

Water Resources Data California Water Year 2002

Following is the PDF version to one of the four-volume set of Water Resources Data for the state of California.

For your convenience the Table of Contents and Index have been linked to the appropriate page within the volume, all Surface-Water and Water-Quality Stations have been book marked, those items that are colored blue are linked to the appropriate page and all web links have been activated.

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

Water Resources Data California Water Year 2002

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

Water-Data Report CA-02-1



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



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2003

PREFACE

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

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

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

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

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY <i>(Leave blank)</i>	2. REPORT DATE April 2003	3. REPORT TYPE AND DATES COVERED Annual—Oct. 1, 2001, to Sept. 30, 2002
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4. TITLE AND SUBTITLE Water Resources Data—California, Water Year 2002, Volume 1, Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from Tijuana River to Santa Maria River	5. FUNDING NUMBERS
--	--------------------

6. AUTHOR(S) G.L. Rockwell, G.L. Pope, J. Agajanian, and L.A. Caldwell	
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7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division, California District Placer Hall, Suite 2015 6000 J Street Sacramento, CA 95819-6129	8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-CA-02-1
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9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division, California District Placer Hall, Suite 2015 6000 J Street Sacramento, CA 95819-6129	10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-CA-02-1
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11. SUPPLEMENTARY NOTES
Prepared in cooperation with the California Department of Water Resources and with other agencies.

12a. DISTRIBUTION / AVAILABILITY STATEMENT No restriction on distribution. This report may be purchased from the National Technical Information Service, Springfield, VA 22161	12b. DISTRIBUTION CODE
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13. ABSTRACT *(Maximum 200 words)*
Water-resources data for the 2002 water year for California consist of records of stage, discharge, and water quality of streams, stage and contents in lakes and reservoirs, and water levels and water quality in wells. Volume 1 contains discharge records for 188 gaging stations and 10 crest-stage partial-record stations, stage and contents for 19 lakes and reservoirs, gage-height records for 2 stations, water quality for 39 streamflow-gaging stations and 11 partial-record stations, and precipitation data for 1 station. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.

14. SUBJECT TERMS *California, *Hydrologic data, *Surface water, *Water quality, Flow rate, Sampling sites, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Water analyses	15. NUMBER OF PAGES 521
	16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT
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**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), elevation, gage heights, or contents; (c), chemical; (b), biological; (p), precipitation;
(g) gage height; (t), water temperature; and (s), sediment]

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Matilija Creek near reservoir, near Matilija Hot Springs (dts)	11114495	393
VENTURA RIVER BASIN		
Ventura River near Ventura (ds)	11118500	395
CARPINTERIA CREEK BASIN		
Carpinteria Creek near Carpinteria (d)	11119500	400
MISSION CREEK BASIN		
Mission Creek at Rocky Nook Park, at Santa Barbara (d)	11119745	402
Mission Creek near Mission Street, at Santa Barbara (d)	11119750	404
ATASCADERO CREEK BASIN		
Atascadero Creek:		
Maria Ygnacio Creek at University Drive, near Goleta (d)	11119940	406
Atascadero Creek near Goleta (d)	11120000	408
SAN JOSE CREEK BASIN		
San Jose Creek near Goleta (d)	11120500	410
SANTA YNEZ RIVER BASIN		
Santa Ynez River at Jameson Lake, near Montecito (d)	11121000	413
Santa Ynez River above Gibraltar Dam, near Santa Barbara (d)	11122000	414
Santa Ynez River below Gibraltar Dam, near Santa Barbara (d)	11123000	415
Santa Ynez River below Los Laureles Canyon, near Santa Ynez (dc)	11123500	417
Lake Cachuma:		
Santa Cruz Creek near Santa Ynez (dc)	11124500	421
Lake Cachuma near Santa Ynez (l)	11125500	425
Hilton Canyon Creek near Santa Ynez (dct)	11125600	426

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

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<u>PACIFIC SLOPE BASINS IN CALIFORNIA—Continued</u>		
SANTA YNEZ RIVER BASIN—Continued		
Santa Ynez River near Santa Ynez (dct)	11126000	429
Santa Ynez River at Highway 154, near Santa Ynez (ct)	11126400	435
Alamo Pintado Creek near Solvang (d)	11128250	437
Alisal Creek:		
Alisal Reservoir near Solvang (l)	11128300	439
Santa Ynez River at Solvang (dct)	11128500	440
Zaca Creek near Buellton (d)	11129800	445
Salsipuedes Creek near Lompoc (dc)	11132500	447
Santa Ynez River at Narrows, near Lompoc (dct)	11133000	451
Santa Ynez River at H Street, near Lompoc (d)	11134000	457
Miguelito Creek at Lompoc (d)	11134800	459
SAN ANTONIO CREEK BASIN		
San Antonio Creek near Casmalia (dc)	11136100	461
SANTA MARIA RIVER BASIN		
Cuyama River (head of Santa Maria River) below Buckhorn Canyon, near Santa Maria (dcs)	11136800	465
Sisquoc River near Sisquoc (c)	11138500	469
Sisquoc River near Garey (d)	11140000	471
Orcutt Creek near Orcutt (dc)	11141050	472

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
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 ²)	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
10251300	Amargosa River at Tecopa	3,090	1962–72, 1974–83
10251350	Horse thief Creek near Tecopa	3.06	1961–70
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
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, 1989–90
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	.71	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
10264590	Cottonwood Creek near Rosamond	35.7	1965–72
10264600	Oak Creek near Mojave	15.8	1957–86

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
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	1997–2001
10264675	Rogers Lake Tributary at Edwards Air Force Base	1.73	1988–2001
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 Olancha	40.1	1906–11, 1914–18, 1920–38, 1960–78
10286001	Cottonwood Creek Penstock weir, near Lone Pine	—	1906–11, 1914–18, 1919–78
10286002	Cottonwood Creek Diversion to powerhouse	—	1939–50, 1974, 1975–78
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
11014700	Telegraph Canyon Creek at Chula Vista	6.23	1973

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
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
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
11046200	San Onofre Creek near San Onofre	34.6	1951–67
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, 1984–85
11046500	San Juan Creek near San Juan Capistrano	106	1929–69
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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
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
11055000	Mill Creek near Mentone	50.5	1939–65
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, 1967–88
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
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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
11075610	Santa Ana River above spreading diversion, below Imperial Highway, near Anaheim	1545	1998–2001
11075620	Santa Ana River spreading diversion, below Imperial Highway near Anaheim	—	1974–85, 1990–2000
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
11092450	Los Angeles River at Sepulveda Dam	158	1932–79
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
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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
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	1973–83
11106500	Conejo Creek near Camarillo	69	1928–31
11107000	Honda Barranca near Somis	2.5	1955–63
11107500	Beardsley Wash near Somis	13	1954–58
11107922	South Fork Santa Clara River at Saugus	43.4	1976–77
11108075	Castaic Creek above Fish Creek, near Castaic	37	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, 1934–73, 1974–83
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	0.625	1970–78
11119780	Arroyo Burro at Santa Barbara	6.65	1970–93
11119900	Atascadero Creek at Puente Road, near Goleta	3.86	1971–72
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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
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
11128500	Santa Ynez River at Solvang	579	1928–40, 1946–99
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, 1999
11136000	San Antonio Creek at Harris	93.7	1941–55
11136050	San Antonio Creek above Barka slough, near Orcutt	114	1985–87
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, 1999
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 2002

DISCONTINUED LAKES AND RESERVOIRS

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

Station No.	Station name	Drainage area (mi ²)	Period of record (Water Year)
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 ²)	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
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	T,S	1969–78, 1984
11046000	Santa Margarita River at Ysidora	723	T,S	1969–78
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	1986–88
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
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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record (Water Year)
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	1998–2001
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
11059300	Santa Ana River at E Street, near San Bernardino	541	T,S	1968–72, 1982–83
11066460	Santa Ana River at MWD Crossing, near Arlington	852	C,T	1970–78, 1999–2000
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	.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	C,T	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	1999
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	1,493	WQ,C,T	1974–82, 1983–85, 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
11078000	Santa Ana River at Santa Ana	1,700	T,S	1968–69, 1971, 1973–80, 1982–87
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	C	1972–80
11109800	Piru Creek below Santa Felicia Dam	425	C,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	251	C,S	1967–78
11113500	Santa Paula Creek near Santa Paula	38.4	C,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
11118500	Ventura River near Ventura	188	WQ,T	1907–08, 1967–81, 1986
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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record (Water Year)
11125500	Lake Cachuma near Santa Ynez	417	WQ	1998
11129800	Zaca Creek near Buellton	32.8	WQ	1997
11132500	Salsipuedes Creek near Lompoc	47.1	WQ,T	1982–98
11133000	Santa Ynez River at Narrows, near Lompoc	789	WQ	1978–88
11134800	Miguelito Creek at Lompoc	11.6	WQ	1980–86, 1988–97
11136100	San Antonio Creek near Casmalia	135	T	1981–83
11138500	Sisquoc River near Sisquoc	281	C	1978–99
11140585	Santa Maria River at Suey Crossing, near Santa Maria	—	S	1999–00
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).

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WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002
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. Rockwell, G.L. Pope, J. Agajanian, *and* L.A. Caldwell

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), 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 188 streamflow-gaging stations and 10 partial-record stations; (2) stage and content records for 19 lakes and reservoirs; (3) gage-height records for 2 stations; (4) precipitation records for 1 station; and (5) water-quality records for 50 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-02-1." 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.

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.

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Chino Basin Water Conservation District, Barrett Kehl, General Manager.
 Coachella Valley Water District, Thomas E. Levy, 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, Gary Keefe, 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, Fred J. Adjarian, 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, David P. Zappe, 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, Al R. Sorensen, General Manager.
 United Water Conservation District, Ms. Dana L. Wischart, 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.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative of undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-

information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrology Benchmark Program can be found at:

<http://water.usgs.gov/hbn/>

National Stream-Quality Accounting Network (NASQAN) monitors 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 basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these

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constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (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 can be found at:

<http://water.usgs.gov/nasqan>

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides 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 a network of 225 precipitation chemistry monitoring 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 all data from the individual sites, can be found at:

<http://bqs.usgs.gov/acidrain/>

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey 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; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 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 will be 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 decision making by water-resources managers 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 can be found at:

<http://water.usgs.gov/nawqa/>

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 2002 water year that began October 1, 2001, and ended September 30, 2002. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station-Identification Numbers

Each streamsite data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream-order" system is used for regular surface-water stations and the "latitude-longitude" system is used for surface-water stations in California where only miscellaneous measurements are made.

Downstream-Order System

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

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The station-identification number is assigned according to downstream order. In assigning station numbers, 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 made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 11119750, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "119750." The part number designates the major river basin; for example, part "11" is the Pacific Slope Basins in California.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description (fig. 1).

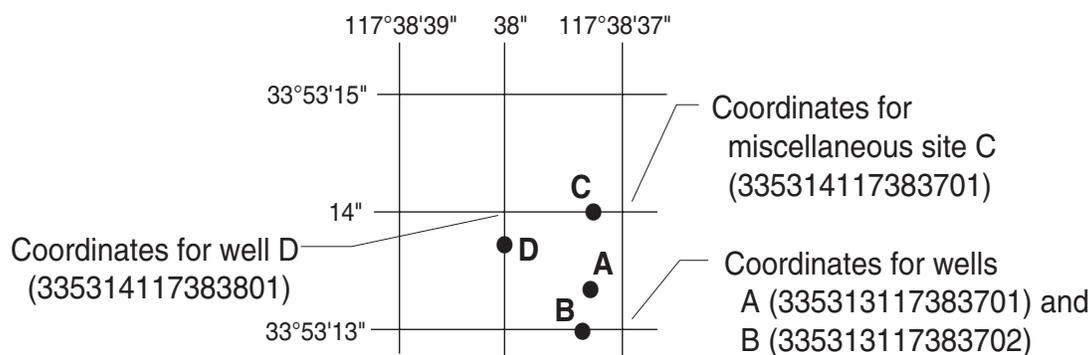


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake and reservoir contents, similarly, are those for which stage or contents may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records" or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record stations for which data are given in this report are shown, by county, in figures 2 through 12.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relation between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relation between stage and lake contents. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with digital recorders, data-collection platforms, or data loggers that sample stage values at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), 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).

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In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge are prepared for any stage within the range of the measurements. If it is necessary to define extremes of discharge outside the range of current-meter measurements, the curves are extended using (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dam or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes or observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This 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 set at some distance from the base gage. At some stations the 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 gaging stations, acoustic velocity meter (AVM) systems are used to compute discharge. The AVM system measures the stream's velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the cross section. Because the AVM sensors are fixed in position, the adjustment coefficients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross-section area. Discharge is computed by multiplying path velocity by the appropriate stage-related coefficient and area.

In computing records of lake or reservoir contents, it is necessary to have available surveys, curves, or tables defining the relation of stage and contents. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relation changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relation. When this is done, the contents computed may become increasingly in error as time increases since the last survey. Discharges over lake or reservoir spillways are computed from stage-discharge relations in the same manner as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following records, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and 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.

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 to clarify information presented under the various headings of the station description.

LOCATION.—Information on locations is obtained from the most accurate maps available. The location of the gaging station is given with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name. 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.

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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 indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time when the present station was not, and whose location was such that records from it reasonably can be considered equivalent with records from the present station.

REVISED RECORDS.—Published records, because of new information, occasionally are incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report is given in which the most recently revised figure was published.

GAGE.—The type of gage currently in use, the datum of the current gage referred to sea level (see glossary), 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 record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station, and possibly to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified.

EXTREMES FOR PERIOD OF RECORD.—Extremes may include maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.—Included is information concerning 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 U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.—Extremes given are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year that are greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

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

Occasionally the records of a discontinued gaging station may need revision. Because for these stations there would be no current or, possibly, future station manuscript published 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 to determine if the published records were revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because 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-gaging stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

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 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 also usually 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"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion 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 contents are given. These figures are identified by a symbol and corresponding footnote.

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Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "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 figures. 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. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be 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 for tables containing complex data for the current water year. 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 record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be 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 this occurs, 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 there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments follow to 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. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.—The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

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.

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

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

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

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

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

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

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90 PERCENT EXCEEDS.—The discharge that is 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 is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of 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 generally are 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.

Identifying Estimated Daily Discharge

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

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage and discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft³/s) for values less than 1 ft³/s, to the nearest tenth between 1.0 and 10 ft³/s, to whole numbers between 10 and 1,000 ft³/s, and to three significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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, figures 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 measured discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 20192, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge measurement notes, gage-height records, temperature measurements, and rating tables are on file in the District Office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District Office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve various types of data and measurement frequencies.

Change in National Trends Network Procedures

Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences, based on a special intercomparison study, is available from the NADP Program Office, Illinois State Water Survey, 2204 Griffith Drive, Champaign, IL 61820-7495 (Telephone: 217-333-7873).

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-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 continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

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A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape or stored electronically in a data logger. 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 through 12.

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.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is the assurance that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, are made onsite when samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures are 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 onsite measurements and for collecting, treating, and shipping samples are given in "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. All these references are listed in the section "Publications on Techniques of Water-Resources Investigations." Also, detailed information on collecting, treating, and shipping samples may be obtained from the District Office.

One sample can adequately define 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 through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream-Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative value 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 for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District Office.

Historical and current (2002) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter (ng/L). If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter ($\mu\text{g/L}$) and could reflect contamination introduced during some phase of the procedure.

Water Temperature

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

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

Sediment

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

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During periods of rapidly changing flow or rapidly changing concentration, samples may have been 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 measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with the ASTM standards and generally follow ISO standards.

At other stations, suspended-sediment samples were 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 suspended sediment, bed material, and bed load are included for some stations.

Estimates of bed-load and total-sediment discharge are included for some stations. Computations of monthly bed-load discharges are based on the relation between instantaneous water discharge and corresponding bed-load discharge for the station. Values of bed-load discharge used in defining this relation are based on samples obtained by use of the Helley-Smith or BL 84 bed-load samplers or by modified-Einstein or Meyer-Peter Muller computation procedures. Application of the bed-load-transport relation at a station was made on a daily basis or subdivided-day basis. The bed-load samplers are designed to collect time-weighted samples for the sediment moving within 0.25 ft of the streambed. Sediment moving in this portion of the flow cannot be sampled with standard suspended-sediment samplers. Calibration of the bed-load samplers has not been completed, and a trap efficiency of 1.0 has been assumed applicable to these devices. Error sources in the theoretical methods, based on analysis of bed-material characteristics, channel geometry, and associated hydraulic factors, are also undefined. In consequence, figures of bed-load discharge must be used with caution. They are estimates, at best, and are subject to revision.

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN, NAWQA, and Hydrologic Benchmark Stations during various seasons and surface-water discharges. Documentation of cross-section variation of water quality is essential in order to determine how many samples in a cross section are necessary to ensure a representative composite sample.

Laboratory Measurements

Sediment samples, biochemical-oxygen-demand (BOD) samples, indicator-bacteria samples, and daily specific-conductance samples are analyzed locally. All other samples are analyzed in the U.S. Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used to analyze sediment samples and to compute sediment records are described in the Techniques of Water-Resources Investigations, Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

Quality-Control Data

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 are described in the following section. Procedures have been established for the storage of water quality-control data within the U.S. Geological Survey. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by 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 blank samples 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. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this District are:

Source solution blank — a blank solution that is transferred to a sample bottle in an area of the office laboratory with an atmosphere that is relatively clean and protected with respect to target analytes.

Ambient blank — a blank solution that is put in the same type of bottle used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.

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.

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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.

Pump blank — a blank solution that is processed through the same pump-and-tubing system used for an environmental sample.

Standpipe blank — a blank solution that is poured from the containment vessel (stand-pipe) before the pump is inserted to obtain the pump blank.

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

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

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

Canister blank — a blank solution that is taken directly from a stainless steel canister just before the VOC sampler is submerged to obtain a field blank sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose 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. There are many types of replicate samples 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 sample — a type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating collection of samples into two or more compositing containers.

Sequential sample — 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 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.

Concurrent sample — a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Split sample — a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

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 other data 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 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, as appropriate, 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 under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.—See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.—This indicates the periods for which there are published water-quality records for the station. 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 individual parameters.

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INSTRUMENTATION.—Information on instrumentation is given only if a water-quality monitor, temperature recorder, 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 U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—If errors in water-quality records are discovered after publication, appropriate updates are made to the Water Quality File in the U.S. Geological Survey's computerized data system, National Water Information System (NWIS), and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

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.

ACCESS TO USGS WATER DATA

The U.S. Geological Survey 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 at

<http://water.usgs.gov>

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of additional data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices. (See address on the back of the title page.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) Units on the inside of the back cover.

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, phosphate-rich 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.

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

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

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

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

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

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

Bedload is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that 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](#)")

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

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 is also called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

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 lithology and porosity of the rock.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

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

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

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

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.

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

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Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft³/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 are numerically 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, (ft³/s)/mi²] 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 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 periodic sample or 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 are usually 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 UTM coordinates. (See also "Gage datum", "Land-surface datum", "National Geodetic Vertical Datum of 1929", and "North American Vertical Datum of 1988")

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

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, etc., 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 CaCO₃) 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 are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41°C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *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 are generally 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) concentration value 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 qualitatively identified 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 (<).

Euglenoids (Euglenophyta) are a group of algae that are usually 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 itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

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

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

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

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

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

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "[Phytoplankton](#)")

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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 are typically made over a wider geographic scale than are measurements of species distribution.

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

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

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:

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

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

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

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.), 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 uniformly distributed on it. (See also "Annual runoff")

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

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) is generally 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. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

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

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

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

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

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

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

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.

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.

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

Micrograms per gram (UG/G, $\mu\text{g/g}$) 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, $\mu\text{g/kg}$) 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, $\mu\text{g/L}$) 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, $\mu\text{S/cm}$) 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.

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National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly 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 "North American Vertical Datum of 1988") See also NOAA web site:

<http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>

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

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

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

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

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area of habitat, usually square meter (m²), 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 utilizes 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	>.004–.062	Sedimentation
Sand	>.062–2.0	Sedimentation/sieve
Gravel.	>2.0–64.0	Sieve
Cobble	>64–256	Manual measurement
Boulder	>256	Manual measurement

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

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at

a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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

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

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

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

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

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

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

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

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

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

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

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

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

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] 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.

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

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represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "[Bed material](#)")

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

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

Return period (See "[Recurrence interval](#)")

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

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

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

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

Sea level, as used in this report, refers to one of the two commonly used national vertical datums, ([NGVD 1929](#) or [NAVD 1988](#)). See separate entries for definitions of these datums. See [conversion factors and vertical datum page](#) (inside back cover) for identification of the datum used in this report.

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

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

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

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

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

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

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

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

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

Stage (See "[Gage height](#)")

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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 (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

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

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](#)")

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/day) 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:

$$\text{concentration (mg/L)} \times \text{discharge (ft}^3/\text{s)} \times 0.0027.$$

(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, 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](#)")

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.

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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	<i>Hexagenia</i>
Species.....	<i>Hexagenia limbata</i>

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 tons per day.

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

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

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

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

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

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

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

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

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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 due to 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 U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

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

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](#)")

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

The U.S. Geological Survey publishes a series of manuals 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.

The reports listed below are for sale by the U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

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, Chapter 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, Chapter 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, Chapter D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI Book 2, Chapter 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, Chapter E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI Book 2, Chapter 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, Chapter F1. 1989. 97 p.

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, Chapter 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, Chapter A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI Book 3, Chapter A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI Book 3, Chapter A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI Book 3. Chapter A5. 1967. 29 p.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI Book 3, Chapter A6. 1968. 13 p.

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- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI Book 3, Chapter A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI Book 3, Chapter 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, Chapter A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI Book 3, Chapter 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, Chapter 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, Chapter A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI Book 3, Chapter A13. 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI Book 3, Chapter A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS–TWRI Book 3, Chapter A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI Book 3, Chapter A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS–TWRI Book 3, Chapter 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, Chapter A18. 1989. 52 p.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI Book 3, Chapter 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, Chapter A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS–TWRI Book 3, Chapter 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, Chapter B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS–TWRI Book 3, Chapter 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, Chapter B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI Book 3, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI Book 3, Chapter B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI Book 3, Chapter 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, Chapter C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI Book 3, Chapter 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, Chapter A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI Book 4, Chapter A2. 1968. 15 p.

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- 4-A3. Statistical methods in water resources, by D.R. Helsel and R.M. Hirsch: USGS–TWRI Book 4, Chapter 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, Chapter B1. 1972. 18 p.
 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI Book 4, Chapter B2. 1973. 20 p.
 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI Book 4, Chapter 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, Chapter D1. 1970. 17 p.

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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter C1. 1976. 116 p.
 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI Book 7, Chapter 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, Chapter 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, Chapter A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI Book 8, Chapter A2. 1983. 57 p.

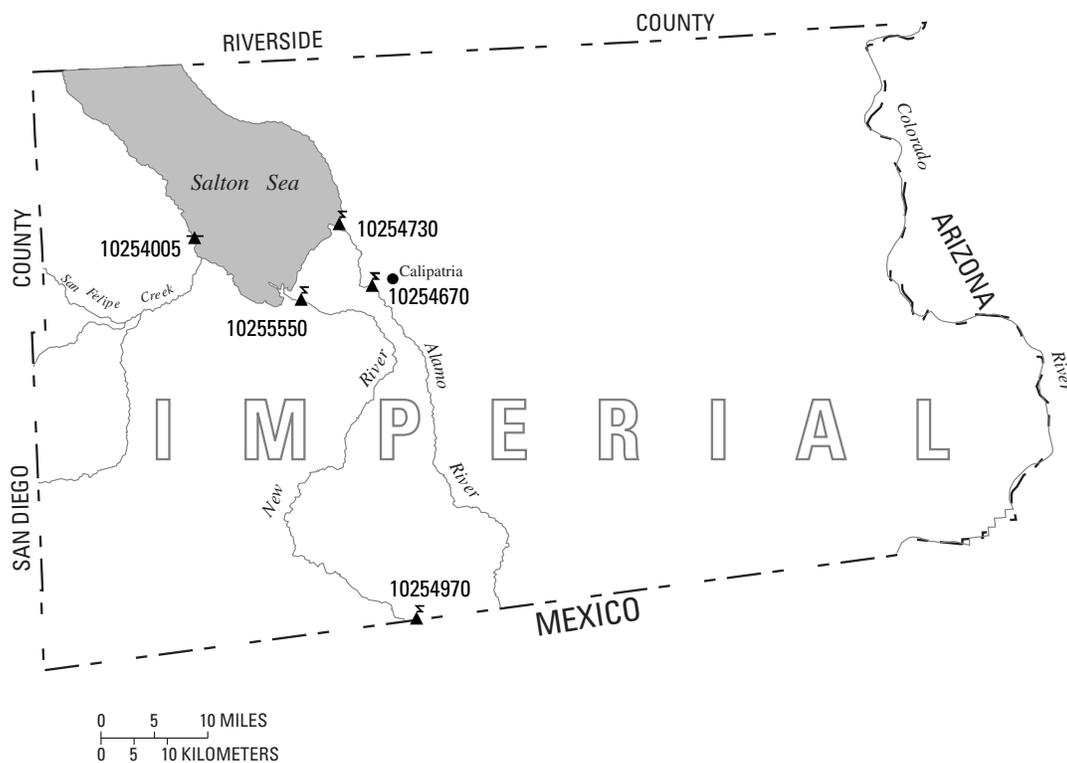
Section B. Instruments for Measurement of Discharge

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI Book 8, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter 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, Chapter A9. 1998. 60 p.

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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 2002

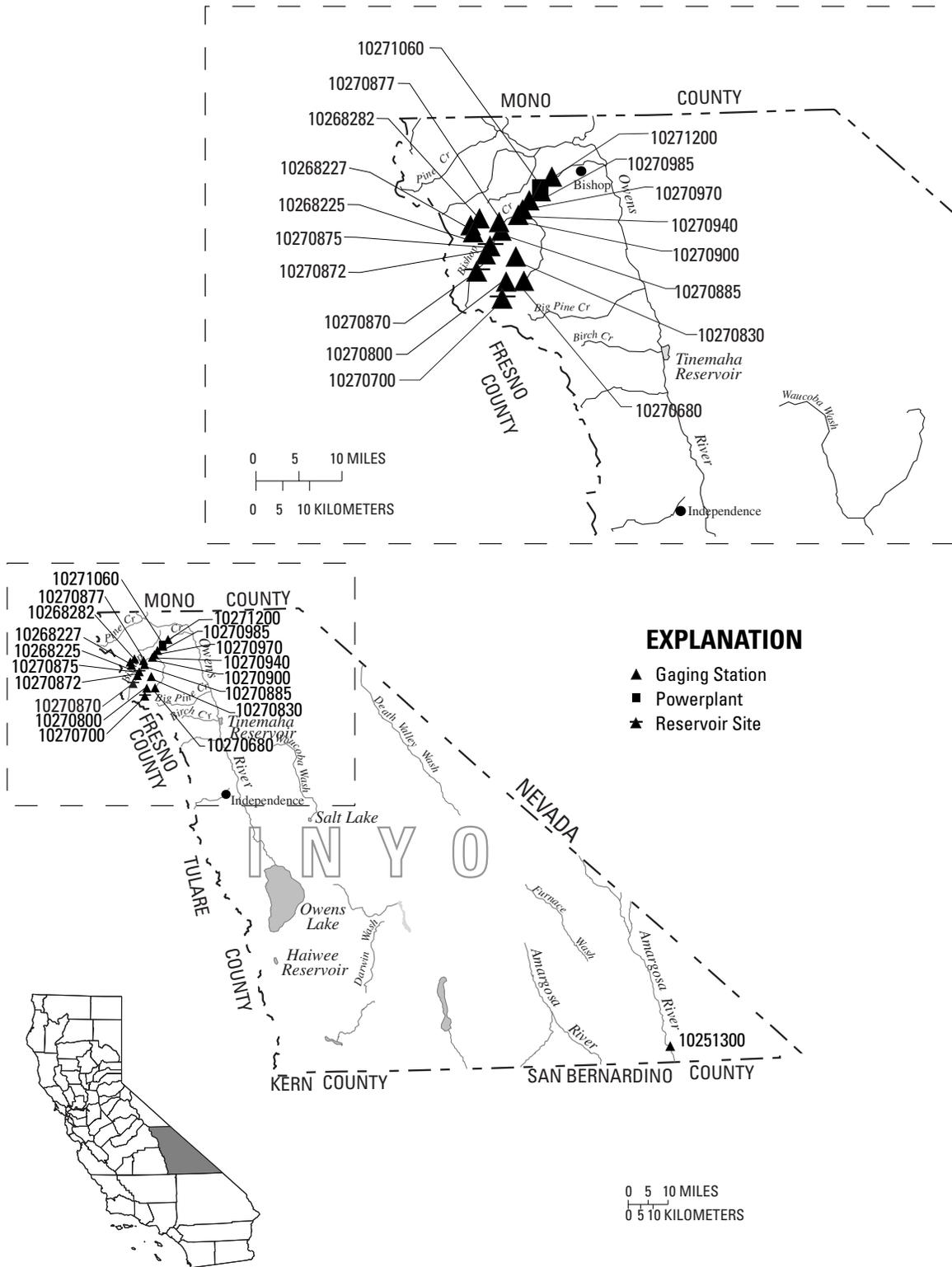


Figure 3. Location of discharge stations in Inyo County.

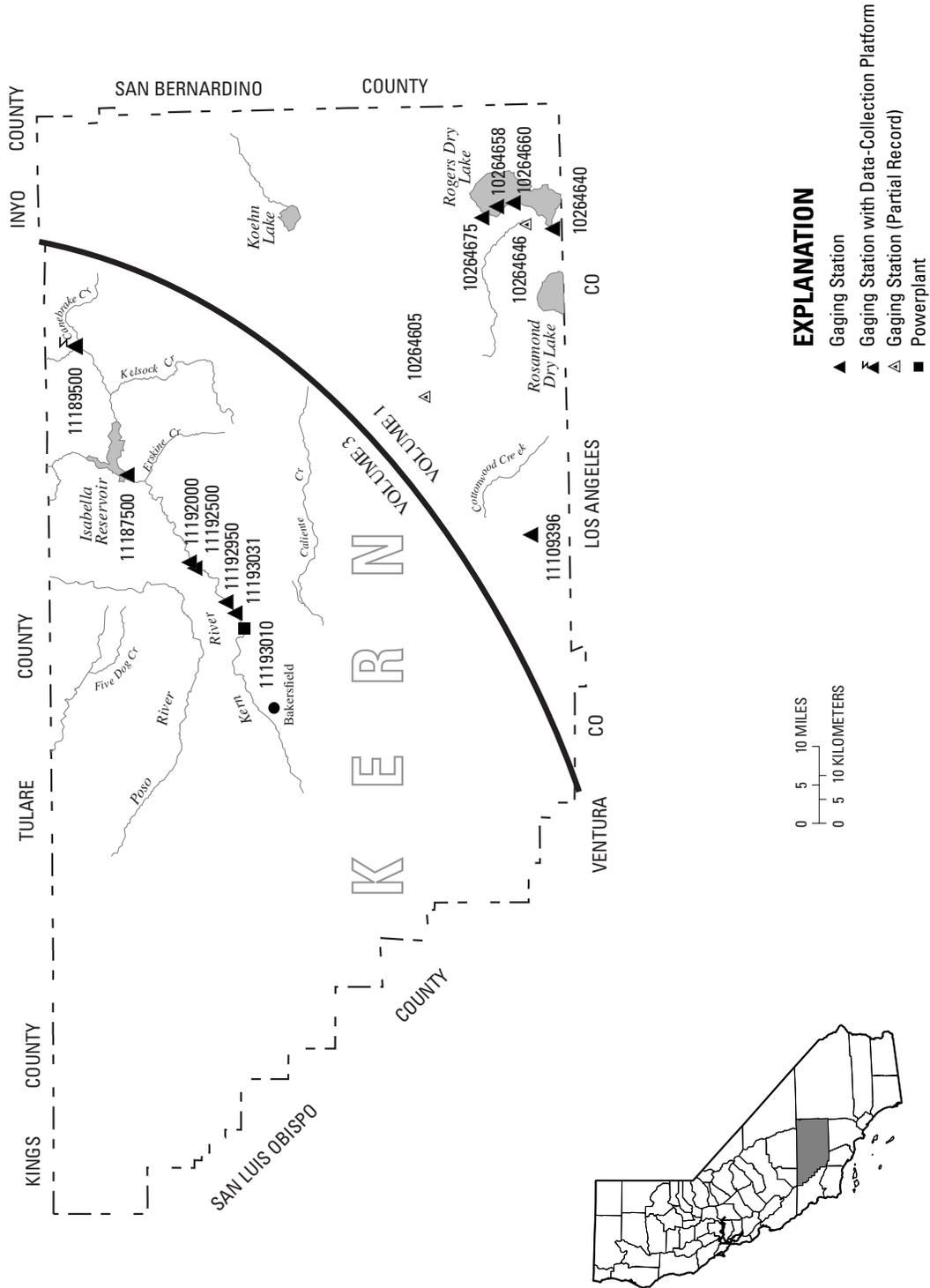


Figure 4. Location of discharge stations in Kern County.
 (NOTE: Records for stations 11187500 through 11193031 published in volume 3.)

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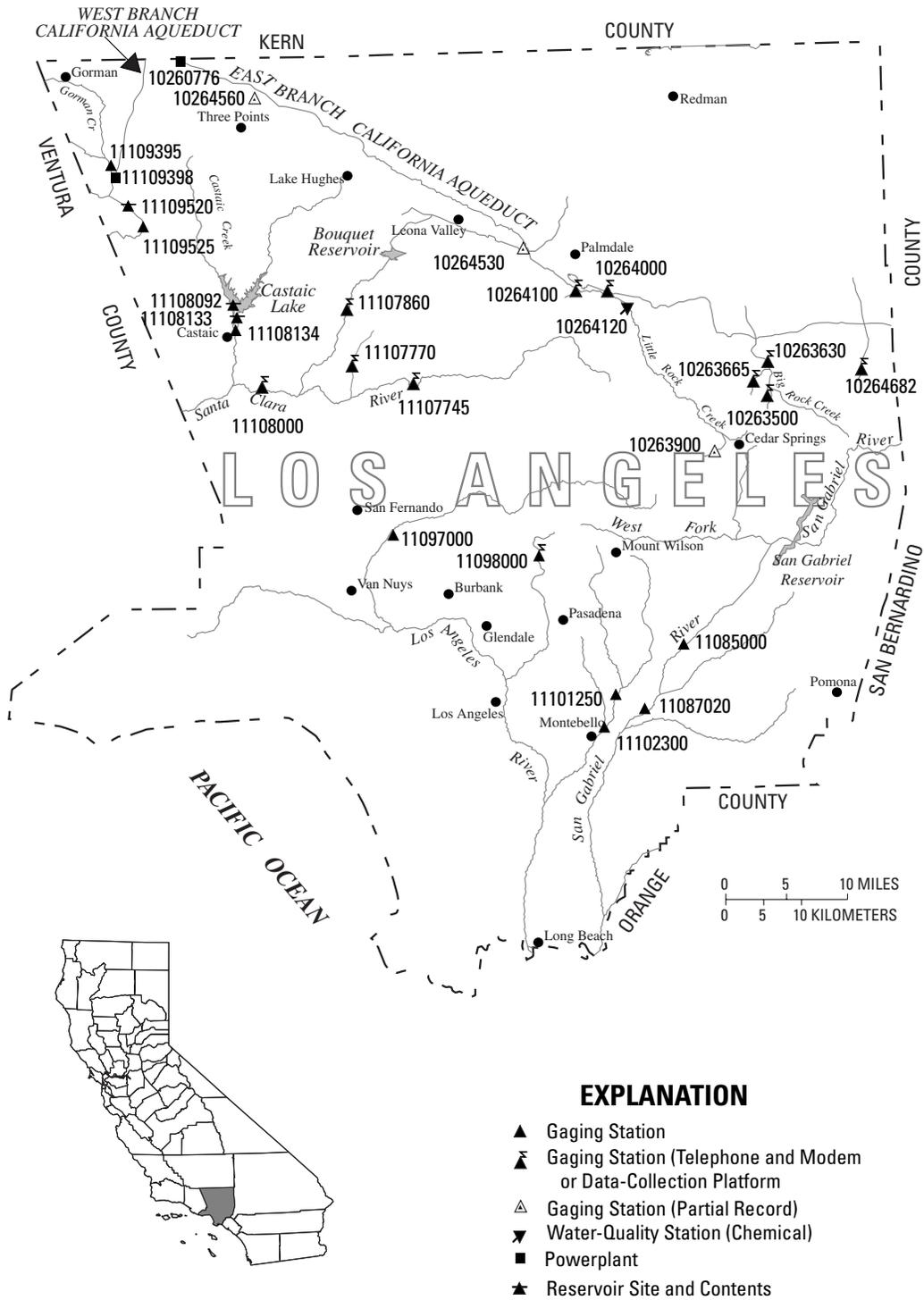


Figure 5. Location of discharge stations in Los Angeles County.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002

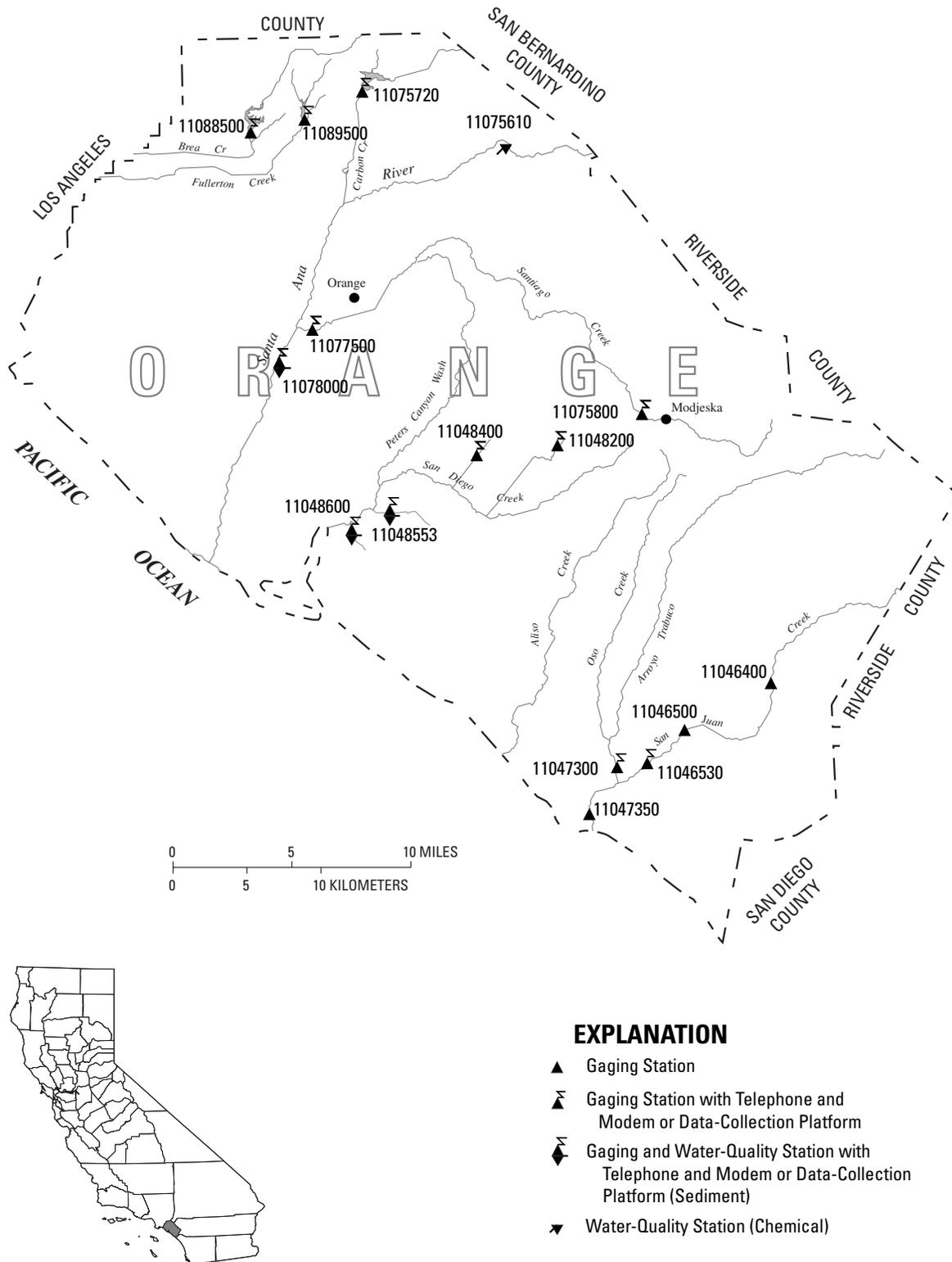


Figure 7. Location of discharge and water-quality stations in Orange County.

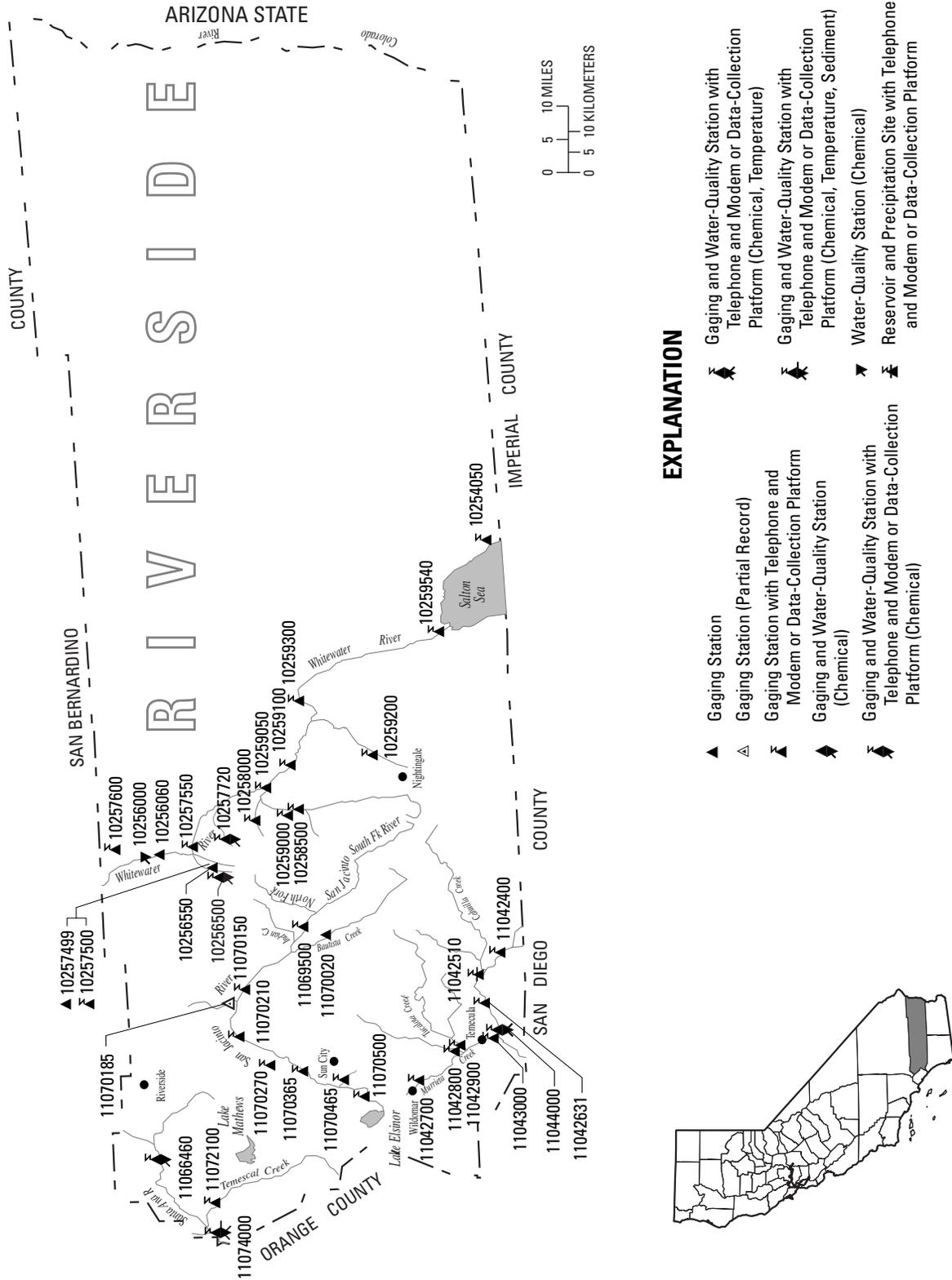
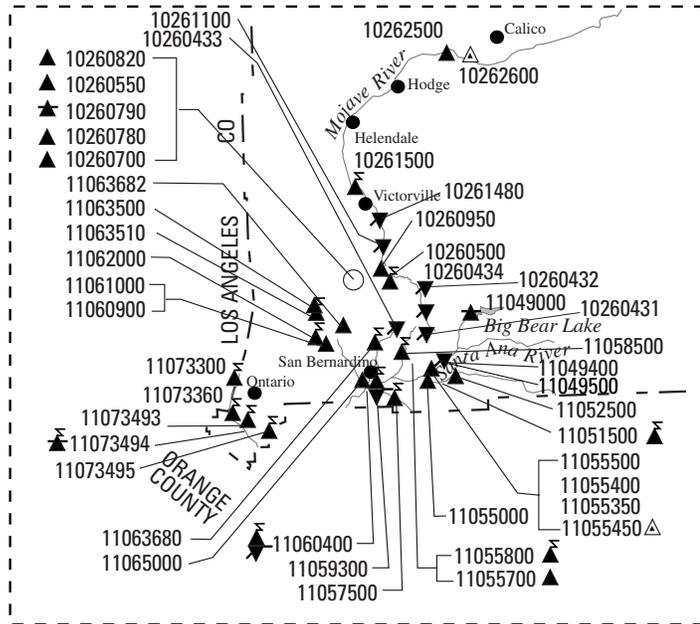


Figure 8. Location of discharge and water-quality stations in Riverside County.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002



EXPLANATION

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

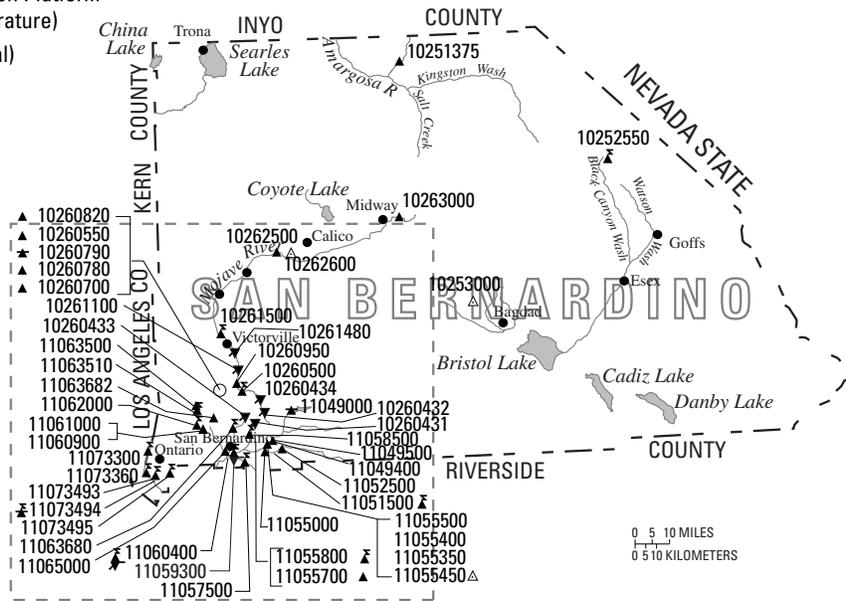
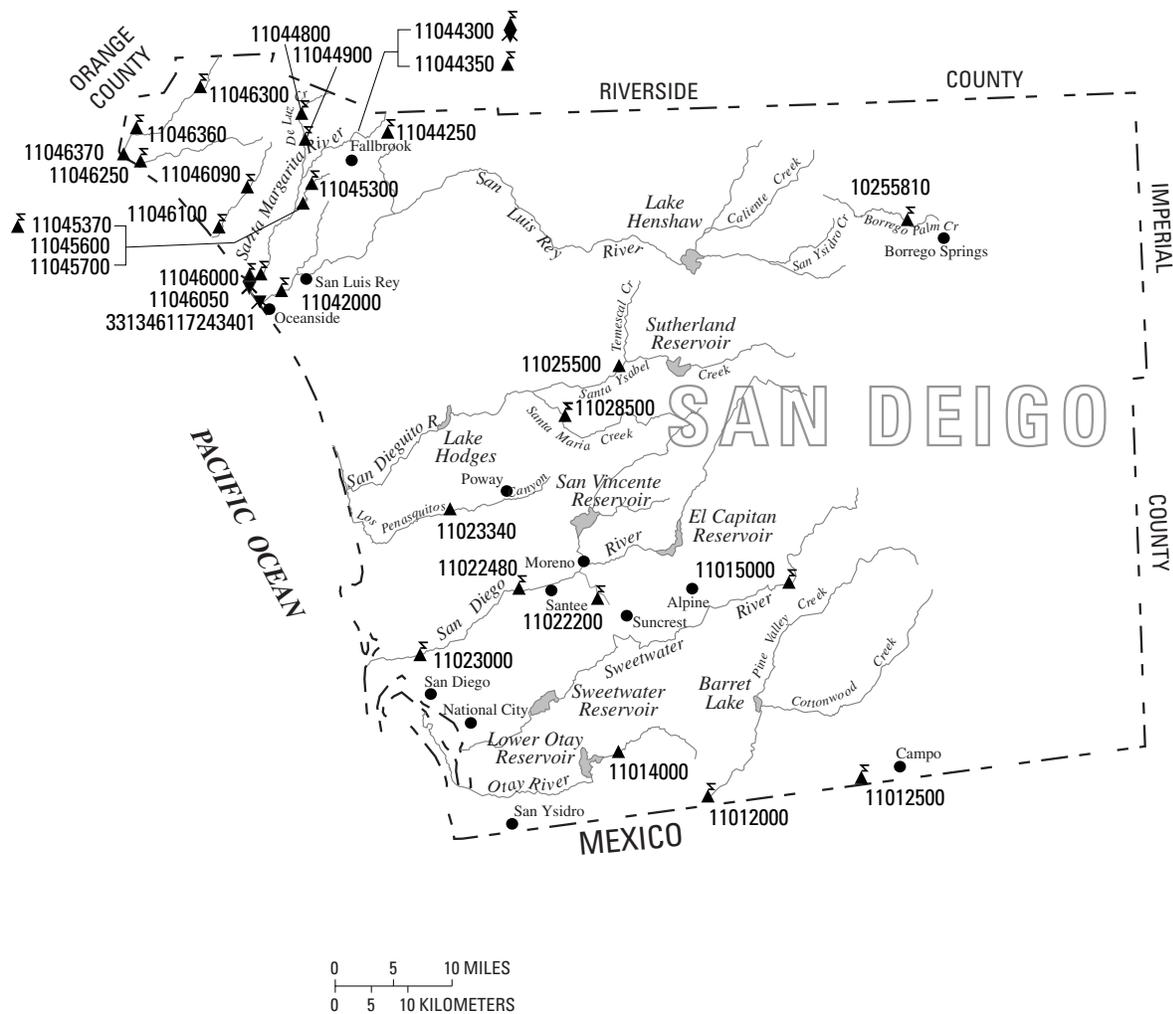


Figure 9. Location of discharge and water-quality stations in San Bernardino County.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2002



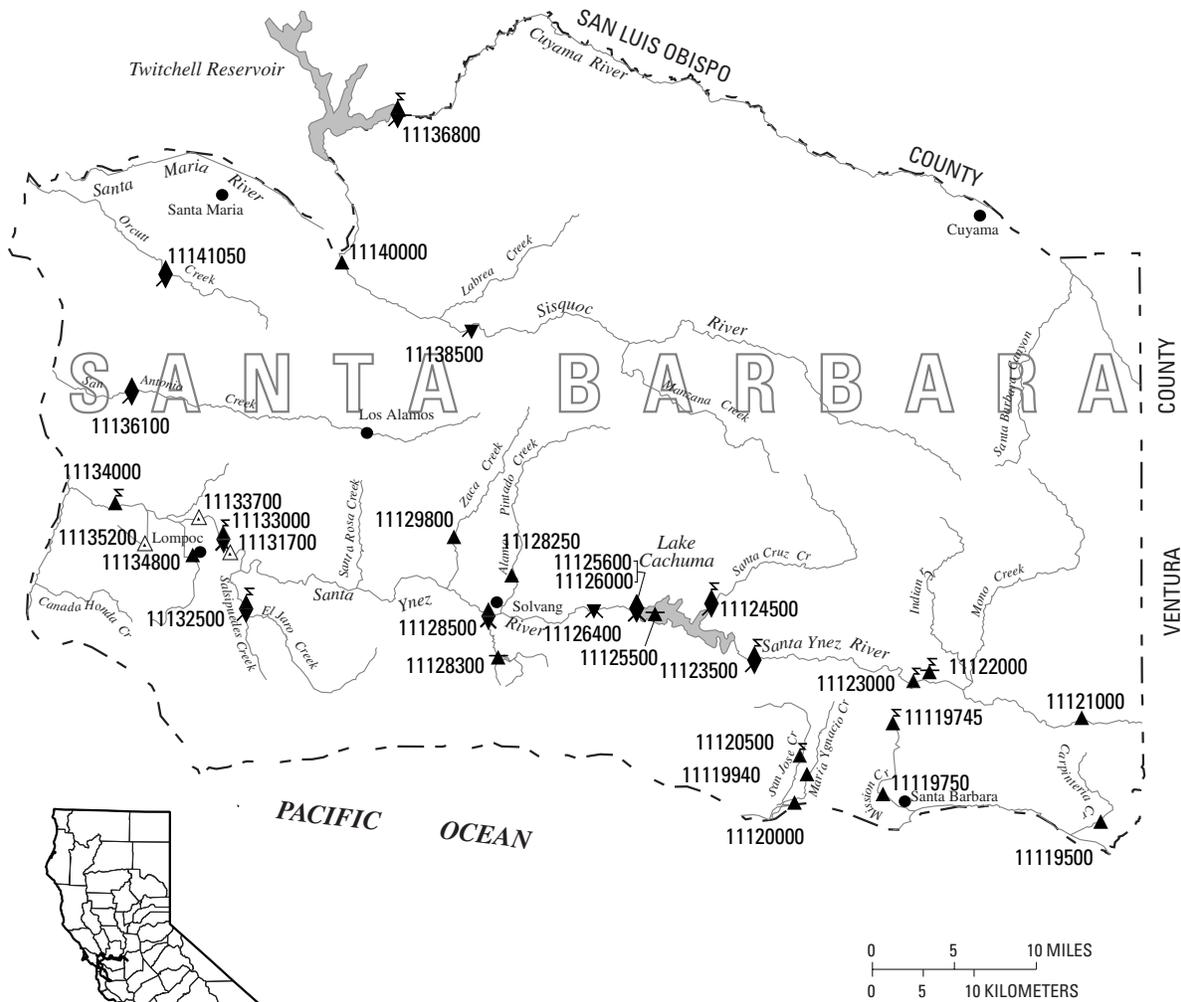
EXPLANATION

- ▲ 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 2002



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 2002

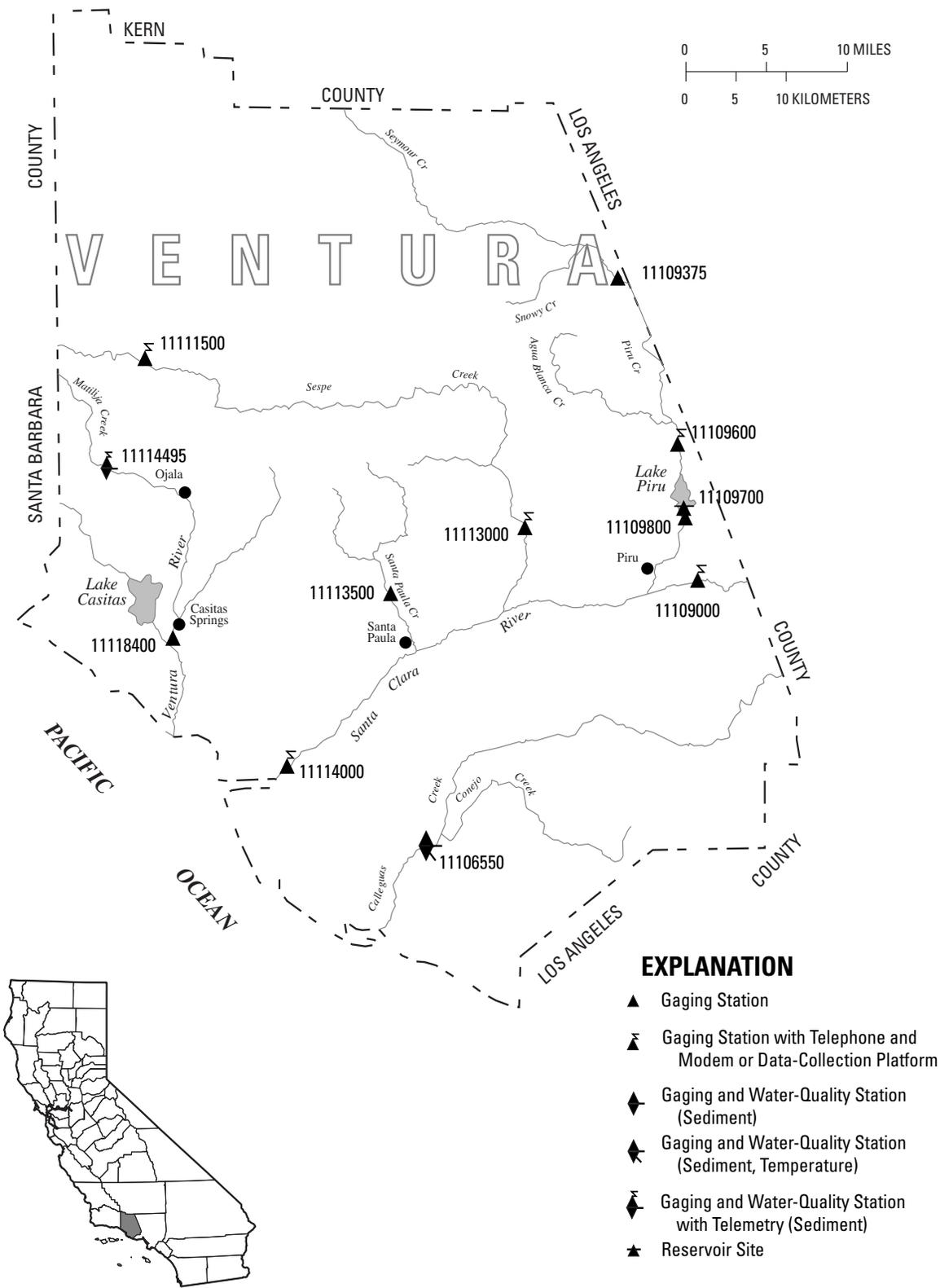


Figure 12. Location of discharge and water-quality stations in Ventura County.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2001

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

Remark Codes

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

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

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (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 mi², 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 sea level, 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 ft³/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 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 15	1215	*3.1	*4.45

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.44	1.7	1.5	1.7	2.1	0.90	0.26	0.08	0.08	0.14	0.33
2	0.14	0.43	1.8	1.5	1.8	1.3	0.89	0.29	0.08	0.08	0.14	0.32
3	0.14	0.43	1.8	1.5	1.9	1.0	0.99	0.29	0.08	0.08	0.14	0.31
4	0.14	0.41	1.8	1.6	2.0	1.2	1.0	0.28	0.08	0.08	0.14	0.31
5	0.15	0.42	1.4	1.2	2.0	1.4	1.0	0.25	0.08	0.09	0.15	0.32
6	0.15	0.41	1.5	1.2	2.0	1.5	0.93	0.22	0.08	0.09	0.15	0.34
7	0.17	0.43	1.9	1.3	2.0	1.5	0.91	0.18	0.07	0.09	0.16	0.35
8	0.18	0.46	1.5	1.4	2.0	1.4	0.86	0.18	0.06	0.09	0.17	0.37
9	0.17	0.41	1.7	1.4	1.9	0.99	0.87	0.14	0.07	0.09	0.17	0.40
10	0.16	0.46	2.2	1.7	1.5	1.2	0.66	0.13	0.07	0.09	0.17	0.41
11	0.17	0.49	2.2	1.1	1.5	1.4	0.68	0.14	0.07	0.09	0.18	0.42
12	0.17	0.53	1.5	1.2	1.7	1.4	0.71	0.11	0.07	0.09	0.18	0.43
13	0.18	0.61	1.3	1.3	1.8	1.4	0.67	0.13	0.06	0.09	0.19	0.44
14	0.19	0.70	1.4	1.5	1.9	0.99	0.57	0.13	0.06	0.09	0.19	0.44
15	0.18	0.58	2.0	1.9	1.9	0.76	0.38	0.13	0.06	0.10	0.22	0.45
16	0.19	0.52	1.3	1.6	1.8	0.87	0.32	0.10	0.06	0.10	0.23	0.43
17	0.20	0.48	1.4	1.3	1.8	0.79	0.32	0.10	0.06	0.10	0.24	0.42
18	0.21	0.49	1.4	1.6	1.8	1.8	0.39	0.09	0.06	0.11	0.25	0.41
19	0.21	0.51	1.4	1.6	1.8	1.7	0.43	0.09	0.06	0.11	0.26	0.42
20	0.21	0.54	1.5	1.8	1.8	1.7	0.45	0.09	0.06	0.12	0.28	0.43
21	0.21	0.55	1.6	1.7	1.9	1.8	0.42	0.09	0.06	0.11	0.29	0.49
22	0.21	0.54	1.6	2.0	1.9	1.8	0.44	0.10	0.06	0.11	0.29	0.47
23	0.22	0.60	1.8	1.8	1.8	1.6	0.43	0.10	0.07	0.12	0.30	0.47
24	0.26	0.69	1.5	1.6	1.7	1.2	0.42	0.10	0.07	0.14	0.30	0.49
25	0.28	1.1	1.1	1.7	1.4	1.4	0.46	0.10	0.07	0.13	0.29	0.51
26	0.29	0.90	1.2	1.9	1.4	1.4	0.43	0.10	0.07	0.13	0.27	0.50
27	0.31	1.3	1.3	2.0	1.5	1.6	0.46	0.09	0.07	0.13	0.31	0.51
28	0.34	1.2	1.3	2.0	1.5	1.5	0.40	0.09	0.08	0.13	0.31	0.52
29	0.35	1.5	1.4	2.0	---	1.5	0.39	0.09	0.08	0.14	0.31	0.47
30	0.38	1.7	1.7	2.0	---	1.2	0.31	0.09	0.08	0.14	0.33	0.49
31	0.43	---	1.5	1.7	---	0.82	---	0.09	---	0.14	0.33	---
TOTAL	6.72	19.83	48.7	49.6	49.7	42.22	18.09	4.37	2.08	3.28	7.08	12.67
MEAN	0.22	0.66	1.57	1.60	1.77	1.36	0.60	0.14	0.069	0.11	0.23	0.42
MAX	0.43	1.7	2.2	2.0	2.0	2.1	1.0	0.29	0.08	0.14	0.33	0.52
MIN	0.13	0.41	1.1	1.1	1.4	0.76	0.31	0.09	0.06	0.08	0.14	0.31
AC-FT	13	39	97	98	99	84	36	8.7	4.1	6.5	14	25

UPPER AMARGOSA

10251300 AMARGOSA RIVER AT TECOPA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.49	0.90	4.11	6.49	11.6	6.37	1.37	0.46	0.14	0.58	5.87	4.16
MAX	39.1	11.4	65.3	56.2	95.6	54.2	13.4	3.19	2.55	3.52	103	93.1
(WY)	1977	1966	1966	1995	1993	1983	1978	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	362.26		264.34			
ANNUAL MEAN	0.99		0.72		3.65	
HIGHEST ANNUAL MEAN					14.9	1983
LOWEST ANNUAL MEAN					0.22	1994
HIGHEST DAILY MEAN	46	Feb 26	2.2	Dec 10	1500	Feb 26 1969
LOWEST DAILY MEAN	0.08	Jun 11	0.06	Jun 8	0.00	Jul 23 1962
ANNUAL SEVEN-DAY MINIMUM	0.08	Jun 11	0.06	Jun 13	0.00	Aug 1 1962
MAXIMUM PEAK FLOW			3.1	Jan 15	10600	Aug 19 1983
MAXIMUM PEAK STAGE			4.45	Jan 15	16.00	Aug 19 1983
ANNUAL RUNOFF (AC-FT)	719		524		2650	
10 PERCENT EXCEEDS	1.6		1.8		2.4	
50 PERCENT EXCEEDS	0.33		0.43		0.22	
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 mi².

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 sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 814 ft³/s, Aug. 12, 1979, gage height, 5.75 ft, from rating curve extended above 2.5 ft³/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 ft³/s, from rating curve extended above 2.5 ft³/s, on basis of slope-conveyance studies, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 18	1830	3.2	0.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.00	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	0.19	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	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	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	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	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	0.00	0.00	0.00	0.00	0.00	0.4	0.00	0.00

BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.078	0.029	0.108	0.178	0.192	0.311	0.073	0.001	0.001	0.134	0.235	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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1964 - 2002
ANNUAL TOTAL	12.95	0.22	
ANNUAL MEAN	0.035	0.001	0.112
HIGHEST ANNUAL MEAN			0.36 1993
LOWEST ANNUAL MEAN			0.001 2002
HIGHEST DAILY MEAN	2.5 Mar 7	0.19 Jul 18	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		3.2 Jul 18	814 Aug 12 1979
MAXIMUM PEAK STAGE		0.96 Jul 18	9.75 Jul 15 1996
ANNUAL RUNOFF (AC-FT)	26	0.4	82
10 PERCENT EXCEEDS	0.07	0.00	0.07
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

SALTON SEA BASIN

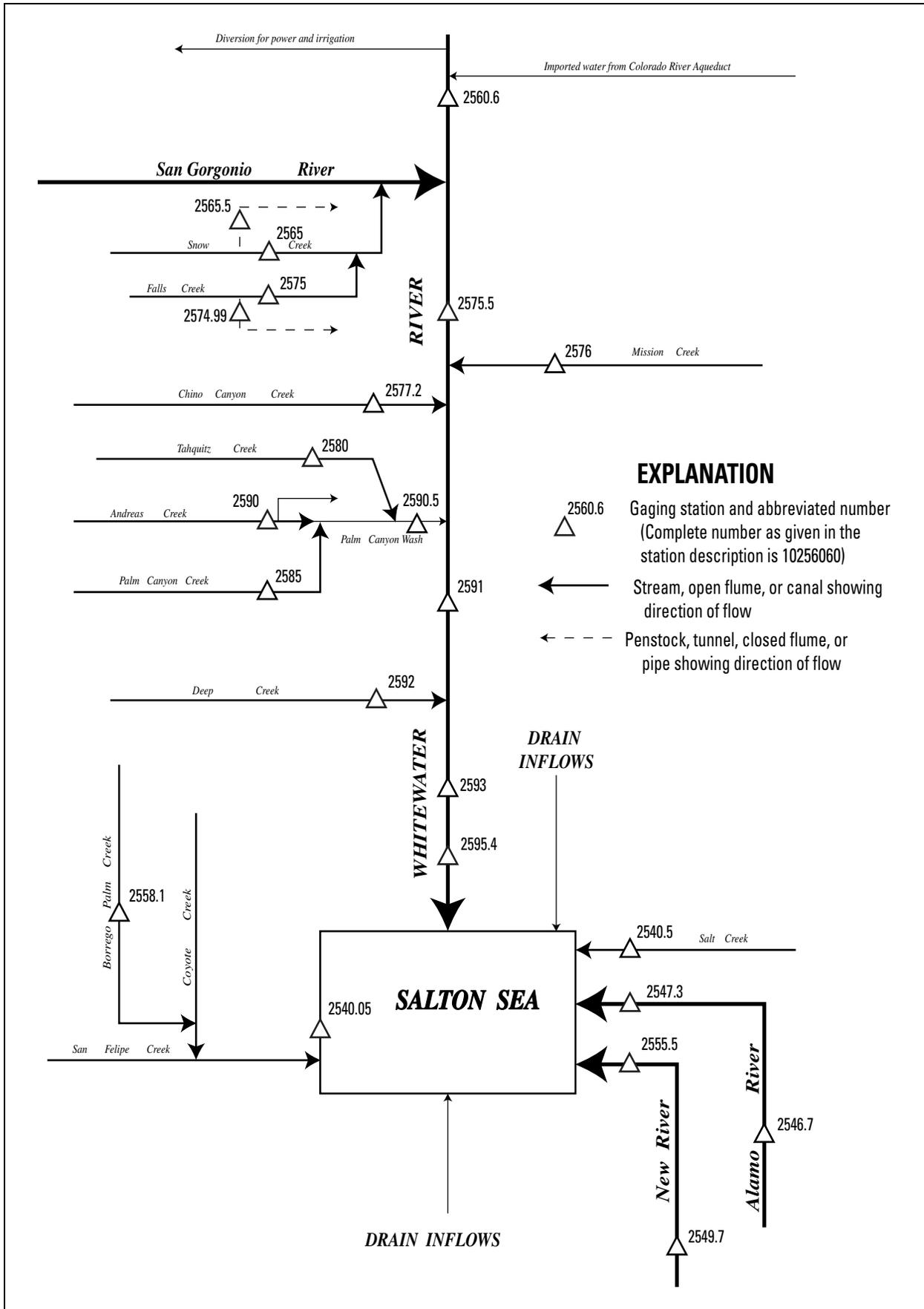


Figure 13. Diversions and storage in Salton Sea Basin.

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	16	32	37	44	43	36	42	35	23	21	18	8
New River	9,170	10,070	11,180	11,800	11,320	12,390	12,310	11,270	8,700	8,160	8,550	8,270
CAL YR 2001:	Alamo River		1,620 acre-ft			WTR YR 2002:		355 acre-ft				
CAL YR 2001:	New River		145,500 acre-ft			WTR YR 2002:		123,200 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 mi².

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 sea level, from topographic map. Prior to Dec. 21, 1984, at same site, at datum 2.50 ft lower.

REMARKS.—Records fair above 1 ft³/s and poor below. No regulation or diversion upstream from station. No discharge records computed above 20 ft³/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 ft³/s, Sept. 24, 1976, gage height, 16.8 ft, present datum, from floodmarks, from rating curve extended above 20 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.47	1.8	1.7	1.9	1.7	0.53	0.00	0.00	0.00	0.00
2	0.00	0.00	0.56	1.8	1.8	1.8	1.7	0.45	0.00	0.00	0.00	0.00
3	0.00	0.00	0.66	1.8	2.0	1.7	1.6	0.39	0.00	0.00	0.00	0.00
4	0.00	0.00	0.73	1.8	2.0	1.7	1.4	0.39	0.00	0.00	0.00	0.00
5	0.00	0.00	0.71	1.8	2.1	1.8	1.3	0.37	0.00	0.00	0.00	0.00
6	0.00	0.00	0.72	1.7	2.1	2.0	1.3	0.33	0.00	0.00	0.00	0.00
7	0.00	0.00	0.78	1.7	2.0	2.1	1.3	0.30	0.00	0.00	0.00	0.00
8	0.00	0.00	0.80	1.8	2.1	2.2	1.4	0.24	0.00	0.00	0.00	0.00
9	0.00	0.00	0.85	1.9	2.1	2.1	1.4	0.21	0.00	0.00	0.00	0.00
10	0.00	0.00	0.87	1.9	2.1	2.0	1.3	0.15	0.00	0.00	0.00	0.00
11	0.00	0.00	0.89	1.9	2.0	2.0	1.3	0.06	0.00	0.00	0.00	0.00
12	0.00	0.00	0.89	1.7	1.9	2.1	1.3	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.89	1.7	2.1	2.1	1.1	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.97	1.8	2.2	2.1	1.1	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	1.1	1.8	2.2	2.0	0.99	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	1.1	2.1	2.1	1.8	0.87	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	1.0	2.1	2.1	1.8	0.79	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	1.1	2.0	2.2	1.9	0.70	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	1.2	2.0	2.2	2.0	0.66	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	1.3	2.0	2.1	2.0	0.67	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	1.4	2.1	2.1	2.0	0.63	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	1.4	2.0	2.1	2.0	0.57	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	1.4	2.1	2.1	2.0	0.55	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	1.5	1.9	2.1	1.9	0.56	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	1.5	1.4	2.1	1.8	0.64	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	1.5	1.3	2.0	1.8	0.75	0.00	0.00	0.00	0.00	0.00
27	0.00	0.01	1.5	1.6	2.0	1.8	0.85	0.00	0.00	0.00	0.00	0.00
28	0.00	0.16	1.6	1.7	2.0	1.8	0.74	0.00	0.00	0.00	0.00	0.00
29	0.00	0.25	1.7	1.8	---	1.8	0.64	0.00	0.00	0.00	0.00	0.00
30	0.00	0.34	1.7	1.8	---	1.8	0.57	0.00	0.00	0.00	0.00	0.00
31	0.00	---	1.7	1.8	---	1.7	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.76	34.49	56.6	57.6	59.5	30.38	3.42	0.00	0.00	0.00	0.00
MEAN	0.000	0.025	1.113	1.826	2.057	1.919	1.013	0.110	0.000	0.000	0.000	0.000
MAX	0.00	0.34	1.7	2.1	2.2	2.2	1.7	0.53	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.47	1.3	1.7	1.7	0.55	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	1.5	68	112	114	118	60	6.8	0.00	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

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 current year. 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 sea level, from topographic map.

REMARKS.—Records excellent below 950 ft³/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 ft³/s, Mar. 27, 1992, gage height, 6.56 ft, from rating curve extended above 1,000 ft³/s, maximum gage height, 7.20 ft, Jan. 17, 1993 (affected by backwater); minimum daily, 259 ft³/s, Jan. 2, 1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	759	796	724	460	635	802	817	946	891	743	839	848
2	768	749	684	418	623	807	860	957	825	760	865	822
3	765	758	645	488	610	780	899	919	822	779	829	818
4	784	766	606	598	556	695	930	892	804	752	786	790
5	827	746	622	603	575	703	947	915	757	759	738	769
6	855	709	668	574	598	794	919	879	781	798	787	786
7	826	713	678	558	580	827	886	894	808	795	830	764
8	846	727	669	578	596	851	828	914	821	745	819	765
9	830	776	666	624	583	769	809	919	761	777	824	786
10	858	809	599	624	587	760	870	851	805	818	844	782
11	858	769	605	590	591	675	887	860	773	806	834	786
12	825	735	621	578	589	694	898	889	786	831	771	819
13	813	722	589	577	636	761	925	837	824	793	706	775
14	841	763	610	518	689	815	896	879	791	791	834	701
15	815	789	663	617	743	822	866	885	785	830	799	670
16	794	780	619	647	709	806	878	901	708	861	802	640
17	801	740	564	651	706	829	927	912	641	870	835	641
18	857	741	580	673	653	819	941	927	658	822	855	703
19	843	707	638	642	665	806	934	886	731	826	785	748
20	856	746	682	629	672	866	944	854	726	822	699	743
21	856	743	660	554	705	921	937	823	728	792	759	791
22	802	705	672	561	738	937	894	833	748	780	754	844
23	819	624	619	597	802	886	835	851	772	741	781	835
24	877	621	565	630	754	878	870	899	726	787	780	793
25	816	647	459	661	707	791	948	900	710	790	759	818
26	785	609	374	653	795	731	970	854	777	839	741	855
27	787	614	507	590	830	834	952	838	747	841	768	869
28	806	644	593	556	811	886	942	822	708	840	754	842
29	745	692	566	596	---	920	885	874	745	804	746	839
30	782	722	607	621	---	907	918	875	711	810	810	855
31	782	---	560	637	---	904	---	884	---	839	809	---
TOTAL	25278	21662	18914	18303	18738	25276	27012	27369	22870	24841	24542	23497
MEAN	815.4	722.1	610.1	590.4	669.2	815.4	900.4	882.9	762.3	801.3	791.7	783.2
MAX	877	809	724	673	830	937	970	957	891	870	865	869
MIN	745	609	374	418	556	675	809	822	641	741	699	640
AC-FT	50140	42970	37520	36300	37170	50130	53580	54290	45360	49270	48680	46610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	
MEAN	781.4	668.9	555.3	532.3	605.7	814.6	949.2	847.9	712.0	711.5	710.0	732.3												
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1980 - 2002
ANNUAL TOTAL	269993	278302	
ANNUAL MEAN	739.7	762.5	718.8
HIGHEST ANNUAL MEAN			833
LOWEST ANNUAL MEAN			628
HIGHEST DAILY MEAN	979	Apr 13	4670
LOWEST DAILY MEAN	348	Mar 3	259
ANNUAL SEVEN-DAY MINIMUM	383	Mar 1	277
MAXIMUM PEAK FLOW		1010	5980
MAXIMUM PEAK STAGE		2.57	7.20
ANNUAL RUNOFF (AC-FT)	535500	552000	520700
10 PERCENT EXCEEDS	895	891	920
50 PERCENT EXCEEDS	775	785	711
90 PERCENT EXCEEDS	512	599	520

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 sea level, from topographic map. Prior to Oct. 1, 1986, at site 0.4 mi downstream at different datum.

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, 4,500 ft³/s, Aug. 17, 1977, estimated, by Imperial Irrigation District; minimum daily, 288 ft³/s, Jan. 2, 1966, Dec. 15, 1984.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	931	926	848	542	703	924	971	1160	1070	908	1060	988
2	946	882	799	469	706	911	990	1170	1050	910	1090	961
3	927	873	765	548	689	918	1070	1110	1040	925	1040	954
4	959	866	723	683	623	847	1140	1070	1030	910	1020	966
5	972	850	724	686	628	818	1180	1080	990	903	951	940
6	993	826	724	654	654	911	1160	1030	1000	927	973	966
7	987	832	766	627	656	981	1100	1050	1000	930	1020	960
8	993	836	717	638	662	1000	1040	1090	1010	928	1030	959
9	1010	887	731	738	623	909	990	1120	956	959	1050	959
10	1010	930	683	735	633	887	1020	1070	959	1000	1020	940
11	1000	875	716	685	638	803	1070	1040	945	1000	1020	1030
12	989	837	740	653	666	796	1070	1060	990	996	950	926
13	984	835	693	656	742	872	1130	990	1020	989	892	883
14	994	881	674	574	807	962	1080	1040	1010	962	1040	796
15	975	915	740	657	848	990	1020	1060	978	969	1030	735
16	957	910	699	716	820	988	1030	1100	936	970	998	700
17	946	864	645	732	830	996	1080	1110	808	1010	1030	697
18	977	840	650	797	762	982	1120	1120	793	999	1060	783
19	984	813	734	763	768	939	1140	1080	858	985	1020	845
20	995	836	806	718	782	969	1130	1020	876	994	915	863
21	1010	850	777	628	804	1050	1160	990	891	967	955	910
22	938	814	757	617	835	1100	1080	1010	898	940	950	968
23	923	705	705	679	912	1100	990	1010	953	902	971	964
24	1000	681	622	719	906	1090	1040	1050	928	940	975	911
25	968	734	528	729	836	1010	1130	1090	896	952	907	953
26	901	690	426	747	909	934	1190	1020	948	998	896	977
27	912	682	528	661	958	1030	1180	980	930	1020	910	978
28	891	748	649	601	928	1110	1150	978	856	1040	919	944
29	818	790	636	642	---	1120	1070	1030	889	1010	914	926
30	872	813	683	683	---	1100	1120	1040	898	998	974	984
31	938	---	650	691	---	1080	---	1060	---	1030	964	---
TOTAL	29700	24821	21538	20668	21328	30127	32641	32828	28406	29971	30544	27366
MEAN	958.1	827.4	694.8	666.7	761.7	971.8	1088	1059	946.9	966.8	985.3	912.2
MAX	1010	930	848	797	958	1120	1190	1170	1070	1040	1090	1030
MIN	818	681	426	469	623	796	971	978	793	902	892	697
AC-FT	58910	49230	42720	40990	42300	59760	64740	65110	56340	59450	60580	54280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002, BY WATER YEAR (WY)

MEAN	942.6	763.8	645.3	640.9	755.4	970.1	1091	972.5	836.0	840.7	848.9	902.0
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002	
ANNUAL TOTAL	327305		329938			
ANNUAL MEAN	896.7		903.9		851.0	
HIGHEST ANNUAL MEAN					991	
LOWEST ANNUAL MEAN					680	
HIGHEST DAILY MEAN	1230		Apr 22		1190	
LOWEST DAILY MEAN	400		Jan 14		426	
ANNUAL SEVEN-DAY MINIMUM	432		Jan 9		582	
ANNUAL RUNOFF (AC-FT)	649200		654400		616500	
10 PERCENT EXCEEDS	1120		1070		1110	
50 PERCENT EXCEEDS	944		939		847	
90 PERCENT EXCEEDS	591		682		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 sea level, from topographic map.

REMARKS.—Records good except for discharges below 150 ft³/s and estimated daily discharges, which are poor. Discharge represents seepage and return flow from irrigated areas. See schematic diagram of [Salton Sea Basin](#).

COOPERATION.—Gage height record provided by Imperial Irrigation District for the following dates: Oct. 26 and Nov. 1, 2001.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 833 ft³/s, Dec. 9, 1982, Sept. 25, 1997, gage height, 14.73 ft; minimum daily, 50 ft³/s, estimated, Oct. 29, 2001.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	326	148	189	198	192	216	225	153	140	133	149
2	158	240	147	195	200	182	224	218	147	152	131	144
3	158	179	146	209	197	175	220	217	145	148	127	145
4	158	166	150	209	198	180	206	211	147	137	135	141
5	160	171	153	202	212	188	195	209	153	136	147	136
6	149	170	150	189	218	197	193	210	152	134	146	134
7	150	169	144	184	217	207	190	211	158	132	135	130
8	182	168	151	192	211	204	192	207	157	130	128	131
9	184	168	153	194	203	195	197	213	148	137	142	135
10	170	169	155	182	196	196	202	196	144	137	149	154
11	163	167	163	178	194	199	202	176	148	139	148	157
12	159	169	161	176	199	216	207	172	152	138	141	155
13	155	166	154	172	205	230	212	173	149	139	142	155
14	159	170	154	172	215	228	214	180	142	136	143	153
15	173	170	166	180	210	221	212	192	146	135	147	145
16	176	181	177	180	206	214	219	187	146	129	149	142
17	171	176	182	179	196	207	227	185	147	125	146	137
18	159	156	198	180	201	211	212	174	147	124	136	133
19	e100	153	206	185	210	230	200	166	144	124	135	130
20	210	155	206	193	214	243	194	162	143	123	140	126
21	161	154	206	195	207	223	187	154	147	123	140	123
22	157	152	207	199	198	213	192	156	145	121	131	126
23	e110	148	207	197	205	209	200	154	145	100	135	142
24	e60	157	206	196	206	192	198	163	140	119	132	144
25	e120	147	205	205	201	186	207	168	146	172	128	143
26	282	145	226	205	202	184	212	173	144	144	128	141
27	e110	149	253	204	195	185	217	177	137	134	132	132
28	e60	148	239	207	192	184	215	175	138	126	134	128
29	e50	146	219	207	---	179	215	167	137	123	141	125
30	e60	143	206	197	---	183	228	154	138	127	153	134
31	e200	---	196	196	---	195	---	156	---	128	156	---
TOTAL	4623	5078	5634	5948	5706	6248	6205	5681	4385	4112	4310	4170
MEAN	149.1	169.3	181.7	191.9	203.8	201.5	206.8	183.3	146.2	132.6	139.0	139.0
MAX	282	326	253	209	218	243	228	225	158	172	156	157
MIN	50	143	144	172	192	175	187	154	137	100	127	123
AC-FT	9170	10070	11180	11800	11320	12390	12310	11270	8700	8160	8550	8270

e Estimated.

SALTON SEA BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	217.9	211.0	250.5	255.0	262.1	278.7	282.1	257.2	216.8	223.8	252.9	233.6
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	162	179	190	188	177	146	133	139	139
(WY)	1997	1997	1997	1996	1991	1995	1996	1990	2002	2002	1996	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002	
ANNUAL TOTAL	73338		62100			
ANNUAL MEAN	200.9		170.1		245.1	
HIGHEST ANNUAL MEAN					362 1986	
LOWEST ANNUAL MEAN					170 2002	
HIGHEST DAILY MEAN	493	Mar 2	326	Nov 1	735	Dec 9 1982
LOWEST DAILY MEAN	50	Oct 29	e50	Oct 29	e50	Oct 29 2001
ANNUAL SEVEN-DAY MINIMUM	106	Oct 24	106	Oct 24	99	Nov 23 1996
MAXIMUM PEAK FLOW			442	Oct 31	833	Dec 9 1982
MAXIMUM PEAK STAGE			11.89	Oct 31	14.73	Dec 9 1982
ANNUAL RUNOFF (AC-FT)	145500		123200		177600	
10 PERCENT EXCEEDS	264		212		358	
50 PERCENT EXCEEDS	181		167		227	
90 PERCENT EXCEEDS	152		132		157	

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 sea level, 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 ft³/s, Aug. 17, 18, 1977, estimated, by Imperial Irrigation District; minimum daily, 150 ft³/s, Mar. 7, 1945.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	604	521	519	484	552	679	694	714	716	573	622	622
2	589	602	516	459	538	670	668	724	670	564	670	591
3	589	690	511	487	530	687	708	746	660	539	657	579
4	597	621	489	561	531	643	784	702	635	568	617	567
5	612	573	472	561	547	624	774	713	578	542	568	592
6	593	582	498	510	575	618	780	736	606	565	591	606
7	564	610	516	508	585	623	745	746	620	586	580	591
8	540	565	526	534	592	633	714	738	689	600	592	580
9	528	574	501	459	556	630	743	747	659	624	623	568
10	568	582	500	482	542	625	756	733	649	633	618	583
11	595	571	484	467	554	613	782	734	676	646	656	558
12	596	533	497	461	545	639	752	740	677	642	641	549
13	635	525	492	503	569	645	782	710	666	654	632	558
14	627	521	505	525	587	672	765	688	595	641	656	557
15	598	500	503	504	590	716	735	673	552	622	650	548
16	614	495	507	513	613	758	716	671	588	581	623	519
17	607	506	493	518	594	749	749	708	605	575	655	512
18	642	522	514	557	579	686	787	716	579	587	658	565
19	665	530	510	559	570	731	763	734	569	592	618	571
20	641	508	522	564	572	705	709	727	556	640	605	556
21	598	485	541	545	625	715	717	691	571	632	572	569
22	627	494	545	531	652	770	733	680	587	650	592	563
23	591	483	536	535	656	773	746	633	591	613	567	607
24	575	489	520	550	633	710	732	655	562	574	541	622
25	551	510	503	545	668	675	741	658	549	541	541	600
26	502	495	477	519	696	674	762	684	592	577	562	613
27	590	488	492	520	701	667	736	688	595	628	568	625
28	691	489	540	515	717	692	722	649	571	597	570	582
29	590	509	572	531	---	717	734	694	567	617	564	558
30	515	544	584	555	---	715	739	682	557	606	596	585
31	490	---	544	552	---	723	---	705	---	605	595	---
TOTAL	18324	16117	15929	16114	16669	21177	22268	21819	18287	18614	18800	17296
MEAN	591.1	537.2	513.8	519.8	595.3	683.1	742.3	703.8	609.6	600.5	606.5	576.5
MAX	691	690	584	564	717	773	787	747	716	654	670	625
MIN	490	483	472	459	530	613	668	633	549	539	541	512
AC-FT	36350	31970	31600	31960	33060	42000	44170	43280	36270	36920	37290	34310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2002, BY WATER YEAR (WY)

MEAN	640.6	563.2	546.7	561.9	598.1	680.9	730.6	666.1	593.7	597.6	614.1	618.0
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1943 - 2002	
ANNUAL TOTAL	231118		221414			
ANNUAL MEAN	633.2		606.6		617.3	
HIGHEST ANNUAL MEAN					741	
LOWEST ANNUAL MEAN					484	
HIGHEST DAILY MEAN	885		787		e3000	
LOWEST DAILY MEAN	467		459		150	
ANNUAL SEVEN-DAY MINIMUM	492		486		284	
ANNUAL RUNOFF (AC-FT)	458400		439200		447200	
10 PERCENT EXCEEDS	787		729		762	
50 PERCENT EXCEEDS	619		592		607	
90 PERCENT EXCEEDS	513		508		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 mi².

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 sea level, 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, 2,640 ft³/s, Aug. 16, 1979, gage height, 9.8 ft, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15 ft³/s, or maximum, from rating curve extended above 72 ft³/s on basis of slope-area measurements at gage heights 7.50 and 9.80 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 21	0415	0.93	2.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.28	0.37	0.28	0.23	0.09	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.28	0.37	0.28	0.21	0.09	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.29	0.35	0.28	0.19	0.09	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.31	0.34	0.29	0.18	0.09	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.33	0.35	0.30	0.17	0.09	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.33	0.35	0.30	0.17	0.08	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.31	0.35	0.31	0.16	0.08	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.33	0.35	0.34	0.17	0.08	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.33	0.35	0.34	0.16	0.08	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.33	0.35	0.32	0.15	0.07	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.33	0.35	0.30	0.15	0.07	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.33	0.36	0.29	0.18	0.07	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.33	0.36	0.29	0.19	0.07	0.00	0.00	0.00	0.00
14	0.00	0.00	0.03	0.33	0.38	0.30	0.19	0.06	0.00	0.00	0.00	0.00
15	0.00	0.00	0.09	0.34	0.38	0.30	0.18	0.06	0.00	0.00	0.00	0.00
16	0.00	0.00	0.11	0.35	0.38	0.35	0.17	0.06	0.00	0.00	0.00	0.00
17	0.00	0.00	0.14	0.37	0.41	0.41	0.16	0.06	0.00	0.00	0.00	0.00
18	0.00	0.00	0.17	0.38	0.43	0.76	0.15	0.05	0.00	0.00	0.00	0.00
19	0.00	0.00	0.20	0.40	0.39	0.52	0.15	0.05	0.00	0.00	0.00	0.00
20	0.00	0.00	0.22	0.40	0.36	0.41	0.14	0.05	0.00	0.00	0.00	0.00
21	0.00	0.00	0.31	0.42	0.34	0.33	0.15	0.05	0.00	0.00	0.00	0.00
22	0.00	0.00	0.27	0.42	0.34	0.29	0.12	0.05	0.00	0.00	0.00	0.00
23	0.00	0.00	0.26	0.40	0.33	0.28	0.13	0.04	0.00	0.00	0.00	0.00
24	0.00	0.00	0.27	0.40	0.31	0.28	0.13	0.04	0.00	0.00	0.00	0.00
25	0.00	0.00	0.28	0.40	0.30	0.28	0.11	0.03	0.00	0.00	0.00	0.00
26	0.00	0.00	0.28	0.39	0.29	0.24	0.12	0.02	0.00	0.00	0.00	0.00
27	0.00	0.00	0.28	0.37	0.29	0.22	0.11	0.02	0.00	0.00	0.00	0.00
28	0.00	0.00	0.28	0.38	0.28	0.21	0.11	0.0	0.00	0.00	0.00	0.00
29	0.00	0.00	0.28	0.38	---	0.21	0.09	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.27	0.39	---	0.21	0.09	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.28	0.37	---	0.23	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	4.02	11.00	9.81	9.75	4.61	1.69	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.130	0.355	0.350	0.315	0.154	0.055	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.31	0.42	0.43	0.76	0.23	0.09	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.28	0.28	0.21	0.09	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	8.0	22	19	19	9.1	3.4	0.00	0.00	0.00	0.00

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.162	0.319	0.774	1.664	2.807	2.977	1.618	0.675	0.228	0.187	0.446	0.146
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1951 - 2002
ANNUAL TOTAL	93.06	40.88	
ANNUAL MEAN	0.255	0.112	0.991
HIGHEST ANNUAL MEAN			7.61 1980
LOWEST ANNUAL MEAN			0.009 1972
HIGHEST DAILY MEAN	7.7 Feb 27	0.76 Mar 18	277 Aug 16 1979
LOWEST DAILY MEAN	0.00 May 22	0.00 Oct 1	0.00 Oct 1 1950
ANNUAL SEVEN-DAY MINIMUM	0.00 May 22	0.00 Oct 1	0.00 Oct 1 1950
MAXIMUM PEAK FLOW		0.93 Feb 21	2640 Aug 16 1979
MAXIMUM PEAK STAGE		2.21 Feb 21	9.80 Aug 16 1979
ANNUAL RUNOFF (AC-FT)	185	81	718
10 PERCENT EXCEEDS	0.68	0.35	2.0
50 PERCENT EXCEEDS	0.00	0.00	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 mi².

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS NONCARB DISSOLV PLD. AS CACO3 (MG/L) (00904)	HARDNESS TOTAL (MG/L) CACO3 (00900)	CALCIUM DIS-SOLVED (MG/L) AS CA (00915)	MAGNESIUM, DIS-SOLVED (MG/L) AS MG (00925)	
NOV 05...	0945	3.4	8.5	380	20.5	10	180	51.0	12.5	
Date	Time	POTASSIUM, DIS-SOLVED (MG/L) AS K (00935)	SODIUM AD-SORPTION RATIO (00931)	SODIUM DIS-SOLVED (MG/L) AS NA (00930)	SODIUM PERCENT CACO3 (00932)	ALKALINITY WATER TOTAL FIELD (MG/L) AS CACO3 (39086)	BICARBONATE WATER DIS-SOLVED FIELD (MG/L) AS HCO3 (00453)	CARBONATE WATER DIS-SOLVED FIELD (MG/L) AS CO3 (00452)	CHLORIDE, DIS-SOLVED (MG/L) AS BR (71870)	CHLORIDE, DIS-SOLVED (MG/L) AS CL (00940)
NOV 05...	4.39	.5	14.9	15	169	202	2	e.03	3.81	
Date	Time	FLUORIDE, DIS-SOLVED (MG/L) AS F (00950)	SILICA, DIS-SOLVED (MG/L) AS SiO2 (00955)	SULFATE DIS-SOLVED (MG/L) AS SO4 (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L) AS N (00608)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L) AS N (00623)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L) AS N (00631)
NOV 05...	1.1	16.0	32.1	.31	230	238	<.04	e.05	.32	
Date	Time	NITRITE DIS-SOLVED (MG/L) AS N (00613)	PHOSPHORUS DIS-SOLVED (MG/L) AS P (00666)	ORTHOPHOSPHATE, DIS-SOLVED (MG/L) AS P (00671)	CARBON, ORGANIC TOTAL (MG/L) AS C (00680)	ARSENIC DIS-SOLVED (UG/L) AS AS (01000)	BORON, DIS-SOLVED (UG/L) AS B (01020)	IRON, DIS-SOLVED (UG/L) AS FE (01046)	MANGANESE, DIS-SOLVED (UG/L) AS MN (01056)	
NOV 05...		<.008	<.06	<.02	1.1	<2	10	<10	e1.1	

e Estimated.

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

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 Gorgonio River.

DRAINAGE AREA.—59.1 mi².

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 sea level, 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 Gorgonio 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 ft³/s, Feb. 15, 1986, gage height, 11.97 ft, from rating curve extended above 900 ft³/s; no flow for many days in some years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Discharge (ft ³ /s)
Oct. 2	1225	3.0
Oct. 24	1140	2.2
Dec. 4	1050	2.6
Jan. 9	1500	3.6
Feb. 12	1100	3.2
Mar. 5	1455	3.7
Apr. 3	1055	2.4
May 7	1540	2.1
June 11	0915	2.0
July 10	0855	.63
Aug. 6	1455	1.7
Sept. 4	1550	1.9

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 mi².

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 sea level, 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. 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 ft³/s, Jan. 25, 1969, gage height, 13.8 ft, from floodmarks, site and datum then in use, from rating curve extended above 55 ft³/s, on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft³/s, June 23–27, Sept. 5–11, 1961.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 29.9 ft³/s, on basis of broad-crested weir computations:

Date	Time	Creek only		Combined creek and diversion
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)
Dec. 16	0945	13	2.82	13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.67	0.35	4.1	4.4	1.9	0.75	0.09	1.2	0.73	0.50	0.50	0.82
2	0.68	0.36	4.0	4.2	0.47	1.2	0.08	1.3	0.81	0.43	0.40	0.84
3	0.75	0.35	4.0	4.3	0.47	0.88	0.09	1.2	0.88	0.45	0.43	0.84
4	0.54	0.41	4.1	4.3	0.46	0.25	0.08	1.2	0.80	0.47	0.44	0.89
5	0.13	0.50	4.1	4.3	0.45	0.25	0.10	1.2	0.74	0.53	0.48	2.0
6	0.15	0.37	2.7	4.2	0.43	0.49	0.10	1.1	0.70	0.53	0.54	2.8
7	0.19	0.36	0.87	2.0	0.43	4.2	0.12	0.73	0.67	0.51	0.53	2.8
8	0.21	0.33	0.85	0.59	0.43	4.5	0.11	0.27	0.70	0.48	0.49	1.8
9	0.23	0.33	0.84	0.59	0.40	4.1	0.08	0.23	0.76	0.46	0.45	0.48
10	0.16	0.35	0.84	0.56	0.39	3.9	0.05	0.18	0.67	0.51	0.41	0.50
11	0.12	0.37	0.87	0.52	0.41	1.6	0.17	0.22	0.68	0.61	0.43	0.47
12	0.11	0.38	0.84	0.49	0.41	0.20	0.43	0.18	0.64	0.48	0.46	0.45
13	0.12	0.48	0.64	0.47	0.40	0.17	0.39	0.15	0.63	0.49	0.44	0.42
14	0.11	0.42	2.2	0.46	0.41	0.28	0.31	0.11	0.59	0.50	1.1	0.39
15	0.11	0.42	3.9	0.47	0.43	0.30	0.32	0.11	0.54	0.59	0.43	0.38
16	0.11	0.42	3.8	0.47	0.42	2.1	0.43	0.15	0.52	0.55	0.48	0.38
17	0.11	0.43	1.7	0.45	2.1	3.8	0.42	0.18	0.48	0.54	0.55	0.43
18	0.12	0.43	0.42	0.44	3.8	3.9	0.40	0.18	0.45	0.56	0.60	0.44
19	1.5	0.42	0.42	0.42	4.1	2.4	0.47	0.19	0.50	0.55	0.70	0.40
20	2.9	0.43	1.6	0.40	2.3	0.34	0.45	0.22	0.52	0.53	0.72	0.33
21	2.9	0.36	4.5	0.41	0.62	0.29	0.43	0.22	0.58	0.54	0.78	0.32
22	1.2	0.39	4.1	0.40	0.58	0.23	0.36	0.21	0.55	0.53	0.78	0.29
23	0.21	0.54	4.0	0.37	0.54	0.25	0.34	0.21	0.53	0.58	0.72	0.28
24	0.21	2.7	3.9	0.38	0.58	0.38	1.7	0.18	0.53	0.57	0.71	0.30
25	0.23	6.5	3.9	0.37	0.54	0.35	3.5	0.17	0.51	0.51	0.72	0.31
26	0.22	4.5	3.8	0.37	0.66	0.28	3.6	0.17	0.47	0.48	0.70	0.31
27	0.23	4.1	3.3	0.35	0.76	0.24	3.7	0.18	0.49	0.50	0.69	0.32
28	0.28	4.1	3.9	2.7	0.75	0.26	3.6	0.28	0.52	0.52	0.75	0.48
29	0.30	3.6	3.9	4.0	---	0.23	2.1	0.24	0.54	0.49	0.76	0.52
30	0.28	4.1	4.4	3.8	---	0.17	1.2	0.38	0.53	0.46	0.75	0.58
31	0.31	---	4.5	3.8	---	0.11	---	0.74	---	0.50	0.77	---
TOTAL	15.39	38.80	86.99	50.98	25.64	38.40	25.22	13.28	18.26	15.95	18.71	21.57
MEAN	0.496	1.293	2.806	1.645	0.916	1.239	0.841	0.428	0.609	0.515	0.604	0.719
MAX	2.9	6.5	4.5	4.4	4.1	4.5	3.7	1.3	0.88	0.61	1.1	2.8
MIN	0.11	0.33	0.42	0.35	0.39	0.11	0.05	0.11	0.45	0.43	0.40	0.28
AC-FT	31	77	173	101	51	76	50	26	36	32	37	43

10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.076	3.283	5.186	13.29	20.33	15.57	10.37	10.51	6.114	3.455	2.774	2.139
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1979 - 2002	
ANNUAL TOTAL	595.93		369.19			
ANNUAL MEAN	1.633		1.011		7.858	
HIGHEST ANNUAL MEAN					28.4	
LOWEST ANNUAL MEAN					1.01	
HIGHEST DAILY MEAN	14	Jan 11	6.5	Nov 25	909	Jan 7 1993
LOWEST DAILY MEAN	0.00	Jun 7	0.05	Apr 10	0.00	Nov 8 1978
ANNUAL SEVEN-DAY MINIMUM	0.01	Jun 5	0.09	Apr 4	0.00	Oct 5 1979
MAXIMUM PEAK FLOW			13		1910	
MAXIMUM PEAK STAGE			2.82		7.35	
ANNUAL RUNOFF (AC-FT)	1180		732		5690	
10 PERCENT EXCEEDS	4.3		3.8		18	
50 PERCENT EXCEEDS	0.58		0.49		2.8	
90 PERCENT EXCEEDS	0.15		0.18		0.20	

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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	3.5	4.1	4.4	3.7	4.3	3.5	e3.9	3.4	2.8	2.8	3.0
2	e3.2	e3.6	4.0	4.2	3.7	4.8	3.4	e4.0	3.5	2.7	2.7	3.0
3	3.2	e3.5	4.0	4.3	3.8	4.5	3.6	e3.9	3.4	2.8	2.7	3.0
4	e3.0	e3.6	4.1	4.3	4.0	3.9	3.6	e3.9	3.3	2.8	2.7	3.1
5	3.1	e3.6	4.1	4.3	3.8	3.9	3.6	e3.9	3.2	2.8	2.8	2.9
6	3.0	3.6	4.2	4.2	3.7	3.8	3.4	3.6	3.2	2.8	2.8	2.8
7	3.3	3.9	4.2	4.1	3.6	4.2	3.5	e3.4	3.0	2.8	2.8	2.8
8	3.3	3.8	e4.2	e4.2	e3.6	4.5	3.5	e3.0	3.2	2.8	2.8	2.7
9	e3.2	3.8	e4.2	e4.2	3.6	4.1	3.7	3.1	3.1	2.8	2.8	2.7
10	3.1	3.9	e4.2	4.2	3.6	3.9	3.6	2.9	3.1	2.8	2.7	2.7
11	3.1	3.8	e4.3	3.8	3.7	3.8	3.8	2.9	3.0	2.9	2.7	2.7
12	3.0	4.0	e4.2	4.1	3.6	3.8	3.7	2.7	3.0	2.8	2.8	2.6
13	e3.0	4.1	e4.0	4.0	e3.6	3.8	3.7	3.0	3.0	2.8	2.7	2.6
14	2.9	4.0	4.0	4.1	3.6	3.9	3.7	2.8	2.9	2.7	2.7	2.6
15	3.1	4.0	3.9	4.1	3.6	3.9	3.7	2.8	2.8	2.9	2.7	2.6
16	e3.1	4.0	3.8	4.1	e3.6	3.8	3.6	2.9	2.9	2.9	2.8	2.6
17	e3.1	4.0	3.7	4.0	e3.8	3.8	3.6	2.9	2.8	2.8	2.9	2.6
18	e3.1	e4.0	3.6	4.0	3.8	3.9	3.6	3.0	2.8	2.9	2.8	2.4
19	2.9	e4.0	3.7	4.0	4.1	3.8	3.9	3.1	2.8	2.9	2.9	2.5
20	2.9	3.9	3.7	3.9	4.2	3.6	3.9	3.1	2.8	2.8	3.0	2.4
21	2.9	4.0	4.5	3.9	4.1	3.7	3.8	3.0	2.9	2.8	3.1	2.4
22	3.0	4.0	4.1	e4.0	4.1	3.5	e3.6	3.0	2.9	2.8	3.1	2.4
23	3.1	4.1	4.0	e4.0	4.0	e3.5	3.4	3.0	2.8	2.9	e2.9	2.4
24	3.4	5.0	3.9	e4.0	4.0	3.6	3.6	2.9	2.8	2.9	2.8	2.4
25	3.2	6.5	3.9	4.0	4.1	3.5	3.5	3.1	2.8	2.8	2.9	2.4
26	e3.2	4.5	3.8	3.9	4.3	3.6	3.6	2.9	2.8	2.8	2.9	2.4
27	3.0	4.1	e4.0	e3.9	4.4	3.5	3.7	3.0	2.8	2.8	2.9	2.4
28	3.5	4.1	3.9	e4.1	4.3	3.7	3.6	3.0	2.9	2.8	3.0	2.6
29	3.2	e4.1	3.9	4.0	---	3.6	3.8	2.9	2.9	2.8	3.1	2.6
30	3.3	4.1	4.4	3.8	---	3.5	e3.9	3.1	2.8	2.8	3.0	2.7
31	e3.4	---	4.5	3.8	---	3.5	---	3.4	---	2.8	3.0	---
TOTAL	97.0	121.1	125.1	125.9	108.0	119.2	109.1	98.1	89.6	87.3	88.3	79.0
MEAN	3.129	4.037	4.035	4.061	3.857	3.845	3.637	3.165	2.987	2.816	2.848	2.633
MAX	3.5	6.5	4.5	4.4	4.4	4.8	3.9	4.0	3.5	2.9	3.1	3.1
MIN	2.9	3.5	3.6	3.8	3.6	3.5	3.4	2.7	2.8	2.7	2.7	2.4
AC-FT	192	240	248	250	214	236	216	195	178	173	175	157

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

MEAN	4.719	7.163	10.12	14.43	15.95	13.91	12.34	12.50	9.079	6.149	5.240	5.230
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	2.76	2.75	3.11	3.30	3.40	3.39	3.16	2.55	2.35	2.31	2.35	2.40
(WY)	1962	1963	1963	1961	1961	1961	1961	1961	1961	1961	1960	1961

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1921 - 2002

ANNUAL TOTAL	1581.4	1247.7		
ANNUAL MEAN	4.333	3.418	9.829	
HIGHEST ANNUAL MEAN			33.0	1969
LOWEST ANNUAL MEAN			2.96	1961
HIGHEST DAILY MEAN	14	Jan 11	3490	Jan 25 1969
LOWEST DAILY MEAN	2.3	Sep 24	2.1	Jun 23 1961
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 22	2.1	Sep 5 1961
MAXIMUM PEAK FLOW			13	Dec 16
MAXIMUM PEAK STAGE			9900	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	3140	2470	13.80	Jan 25 1969
10 PERCENT EXCEEDS	6.6	4.1	16	
50 PERCENT EXCEEDS	4.0	3.5	5.6	
90 PERCENT EXCEEDS	3.0	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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
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NOV 05... 1215 2.6 7.9 106 15.0 34 12.3 .902 1.74

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ALKA-LINITY WAT TOT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
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NOV 05... .7 9.87 37 52 64 e.02 1.31 e.1 18.8

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
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NOV 05... 1.3 .11 80 78 <.04 <.10 .06 <.008 <.06

Date	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
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NOV 05... <.02 .9 <2 <10 <10 <2.0

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

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 mi².

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 sea level, from topographic map.

REMARKS.—Records good. 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 ft³/s, Jan. 10, 1995, gage height, 6.14 ft (creek gage; no diversion at peak), from rating curve extended above 6.5 ft³/s on basis of critical depth computations; maximum gage height, 6.24 ft, Feb. 14, 1998; minimum daily, 0.10 ft³/s, Sept. 11, 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended as noted above:

Date	Time	Creek only		Combined creek and diversion
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)
Nov. 24	2115	2.1	4.33	2.1

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.14	0.23	0.36	0.54	0.40	0.33	0.30	0.24	0.15	0.11	0.11	0.11
2	0.15	0.25	0.35	0.51	0.40	0.33	0.29	0.23	0.15	0.11	0.11	0.11
3	0.16	0.25	0.35	0.48	0.40	0.34	0.27	0.23	0.15	0.11	0.11	0.11
4	0.16	0.25	0.37	0.46	0.40	0.34	0.26	0.23	0.15	0.12	0.11	0.11
5	0.17	0.26	0.37	0.45	0.39	0.32	0.26	0.22	0.15	0.12	0.11	0.11
6	0.18	0.26	0.36	0.43	0.38	0.32	0.26	0.22	0.16	0.12	0.11	0.12
7	0.18	0.27	0.35	0.40	0.39	0.44	0.26	0.21	0.15	0.11	0.11	0.13
8	0.19	0.26	0.37	0.40	0.37	0.42	0.27	0.21	0.13	0.11	0.11	0.12
9	0.20	0.26	0.43	0.41	0.37	0.39	0.28	0.19	0.13	0.11	0.11	0.12
10	0.20	0.26	0.55	0.41	0.36	0.37	0.31	0.19	0.13	0.11	0.11	0.12
11	0.20	0.26	0.59	0.40	0.36	0.35	0.37	0.19	0.13	0.12	0.11	0.12
12	0.20	0.29	0.59	0.40	0.36	0.34	0.32	0.19	0.12	0.11	0.11	0.12
13	0.20	0.29	0.59	0.40	0.35	0.34	0.31	0.18	0.12	0.11	0.11	0.12
14	0.19	0.29	0.64	0.40	0.35	0.31	0.32	0.17	0.12	0.11	0.11	0.12
15	0.19	0.28	0.69	0.41	0.35	0.34	0.33	0.14	0.12	0.12	0.12	0.12
16	0.19	0.28	0.63	0.43	0.36	0.34	0.32	0.14	0.12	0.11	0.12	0.12
17	0.19	0.28	0.64	0.44	0.35	0.34	0.30	0.14	0.12	0.11	0.12	0.12
18	0.19	0.28	0.62	0.42	0.36	0.39	0.30	0.14	0.12	0.11	0.12	0.12
19	0.19	0.28	0.47	0.41	0.37	0.36	0.33	0.15	0.12	0.11	0.12	0.11
20	0.20	0.28	0.37	0.41	0.36	0.35	0.34	0.14	0.12	0.11	0.13	0.11
21	0.20	0.28	0.52	0.42	0.35	0.34	0.35	0.14	0.12	0.11	0.13	0.11
22	0.20	0.27	0.44	0.42	0.35	0.34	0.33	0.14	0.12	0.11	0.12	0.11
23	0.20	0.30	0.40	0.41	0.35	0.35	0.33	0.13	0.12	0.11	0.12	0.11
24	0.21	0.63	0.40	0.40	0.34	0.35	0.29	0.13	0.12	0.11	0.11	0.11
25	0.21	0.98	0.40	0.40	0.34	0.35	0.25	0.14	0.12	0.11	0.12	0.12
26	0.21	0.50	0.39	0.40	0.33	0.35	0.26	0.14	0.11	0.11	0.11	0.11
27	0.22	0.41	0.38	0.40	0.33	0.35	0.26	0.15	0.12	0.11	0.11	0.12
28	0.22	0.37	0.39	0.43	0.32	0.35	0.25	0.16	0.12	0.11	0.12	0.11
29	0.23	0.36	0.51	0.46	---	0.35	0.25	0.16	0.12	0.11	0.11	0.12
30	0.23	0.38	0.73	0.43	---	0.34	0.24	0.15	0.11	0.11	0.11	0.12
31	0.23	---	0.59	0.40	---	0.31	---	0.15	---	0.11	0.11	---
TOTAL	6.03	9.84	14.84	13.18	10.14	10.84	8.81	5.34	3.84	3.46	3.54	3.48
MEAN	0.195	0.328	0.479	0.425	0.362	0.350	0.294	0.172	0.128	0.112	0.114	0.116
MAX	0.23	0.98	0.73	0.54	0.40	0.44	0.37	0.24	0.16	0.12	0.13	0.13
MIN	0.14	0.23	0.35	0.40	0.32	0.31	0.24	0.13	0.11	0.11	0.11	0.11
AC-FT	12	20	29	26	20	22	17	11	7.6	6.9	7.0	6.9

10257500 FALLS CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.983	1.211	1.521	1.598	1.973	1.720	1.744	1.570	1.190	0.861	0.777	0.877
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	0.19	0.33	0.48	0.31	0.36	0.15	0.15	0.13	0.13	0.11	0.11	0.12
(WY)	2002	2002	2002	1999	2002	1997	1997	1997	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1923 - 2002	
ANNUAL TOTAL	138.93		93.34		1.305	
ANNUAL MEAN	0.381		0.256		0.26	
HIGHEST ANNUAL MEAN					2.77	
LOWEST ANNUAL MEAN					0.26	
HIGHEST DAILY MEAN	2.8	Jan 11	0.98	Nov 25	50	Mar 5 1995
LOWEST DAILY MEAN	0.00	May 26	0.11	Jun 26	0.00	Apr 16 1997
ANNUAL SEVEN-DAY MINIMUM	0.04	May 25	0.11	Jul 16	0.00	Apr 13 1997
MAXIMUM PEAK FLOW			2.1	Nov 24	154	Jan 10 1995
MAXIMUM PEAK STAGE			4.33	Nov 24	6.24	Feb 14 1998
ANNUAL RUNOFF (AC-FT)	276		185		945	
10 PERCENT EXCEEDS	0.80		0.41		2.6	
50 PERCENT EXCEEDS	0.27		0.23		0.90	
90 PERCENT EXCEEDS	0.11		0.11		0.19	

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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.14	0.23	0.36	0.54	0.40	0.33	0.30	0.24	0.15	0.11	0.11	0.11
2	0.15	0.25	0.35	0.51	0.40	0.33	0.29	0.23	0.15	0.11	0.11	0.11
3	0.16	0.25	0.35	0.48	0.40	0.34	0.27	0.23	0.15	0.11	0.11	0.11
4	0.16	0.25	0.37	0.46	0.40	0.34	0.26	0.23	0.15	0.12	0.11	0.11
5	0.17	0.26	0.37	0.45	0.39	0.32	0.26	0.22	0.15	0.12	0.11	0.11
6	0.18	0.26	0.36	0.43	0.38	0.32	0.26	0.22	0.16	0.12	0.11	0.12
7	0.18	0.27	0.35	0.40	0.39	0.44	0.26	0.21	0.15	0.11	0.11	0.13
8	0.19	0.26	0.37	0.40	0.37	0.42	0.27	0.21	0.13	0.11	0.11	0.12
9	0.20	0.26	0.43	0.41	0.37	0.39	0.28	0.19	0.13	0.11	0.11	0.12
10	0.20	0.26	0.55	0.41	0.36	0.37	0.31	0.19	0.13	0.11	0.11	0.12
11	0.20	0.26	0.59	0.40	0.36	0.35	0.37	0.19	0.13	0.12	0.11	0.12
12	0.20	0.29	0.59	0.40	0.36	0.34	0.32	0.19	0.12	0.11	0.11	0.12
13	0.20	0.29	0.59	0.40	0.35	0.34	0.31	0.18	0.12	0.11	0.11	0.12
14	0.19	0.29	0.64	0.40	0.35	0.31	0.32	0.17	0.12	0.11	0.11	0.12
15	0.19	0.28	0.69	0.41	0.35	0.34	0.33	0.14	0.12	0.12	0.12	0.12
16	0.19	0.28	0.63	0.43	0.36	0.34	0.32	0.14	0.12	0.11	0.12	0.12
17	0.19	0.28	0.64	0.44	0.35	0.34	0.30	0.14	0.12	0.11	0.12	0.12
18	0.19	0.28	0.62	0.42	0.36	0.39	0.30	0.14	0.12	0.11	0.12	0.12
19	0.19	0.28	0.47	0.41	0.37	0.36	0.33	0.15	0.12	0.11	0.12	0.11
20	0.20	0.28	0.37	0.41	0.36	0.35	0.34	0.14	0.12	0.11	0.13	0.11
21	0.20	0.28	0.52	0.42	0.35	0.34	0.35	0.14	0.12	0.11	0.13	0.11
22	0.20	0.27	0.44	0.42	0.35	0.34	0.33	0.14	0.12	0.11	0.12	0.11
23	0.20	0.30	0.40	0.41	0.35	0.35	0.33	0.13	0.12	0.11	0.12	0.11
24	0.21	0.63	0.40	0.40	0.34	0.35	0.29	0.13	0.12	0.11	0.11	0.11
25	0.21	0.98	0.40	0.40	0.34	0.35	0.25	0.14	0.12	0.11	0.12	0.12
26	0.21	0.50	0.39	0.40	0.33	0.35	0.26	0.14	0.11	0.11	0.11	0.11
27	0.22	0.41	0.38	0.40	0.33	0.35	0.26	0.15	0.12	0.11	0.11	0.12
28	0.22	0.37	0.39	0.43	0.32	0.35	0.25	0.16	0.12	0.11	0.12	0.11
29	0.23	0.36	0.51	0.46	---	0.35	0.25	0.16	0.12	0.11	0.11	0.12
30	0.23	0.38	0.73	0.43	---	0.34	0.24	0.15	0.11	0.11	0.11	0.12
31	0.23	---	0.59	0.40	---	0.31	---	0.15	---	0.11	0.11	---
TOTAL	6.03	9.84	14.84	13.18	10.14	10.84	8.81	5.34	3.84	3.46	3.54	3.48
MEAN	0.195	0.328	0.479	0.425	0.362	0.350	0.294	0.172	0.128	0.112	0.114	0.116
MAX	0.23	0.98	0.73	0.54	0.40	0.44	0.37	0.24	0.16	0.12	0.13	0.13
MIN	0.14	0.23	0.35	0.40	0.32	0.31	0.24	0.13	0.11	0.11	0.11	0.11
AC-FT	12	20	29	26	20	22	17	11	7.6	6.9	7.0	6.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

MEAN	0.649	0.924	0.926	1.428	2.352	2.030	1.243	1.449	1.060	0.797	0.615	0.702
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	0.19	0.33	0.48	0.43	0.36	0.34	0.29	0.17	0.13	0.11	0.11	0.12
(WY)	2002	2002	2002	2002	2002	1997	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1995 - 2002

ANNUAL TOTAL	173.93		93.34		1.175		1995	
ANNUAL MEAN	0.477		0.256		0.26		2002	
HIGHEST ANNUAL MEAN					2.99		1995	
LOWEST ANNUAL MEAN					0.26		2002	
HIGHEST DAILY MEAN	2.8	Jan 11	0.98	Nov 25	50	Mar 5	1995	
LOWEST DAILY MEAN	0.11	Aug 24	0.11	Jun 26	0.10	Sep 11	1997	
ANNUAL SEVEN-DAY MINIMUM	0.11	Aug 24	0.11	Jul 16	0.11	Aug 24	2001	
MAXIMUM PEAK FLOW			2.1		154		Jan 10 1995	
ANNUAL RUNOFF (AC-FT)	345		185		851			
10 PERCENT EXCEEDS	0.98		0.41		2.6			
50 PERCENT EXCEEDS	0.37		0.23		0.67			
90 PERCENT EXCEEDS	0.13		0.11		0.20			

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 mi².

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 sea level, from topographic map.

REMARKS.—Records poor. 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 ft³/s, Jan. 10, 1995, gage height, 8.32 ft, main channel, from rating curve extended above 400 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.44	0.00	6.5	3.8	1.7	1.4	0.04	0.00	0.00	0.00	0.00	0.00
2	0.10	0.00	4.7	2.4	2.5	1.7	0.00	0.00	0.00	0.00	0.00	0.00
3	0.01	0.00	5.0	4.0	3.1	1.7	0.00	0.00	0.00	0.00	0.00	0.00
4	0.26	0.04	2.5	2.5	2.3	1.3	0.00	0.00	0.00	0.00	0.00	0.00
5	0.14	0.00	7.1	2.5	2.3	1.4	0.00	0.00	0.00	0.00	0.00	0.00
6	0.37	0.00	3.2	4.0	1.9	1.2	0.00	0.00	0.00	0.00	0.00	0.00
7	0.08	0.00	2.4	3.1	2.0	0.92	0.00	0.00	0.00	0.00	0.00	0.00
8	1.0	0.05	2.5	3.2	1.8	1.4	0.00	0.00	0.00	0.00	0.00	0.00
9	2.1	0.00	1.9	2.5	2.0	1.6	0.00	0.00	0.00	0.00	0.00	0.00
10	0.43	0.00	2.5	2.3	1.7	1.3	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	2.3	2.3	2.1	0.80	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	2.8	2.8	1.6	0.44	0.00	0.00	0.00	0.00	0.00	0.00
13	0.19	2.1	2.0	2.0	1.8	0.14	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	1.8	5.3	2.5	1.5	1.1	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.58	7.6	2.0	1.3	1.1	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.32	4.9	2.3	1.7	1.3	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.19	3.7	2.3	1.4	1.7	0.00	0.00	0.00	0.00	0.00	0.00
18	0.06	0.18	2.8	2.1	1.7	2.0	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.40	2.0	2.8	1.6	0.79	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.36	2.0	3.0	1.1	0.59	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.29	7.3	2.3	1.1	0.26	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.40	8.0	2.1	1.7	0.30	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.96	8.2	2.1	1.5	0.51	0.00	0.00	0.00	0.00	0.00	0.00
24	0.16	9.0	4.1	2.0	1.6	1.3	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	18	2.7	2.2	1.5	0.94	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	11	2.0	2.5	1.6	0.45	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	6.8	3.9	2.5	1.6	0.13	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	7.0	5.1	4.4	1.6	0.03	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	11	9.6	5.7	---	0.28	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	11	14	2.3	---	0.17	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	7.8	2.6	---	0.29	---	0.00	---	0.00	0.00	---
TOTAL	5.34	81.47	146.4	85.1	49.3	28.54	0.04	0.00	0.00	0.00	0.00	0.00
MEAN	0.172	2.716	4.723	2.745	1.761	0.921	0.001	0.000	0.000	0.000	0.000	0.000
MAX	2.1	18	14	5.7	3.1	2.0	0.04	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	1.9	2.0	1.1	0.03	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	11	162	290	169	98	57	0.08	0.00	0.00	0.00	0.00	0.00
a	0	0	0	0	0	0	0	2.6	0	0	0	0

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

SALTON SEA BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	129.5	122.0	89.81	95.36	114.0	133.0	127.3	107.2	124.9	82.66	87.79	105.1
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002	
ANNUAL TOTAL	650.79		396.19			
ANNUAL MEAN	1.783		1.085		115.5	
HIGHEST ANNUAL MEAN					308	
LOWEST ANNUAL MEAN					1.09	
HIGHEST DAILY MEAN	149	Apr 18	18	Nov 25	2600	Jan 7 1993
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 11	0.00	Mar 4 1985
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 25	0.00	Feb 16 1986
MAXIMUM PEAK FLOW			92	Nov 24	2530	Jan 10 1995
MAXIMUM PEAK STAGE			4.20	Nov 24	8.32	Jan 10 1995
ANNUAL RUNOFF (AC-FT)	1290		786		83660	
10 PERCENT EXCEEDS	3.1		2.8		346	
50 PERCENT EXCEEDS	0.00		0.00		12	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

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 mi².

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 sea level (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 ft³/s, Nov. 22, 1965, Jan. 25, 1969, gage height, 12.34 ft, from rating curve extended above 70 ft³/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 ft³/s, or maximum, from rating curve extended above 147 ft³/s, on basis of slope-area measurements at gage heights 10.45 and 12.34 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	0945	0.45	3.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.19	0.26	0.20	0.14	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.20	0.26	0.20	0.11	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.22	0.27	0.20	0.11	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.22	0.26	0.20	0.10	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.22	0.26	0.20	0.09	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.25	0.26	0.19	0.07	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.26	0.26	0.19	0.05	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.24	0.26	0.19	0.03	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.24	0.25	0.17	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.24	0.25	0.18	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.26	0.25	0.18	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.25	0.24	0.17	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.24	0.23	0.17	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.23	0.23	0.17	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.23	0.24	0.17	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.23	0.24	0.20	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.24	0.24	0.22	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.23	0.24	0.16	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.24	0.23	0.15	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.25	0.23	0.15	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.25	0.23	0.16	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.25	0.24	0.17	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.24	0.23	0.18	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.28	0.23	0.18	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.27	0.22	0.17	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.01	0.26	0.22	0.18	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.08	0.26	0.22	0.18	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.11	0.27	0.21	0.18	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.12	0.26	---	0.17	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.14	0.25	---	0.15	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.17	0.25	---	0.14	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.63	7.52	6.76	5.52	0.70	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.020	0.243	0.241	0.178	0.023	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.17	0.28	0.27	0.22	0.14	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.19	0.21	0.14	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	1.2	15	13	11	1.4	0.00	0.00	0.00	0.00	0.00

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.552	1.670	3.301	5.891	7.260	8.170	10.50	13.60	7.117	2.283	0.951	0.691
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1948 - 2002	
ANNUAL TOTAL	115.99		21.13			
ANNUAL MEAN	0.318		0.058		5.152	
HIGHEST ANNUAL MEAN					32.9 1980	
LOWEST ANNUAL MEAN					0.058 2002	
HIGHEST DAILY MEAN	2.1	Feb 27	0.28	Jan 24	1080	Jan 25 1969
LOWEST DAILY MEAN	0.00	Jun 14	0.00	Oct 1	0.00	Oct 1 1947
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 14	0.00	Oct 1	0.00	Oct 1 1947
MAXIMUM PEAK FLOW			0.45 Jan 24		2900 Nov 22 1965	
MAXIMUM PEAK STAGE			3.28 Jan 24		15.78 Sep 7 1981	
ANNUAL RUNOFF (AC-FT)	230		42		3730	
10 PERCENT EXCEEDS	1.0		0.24		11	
50 PERCENT EXCEEDS	0.00		0.00		0.88	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

SALTON SEA BASIN

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.802	1.014	1.088	3.222	7.962	6.278	5.095	4.141	2.653	1.776	1.359	0.888
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1968 - 2002
ANNUAL TOTAL	0.50	0.01	
ANNUAL MEAN	0.001	0.000	2.993
HIGHEST ANNUAL MEAN			28.3 1980
LOWEST ANNUAL MEAN			0.000 2002
HIGHEST DAILY MEAN	0.45 Jan 11	0.00 Nov 24	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		0.23 Nov 24	1750 Aug 17 1983
MAXIMUM PEAK STAGE		1.45 Nov 24	6.40 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1.0	0.02	2170
10 PERCENT EXCEEDS	0.00	0.00	5.5
50 PERCENT EXCEEDS	0.00	0.00	0.44
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 mi².

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 sea level, from topographic map.

REMARKS.—Records good. 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 ft³/s, Jan. 7, 1993, gage height, 10.18 ft, from rating curve extended above 35 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.13	0.18	0.13	0.19	0.14	0.05	0.12	0.04	0.01	0.01	0.01
2	0.07	0.14	0.18	0.13	0.22	0.16	0.06	0.10	0.04	0.01	0.01	0.01
3	0.06	0.13	0.17	0.13	0.21	0.17	0.07	0.08	0.05	0.01	0.01	0.01
4	0.06	0.14	0.13	0.14	0.20	0.16	0.07	0.08	0.04	0.01	0.01	0.01
5	0.07	0.14	0.15	0.14	0.20	0.16	0.06	0.06	0.03	0.01	0.01	0.01
6	0.07	0.14	0.16	0.14	0.20	0.14	0.07	0.07	0.03	0.01	0.01	0.00
7	0.08	0.14	0.16	0.12	0.21	0.13	0.07	0.09	0.03	0.01	0.01	0.00
8	0.07	0.13	0.17	0.14	0.20	0.11	0.08	0.09	0.03	0.01	0.01	0.00
9	0.08	0.15	0.18	0.15	0.20	0.11	0.07	0.07	0.03	0.01	0.01	0.01
10	0.07	0.15	0.17	0.15	0.21	0.10	0.08	0.08	0.03	0.01	0.00	0.01
11	0.07	0.16	0.17	0.15	0.21	0.08	0.06	0.08	0.04	0.01	0.00	0.02
12	0.07	0.17	0.17	0.16	0.20	0.11	0.06	0.06	0.03	0.00	0.00	0.02
13	0.08	0.18	0.18	0.17	0.18	0.10	0.06	0.06	0.03	0.00	0.00	0.02
14	0.07	0.18	0.20	0.17	0.19	0.11	0.05	0.06	0.03	0.00	0.01	0.02
15	0.07	0.18	0.18	0.20	0.18	0.12	0.09	0.07	0.03	0.00	0.01	0.02
16	0.07	0.16	0.19	0.18	0.19	0.13	0.10	0.06	0.03	0.01	0.01	0.02
17	0.07	0.17	0.19	0.19	0.17	0.13	0.11	0.06	0.02	0.01	0.01	0.03
18	0.09	0.17	0.19	0.20	0.17	0.15	0.11	0.06	0.02	0.01	0.00	0.04
19	0.09	0.16	0.18	0.19	0.19	0.12	0.11	0.05	0.02	0.01	0.01	0.04
20	0.09	0.16	0.19	0.19	0.18	0.10	0.12	0.06	0.02	0.01	0.01	0.04
21	0.09	0.16	0.22	0.19	0.16	0.08	0.10	0.08	0.02	0.01	0.01	0.03
22	0.10	0.13	0.19	0.18	0.14	0.07	0.10	0.07	0.03	0.01	0.02	0.03
23	0.09	0.11	0.19	0.19	0.15	0.10	0.08	0.07	0.02	0.01	0.02	0.03
24	0.09	0.20	0.19	0.20	0.15	0.10	0.13	0.06	0.02	0.01	0.01	0.03
25	0.11	0.14	0.19	0.19	0.14	0.09	0.06	0.06	0.01	0.01	0.01	0.03
26	0.11	0.14	0.19	0.19	0.14	0.09	0.10	0.05	0.02	0.01	0.01	0.03
27	0.10	0.19	0.18	0.17	0.13	0.09	0.10	0.05	0.02	0.01	0.02	0.04
28	0.11	0.19	0.17	0.16	0.14	0.10	0.09	0.05	0.02	0.01	0.02	0.05
29	0.10	0.19	0.16	0.17	---	0.08	0.10	0.05	0.02	0.01	0.02	0.05
30	0.10	0.18	0.14	0.18	---	0.06	0.10	0.04	0.02	0.01	0.02	0.05
31	0.12	---	0.13	0.18	---	0.06	---	0.04	---	0.01	0.01	---
TOTAL	2.58	4.71	5.44	5.17	5.05	3.45	2.51	2.08	0.82	0.27	0.32	0.71
MEAN	0.083	0.157	0.175	0.167	0.180	0.111	0.084	0.067	0.027	0.009	0.010	0.024
MAX	0.12	0.20	0.22	0.20	0.22	0.17	0.13	0.12	0.05	0.01	0.02	0.05
MIN	0.06	0.11	0.13	0.12	0.13	0.06	0.05	0.04	0.01	0.00	0.00	0.00
AC-FT	5.1	9.3	11	10	10	6.8	5.0	4.1	1.6	0.5	0.6	1.4

SALTON SEA BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.268	0.384	0.471	1.628	2.287	1.838	1.155	0.607	0.227	0.067	0.091	0.211
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1987 - 2002
ANNUAL TOTAL	66.02	33.11	
ANNUAL MEAN	0.181	0.091	0.761
HIGHEST ANNUAL MEAN			4.02 1993
LOWEST ANNUAL MEAN			0.086 1999
HIGHEST DAILY MEAN	0.88 Jan 11	0.22 Dec 21	49 Jan 17 1993
LOWEST DAILY MEAN	0.03 Jul 2	0.00 Jul 12	0.00 Jun 15 1989
ANNUAL SEVEN-DAY MINIMUM	0.04 Jun 28	0.00 Jul 9	0.00 Jun 15 1989
MAXIMUM PEAK FLOW		0.70 Nov 24	153 Jan 7 1993
MAXIMUM PEAK STAGE		9.40 Nov 24	10.32 Feb 14 1998
ANNUAL RUNOFF (AC-FT)	131	66	551
10 PERCENT EXCEEDS	0.35	0.19	1.5
50 PERCENT EXCEEDS	0.14	0.08	0.18
90 PERCENT EXCEEDS	0.06	0.01	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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 06...	0800	.18	8.1	205	14.0	76	26.8	2.21	4.83

Date	Time	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ALKALINITY WATER TOTAL FIELD (MG/L AS CACO3) (39086)	BICARBONATE WATER DIS FIELD (MG/L AS HCO3) (00453)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
NOV 06...	.6	11.6	24	98	120	e.02	2.77	e.1	17.3	

Date	Time	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)
NOV 06...	4.0	.17	126	128	<.04	<.10	<.05	<.008	<.06	

Date	Time	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 06...		<.02	4.7	<2	e10	<10	<2.0

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

SALTON SEA BASIN

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 mi².

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 sea level, from topographic map. Prior to Jan. 14, 1942, at datum 0.2 ft higher.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,000 ft³/s, Feb. 21, 1980, gage height, 7.29 ft, from rating curve extended above 650 ft³/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.—No flow entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.337	0.795	3.656	8.410	18.69	18.46	7.140	2.172	0.661	0.748	0.950	0.811
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1930 - 2002
ANNUAL TOTAL	55.26	0.00	
ANNUAL MEAN	0.151	0.000	5.189
HIGHEST ANNUAL MEAN			47.4 1980
LOWEST ANNUAL MEAN			0.000 1972
HIGHEST DAILY MEAN	23 Jul 6	0.00 Oct 1	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			7000 Feb 21 1980
MAXIMUM PEAK STAGE			7.29 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	110	0.00	3760
10 PERCENT EXCEEDS	0.00	0.00	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 mi².

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 sea level, from topographic map. Prior to Mar. 25, 1949, reference point at same site at different datum.

REMARKS.—Records good above 1 ft³/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 ft³/s, Aug. 31, 1954, gage height, 7.11 ft, from rating curve extended above 80 ft³/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 ft³/s, or maximum, from rating curve extended above 98 ft³/s, by theoretical computations of flow over weir:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2145	6.1	2.55

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.59	0.98	1.4	1.5	1.5	1.3	1.0	0.93	0.36	0.13	0.15	0.16
2	0.61	0.98	1.3	1.5	1.4	1.3	1.0	0.92	0.45	0.08	0.11	0.21
3	0.69	0.98	1.3	1.5	1.4	1.3	1.0	0.86	0.47	0.06	0.09	0.17
4	0.73	1.0	1.3	1.5	1.4	1.3	1.0	0.79	0.40	0.09	0.11	0.14
5	0.68	1.0	1.3	1.5	1.4	1.3	1.0	0.76	0.34	0.11	0.10	0.30
6	0.66	1.0	1.3	1.5	1.4	1.3	1.1	0.73	0.28	0.15	0.10	0.53
7	0.74	1.1	1.2	1.4	1.4	1.5	1.1	0.74	0.24	0.14	0.11	0.64
8	0.80	1.0	1.2	1.4	1.4	1.4	1.1	0.72	0.23	0.12	0.10	0.56
9	0.77	1.0	1.3	1.4	1.4	1.4	1.1	0.71	0.30	0.11	0.08	0.45
10	0.71	1.0	1.2	1.5	1.4	1.4	1.0	0.67	0.32	0.11	0.04	0.43
11	0.69	1.1	1.3	1.4	1.4	1.4	0.97	0.67	0.35	0.19	0.06	0.44
12	0.69	1.1	1.3	1.4	1.4	1.3	0.97	0.66	0.34	0.17	0.11	0.40
13	0.70	1.1	1.3	1.4	1.4	1.3	0.93	0.62	0.28	0.11	0.12	0.34
14	0.67	1.1	1.5	1.4	1.3	1.3	0.83	0.60	0.25	0.14	0.10	0.28
15	0.67	1.1	1.6	1.5	1.3	1.4	0.83	0.57	0.22	0.16	0.09	0.24
16	0.65	1.1	1.4	1.5	1.3	1.4	0.96	0.59	0.21	0.16	0.11	0.22
17	0.69	1.1	1.4	1.4	1.4	1.5	0.99	0.62	0.18	0.13	0.13	0.25
18	0.69	1.1	1.4	1.4	1.4	1.6	0.99	0.60	0.17	0.14	0.18	0.31
19	0.71	1.1	1.4	1.4	1.4	1.5	1.0	0.64	0.17	0.14	0.28	0.31
20	0.69	1.1	1.4	1.4	1.4	1.3	1.0	0.63	0.18	0.13	0.37	0.33
21	0.75	1.0	1.7	1.5	1.3	1.2	0.98	0.75	0.22	0.15	0.26	0.32
22	0.79	1.0	1.5	1.5	1.3	1.2	0.93	0.73	0.23	0.15	0.25	0.30
23	0.79	1.1	1.5	1.4	1.3	1.2	0.82	0.67	0.20	0.14	0.22	0.26
24	0.79	1.9	1.5	1.4	1.3	1.3	0.97	0.61	0.18	0.17	0.18	0.26
25	0.79	2.4	1.5	1.4	1.3	1.3	1.0	0.56	0.17	0.16	0.17	0.27
26	0.79	1.5	1.5	1.4	1.3	1.2	1.0	0.57	0.12	0.14	0.16	0.25
27	0.79	1.3	1.4	1.4	1.4	1.2	1.1	0.53	0.11	0.12	0.14	0.28
28	0.84	1.3	1.4	1.5	1.3	1.2	1.0	0.51	0.13	0.11	0.16	0.40
29	0.89	1.4	1.5	1.5	---	1.2	0.90	0.49	0.15	0.11	0.18	0.54
30	0.87	1.5	1.6	1.4	---	1.1	0.88	0.40	0.15	0.10	0.18	0.60
31	0.94	---	1.5	1.5	---	1.1	---	0.36	---	0.12	0.17	---
TOTAL	22.86	35.44	43.4	44.8	38.3	40.7	29.45	20.21	7.40	4.04	4.61	10.19
MEAN	0.737	1.181	1.400	1.445	1.368	1.313	0.982	0.652	0.247	0.130	0.149	0.340
MAX	0.94	2.4	1.7	1.5	1.5	1.6	1.1	0.93	0.47	0.19	0.37	0.64
MIN	0.59	0.98	1.2	1.4	1.3	1.1	0.82	0.36	0.11	0.06	0.04	0.14
AC-FT	45	70	86	89	76	81	58	40	15	8.0	9.1	20

SALTON SEA BASIN

10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.347	2.149	3.028	4.595	5.533	5.786	4.278	2.962	1.897	1.361	1.339	1.239
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1949 - 2002	
ANNUAL TOTAL	411.00		301.40			
ANNUAL MEAN	1.126		0.826		2.946	
HIGHEST ANNUAL MEAN					12.4	1983
LOWEST ANNUAL MEAN					0.66	1961
HIGHEST DAILY MEAN	4.2	Feb 27	2.4	Nov 25	395	Dec 6 1966
LOWEST DAILY MEAN	0.26	Jul 2	0.04	Aug 10	0.00	Jun 27 1961
ANNUAL SEVEN-DAY MINIMUM	0.33	Jun 28	0.08	Aug 5	0.00	Jul 13 1963
MAXIMUM PEAK FLOW			6.1	Nov 24	1960	Aug 31 1954
MAXIMUM PEAK STAGE			2.55	Nov 24	7.11	Aug 31 1954
ANNUAL RUNOFF (AC-FT)	815		598		2130	
10 PERCENT EXCEEDS	1.9		1.4		5.3	
50 PERCENT EXCEEDS	1.1		0.87		1.6	
90 PERCENT EXCEEDS	0.39		0.14		0.56	

10259050 PALM CANYON WASH NEAR CATHEDRAL CITY, CA

LOCATION (REVISED).—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 sea level, from topographic map.

REMARKS.—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 ft³/s, Jan. 16, 1993, gage height, 8.70 ft, from rating curve extended above 1,350 ft³/s; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—No flow entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.002	0.041	15.19	4.168	7.252	0.254	1.439	1.473	0.166	0.419	0.215
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	26.29		0.00			
ANNUAL MEAN	0.072		0.000		2.562	
HIGHEST ANNUAL MEAN					20.4	1993
LOWEST ANNUAL MEAN					0.000	1990
HIGHEST DAILY MEAN	16	Jul 6	0.00	Oct 1	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					8280	Jan 16 1993
MAXIMUM PEAK STAGE					8.70	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	52		0.00		1860	
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 mi².

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 sea level, from topographic map. Prior to Dec. 4, 1997, at datum 10.00 ft lower.

REMARKS.—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 ft³/s, Jan. 7, 1993, gage height, 5.93 ft, datum then in use, from rating curve extended above 1,460 ft³/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.

EXTREMES FOR CURRENT YEAR.—No flow for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.003	0.003	0.025	25.30	5.693	5.800	0.030	0.027	0.007	0.020	0.100	0.140
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002	
ANNUAL TOTAL	6.56		0.00			
ANNUAL MEAN	0.018		0.000		3.106	
HIGHEST ANNUAL MEAN					30.4	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	2.7	Feb 26	0.00	Oct 1	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					9060	Jan 7 1993
MAXIMUM PEAK STAGE					8.09	Feb 14 1998
ANNUAL RUNOFF (AC-FT)	13		0.00		2250	
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 mi².

PERIOD OF RECORD.—May 1962 to current year.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,100 ft³/s, Sept. 10, 1976, gage height, 7.84 ft inside, 11.5 ft from floodmarks, from rating curve extended above 40 ft³/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.—No flow for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.218	0.814	1.802	4.259	7.496	5.755	2.022	0.803	0.317	0.739	0.968	1.198
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	22.92		0.00			
ANNUAL MEAN	0.063		0.000		2.180	
HIGHEST ANNUAL MEAN					15.1	1993
LOWEST ANNUAL MEAN					0.000	2002
HIGHEST DAILY MEAN	1.2	Mar 7	0.00	Oct 1	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					7100	Sep 10 1976
MAXIMUM PEAK STAGE					10.27	Aug 14 1984
ANNUAL RUNOFF (AC-FT)	45		0.00		1580	
10 PERCENT EXCEEDS	0.22		0.00		2.8	
50 PERCENT EXCEEDS	0.00		0.00		0.04	
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 mi².

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 sea level, 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.—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 ft³/s, Jan. 25, 1969, gage height, 14.41 ft, site and datum then in use, from rating curve extended above 1,300 ft³/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 ft³/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 ft³/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—No flow for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.009	0.076	2.180	20.19	12.50	4.424	0.018	0.010	0.008	1.036	1.027	2.409
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL TOTAL	1.40		0.00			
ANNUAL MEAN	0.004		0.000		3.640	
HIGHEST ANNUAL MEAN					47.4	1993
LOWEST ANNUAL MEAN					0.000	1973
HIGHEST DAILY MEAN	0.49	Feb 27	0.00	Oct 1	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					11400	Jan 25 1969
MAXIMUM PEAK STAGE					14.41	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	2.8		0.00		2640	
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	

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 mi².

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
FEB 05...	1340	e.20	610	9.7	88	7.6	160	2.0
MAY 06...	1500	.09	612	9.6	121	7.7	155	15.5
Date	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)
FEB 05...	20.3	1.1	112	e.09	<.05	<.008	<.01	<.007
MAY 06...	19.0	.4	105	.11	<.05	<.008	--	<.007

e Estimated.

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

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 mi².

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	
FEB 05...	1100	.22	617	10.3	92	7.8	168	2.0	
MAY 06...	1130	.09	615	9.6	112	7.8	191	12.5	
Date		CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	NITROGEN, AMMONIA + ORGANIC (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)
FEB 05...	3.22	.7	122	<.10	<.05	<.008	<.01	<.007	
MAY 06...	1.72	.6	133	e.08	<.05	<.008	--	<.007	

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

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 mi².

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT									
30...	1445	e.05	--	--	--	--	188	11.5	7.44
FEB									
05...	1520	e.10	631	3.7	36	7.0	118	5.5	6.17
MAY									
06...	1650	.03	631	6.7	73	7.3	159	11.0	6.14
Date		FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AM- MONIA ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, +NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)
OCT									
30...	e.1	1.5	132	.22	.06	<.008	.02	--	
FEB									
05...	--	1.5	116	<.10	e.04	<.008	<.01	<.007	
MAY									
06...	--	1.5	117	.11	<.05	<.008	--	e.005	

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 mi².

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD) UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT 30...	1040	.14	628	6.8	75	7.8	305	11.0	3.79
FEB 05...	1215	.99	626	10.6	93	8.3	194	2.0	4.69
MAY 06...	1300	.40	626	8.8	106	8.3	304	15.0	2.83

Date	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AM-MONIA ORGANIC (MG/L AS N) (00625)	NITRO-GEN, +NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
OCT 30...	5.3	1.9	190	e.06	<.05	<.008	.02	--
FEB 05...	--	2.6	182	e.05	<.05	<.008	<.01	<.007
MAY 06...	--	1.7	184	e.08	<.05	<.008	--	<.007

e Estimated.

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

MOJAVE RIVER BASIN

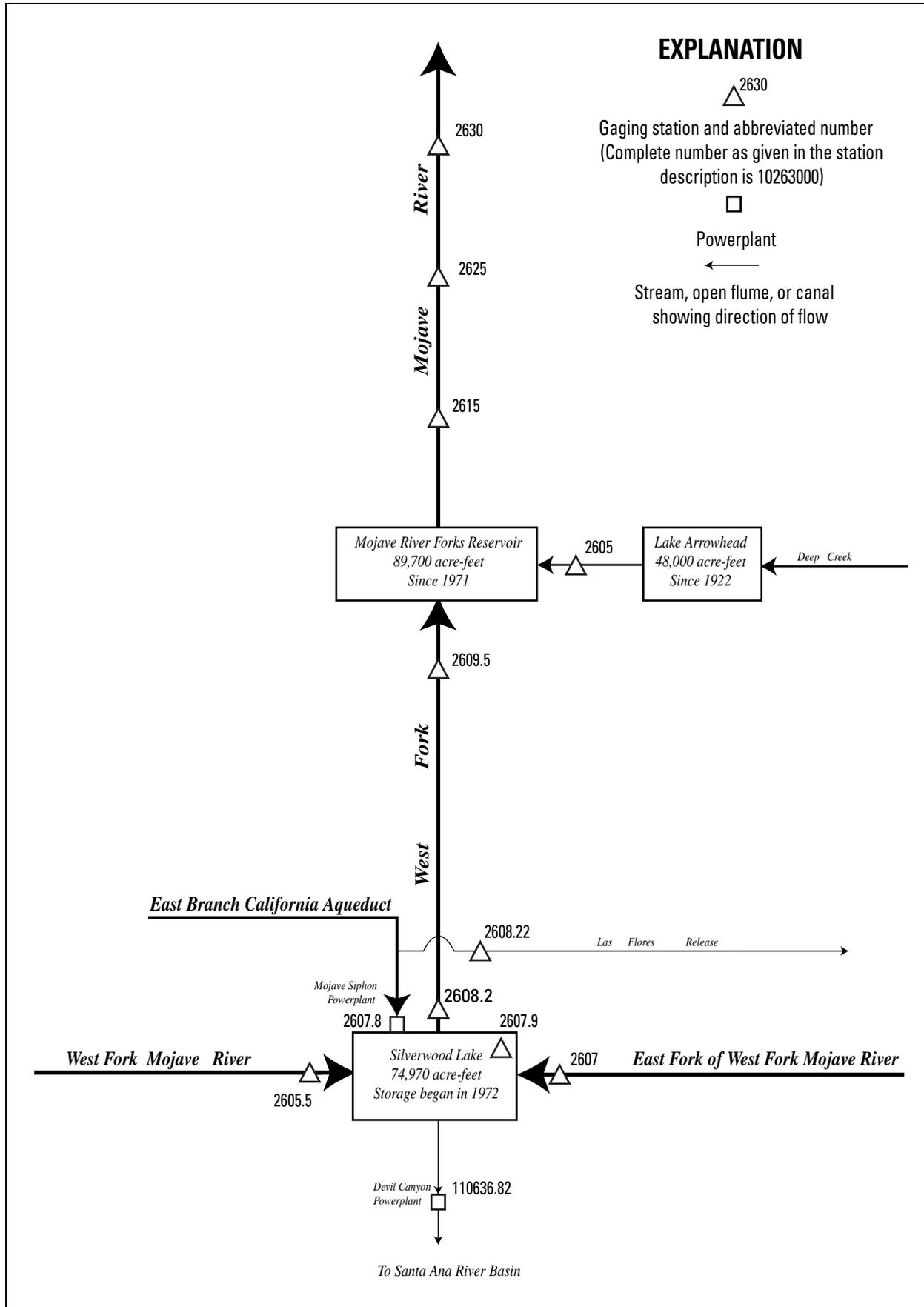


Figure 14. Diversions and storage in Mojave River Basin.

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 mi².

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 sea level, from topographic map. See WSP 1314 for history of changes prior to Dec. 10, 1938.

REMARKS.—Records good above 1 ft³/s and fair below, except for estimated daily discharges, which are poor. 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 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	2030	15	1.61

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.76	2.4	4.5	6.1	5.4	6.8	7.1	e4.6	1.7	0.32	0.25	0.69
2	0.74	2.5	4.3	6.0	5.5	6.6	6.9	e4.5	1.6	0.30	0.32	0.78
3	0.73	2.7	4.3	6.0	5.4	6.6	6.9	e4.5	1.4	0.29	0.46	0.63
4	0.71	2.8	4.5	6.0	5.5	6.7	6.7	e4.4	1.6	0.30	0.42	0.55
5	0.78	3.0	5.3	6.1	5.6	6.8	6.4	e4.3	1.4	0.34	0.49	0.62
6	0.91	3.0	5.2	6.0	5.6	6.9	6.4	e4.2	1.3	0.33	0.55	0.81
7	0.93	3.0	5.0	6.0	5.7	6.8	e6.4	e4.1	1.2	0.29	0.56	0.95
8	0.99	2.9	4.7	6.0	5.8	7.0	e6.3	e4.0	1.1	0.25	0.57	0.93
9	1.1	2.8	4.7	5.8	6.0	7.2	e6.2	e3.9	0.85	0.22	0.55	0.82
10	1.2	2.9	4.7	5.9	6.1	7.2	e6.0	e3.8	0.94	0.23	0.44	0.67
11	1.2	3.0	4.6	5.9	6.1	7.3	e5.7	3.8	0.91	0.22	0.41	0.60
12	1.3	3.1	4.7	5.8	6.1	7.2	e5.6	3.7	0.86	0.28	0.37	0.62
13	1.3	3.7	4.6	5.7	6.1	7.2	e5.5	3.5	0.91	0.43	0.36	0.60
14	1.4	4.3	4.6	5.8	6.2	7.1	e5.4	3.4	0.86	0.40	0.35	0.51
15	1.5	4.4	5.0	5.8	6.1	6.9	e5.2	3.3	0.87	0.27	0.31	0.44
16	1.6	3.9	4.6	5.5	6.2	7.0	e5.1	3.3	0.84	0.25	0.36	0.41
17	1.5	3.8	4.8	5.2	6.4	7.2	e5.0	3.0	0.82	0.27	0.34	0.56
18	1.6	3.6	4.7	5.0	7.1	7.8	e5.0	2.7	0.84	0.30	0.31	0.62
19	1.5	3.6	4.8	5.0	8.4	8.4	e4.9	2.2	0.85	0.31	0.30	0.61
20	1.5	3.4	4.8	5.0	7.5	8.0	e4.8	2.4	0.74	0.30	0.31	0.56
21	1.4	3.4	5.2	5.0	7.0	8.3	e4.7	2.5	0.62	0.31	0.41	0.52
22	1.6	3.3	5.4	5.2	6.6	8.1	e4.5	2.8	0.50	0.31	0.46	0.46
23	1.7	3.4	5.6	5.2	6.8	7.8	e4.4	3.0	0.36	0.33	0.44	0.44
24	1.7	3.5	5.3	5.1	6.8	7.9	e5.2	2.8	0.30	0.39	0.47	0.42
25	1.7	6.1	5.2	5.1	6.8	9.9	e5.0	2.6	0.27	0.45	0.40	0.45
26	1.7	10	5.2	5.2	6.8	9.4	e5.5	2.5	0.27	0.38	0.37	0.51
27	1.9	6.5	5.2	5.3	6.8	8.6	e5.1	2.4	0.24	0.39	0.42	0.48
28	2.0	5.1	5.3	6.5	6.9	8.3	e5.0	2.3	0.27	0.30	0.44	0.56
29	2.0	4.6	5.4	8.6	---	8.2	e4.8	2.2	0.28	0.22	0.45	0.66
30	2.1	4.5	5.8	7.2	---	8.0	e4.7	2.0	0.32	0.24	0.46	0.74
31	2.3	---	6.0	5.8	---	7.4	---	1.8	---	0.23	0.55	---
TOTAL	43.35	115.2	154.0	178.8	177.3	234.6	166.4	100.5	25.02	9.45	12.90	18.22
MEAN	1.398	3.840	4.968	5.768	6.332	7.568	5.547	3.242	0.834	0.305	0.416	0.607
MAX	2.3	10	6.0	8.6	8.4	9.9	7.1	4.6	1.7	0.45	0.57	0.95
MIN	0.71	2.4	4.3	5.0	5.4	6.6	4.4	1.8	0.24	0.22	0.25	0.41
AC-FT	86	228	305	355	352	465	330	199	50	19	26	36

e Estimated.

MOJAVE RIVER BASIN

10260500 DEEP CREEK NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.180	19.00	54.45	130.3	207.6	211.9	141.1	63.89	17.33	5.572	3.177	3.524
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1905 - 2002	
ANNUAL TOTAL	6361.63		1235.74			
ANNUAL MEAN	17.43		3.386		71.19	
HIGHEST ANNUAL MEAN					411	
LOWEST ANNUAL MEAN					3.06	
HIGHEST DAILY MEAN	124	Mar 21	10	Nov 26	14700	Jan 25 1969
LOWEST DAILY MEAN	0.18	Aug 10	0.22	Jul 9	0.00	Jul 17 1961
ANNUAL SEVEN-DAY MINIMUM	0.24	Aug 7	0.26	Jul 6	0.07	Jul 12 1961
MAXIMUM PEAK FLOW			15	Nov 25	46600	Mar 2 1938
MAXIMUM PEAK STAGE			1.61	Nov 25	23.81	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	12620		2450		51570	
10 PERCENT EXCEEDS	63		6.8		136	
50 PERCENT EXCEEDS	4.7		3.3		9.7	
90 PERCENT EXCEEDS	0.34		0.33		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 mi².

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 sea level, 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 ft³/s, Feb. 23, 1998, gage height, 3.88 ft; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	0.25	0.19	0.19	0.13	0.01	0.00	0.00	0.00
2	0.00	0.00	0.00	0.03	0.24	0.18	0.18	0.13	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.03	0.22	0.17	0.18	0.11	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.02	0.20	0.17	0.17	0.10	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.02	0.20	0.18	0.17	0.10	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.02	0.19	0.18	0.19	0.09	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.02	0.18	0.28	0.23	0.09	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.02	0.17	0.23	0.25	0.09	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.02	0.17	0.21	0.24	0.08	0.00	0.00	0.00	0.00
10	0.00	0.00	0.01	0.02	0.16	0.20	0.23	0.08	0.00	0.00	0.00	0.00
11	0.00	0.00	0.01	0.02	0.16	0.19	0.23	0.08	0.00	0.00	0.00	0.00
12	0.00	0.00	0.01	0.02	0.16	0.19	0.23	0.07	0.00	0.00	0.00	0.00
13	0.00	0.00	0.01	0.02	0.16	0.19	0.23	0.07	0.00	0.00	0.00	0.00
14	0.00	0.00	0.02	0.02	0.16	0.19	0.17	0.06	0.00	0.00	0.00	0.00
15	0.00	0.00	0.02	0.02	0.16	0.19	0.16	0.05	0.00	0.00	0.00	0.00
16	0.00	0.00	0.02	0.02	0.16	0.19	0.17	0.05	0.00	0.00	0.00	0.00
17	0.00	0.00	0.01	0.02	0.32	0.20	0.16	0.04	0.00	0.00	0.00	0.00
18	0.00	0.00	0.01	0.02	0.28	0.27	0.16	0.04	0.00	0.00	0.00	0.00
19	0.00	0.00	0.01	0.02	0.23	0.24	0.16	0.04	0.00	0.00	0.00	0.00
20	0.00	0.00	0.01	0.02	0.21	0.23	0.16	0.12	0.00	0.00	0.00	0.00
21	0.00	0.00	0.09	0.03	0.20	0.22	0.14	0.12	0.00	0.00	0.00	0.00
22	0.00	0.00	0.04	0.03	0.20	0.21	0.13	0.08	0.00	0.00	0.00	0.00
23	0.00	0.00	0.03	0.02	0.20	0.21	0.11	0.07	0.00	0.00	0.00	0.00
24	0.00	0.00	0.03	0.02	0.20	0.22	0.15	0.06	0.00	0.00	0.00	0.00
25	0.00	0.00	0.03	0.02	0.20	0.22	0.15	0.05	0.00	0.00	0.00	0.00
26	0.00	0.00	0.03	0.02	0.19	0.21	0.15	0.04	0.00	0.00	0.00	0.00
27	0.00	0.00	0.03	0.09	0.19	0.20	0.16	0.04	0.00	0.00	0.00	0.00
28	0.00	0.00	0.02	1.3	0.19	0.20	0.15	0.03	0.00	0.00	0.00	0.00
29	0.00	0.00	0.02	0.48	---	0.20	0.13	0.03	0.00	0.00	0.00	0.00
30	0.00	0.00	0.02	0.34	---	0.20	0.13	0.02	0.00	0.00	0.00	0.00
31	0.00	---	0.03	0.27	---	0.19	---	0.01	---	0.00	0.00	---
TOTAL	0.00	0.00	0.51	3.05	5.55	6.35	5.26	2.17	0.01	0.00	0.00	0.00
MEAN	0.000	0.000	0.016	0.098	0.198	0.205	0.175	0.070	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.09	1.3	0.32	0.28	0.25	0.13	0.01	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.02	0.16	0.17	0.11	0.01	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	1.0	6.0	11	13	10	4.3	0.02	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1999	1999	1997	1997	1998	1998	1998	1998	1998	1998	1998	1998
MEAN	0.046	0.109	0.843	2.275	7.455	4.438	3.028	3.061	1.015	0.261	0.062	0.037
MAX (WY)	0.25	0.41	4.49	12.8	26.5	12.5	10.5	17.1	5.94	1.81	0.44	0.26
MIN (WY)	0.000	0.000	0.016	0.042	0.20	0.20	0.18	0.070	0.000	0.000	0.000	0.000
	1998	2001	2002	2000	2002	2002	2002	2002	2002	1997	1996	1996

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL TOTAL	491.22		22.90			
ANNUAL MEAN	1.346		0.063		1.854	
HIGHEST ANNUAL MEAN					6.29	
LOWEST ANNUAL MEAN					0.063	
HIGHEST DAILY MEAN	25	Feb 20	1.3	Jan 28	278	Feb 23 1998
LOWEST DAILY MEAN	0.00	Jul 3	0.00	Oct 1	0.00	Jul 7 1996
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 3	0.00	Oct 1	0.00	Jul 7 1996
MAXIMUM PEAK FLOW			3.9		584	Feb 23 1998
MAXIMUM PEAK STAGE			2.03		3.88	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	974		45		1340	
10 PERCENT EXCEEDS	3.9		0.20		4.6	
50 PERCENT EXCEEDS	0.02		0.00		0.19	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002
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	0.43	0.32	0.39	0.28	0.03	0.00	0.00	0.00
2	0.00	0.00	0.00	0.18	0.40	0.30	0.36	0.27	0.02	0.00	0.00	0.00
3	0.00	0.00	0.00	0.18	0.38	0.28	0.36	0.26	0.02	0.00	0.00	0.00
4	0.00	0.00	0.04	0.18	0.36	0.29	0.34	0.23	0.01	0.00	0.00	0.00
5	0.00	0.00	0.03	0.18	0.36	0.32	0.35	0.23	0.01	0.00	0.00	0.00
6	0.00	0.00	0.03	0.18	0.36	0.32	0.36	0.21	0.00	0.00	0.00	0.00
7	0.00	0.00	0.04	0.18	0.36	0.56	0.39	0.21	0.00	0.00	0.00	0.00
8	0.00	0.00	0.04	0.18	0.36	0.45	0.38	0.22	0.00	0.00	0.00	0.00
9	0.00	0.00	0.06	0.18	0.35	0.38	0.34	0.20	0.00	0.00	0.00	0.00
10	0.00	0.00	0.07	0.17	0.32	0.36	0.32	0.19	0.00	0.00	0.00	0.00
11	0.00	0.00	0.07	0.15	0.32	0.34	0.32	0.18	0.00	0.00	0.00	0.00
12	0.00	0.00	0.07	0.15	0.32	0.32	0.32	0.16	0.00	0.00	0.00	0.00
13	0.00	0.00	0.07	0.15	0.32	0.32	0.30	0.15	0.00	0.00	0.00	0.00
14	0.00	0.00	0.11	0.17	0.32	0.32	0.28	0.14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.15	0.18	0.32	0.32	0.29	0.13	0.00	0.00	0.00	0.00
16	0.00	0.00	0.12	0.18	0.31	0.32	0.34	0.11	0.00	0.00	0.00	0.00
17	0.00	0.00	0.11	0.18	0.76	0.39	0.32	0.11	0.00	0.00	0.00	0.00
18	0.00	0.00	0.11	0.18	0.76	0.63	0.32	0.10	0.00	0.00	0.00	0.00
19	0.00	0.00	0.11	0.18	0.49	0.56	0.32	0.10	0.00	0.00	0.00	0.00
20	0.00	0.00	0.12	0.18	0.45	0.60	0.32	0.24	0.00	0.00	0.00	0.00
21	0.00	0.00	0.42	0.18	0.41	0.61	0.30	0.35	0.00	0.00	0.00	0.00
22	0.00	0.00	0.35	0.19	0.40	0.56	0.27	0.22	0.00	0.00	0.00	0.00
23	0.00	0.00	0.22	0.19	0.38	0.51	0.24	0.17	0.00	0.00	0.00	0.00
24	0.00	0.00	0.20	0.18	0.36	0.87	0.32	0.14	0.00	0.00	0.00	0.00
25	0.00	0.00	0.18	0.19	0.36	0.60	0.38	0.11	0.00	0.00	0.00	0.00
26	0.00	0.00	0.18	0.20	0.34	0.53	0.33	0.11	0.00	0.00	0.00	0.00
27	0.00	0.00	0.18	0.34	0.32	0.48	0.48	0.09	0.00	0.00	0.00	0.00
28	0.00	0.00	0.18	4.5	0.32	0.45	0.37	0.08	0.00	0.00	0.00	0.00
29	0.00	0.00	0.18	0.93	---	0.46	0.30	0.07	0.00	0.00	0.00	0.00
30	0.00	0.00	0.18	0.60	---	0.46	0.28	0.05	0.00	0.00	0.00	0.00
31	0.00	---	0.18	0.48	---	0.43	---	0.04	---	0.00	0.00	---
TOTAL	0.00	0.00	3.80	11.47	10.94	13.66	9.99	5.15	0.09	0.00	0.00	0.00
MEAN	0.000	0.000	0.123	0.370	0.391	0.441	0.333	0.166	0.003	0.000	0.000	0.000
MAX	0.00	0.00	0.42	4.5	0.76	0.87	0.48	0.35	0.03	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.15	0.31	0.28	0.24	0.04	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	7.5	23	22	27	20	10	0.2	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	0.092	0.527	1.835	5.606	21.00	12.35	9.239	8.643	2.742	0.754	0.158	0.365
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
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL TOTAL	934.69		55.10			
ANNUAL MEAN	2.561		0.151		5.182	
HIGHEST ANNUAL MEAN					20.5	1998
LOWEST ANNUAL MEAN					0.15	2002
HIGHEST DAILY MEAN	43	Feb 20	4.5	Jan 28	577	Feb 23 1998
LOWEST DAILY MEAN	0.00	Jul 2	0.00	Oct 1	0.00	Jul 12 1996
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 2	0.00	Oct 1	0.00	Jul 12 1996
MAXIMUM PEAK FLOW			12		1440	Feb 23 1998
MAXIMUM PEAK STAGE			3.14		6.92	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	1850		109		3750	
10 PERCENT EXCEEDS	8.8		0.38		12	
50 PERCENT EXCEEDS	0.12		0.01		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 pen stock and water-stage recorder in bypass flume. Elevation of gage is 2,932.5 ft above sea level (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 ft³/s, July 12, 1997; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	763	482	1380	966	774	1020	994	1110	1240	1710	1600
2	942	992	358	715	1030	1170	1010	1070	1950	1200	1630	1640
3	1090	654	517	822	1330	1130	976	936	1280	953	1570	1200
4	1040	1060	434	777	1010	711	894	1070	1240	1370	2080	1160
5	1060	607	1090	635	728	658	1010	1330	1230	1480	1720	1610
6	1120	226	752	863	1040	601	1060	1200	1180	1520	1490	1410
7	1990	817	427	915	991	474	1170	1110	1020	1360	1510	1920
8	1140	1050	545	992	1060	539	1110	562	1100	1740	1570	1930
9	1100	936	878	985	1380	958	1200	1310	1830	1680	1670	1680
10	1090	910	1170	944	1370	1810	1140	1210	1490	1620	1780	1710
11	998	83	1150	985	1140	825	505	1220	1540	1810	1950	1540
12	1080	199	1000	1140	992	681	949	2340	1520	1870	1350	1630
13	1040	1290	1010	1550	1160	754	1140	1060	1520	252	1770	1460
14	2200	1410	830	971	1110	785	1040	1180	1390	1760	1500	1990
15	1020	1260	695	1040	983	773	1020	1220	1430	1300	1690	2220
16	917	1220	808	1100	1350	847	958	1370	1560	1380	1520	1500
17	1100	1530	747	1190	1920	998	1040	1440	1260	1570	1500	1540
18	1080	1880	568	1070	1110	274	1020	1300	1350	1500	1980	1550
19	1070	1410	630	916	863	1070	1120	1800	1380	1470	1610	1610
20	958	1280	846	1300	807	545	1010	1450	1230	1540	1560	1470
21	1220	1150	864	974	950	564	1250	1480	1160	1950	1410	1920
22	927	1670	799	1000	850	985	1080	1400	1240	1490	1570	2120
23	843	1370	1460	924	871	1060	1100	1380	1800	1430	1520	1570
24	1000	1170	1020	1030	1770	1150	1080	1480	1390	1560	1680	1550
25	913	1570	1010	908	883	861	1070	1540	1410	1520	1700	1540
26	1110	1330	951	964	929	859	1070	1450	1350	1440	1510	1640
27	1880	743	950	1530	1090	1000	985	1350	1340	1740	1510	1670
28	1050	768	801	916	749	804	1130	1200	1340	1890	1570	1930
29	845	705	797	941	---	837	1170	1200	1240	1430	1540	1950
30	835	835	1340	638	---	813	1160	1270	1830	1510	1520	1650
31	816	---	736	849	---	1330	---	1260	---	1500	1530	---
TOTAL	34554	30888	25665	30964	30432	26640	31487	40182	41710	46075	50220	49910
MEAN	1115	1030	827.9	998.8	1087	859.4	1050	1296	1390	1486	1620	1664
MAX	2200	1880	1460	1550	1920	1810	1250	2340	1950	1950	2080	2220
MIN	816	83	358	635	728	274	505	562	1020	252	1350	1160
AC-FT	68540	61270	50910	61420	60360	52840	62450	79700	82730	91390	99610	99000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	737.9	499.9	652.3	518.5	440.8	710.6	1059
MAX	1366	1382	1526	1177	1087	1308	1367
(WY)	2000	2001	2001	2000	2002	2000	1997
MIN	28.0	51.3	94.7	62.1	1.46	217	683
(WY)	1996	1997	1997	1999	1998	1998	1999

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1996 - 2002

ANNUAL TOTAL	368581	438727	
ANNUAL MEAN	1010	1202	893.7
HIGHEST ANNUAL MEAN			1227
LOWEST ANNUAL MEAN			603
HIGHEST DAILY MEAN	2330	Aug 5	2340
LOWEST DAILY MEAN	20	Jan 21	83
ANNUAL SEVEN-DAY MINIMUM	327	Jan 21	580
ANNUAL RUNOFF (AC-FT)	731100		870200
10 PERCENT EXCEEDS	1420		1700
50 PERCENT EXCEEDS	1020		1150
90 PERCENT EXCEEDS	563		753

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 sea level. Elevation of bypass gage is 3,372.5 ft above sea level (from California Department of Water Resources). Prior to Oct. 1, 2002, bypass flume discontinued.

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. Beginning Oct. 1, 2002, all flow passes through the powerplant. 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 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,200 ft³/s, July 14, 1997; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	783	260	1250	728	483	1110	920	957	1280	1510	1300
2	772	834	350	662	1010	1040	966	885	1640	853	1320	1510
3	916	317	541	1020	1270	1040	935	929	1210	742	1460	1270
4	1070	936	347	805	1080	1020	792	799	1060	1190	1460	1050
5	785	631	1190	706	545	874	913	1270	1050	1210	1690	1190
6	1070	295	531	644	878	526	936	934	1000	1450	1580	1190
7	1680	836	565	815	1060	432	859	1190	1020	1600	1360	1750
8	1120	895	557	1060	1060	874	1060	468	1010	1470	1350	1890
9	844	805	775	961	1260	847	1160	1060	1340	1510	1300	1430
10	899	819	929	781	1310	1450	1000	1060	1400	1370	1620	1480
11	1000	110	1060	826	1180	885	443	1060	1370	1710	1740	1550
12	933	200	1220	1030	870	773	917	1750	1370	1350	1230	1340
13	986	907	971	1550	1070	760	964	1320	1470	523	1550	1340
14	1900	1340	813	881	1000	756	793	1250	1180	1490	1320	1660
15	1040	1260	526	1120	1080	605	1190	960	1190	1070	1390	1920
16	766	1230	744	1070	1090	720	786	1210	1350	1270	1390	1670
17	895	1210	730	931	1680	875	893	1350	1330	1260	1410	1340
18	979	1800	637	1050	1380	1320	874	1090	1070	1320	1410	1370
19	1030	1440	545	872	736	894	887	1630	1030	1240	1600	1410
20	897	1140	579	1270	728	560	898	1360	1160	1340	1230	1330
21	908	1310	778	1110	1070	543	949	1370	1050	1490	1360	1620
22	678	1280	797	974	834	931	1100	1060	954	1540	1370	1940
23	795	1340	1390	801	533	1020	1060	1330	1630	1340	1300	1680
24	881	984	821	952	1670	763	993	1340	1180	1350	1600	1510
25	938	1430	1070	782	1090	1190	880	1370	1080	1300	1440	1350
26	752	1240	945	1050	860	740	974	1330	1320	1130	1400	1370
27	953	741	958	1280	1070	883	957	1110	1270	1580	1390	1530
28	1900	729	659	858	814	725	826	1150	1000	1600	1320	1740
29	805	704	865	1080	---	808	1090	1060	1060	1360	1380	1860
30	788	792	1070	565	---	689	1080	1060	1610	1370	1300	1490
31	671	---	622	851	---	1220	---	1100	---	1380	1350	---
TOTAL	30671	28338	23845	29607	28956	26246	28285	35775	36361	40688	44130	45080
MEAN	989.4	944.6	769.2	955.1	1034	846.6	942.8	1154	1212	1313	1424	1503
MAX	1900	1800	1390	1550	1680	1450	1190	1750	1640	1710	1740	1940
MIN	671	110	260	565	533	432	443	468	954	523	1230	1050
AC-FT	60840	56210	47300	58730	57430	52060	56100	70960	72120	80700	87530	89420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	635.3	419.7	576.5	456.3	403.8	617.9	952.0
MAX	1187	1271	1431	1102	1034	1195	1235
(WY)	2000	2001	2001	2000	2002	2000	1997
MIN	22.6	0.000	0.95	7.89	0.52	169	584
(WY)	1996	1997	1997	1997	1997	1996	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL TOTAL	327747.07	397982	
ANNUAL MEAN	897.9	1090	768.3
HIGHEST ANNUAL MEAN			1090
LOWEST ANNUAL MEAN			502
HIGHEST DAILY MEAN	1930	Aug 12	2200
LOWEST DAILY MEAN	0.00	Sep 24	0.00
ANNUAL SEVEN-DAY MINIMUM	291	Jan 21	0.00
ANNUAL RUNOFF (AC-FT)	650100	789400	556600
10 PERCENT EXCEEDS	1310	1520	1370
50 PERCENT EXCEEDS	883	1060	849
90 PERCENT EXCEEDS	492	705	6.1

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 mi².

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 sea level.

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, 38,006 acre-ft, Mar. 22, 1996, elevation, 3,310.24 ft.

EXTREMES (AT 2400 HOURS) FOR CURRENT YEAR.—Maximum contents, 73,697 acre-ft, July 11, elevation, 3,353.39 ft; minimum, 63,209 acre-ft, Nov. 12, elevation, 3,342.59.

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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71892	72647	72054	73109	69210	70742	72657	72647	71577	72610	72619	71968
2	71387	72417	72130	72830	69594	71026	72657	72149	72484	72006	72360	72083
3	71264	70828	72322	72897	70242	71520	72542	71720	72322	71416	72226	71920
4	71140	70818	71682	72551	70506	71796	72149	71197	72188	71482	72197	71036
5	70346	70016	71987	71825	69528	71787	71997	71730	71930	71368	72475	70440
6	70280	68298	71245	70818	69182	71159	71815	71473	71549	71796	72983	69707
7	71425	68103	70535	70176	69332	70337	71815	71710	71207	72389	72714	70176
8	71473	67706	69697	69847	69192	70337	71815	70525	70951	72609	72513	70903
9	71026	67098	69735	69660	69782	69988	72226	70280	71112	72868	72054	70620
10	70365	66703	69829	69369	70280	71501	72676	70092	71264	72945	72475	70582
11	70365	64668	70299	68819	70421	71634	71815	70016	71549	73697	73099	70742
12	70365	63209	70970	68902	70223	71539	72264	71131	71653	73407	72686	70554
13	70554	63387	71321	69969	70176	71292	72264	71397	72408	72830	72961	70064
14	72475	64174	71606	69557	69791	71008	72025	71520	72188	73089	72762	70346
15	72561	64659	71691	69603	69753	70591	72686	71074	72245	72599	72657	71302
16	72398	65237	72360	69782	69782	70393	72475	70865	72686	72302	72513	71815
17	72102	65591	72782	69388	70932	70469	72398	70714	72945	72006	72475	71302
18	72111	67024	72331	69491	71549	71444	72264	70554	72676	72025	72398	71045
19	72245	67770	72130	69052	70998	71444	72092	71254	72312	71739	72676	70733
20	72207	67955	71577	69538	70676	70960	72293	71340	72274	71815	72283	70431
21	71834	68196	71530	69922	71036	70733	72341	71787	71949	72178	72063	70535
22	71245	68772	72102	69725	70865	70648	72762	71720	71568	72456	71958	71435
23	70629	69070	73465	69276	69876	71140	72993	71949	72427	72341	71653	71834
24	70271	69080	72264	69323	71283	71112	73070	72016	72408	72571	71911	71606
25	70045	69894	72169	68921	71644	71730	72849	71892	72140	72820	71892	71121
26	69557	70894	71749	69229	71577	71558	72983	72590	72331	72226	72083	70724
27	69323	71131	71387	70092	71796	71682	72955	72561	72216	72705	72169	70601
28	70368	71102	70563	70111	71644	71406	72666	72590	71806	72810	72159	71064
29	71682	71711	71691	70289	---	71596	72964	72389	71501	72666	72350	71606
30	72312	72513	72312	69829	---	71235	72993	72197	72619	72417	72063	71568
31	72494	---	72102	69688	---	71958	---	72035	---	72379	72207	---
MAX	72561	72647	73465	73109	71796	71958	73070	72647	72945	73697	73099	72083
MIN	69323	63209	69697	68819	69182	69988	71815	70016	70951	71368	71653	69707
a	3352.44	3352.46	3358.03	3349.48	3351.55	3351.88	3352.96	3351.96	3352.58	3352.32	3352.14	3351.47
b	+937	+19	-411	-2414	+1956	+314	+1035	-958	+584	-240	-172	-639

CAL YR 2001 b +567
WTR YR 2002 b +11

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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002

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	0.00	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	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
a	85	52	0	0	14	121	79	37	28	0	0	0

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.036	0.536	7.520	14.88	68.13	94.14	22.89	21.63	3.878	0.531	1.501	0.124
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1981 - 2002	
ANNUAL TOTAL	643.00		0.00			
ANNUAL MEAN	1.762		0.000		19.42	
HIGHEST ANNUAL MEAN					118	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	52	Feb 21	0.00	Oct 1	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)	1280		0.00		14070	Mar 2 1983
TOTAL FLOW (AC-FT) a	3610		416			
10 PERCENT EXCEEDS	0.00		0.00		30	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Flow, in acre-feet, through Las Flores Release (station 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 mi².

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. Elevation of gage is 3,040 ft above sea level, from topographic map.

REMARKS.—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 ft³/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 ft³/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.

EXTREMES FOR CURRENT YEAR.—No flow for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.418	4.410	12.91	66.44	146.2	140.2	48.63	30.84	12.90	1.307	0.513	0.617
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL TOTAL	2349.24		0.00			
ANNUAL MEAN	6.436		0.000		38.39	
HIGHEST ANNUAL MEAN					183	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	112	Mar 7	0.00	Oct 1	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					11300	
MAXIMUM PEAK STAGE					23.20	
ANNUAL RUNOFF (AC-FT)	4660		0.00		27810	
10 PERCENT EXCEEDS	18		0.00		60	
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 mi².

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, PER-CENT SATUR-ATION (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT 29...	1500	1.9	687	7.6	88	8.1	570	17.0	14.1	5.5	116
FEB 04...	1345	6.1	686	11.4	103	8.1	354	6.5	9.97	2.5	43.9
MAY 08...	1340	4.1	683	9.8	121	8.0	378	20.5	9.04	2.7	39.3
AUG 27...	1145	.02	682	9.8	108	8.6	550	14.5	14.8	3.1	2.2

Date	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AM-MONIA ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, +NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)
OCT 29...	372	--	<.05	<.008	--	300	<.1	<.1	<.1	<.2
FEB 04...	230	--	<.05	<.008	--	100	<.1	<.1	<.1	<.2
MAY 08...	213	--	<.05	<.008	--	130	<.1	<.1	<.1	<.2
AUG 27...	369	.34	.025	<.002	.19	200	<.1	<.1	<.1	<.2

Date	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34536)	BENZENE TOTAL (UG/L) (34030)	BROMO-FORM TOTAL (UG/L) (32104)	CARBON TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)
OCT 29...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2
FEB 04...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2
MAY 08...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2
AUG 27...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2

< 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 2001 TO SEPTEMBER 2002

Date	CIS-1,2	-DI-	BROMO-	CHLORO-	DI-	DI-ISO-	ETHER	ETHER	ETHER	ETHER	FREON-
	CHLORO- FORM TOTAL (UG/L) (32106)	ETHENE WATER TOTAL (UG/L) (77093)	DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- METHANE TOTAL (UG/L) (34668)	DI- FLUORO- METHANE TOTAL (UG/L) (81577)	DI-ISO- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81576)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (50004)	ETHER BUTYL WATER UNFLTRD RECOVER (UG/L) (50005)	ETHER PENTYL METHYL UNFLTRD RECOVER (UG/L) (34371)	ETHER ETHYL- BENZENE TOTAL (UG/L) (77652)	113 WATER UNFLTRD REC (UG/L) (77652)
OCT 29...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1	<.1
FEB 04...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1	<.1
MAY 08...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1	<.1
AUG 27...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1	<.1
Date	METHYL	METHYL	META/ PARA-	O-		TETRA-		TRI-	TRI-	VINYL	
	TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	ENE CHLO- RIDE TOTAL (UG/L) (34423)	XYLENE WATER UNFLTRD REC (UG/L) (85795)	XYLENE WATER WHOLE TOTAL (UG/L) (77135)	STYRENE TOTAL (UG/L) (77128)	ENE ETHYL- TOTAL (UG/L) (34475)	TOLUENE TOTAL (UG/L) (34010)	ENE ETHYL- TOTAL (UG/L) (39180)	CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	CHLORO- FLUORO- METHANE TOTAL (UG/L) (39175)	CHLO- RIDE TOTAL (UG/L) (39175)
OCT 29...	<.2	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2
FEB 04...	<.2	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2
MAY 08...	<.2	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2
AUG 27...	<.2	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2

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

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 mi².

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
OCT											
29...	1230	6.1	695	4.8	53	7.4	687	16.0	52.6	.5	52.0
FEB											
04...	1120	13	697	8.7	82	7.6	558	9.0	42.0	.4	42.9
MAY											
08...	1110	9.0	694	7.0	80	7.4	597	16.5	41.8	.3	41.7
AUG											
27...	1420	1.9	690	5.1	63	7.3	720	21.0	48.8	.5	41.7
Date		SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AM-MONIA ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, +NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	BORON, DIS-SOLVED (UG/L AS B) (01020)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)
OCT											
29...	404	--	.67	<.008	--	170	<.1	<.1	<.1	<.2	
FEB											
04...	344	--	.45	<.008	--	120	<.1	<.1	<.1	<.2	
MAY											
08...	343	--	.20	e.004	--	140	<.1	<.1	<.1	<.2	
AUG											
27...	413	.18	.294	.011	e.05	180	<.1	<.1	<.1	<.2	
Date		1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34536)	BENZENE TOTAL (UG/L) (34030)	BROMO-FORM TOTAL (UG/L) (32104)	CARBON TETRA-CHLO-RIDE TOTAL (UG/L) (32102)	CHLORO-BENZENE TOTAL (UG/L) (34301)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)
OCT											
29...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2	
FEB											
04...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2	
MAY											
08...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2	
AUG											
27...	<.1	<.1	<.1	<.1	<.1	<.1	<.2	<.2	<.1	<.2	

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

10261480 MOJAVE RIVER AT UPPER NARROWS, AT VICTORVILLE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL WATER UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)
	Date	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	META/ PARA- XYLENE WATER UNFLTRD REC (UG/L) (85795)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE TOTAL (UG/L) (34010)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLURO- METHANE TOTAL (UG/L) (34488)
OCT 29...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1
FEB 04...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1
MAY 08...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1
AUG 27...	<.1	<.1	<.1	<.2	<.2	<.2	<.1	<.2	<.1	<.1
OCT 29...	e.1	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.2	<.2
FEB 04...	.2	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.2	<.2
MAY 08...	<.2	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.2	<.2
AUG 27...	e.1	<.2	<.2	<.1	<.1	<.1	<.1	<.1	<.2	<.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 mi².

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. Elevation of gage is 2,643.01 ft above sea level. 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 fair except for discharges below 10 ft³/s and estimated daily discharges, which are 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 ft³/s, Mar. 2, 1938, gage height, 23.7 ft, present datum, from rating curve extended above 10,000 ft³/s, on basis of slope-area measurement of peak flow; no flow Sept. 21–23, 1995.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.91	1.8	8.8	12	14	15	e14	7.6	3.1	1.3	0.86	0.74
2	1.0	1.5	8.7	13	13	15	15	7.2	3.2	1.3	0.61	0.69
3	1.1	1.3	8.9	13	13	e14	e14	6.9	2.8	1.3	0.58	e0.65
4	1.1	2.0	9.1	13	13	e13	e13	5.9	2.7	1.5	0.66	e0.69
5	0.98	2.6	8.7	13	13	13	e13	6.4	2.6	1.4	0.73	e0.75
6	1.0	1.8	8.3	13	13	14	e13	e5.6	2.3	1.5	0.53	0.78
7	0.89	3.2	8.5	13	14	14	e12	5.1	2.2	1.4	0.83	0.70
8	0.85	3.4	8.7	13	15	14	e12	5.3	2.1	1.2	0.87	0.67
9	0.96	3.2	9.3	13	15	13	e11	4.4	2.8	1.1	1.1	0.77
10	1.0	2.9	8.5	13	15	12	e10	4.6	2.7	1.3	0.83	0.81
11	0.91	e3.0	8.4	13	15	11	9.8	4.6	2.3	1.0	0.79	1.0
12	0.98	4.0	8.4	15	16	11	9.6	4.4	2.1	1.0	0.80	e0.79
13	0.96	16	8.3	14	15	13	e9.0	4.4	2.2	0.92	0.72	0.88
14	0.91	6.8	8.5	14	13	12	e8.0	4.1	1.8	0.97	0.80	1.1
15	0.87	6.8	8.5	15	13	13	e7.5	e4.0	e1.7	1.0	0.76	0.95
16	0.93	7.0	8.3	15	13	13	e7.2	e3.7	e1.6	0.91	0.72	0.63
17	0.92	6.1	9.4	13	13	14	e6.9	e3.5	1.5	1.1	0.81	0.84
18	0.91	5.2	9.8	13	15	15	6.9	3.0	1.6	1.0	0.80	0.85
19	0.96	5.4	10	13	13	14	7.5	3.3	1.8	1.1	0.81	0.71
20	0.83	5.7	9.8	13	13	14	7.0	4.0	1.7	1.0	0.58	0.92
21	0.92	5.9	11	13	13	13	6.9	4.9	e1.7	1.1	0.64	0.82
22	0.95	6.5	11	13	13	14	6.3	5.1	e1.7	1.1	0.78	0.74
23	0.92	5.9	11	14	13	15	6.0	5.2	e1.8	0.94	0.67	0.68
24	1.0	7.1	11	14	14	16	6.4	4.9	e1.8	0.91	0.65	0.80
25	1.2	8.2	11	14	17	15	6.3	4.8	e1.7	1.0	0.60	0.99
26	1.1	7.6	11	13	15	15	5.9	4.3	1.6	1.1	0.65	0.99
27	1.1	7.5	11	13	17	14	6.2	3.2	1.4	0.92	0.64	0.92
28	1.1	7.7	12	14	14	14	6.4	3.5	1.8	1.0	0.70	0.94
29	1.1	7.9	14	15	---	15	6.4	3.5	1.7	1.3	0.73	1.0
30	1.4	8.1	12	15	---	16	7.3	3.0	1.4	1.5	e0.67	1.0
31	1.5	---	12	14	---	13	---	3.1	---	1.0	e0.62	---
TOTAL	31.26	162.1	303.9	419	393	427	270.5	143.5	61.4	35.17	22.54	24.80
MEAN	1.008	5.403	9.803	13.52	14.04	13.77	9.017	4.629	2.047	1.135	0.727	0.827
MAX	1.5	16	14	15	17	16	15	7.6	3.2	1.5	1.1	1.1
MIN	0.83	1.3	8.3	12	13	11	5.9	3.0	1.4	0.91	0.53	0.63
AC-FT	62	322	603	831	780	847	537	285	122	70	45	49

e Estimated.

MOJAVE RIVER BASIN

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.13	34.41	49.91	95.16	204.0	215.7	123.0	47.10	20.87	14.30	14.43	16.23
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	9.80	13.5	14.0	12.6	9.02	4.06	1.79	1.13	0.73	0.76
(WY)	2002	2002	2002	2002	2002	1990	2002	2001	2001	2002	2002	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002	
ANNUAL TOTAL	2543.78		2294.17			
ANNUAL MEAN	6.969		6.285		70.78	
HIGHEST ANNUAL MEAN					402	
LOWEST ANNUAL MEAN					6.29	
HIGHEST DAILY MEAN	66	Jan 11	17	Feb 25	21000	Feb 25 1969
LOWEST DAILY MEAN	0.40	Sep 28	0.53	Aug 6	0.00	Sep 21 1995
ANNUAL SEVEN-DAY MINIMUM	0.58	Sep 23	0.65	Aug 20	0.37	Sep 20 1995
MAXIMUM PEAK FLOW			54	Nov 13	70600	Mar 2 1938
MAXIMUM PEAK STAGE			4.11	May 24	23.70	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	5050		4550		51270	
10 PERCENT EXCEEDS	15		14		53	
50 PERCENT EXCEEDS	4.1		4.6		26	
90 PERCENT EXCEEDS	0.86		0.80		9.7	

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 mi².

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 sea level.

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 ft³/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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.001	0.341	3.265	24.05	92.91	107.9	39.45	5.217	0.001	0.003	0.021	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002	
ANNUAL TOTAL	0.00		0.00			
ANNUAL MEAN	0.000		0.000		22.38	
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		16210	
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 mi².

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 sea level. 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 poor. 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 ft³/s, Jan. 26, 1969, gage height, 12.40 ft (present datum), from rating curve extended above 3,200 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 6	1530	0.92	2.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.18	0.36	0.43	0.59	0.58	0.76	0.64	0.47	0.06	0.00	0.00	0.00
2	0.19	0.35	0.42	0.59	0.61	0.74	e0.65	0.47	0.05	0.00	0.00	0.00
3	0.19	0.35	0.40	0.59	0.62	0.75	e0.64	0.45	0.04	0.00	0.00	0.00
4	0.19	0.39	0.41	0.59	0.63	0.79	e0.62	0.42	0.04	0.00	0.00	0.00
5	0.19	0.38	0.37	0.58	0.63	0.81	e0.61	0.40	0.03	0.00	0.00	0.00
6	0.19	0.38	0.37	0.59	0.65	0.84	e0.62	0.36	0.03	0.00	0.00	0.00
7	0.20	0.37	0.37	0.60	0.66	0.87	0.61	0.34	0.02	0.00	0.00	0.00
8	0.22	0.36	0.38	0.65	0.68	0.83	0.59	0.33	0.01	0.00	0.00	0.00
9	0.21	0.35	0.39	0.65	0.65	0.75	e0.57	0.33	0.00	0.00	0.00	0.00
10	0.22	0.36	0.41	0.65	0.63	0.80	e0.55	0.31	0.00	0.00	0.00	0.00
11	0.23	0.38	0.41	0.64	0.64	0.80	0.55	0.30	0.01	0.00	0.00	0.00
12	0.23	0.39	0.42	0.66	0.67	0.76	0.53	0.32	0.01	0.00	0.00	0.00
13	0.23	0.40	0.44	0.66	0.68	0.68	0.51	0.32	0.00	0.00	0.00	0.01
14	0.25	0.37	0.47	0.68	0.67	0.62	0.49	0.31	0.00	0.00	0.00	0.01
15	0.26	0.36	0.46	0.69	0.66	0.63	0.48	0.27	0.00	0.00	0.00	0.02
16	0.26	0.36	0.43	0.65	0.68	0.65	0.47	0.25	0.00	0.00	0.00	0.02
17	0.26	0.38	0.46	0.66	0.70	0.63	0.51	0.25	0.00	0.00	0.00	0.02
18	0.26	0.38	0.47	0.67	0.70	0.69	0.51	0.22	0.00	0.00	0.00	0.02
19	0.26	0.38	0.47	0.67	0.68	0.67	0.51	0.21	0.00	0.00	0.00	0.03
20	0.26	0.39	0.49	0.65	0.71	0.68	0.51	0.22	0.00	0.00	0.00	0.05
21	0.26	0.40	0.49	0.62	0.69	0.68	0.50	0.28	0.00	0.00	0.00	0.05
22	0.27	0.40	0.48	0.66	0.69	0.68	0.49	0.30	0.00	0.00	0.00	0.05
23	0.25	0.38	0.49	0.61	0.75	0.65	0.47	0.27	0.00	0.00	0.00	0.06
24	0.27	0.45	0.46	0.61	0.75	0.65	0.45	0.23	0.00	0.00	0.00	0.07
25	0.27	0.50	0.51	0.62	0.74	0.65	0.52	0.19	0.00	0.00	0.00	0.08
26	0.28	0.41	0.59	0.67	0.75	0.64	0.47	0.15	0.00	0.00	0.00	0.08
27	0.31	0.40	0.59	0.68	0.77	0.63	0.46	0.13	0.00	0.00	0.00	0.08
28	0.31	0.40	0.59	0.68	0.80	0.67	0.45	0.11	0.00	0.00	0.00	0.09
29	0.31	0.42	0.62	0.65	---	0.71	0.45	0.09	0.00	0.00	0.00	0.13
30	0.35	0.42	0.65	0.65	---	0.66	0.46	0.07	0.00	0.00	0.00	0.16
31	0.37	---	0.61	0.61	---	0.64	---	0.06	---	0.00	0.00	---
TOTAL	7.73	11.62	14.55	19.77	19.07	22.01	15.89	8.43	0.30	0.00	0.00	1.03
MEAN	0.249	0.387	0.469	0.638	0.681	0.710	0.530	0.272	0.010	0.000	0.000	0.034
MAX	0.37	0.50	0.65	0.69	0.80	0.87	0.65	0.47	0.06	0.00	0.00	0.16
MIN	0.18	0.35	0.37	0.58	0.58	0.62	0.45	0.06	0.00	0.00	0.00	0.00
AC-FT	15	23	29	39	38	44	32	17	0.6	0.00	0.00	2.0

e Estimated.

10263000 MOJAVE RIVER AT AFTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.731	0.924	2.632	12.85	41.66	16.84	2.731	0.643	0.387	0.653	1.304	0.835
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1930 - 2002
ANNUAL TOTAL	167.13	120.40	
ANNUAL MEAN	0.458	0.330	6.647
HIGHEST ANNUAL MEAN			100 1969
LOWEST ANNUAL MEAN			0.22 1975
HIGHEST DAILY MEAN	33 Aug 13	0.87 Mar 7	10000 Feb 20 1993
LOWEST DAILY MEAN	0.04 Jul 4	0.00 Jun 9	0.00 Jun 28 1961
ANNUAL SEVEN-DAY MINIMUM	0.05 Jul 31	0.00 Jun 13	0.00 Jul 14 1961
MAXIMUM PEAK FLOW		0.92 Mar 6	18000 Jan 26 1969
MAXIMUM PEAK STAGE		2.70 Mar 12	12.40 Jan 26 1969
ANNUAL RUNOFF (AC-FT)	332	239	4820
10 PERCENT EXCEEDS	0.60	0.68	1.6
50 PERCENT EXCEEDS	0.35	0.36	0.70
90 PERCENT EXCEEDS	0.06	0.00	0.05

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 mi².

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 sea level, 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 poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,300 ft³/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 ft³/s, Nov. 5, 1951.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1930	7.3	1.78

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.9	3.6	4.1	4.3	3.9	3.8	3.1	1.9	1.8	1.3	1.6
2	4.5	4.9	3.4	4.2	4.3	3.4	3.7	3.1	2.0	1.7	1.3	1.5
3	4.7	4.6	3.3	4.2	4.3	3.2	3.9	3.1	2.1	1.8	1.4	1.3
4	4.8	4.0	3.4	4.3	4.3	3.2	3.8	3.1	2.0	1.8	1.5	1.1
5	4.8	3.7	3.5	4.3	4.2	3.1	3.6	3.2	1.9	1.9	1.5	1.1
6	5.3	3.6	3.6	4.3	4.1	3.1	3.6	3.1	1.9	1.8	1.4	1.1
7	4.5	3.4	3.6	4.2	4.1	3.6	3.7	3.1	1.8	1.7	1.3	1.1
8	4.1	3.4	3.6	4.2	4.1	4.6	3.9	3.1	1.8	1.6	1.2	1.2
9	4.1	3.4	4.1	4.1	4.1	4.5	3.9	3.1	2.1	1.4	1.3	1.2
10	4.2	3.5	4.8	4.2	4.1	4.2	3.9	3.2	2.0	1.5	1.4	1.1
11	4.1	4.1	4.7	4.2	4.0	3.6	3.7	3.2	1.9	1.6	1.4	1.1
12	4.3	5.0	4.7	4.1	4.0	3.6	3.6	3.0	1.8	1.4	1.2	1.2
13	4.4	6.4	4.5	4.3	3.9	3.5	3.4	2.8	1.9	1.5	1.3	1.3
14	4.3	5.9	4.4	4.3	3.9	3.5	3.3	2.7	1.8	1.5	1.4	1.2
15	3.9	5.5	4.7	4.1	3.9	3.4	3.9	2.7	1.8	1.5	1.3	1.3
16	3.9	5.1	4.8	4.1	3.9	3.2	4.1	2.9	1.8	1.4	1.3	1.2
17	3.9	4.7	5.0	4.1	4.0	3.2	4.1	2.7	1.8	1.6	1.5	1.2
18	4.1	4.6	5.1	4.1	4.0	3.2	4.1	2.7	1.6	1.6	1.5	1.2
19	4.0	4.8	5.0	4.1	4.0	3.1	4.1	2.8	1.7	1.5	1.5	1.1
20	3.7	4.6	4.9	4.2	4.0	3.0	4.1	2.4	1.8	1.6	1.4	1.2
21	3.6	4.3	5.3	4.3	4.0	2.9	4.0	2.4	1.8	1.7	1.5	1.3
22	3.5	4.5	5.1	4.3	4.0	3.0	3.9	2.4	1.8	1.4	1.5	1.2
23	3.5	4.8	5.1	4.3	3.9	3.3	3.7	2.3	1.6	1.7	1.5	1.3
24	3.7	5.3	5.1	4.2	3.7	3.7	3.5	2.2	1.5	1.6	1.5	1.3
25	3.7	5.3	5.1	4.1	3.9	3.9	3.5	2.0	1.5	1.1	1.4	1.3
26	3.6	4.8	5.0	4.0	3.8	3.9	3.5	2.0	1.5	1.3	1.3	1.3
27	3.8	4.6	4.6	4.2	3.6	3.9	3.5	2.0	1.8	1.4	1.2	1.3
28	4.4	4.3	4.3	5.3	3.9	3.9	3.5	2.0	1.7	1.4	1.2	1.3
29	4.4	4.2	4.3	4.7	---	3.9	3.4	1.9	1.7	1.3	1.1	1.2
30	4.7	3.9	4.3	4.5	---	3.5	3.3	2.0	1.7	1.3	1.2	1.2
31	5.0	---	4.1	4.5	---	3.5	---	2.0	---	1.3	1.4	---
TOTAL	130.0	136.1	137.0	132.1	112.3	109.5	112.0	82.3	54.0	47.7	42.2	37.0
MEAN	4.194	4.537	4.419	4.261	4.011	3.532	3.733	2.655	1.800	1.539	1.361	1.233
MAX	5.3	6.4	5.3	5.3	4.3	4.6	4.1	3.2	2.1	1.9	1.5	1.6
MIN	3.5	3.4	3.3	4.0	3.6	2.9	3.3	1.9	1.5	1.1	1.1	1.1
AC-FT	258	270	272	262	223	217	222	163	107	95	84	73

10263500 BIG ROCK CREEK NEAR VALYERMO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.117	7.304	10.17	18.11	30.42	37.27	30.48	27.66	18.71	10.81	7.819	6.173
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	1.80	2.10	2.39	2.40	2.67	2.35	1.61	1.15	1.09	1.01
(WY)	1952	1952	1991	1951	1951	1951	1951	1951	1961	1961	1961	1961

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1923 - 2002	
ANNUAL TOTAL	4143.8		1132.2			
ANNUAL MEAN	11.35		3.102		17.49	
HIGHEST ANNUAL MEAN					90.9	
LOWEST ANNUAL MEAN					1.91	
HIGHEST DAILY MEAN	49	Mar 21	6.4	Nov 13	3300	Mar 2 1938
LOWEST DAILY MEAN	2.3	Jan 1	1.1	Jul 25	0.70	Nov 5 1951
ANNUAL SEVEN-DAY MINIMUM	2.4	Jan 1	1.1	Sep 4	0.87	Nov 3 1951
MAXIMUM PEAK FLOW			7.3	Nov 12	8300	Mar 2 1938
MAXIMUM PEAK STAGE			a2.54	Oct 3	7.70	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	8220		2250		12670	
10 PERCENT EXCEEDS	30		4.6		37	
50 PERCENT EXCEEDS	6.4		3.5		7.2	
90 PERCENT EXCEEDS	3.5		1.3		2.6	

a Peak stage during the 2002 water year was affected by a swimmers dam.

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 mi².

PERIOD OF RECORD.—August to September 2002.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 0.50 ft³/s, Sept. 4, 2002, gage height, 1.02 ft; maximum gage height, 1.04 ft, Sept. 27, 2002; minimum daily, 0.08 ft³/s, Sept. 25, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 70 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 4	0500	0.50	1.02

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	0.35
2	---	---	---	---	---	---	---	---	---	---	---	0.35
3	---	---	---	---	---	---	---	---	---	---	---	0.36
4	---	---	---	---	---	---	---	---	---	---	---	0.42
5	---	---	---	---	---	---	---	---	---	---	---	0.44
6	---	---	---	---	---	---	---	---	---	---	---	0.44
7	---	---	---	---	---	---	---	---	---	---	---	0.43
8	---	---	---	---	---	---	---	---	---	---	---	0.46
9	---	---	---	---	---	---	---	---	---	---	---	0.42
10	---	---	---	---	---	---	---	---	---	---	---	0.43
11	---	---	---	---	---	---	---	---	---	---	---	0.42
12	---	---	---	---	---	---	---	---	---	---	---	0.42
13	---	---	---	---	---	---	---	---	---	---	---	0.35
14	---	---	---	---	---	---	---	---	---	---	---	0.34
15	---	---	---	---	---	---	---	---	---	---	---	0.30
16	---	---	---	---	---	---	---	---	---	---	---	0.25
17	---	---	---	---	---	---	---	---	---	---	---	0.18
18	---	---	---	---	---	---	---	---	---	---	---	0.14
19	---	---	---	---	---	---	---	---	---	---	---	0.12
20	---	---	---	---	---	---	---	---	---	---	---	0.12
21	---	---	---	---	---	---	---	---	---	---	---	0.12
22	---	---	---	---	---	---	---	---	---	---	0.24	0.11
23	---	---	---	---	---	---	---	---	---	---	0.24	0.10
24	---	---	---	---	---	---	---	---	---	---	0.24	0.09
25	---	---	---	---	---	---	---	---	---	---	0.32	0.08
26	---	---	---	---	---	---	---	---	---	---	0.33	0.20
27	---	---	---	---	---	---	---	---	---	---	0.35	0.19
28	---	---	---	---	---	---	---	---	---	---	0.29	0.21
29	---	---	---	---	---	---	---	---	---	---	0.29	0.25
30	---	---	---	---	---	---	---	---	---	---	0.28	0.26
31	---	---	---	---	---	---	---	---	---	---	0.34	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	8.35
MEAN	---	---	---	---	---	---	---	---	---	---	---	0.278
MAX	---	---	---	---	---	---	---	---	---	---	---	0.46
MIN	---	---	---	---	---	---	---	---	---	---	---	0.08
AC-FT	---	---	---	---	---	---	---	---	---	---	---	17

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

MEAN	---	---	---	---	---	---	---	---	---	---	0.292	0.278
MAX	---	---	---	---	---	---	---	---	---	---	0.29	0.28
(WY)	---	---	---	---	---	---	---	---	---	---	2002	2002
MIN	---	---	---	---	---	---	---	---	---	---	0.29	0.28
(WY)	---	---	---	---	---	---	---	---	---	---	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	11.27
ANNUAL MEAN	0.282
HIGHEST DAILY MEAN	0.46 Sep 8
LOWEST DAILY MEAN	0.08 Sep 25
ANNUAL SEVEN-DAY MINIMUM	0.11 Sep 22
MAXIMUM PEAK FLOW	0.50 Sep 4
MAXIMUM PEAK STAGE	1.04 Sep 27
ANNUAL RUNOFF (AC-FT)	22
10 PERCENT EXCEEDS	0.43
50 PERCENT EXCEEDS	0.29
90 PERCENT EXCEEDS	0.11

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 mi².

PERIOD OF RECORD.—November 2001 to September 2002.

GAGE.—Water-stage recorder. Elevation of gage is 3,550 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 0.72 ft³/s, Nov. 12, 2001, and Dec. 29, 2001, to Jan. 3, 2002; maximum gage height, 1.67 ft, Nov. 24–29, 2001; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 40 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1930	0.72	1.64

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	0.63	0.72	0.56	0.51	0.51	0.42	0.19	0.02	0.00	0.00
2	---	---	0.63	0.72	0.54	0.52	0.50	0.41	0.18	0.01	0.00	0.00
3	---	---	0.62	0.71	0.54	0.52	0.48	0.41	0.17	0.01	0.00	0.00
4	---	---	0.61	0.70	0.54	0.52	0.46	0.42	0.16	0.01	0.00	0.00
5	---	0.64	0.61	0.65	0.54	0.52	0.46	0.41	0.15	0.00	0.00	0.00
6	---	0.65	0.61	0.65	0.52	0.52	0.46	0.39	0.15	0.00	0.00	0.00
7	---	0.65	0.60	0.65	0.52	0.52	0.45	0.38	0.15	0.00	0.00	0.00
8	---	0.65	0.59	0.65	0.52	0.52	0.44	0.38	0.14	0.00	0.00	0.00
9	---	0.65	0.59	0.67	0.52	0.52	0.44	0.37	0.14	0.00	0.00	0.00
10	---	0.65	0.60	0.66	0.52	0.52	0.44	0.36	0.14	0.00	0.00	0.00
11	---	0.64	0.60	0.65	0.52	0.50	0.44	0.36	0.13	0.00	0.00	0.00
12	---	0.66	0.59	0.65	0.52	0.50	0.44	0.34	0.13	0.00	0.00	0.00
13	---	0.68	0.59	0.65	0.52	0.50	0.42	0.32	0.13	0.00	0.00	0.00
14	---	0.68	0.61	0.65	0.52	0.50	0.40	0.31	0.12	0.00	0.00	0.00
15	---	0.68	0.63	0.68	0.52	0.50	0.41	0.30	0.12	0.00	0.00	0.00
16	---	0.65	0.65	0.68	0.52	0.50	0.42	0.30	0.11	0.00	0.00	0.00
17	---	0.63	0.67	0.63	0.52	0.51	0.42	0.30	0.11	0.00	0.00	0.00
18	---	0.61	0.68	0.63	0.52	0.50	0.42	0.27	0.10	0.00	0.00	0.00
19	---	0.60	0.68	0.62	0.51	0.47	0.40	0.26	0.09	0.00	0.00	0.00
20	---	0.59	0.63	0.61	0.50	0.47	0.40	0.26	0.09	0.00	0.00	0.00
21	---	0.59	0.65	0.61	0.50	0.46	0.42	0.26	0.08	0.00	0.00	0.00
22	---	0.59	0.68	0.60	0.50	0.46	0.44	0.26	0.07	0.00	0.00	0.00
23	---	0.59	0.69	0.60	0.50	0.48	0.44	0.25	0.07	0.00	0.00	0.00
24	---	0.61	0.70	0.58	0.50	0.50	0.44	0.24	0.06	0.00	0.00	0.00
25	---	0.65	0.70	0.54	0.50	0.50	0.43	0.24	0.05	0.00	0.00	0.00
26	---	0.68	0.70	0.54	0.50	0.50	0.44	0.23	0.04	0.00	0.00	0.00
27	---	0.68	0.70	0.54	0.50	0.49	0.44	0.22	0.04	0.00	0.00	0.00
28	---	0.68	0.70	0.56	0.51	0.49	0.44	0.22	0.04	0.00	0.00	0.00
29	---	0.66	0.71	0.56	---	0.49	0.44	0.21	0.04	0.00	0.00	0.00
30	---	0.65	0.72	0.56	---	0.48	0.44	0.20	0.03	0.00	0.00	0.00
31	---	---	0.72	0.56	---	0.49	---	0.20	---	0.00	0.00	---
TOTAL	---	---	20.09	19.48	14.50	15.48	13.18	9.50	3.22	0.05	0.00	0.00
MEAN	---	---	0.648	0.628	0.518	0.499	0.439	0.306	0.107	0.002	0.000	0.000
MAX	---	---	0.72	0.72	0.56	0.52	0.51	0.42	0.19	0.02	0.00	0.00
MIN	---	---	0.59	0.54	0.50	0.46	0.40	0.20	0.03	0.00	0.00	0.00
AC-FT	---	---	40	39	29	31	26	19	6.4	0.1	0.00	0.00

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

MEAN	---	0.642	0.648	0.628	0.518	0.499	0.439	0.306	0.107	0.002	0.000	0.000
MAX	---	0.64	0.65	0.63	0.52	0.50	0.44	0.31	0.11	0.002	0.000	0.000
(WY)	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	0.64	0.65	0.63	0.52	0.50	0.44	0.31	0.11	0.002	0.000	0.000
(WY)	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	112.19
ANNUAL MEAN	0.340
HIGHEST DAILY MEAN	0.72 Dec 30
LOWEST DAILY MEAN	0.00 Jul 5
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 5
MAXIMUM PEAK FLOW	0.72 Nov 12
MAXIMUM PEAK STAGE	1.67 Nov 24
ANNUAL RUNOFF (AC-FT)	223
10 PERCENT EXCEEDS	0.65
50 PERCENT EXCEEDS	0.44
90 PERCENT EXCEEDS	0.00

10264000 LITTLE ROCK CREEK ABOVE LITTLE ROCK RESERVOIR, NEAR LITTLE ROCK, 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 mi².

PERIOD OF RECORD.—October 1930 to February 1938, May to September 1938, April 1939 to September 1977, October 1978 to September 1979, January to September 2002. Prior to January 2002, published as "Little Rock Creek near Little Rock".

GAGE.—Water-stage recorder. Elevation of gage is 3,310 ft above sea level, 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 fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,900 ft³/s, Jan. 25, 1969, gage height, 14.40 ft, site and datum then in use, from rating curve extended above 750 ft³/s, on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 17,000 ft³/s, estimated, Mar. 2, 1938, gage height, unknown.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 29	0015	3.7	9.38

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	2.0	1.7	1.2	0.74	0.12	0.00	0.00	0.00
2	---	---	---	---	1.9	1.6	1.1	0.72	0.10	0.00	0.00	0.00
3	---	---	---	---	1.9	1.5	1.0	0.70	0.08	0.00	0.00	0.00
4	---	---	---	---	1.9	1.5	0.97	0.68	0.05	0.00	0.00	0.00
5	---	---	---	---	1.9	1.5	0.94	0.66	0.01	0.00	0.00	0.00
6	---	---	---	---	1.9	1.5	0.94	0.64	0.00	0.00	0.00	0.00
7	---	---	---	---	1.9	1.6	0.93	0.62	0.00	0.00	0.00	0.00
8	---	---	---	---	2.0	1.8	0.92	0.62	0.00	0.00	0.00	0.00
9	---	---	---	---	2.0	1.8	0.90	0.62	0.00	0.00	0.00	0.00
10	---	---	---	---	2.0	1.7	0.87	0.60	0.00	0.00	0.00	0.00
11	---	---	---	---	2.0	1.5	0.85	0.57	0.00	0.00	0.00	0.00
12	---	---	---	---	2.0	1.4	0.81	0.54	0.00	0.00	0.00	0.00
13	---	---	---	---	2.0	1.3	0.78	0.51	0.00	0.00	0.00	0.00
14	---	---	---	---	2.0	1.3	0.73	0.49	0.00	0.00	0.00	0.00
15	---	---	---	---	2.0	1.3	0.69	0.46	0.00	0.00	0.00	0.00
16	---	---	---	---	2.1	1.3	0.67	0.43	0.00	0.00	0.00	0.00
17	---	---	---	---	2.2	1.4	0.67	0.41	0.00	0.00	0.00	0.00
18	---	---	---	---	2.3	1.5	0.67	0.38	0.00	0.00	0.00	0.00
19	---	---	---	---	2.2	1.5	0.67	0.35	0.00	0.00	0.00	0.00
20	---	---	---	---	2.1	1.5	0.68	0.34	0.00	0.00	0.00	0.00
21	---	---	---	---	2.0	1.5	0.78	0.33	0.00	0.00	0.00	0.00
22	---	---	---	---	2.1	1.5	0.80	0.32	0.00	0.00	0.00	0.00
23	---	---	---	---	2.2	1.4	0.78	0.32	0.00	0.00	0.00	0.00
24	---	---	---	---	2.0	1.3	0.77	0.31	0.00	0.00	0.00	0.00
25	---	---	---	1.2	1.9	1.3	0.78	0.28	0.00	0.00	0.00	0.00
26	---	---	---	1.2	1.8	1.3	0.77	0.26	0.00	0.00	0.00	0.00
27	---	---	---	1.3	1.8	1.3	0.82	0.24	0.00	0.00	0.00	0.00
28	---	---	---	2.6	1.7	1.3	0.83	0.22	0.00	0.00	0.00	0.00
29	---	---	---	3.2	---	1.3	0.80	0.19	0.00	0.00	0.00	0.00
30	---	---	---	2.4	---	1.3	0.78	0.17	0.00	0.00	0.00	0.00
31	---	---	---	2.1	---	1.2	---	0.14	---	0.00	0.00	---
TOTAL	---	---	---	---	55.8	44.9	24.90	13.86	0.36	0.00	0.00	0.00
MEAN	---	---	---	---	1.993	1.448	0.830	0.447	0.012	0.000	0.000	0.000
MAX	---	---	---	---	2.3	1.8	1.2	0.74	0.12	0.00	0.00	0.00
MIN	---	---	---	---	1.7	1.2	0.67	0.14	0.00	0.00	0.00	0.00
AC-FT	---	---	---	---	111	89	49	27	0.7	0.00	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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.605	8.005	16.88	20.58	41.15	39.54	38.57	19.33	4.658	1.159	0.417	0.910
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 2002 WATER YEAR

WATER YEARS 1931 - 2002

ANNUAL TOTAL	153.82	
ANNUAL MEAN	0.618	15.68
HIGHEST ANNUAL MEAN		71.3
LOWEST ANNUAL MEAN		0.60
HIGHEST DAILY MEAN	3.2	2730
LOWEST DAILY MEAN	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00
MAXIMUM PEAK FLOW	3.7	5900
MAXIMUM PEAK STAGE	9.38	14.40
ANNUAL RUNOFF (AC-FT)	305	11360
10 PERCENT EXCEEDS	1.9	34
50 PERCENT EXCEEDS	0.19	2.5
90 PERCENT EXCEEDS	0.00	0.00

10264100 SANTIAGO CANYON CREEK ABOVE LITTLE ROCK CREEK, NEAR LITTLEROCK, 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 mi².

PERIOD OF RECORD.—January to September 2002.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,300 ft above sea level, from topographic map.

REMARKS.—No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—No flow since station established on Jan. 18, 2002.

EXTREMES FOR CURRENT YEAR.—No flow from January to September 2002.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, 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	0.000	0.000	0.000
MAX	---	---	---	---	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	---	---	---	---	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	---	---	---	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	---	---	---	---	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

HIGHEST DAILY MEAN	0.00	Jan 19
LOWEST DAILY MEAN	0.00	Jan 19
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 19
10 PERCENT EXCEEDS	0.00	
50 PERCENT EXCEEDS	0.00	
90 PERCENT EXCEEDS	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.—63.73 mi².

PERIOD OF RECORD.—October 2001 to September 2002.

CHEMICAL DATA.—October 2001 to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM-PLING DEPTH (M) (00098)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
28...	1440	3.30	1.0	678	7.7	86	7.4	676	15.0
28...	1441	3.30	2.0	678	6.3	69	7.3	678	14.5
28...	1442	3.30	3.0	678	5.0	55	7.2	679	14.5
MAY									
07...	1101	8.30	1.0	677	9.0	106	8.4	588	17.5
07...	1102	8.30	2.0	677	9.1	108	8.4	588	17.5
07...	1103	8.30	3.0	677	9.0	106	8.4	587	17.5
07...	1104	8.30	4.0	677	8.0	91	8.3	587	15.5
07...	1105	8.30	5.0	677	5.6	63	8.2	591	15.0
07...	1106	8.30	6.0	677	3.3	37	8.0	598	14.5
07...	1107	8.30	7.0	677	1.0	11	7.8	616	13.5
07...	1108	8.30	8.0	677	.5	5	7.5	645	12.0

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM-PLING DEPTH (M) (00098)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
OCT									
28...	1440	3.30	1.0	678	7.7	86	7.4	676	15.0
MAY									
07...	1125	8.30	1.0	677	9.0	106	8.4	588	17.5
07...	1150	8.30	4.0	677	8.0	91	8.3	587	15.5
07...	1210	8.30	8.0	677	.5	5	7.5	645	12.0

Date	Time	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
OCT										
28...	290	88.9	17.5	6.40	27.1	340	9.71	.3	28.1	
MAY										
07...	240	69.1	17.0	5.98	30.2	275	8.38	.3	15.9	
07...	240	69.4	16.9	6.03	30.8	274	8.62	.3	16.0	
07...	250	72.9	17.1	5.82	30.2	290	8.36	.3	17.5	

Date	Time	SULFATE DIS-SOLVED (MG/L AS S04) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
OCT									
28...	37.3	414	<.05	<.008	e15	60	e8	345	
MAY									
07...	40.6	379	<.05	<.008	--	80	21	404	
07...	40.0	372	<.05	<.008	--	80	25	438	
07...	35.2	389	<.05	<.008	e3	80	39	1330	

< Actual value is known to be less than the value shown.
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 mi².

PERIOD OF RECORD.—October 2001 to September 2002.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,800 ft above sea level, from topographic map.

REMARKS.—Records good. 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.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7.6 ft³/s, Nov. 24, 2001, gage height, 3.11 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1915	7.6	3.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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
2	---	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
4	---	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
6	---	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
8	---	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
10	---	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
12	---	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
14	---	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
16	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.03	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	---	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	---	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	---	0.49	0.00	0.00	0.00	0.00	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
AC-FT	---	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

MEAN	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.000	0.017	0.000	0.000	0.000	0.000	0.000	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 WATER YEAR

ANNUAL TOTAL	0.52
ANNUAL MEAN	0.001
HIGHEST DAILY MEAN	0.49 Nov 24
LOWEST DAILY MEAN	0.00 Oct 17
ANNUAL SEVEN-DAY MINIMUM	0.00 Oct 17
MAXIMUM PEAK FLOW	7.6 Nov 24
MAXIMUM PEAK STAGE	3.11 Nov 24
ANNUAL RUNOFF (AC-FT)	1.0
10 PERCENT EXCEEDS	0.00
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	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 mi².

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)
NOV 28...	0950	7.5	2.7	525	10.2	105	--	136	1.0	62	17.0
MAR 06...	1000	3.8	1.9	551	--	--	7.0	185	1.0	82	21.6
JUN 26...	0945	33	1.6	560	8.2	114	7.5	56	16.0	23	7.48
AUG 22...	1250	9.5	1.1	559	8.8	116	8.8	100	13.5	--	--

Date	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	NITRO- GEN, AM- MONIA + ORGANIC (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
NOV 28...	15.9	4.75	4.45	2.86	138	.14	<.05	<.008	<.01	--	--
MAR 06...	19.3	6.85	6.22	.69	120	.18	<.05	<.008	--	e.004	--
JUN 26...	6.68	1.14	1.13	e.23	22	.13	<.05	<.008	--	<.007	--
AUG 22...	--	--	--	<.30	58	.22	<.013	<.008	--	<.007	.012

Date	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ANTI- MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
NOV 28...	<1	7	e.03	<.9	e1	3	<.06	<.06	<.04	e.03
MAR 06...	<1	2	.09	<.9	e1	13	<.06	<.06	<.04	<.04
JUN 26...	4	9	.12	<.9	2	3	<.06	<.06	<.04	e.03
AUG 22...	--	--	--	--	--	--	--	--	--	--

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

10265125 MAMMOTH CREEK AT TWIN LAKES, NEAR MAMMOTH LAKES, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
NOV 28...	<.8	<.8	.14	<1	.2	e.3	49	150	<.08	<1
MAR 06...	<.8	<.8	.28	<1	e.1	e.5	195	470	<.08	<1
JUN 26...	<.8	<.8	.04	<1	.4	<.6	46	130	<.08	<1
AUG 22...	--	--	--	--	--	--	--	--	--	--
Date	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)
NOV 28...	31.3	33	<.01	<.01	1.8	1.9	<.06	<1	<.3	<.4
MAR 06...	46.0	45	<.01	<.01	2.1	1.8	<.06	<1	<.3	<.4
JUN 26...	5.1	10	.01	.01	2.4	2.5	<.06	<1	<.3	<.4
AUG 22...	--	--	--	--	--	--	--	--	--	--
Date	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL) (01059)	VANA- DIUM, TOTAL RECOV- ERABLE (UG/L AS V) (01087)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
NOV 28...	<1	<.05	<.04	<.9	<10	<8	<1	3	3.0	.06
MAR 06...	<1	<.05	<.04	<.9	<10	<8	2	2	4.0	.04
JUN 26...	<1	<.05	<.04	<.9	<10	<8	3	2	2.0	.18
AUG 22...	--	--	--	--	--	--	--	--	3.0	.08

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

10265128 MAMMOTH CREEK AT OLD MAMMOTH ROAD, AT MAMMOTH LAKES, CA

LOCATION.—Lat 37°38'07", long 118°57'53", in NE 1/4 NW 1/4 sec.2, T.4 S., R.27 E., Mono County, Hydrologic Unit 18090102, 0.85 mi south of the intersection of Highway 203 and Old Mammoth Road, and 16.5 mi west of Tom's Place.

DRAINAGE AREA.—13.4 mi².

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	SPE-CIFIC DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
NOV 28...	1230	8.8	3.2	566	10.2	94	150	.0	71	15.8
Date	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	MAGNE-SIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AM-MONIA + ORGANIC (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS HYDRO. + ORTHO DIS-SOLVED (MG/L AS P) (00677)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
NOV 28...	15.0	7.59	7.15	.78	130	.16	e.02	<.008	.04	1
Date	ALUM-INUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYL-LIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM, WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)
NOV 28...	50	<.05	<.9	3	5	<.06	<.06	<.04	<.04	<.8
Date	CHRO-MIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 28...	<.8	.07	<1	.3	e.5	43	370	<.08	<1	48.8

e Estimated.

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

10265128 MAMMOTH CREEK AT OLD MAMMOTH ROAD, AT MAMMOTH LAKES, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MANGA- NESE, TOTAL	MERCURY TOTAL	MERCURY TOTAL	MOLYB- DENUM, TOTAL	MOLYB- DENUM, TOTAL	NICKEL, TOTAL	NICKEL, TOTAL	SELE- NIUM, TOTAL	SELE- NIUM, TOTAL	SILVER, TOTAL
	RECOV- ERABLE (UG/L AS MN) (01055)	DIS- SOLVED (UG/L AS HG) (71890)	RECOV- ERABLE (UG/L AS HG) (71900)	DIS- SOLVED (UG/L AS MO) (01060)	RECOV- ERABLE (UG/L AS MO) (01062)	DIS- SOLVED (UG/L AS NI) (01065)	RECOV- ERABLE (UG/L AS NI) (01067)	RECOV- ERABLE (UG/L AS NI) (01145)	DIS- SOLVED (UG/L AS SE) (01147)	DIS- SOLVED (UG/L AS SE) (01147)
NOV 28...	157	<.01	.07	2.1	2.2	<.06	<1	<.3	<.4	<1

Date	SILVER, TOTAL	THAL- LIUM, TOTAL	THAL- LIUM, TOTAL	VANA- DIUM, TOTAL	VANA- DIUM, TOTAL	ZINC, TOTAL	ZINC, TOTAL	SEDI- MENT, TOTAL	SEDI- MENT, TOTAL
	RECOV- ERABLE (UG/L AS AG) (01077)	DIS- SOLVED (UG/L AS TL) (01057)	RECOV- ERABLE (UG/L AS TL) (01059)	RECOV- ERABLE (UG/L AS V) (01087)	RECOV- ERABLE (UG/L AS V) (01085)	RECOV- ERABLE (UG/L AS ZN) (01090)	RECOV- ERABLE (UG/L AS ZN) (01092)	RECOV- ERABLE (UG/L AS ZN) (80154)	RECOV- ERABLE (UG/L AS ZN) (80154)
NOV 28...	<.05	<.04	<.9	M	<8	1	4	7.0	.17

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

M Presence of material verified, but not quantified.

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 mi².

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL AS CaCO3 (MG/L) (00900)	CALCIUM DIS-SOLVED (MG/L) (00915)
NOV 28...	1545	5.8	.9	580	9.7	88	--	150	.0	61	13.9
MAR 06...	1335	5.1	1.7	580	--	--	8.4	193	1.0	72	15.6
JUN 26...	1250	28	3.6	588	8.0	104	8.0	66	15.5	25	6.88
AUG 22...	1430	7.6	1.6	588	--	--	8.1	105	13.5	--	--

Date	CALCIUM TOTAL RECOVERABLE (MG/L) (00916)	MAGNESIUM, DIS-SOLVED (MG/L) (00925)	MAGNESIUM, TOTAL RECOVERABLE (MG/L) (00927)	CHLORIDE, DIS-SOLVED (MG/L) (00940)	SOLIDS, AT 180 DEG. C RESIDUE (MG/L) (70300)	NITROGEN, AMMONIA + ORGANIC (MG/L) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L) (00613)	PHOSPHORUS, HYDRO. + ORTHO. DIS-SOLVED (MG/L) (00677)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L) (00671)	PHOSPHORUS TOTAL (MG/L) (00665)
NOV 28...	12.8	6.34	5.80	.74	108	--	--	<.008	.03	--	--
MAR 06...	13.7	8.12	7.33	1.64	130	--	--	<.008	--	.046	--
JUN 26...	6.23	1.85	1.85	e.22	49	.18	<.05	.015	--	.016	--
AUG 22...	--	--	--	.40	62	.15	.042	<.002	--	.026	.042

Date	ALUMINUM, DIS-SOLVED (UG/L) (01106)	ALUMINUM, TOTAL RECOVERABLE (UG/L) (01105)	ANTIMONY, DIS-SOLVED (UG/L) (01095)	ANTIMONY, TOTAL (UG/L) (01097)	ARSENIC, DIS-SOLVED (UG/L) (01000)	ARSENIC, TOTAL (UG/L) (01002)	BERYLLIUM, DIS-SOLVED (UG/L) (01010)	BERYLLIUM, TOTAL RECOVERABLE (UG/L) (01012)	CADMIUM, DIS-SOLVED (UG/L) (01025)	CADMIUM, TOTAL (UG/L) (01027)
NOV 28...	2	14	<.05	<.9	3	4	<.06	<.06	<.04	<.04
MAR 06...	2	12	.05	<.9	4	4	<.06	<.06	<.04	<.04
JUN 26...	4	99	.10	<.9	2	3	<.06	<.06	<.04	e.03
AUG 22...	--	--	--	--	--	--	--	--	--	--

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

10265130 MAMMOTH CREEK AT HIGHWAY 395, NEAR MAMMOTH LAKES, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
	NOV 28...	e.4	<.8	.03	<1	.3	e.4	e10	50	<.08
MAR 06...	<.8	<.8	.04	<1	e.2	e.5	23	90	<.08	<1
JUN 26...	<.8	<.8	.02	<1	.4	e.4	30	260	<.08	<1
AUG 22...	--	--	--	--	--	--	--	--	--	--
Date	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)
	NOV 28...	3.0	9	<.01	.01	4.1	4.2	<.06	<1	e.2
MAR 06...	2.1	17	<.01	.02	4.3	3.8	<.06	<1	<.3	<.4
JUN 26...	3.9	90	.01	.14	3.7	3.8	.13	<1	<.3	e.2
AUG 22...	--	--	--	--	--	--	--	--	--	--
Date	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL) (01059)	VANA- DIUM, TOTAL RECOV- ERABLE (UG/L AS V) (01087)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
	NOV 28...	<1	<.05	<.04	<.9	<10	<8	1	1	2.0
MAR 06...	<1	<.05	<.04	<.9	<10	<8	<1	2	2.0	.03
JUN 26...	<1	<.05	<.04	<.9	<10	<8	2	2	12	.90
AUG 22...	--	--	--	--	--	--	--	--	3.0	.06

e Estimated.

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

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 mi².

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 sea level, from topographic map.

REMARKS.—Records good. Minor diversions for domestic and agricultural use upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 433 ft³/s, Jan. 2, 1997, gage height, 4.38 ft; minimum daily, 29 ft³/s, several days in 1992.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 80 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 20	1400	90	1.71	June 8	1100	114	1.97

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	41	41	42	39	39	41	45	96	55	45	41
2	44	41	41	41	39	39	42	40	93	54	44	41
3	44	41	40	42	39	38	42	43	83	54	43	41
4	43	41	40	41	38	39	43	43	86	54	42	41
5	43	41	40	41	38	39	43	42	75	52	42	41
6	42	41	41	41	38	40	43	42	84	51	43	41
7	42	41	41	41	38	38	43	42	100	51	44	43
8	42	40	41	41	38	39	44	43	112	50	44	41
9	42	41	41	41	38	41	44	43	93	48	44	41
10	41	41	41	41	39	41	44	42	77	47	44	41
11	41	41	41	40	39	41	45	42	67	46	43	41
12	41	41	41	41	39	42	45	42	61	47	43	41
13	41	41	41	40	39	42	45	42	60	48	43	40
14	41	41	39	40	39	40	46	43	64	48	43	40
15	40	41	41	38	40	39	47	44	67	46	43	40
16	40	41	41	38	41	40	47	45	71	45	43	40
17	40	41	41	38	40	39	47	44	70	45	42	39
18	40	41	41	38	40	41	46	44	68	50	42	39
19	40	41	41	38	41	40	46	53	64	49	42	39
20	40	41	41	38	42	40	46	86	65	46	42	39
21	39	41	41	38	42	40	45	e80	68	46	42	39
22	40	43	41	38	42	40	45	e65	69	45	42	39
23	39	42	41	37	42	41	45	55	66	44	43	39
24	39	45	41	38	41	41	44	47	61	44	42	39
25	39	43	41	38	40	41	46	47	55	44	42	39
26	39	41	41	38	40	41	49	47	54	44	42	38
27	39	40	41	39	40	40	47	49	57	44	42	39
28	39	39	41	39	39	40	46	57	57	43	42	39
29	39	40	42	39	---	41	46	68	57	43	42	39
30	42	40	42	39	---	41	46	75	56	43	42	39
31	44	---	42	39	---	41	---	86	---	44	42	---
TOTAL	1269	1233	1269	1223	1110	1244	1348	1586	2156	1470	1324	1199
MEAN	40.94	41.10	40.94	39.45	39.64	40.13	44.93	51.16	71.87	47.42	42.71	39.97
MAX	44	45	42	42	42	42	49	86	112	55	45	43
MIN	39	39	39	37	38	38	41	40	54	43	42	38
AC-FT	2520	2450	2520	2430	2200	2470	2670	3150	4280	2920	2630	2380

e Estimated.

10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	46.22	45.14	42.63	45.70	43.46	44.74	47.68	69.81	95.73	84.10	61.65	52.23
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1990 - 2002	
ANNUAL TOTAL	18308		16431			
ANNUAL MEAN	50.16		45.02		56.65	
HIGHEST ANNUAL MEAN					79.1 1995	
LOWEST ANNUAL MEAN					37.5 1992	
HIGHEST DAILY MEAN	110	May 18	112	Jun 8	309	Jan 3 1997
LOWEST DAILY MEAN	39	Oct 21	37	Jan 23	29	Nov 23 1992
ANNUAL SEVEN-DAY MINIMUM	39	Oct 23	38	Jan 17	29	Dec 8 1992
MAXIMUM PEAK FLOW			114	Jun 8	433	Jan 2 1997
MAXIMUM PEAK STAGE			1.97	Jun 8	4.38	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	36310		32590		41040	
10 PERCENT EXCEEDS	67		55		91	
50 PERCENT EXCEEDS	45		41		48	
90 PERCENT EXCEEDS	41		39		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 mi².

PERIOD OF RECORD.—August 2001 to current year.

CHEMICAL DATA.—August 2001 to current year.

SEDIMENT DATA.—November 2001 to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
NOV										
27...	1210	3.2	4.1	594	9.5	84	--	30	.0	e.27
MAR										
07...	1055	2.4	2.8	587	11.8	108	7.9	35	1.0	e.26
JUN										
25...	1430	14	2.0	599	7.8	109	7.7	22	19.5	<.30
AUG										
22...	0930	2.1	2.6	--	--	--	--	--	11.0	e.25

Date	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AM-MONIA + ORGANIC (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-SUS-PENDED (T/DAY) (80155)
NOV									
27...	32	.22	<.05	<.008	--	.08	--	10	.09
MAR									
07...	18	.12	e.03	<.008	<.007	--	--	9.0	.06
JUN									
25...	20	.14	<.05	<.008	<.007	--	--	6.0	.23
AUG									
22...	23	.40	e.009	<.002	<.007	--	.015	4.0	.02

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 mi².

PERIOD OF RECORD.—August 2001 to current year.

CHEMICAL DATA.—August 2001 to current year.

SEDIMENT DATA.—November 2001 to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, (PER- CENT SOLVED SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV 27...	1010	6.2	2.3	581	9.7	87	--	49	.0	.52
MAR 07...	0930	7.1	1.4	573	10.4	95	8.0	51	.0	.42
JUN 25...	1250	50	5.5	585	8.5	109	7.6	21	14.5	.36
AUG 22	1120	13	1.1	584	8.8	102	7.8	36	10.0	.52

Date	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS HYDRO. + ORTHO DIS. (MG/L AS P) (00677)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- SUS- PENDE (T/DAY) (80155)
NOV 27...	42	.18	<.05	<.008	--	<.01	--	3.0	.05
MAR 07...	34	e.06	<.05	<.008	<.007	--	--	3.0	.06
JUN 25...	31	e.10	<.05	<.008	<.007	--	--	4.0	.54
AUG 22...	24	.07	<.013	<.002	<.007	--	.004	2.0	.07

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

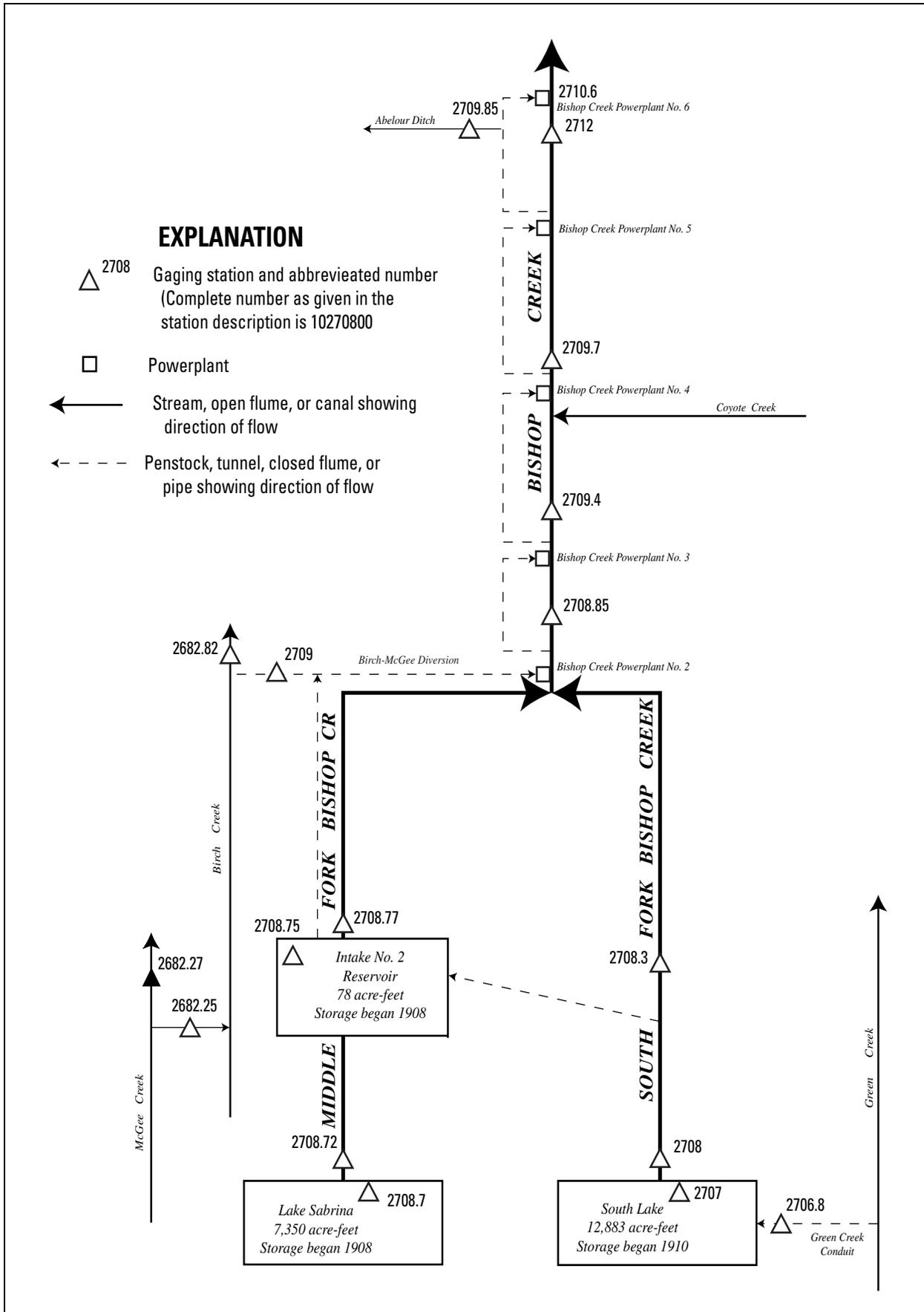


Figure 15. Diversions and storage in Bishop Creek Basin.

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 Cippolletti weir. Elevation of gage is 8,630 ft above sea level, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	0.19	---	---	---	---	---	0.50	6.6	12	5.3	2.0
2	2.1	0.07	---	---	---	---	---	0.48	6.8	13	5.1	2.0
3	2.1	0.06	---	---	---	---	---	0.56	7.0	12	4.8	2.0
4	2.1	0.06	---	---	---	---	---	0.58	7.2	12	4.5	2.0
5	2.2	0.06	---	---	---	---	---	0.64	7.5	12	4.1	2.0
6	2.2	---	---	---	---	---	---	0.74	8.0	11	3.8	1.9
7	2.1	---	---	---	---	---	---	0.75	8.5	11	3.7	1.8
8	2.1	---	---	---	---	---	---	0.81	8.7	11	3.5	1.8
9	2.1	---	---	---	---	---	---	0.98	8.7	11	3.5	1.8
10	2.1	---	---	---	---	---	---	0.95	8.7	9.9	3.4	1.8
11	4.4	---	---	---	---	---	---	0.99	8.7	9.8	3.4	1.8
12	6.4	---	---	---	---	---	---	1.1	8.8	10	3.4	1.7
13	5.9	---	---	---	---	---	---	1.2	8.9	9.7	3.6	1.7
14	5.5	---	---	---	---	---	---	1.3	9.0	9.2	3.7	1.7
15	5.0	---	---	---	---	---	---	1.6	9.2	9.2	3.8	1.7
16	4.4	---	---	---	---	---	---	1.9	9.2	8.5	3.6	1.6
17	3.8	---	---	---	---	---	---	2.4	9.6	8.3	3.6	1.5
18	2.7	---	---	---	---	---	---	3.1	10	7.9	3.5	1.5
19	0.97	---	---	---	---	---	---	3.6	11	6.9	3.4	1.5
20	0.56	---	---	---	---	---	---	3.7	11	6.9	3.2	1.5
21	0.41	---	---	---	---	---	---	3.5	8.3	6.7	2.9	1.5
22	0.37	---	---	---	---	---	e0.25	3.1	4.7	6.4	2.7	1.5
23	0.30	---	---	---	---	---	0.51	2.8	4.6	5.9	2.5	1.5
24	0.23	---	---	---	---	---	0.53	2.6	5.1	5.9	2.5	1.4
25	0.23	---	---	---	---	---	0.56	2.5	9.3	6.2	2.5	1.4
26	0.22	---	---	---	---	---	0.57	2.6	11	6.2	2.4	1.4
27	0.16	---	---	---	---	---	0.55	3.0	10	5.8	2.3	1.4
28	0.16	---	---	---	---	---	0.55	3.9	11	5.6	2.2	1.5
29	0.15	---	---	---	---	---	0.55	4.7	12	5.5	2.2	1.5
30	0.37	---	---	---	---	---	0.51	5.3	12	5.3	2.1	1.4
31	0.28	---	---	---	---	---	---	6.0	---	5.2	2.0	---
TOTAL	63.81	---	---	---	---	---	---	67.88	261.1	266.0	103.2	49.8
MEAN	2.058	---	---	---	---	---	---	2.190	8.703	8.581	3.329	1.660
MAX	6.4	---	---	---	---	---	---	6.0	12	13	5.3	2.0
MIN	0.15	---	---	---	---	---	---	0.48	4.6	5.2	2.0	1.4
AC-FT	127	---	---	---	---	---	---	135	518	528	205	99

e Estimated.

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 sea level, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	0.37	0.00	0.00
2	---	---	---	---	---	---	---	---	---	0.36	0.00	0.00
3	---	---	---	---	---	---	---	---	---	0.33	0.00	0.00
4	---	---	---	---	---	---	---	---	---	0.29	0.00	0.00
5	---	---	---	---	---	---	---	---	e0.50	0.26	0.00	0.00
6	---	---	---	---	---	---	---	---	1.0	0.25	0.00	0.00
7	---	---	---	---	---	---	---	---	1.2	0.22	0.00	0.00
8	---	---	---	---	---	---	---	---	1.2	0.20	0.00	0.00
9	---	---	---	---	---	---	---	---	1.0	0.18	0.00	0.00
10	---	---	---	---	---	---	---	---	0.87	0.14	0.00	0.00
11	---	---	---	---	---	---	---	---	0.76	0.13	0.00	0.00
12	---	---	---	---	---	---	---	---	0.69	0.12	0.00	0.00
13	---	---	---	---	---	---	---	---	0.64	0.12	0.00	0.00
14	---	---	---	---	---	---	---	---	0.60	0.11	0.00	0.00
15	---	---	---	---	---	---	---	---	0.58	0.08	0.00	0.00
16	---	---	---	---	---	---	---	---	0.58	0.06	0.00	0.00
17	---	---	---	---	---	---	---	---	0.56	0.05	0.00	0.00
18	---	---	---	---	---	---	---	---	0.55	0.06	0.00	0.00
19	---	---	---	---	---	---	---	---	0.56	0.05	0.00	0.00
20	---	---	---	---	---	---	---	---	0.58	0.03	0.00	0.00
21	---	---	---	---	---	---	---	---	0.70	0.01	0.00	0.00
22	---	---	---	---	---	---	---	---	0.74	0.00	0.00	0.00
23	---	---	---	---	---	---	---	---	0.60	0.00	0.00	0.00
24	---	---	---	---	---	---	---	---	0.51	0.00	0.00	0.00
25	---	---	---	---	---	---	---	---	0.44	0.00	0.00	0.00
26	---	---	---	---	---	---	---	---	0.41	0.00	0.00	0.00
27	---	---	---	---	---	---	---	---	0.41	0.00	0.00	0.00
28	---	---	---	---	---	---	---	---	0.41	0.00	0.00	0.00
29	---	---	---	---	---	---	---	---	0.41	0.00	0.00	0.00
30	---	---	---	---	---	---	---	---	0.40	0.00	0.00	0.00
31	---	---	---	---	---	---	---	---	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	---	---	3.42	0.00	0.00
MEAN	---	---	---	---	---	---	---	---	---	0.110	0.000	0.000
MAX	---	---	---	---	---	---	---	---	---	0.37	0.00	0.00
MIN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	---	6.8	0.00	0.00

e Estimated.

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 mi².

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 sea level (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, 11,500 acre-ft, Oct. 1–5, maximum elevation, 9,743.26 ft, Oct. 1; minimum, 3,020 acre-ft, May 13, elevation, 9,672.77 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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11500	10900	9420	7220	5140	3660	3080	3210	4310	7780	9120	9010
2	11500	10900	9410	7140	5070	3640	3080	3180	4440	7880	9130	9000
3	11500	10800	9360	7070	5010	3620	3070	3140	4560	7980	9140	8990
4	11500	10800	9290	7000	4950	3600	3070	3100	4690	8070	9140	8960
5	11500	10600	9230	6930	4890	3580	3070	3080	4840	8160	9140	8960
6	11400	10500	9170	6860	4830	3560	3060	3060	5020	8230	9150	8920
7	11400	10400	9090	6790	4780	3510	3060	3060	5190	8310	9150	8910
8	11400	10400	9010	6720	4710	3500	3060	3060	5350	8380	9150	8880
9	11400	10300	8920	6640	4650	3480	3070	3060	5450	8440	9150	8860
10	11400	10300	8860	6570	4600	3460	3070	3050	5560	8490	9150	8840
11	11300	10200	8790	6500	4540	3440	3090	3030	5650	8550	9150	8830
12	11300	10200	8700	6430	4480	3420	3110	3030	5750	8610	9150	8800
13	11300	10100	8630	6360	4410	3400	3130	3020	5850	8670	9150	8770
14	11300	10100	8540	6280	4360	3380	3150	3030	5960	8730	9150	8750
15	11300	10100	8470	6220	4300	3370	3170	3060	6080	8780	9140	8730
16	11300	10000	8400	6150	4240	3350	3180	3120	6190	8820	9150	8680
17	11200	9960	8320	6090	4180	3340	3190	3210	6310	8860	9150	8600
18	11200	9910	8250	6040	4130	3330	3190	3310	6430	8890	9140	8490
19	11200	9870	8180	5980	4080	3320	3200	3380	6570	8930	9140	8390
20	11200	9830	8080	5920	4030	3300	3200	3440	6720	8960	9120	8280
21	11200	9770	8010	5860	3980	3280	3210	3490	6850	8970	9120	8180
22	11100	9730	7920	5790	3940	3250	3210	3520	6960	8990	9110	8080
23	11100	9690	7840	5720	3890	3230	3220	3540	7050	9000	9100	7970
24	11100	9660	7780	5660	3840	3210	3230	3560	7140	9010	9100	7860
25	11100	9630	7710	5590	3810	3190	3240	3590	7210	9030	9080	7750
26	11100	9590	7630	5520	3760	3180	3250	3640	7300	9040	9070	7640
27	11000	9550	7560	5450	3730	3160	3260	3700	7390	9060	9060	7530
28	11000	9520	7490	5380	3690	3140	3270	3790	7480	9070	9050	7430
29	11000	9480	7420	5300	---	3120	3270	3900	7570	9090	9040	7330
30	10900	9450	7350	5240	---	3110	3250	4030	7680	9100	9030	7230
31	10900	---	7280	5190	---	3090	---	4170	---	9110	9020	---
MAX	11500	10900	9420	7220	5140	3660	3270	4170	7680	9110	9150	9010
MIN	10900	9450	7280	5190	3690	3090	3060	3020	4310	7780	9020	7230
a	9739.76	9730.38	9715.28	9696.64	9680.82	9673.60	9675.56	9686.34	9718.54	9728.18	9727.59	9714.82
b	-600	-1450	-2170	-2090	-1500	-600	+160	+920	+3510	+1430	-90	-1790

CAL YR 2001 MAX 13000 MIN 4840 b +270
WTR YR 2002 MAX 11500 MIN 3020 b -4270

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 mi².

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 sea level, 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 ft³/s, July 31, 1995, gage height, 1.44 ft; minimum daily, 6.7 ft³/s, Apr. 4, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	19	30	44	37	20	14	33	14	14	14	14
2	15	26	30	44	36	18	14	36	13	15	14	14
3	14	29	37	44	36	18	14	36	13	14	14	14
4	14	30	42	44	36	17	14	38	14	14	14	14
5	14	84	42	44	36	18	15	39	14	14	14	14
6	14	57	44	44	35	17	15	38	14	14	14	16
7	14	42	47	43	35	18	15	36	15	14	14	19
8	14	32	47	42	35	18	14	36	13	14	14	20
9	15	28	47	42	35	18	14	36	13	14	14	19
10	15	28	44	42	35	17	14	36	14	14	14	18
11	15	28	46	42	35	17	14	36	14	14	14	18
12	15	28	47	41	34	17	16	36	14	14	14	18
13	15	28	47	41	34	13	16	35	14	14	14	19
14	15	28	47	38	34	13	17	35	14	14	14	19
15	15	28	47	36	34	13	16	32	14	14	14	18
16	14	28	44	38	34	14	15	23	14	14	14	28
17	14	28	44	36	34	15	15	20	14	14	14	47
18	14	28	44	36	34	15	15	20	14	14	14	56
19	14	28	47	36	34	16	15	24	14	15	14	55
20	14	28	48	36	34	16	15	17	14	17	14	55
21	14	28	48	36	30	16	14	20	14	18	14	57
22	14	24	48	36	28	16	14	20	14	17	14	57
23	13	28	46	39	28	16	14	20	14	17	14	57
24	13	26	46	40	28	16	14	20	14	17	14	57
25	14	28	45	39	27	16	14	20	14	17	14	57
26	17	29	44	40	27	16	14	20	15	16	14	57
27	17	29	44	40	24	16	14	19	15	16	14	56
28	17	29	44	40	22	16	14	15	14	16	14	56
29	17	30	44	40	---	16	14	13	14	16	14	56
30	18	30	44	39	---	16	24	13	14	16	14	56
31	15	---	44	37	---	14	---	13	---	15	14	---
TOTAL	458	936	1368	1239	911	502	447	835	419	466	434	1061
MEAN	14.77	31.20	44.13	39.97	32.54	16.19	14.90	26.94	13.97	15.03	14.00	35.37
MAX	18	84	48	44	37	20	24	39	15	18	14	57
MIN	13	19	30	36	22	13	14	13	13	14	14	14
AC-FT	908	1860	2710	2460	1810	996	887	1660	831	924	861	2100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	24.42	24.91	26.02	25.04	28.78	28.50	27.31	21.72	17.69	31.84	38.78	32.16
MAX	41.6	41.1	44.1	40.0	54.2	61.6	57.4	36.7	28.8	61.4	87.7	47.6
(WY)	1998	1998	2002	2002	1993	1997	1996	1996	1996	1995	1995	1998
MIN	10.8	10.6	9.98	7.59	7.45	7.75	7.74	10.6	7.70	9.45	14.0	17.0
(WY)	1991	1991	1991	1991	1991	1991	1992	1994	1991	1991	2002	2001

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1991 - 2002
ANNUAL TOTAL	8479	9076	
ANNUAL MEAN	23.23	24.87	27.27
HIGHEST ANNUAL MEAN			38.7
LOWEST ANNUAL MEAN			12.4
HIGHEST DAILY MEAN	84	Nov 5	139 Jul 31 1995
LOWEST DAILY MEAN	13	Oct 23	6.7 Apr 4 1994
ANNUAL SEVEN-DAY MINIMUM	14	Oct 18	6.9 May 29 1991
MAXIMUM PEAK FLOW			142 Jul 31 1995
MAXIMUM PEAK STAGE		1.08	Nov 5 1.44 Jul 31 1995
ANNUAL RUNOFF (AC-FT)	16820	18000	19760
10 PERCENT EXCEEDS	42	44	51
50 PERCENT EXCEEDS	19	17	22
90 PERCENT EXCEEDS	15	14	11

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 mi².

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.—Acoustic-velocity meter. Elevation of gage is 7,130 ft above sea level, from topographic map.

REMARKS.—No records computed above 20 ft³/s. 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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	7.6	8.0	8.6	7.5	7.7	11	11	11	11	11
2	11	8.1	7.6	7.9	8.5	7.2	7.7	11	11	11	11	11
3	11	7.5	7.4	7.9	8.5	7.2	7.6	11	11	11	11	11
4	11	7.4	7.4	7.8	8.6	7.7	7.8	11	11	11	11	11
5	11	12	7.4	7.7	8.5	8.2	8.3	11	11	11	11	11
6	11	11	7.5	7.6	8.4	8.2	8.3	11	11	11	11	11
7	11	7.5	7.5	7.5	8.3	8.2	8.3	11	11	11	11	11
8	11	7.5	7.5	8.4	8.2	8.2	8.2	10	11	11	10	10
9	11	7.4	7.4	9.6	8.2	7.9	8.2	10	11	11	11	10
10	11	7.5	7.4	9.5	8.2	7.6	8.2	11	11	11	11	e11
11	11	7.4	7.4	9.4	8.2	7.6	8.2	10	11	11	11	e11
12	10	7.4	7.5	9.2	8.2	7.6	8.0	11	11	11	11	e11
13	10	7.4	7.5	9.1	8.1	7.6	7.4	11	11	11	11	e11
14	10	7.4	7.5	8.9	8.1	7.7	7.3	11	11	11	11	e11
15	10	7.4	7.5	8.8	8.1	7.7	7.6	11	11	11	11	e11
16	10	7.4	7.5	9.0	8.1	7.7	7.9	11	10	11	11	e11
17	11	7.4	7.4	8.5	8.1	7.7	7.9	11	11	11	11	e11
18	11	7.4	7.4	8.4	8.2	7.7	7.9	11	10	10	11	e11
19	11	7.6	7.5	8.3	8.1	7.8	7.9	11	10	10	11	e11
20	11	7.5	7.6	8.3	8.0	7.8	7.9	11	10	10	11	e11
21	11	7.5	7.5	8.3	7.9	7.6	7.9	11	10	10	11	e11
22	11	7.4	7.5	8.1	7.8	7.6	7.9	11	10	10	11	e11
23	11	7.5	7.5	7.9	7.8	7.6	7.5	11	10	11	11	e11
24	11	7.5	7.5	8.3	7.8	7.6	7.4	11	11	11	11	e11
25	11	7.5	7.0	8.5	7.7	7.4	9.1	11	11	11	11	e11
26	11	7.5	9.3	8.6	7.6	7.5	11	11	10	11	11	e11
27	11	7.5	9.2	8.7	7.8	8.1	11	11	11	11	11	e11
28	11	7.5	9.0	8.8	8.0	8.2	11	11	11	11	11	11
29	11	7.4	8.8	8.7	---	7.7	11	11	11	11	11	11
30	10	7.4	8.6	7.4	---	7.7	11	11	11	11	11	11
31	12	---	8.1	8.7	---	7.7	---	11	---	10	11	---
TOTAL	336	236.9	239.5	261.8	227.6	239.5	253.1	338	322	335	340	328
MEAN	10.84	7.897	7.726	8.445	8.129	7.726	8.437	10.90	10.73	10.81	10.97	10.93
MAX	12	12	9.3	9.6	8.6	8.2	11	11	11	11	11	11
MIN	10	7.4	7.0	7.4	7.6	7.2	7.3	10	10	10	10	10
AC-FT	666	470	475	519	451	475	502	670	639	664	674	651

CAL YR 2001 TOTAL 3357.2 MEAN 9.198 MAX 12 MIN 7.0 AC-FT 6660
WTR YR 2002 TOTAL 3457.4 MEAN 9.472 MAX 12 MIN 7.0 AC-FT 6860

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 mi².

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 sea level (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, 7,000 acre-ft, July 22, 23, 26, 27, maximum elevation, 9,129.82, July 22, 26; minimum, 509 acre-ft, May 4, elevation, 9,089.59 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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4860	3010	2330	2010	1570	1170	663	560	1830	5590	6940	5410
2	4790	2970	2330	2000	1550	1160	659	539	1970	5710	6910	5350
3	4720	2920	2330	1990	1540	1140	658	520	2100	5820	6900	5280
4	4650	2870	2330	1980	1520	1130	661	509	2220	5930	6870	5230
5	4580	2770	2320	1970	1510	1110	663	515	2370	6020	6840	5170
6	4510	2690	2310	1960	1490	1100	664	538	2540	6110	6810	5120
7	4440	2660	2300	1940	1490	1090	667	557	2730	6200	6770	5060
8	4370	2640	2280	1930	1470	1070	676	574	2900	6280	6730	5000
9	4290	2620	2270	1910	1450	1060	689	601	3020	6350	6690	4940
10	4230	2600	2270	1900	1440	1050	693	610	3130	6420	6650	4900
11	4160	2590	2250	1880	1420	1030	719	613	3220	6490	6600	4840
12	4090	2570	2240	1870	1410	1020	740	626	3300	6560	6540	4780
13	4030	2560	2230	1850	1390	1010	770	644	3400	6650	6510	4710
14	3970	2540	2220	1840	1380	983	814	658	3520	6710	6460	4650
15	3900	2520	2210	1820	1370	963	838	677	3650	6780	6420	4560
16	3830	2490	2190	1810	1350	941	853	716	3780	6830	6380	4500
17	3760	2480	2180	1790	1340	924	849	777	3910	6880	6330	4480
18	3680	2460	2170	1770	1320	908	826	861	4050	6910	6280	4480
19	3600	2440	2150	1760	1310	886	808	937	4190	6940	6210	4480
20	3530	2430	2140	1740	1300	869	786	1010	4360	6970	6160	4480
21	3450	2410	2120	1730	1280	849	756	1040	4520	6990	6100	4480
22	3380	2400	2110	1710	1280	834	721	1080	4640	7000	6030	4480
23	3310	2380	2110	1690	1270	815	696	1110	4730	7000	5970	4480
24	3240	2390	2090	1670	1250	796	687	1130	4830	6990	5910	4480
25	3190	2380	2080	1660	1240	777	684	1160	4920	6990	5850	4480
26	3150	2380	2060	1650	1220	756	684	1200	5030	7000	5790	4480
27	3120	2350	2050	1640	1210	737	672	1250	5120	7000	5730	4460
28	3090	2350	2040	1620	1190	720	658	1320	5220	6990	5670	4460
29	3060	2350	2030	1610	---	703	636	1420	5340	6990	5610	4460
30	3050	2340	2030	1600	---	685	594	1530	5470	6970	5540	4460
31	3050	---	2020	1580	---	672	---	1670	---	6960	5480	---
MAX	4860	3010	2330	2010	1570	1170	853	1670	5470	7000	6940	5410
MIN	3050	2340	2020	1580	1190	672	594	509	1830	5590	5480	4460
a	9107.23	9102.70	9100.65	9097.67	9094.91	9091.00	9090.32	9098.36	9121.74	9129.59	9121.59	9115.71
b	-1880	-710	-320	-440	-390	-518	-78	+1076	+3800	+1490	-1480	-1020
CAL YR 2001	MAX 7475	MIN 1068	b -540									
WTR YR 2002	MAX 7000	MIN 509	b -470									

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 mi².

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 sea level, 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 ft³/s, July 10, 1995, gage height, 2.15 ft; minimum daily, 6.5 ft³/s, Mar. 19–27, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	24	16	15	14	15	15	34	13	16	38	46
2	47	28	17	15	14	15	14	29	13	16	37	46
3	47	31	17	15	14	15	14	26	13	15	37	45
4	47	32	17	15	14	14	14	26	13	14	37	43
5	46	70	17	15	14	14	14	24	13	15	37	42
6	46	45	17	15	14	14	14	21	13	16	37	41
7	46	22	17	15	14	14	14	21	14	17	40	41
8	46	18	17	15	14	14	14	21	13	17	40	41
9	45	16	17	15	14	14	13	21	13	17	39	41
10	44	16	17	15	14	14	13	21	14	17	42	41
11	42	16	17	15	14	14	13	21	19	18	42	40
12	42	15	17	15	14	14	14	21	22	19	42	41
13	42	15	17	15	14	14	14	24	21	19	41	43
14	42	15	17	15	14	16	14	27	14	20	41	43
15	42	15	17	15	14	16	14	27	14	20	41	47
16	41	19	17	15	14	16	16	26	14	20	43	40
17	47	15	17	15	14	16	25	24	14	20	43	15
18	47	15	17	15	14	17	29	17	13	21	46	9.4
19	46	15	16	15	14	18	26	16	13	21	46	9.4
20	46	15	16	15	13	18	26	17	14	21	45	9.4
21	45	15	17	14	13	17	30	19	14	24	45	9.4
22	43	15	16	14	13	17	33	18	16	26	48	9.4
23	42	15	15	14	13	16	29	18	17	30	45	9.4
24	40	15	15	14	13	16	23	18	17	32	45	9.1
25	30	15	15	14	13	16	24	19	14	30	45	8.8
26	21	15	15	14	13	16	24	20	14	29	44	8.8
27	22	16	15	14	14	16	25	20	13	32	45	8.8
28	22	17	15	14	16	16	26	16	14	35	47	8.8
29	22	17	15	14	---	16	29	13	15	35	47	8.8
30	19	17	15	14	---	16	38	13	15	34	46	8.8
31	15	---	15	14	---	16	---	13	---	34	46	---
TOTAL	1220	614	505	454	387	480	611	651	439	700	1317	814.3
MEAN	39.35	20.47	16.29	14.65	13.82	15.48	20.37	21.00	14.63	22.58	42.48	27.14
MAX	48	70	17	15	16	18	38	34	22	35	48	47
MIN	15	15	15	14	13	14	13	13	13	14	37	8.8
AC-FT	2420	1220	1000	901	768	952	1210	1290	871	1390	2610	1620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	22.77	20.94	18.56	21.38	26.45	24.71	21.64	22.99	38.95	72.98	52.35	34.28
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	1997	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 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1991 - 2002		
ANNUAL TOTAL	10768			8192.3					
ANNUAL MEAN	29.50			22.44			31.57		
HIGHEST ANNUAL MEAN							47.8		
LOWEST ANNUAL MEAN							18.4		
HIGHEST DAILY MEAN	117			70			244		
LOWEST DAILY MEAN	14			8.8			6.5		
ANNUAL SEVEN-DAY MINIMUM	14			8.8			6.5		
MAXIMUM PEAK FLOW				73			270		
MAXIMUM PEAK STAGE				0.90			2.15		
ANNUAL RUNOFF (AC-FT)	21360			16250			22870		
10 PERCENT EXCEEDS	50			43			61		
50 PERCENT EXCEEDS	19			16			23		
90 PERCENT EXCEEDS	15			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 mi².

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 sea level (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, 89 acre-ft, Nov. 5, elevation, 8,099.76 ft; minimum, 0 acre-ft, Sept. 23–30.

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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	31	67	74	71	71	75	74	76	72	71	70
2	75	62	70	74	73	71	74	72	69	76	73	69
3	73	81	75	76	75	71	76	65	70	71	72	68
4	69	81	74	74	76	71	75	66	74	71	70	64
5	71	89	69	73	74	71	72	71	73	71	69	56
6	73	85	69	72	71	72	70	72	73	72	67	48
7	71	75	71	72	71	73	69	71	77	68	69	45
8	72	74	74	71	70	73	70	70	70	67	68	47
9	73	74	75	70	70	73	72	69	72	67	67	44
10	73	74	72	69	71	73	76	69	65	69	71	36
11	71	72	71	68	72	75	72	69	74	70	72	29
12	73	72	72	69	73	76	75	66	73	76	72	27
13	74	72	73	74	75	73	73	64	76	74	71	23
14	72	74	74	74	76	75	72	68	70	70	70	21
15	71	75	75	73	76	72	71	75	69	70	69	25
16	68	75	73	74	74	76	65	70	68	72	69	22
17	69	71	70	72	72	72	65	77	72	70	67	19
18	67	73	67	73	71	75	70	71	71	66	67	21
19	67	74	67	75	72	75	66	76	72	67	67	21
20	70	73	70	75	72	75	62	68	76	68	66	20
21	71	74	75	74	70	76	62	73	75	73	65	20
22	69	70	76	72	71	74	71	70	71	71	72	19
23	71	69	74	75	70	74	75	67	73	75	73	e0.00
24	68	70	72	76	69	73	67	63	75	71	73	e0.00
25	67	68	73	75	68	73	68	59	72	70	72	e0.00
26	73	67	71	72	68	74	70	58	73	68	70	e0.00
27	74	70	70	72	64	73	68	65	71	66	69	e0.00
28	73	71	69	73	71	72	71	70	75	68	71	e0.00
29	72	70	72	74	---	75	72	71	72	67	72	e0.00
30	70	68	72	75	---	76	76	72	72	68	71	e0.00
31	29	---	73	69	---	73	---	68	---	69	70	---
MAX	75	89	76	76	76	76	76	77	77	76	73	70
MIN	29	31	67	68	64	71	62	58	65	66	65	0.00
a	8093.57	8097.96	8098.47	8098.06	8098.28	8098.49	8098.68	8098.02	8098.40	8098.07	8098.20	
b	-40	+39	+5	-4	+2	+2	+3	-8	+4	-3	+1	-70
CAL YR 2001	MAX 89	MIN 29		b +3								
WTR YR 2002	MAX 89	MIN 0.00		b -69								

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 mi².

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 sea level, from topographic map.

REMARKS.—No records computed above 30 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	---	7.3	5.5	5.4	5.4	5.5	5.6	5.4	6.1	6.1	6.0
2	6.0	---	7.4	5.5	5.4	5.4	5.5	5.5	5.5	6.0	6.1	6.0
3	6.0	---	6.5	5.5	5.4	5.4	5.5	5.5	5.4	6.1	6.0	6.0
4	6.0	---	5.8	5.5	5.4	5.4	5.6	5.5	5.4	6.0	6.0	6.0
5	6.0	---	5.5	5.5	5.4	5.4	5.5	5.5	5.3	6.0	6.0	6.0
6	6.1	---	5.5	5.5	5.4	5.5	5.5	5.5	5.4	6.0	5.9	5.9
7	6.0	---	5.5	5.5	5.5	5.6	5.5	5.5	5.5	6.0	5.8	5.7
8	6.0	7.6	5.5	5.5	5.5	5.6	5.5	5.5	5.4	5.9	5.8	5.7
9	6.0	7.5	5.5	5.5	5.5	5.5	5.5	5.5	9.1	5.9	5.7	5.7
10	6.0	7.5	5.5	5.5	5.5	5.6	5.5	5.4	6.2	6.0	5.7	5.6
11	6.0	7.5	5.5	5.5	5.5	5.5	5.6	5.4	6.1	6.0	5.8	5.5
12	6.0	7.5	5.5	5.5	5.5	5.6	5.5	5.4	6.1	6.0	5.8	5.5
13	6.0	7.5	5.5	5.4	5.5	5.6	6.2	5.4	6.2	6.1	5.8	8.2
14	6.0	7.5	e5.6	5.6	5.5	5.5	5.5	5.4	6.1	6.1	5.8	10
15	6.0	7.5	e5.5	5.6	5.6	5.7	5.8	5.4	6.1	6.0	5.8	10
16	6.0	7.7	5.5	e5.6	5.6	5.8	5.6	5.4	6.1	6.0	5.8	10
17	6.0	7.4	5.5	e5.6	5.5	5.8	5.5	5.8	6.0	6.0	5.8	15
18	6.0	7.3	5.5	e5.6	5.6	5.8	5.5	5.7	6.2	6.0	5.8	15
19	6.0	7.3	5.4	5.5	5.5	5.5	5.5	5.9	6.1	6.0	5.8	15
20	6.0	7.5	5.4	5.5	5.5	5.5	5.5	5.6	6.3	6.0	5.8	15
21	6.0	7.5	5.5	5.5	5.6	5.5	5.5	5.5	6.3	6.0	5.8	15
22	6.0	e7.5	5.5	5.5	5.5	5.6	5.5	5.5	6.3	6.0	5.8	15
23	6.0	7.4	5.5	e5.5	5.6	5.7	5.5	5.4	6.1	6.0	5.8	30
24	6.1	e7.4	5.7	e5.5	5.5	5.7	5.5	5.4	6.1	6.0	5.9	---
25	6.1	7.4	5.6	5.5	5.5	5.6	5.6	5.4	6.1	6.1	6.0	---
26	6.4	7.3	5.5	5.5	5.5	5.5	5.7	5.4	6.1	6.0	6.0	---
27	6.1	7.4	5.5	5.5	5.5	5.6	5.6	5.4	6.1	6.0	6.0	---
28	6.1	7.3	5.5	5.5	5.4	5.5	5.5	5.4	6.1	6.0	6.0	---
29	6.1	7.4	5.6	5.7	---	5.5	5.5	5.4	6.1	6.0	6.0	---
30	6.2	7.3	5.6	e5.7	---	5.5	5.6	5.9	6.1	6.0	6.0	---
31	---	---	5.6	5.6	---	5.5	---	5.4	---	6.0	6.1	---
TOTAL	---	---	176.0	171.4	153.8	172.3	166.8	170.5	181.3	186.3	182.5	---
MEAN	---	---	5.677	5.529	5.493	5.558	5.560	5.500	6.043	6.010	5.887	---
MAX	---	---	7.4	5.7	5.6	5.8	6.2	5.9	9.1	6.1	6.1	---
MIN	---	---	5.4	5.4	5.4	5.4	5.5	5.4	5.3	5.9	5.7	---
AC-FT	---	---	349	340	305	342	331	338	360	370	362	---

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 mi².

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 sea level, from topographic map.

REMARKS.—No records computed above 20 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	---	14	14	14	14	14	14	13	14	14	13
2	14	---	14	14	14	14	14	14	13	14	14	13
3	14	---	14	14	14	14	14	14	13	14	14	13
4	14	---	14	14	14	14	14	14	13	14	14	13
5	14	---	14	14	14	14	14	13	13	14	14	13
6	14	---	14	14	14	14	14	13	13	14	14	13
7	14	---	14	14	14	14	14	13	13	14	14	13
8	14	14	14	14	14	14	14	13	13	14	14	13
9	14	14	14	14	14	14	14	13	13	14	14	13
10	14	14	14	14	14	14	14	13	13	14	14	13
11	14	14	14	14	14	14	14	13	13	14	14	13
12	14	14	14	14	14	14	14	13	13	14	14	13
13	14	15	14	14	14	14	14	13	13	14	14	13
14	14	14	14	14	14	14	14	13	13	14	14	13
15	14	14	14	14	14	14	14	13	13	14	14	13
16	14	14	14	14	14	14	14	13	13	14	14	13
17	14	14	14	14	14	14	14	13	13	14	14	13
18	14	14	14	14	14	14	14	13	13	14	14	14
19	14	14	14	14	14	14	14	13	13	14	14	14
20	14	14	14	14	14	14	14	13	13	14	14	14
21	14	14	14	14	14	14	14	13	13	14	14	14
22	14	14	14	14	14	14	14	13	13	14	14	14
23	14	14	14	14	14	14	14	13	13	14	14	16
24	14	14	14	14	14	14	14	13	13	14	14	14
25	14	14	14	14	14	14	14	13	13	14	14	14
26	---	14	14	14	14	14	14	13	13	14	13	14
27	---	14	14	14	14	14	14	13	14	14	13	14
28	---	14	14	14	14	14	14	13	14	14	13	14
29	---	14	14	14	---	14	14	13	14	14	13	14
30	---	14	14	14	---	14	14	13	14	14	13	14
31	---	---	14	14	---	14	---	13	---	14	13	---
TOTAL	---	---	434	434	392	434	420	405	394	434	428	405
MEAN	---	---	14.00	14.00	14.00	14.00	14.00	13.06	13.13	14.00	13.81	13.50
MAX	---	---	14	14	14	14	14	14	14	14	14	16
MIN	---	---	14	14	14	14	14	13	13	14	13	13
AC-FT	---	---	861	861	778	861	833	803	781	861	849	803

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 sea level, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	1.6	3.9	3.6	3.5	3.3	3.3	3.7	14	26	13	7.4
2	7.0	1.4	3.8	3.6	3.5	3.2	3.3	3.6	14	e26	13	7.3
3	6.9	1.4	3.8	3.6	3.4	3.2	3.3	3.7	15	e25	13	7.2
4	7.0	1.4	3.8	3.6	3.4	3.2	3.3	3.8	16	e25	12	7.4
5	7.0	1.4	4.0	3.5	3.4	3.2	3.2	3.8	17	e25	12	7.2
6	7.0	1.4	3.9	3.6	3.4	3.2	3.2	3.9	16	e24	11	7.0
7	7.0	1.3	3.9	3.6	3.5	3.2	3.2	4.0	16	e24	11	6.9
8	6.9	1.3	3.9	3.6	3.5	3.3	3.2	4.1	19	e24	11	6.7
9	6.9	1.3	3.9	3.6	3.4	3.2	3.2	4.2	17	24	10	6.7
10	6.8	1.3	3.8	3.6	3.4	3.2	3.2	4.3	17	24	10	6.6
11	9.0	1.3	3.8	3.6	3.4	3.3	3.2	4.3	17	24	10	6.5
12	11	1.2	3.8	3.6	3.4	3.3	3.2	4.4	16	24	9.9	6.4
13	11	1.2	3.8	3.6	3.4	3.2	3.2	4.5	16	23	10	6.4
14	11	1.2	3.9	3.6	3.5	3.2	3.3	4.6	16	23	10	6.2
15	10	1.2	3.8	3.5	3.5	3.1	3.3	4.9	16	23	10	6.1
16	9.3	1.2	3.8	3.5	3.4	3.0	3.2	5.3	15	21	9.8	5.9
17	6.8	2.7	3.8	3.5	3.4	3.0	3.2	5.8	19	20	9.7	3.4
18	4.8	3.9	3.8	3.5	3.4	3.1	3.2	6.6	25	19	9.5	0.00
19	2.9	3.9	3.8	3.5	3.5	3.1	3.2	7.2	21	17	9.3	0.00
20	2.4	3.9	3.8	3.5	3.5	3.1	3.1	7.4	21	17	9.3	0.00
21	2.4	4.0	3.7	3.5	3.4	3.1	3.1	7.0	23	17	9.2	0.00
22	2.6	4.3	3.7	3.5	3.4	3.1	3.5	6.6	17	16	8.9	0.00
23	2.9	3.9	3.7	3.4	3.3	3.1	3.7	6.3	16	15	8.6	0.00
24	2.8	4.1	3.7	3.5	3.3	3.1	3.7	6.1	18	15	8.4	0.00
25	1.9	3.7	3.7	3.5	3.3	3.1	3.9	6.0	24	16	8.3	0.00
26	1.4	3.9	3.6	3.5	3.3	3.1	3.9	6.1	27	15	8.2	0.00
27	1.3	3.9	3.7	3.5	3.3	3.1	3.8	6.8	26	14	8.1	0.00
28	1.3	4.0	3.6	3.5	3.3	3.2	3.7	8.1	26	14	8.0	0.00
29	1.2	3.9	3.7	3.5	---	3.3	3.7	9.5	29	14	7.8	0.40
30	2.1	3.8	3.6	3.5	---	3.3	3.6	11	28	13	7.7	0.00
31	1.7	---	3.6	3.5	---	3.3	---	12	---	13	7.5	---
TOTAL	169.3	75.0	117.1	109.7	95.4	98.4	101.1	179.6	577	620	304.2	111.70
MEAN	5.461	2.500	3.777	3.539	3.407	3.174	3.370	5.794	19.23	20.00	9.813	3.723
MAX	11	4.3	4.0	3.6	3.5	3.3	3.9	12	29	26	13	7.4
MIN	1.2	1.2	3.6	3.4	3.3	3.0	3.1	3.6	14	13	7.5	0.00
AC-FT	336	149	232	218	189	195	201	356	1140	1230	603	222

e Estimated.

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 mi².

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 sea level, from topographic map.

REMARKS.—No records computed above 20 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	---	6.7	e6.3	e6.2	6.3	5.7	5.7	5.5	5.8	7.6	6.0
2	6.5	---	6.7	e6.3	e6.2	6.3	5.7	5.7	5.5	5.8	8.5	6.0
3	6.5	---	6.4	e6.3	e6.2	6.3	5.7	5.7	5.5	5.8	8.5	6.0
4	6.5	---	6.1	6.3	e6.2	6.3	5.7	5.7	5.5	5.8	8.5	6.0
5	6.1	---	6.1	6.3	e6.2	6.3	5.7	5.7	5.5	5.8	8.5	6.0
6	6.0	---	6.1	6.3	e6.2	6.3	5.7	5.7	5.5	5.8	8.7	6.0
7	6.0	---	6.1	6.3	6.3	6.3	5.7	5.7	5.5	5.8	8.8	6.0
8	6.0	---	6.1	6.3	6.3	6.3	5.7	5.7	5.5	5.8	8.8	6.0
9	6.0	---	6.1	6.3	6.3	6.3	5.7	5.7	5.7	5.8	8.8	6.0
10	6.0	---	6.1	6.3	6.3	6.3	5.7	12	5.7	5.8	8.8	6.7
11	6.0	---	6.1	6.3	6.3	6.0	5.7	5.5	5.7	5.8	8.8	6.0
12	6.0	---	6.1	6.3	6.3	5.7	5.7	7.3	5.7	5.8	8.8	6.0
13	6.0	---	6.1	6.3	6.3	5.7	5.7	---	5.7	5.8	7.7	6.0
14	6.0	---	6.1	6.3	6.3	5.7	5.7	---	5.7	5.8	6.0	6.0
15	6.0	---	6.1	6.3	6.3	5.7	5.8	---	5.7	5.8	6.0	6.0
16	6.0	---	6.1	6.2	6.3	5.7	5.8	---	5.7	5.8	6.0	6.0
17	6.0	8.1	6.1	6.1	6.3	5.8	5.8	---	5.7	5.8	6.0	6.0
18	6.0	6.7	e6.1	6.2	6.3	5.7	5.7	5.4	5.7	5.7	6.0	6.0
19	6.0	6.9	e6.1	6.3	6.2	5.7	5.7	5.3	5.7	5.7	6.0	6.0
20	6.0	6.8	e6.1	6.3	6.1	5.7	5.7	5.3	5.7	5.7	6.0	6.0
21	6.0	6.9	e6.1	6.3	6.1	5.7	5.7	5.5	5.5	5.7	6.0	6.0
22	6.0	6.9	e6.1	6.3	6.1	5.7	5.7	5.5	5.7	5.7	6.0	6.0
23	6.0	6.8	e6.1	6.6	6.2	5.7	5.7	5.5	5.7	5.7	6.0	7.3
24	---	7.7	e6.1	6.2	6.3	5.7	5.8	5.5	5.8	5.7	6.0	6.0
25	---	6.6	e6.1	6.1	6.3	5.7	5.8	5.5	5.8	5.7	6.0	6.0
26	---	6.6	e6.3	6.2	6.3	5.7	5.7	5.5	5.8	5.7	6.0	6.0
27	---	6.6	e6.3	6.3	6.3	5.7	5.7	5.5	5.8	5.7	6.0	6.0
28	---	6.6	e6.3	6.3	6.3	5.7	5.7	5.5	5.8	5.7	6.0	6.0
29	---	6.6	e6.3	6.3	---	5.7	5.7	5.5	5.8	5.7	6.0	6.0
30	---	6.6	e6.3	6.2	---	5.7	5.7	5.6	5.8	5.8	6.0	6.0
31	---	---	e6.3	e6.2	---	5.7	---	5.6	---	5.8	6.0	---
TOTAL	---	---	191.8	194.6	175.0	183.1	171.5	---	169.9	178.6	218.8	182.0
MEAN	---	---	6.187	6.277	6.250	5.906	5.717	---	5.663	5.761	7.058	6.067
MAX	---	---	6.7	6.6	6.3	6.3	5.8	---	5.8	5.8	8.8	7.3
MIN	---	---	6.1	6.1	6.1	5.7	5.7	---	5.5	5.7	6.0	6.0
AC-FT	---	---	380	386	347	363	340	---	337	354	434	361

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 mi².

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 sea level, from topographic map.

REMARKS.—No records computed above 30 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	---	---	---	---	---	---	---	19	19	20	20
2	19	---	---	---	---	---	---	---	19	19	20	20
3	19	---	---	---	---	---	---	---	19	19	20	20
4	19	---	---	---	---	---	---	---	19	19	20	20
5	19	---	---	---	---	---	---	---	19	19	20	20
6	19	---	---	---	---	---	---	---	19	19	20	20
7	19	---	---	---	---	---	---	---	19	19	20	20
8	19	---	---	---	---	---	---	---	19	19	20	20
9	19	---	---	---	---	---	---	---	19	19	20	20
10	19	---	---	---	---	---	---	---	19	19	20	20
11	19	---	---	---	---	---	---	---	19	19	20	20
12	19	---	---	---	---	---	---	---	19	19	20	20
13	19	---	---	---	---	---	---	---	19	21	20	20
14	19	---	---	---	---	---	---	---	19	19	20	20
15	19	---	---	---	---	---	---	---	19	19	20	20
16	19	---	---	---	---	---	---	21	19	19	20	20
17	19	---	---	---	---	---	---	21	19	20	20	20
18	19	---	---	---	---	---	---	20	20	22	20	20
19	19	---	---	---	---	---	---	20	22	25	20	20
20	19	---	---	---	---	---	---	20	---	25	20	20
21	19	---	---	---	---	---	---	21	---	27	20	20
22	19	---	---	---	---	---	---	21	---	30	20	20
23	19	---	---	---	---	---	---	21	29	---	20	20
24	---	---	---	---	---	---	---	21	22	---	20	20
25	30	---	---	---	---	---	---	21	20	25	20	20
26	20	---	---	---	---	---	---	21	20	20	20	20
27	19	---	---	---	---	---	---	21	20	20	20	20
28	20	---	---	---	---	---	---	20	20	20	20	20
29	26	---	---	---	---	---	---	19	20	20	20	20
30	---	---	---	---	---	---	---	19	20	---	20	20
31	---	---	---	---	---	---	---	19	---	27	20	---
TOTAL	---	---	---	---	---	---	---	---	---	---	620	600
MEAN	---	---	---	---	---	---	---	---	---	---	20.00	20.00
MAX	---	---	---	---	---	---	---	---	---	---	20	20
MIN	---	---	---	---	---	---	---	---	---	---	20	20
AC-FT	---	---	---	---	---	---	---	---	---	---	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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	0.00	2.0	2.0	1.9	1.9	1.7	1.9	1.7	1.9	2.1	2.1
2	1.9	0.00	2.0	2.0	1.9	1.9	1.7	1.9	1.7	2.0	2.1	2.1
3	1.9	0.00	2.0	2.0	1.9	2.0	1.8	1.9	1.7	1.9	2.1	2.1
4	1.9	0.00	2.0	2.0	1.9	2.0	1.8	1.9	1.8	2.0	2.1	2.1
5	1.9	0.00	2.0	2.0	1.9	2.0	1.8	1.9	1.7	2.0	2.1	2.1
6	1.9	0.00	2.0	2.0	1.9	1.9	1.8	1.9	1.7	2.0	2.1	2.1
7	1.9	0.00	2.0	2.0	1.9	1.9	1.8	1.9	1.7	2.0	2.1	2.1
8	1.9	0.00	2.0	1.9	1.9	1.9	1.8	1.9	1.7	2.0	2.1	2.1
9	1.9	0.05	2.0	1.9	1.9	1.9	1.8	1.9	1.7	2.0	2.0	2.1
10	1.9	1.4	2.0	1.9	1.9	1.9	1.8	1.9	1.7	2.1	2.0	2.1
11	1.9	2.1	2.0	1.9	1.9	1.8	1.8	1.9	1.8	2.1	2.0	2.1
12	1.9	2.1	2.0	1.9	1.9	1.7	1.8	1.9	1.7	2.1	2.0	2.1
13	1.9	2.1	2.0	1.9	1.9	1.7	1.8	1.9	1.8	2.0	2.0	2.1
14	1.9	2.1	2.0	1.9	1.9	1.7	1.8	2.0	2.0	2.0	2.0	2.1
15	1.9	2.1	2.0	1.9	1.9	1.7	1.8	2.2	2.0	2.1	2.0	2.1
16	1.9	2.1	2.0	1.9	1.9	1.7	1.8	2.1	2.0	2.1	2.0	2.1
17	1.9	2.1	2.0	e1.9	1.9	1.7	1.8	1.9	2.0	2.1	2.0	2.1
18	1.9	2.1	2.0	e1.9	1.9	1.7	1.8	1.8	1.9	2.1	2.0	2.2
19	1.9	2.1	2.0	1.9	1.9	1.7	1.9	1.8	1.9	2.1	2.0	2.2
20	2.0	2.1	2.0	1.9	1.9	1.7	1.9	1.8	1.9	2.1	2.0	2.2
21	2.0	2.1	2.0	1.9	1.9	1.7	1.9	1.9	1.8	2.1	2.0	2.1
22	2.0	2.1	2.0	1.9	2.0	1.7	1.9	1.9	1.9	2.1	2.0	2.1
23	2.0	2.0	2.0	e1.9	2.3	1.7	1.9	1.9	2.0	2.4	2.0	2.1
24	0.77	2.1	2.0	2.0	2.4	1.7	1.9	1.9	2.0	2.1	2.0	2.1
25	0.03	2.1	2.0	2.0	2.1	1.7	1.9	1.8	1.9	2.1	2.0	2.1
26	0.02	2.0	2.0	2.0	1.8	1.7	1.9	1.8	1.9	2.1	2.0	2.1
27	0.02	2.0	2.0	2.0	1.9	1.7	1.9	1.8	1.9	2.1	2.0	2.1
28	0.01	2.0	2.0	2.0	1.9	1.7	1.9	1.8	2.0	2.1	2.0	2.1
29	0.01	2.0	2.0	e2.0	---	1.7	1.9	1.8	1.9	2.1	2.0	2.1
30	0.00	2.0	2.0	e2.0	---	1.7	1.9	1.8	1.9	2.3	2.1	2.1
31	0.00	---	2.0	e2.0	---	1.7	---	1.7	---	2.2	2.1	---
TOTAL	44.96	42.85	62.0	60.4	54.3	55.1	55.0	58.4	55.3	64.4	63.0	63.3
MEAN	1.450	1.428	2.000	1.948	1.939	1.777	1.833	1.884	1.843	2.077	2.032	2.110
MAX	2.0	2.1	2.0	2.0	2.4	2.0	1.9	2.2	2.0	2.4	2.1	2.2
MIN	0.00	0.00	2.0	1.9	1.8	1.7	1.7	1.7	1.7	1.9	2.0	2.1
AC-FT	89	85	123	120	108	109	109	116	110	128	125	126

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1.998	1.720	1.858	1.930	1.906	1.907	1.985	2.049	2.120	2.155	2.190	2.174
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	1.91	1.85	1.89
(WY)	2002	1997	2001	2000	2000	1991	1999	2001	2002	1992	1991	1991

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1991 - 2002	
ANNUAL TOTAL	680.51		679.01			
ANNUAL MEAN	1.864		1.860		2.000	
HIGHEST ANNUAL MEAN					2.19 1996	
LOWEST ANNUAL MEAN					1.85 1991	
HIGHEST DAILY MEAN	2.8 Jul 6		2.4 Feb 24		3.3 May 7 1995	
LOWEST DAILY MEAN	0.00 Oct 30		0.00 Oct 30		0.00 Nov 3 1998	
ANNUAL SEVEN-DAY MINIMUM	0.00 Oct 30		0.00 Oct 30		0.00 Oct 30 2001	
ANNUAL RUNOFF (AC-FT)	1350		1350		1450	
10 PERCENT EXCEEDS	2.1		2.1		2.4	
50 PERCENT EXCEEDS	1.9		1.9		2.0	
90 PERCENT EXCEEDS	1.7		1.7		1.8	

e Estimated.

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 mi².

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 sea level, from topographic map.

REMARKS.—Flow regulated for power development by South Lake, Lake Sabrina, and Intake No. 2 Reservoir (stations 10270700, 10270870, and 10270875), 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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.96	55	67	78	16	57	54	92	1.3	1.5	0.58	0.96
2	0.96	55	66	78	15	53	55	92	1.3	1.4	1.2	0.96
3	1.0	53	69	78	15	53	56	91	1.3	1.5	1.1	0.96
4	0.96	65	79	77	15	52	58	91	1.3	1.4	1.1	0.96
5	0.96	126	81	78	17	53	59	93	1.2	1.4	1.1	0.98
6	0.96	154	81	78	17	53	58	93	1.1	1.3	1.1	0.97
7	0.96	90	82	55	16	52	57	93	1.1	1.3	1.1	0.96
8	0.96	77	82	24	16	53	57	93	1.1	1.3	1.1	1.0
9	0.96	63	82	23	16	52	58	93	0.96	1.3	1.1	0.96
10	0.96	61	80	23	15	53	58	91	0.96	1.3	1.0	0.96
11	0.96	62	81	22	15	51	62	93	0.96	1.3	1.0	0.96
12	0.96	60	82	22	15	53	64	91	0.96	1.2	1.0	0.96
13	0.96	61	82	19	15	52	68	87	0.90	2.1	1.1	0.96
14	0.96	54	82	19	15	47	71	92	0.82	1.1	1.1	0.94
15	0.96	58	82	17	15	51	69	77	0.82	1.0	1.4	0.96
16	0.96	62	80	16	16	47	71	6.2	0.78	0.96	1.0	0.96
17	0.96	65	80	19	16	53	71	2.1	0.79	0.97	0.96	1.0
18	0.96	61	80	16	14	49	70	1.7	0.77	1.3	0.96	1.1
19	0.96	61	80	16	14	55	71	1.6	0.78	1.0	0.96	1.1
20	0.96	62	81	16	13	55	72	1.6	0.72	0.90	0.96	1.1
21	0.96	61	81	16	12	54	70	1.5	0.69	0.89	0.96	1.0
22	0.96	63	81	16	8.1	55	70	1.5	0.74	1.2	0.96	0.96
23	0.96	62	80	18	7.9	55	70	1.5	0.64	37	0.97	0.96
24	1.9	67	79	20	8.2	55	72	1.5	0.60	1.1	0.96	0.96
25	1.3	63	78	19	7.9	54	71	1.5	0.60	0.58	0.96	1.0
26	51	62	79	19	8.8	54	72	1.5	0.59	0.45	1.0	0.96
27	58	62	79	19	10	54	72	1.5	0.95	0.40	1.0	0.96
28	58	65	78	17	49	54	70	1.5	1.5	0.38	0.99	1.1
29	60	67	80	18	---	55	71	1.5	1.5	0.37	0.91	1.1
30	64	67	78	22	---	55	82	1.4	1.5	6.5	0.96	5.7
31	63	---	79	21	---	57	---	1.3	---	0.88	0.96	---
TOTAL	379.32	2044	2451	979	417.9	1646	1979	1391.4	29.23	75.28	31.55	34.41
MEAN	12.24	68.13	79.06	31.58	14.93	53.10	65.97	44.88	0.974	2.428	1.018	1.147
MAX	64	154	82	78	49	57	82	93	1.5	37	1.4	5.7
MIN	0.96	53	66	16	7.9	47	54	1.3	0.59	0.37	0.58	0.94
AC-FT	752	4050	4860	1940	829	3260	3930	2760	58	149	63	68
a	4380	24	20	3180	3420	0	0	3050	6610	5700	5390	5240

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.372	14.84	8.353	7.296	3.401	6.741	8.252	12.16	29.05	69.04	31.07	5.770
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1991 - 2002	
ANNUAL TOTAL	8604.83		11458.09			
ANNUAL MEAN	23.57		31.39		17.16	
HIGHEST ANNUAL MEAN					43.2 1995	
LOWEST ANNUAL MEAN					0.35 1992	
HIGHEST DAILY MEAN	264	Jul 8	154	Nov 6	420	Jul 24 1998
LOWEST DAILY MEAN	0.69	Jan 1	0.37	Jul 29	0.00	Jul 27 1992
ANNUAL SEVEN-DAY MINIMUM	0.95	Sep 20	0.65	Jun 20	0.00	Jul 27 1992
MAXIMUM PEAK FLOW			194	Nov 6	453	Jul 23 1998
MAXIMUM PEAK STAGE			2.38	Nov 6	3.77	Jul 23 1998
ANNUAL RUNOFF (AC-FT)	17070		22730		12430	
ANNUAL DIVERSION (AC-FT) a	50480		37030			
10 PERCENT EXCEEDS	80		80		62	
50 PERCENT EXCEEDS	1.7		16		1.5	
90 PERCENT EXCEEDS	0.96		0.96		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 mi².

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 sea level (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, 3,290 acre-ft, July 20, elevation, 7,801.33 ft; minimum, 327 acre-ft (estimated), Mar. 27, 28, 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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	1460	1600	e1790	1850	1240	371	1200	1880	3180	3080	2610
2	1400	1460	1610	e1790	1850	1210	386	1160	1970	3200	3080	2600
3	1390	1470	1610	1800	1850	1180	404	1130	2040	3210	3070	2570
4	1400	1470	1630	1810	1850	1150	425	1100	2110	3200	3050	2620
5	1400	1460	1630	e1810	1850	1130	446	1070	2190	3180	3020	2630
6	1420	1470	1640	e1810	1850	1100	467	1050	2280	3170	2990	2640
7	1410	1470	1640	e1810	1850	1070	487	1040	2370	3140	2950	2580
8	1410	1470	1670	e1810	1850	1040	508	1020	2450	3110	2930	2600
9	1410	1470	1660	1810	1850	1020	541	1010	2510	3100	2920	2580
10	1410	1480	1670	1820	1850	977	563	1000	2520	3080	2920	2560
11	1410	1490	1670	1820	1850	947	596	994	2530	3100	2900	2560
12	1410	1490	1680	1830	1830	921	634	975	2560	3140	2890	2570
13	1410	1490	1690	1830	1790	893	676	969	2590	3170	2870	2540
14	1410	1490	1690	1830	1750	862	721	964	2640	3200	2850	2540
15	1420	1490	1690	1840	1710	835	782	983	2680	3220	2840	2540
16	1420	1490	1690	1840	1680	803	847	1020	2720	3230	2840	2530
17	1420	1490	1700	1840	1650	773	897	1070	2760	3260	2850	2490
18	1410	1500	1700	1840	1610	743	935	1160	2790	3270	2840	2480
19	1420	1500	1710	1840	1570	711	961	1240	2860	3280	2790	2480
20	1430	1490	1710	1850	1540	683	996	1300	2920	3290	2770	2460
21	1420	1500	1720	1850	1500	655	1030	1330	2980	3250	2750	2490
22	1430	1520	1730	1850	1470	612	1050	1350	3000	3270	2730	2490
23	1430	1520	1690	1860	1440	556	1080	1350	3020	3250	2730	2470
24	1440	1550	1740	1850	1410	491	1110	1350	3030	3250	2710	2450
25	1440	1560	1740	1870	1370	436	1130	1360	3040	3200	2750	2430
26	1430	1560	1730	1850	1340	e372	1170	1370	3060	3180	2740	2410
27	1430	1560	1740	1850	1300	e327	1180	1420	3090	3160	2730	2360
28	1440	1570	1750	1860	1270	e327	1220	1460	3120	3140	2720	2350
29	1430	1580	1770	1850	---	331	1240	1530	3140	3130	2700	2330
30	1450	1580	e1770	1850	---	344	1230	1630	3160	3110	2660	2320
31	1460	---	e1780	1850	---	357	---	1750	---	3100	2630	---
MAX	1460	1580	1780	1870	1850	1240	1240	1750	3160	3290	3080	2640
MIN	1390	1460	1600	1790	1270	327	371	964	1880	3080	2630	2320
a	7784.62	7785.86		7788.56	7782.69	7771.99	7782.22	7787.31	7800.28	7799.78	7795.71	7792.98
b	+50	+120	+200	+70	-580	-913	+873	+520	+1410	-60	-470	-310
CAL YR 2001	MAX 3600	MIN 583	b -110									
WTR YR 2002	MAX 3290	MIN 327	b +910									

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 mi².

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 sea level, from topographic map.

REMARKS.—Records not computed above 15 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.03	e0.07	e0.00	e0.00	0.00	0.00	3.6	4.1	2.1
2	0.00	0.00	0.00	e0.03	e0.07	e0.00	e0.00	0.00	0.00	3.7	3.8	2.1
3	0.00	0.00	0.00	e0.03	e0.08	e0.00	e0.00	0.00	0.00	3.8	3.8	2.1
4	0.00	0.00	0.00	e0.03	e0.08	e0.00	e0.00	0.00	0.00	3.9	3.7	2.1
5	0.00	0.00	0.00	e0.03	e0.08	e0.00	e0.00	0.00	e0.10	3.9	3.6	2.1
6	0.00	0.00	0.00	e0.03	e0.08	e0.00	e0.00	0.00	e0.20	3.9	3.5	2.1
7	0.00	0.00	0.00	e0.03	e0.09	e0.00	e0.00	0.00	e0.31	3.9	3.4	2.0
8	0.00	0.00	0.00	e0.03	e0.09	e0.00	e0.00	0.00	e0.42	3.9	3.3	2.0
9	0.00	0.00	0.00	e0.03	e0.09	e0.00	0.00	0.00	e0.50	3.7	3.3	1.9
10	0.00	0.00	0.00	e0.03	e0.09	e0.00	0.00	0.00	e0.71	3.6	3.1	1.9
11	0.00	0.00	0.00	e0.04	e0.09	e0.00	0.00	0.00	e0.94	3.6	3.1	1.9
12	0.00	0.00	0.00	e0.04	e0.09	e0.00	0.00	0.00	e1.1	3.6	3.1	1.9
13	0.00	0.00	e0.01	e0.04	e0.09	e0.00	0.00	0.00	e1.1	3.8	3.1	1.8
14	0.00	0.00	e0.01	e0.04	e0.09	e0.00	0.00	0.00	1.1	3.8	3.1	1.7
15	0.00	0.00	e0.01	e0.04	e0.09	e0.00	0.00	0.00	1.3	4.1	3.0	1.7
16	0.00	0.00	e0.01	e0.04	e0.08	e0.00	0.00	0.00	1.4	4.1	2.9	1.7
17	0.00	0.00	e0.01	e0.04	e0.08	e0.00	0.00	0.00	1.4	4.3	2.8	1.7
18	0.00	0.00	e0.01	e0.04	e0.08	e0.00	0.00	0.00	1.6	4.4	2.7	1.7
19	0.00	0.00	e0.01	e0.04	e0.08	e0.00	0.00	0.00	1.7	4.4	2.6	1.7
20	0.00	0.00	e0.01	e0.04	e0.08	e0.00	0.00	0.00	1.9	4.4	2.6	1.7
21	0.00	0.00	e0.01	e0.05	e0.07	e0.00	0.00	0.00	2.1	4.4	2.5	1.6
22	0.00	0.00	e0.01	e0.05	e0.06	e6.0	0.00	0.00	2.3	4.4	2.5	1.6
23	0.00	0.00	e0.02	e0.05	e0.05	e12	0.00	0.00	2.5	4.4	2.4	1.6
24	0.00	0.00	e0.02	e0.05	e0.04	e12	0.00	0.00	2.5	4.4	2.4	1.6
25	0.00	0.00	e0.02	e0.05	e0.03	e12	0.00	0.00	2.6	4.4	2.4	1.6
26	0.00	0.00	e0.02	e0.05	e0.02	e11	0.00	0.00	2.8	4.4	2.4	1.6
27	0.00	0.00	e0.02	e0.05	e0.01	e11	0.00	0.00	2.9	4.3	2.4	1.5
28	0.00	0.00	e0.02	e0.06	e0.00	e11	0.00	0.00	3.1	4.3	2.3	1.5
29	0.00	0.00	e0.02	e0.06	---	e6.0	0.00	0.00	3.2	4.2	2.2	1.5
30	0.00	0.00	e0.02	e0.06	---	e0.00	0.00	0.00	3.4	4.1	2.2	1.4
31	0.00	---	e0.02	e0.07	---	e0.00	---	0.00	---	4.1	2.2	---
TOTAL	0.00	0.00	0.28	1.30	1.95	81.00	0.00	0.00	43.18	125.8	90.5	53.4
MEAN	0.000	0.000	0.009	0.042	0.070	2.613	0.000	0.000	1.439	4.058	2.919	1.780
MAX	0.00	0.00	0.02	0.07	0.09	12	0.00	0.00	3.4	4.4	4.1	2.1
MIN	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	3.6	2.2	1.4
AC-FT	0.00	0.00	0.6	2.6	3.9	161	0.00	0.00	86	250	180	106
a	0	0	0	0	0	0	0	26	588	187	0	0
b	375	318	338	361	899	1230	381	2060	2690	1760	916	595

CAL YR 2001 a 844 b 11950
WTR YR 2002 a 801 b 11920

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 mi².

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 sea level (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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3020	---	---	---	---	---	---	---	5500	5390	5250	4940
2	2870	---	---	---	---	---	---	28	5470	5380	5250	4930
3	2720	---	---	---	---	---	---	119	5450	5370	5240	4920
4	2570	---	---	---	---	---	---	239	5450	5360	5230	4910
5	2420	---	---	---	---	---	---	377	5470	5350	5220	4900
6	2280	---	---	---	---	---	---	553	5480	5350	5200	4890
7	2140	---	---	---	---	---	---	739	5470	5340	5180	4880
8	2000	---	---	---	---	---	---	914	5430	5340	5160	4870
9	1860	---	---	---	---	---	---	1080	5400	5330	5150	4860
10	1730	---	---	---	---	---	---	1210	5400	5330	5130	4810
11	1590	---	---	---	---	---	---	1310	5410	5340	5120	4670
12	1470	---	---	---	---	---	---	1430	5420	5350	5100	4540
13	1340	---	---	---	---	---	---	1640	5430	5350	5090	4400
14	1220	---	---	---	---	---	---	1900	5420	5380	5090	4270
15	1100	---	---	---	---	---	---	2180	5420	5380	5090	4130
16	986	---	---	---	---	---	---	2500	5410	5320	5090	4000
17	871	---	---	---	---	---	---	2900	5410	5310	5110	3860
18	762	---	---	---	---	---	---	3310	5430	5310	5100	3730
19	654	---	---	---	---	---	---	3650	5420	5330	5080	3570
20	550	---	---	---	---	---	---	3850	5410	5320	5080	3400
21	448	---	---	---	---	---	---	3950	5390	5320	5070	3230
22	349	---	---	---	---	---	---	4020	5380	5320	5060	3070
23	250	---	---	---	---	---	---	4080	5380	5280	5050	2900
24	---	---	---	---	---	---	---	4170	5370	5300	5040	2740
25	---	---	---	---	---	---	---	4340	5380	5300	5030	2580
26	---	---	---	---	---	---	---	4580	5390	5300	5010	2430
27	---	---	---	---	---	---	---	4860	5380	5270	5000	2280
28	---	---	---	---	---	---	---	5160	5390	5270	4990	2140
29	---	---	---	---	---	---	---	5460	5390	5270	4970	2000
30	---	---	---	---	---	---	---	5530	5390	5260	4960	1860
31	---	---	---	---	---	---	---	5530	---	5260	4950	---
MAX	---	---	---	---	---	---	---	---	5500	5390	5250	4940
MIN	---	---	---	---	---	---	---	---	5370	5260	4950	1860
a								9416.95	9416.23	9415.52	9413.83	9394.35
b									-140	-130	-310	-3090

WTR YR 2002 b -1330

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 mi².

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 sea level (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, 16,900 acre-ft, Oct. 25–31, maximum elevation, 9,050.44 ft, Oct. 30; minimum, 2,440 acre-ft, Apr. 1, 2, minimum elevation, 8,990.72 ft, Apr. 1.

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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16400	16800	13900	11200	8380	5610	2440	4430	7640	15300	16300	16000
2	16400	16700	13800	11100	8290	5500	2440	4390	8100	15400	16300	16000
3	16500	16600	13800	11000	8190	5390	2500	4360	8500	15500	16300	15900
4	16500	16400	13700	11000	8100	5290	2600	4340	8910	15600	16300	15900
5	16500	16400	13600	10900	8000	5190	2690	4330	9380	15700	16300	15800
6	16600	16300	13500	10800	7920	5100	2750	4340	9870	15800	16300	15800
7	16600	16100	13400	10700	7830	5020	2810	4350	10300	15800	16300	15800
8	16600	16100	13400	10600	7740	4890	2910	4370	10700	15900	16300	15700
9	16700	15900	13300	10500	7630	4800	3010	4390	11000	15900	16300	15700
10	16700	15800	13200	10400	7540	4680	3090	4390	11100	16000	16300	15700
11	16700	15700	13100	10300	7440	4580	3230	4380	11300	16000	16300	15700
12	16700	15700	13000	10200	7350	4470	3410	4380	11600	16100	16200	15800
13	16700	15500	12900	10200	7260	4370	3610	4400	11800	16100	16200	15900
14	16800	15400	12800	10100	7160	4270	3850	4440	12100	16200	16200	15900
15	16800	15400	12700	9970	7080	4160	4050	4480	12400	16200	16200	16000
16	16800	15200	12600	9870	6970	4050	4170	4560	12600	16300	16200	16000
17	16800	15100	12500	9790	6870	3950	4190	4690	12800	16300	16200	16100
18	16800	15000	12400	9690	6750	3830	4200	4840	13000	16300	16200	16100
19	16800	14900	12400	9600	6650	3720	4190	4970	13300	16300	16200	16200
20	16800	14800	12300	9500	6530	3610	4170	5060	13600	16300	16100	16300
21	16800	14700	12200	9420	6440	3500	4150	5130	13800	16300	16100	16400
22	16700	14600	12100	9310	6340	3400	4140	5180	14000	16300	16100	16500
23	16700	14500	12000	9220	6220	3300	4170	5230	14100	16300	16100	16600
24	16800	14500	11900	9120	6120	3190	4240	5280	14300	16300	16100	16700
25	16900	14400	11800	9030	6010	3080	4330	5350	14400	16300	16100	16800
26	16900	14300	11700	8940	5910	2970	4420	5440	14500	16300	16100	16800
27	16900	14200	11600	8860	5810	2870	4460	5540	14700	16300	16000	16800
28	16900	14100	11600	8760	5700	2760	4460	5650	14800	16300	16000	16800
29	16900	14000	11500	8670	---	2660	4450	5890	15000	16300	16000	16800
30	16900	14000	11400	8580	---	2570	4450	6460	15100	16300	16000	16800
31	16900	---	11300	8480	---	2490	---	7050	---	16300	16000	---
MAX	16900	16800	13900	11200	8380	5610	4460	7050	15100	16300	16300	16800
MIN	16400	14000	11300	8480	5700	2490	2440	4330	7640	15300	16000	15700
a	9050.29	9039.75	9029.63	9018.30	9006.24	8990.98	9000.49	9012.19	9044.03	9048.41	9047.23	9049.97
b	+600	-2900	-2700	-2820	-2780	-3210	+1960	+2600	+8050	+1200	-300	+800
CAL YR 2001	MAX 17300	MIN 3070	b +5720									
WTR YR 2002	MAX 16900	MIN 2440	b +500									

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 mi².

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 sea level (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, 6.3 ft³/s, June 19, 2002; no flow for several days in April 2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.3	2.9	1.3	1.3	1.3
2	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	4.5	1.3	1.3	1.3
3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.3	4.6	1.3	1.3	1.3
4	1.3	1.2	1.2	1.3	1.2	1.2	1.3	1.3	4.7	1.3	1.3	1.3
5	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	4.9	1.3	1.3	1.3
6	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	5.0	1.3	1.3	1.2
7	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	5.1	1.3	1.3	1.2
8	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	5.2	1.3	1.3	1.2
9	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	5.3	1.3	1.3	1.2
10	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	5.5	1.3	1.3	1.2
11	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3	5.8	1.3	1.3	1.2
12	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3	5.9	1.3	1.3	1.2
13	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3	5.9	1.3	1.3	1.2
14	1.3	1.2	1.2	1.3	1.2	1.2	1.3	1.3	6.0	1.3	1.3	1.3
15	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	6.1	1.3	1.3	1.3
16	1.3	1.2	1.2	1.2	1.3	1.2	1.3	1.3	6.1	1.3	1.3	1.3
17	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	6.2	1.3	1.3	1.3
18	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	6.2	1.3	1.3	1.3
19	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	3.9	1.3	1.3	1.3
20	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
21	1.3	1.3	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3
22	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3
23	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3
24	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
25	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
26	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
27	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
28	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3
29	1.3	1.3	1.2	1.3	---	1.2	1.3	1.3	1.3	1.3	1.3	1.3
30	1.3	1.3	1.2	1.2	---	1.2	1.3	1.3	1.3	1.3	1.3	1.3
31	1.3	---	1.2	1.2	---	1.2	---	1.3	---	1.3	1.3	---
TOTAL	40.3	37.1	37.8	37.6	33.8	37.2	38.4	40.1	114.1	40.3	40.3	38.2
MEAN	1.300	1.237	1.219	1.213	1.207	1.200	1.280	1.294	3.803	1.300	1.300	1.273
MAX	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3	6.2	1.3	1.3	1.3
MIN	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2
AC-FT	80	74	75	75	67	74	76	80	226	80	80	76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

MEAN	1.252	1.191	1.210	1.206	1.206	1.200	1.004	1.599	2.104	1.237	1.251	1.244
MAX	1.30	1.24	1.22	1.21	1.21	1.21	1.30	2.23	3.80	1.30	1.30	1.27
(WY)	2002	2002	2002	2002	2000	2001	2001	2001	2002	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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 2000 - 2002
ANNUAL TOTAL	484.0	535.2	
ANNUAL MEAN	1.326	1.466	1.389
HIGHEST ANNUAL MEAN			1.47 2002
LOWEST ANNUAL MEAN			1.31 2001
HIGHEST DAILY MEAN	3.8 May 20	6.2 Jun 17	6.2 Jun 17 2002
LOWEST DAILY MEAN	1.2 Jan 1	1.2 Nov 4	0.00 Apr 5 2000
ANNUAL SEVEN-DAY MINIMUM	1.2 Jan 1	1.2 Nov 4	0.00 Apr 5 2000
MAXIMUM PEAK FLOW		6.3 Jun 19	6.3 Jun 19 2002
ANNUAL RUNOFF (AC-FT)	960	1060	1010
10 PERCENT EXCEEDS	1.3	1.3	1.3
50 PERCENT EXCEEDS	1.2	1.3	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 mi².

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 sea level (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, 871 acre-ft, Aug. 30, 1995, elevation, 8,497.40 ft; minimum, 22 acre-ft, Feb. 28, 1991, elevation, 8,470.97 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 811 acre-ft, June 30, July 1, maximum elevation, 8,495.89 ft, June 30; minimum, 28 acre-ft, Nov. 9–23, minimum elevation, 8,471.21 ft, Nov. 11–19.

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 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	785	183	31	36	33	33	35	83	394	811	802	791
2	785	160	31	36	32	33	35	84	418	810	802	791
3	780	137	33	36	32	32	35	87	440	808	801	791
4	776	115	35	36	32	32	36	89	462	806	798	792
5	776	93	34	36	32	32	36	93	485	807	795	789
6	776	72	34	35	32	32	34	99	510	807	794	787
7	776	52	35	35	32	32	34	106	535	806	794	786
8	776	32	35	36	32	32	34	114	559	806	794	786
9	776	28	35	36	31	32	34	122	580	807	794	786
10	776	28	35	36	31	32	35	130	599	808	794	786
11	776	28	35	36	31	31	37	135	617	808	794	786
12	776	28	35	36	31	31	41	141	635	808	794	786
13	776	28	35	36	32	32	44	147	653	807	795	786
14	776	28	34	36	32	32	48	156	671	806	794	786
15	776	28	35	35	32	32	55	167	690	804	794	786
16	777	28	35	35	32	31	59	179	708	802	794	784
17	777	28	35	35	32	31	62	194	726	801	794	784
18	777	28	35	34	32	31	64	212	742	802	793	784
19	777	28	35	34	31	30	65	230	758	803	792	784
20	777	28	36	33	31	30	66	244	768	804	792	785
21	777	28	36	33	32	30	67	254	775	805	791	785
22	776	28	36	33	33	30	67	262	782	805	791	785
23	777	28	36	33	35	30	68	268	788	803	790	785
24	761	30	36	32	35	31	69	274	794	801	790	785
25	683	31	35	33	36	31	70	282	798	800	790	785
26	597	30	35	33	37	30	74	291	802	800	790	786
27	511	30	35	33	37	30	77	303	805	800	790	785
28	428	30	35	33	35	30	78	316	808	801	790	785
29	347	31	36	33	---	31	80	330	810	803	791	787
30	271	31	36	33	---	33	82	349	811	803	791	787
31	210	---	36	33	---	34	---	371	---	803	791	---
MAX	785	183	36	36	37	34	82	371	811	811	802	792
MIN	210	28	31	32	31	30	34	83	394	800	790	784
a	8477.74	8471.33	8471.54	8471.41	8471.42	8471.49	8473.48	8483.97	8495.89	8495.70	8495.40	8495.31
b	-567	-179	+5	-3	+2	-1	+48	+289	+440	-8	-12	-4

CAL YR 2001 MAX 821 MIN 28 b -64
WTR YR 2002 MAX 811 MIN 28 b +10

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 mi².

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 Cipolletti weir is set in the Parshall flume at times. Elevation of gage is 8,440 ft above sea level, 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.

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 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	e2.3	e1.8	e1.8	e2.2	e2.3	e2.2	e2.2	1.6	2.9	1.5	1.4
2	1.4	e2.3	e1.8	e1.8	e2.2	e2.3	e2.2	e2.2	1.6	3.2	1.7	1.4
3	1.4	e2.3	e1.8	e1.8	e2.2	e2.3	e2.3	e2.1	1.7	2.9	2.2	1.5
4	1.4	e2.3	e1.8	e1.8	e2.2	e2.3	e2.6	e2.1	1.7	2.9	2.6	1.7
5	1.4	e2.3	e1.8	e1.8	e2.2	e2.3	e2.6	e2.1	1.7	2.0	1.9	2.4
6	1.4	e2.1	e1.8	e1.8	e2.2	e2.3	e2.7	e2.1	1.7	2.3	1.6	2.0
7	1.4	e1.9	e1.8	e1.8	e2.2	e2.3	e2.7	e2.1	1.7	2.2	1.6	1.4
8	1.4	e1.8	e1.8	e1.8	e2.2	e2.4	e2.8	e2.1	1.7	1.7	1.5	1.4
9	1.4	e1.8	e1.8	e1.8	e2.2	e2.4	e2.4	e2.1	1.8	1.7	1.5	1.4
10	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.1	e2.1	1.8	1.7	1.5	1.5
11	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.1	e2.1	1.8	1.8	1.5	1.5
12	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.2	e2.1	1.8	2.3	1.5	1.5
13	1.4	e1.9	e1.8	e1.8	e2.2	e2.5	e2.1	e2.5	1.8	2.8	1.5	1.5
14	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.1	e3.0	1.8	2.3	1.5	1.5
15	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.2	e3.0	1.8	2.5	1.5	2.0
16	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.1	e3.0	2.0	2.3	1.5	1.6
17	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.6	e3.0	2.0	1.7	1.6	1.5
18	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.6	e3.1	1.7	1.5	1.6	1.5
19	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.6	e3.9	1.6	1.5	1.5	1.5
20	1.4	e1.8	e1.8	e1.8	e2.2	e2.5	e2.6	e3.1	2.2	1.5	1.7	1.5
21	1.4	e1.8	e1.8	e1.8	e2.1	e2.5	e2.6	e3.1	1.5	1.6	1.5	1.5
22	1.4	e1.9	e1.8	e1.8	e2.0	e2.5	e2.7	e3.1	1.5	2.0	1.5	1.5
23	1.4	e2.2	e1.8	e1.8	e2.0	e2.5	e2.3	e2.4	1.5	2.3	1.5	1.5
24	1.2	e1.9	e1.8	e1.8	e2.0	e2.5	e2.2	1.5	1.5	1.8	1.5	1.5
25	1.9	e1.9	e1.8	e1.8	e2.1	e2.5	e2.2	1.5	1.7	1.9	1.5	1.5
26	2.7	e1.9	e1.8	e1.8	e2.1	e2.5	e2.2	1.5	1.9	1.5	1.5	1.5
27	2.3	e1.8	e1.8	e1.8	e2.1	e2.5	e2.2	1.5	1.9	1.5	1.5	1.7
28	2.3	e1.8	e1.8	e1.8	e2.5	e2.5	e2.3	1.5	2.2	1.5	1.5	1.6
29	2.3	e1.8	e1.8	e1.8	---	e2.5	e2.1	1.5	2.1	1.4	1.4	1.6
30	1.9	e1.9	e1.8	e2.0	---	e2.5	e2.1	1.5	2.8	1.8	1.4	1.5
31	e5.8	---	e1.8	e2.0	---	e2.4	---	1.5	---	1.6	1.4	---
TOTAL	52.6	57.9	55.8	56.2	60.9	75.8	70.7	70.6	54.1	62.6	49.2	47.1
MEAN	1.697	1.930	1.800	1.813	2.175	2.445	2.357	2.277	1.803	2.019	1.587	1.570
MAX	5.8	2.3	1.8	2.0	2.5	2.5	2.8	3.9	2.8	3.2	2.6	2.4
MIN	1.2	1.8	1.8	1.8	2.0	2.3	2.1	1.5	1.5	1.4	1.4	1.4
AC-FT	104	115	111	111	121	150	140	140	107	124	98	93
a	2790	2910	3020	2960	2920	3500	2480	1900	1190	1160	916	2030

e Estimated.

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.899	2.021	1.104	1.282	1.071	1.173	1.532	1.678	19.04	40.66	9.114	1.168
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 - 2002	
ANNUAL TOTAL	810.8		713.5			
ANNUAL MEAN	2.221		1.955		6.864	
HIGHEST ANNUAL MEAN					33.6	1995
LOWEST ANNUAL MEAN					0.41	1994
HIGHEST DAILY MEAN	13	May 25	5.8	Oct 31	397	Jul 30 1995
LOWEST DAILY MEAN	1.2	Apr 16	1.2	Oct 24	0.00	Oct 27 1990
ANNUAL SEVEN-DAY MINIMUM	1.3	Apr 13	1.4	Oct 18	0.00	Mar 12 1991
MAXIMUM PEAK FLOW			16	Jul 13	441	Jul 30 1995
MAXIMUM PEAK STAGE			1.05	Jul 13	4.90	Jul 30 1995
ANNUAL RUNOFF (AC-FT)	1610		1420		4970	
ANNUAL DIVERSION (AC-FT) a	23870		27790			
10 PERCENT EXCEEDS	2.9		2.5		4.2	
50 PERCENT EXCEEDS	1.8		1.8		1.4	
90 PERCENT EXCEEDS	1.4		1.5		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 mi².

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 sea level (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, 5,640 acre-ft, Aug. 1–4, maximum elevation, 10,075.13 ft, Aug. 2; minimum, 1,460 acre-ft, Apr. 8–11, minimum elevation, 10,056.50 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 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4270	3820	3510	3150	2690	2110	1510	1770	3210	5090	5640	5420
2	e4250	3800	3550	3150	2670	2080	1490	1790	3300	5160	5640	5410
3	e4240	3790	3550	3140	2650	2060	1480	1800	3370	5200	5640	5400
4	e4220	3770	3540	3120	2630	2040	1480	1810	3460	5230	5640	5400
5	e4200	3760	3520	3110	2620	2010	1470	1820	3560	5260	5630	5380
6	e4190	3740	3500	3090	2610	2000	1470	1840	3660	5290	5620	5390
7	e4170	3720	3480	3070	2600	2010	1470	1880	3770	5320	5610	5390
8	e4160	3700	3470	3060	2590	1980	1460	1910	3840	5350	5610	5380
9	e4140	3690	3450	3040	2570	1950	1460	1940	3900	5370	5600	5370
10	e4120	3670	3430	3020	2560	1940	1460	1970	3950	5390	5590	5360
11	4110	3650	3420	3010	2540	1920	1460	1980	4000	5410	5590	5340
12	4100	3650	3400	2990	2520	1900	1480	2010	4060	5460	5580	5330
13	4080	3640	3390	2970	2490	1880	1510	2040	4130	5500	5580	5320
14	4070	3620	3380	2960	2470	1860	1540	2090	4200	5530	5570	5300
15	4060	3610	3370	2940	2440	1840	1580	2140	4260	5560	5570	5290
16	4050	3590	3350	2920	2420	1820	1610	2200	4320	5560	5570	5270
17	4020	3570	3340	2900	2410	1810	1630	2270	4380	5590	5560	5250
18	4010	3550	3320	2890	2380	1780	1650	2350	4460	5610	5550	5240
19	4000	3540	3300	2870	2360	1760	1650	2410	4530	5620	5550	5230
20	3990	3520	3300	2850	2340	1740	1660	2460	4600	5630	5540	5210
21	3970	3520	3280	2840	2310	1720	1660	2500	4650	5630	5520	5200
22	3950	3530	3270	2820	2290	1690	1670	2530	4690	5630	5510	5190
23	3940	3510	3260	2800	2260	1690	1680	2550	4740	5630	5500	5170
24	3930	3570	3240	2790	2230	1670	1690	2580	4780	5620	5490	5160
25	3910	3540	3230	2780	2210	1640	1710	2620	4820	5630	5480	5150
26	3890	3530	3210	2770	2180	1620	1730	2680	4870	5630	5470	5130
27	3870	3510	3190	2770	2160	1600	1740	2740	4920	5630	5460	5120
28	3850	3510	3180	2750	2130	1580	1750	2800	4970	5630	5450	5110
29	3840	3520	3190	2730	---	1560	1760	2880	5020	5630	5440	5100
30	3850	3500	3180	2720	---	1540	1780	2980	5070	5630	5440	5090
31	3830	---	3170	2700	---	1520	---	3100	---	5630	5430	---
MAX	4270	3820	3550	3150	2690	2110	1780	3100	5070	5630	5640	5420
MIN	3830	3500	3170	2700	2130	1520	1460	1770	3210	5090	5430	5090
a	10067.60	10066.12	10064.65	10062.50	10059.82	10056.82	10058.07	10064.32	10072.90	10075.10	10074.28	10072.89
b	-160	-330	-330	-470	-570	-610	+260	+1320	+1970	+560	-200	-340

CAL YR 2001 MAX 4700 MIN 1270 b +170
WTR YR 2002 MAX 5640 MIN 1460 b +1100

e Estimated.
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 mi².

PERIOD OF RECORD.—October 1997 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 10,050 ft above sea level, 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 ft³/s, Mar. 23, 1998, gage height, 2.99 ft; minimum daily, 3.0 ft³/s, May 31, 2001.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	8.8	11	11	10	15	13	3.9	3.7	3.3	7.4	7.5
2	7.4	8.8	11	11	10	15	13	4.0	3.6	3.3	7.2	7.5
3	7.3	8.8	11	11	10	15	13	4.0	3.6	3.3	7.1	7.5
4	7.3	8.8	11	11	10	15	13	4.0	3.6	3.2	7.1	7.5
5	7.3	8.8	11	11	10	14	13	4.0	3.7	3.3	7.1	7.5
6	7.3	8.8	11	11	10	14	13	4.0	3.8	3.1	7.1	7.5
7	7.3	8.7	11	11	10	14	13	4.1	3.8	3.3	7.1	7.5
8	7.3	8.6	11	11	10	14	12	4.1	3.8	3.3	7.0	7.5
9	7.3	8.6	11	11	10	14	12	4.1	3.7	3.3	7.0	7.5
10	7.3	8.7	12	11	10	14	13	4.2	3.7	3.4	7.0	7.5
11	7.4	8.7	11	11	10	14	13	4.1	3.4	3.3	7.1	7.5
12	7.3	8.6	12	11	13	14	7.2	4.2	3.2	3.4	7.2	7.5
13	7.3	8.6	11	11	16	14	3.9	4.3	3.2	3.3	7.2	7.5
14	7.3	8.6	12	11	16	14	4.0	4.3	3.2	3.3	7.2	7.5
15	7.3	8.5	11	11	15	14	4.1	4.4	3.2	3.3	7.2	7.6
16	7.3	8.5	11	11	15	14	4.1	4.5	3.2	3.3	7.1	7.8
17	7.3	8.6	11	11	15	14	4.1	4.6	3.2	3.8	7.1	7.7
18	7.2	8.5	11	11	15	13	4.0	4.7	3.2	6.6	7.1	7.7
19	7.2	9.6	11	11	15	14	4.0	4.7	3.2	6.7	7.1	7.7
20	7.2	11	11	11	15	14	4.1	4.7	3.2	6.7	7.2	7.7
21	7.2	11	11	11	15	13	4.1	4.7	3.2	6.7	7.2	7.7
22	7.1	11	11	10	15	13	4.1	4.7	3.2	6.6	7.2	7.7
23	7.1	11	11	10	15	13	4.1	3.9	3.2	6.7	7.3	8.0
24	7.1	11	11	10	15	13	4.1	3.3	3.2	6.8	7.2	8.0
25	8.1	11	11	10	15	13	4.1	3.3	3.2	6.8	7.2	7.9
26	8.9	11	11	10	15	13	4.1	3.4	3.2	6.8	7.2	7.9
27	9.0	11	11	10	15	13	4.1	3.4	3.2	6.8	7.2	7.9
28	8.9	11	11	10	15	13	4.1	3.4	3.2	6.8	7.2	7.9
29	8.9	11	11	10	---	13	4.0	3.4	3.2	6.9	7.3	7.9
30	8.9	11	11	10	---	13	4.0	3.6	3.2	7.1	7.5	8.0
31	8.8	---	11	10	---	13	---	3.6	---	7.0	7.5	---
TOTAL	237.6	286.6	344	331	365	426	221.3	125.6	101.2	151.5	222.6	230.1
MEAN	7.665	9.553	11.10	10.68	13.04	13.74	7.377	4.052	3.373	4.887	7.181	7.670
MAX	9.0	11	12	11	16	15	13	4.7	3.8	7.1	7.5	8.0
MIN	7.1	8.5	11	10	10	13	3.9	3.3	3.2	3.1	7.0	7.5
AC-FT	471	568	682	657	724	845	439	249	201	301	442	456

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002
MEAN	10.24	10.91	12.60	13.95	13.11
MAX	13.6	13.8	15.6	15.1	14.1
(WY)	1999	1999	2000	1998	2000
MIN	7.66	9.55	9.15	10.7	11.0
(WY)	2002	2002	1998	2002	1999

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1998 - 2002
ANNUAL TOTAL	2970.4	3042.5	
ANNUAL MEAN	8.138	8.336	10.48
HIGHEST ANNUAL MEAN			12.2
LOWEST ANNUAL MEAN			8.34
HIGHEST DAILY MEAN	18	16	33
LOWEST DAILY MEAN	3.0	3.1	3.0
ANNUAL SEVEN-DAY MINIMUM	3.1	3.2	3.1
MAXIMUM PEAK FLOW		16	33
MAXIMUM PEAK STAGE		0.86	2.99
ANNUAL RUNOFF (AC-FT)	5890	6030	7590
10 PERCENT EXCEEDS	14	13	15
50 PERCENT EXCEEDS	7.4	7.7	10
90 PERCENT EXCEEDS	3.1	3.4	3.7

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 mi².

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 sea level (levels by Southern California Edison Co.).

REMARKS.—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.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 1,284 acre-ft, June 13, 1996, elevation, 9,650.68 ft; minimum, 88 acre-ft, several days in 1992, elevation, 9,628.95 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,270 acre-ft, several days in June, maximum elevation, 9,650.51 ft, June 1, 5, 6; minimum, 108 acre-ft, Nov. 24, elevation, 9,629.42 ft.

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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	616	120	115	111	111	121	272	1270	1260	1240	1130
2	1150	579	120	115	111	112	122	273	1270	1260	1240	1130
3	1140	545	122	116	111	112	124	275	1260	1250	1240	1130
4	1140	511	121	115	110	112	128	280	1270	1260	1240	1130
5	1130	479	118	113	110	112	132	289	1270	1250	1230	1130
6	1120	445	116	113	110	114	134	304	1270	1250	1230	1130
7	1120	416	114	113	111	118	135	324	1270	1250	1230	1130
8	1110	386	114	113	112	119	139	344	1260	1250	1220	1130
9	1100	357	115	112	111	118	143	368	1240	1250	1220	1140
10	1090	329	115	112	110	119	148	390	1230	1250	1210	1140
11	1090	304	114	111	111	119	155	406	1230	1250	1210	1140
12	1080	282	113	111	110	119	167	426	1230	1260	1200	1140
13	1070	258	110	111	111	118	182	455	1250	1260	1200	1140
14	1070	235	113	111	110	118	201	494	1260	1250	1190	1140
15	1060	214	118	111	111	122	222	540	1260	1250	1190	1140
16	1050	193	115	112	110	118	234	592	1260	1250	1180	1140
17	1050	173	115	112	112	119	237	655	1260	1250	1180	1130
18	1040	155	114	111	111	118	240	725	1260	1260	1170	1130
19	1030	139	113	111	113	118	240	777	1260	1260	1170	1130
20	1030	123	114	111	112	118	240	812	1260	1260	1160	1130
21	1020	123	113	111	112	118	239	833	1260	1250	1150	1130
22	996	120	113	111	111	117	239	847	1260	1250	1150	1130
23	961	116	117	112	111	117	241	863	1260	1250	1140	1130
24	926	108	116	110	111	118	245	886	1250	1250	1140	1130
25	889	119	115	111	111	118	250	920	1260	1250	1140	1130
26	846	124	115	113	111	118	262	964	1260	1250	1130	1130
27	804	119	115	113	111	118	266	1010	1260	1250	1130	1130
28	762	118	116	113	111	118	268	1070	1260	1250	1130	1130
29	723	119	120	112	---	118	270	1130	1260	1250	1130	1130
30	691	118	120	111	---	118	271	1200	1260	1250	1130	1130
31	653	---	116	111	---	119	---	1250	---	1250	1130	---
MAX	1160	616	122	116	113	122	271	1250	1270	1260	1240	1140
MIN	653	108	110	110	110	111	121	272	1230	1250	1130	1130
a	9640.81	9629.68	9629.63	9629.50	9629.49	9629.70	9633.18	9650.23	9650.33	9650.17	9648.54	9648.51
b	-507	-535	-2	-5	0	+8	+152	+979	+10	-10	-120	0

CAL YR 2001 MAX 1270 MIN 108 b +7
WTR YR 2002 MAX 1270 MIN 108 b -30

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 mi².

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 sea level, 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	22	4.1	---	---	---	---	3.6	30	8.8	6.1	2.0
2	5.1	21	14	---	---	---	---	3.6	34	8.4	6.0	2.0
3	5.1	21	31	---	---	---	---	3.6	30	7.7	6.0	2.0
4	5.1	20	3.8	---	---	---	---	3.7	30	7.0	5.9	2.0
5	5.1	19	4.4	---	---	---	---	3.8	33	6.8	5.9	2.0
6	5.2	19	2.3	---	---	---	---	3.9	36	6.8	5.9	2.0
7	5.2	18	2.1	---	---	---	---	4.5	34	7.0	5.9	2.0
8	5.2	18	1.8	---	---	---	---	4.2	29	6.9	5.9	2.0
9	5.2	17	1.8	---	---	---	---	3.1	24	6.9	5.9	1.9
10	5.2	16	1.9	---	---	---	---	2.1	24	6.9	5.9	1.8
11	5.2	16	1.7	---	---	---	---	2.1	16	6.9	5.9	1.8
12	5.2	15	---	---	---	---	2.6	2.2	11	7.8	5.9	1.8
13	5.2	14	---	---	---	---	2.7	2.3	11	8.9	5.9	1.8
14	5.2	14	---	---	---	---	2.9	2.5	11	8.2	5.9	1.8
15	5.2	13	---	---	---	---	3.1	2.6	12	7.8	5.9	1.8
16	5.2	13	---	---	---	---	3.2	2.8	13	7.2	5.9	1.8
17	5.3	12	---	---	---	---	3.3	3.0	13	6.9	6.0	1.8
18	5.3	11	---	---	---	---	3.4	3.1	14	8.4	5.9	1.9
19	5.3	9.6	---	---	---	---	3.4	3.1	15	9.6	5.9	1.9
20	5.3	8.3	---	---	---	---	3.3	2.9	14	8.2	5.9	1.9
21	5.4	5.7	---	---	---	---	3.3	2.8	14	7.5	5.9	1.9
22	13	5.5	---	---	---	---	3.3	2.8	13	7.1	5.2	2.0
23	19	3.9	---	---	---	---	3.3	2.8	12	6.7	4.3	2.0
24	19	2.0	---	---	---	---	3.3	2.9	11	6.4	4.3	2.0
25	22	5.5	---	---	---	---	3.5	3.0	8.7	6.3	4.7	2.0
26	25	16	---	---	---	---	3.5	3.1	8.3	6.2	4.3	2.0
27	24	4.9	---	---	---	---	3.5	3.2	9.4	6.1	3.2	2.0
28	24	3.7	---	---	---	---	3.6	3.3	9.5	6.1	2.2	2.0
29	23	4.2	---	---	---	---	3.6	7.3	9.2	6.1	2.1	2.0
30	23	3.3	---	---	---	---	3.6	10	8.7	6.1	2.0	2.0
31	22	---	---	---	---	---	---	19	---	6.1	2.0	---
TOTAL	321.6	371.6	---	---	---	---	---	122.9	537.8	223.8	158.7	57.9
MEAN	10.37	12.39	---	---	---	---	---	3.965	17.93	7.219	5.119	1.930
MAX	25	22	---	---	---	---	---	19	36	9.6	6.1	2.0
MIN	3.4	2.0	---	---	---	---	---	2.1	8.3	6.1	2.0	1.8
AC-FT	638	737	---	---	---	---	---	244	1070	444	315	115

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 mi².

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 sea level (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, 576 acre-ft, June 7, elevation, 9,493.86 ft; minimum, 161 acre-ft, Oct. 22, elevation, 9,486.46 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 2001 TO SEPTEMBER 2002												
DAILY OBSERVATION AT 2400 HOURS												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	512	463	452	471	475	452	474	419	550	451	435	422
2	512	427	444	467	475	457	480	418	531	435	445	425
3	512	416	438	463	473	462	481	427	527	421	451	430
4	510	416	456	459	471	463	486	439	537	417	455	436
5	490	417	441	463	470	459	478	453	558	424	455	430
6	483	420	446	467	468	459	463	476	556	432	454	437
7	485	420	e446	469	468	449	452	485	576	439	449	447
8	486	422	e379	470	464	446	446	469	527	434	442	446
9	486	427	e379	470	465	449	444	451	502	430	436	442
10	489	434	e379	469	466	452	435	422	480	442	433	444
11	482	440	381	470	465	458	440	409	470	455	428	445
12	475	446	383	471	466	462	446	410	485	488	425	440
13	467	446	386	472	468	463	460	441	497	472	425	433
14	458	446	390	471	467	463	488	474	490	456	424	435
15	448	445	396	469	466	465	455	498	473	448	416	439
16	422	442	405	468	463	465	421	488	467	437	417	437
17	377	437	416	468	460	463	421	504	479	433	421	439
18	331	433	421	470	458	464	411	525	509	456	424	438
19	285	433	427	470	459	465	399	499	517	441	425	439
20	234	441	434	470	457	466	399	449	508	428	426	439
21	181	445	441	470	456	466	400	417	479	419	425	439
22	161	e449	448	470	454	466	406	405	441	405	425	439
23	183	458	452	467	452	468	421	405	441	394	421	440
24	213	e444	459	469	448	468	442	429	446	400	417	440
25	248	e435	466	469	446	467	459	462	452	427	413	439
26	291	e432	471	471	444	466	457	485	470	442	409	437
27	334	452	477	472	442	465	442	469	465	444	424	437
28	375	460	484	474	446	465	439	479	458	442	424	440
29	416	458	488	474	---	467	434	521	452	440	412	442
30	466	452	485	475	---	473	426	553	463	436	415	442
31	486	---	477	475	---	475	---	559	---	433	419	---
MAX	512	463	488	475	475	475	488	559	576	488	455	447
MIN	161	416	379	459	442	446	399	405	441	394	409	422
a	9492.40	9491.85	9492.26	9492.23	9491.75	9492.23	9491.40	9493.58	9492.03	9491.52	9491.28	9491.67
b	-25	-34	+25	-2	-29	+29	-49	+133	-96	-30	-14	+23
CAL YR 2001	MAX 550	MIN 161	b +35									
WTR YR 2002	MAX 576	MIN 161	b -69									

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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	64	0.00	0.00	0.00
2	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42	0.00	0.00	0.00
3	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00
4	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27	0.00	0.00	0.00
5	6.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	61	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	0.00	0.00	e5.4
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	e11
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	e11
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e11
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e3.5
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.0	0.60	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14	9.8	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.25	11	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	3.2	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	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	0.00	1.6	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	32	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	56	---	0.00	0.00	---
TOTAL	57.80	0.00	0.00	0.00	0.00	0.00	0.00	111.88	425.57	0.00	0.00	41.90
MEAN	1.865	0.000	0.000	0.000	0.000	0.000	0.000	3.609	14.19	0.000	0.000	1.397
MAX	13	0.00	0.00	0.00	0.00	0.00	0.00	56	68	0.00	0.00	11
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	115	0.00	0.00	0.00	0.00	0.00	0.00	222	844	0.00	0.00	83
a	930	1280	841	766	853	1020	1990	3560	5050	2370	1110	632

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.312	0.221	0.000	1.608	0.495	0.424	1.261	8.241	27.62	20.79	1.190	0.898
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1991 - 2002	
ANNUAL TOTAL	491.94		637.15			
ANNUAL MEAN	1.348		1.746		5.351	
HIGHEST ANNUAL MEAN					17.3	1995
LOWEST ANNUAL MEAN					0.27	1994
HIGHEST DAILY MEAN	45	May 16	68	Jun 7	271	Jul 9 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 6	0.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 6	0.00	Oct 1 1990
MAXIMUM PEAK FLOW			122	Jun 7	310	Jul 9 1995
MAXIMUM PEAK STAGE			3.16	Jun 7	5.52	Mar 22 1993
ANNUAL RUNOFF (AC-FT)	976		1260		3880	
ANNUAL DIVERSION (AC-FT) a	16810		20400			
10 PERCENT EXCEEDS	0.00		0.00		8.6	
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 mi².

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 sea level (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 ft³/s, Feb. 21, 1980, gage height, 11.15 ft, from rating curve extended above 8,700 ft³/s; no flow for part of each year.

EXTREMES FOR CURRENT YEAR.—No flow for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.112	0.730	2.357	18.13	50.47	67.93	34.55	12.21	4.401	1.361	1.054	1.063
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1937	1937	1950	1951	1951	1951	1955	1947	1940	1939	1938	1937

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1937 - 2002
ANNUAL TOTAL	119.53	0.00	
ANNUAL MEAN	0.327	0.000	16.09
HIGHEST ANNUAL MEAN			243 1983
LOWEST ANNUAL MEAN			0.000 1956
HIGHEST DAILY MEAN	8.1 Mar 11	0.00 Oct 1	8430 Feb 21 1980
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1936
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1936
MAXIMUM PEAK FLOW			11700 Feb 21 1980
MAXIMUM PEAK STAGE			11.15 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	237	0.00	11660
10 PERCENT EXCEEDS	0.77	0.00	9.6
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 mi², of which 3 mi² 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 sea level. 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 ft³/s, Jan. 16, 1993, gage height, 6.86 ft, from rating curve extended above 340 ft³/s; no flow for part of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	0.19	0.18	0.16	0.15	0.01	0.00	0.00	0.00
2	0.00	0.00	0.03	0.15	0.19	0.19	0.16	0.15	0.0	0.00	0.00	0.00
3	0.00	0.00	0.08	0.16	0.19	0.18	0.17	0.15	0.0	0.00	0.00	0.00
4	0.00	0.00	0.07	0.15	0.17	0.18	0.18	0.14	0.00	0.00	0.00	0.00
5	0.00	0.00	0.07	0.15	0.15	0.16	0.17	0.14	0.00	0.00	0.00	0.00
6	0.00	0.00	0.07	0.15	0.15	0.15	0.17	0.14	0.00	0.00	0.00	0.00
7	0.00	0.00	0.06	0.15	0.15	0.16	0.18	0.16	0.00	0.00	0.00	0.00
8	0.00	0.00	0.06	0.16	0.16	0.14	0.15	0.16	0.00	0.00	0.00	0.00
9	0.00	0.00	0.06	0.16	0.16	0.12	0.14	0.14	0.00	0.00	0.00	0.00
10	0.00	0.00	0.09	0.16	0.20	0.12	0.13	0.13	0.00	0.00	0.00	0.00
11	0.00	0.00	0.08	0.16	0.26	0.11	0.13	0.13	0.00	0.00	0.00	0.00
12	0.00	0.00	0.07	0.16	0.27	0.11	0.12	0.11	0.00	0.00	0.00	0.00
13	0.00	0.00	0.10	0.16	0.21	0.12	0.12	0.09	0.00	0.00	0.00	0.00
14	0.00	0.00	0.11	0.16	0.16	0.12	0.10	0.06	0.00	0.00	0.00	0.00
15	0.00	0.00	0.11	0.14	0.15	0.12	0.13	0.06	0.00	0.00	0.00	0.00
16	0.00	0.00	0.11	0.14	0.15	0.17	0.14	0.07	0.00	0.00	0.00	0.00
17	0.00	0.00	0.11	0.15	0.17	0.14	0.13	0.07	0.00	0.00	0.00	0.00
18	0.00	0.00	0.11	0.16	0.17	0.23	0.13	0.07	0.00	0.00	0.00	0.00
19	0.00	0.00	0.11	0.16	0.19	0.18	0.15	0.03	0.00	0.00	0.00	0.00
20	0.00	0.00	0.11	0.16	0.20	0.17	0.14	0.03	0.00	0.00	0.00	0.00
21	0.00	0.00	0.12	0.16	0.19	0.17	0.13	0.03	0.00	0.00	0.00	0.00
22	0.00	0.00	0.12	0.16	0.19	0.16	0.11	0.03	0.00	0.00	0.00	0.00
23	0.00	0.00	0.12	0.16	0.19	0.17	0.10	0.03	0.00	0.00	0.00	0.00
24	0.00	0.00	0.12	0.16	0.18	0.18	0.13	0.02	0.00	0.00	0.00	0.00
25	0.00	0.00	0.12	0.16	0.19	0.16	0.14	0.02	0.00	0.00	0.00	0.00
26	0.00	0.00	0.12	0.16	0.18	0.17	0.18	0.02	0.00	0.00	0.00	0.00
27	0.00	0.00	0.12	0.17	0.18	0.17	0.16	0.02	0.00	0.00	0.00	0.00
28	0.00	0.00	0.12	0.17	0.18	0.18	0.14	0.02	0.00	0.00	0.00	0.00
29	0.00	0.00	0.12	0.18	---	0.17	0.13	0.02	0.00	0.00	0.00	0.00
30	0.00	0.00	0.13	0.18	---	0.17	0.13	0.02	0.00	0.00	0.00	0.00
31	0.00	---	0.14	0.18	---	0.16	---	0.01	---	0.00	0.00	---
TOTAL	0.00	0.00	2.96	4.93	5.12	4.91	4.25	2.42	0.01	0.00	0.00	0.00
MEAN	0.000	0.000	0.095	0.159	0.183	0.158	0.142	0.078	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.14	0.18	0.27	0.23	0.18	0.16	0.01	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.14	0.15	0.11	0.10	0.01	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	5.9	9.8	10	9.7	8.4	4.8	0.02	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2002, BY WATER YEAR (WY)

	0.770	1.418	2.533	5.504	7.856	11.38	7.277	3.436	1.743	0.913	0.836	0.635
MEAN	0.770	1.418	2.533	5.504	7.856	11.38	7.277	3.436	1.743	0.913	0.836	0.635
MAX (WY)	1984	1984	1984	1993	1980	1983	1983	1983	1983	1983	1983	1983
MIN (WY)	1937	1949	1949	1957	1957	1956	1957	1957	1950	1947	1946	1947

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1937 - 2002

ANNUAL TOTAL	69.23	24.60	3.670	1983
ANNUAL MEAN	0.190	0.067	39.6	1983
HIGHEST ANNUAL MEAN			0.000	1957
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	3.4	Mar 7	745	Jan 16 1993
LOWEST DAILY MEAN	0.00	Jun 26	0.00	Oct 1 1936
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 26	0.00	Oct 1 1936
MAXIMUM PEAK FLOW			0.70	Mar 18 1580
MAXIMUM PEAK STAGE			1.39	Mar 18 6.86
ANNUAL RUNOFF (AC-FT)	137	49	2660	
10 PERCENT EXCEEDS	0.47	0.17	9.0	
50 PERCENT EXCEEDS	0.07	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 mi².

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 sea level. 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 ft³/s, Mar. 5, 1995, gage height, 7.59 ft, present datum, from rating curve extended above 1,200 ft³/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 ft³/s, or maximum, from rating curve extended above 1,200 ft³/s on basis of critical-depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
unknown	unknown	unknown	unknown

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	e0.20	e0.04	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	e0.21	e0.03	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	e0.20	e0.03	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	e0.20	e0.04	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	e0.00	e0.18	e0.03	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	e0.00	e0.18	e0.02	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	e0.00	e0.17	e0.01	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	e0.00	e0.15	e0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	e0.00	e0.11	e0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	e0.03	e0.11	e0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	e0.33	e0.11	e0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	e0.34	e0.11	e0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	e0.30	e0.12	e0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	e0.24	e0.12	e0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	e0.20	e0.12	e0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	e0.20	e0.20	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e0.22	e0.17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e0.22	e0.26	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	e0.24	e0.20	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	e0.25	e0.18	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	e0.23	e0.17	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	e0.21	e0.16	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	e0.21	e0.15	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e0.20	e0.13	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	e0.21	e0.12	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	e0.20	e0.11	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	e0.20	e0.09	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e0.20	e0.08	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	e0.07	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	e0.06	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	e0.05	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	4.23	4.49	0.20	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.151	0.145	0.007	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.34	0.26	0.04	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	8.4	8.9	0.4	0.00	0.00	0.00	0.00	0.00

e Estimated.

11014000 JAMUL CREEK NEAR JAMUL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.342	9.395	10.01	17.82	19.97	28.95	19.34	15.33	15.12	12.83	11.14	8.838
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL TOTAL	4700.95		8.92			
ANNUAL MEAN	12.88		0.024		14.49	
HIGHEST ANNUAL MEAN					55.2 1995	
LOWEST ANNUAL MEAN					0.000 1961	
HIGHEST DAILY MEAN	36	Jan 27	0.34	Feb 12	2320	Jan 16 1993
LOWEST DAILY MEAN	0.00	Aug 20	0.00	Oct 1	0.00	Jul 17 1949
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 20	0.00	Oct 1	0.00	Jul 17 1949
MAXIMUM PEAK FLOW			a		5870	Mar 5 1995
MAXIMUM PEAK STAGE			a		7.59	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	9320		18		10500	
10 PERCENT EXCEEDS	28		0.12		38	
50 PERCENT EXCEEDS	16		0.00		0.30	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Maximum flow and stage are unknown, but probably occurred sometime during the period of February 12 to March 18.

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 mi².

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 sea level. 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 ft³/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 ft³/s, or maximum, from rating curve extended above 1,150 ft³/s, on basis of slope area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	0000	0.60	4.48

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.06	0.15	0.08	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.08	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.05	0.15	0.06	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.06	0.15	0.05	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.06	0.12	0.05	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.07	0.15	0.04	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.11	0.15	0.05	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.12	0.15	0.04	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.08	0.15	0.02	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.08	0.16	0.02	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.01	0.08	0.15	0.02	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.02	0.08	0.15	0.0	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.02	0.10	0.16	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.02	0.10	0.17	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.03	0.10	0.17	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.04	0.16	0.16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.07	0.13	0.17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.06	0.23	0.17	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.04	0.15	0.17	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.04	0.15	0.15	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.04	0.14	0.16	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.04	0.12	0.15	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.05	0.15	0.14	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.05	0.16	0.17	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.04	0.15	0.14	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.05	0.15	0.16	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.05	0.15	0.14	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.05	0.15	0.11	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.12	0.10	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.13	0.09	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.14	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.72	3.58	4.46	0.51	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.026	0.115	0.149	0.016	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.07	0.23	0.17	0.08	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	1.4	7.1	8.8	1.0	0.00	0.00	0.00	0.00

11015000 SWEETWATER RIVER NEAR DESCANSO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.196	1.419	4.447	12.13	27.53	36.61	19.18	7.653	2.944	0.826	0.438	0.301
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1957 - 2002
ANNUAL TOTAL	94.76	9.27	
ANNUAL MEAN	0.260	0.025	9.375
HIGHEST ANNUAL MEAN			71.2 1983
LOWEST ANNUAL MEAN			0.004 1961
HIGHEST DAILY MEAN	2.9 Mar 10	0.23 Mar 18	2500 Feb 20 1980
LOWEST DAILY MEAN	0.00 Jun 7	0.00 Oct 1	0.00 Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 7	0.00 Oct 1	0.00 Oct 1 1956
MAXIMUM PEAK FLOW		0.60 Mar 18	8600 Mar 5 1995
MAXIMUM PEAK STAGE		4.48 Mar 18	13.22 Mar 5 1995
ANNUAL RUNOFF (AC-FT)	188	18	6790
10 PERCENT EXCEEDS	0.96	0.14	12
50 PERCENT EXCEEDS	0.00	0.00	0.28
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 mi².

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 sea level, 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 ft³/s, Mar. 5, 1995, gage height, 9.74 ft, from rating curve extended above 209 ft³/s, on basis of critical-depth computations; minimum daily, 0.04 ft³/s, several days in 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft³/s, or maximum, from rating curve extended as explained above:

Date	Discharge Time	Gage height (ft ³ /s)	(ft)
Mar. 18	0045	26	3.41

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.12	0.20	0.40	0.51	0.55	0.45	0.48	0.38	0.23	0.17	0.16	0.12
2	0.14	0.20	0.33	0.53	0.53	0.42	0.45	0.37	0.23	0.16	0.19	0.11
3	0.15	0.19	2.5	0.73	0.50	0.38	0.48	0.36	0.23	0.16	0.17	0.12
4	0.15	0.17	2.0	0.50	0.49	0.36	e0.48	0.36	0.23	0.16	0.18	0.14
5	0.16	0.17	0.46	0.48	0.47	0.37	e0.48	0.34	0.22	0.21	0.18	0.15
6	0.19	0.18	0.42	0.47	0.46	0.37	1.2	0.35	0.22	0.18	0.17	0.18
7	0.20	0.20	0.39	0.47	0.45	0.48	0.61	0.36	0.23	0.17	0.17	1.1
8	0.19	0.22	0.35	0.46	0.46	0.46	0.48	0.35	0.23	0.16	0.11	0.17
9	0.15	0.23	0.36	0.45	0.46	0.40	0.46	0.33	0.23	0.16	0.11	0.15
10	0.15	0.24	1.1	0.45	0.42	0.40	0.43	0.32	0.25	0.16	0.12	0.14
11	0.15	0.23	0.61	0.45	0.43	0.44	0.59	0.31	0.27	0.17	0.13	0.14
12	0.16	0.62	0.43	0.45	0.44	0.43	0.41	0.29	0.25	0.16	0.14	0.15
13	0.16	0.33	0.41	0.45	0.43	0.41	0.41	0.30	0.22	0.16	0.13	0.14
14	0.16	0.24	0.90	0.46	0.44	0.41	0.40	0.28	0.21	0.15	0.13	0.13
15	0.16	0.24	0.54	0.46	0.45	0.39	0.44	0.29	0.20	0.15	0.14	0.13
16	0.16	0.25	0.44	0.46	0.45	1.5	0.42	0.29	0.20	0.15	0.15	0.14
17	0.16	0.25	0.44	0.46	0.73	0.42	0.39	0.29	0.20	0.15	0.15	0.16
18	0.15	0.24	0.44	0.46	0.60	2.5	0.39	0.29	0.21	0.15	0.16	0.16
19	0.16	0.24	0.43	0.47	0.54	0.74	0.38	0.30	0.19	0.15	0.15	0.15
20	0.18	0.24	0.44	0.47	0.54	0.44	0.38	0.29	0.20	0.15	0.16	0.14
21	0.19	0.24	4.9	0.47	0.52	e0.43	0.38	0.27	0.20	0.16	0.15	0.12
22	0.20	0.26	0.69	0.46	0.50	e0.41	0.37	0.26	0.19	0.15	0.17	0.12
23	0.20	0.26	0.57	0.46	0.50	e0.43	0.36	0.25	0.23	0.14	0.18	0.11
24	0.20	2.4	0.52	0.53	0.50	e0.72	0.88	0.25	0.19	0.13	0.19	0.11
25	0.19	0.76	0.49	0.53	0.50	e0.50	0.56	0.26	0.18	0.13	0.15	0.11
26	0.18	0.30	0.49	0.54	0.56	0.48	0.86	0.26	0.18	0.13	0.14	0.12
27	0.20	0.30	0.49	0.56	0.47	0.48	0.54	0.26	0.18	0.15	0.15	0.12
28	0.21	0.29	0.48	0.92	0.47	0.49	0.44	0.26	0.17	0.15	0.14	0.15
29	0.21	1.1	0.47	1.8	---	0.47	0.41	0.25	0.18	0.14	0.16	0.15
30	0.26	0.49	0.46	0.63	---	0.46	0.38	0.25	0.17	0.14	0.16	0.15
31	0.18	---	0.51	0.56	---	0.47	---	0.24	---	0.16	0.14	---
TOTAL	5.42	11.28	23.46	17.10	13.86	17.11	14.94	9.26	6.32	4.81	4.73	5.08
MEAN	0.175	0.376	0.757	0.552	0.495	0.552	0.498	0.299	0.211	0.155	0.153	0.169
MAX	0.26	2.4	4.9	1.8	0.73	2.5	1.2	0.38	0.27	0.21	0.19	1.1
MIN	0.12	0.17	0.33	0.45	0.42	0.36	0.36	0.24	0.17	0.13	0.11	0.11
AC-FT	11	22	47	34	27	34	30	18	13	9.5	9.4	10

e Estimated.

11022200 LOS COCHES CREEK NEAR LAKESIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.436	1.105	1.710	4.462	5.644	5.494	2.749	1.314	0.753	0.372	0.248	0.263
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	0.55	0.50	0.55	0.45	0.25	0.16	0.096	0.079	0.077
(WY)	1998	1993	1990	2002	2002	2002	1989	1984	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	385.47		133.37			
ANNUAL MEAN	1.056		0.365		2.028	
HIGHEST ANNUAL MEAN					6.77	1993
LOWEST ANNUAL MEAN					0.37	2002
HIGHEST DAILY MEAN	27	Jan 11	4.9	Dec 21	248	Mar 5 1995
LOWEST DAILY MEAN	0.11	Sep 29	0.11	Aug 8	0.04	Oct 26 1997
ANNUAL SEVEN-DAY MINIMUM	0.13	Sep 25	0.12	Sep 21	0.04	Oct 31 1997
MAXIMUM PEAK FLOW			26	Mar 18	1090	Mar 5 1995
MAXIMUM PEAK STAGE			3.41	Mar 18	9.74	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	765		265		1470	
10 PERCENT EXCEEDS	1.5		0.54		3.2	
50 PERCENT EXCEEDS	0.44		0.27		0.51	
90 PERCENT EXCEEDS	0.18		0.14		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 mi².

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 sea level, 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 ft³/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 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.7	5.0	6.6	6.9	4.8	4.3	3.8	1.5	0.66	0.47	0.36
2	1.1	1.8	4.9	6.1	6.5	4.3	4.5	3.9	1.5	0.66	0.45	0.33
3	1.3	1.9	26	14	6.1	4.1	4.4	3.5	1.4	0.74	0.45	0.32
4	1.4	2.3	41	6.5	5.9	4.1	4.4	3.1	1.4	0.66	0.44	0.33
5	1.4	2.7	6.1	5.9	5.5	4.4	4.4	2.9	1.3	0.66	0.40	0.39
6	1.4	2.2	5.3	6.0	5.6	4.4	8.5	2.8	1.2	0.65	0.40	1.8
7	1.4	2.2	4.3	6.5	5.7	8.4	4.7	2.9	1.2	0.64	0.43	42
8	1.4	2.1	4.1	6.7	5.3	15	4.3	3.2	1.3	0.61	0.45	2.2
9	1.9	1.9	5.5	6.5	5.2	5.0	4.3	3.4	1.2	0.63	0.34	1.3
10	2.1	1.9	13	6.3	4.9	4.5	4.5	2.8	1.2	0.68	0.34	0.97
11	1.7	1.9	7.9	5.9	4.8	4.3	4.1	2.5	1.3	0.68	0.34	0.88
12	1.4	4.7	5.0	5.5	4.7	4.4	4.1	2.3	1.3	0.65	0.34	0.81
13	1.4	21	5.6	5.0	4.5	4.7	6.1	2.1	1.2	0.72	0.37	0.78
14	1.4	3.4	19	5.5	4.9	4.3	3.9	2.1	1.1	0.61	0.40	0.71
15	1.3	2.9	9.0	5.3	5.4	4.2	3.7	2.1	1.1	0.62	0.45	0.66
16	1.4	2.7	7.5	6.5	4.9	22	4.2	2.1	1.0	0.48	0.54	0.68
17	2.3	2.7	6.9	6.3	9.7	6.3	4.0	2.3	0.95	0.59	0.41	0.69
18	1.5	2.7	5.9	5.6	6.9	82	3.9	2.1	1.0	0.50	0.41	0.72
19	1.6	2.7	5.4	5.5	5.1	11	3.8	2.1	1.0	0.50	0.37	0.68
20	1.6	2.6	5.2	5.3	5.4	8.0	3.3	2.0	0.91	0.52	0.41	0.75
21	1.8	2.6	55	5.1	5.2	7.2	3.2	1.9	0.88	0.51	0.45	0.64
22	1.8	2.6	12	5.3	5.1	6.8	3.3	1.9	0.87	0.51	0.38	0.58
23	1.9	2.5	9.3	5.5	4.8	7.0	3.1	1.9	0.81	0.50	0.36	0.56
24	2.0	46	8.2	4.5	4.8	12	20	1.9	0.78	0.49	0.35	0.57
25	1.8	22	6.8	4.7	4.8	6.5	5.9	1.9	0.82	0.46	0.32	0.59
26	1.4	7.4	7.8	4.2	4.8	6.1	16	1.8	0.79	0.47	0.32	0.63
27	1.3	4.8	8.0	4.2	4.8	5.7	5.7	1.7	0.70	0.45	0.37	0.59
28	1.4	3.7	6.9	18	5.0	5.7	4.5	1.6	0.71	0.45	0.40	0.60
29	1.7	26	6.6	22	---	5.4	4.2	1.6	0.76	0.44	0.41	1.1
30	1.5	7.9	6.8	8.8	---	4.8	3.8	1.6	0.73	0.46	0.39	0.95
31	1.7	---	7.2	7.9	---	4.3	---	1.5	---	0.47	0.38	---
TOTAL	48.3	193.5	327.2	217.7	153.2	281.7	159.1	73.3	31.91	17.67	12.34	64.17
MEAN	1.558	6.450	10.55	7.023	5.471	9.087	5.303	2.365	1.064	0.570	0.398	2.139
MAX	2.3	46	55	22	9.7	82	20	3.9	1.5	0.74	0.54	42
MIN	1.0	1.7	4.1	4.2	4.5	4.1	3.1	1.5	0.70	0.44	0.32	0.32
AC-FT	96	384	649	432	304	559	316	145	63	35	24	127

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2002, BY WATER YEAR (WY)

MEAN	2.194	5.840	20.59	32.14	92.89	79.61	47.75	17.73	4.756	3.003	2.702	1.898
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1912 - 2002
ANNUAL TOTAL	4367.20	1580.09	
ANNUAL MEAN	11.96	4.329	25.48
HIGHEST ANNUAL MEAN			219
LOWEST ANNUAL MEAN			0.002
HIGHEST DAILY MEAN	291	Jan 11	82
LOWEST DAILY MEAN	0.71	Sep 2	0.32
ANNUAL SEVEN-DAY MINIMUM	0.75	Sep 2	0.36
MAXIMUM PEAK FLOW			525
MAXIMUM PEAK STAGE			6.88
ANNUAL RUNOFF (AC-FT)	8660	3130	18460
10 PERCENT EXCEEDS	24	7.3	28
50 PERCENT EXCEEDS	5.2	2.5	1.6
90 PERCENT EXCEEDS	1.0	0.45	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 mi².

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 sea level, 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 ft³/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 ft³/s, Mar. 6, 1995, gage height, 13.47 ft, from rating curve extended above 5,800 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.5	18	7.9	16	5.7	7.6	8.3	3.0	2.1	1.8	0.96
2	0.99	1.5	14	7.9	12	5.7	7.1	6.0	3.1	2.3	2.1	0.99
3	0.99	1.7	18	15	10	5.7	6.1	5.5	3.2	2.3	2.2	1.0
4	0.99	2.1	44	15	10	5.7	5.7	5.4	3.0	2.5	2.3	0.96
5	0.99	3.5	43	12	10	5.4	5.6	5.1	2.8	2.6	2.4	0.89
6	1.1	2.7	23	11	9.7	5.0	13	4.7	2.8	2.6	2.3	1.6
7	1.3	2.6	14	9.1	8.5	5.9	14	4.5	2.8	2.5	2.5	23
8	1.3	2.3	9.7	8.1	8.4	27	8.0	4.4	2.8	2.3	2.4	20
9	1.3	2.1	8.2	7.9	8.1	16	7.5	4.2	2.8	1.9	2.4	7.0
10	1.4	2.0	8.9	7.1	7.8	14	7.1	4.0	2.9	1.9	2.3	4.0
11	1.5	2.2	9.9	6.9	7.5	12	6.3	3.9	2.8	1.9	2.2	3.0
12	1.4	3.7	8.9	7.0	6.9	9.4	6.3	3.8	2.5	1.8	2.2	2.6
13	1.3	17	9.1	7.0	7.0	7.6	5.7	3.6	2.4	1.9	1.9	2.2
14	1.4	12	10	6.7	6.5	6.1	5.7	3.3	2.4	2.0	1.7	2.2
15	1.5	7.3	19	6.6	6.4	4.8	6.3	2.9	2.3	2.1	1.6	2.3
16	1.4	5.1	13	6.6	6.6	13	6.9	2.9	2.3	1.9	1.6	2.1
17	1.5	4.2	13	6.4	10	18	6.9	2.9	2.4	1.8	1.8	1.9
18	1.4	4.0	9.8	6.2	18	108	5.9	3.0	2.5	1.9	1.6	1.8
19	1.5	3.5	8.0	6.1	13	74	5.0	3.3	2.5	2.1	1.8	1.7
20	1.5	3.0	7.6	6.5	11	33	4.5	3.5	2.5	2.2	1.7	1.6
21	1.5	2.8	59	6.2	9.6	19	4.4	3.2	2.3	2.3	1.7	1.6
22	1.6	3.0	41	6.3	8.0	14	4.2	3.0	2.5	2.2	1.8	1.7
23	1.8	3.1	29	6.6	7.1	11	3.8	3.0	2.5	1.8	1.6	1.7
24	1.7	17	18	6.4	6.7	10	9.4	2.9	2.4	1.6	1.6	1.7
25	1.7	93	13	6.6	6.5	9.6	23	2.8	2.1	1.6	1.6	1.7
26	1.5	26	11	6.5	6.8	10	54	3.0	1.9	1.6	1.6	1.6
27	1.5	17	9.2	6.5	6.1	9.8	40	3.0	1.7	1.6	1.4	1.6
28	1.7	11	8.1	25	5.8	9.1	18	3.0	1.7	1.8	1.2	1.6
29	1.7	16	8.0	34	---	8.1	13	3.0	1.7	1.7	1.1	2.4
30	1.6	39	8.0	44	---	8.0	10	3.0	1.7	1.6	0.97	2.8
31	1.6	---	7.9	25	---	8.0	---	3.0	---	1.6	0.97	---
TOTAL	43.76	311.9	521.3	340.1	250.0	498.6	321.0	118.1	74.3	62.0	56.34	100.20
MEAN	1.412	10.40	16.82	10.97	8.929	16.08	10.70	3.810	2.477	2.000	1.817	3.340
MAX	1.8	93	59	44	18	108	54	8.3	3.2	2.6	2.5	23
MIN	0.99	1.5	7.6	6.1	5.8	4.8	3.8	2.8	1.7	1.6	0.97	0.89
AC-FT	87	619	1030	675	496	989	637	234	147	123	112	199

SAN DIEGO RIVER BASIN

11023000 SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.219	25.64	39.81	93.86	113.5	135.1	45.96	16.79	6.646	2.980	2.389	3.320
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002	
ANNUAL TOTAL	7878.75		2697.60			
ANNUAL MEAN	21.59		7.391		40.49	
HIGHEST ANNUAL MEAN					125	
LOWEST ANNUAL MEAN					7.39	
HIGHEST DAILY MEAN	493	Jan 12	108	Mar 18	4760	Mar 3 1983
LOWEST DAILY MEAN	0.78	Sep 7	0.89	Sep 5	0.00	Sep 7 1984
ANNUAL SEVEN-DAY MINIMUM	0.97	Sep 3	0.96	Aug 30	0.00	Sep 13 1984
MAXIMUM PEAK FLOW			170	Nov 25	9430	Mar 6 1995
MAXIMUM PEAK STAGE			4.29	Nov 25	13.47	Mar 6 1995
ANNUAL RUNOFF (AC-FT)	15630		5350		29330	
10 PERCENT EXCEEDS	53		15		71	
50 PERCENT EXCEEDS	6.2		3.5		6.8	
90 PERCENT EXCEEDS	1.2		1.6		0.83	

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 mi².

PERIOD OF RECORD.—October 1964 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above sea level, 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 ft³/s, Feb. 21, 1980, gage height, 10.26 ft, from rating curve extended above 1,400 ft³/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 400 ft³/s, or maximum, from rating curve extended above 2,130 ft³/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2115	897	6.15	Apr. 26	0930	440	4.83
Dec. 21	0415	479	4.97				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.9	5.1	2.4	3.4	3.8	3.8	2.7	2.4	1.5	2.0	1.2
2	1.9	3.7	3.9	2.4	3.2	3.8	3.5	2.5	2.2	1.5	2.0	1.2
3	2.2	4.3	7.3	6.4	3.1	3.2	3.5	2.6	2.3	1.6	1.9	1.4
4	2.6	5.1	17	2.9	3.1	3.2	3.6	2.5	3.1	1.7	2.0	1.5
5	2.5	8.0	4.2	2.5	3.1	3.4	3.6	2.5	3.6	1.8	2.0	1.7
6	2.4	11	3.3	2.4	3.6	3.7	16	2.5	2.5	1.7	2.0	6.4
7	2.2	3.5	3.3	2.3	3.3	44	4.9	2.6	2.3	1.6	1.8	13
8	2.2	3.7	2.8	2.3	3.4	76	3.6	2.8	2.4	1.6	1.9	3.3
9	2.8	3.0	12	2.6	3.5	5.6	3.6	2.7	2.1	1.7	2.0	1.9
10	2.7	3.4	50	2.6	3.2	3.8	3.5	2.9	2.1	1.6	1.9	1.6
11	4.5	3.2	8.2	2.7	3.2	3.6	3.5	4.2	2.0	1.8	1.7	1.5
12	2.5	17	3.8	2.7	3.4	3.7	3.6	2.4	1.9	1.9	1.7	1.8
13	2.8	66	3.4	2.8	3.5	3.7	3.3	2.3	1.9	1.8	1.5	1.9
14	2.5	6.3	19	2.9	3.4	3.7	3.2	2.6	1.9	1.6	1.5	1.9
15	2.7	4.5	13	3.1	3.6	9.4	5.3	2.5	1.9	1.6	1.6	1.8
16	2.9	4.0	3.6	2.7	3.5	20	4.4	4.3	1.6	1.8	1.5	1.7
17	3.7	3.7	3.1	2.6	15	14	3.4	2.9	1.7	1.9	1.3	1.7
18	2.9	4.0	2.9	2.9	7.9	101	3.2	2.7	1.6	1.9	1.4	2.0
19	2.9	3.5	2.8	2.7	3.9	5.9	3.1	2.8	2.6	1.7	1.7	1.8
20	2.8	3.2	2.8	2.5	3.4	4.1	3.0	2.9	2.2	1.8	1.6	1.8
21	2.6	3.1	131	2.6	3.3	4.0	3.0	2.3	2.2	1.7	1.5	1.7
22	2.7	2.9	10	2.9	3.4	4.0	3.0	2.3	1.9	1.9	1.5	1.5
23	3.2	3.2	4.1	3.0	3.3	3.9	3.1	2.2	1.8	1.9	1.4	1.4
24	2.7	135	3.6	2.9	3.3	35	42	2.3	1.9	1.8	1.5	1.4
25	2.4	84	3.1	3.0	3.3	5.7	13	2.6	1.7	1.7	1.3	1.6
26	2.9	6.5	2.8	3.1	3.4	4.4	52	2.3	1.7	1.7	1.5	1.8
27	2.6	4.8	2.5	3.0	3.4	4.4	8.1	2.2	1.7	1.7	1.4	1.8
28	2.8	3.6	2.5	31	3.4	4.5	3.4	2.3	1.7	1.8	1.4	1.8
29	2.7	88	2.4	40	---	4.3	2.9	2.4	1.7	2.0	1.5	1.9
30	2.6	19	2.5	7.8	---	3.9	2.8	2.4	1.4	1.8	1.5	2.0
31	4.0	---	2.8	3.7	---	3.9	---	2.6	---	2.0	1.4	---
TOTAL	84.6	515.1	338.8	159.4	110.5	397.6	218.9	81.8	62.0	54.1	50.9	68.0
MEAN	2.729	17.17	10.93	5.142	3.946	12.83	7.297	2.639	2.067	1.745	1.642	2.267
MAX	4.5	135	131	40	15	101	52	4.3	3.6	2.0	2.0	13
MIN	1.7	2.9	2.4	2.3	3.1	3.2	2.8	2.2	1.4	1.5	1.3	1.2
AC-FT	168	1020	672	316	219	789	434	162	123	107	101	135

LOS PENASQUITOS CREEK BASIN

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.946	6.355	8.988	24.30	34.07	32.97	9.520	3.220	1.678	1.197	1.109	1.667
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1965 - 2002
ANNUAL TOTAL	5146.0	2141.7	
ANNUAL MEAN	14.10	5.868	10.47
HIGHEST ANNUAL MEAN			39.4 1998
LOWEST ANNUAL MEAN			0.80 1965
HIGHEST DAILY MEAN	610 Feb 27	135 Nov 24	1400 Mar 1 1978
LOWEST DAILY MEAN	1.5 Sep 2	1.2 Sep 1	0.00 May 16 1968
ANNUAL SEVEN-DAY MINIMUM	1.8 Aug 30	1.4 Aug 27	0.00 Jul 18 1977
MAXIMUM PEAK FLOW		897 Nov 24	4750 Feb 21 1980
MAXIMUM PEAK STAGE		6.15 Nov 24	10.92 Jan 4 1995
ANNUAL RUNOFF (AC-FT)	10210	4250	7590
10 PERCENT EXCEEDS	18	6.4	12
50 PERCENT EXCEEDS	3.4	2.8	1.6
90 PERCENT EXCEEDS	2.1	1.6	0.28

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 mi².

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 sea level (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 ft³/s, Jan. 27, 1916, gage height, 14.0 ft, datum then in use, from rating curve extended above 1,500 ft³/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 2001 TO SEPTEMBER 2002

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	0.17	0.15	0.16	0.14	0.02	0.00	0.00	0.00
2	0.00	0.00	0.00	0.07	0.16	0.12	0.15	0.14	0.02	0.00	0.00	0.00
3	0.00	0.00	0.00	0.08	0.14	0.08	0.15	0.10	0.02	0.00	0.00	0.00
4	0.00	0.00	0.00	0.07	0.14	0.08	0.15	0.11	0.01	0.00	0.00	0.00
5	0.00	0.00	0.00	0.07	0.15	0.09	0.17	0.11	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.06	0.16	0.12	0.22	0.11	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.06	0.16	0.55	0.21	0.14	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.07	0.17	0.39	0.18	0.13	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.08	0.13	0.20	0.16	0.10	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.08	0.07	0.15	0.17	0.09	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.07	0.07	0.13	0.17	0.07	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.07	0.10	0.12	0.15	0.04	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.07	0.12	0.14	0.14	0.01	0.00	0.00	0.00	0.00
14	0.00	0.00	0.01	0.09	0.15	0.14	0.13	0.0	0.00	0.00	0.00	0.00
15	0.00	0.00	0.02	0.11	0.18	0.15	0.21	0.01	0.00	0.00	0.00	0.00
16	0.00	0.00	0.01	0.12	0.19	0.26	0.23	0.03	0.00	0.00	0.00	0.00
17	0.00	0.00	0.01	0.12	0.28	0.26	0.18	0.03	0.00	0.00	0.00	0.00
18	0.00	0.00	0.01	0.12	0.31	1.2	0.19	0.03	0.00	0.00	0.00	0.00
19	0.00	0.00	0.02	0.12	0.25	0.32	0.17	0.04	0.00	0.00	0.00	0.00
20	0.00	0.00	0.02	0.12	0.19	0.21	0.15	0.04	0.00	0.00	0.00	0.00
21	0.00	0.00	0.13	0.12	0.11	0.18	0.13	0.04	0.00	0.00	0.00	0.00
22	0.00	0.00	0.05	0.11	0.07	0.16	0.12	0.03	0.00	0.00	0.00	0.00
23	0.00	0.00	0.04	0.11	0.07	0.17	0.08	0.02	0.00	0.00	0.00	0.00
24	0.00	0.00	0.03	0.08	0.09	0.33	0.19	0.02	0.00	0.00	0.00	0.00
25	0.00	0.00	0.03	0.09	0.09	0.22	0.27	0.04	0.00	0.00	0.00	0.00
26	0.00	0.00	0.03	0.09	0.08	0.18	0.25	0.04	0.00	0.00	0.00	0.00
27	0.00	0.00	0.03	0.11	0.07	0.21	0.28	0.04	0.00	0.00	0.00	0.00
28	0.00	0.00	0.03	0.20	0.09	0.25	0.18	0.03	0.00	0.00	0.00	0.00
29	0.00	0.00	0.03	0.29	---	0.23	0.16	0.03	0.00	0.00	0.00	0.00
30	0.00	0.00	0.04	0.21	---	0.19	0.14	0.03	0.00	0.00	0.00	0.00
31	0.00	---	0.06	0.18	---	0.18	---	0.02	---	0.00	0.00	---
TOTAL	0.00	0.00	0.60	3.31	3.96	7.16	5.24	1.81	0.08	0.00	0.00	0.00
MEAN	0.000	0.000	0.019	0.107	0.141	0.231	0.175	0.058	0.003	0.000	0.000	0.000
MAX	0.00	0.00	0.13	0.29	0.31	1.2	0.28	0.14	0.02	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.06	0.07	0.08	0.08	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	1.2	6.6	7.9	14	10	3.6	0.2	0.00	0.00	0.00

SAN DIEGUITO RIVER BASIN

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 - 2002, BY WATER YEAR (WY)

	1955	1955	1955	1959	1961	1961	1961	1959	1956	1955	1955	1955
MEAN	0.471	1.999	5.044	14.75	39.91	41.20	18.98	8.007	3.359	1.051	0.645	0.370
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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1955 - 2002

ANNUAL TOTAL	253.20	22.16	
ANNUAL MEAN	0.694	0.061	11.16
HIGHEST ANNUAL MEAN			131 1980
LOWEST ANNUAL MEAN			0.000 1961
HIGHEST DAILY MEAN	10 Feb 27	1.2 Mar 18	6190 Feb 21 1980
LOWEST DAILY MEAN	0.00 Jun 10	0.00 Oct 1	0.00 Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 10	0.00 Oct 1	0.00 Oct 1 1954
MAXIMUM PEAK FLOW		3.9 Mar 18	10700 Feb 21 1980
MAXIMUM PEAK STAGE		2.29 Mar 18	14.25 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	502	44	8080
10 PERCENT EXCEEDS	2.3	0.18	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 mi².

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 sea level. 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 ft³/s, Feb. 21, 1980, gage height, 14.39 ft, from rating curve extended above 166 ft³/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 ft³/s, or maximum, from rating curve extended above 955 ft³/s, on basis of slope-area measurement at gage height 14.39 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	1330	0.19	0.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	0.02	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	0.01	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	0.01	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.08	0.02	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.05	0.04	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.01	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	---	0.01	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.01	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.26	0.63	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.008	0.021	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.08	0.06	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	0.00	0.5	1.2	0.00	0.00	0.00	0.00	0.00

SAN DIEGUITO RIVER BASIN

11028500 SANTA MARIA CREEK NEAR RAMONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.052	0.422	1.306	22.67	24.50	25.20	6.401	2.209	0.547	0.070	0.094	0.032
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1913 - 2002	
ANNUAL TOTAL	193.78		0.89			
ANNUAL MEAN	0.531		0.002		6.990	
HIGHEST ANNUAL MEAN					78.2	1993
LOWEST ANNUAL MEAN					0.000	1951
HIGHEST DAILY MEAN	37	Mar 10	0.08	Mar 18	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			0.19	Mar 18	15200	Feb 21 1980
MAXIMUM PEAK STAGE			0.96	Mar 18	14.39	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	384		1.8		5060	
10 PERCENT EXCEEDS	0.70		0.00		2.9	
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 mi².

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 sea level, 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 ft³/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 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	4.7	3.5	6.7	9.7	15	13	8.7	3.2	2.1	2.2	5.1
2	1.4	4.7	3.2	6.7	11	14	12	8.5	3.2	2.1	2.2	5.1
3	1.4	4.5	3.2	7.3	11	12	12	8.2	3.1	2.2	2.1	5.1
4	1.3	4.8	7.1	7.6	11	13	11	8.1	3.0	2.4	2.2	5.3
5	1.3	4.9	4.0	7.6	11	7.8	11	8.0	3.1	2.5	2.2	5.9
6	1.3	4.6	3.5	7.8	11	7.8	11	7.6	3.3	2.6	2.2	6.0
7	1.2	4.4	3.2	8.4	12	8.2	11	7.8	3.2	2.7	2.1	6.2
8	1.1	4.5	2.8	8.9	13	8.4	10	7.8	3.3	2.7	2.1	6.1
9	1.2	4.5	3.0	9.3	14	8.0	9.6	7.5	3.1	2.6	2.2	6.0
10	1.3	4.5	11	9.1	12	8.1	9.3	6.9	3.0	2.4	2.2	5.6
11	2.6	4.4	5.3	8.9	12	8.6	9.2	6.5	2.8	2.5	2.3	3.5
12	3.8	4.4	3.9	8.8	11	8.9	8.9	6.1	2.6	2.4	2.3	4.6
13	4.0	5.9	3.4	9.3	11	9.4	9.0	5.8	2.5	2.5	2.4	3.6
14	3.9	4.9	3.8	9.9	10	9.9	8.9	5.7	2.5	2.4	2.4	5.3
15	4.0	2.8	4.2	10	9.7	10	9.5	5.7	2.3	2.2	3.6	5.6
16	4.1	2.2	3.6	9.8	9.5	11	9.5	5.5	2.2	2.2	3.6	5.7
17	4.2	2.1	3.3	9.5	13	13	8.4	5.1	2.2	2.3	3.5	3.6
18	4.3	2.0	3.3	9.4	14	24	7.8	5.1	2.2	2.2	3.5	3.0
19	5.0	1.9	3.4	9.6	11	24	7.5	5.1	2.2	2.2	3.4	2.9
20	4.9	1.9	3.3	9.6	9.9	23	7.1	5.2	2.3	2.3	3.2	4.9
21	5.0	2.1	5.0	9.6	9.9	23	7.0	5.0	2.4	2.2	2.9	5.2
22	4.7	2.1	7.1	9.9	11	21	6.8	4.8	2.2	2.2	2.9	5.3
23	4.7	2.1	4.5	9.8	11	19	6.9	4.7	2.2	2.2	3.2	5.1
24	4.7	2.5	4.4	9.0	11	19	7.5	4.4	2.2	2.3	3.2	2.9
25	4.6	9.1	4.6	8.7	12	19	8.7	4.3	2.2	2.1	2.8	2.5
26	4.6	5.7	4.8	8.8	11	17	9.9	4.2	2.1	2.1	3.0	2.3
27	4.7	4.0	5.1	8.8	10	17	10	4.1	2.2	2.1	3.4	2.2
28	4.7	3.3	5.4	8.7	12	16	9.5	3.7	2.2	2.1	3.5	2.2
29	4.6	3.9	6.1	11	---	15	8.9	3.7	2.1	2.0	5.4	2.6
30	4.7	4.5	6.2	10	---	13	8.8	3.7	2.1	2.1	3.5	2.5
31	4.7	---	6.6	9.3	---	13	---	3.5	---	2.1	4.9	---
TOTAL	105.5	117.9	141.8	277.8	314.7	436.1	279.7	181.0	77.2	71.0	90.6	131.9
MEAN	3.403	3.930	4.574	8.961	11.24	14.07	9.323	5.839	2.573	2.290	2.923	4.397
MAX	5.0	9.1	11	11	14	24	13	8.7	3.3	2.7	5.4	6.2
MIN	1.1	1.9	2.8	6.7	9.5	7.8	6.8	3.5	2.1	2.0	2.1	2.2
AC-FT	209	234	281	551	624	865	555	359	153	141	180	262

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.633	8.585	19.74	44.97	97.67	133.3	53.73	28.16	14.03	7.171	5.418	3.289
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002	
ANNUAL TOTAL	8147.16		2225.2			
ANNUAL MEAN	22.32		6.096		34.37	
HIGHEST ANNUAL MEAN					415 1980	
LOWEST ANNUAL MEAN					0.000 1931	
HIGHEST DAILY MEAN	261	Feb 27	24	Mar 18	11300	Mar 3 1938
LOWEST DAILY MEAN	0.31	Jan 1	1.1	Oct 8	0.00	Oct 1 1929
ANNUAL SEVEN-DAY MINIMUM	0.41	Aug 8	1.2	Oct 4	0.00	Oct 1 1929
MAXIMUM PEAK FLOW			28	Mar 18	25700	Jan 16 1993
MAXIMUM PEAK STAGE			6.64	Mar 4	21.70	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	16160		4410		24900	
10 PERCENT EXCEEDS	61		11		55	
50 PERCENT EXCEEDS	5.1		4.7		1.6	
90 PERCENT EXCEEDS	1.3		2.2		0.00	

SANTA MARGARITA RIVER BASIN

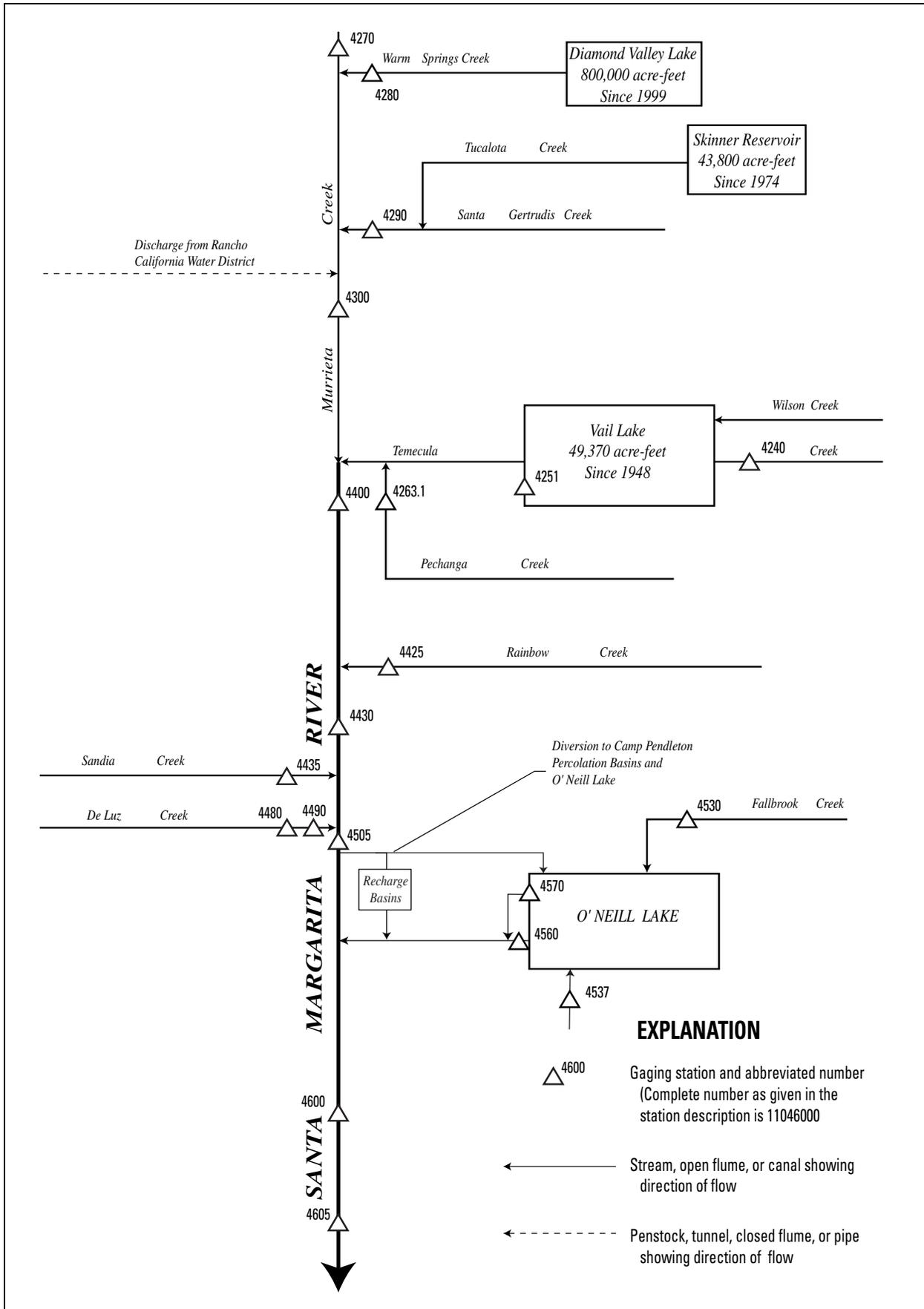


Figure 16. Diversions and storage in Santa Margarita River Basin.

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 mi².

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 sea level, 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 ft³/s, Jan. 16, 1993, gage height, 14.6 ft, from floodmark, from rating curve extended above 1,200 ft³/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 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	2100	2.3	1.57

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.53	0.73	1.0	1.8	1.8	1.4	1.6	0.98	0.62	0.40	0.31	0.27
2	0.55	0.74	1.0	1.7	1.7	1.3	1.7	0.99	0.62	0.32	0.29	0.26
3	0.52	0.75	1.1	1.7	1.7	1.3	1.2	0.98	0.62	0.31	0.28	0.23
4	0.52	0.77	1.1	1.7	1.6	1.3	1.2	0.97	0.58	0.32	0.26	0.18
5	0.56	0.80	1.1	1.7	1.6	1.3	1.2	0.91	0.54	0.33	0.23	0.21
6	0.61	0.76	1.1	1.7	1.6	1.3	1.3	0.91	0.51	0.34	0.21	0.30
7	0.62	0.76	1.0	1.6	1.6	1.5	1.3	0.92	0.50	0.35	0.23	0.40
8	0.63	0.76	1.0	1.6	1.6	1.5	1.3	0.91	0.55	0.32	0.22	0.40
9	0.70	0.73	1.0	1.6	1.6	1.6	1.3	0.90	0.58	0.29	0.19	0.36
10	0.70	0.77	1.1	1.6	1.5	1.5	1.2	0.85	0.58	0.27	0.16	0.33
11	0.64	0.81	1.2	1.5	1.6	1.5	1.2	0.84	0.56	0.29	0.15	0.32
12	0.61	0.82	1.2	1.5	1.6	1.4	1.1	0.81	0.56	0.30	0.15	0.30
13	0.59	0.88	1.2	1.5	1.6	1.4	1.1	0.78	0.53	0.29	0.16	0.28
14	0.58	0.88	1.3	1.5	1.6	1.4	1.1	0.75	0.51	0.28	0.16	0.25
15	0.56	0.82	1.2	1.5	1.4	1.4	1.0	0.74	0.50	0.28	0.17	0.23
16	0.57	0.80	1.2	1.6	1.4	1.4	1.0	0.75	0.49	0.28	0.20	0.23
17	0.57	0.81	1.3	1.6	1.5	1.5	1.0	0.76	0.45	0.28	0.22	0.24
18	0.60	0.83	1.2	1.6	1.5	1.9	1.0	0.76	0.44	0.29	0.24	0.27
19	0.62	0.82	1.1	1.6	1.5	1.9	1.1	0.77	0.45	0.31	0.26	0.28
20	0.63	0.79	1.2	1.6	1.5	1.6	1.1	0.76	0.50	0.33	0.28	0.26
21	0.66	0.81	1.3	1.5	1.5	1.5	1.1	0.76	0.52	0.34	0.30	0.25
22	0.70	0.86	1.2	1.5	1.5	1.5	0.96	0.75	0.51	0.35	0.32	0.23
23	0.72	0.88	1.3	1.5	1.4	1.5	0.92	0.74	0.50	0.32	0.30	0.23
24	0.70	0.98	1.5	1.5	1.4	1.5	0.95	0.72	0.43	0.29	0.27	0.23
25	0.67	1.1	1.5	1.5	1.4	1.5	1.1	0.69	0.37	0.25	0.25	0.23
26	0.66	1.1	1.5	1.5	1.4	1.6	1.1	0.70	0.29	0.23	0.24	0.24
27	0.65	1.0	1.5	1.6	1.4	1.5	1.1	0.70	0.20	0.24	0.24	0.28
28	0.67	1.0	1.6	1.7	1.4	1.6	1.0	0.70	0.21	0.26	0.26	0.36
29	0.70	1.0	1.6	1.9	---	1.6	0.99	0.67	0.32	0.27	0.27	0.40
30	0.69	1.0	1.6	2.1	---	1.6	0.98	0.61	0.42	0.32	0.26	0.42
31	0.71	---	1.8	1.9	---	1.6	---	0.61	---	0.37	0.27	---
TOTAL	19.44	25.56	39.0	50.4	42.9	46.4	34.20	24.69	14.46	9.42	7.35	8.47
MEAN	0.627	0.852	1.258	1.626	1.532	1.497	1.140	0.796	0.482	0.304	0.237	0.282
MAX	0.72	1.1	1.8	2.1	1.8	1.9	1.7	0.99	0.62	0.40	0.32	0.42
MIN	0.52	0.73	1.0	1.5	1.4	1.3	0.92	0.61	0.20	0.23	0.15	0.18
AC-FT	39	51	77	100	85	92	68	49	29	19	15	17

11042400 TEMECULA CREEK NEAR AGUANGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.519	3.341	5.537	16.69	26.02	20.76	11.02	5.026	2.672	1.534	1.309	1.291
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1957 - 2002
ANNUAL TOTAL	665.90	322.29	
ANNUAL MEAN	1.824	0.883	7.967
HIGHEST ANNUAL MEAN			56.1 1993
LOWEST ANNUAL MEAN			0.28 1961
HIGHEST DAILY MEAN	11 Feb 27	2.1 Jan 30	3600 Jan 16 1993
LOWEST DAILY MEAN	0.40 Aug 16	0.15 Aug 11	0.00 Aug 1 1957
ANNUAL SEVEN-DAY MINIMUM	0.43 Aug 4	0.16 Aug 9	0.00 Aug 1 1957
MAXIMUM PEAK FLOW		2.3 Mar 18	8100 Jan 16 1993
MAXIMUM PEAK STAGE		1.57 Mar 18	14.60 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	1320	639	5770
10 PERCENT EXCEEDS	4.1	1.6	11
50 PERCENT EXCEEDS	1.0	0.80	1.7
90 PERCENT EXCEEDS	0.52	0.26	0.00

SANTA MARGARITA RIVER BASIN
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 mi².

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 sea level (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 ft³/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, 20,200 acre-ft, Oct. 1, elevation, 1,436.21 ft; minimum observed, 18,120 acre-ft, Sept. 29, 30, elevation, 1,432.92 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 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20190	19940	19880	19890	19930	19900	19860	19750	19520	19170	18780	18400
2	20170	20000	19880	19900	19930	19900	19860	19740	19510	19150	18780	18390
3	20170	19900	19890	19900	19930	19890	19860	19730	19500	19150	18760	18380
4	20160	19910	19900	19900	19940	19880	19860	19730	19480	19130	18750	18380
5	20160	19890	19900	19900	19930	19880	19860	19730	19470	19120	18740	18380
6	20160	19880	19900	19900	19930	19870	19860	19730	19460	19110	18720	18370
7	20150	19890	19880	19910	19930	19900	19850	19710	19460	19100	18700	18370
8	20160	19880	19850	19900	19940	19900	19840	19710	19450	19080	18680	18360
9	20160	19880	19860	19920	19920	19890	19840	19700	19440	19080	18670	18350
10	20150	19890	19850	19910	19890	19890	19840	19700	19430	19060	18660	18330
11	20130	e19930	19860	19910	19900	19880	19840	19690	19410	19040	18660	18320
12	20110	e19930	19850	19910	19910	19890	19830	19670	19410	19050	18640	18300
13	20120	e19930	19850	19900	19900	19900	19830	19660	19390	19030	18630	18300
14	20100	19900	19860	19900	19900	19880	19830	19660	19380	19030	18630	18290
15	20090	19890	19860	19910	19900	19880	19830	19650	19360	19010	18610	18280
16	20070	19890	19860	19910	19900	19870	19820	19650	19350	e19000	18590	18270
17	20060	19890	19860	19910	19910	19890	19810	19640	19340	18980	18590	18260
18	20050	19890	19850	19920	19920	19880	19810	19640	19320	18970	18580	18260
19	20050	19880	19860	19910	19920	19880	19810	19620	19320	18960	18580	18240
20	20040	19880	19850	19900	19920	19870	19800	19610	19310	18950	18560	18220
21	20040	19880	19880	19910	19900	19880	19790	19600	19290	18940	18560	18210
22	19960	19880	19880	19910	19900	19880	19780	19590	19290	18930	18530	18210
23	19950	19880	19880	19910	19910	19870	19770	19580	e19280	18910	18510	18200
24	19950	19900	19880	19910	19910	19870	19780	19570	19260	18890	18510	18190
25	19950	19900	19880	19900	19910	19860	19780	19570	19250	18870	18500	18180
26	19930	19900	19880	19900	19900	19860	19780	19560	19230	18860	18480	18160
27	19930	19900	19880	19900	19900	19860	19780	19550	19220	18850	18480	18160
28	19930	19880	19880	19920	19900	19860	19770	19550	19200	18840	18460	18140
29	19950	19880	19880	19940	---	19860	19760	19540	19180	18820	18430	18140
30	19940	19880	19890	19940	---	19860	19750	19540	19180	18810	18420	18130
31	19930	---	19890	19940	---	19860	---	19520	---	18800	18400	---
MAX	20190	20000	19900	19940	19940	19900	19860	19750	19520	19170	18780	18400
MIN	19930	19880	19850	19890	19890	19860	19750	19520	19180	18800	18400	18130
a	1435.90	1435.73	1435.73	1435.81	1435.75	1435.68	1435.52	1435.16	1434.62	1434.02	1433.38	1432.93
b	-270	-50	+10	+50	-40	-40	-110	-230	-340	-380	-400	-270

CAL YR 2001 MAX 21960 MIN 19850 b -930
WTR YR 2002 MAX 20190 MIN 18130 b -2070

e Estimated.

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, 0.25 in., Jan. 29; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.00	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	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.03	0.00	0.01	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	0.04	0.00	0.00	0.00	0.00	0.00	0.02
7	0.00	0.00	0.00	0.00	0.00	0.04	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.01	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	0.10	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	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.02	0.22	e0.00	0.00	0.00	e0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.01	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.04	e0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.05	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.23	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	e0.05	0.00	e0.00	e0.00	0.00	0.00	0.00
24	0.00	0.19	0.00	0.00	0.00	e0.00	0.19	e0.00	e0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	e0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.01	0.02	0.25	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.05	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.01	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.33	0.46	0.35	0.03	0.35	0.23	0.00	0.00	0.00	0.00	0.02
MAX	0.00	0.19	0.23	0.25	0.02	0.22	0.19	0.00	0.00	0.00	0.00	0.02
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 mi².

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 sea level, from topographic map.

REMARKS.—Records fair except for estimated discharges, which are 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 ft³/s, Jan. 16, 1993, gage height, 8.12 ft, from rating curve extended above 400 ft³/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 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	unknown	unknown	3.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	e0.0	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	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	1.4	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	e9.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	e0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	e0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	e0.0	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	e0.0	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	9.50	1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.317	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	9.0	1.4	0.00	0.00	0.00	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	19	3.4	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—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.027	0.027	4.619	2.818	2.144	0.334	0.150	0.038	0.016	0.012	0.000
MAX	0.003	0.32	0.15	63.4	24.4	16.5	2.63	0.95	0.51	0.23	0.18	0.006
(WY)	1988	2002	1993	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	67.52		11.20			
ANNUAL MEAN	0.185		0.031		0.842	
HIGHEST ANNUAL MEAN					8.27 1993	
LOWEST ANNUAL MEAN					0.000 1992	
HIGHEST DAILY MEAN	13	Feb 26	9.0	Nov 24	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			a Nov 24		3120	Jan 16 1993
MAXIMUM PEAK STAGE			3.12 Nov 24		8.12	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	134		22		610	
10 PERCENT EXCEEDS	0.00		0.00		0.14	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Maximum flow is unknown, but is known to have occurred on November 24.

11042700 MURRIETA CREEK AT TENAJA ROAD, NEAR MURRIETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.037	0.687	0.723	21.32	3.246	1.836	1.880	0.066	0.000	0.000	0.000
MAX	0.000	0.18	3.42	2.87	97.5	13.4	8.95	9.40	0.33	0.000	0.000	0.000
(WY)	1998	2001	1998	1998	1998	1998	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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1998 - 2002
ANNUAL TOTAL	201.49	0.39	
ANNUAL MEAN	0.552	0.001	2.361
HIGHEST ANNUAL MEAN			10.7 1998
LOWEST ANNUAL MEAN			0.000 1999
HIGHEST DAILY MEAN	46 Feb 27	0.36 Feb 7	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		6.1 Feb 7	3390 Feb 23 1998
MAXIMUM PEAK STAGE		5.97 Feb 7	10.35 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	400	0.8	1710
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 mi².

PERIOD OF RECORD.—October 1987 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 1,040 ft above sea level, 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 mi² 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 ft³/s, Jan. 17, 1993, gage height, 8.59 ft, from rating curve extended above 2,190 ft³/s; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2115	101	4.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.03	e0.05	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00
2	0.00	0.06	0.04	e0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.03	0.02	0.05	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.00
4	0.00	0.10	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.01	0.03	0.01	0.00	0.01	0.02	0.00	0.02	0.01	0.01	0.00
6	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.01	0.00	0.00	0.02	0.01	0.00	0.02	0.07	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.01	0.00	0.00	0.01	0.02	0.00	0.03	0.01	0.00	0.00
10	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
11	0.00	0.00	0.01	0.00	0.03	0.01	0.02	0.00	0.01	0.02	0.01	0.00
12	0.00	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.01	0.11	0.00	0.00	0.01	0.02	0.03	0.01	0.01	0.00	0.01
14	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.11	0.00	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
16	0.00	0.00	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.03	0.08	0.01	0.13	0.05	0.02	0.01	0.01	0.01	0.01	0.01
18	0.00	0.00	0.08	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.09	0.00	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
20	0.00	0.05	0.07	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.41	0.02	0.02	0.01	0.01	0.02	0.01	0.02	0.00	0.04
22	0.00	0.04	e0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	e0.07	0.01	0.01	0.08	0.01	0.01	0.01	0.00	0.00	0.02
24	0.00	14	e0.06	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00
25	0.00	0.20	e0.05	0.02	0.00	0.02	0.02	0.00	0.01	0.00	0.04	0.01
26	0.00	0.08	e0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.04	e0.04	0.02	0.00	0.01	0.03	0.00	0.01	0.00	0.00	0.02
28	0.00	0.05	e0.04	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.10	0.08	e0.03	0.03	---	0.02	0.02	0.00	0.02	0.00	0.00	0.04
30	0.00	0.06	e0.10	0.01	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	e0.15	0.00	---	0.02	---	0.00	---	0.03	0.00	---
TOTAL	0.10	14.94	2.18	0.37	0.27	0.31	0.29	0.12	0.19	0.23	0.10	0.17
MEAN	0.003	0.498	0.070	0.012	0.010	0.010	0.010	0.004	0.006	0.007	0.003	0.006
MAX	0.10	14	0.41	0.05	0.13	0.08	0.05	0.03	0.03	0.07	0.04	0.04
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.2	30	4.3	0.7	0.5	0.6	0.6	0.2	0.4	0.5	0.2	0.3

e Estimated.

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.069	0.158	0.505	18.66	17.74	9.660	0.808	0.381	0.229	0.067	0.036	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	0.012	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1989	1989	1990	2002	1989	1988	1989	1989	1988	1989	1988	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	330.67		19.27			
ANNUAL MEAN	0.906		0.053		3.965	
HIGHEST ANNUAL MEAN					27.6	1993
LOWEST ANNUAL MEAN					0.053	2002
HIGHEST DAILY MEAN	66	Feb 27	14	Nov 24	2070	Jan 16 1993
LOWEST DAILY MEAN	0.00	Jan 2	0.00	Oct 1	0.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 27	0.00	Oct 1	0.00	Oct 1 1987
MAXIMUM PEAK FLOW			101	Nov 24	5570	Jan 17 1993
MAXIMUM PEAK STAGE			4.51	Nov 24	8.59	Jan 17 1993
ANNUAL RUNOFF (AC-FT)	656		38		2870	
10 PERCENT EXCEEDS	0.10		0.05		0.88	
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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002
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	3.4	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	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	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.63	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	1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.35	0.43	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.60	2.0	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	2.2	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	1.0	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	17	0.00	0.00	0.00	0.00	2.5	0.00	0.00	0.00	0.00	0.00
25	0.00	2.1	0.00	0.00	0.00	0.00	0.46	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	0.19	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.41	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	19.91	4.14	0.00	0.95	3.43	2.96	0.00	0.00	0.00	3.62	0.00
MEAN	0.000	0.664	0.134	0.000	0.034	0.111	0.099	0.000	0.000	0.000	0.117	0.000
MAX	0.00	17	2.2	0.00	0.60	2.0	2.5	0.00	0.00	0.00	3.4	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	39	8.2	0.00	1.9	6.8	5.9	0.00	0.00	0.00	7.2	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

MEAN	0.019	0.363	0.695	12.47	13.05	10.31	5.660	2.678	0.010	0.033	0.008	0.050
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1988 - 2002
ANNUAL TOTAL	333.29	35.01	
ANNUAL MEAN	0.913	0.096	3.734
HIGHEST ANNUAL MEAN			23.2 1993
LOWEST ANNUAL MEAN			0.006 1990
HIGHEST DAILY MEAN	56 Feb 27	17 Nov 24	1340 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		133 Nov 24	e7200 Jan 16 1993
MAXIMUM PEAK STAGE		2.37 Nov 24	8.47 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	661	69	2700
10 PERCENT EXCEEDS	0.17	0.00	1.7
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.

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 mi².

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 sea level, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.—Records good. 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 ft³/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 150 ft³/s, or maximum, from rating curve extended above 6,430 ft³/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2200	647	3.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	1.9	3.6	4.0	3.6	2.4	3.0	2.9	3.1	2.7	4.7	3.5
2	2.8	2.3	3.3	4.1	5.2	2.3	2.9	3.2	3.6	2.9	5.4	4.1
3	2.4	2.0	4.0	3.8	3.6	2.0	2.8	3.0	3.0	3.0	3.9	3.9
4	2.0	2.1	5.6	4.1	12	2.1	2.9	3.1	2.3	2.7	3.5	4.0
5	2.5	2.3	3.4	3.9	4.4	3.4	2.9	3.0	3.7	2.6	3.6	3.9
6	2.9	2.0	3.3	4.2	3.9	3.6	3.2	3.0	4.2	2.0	3.2	4.5
7	2.2	3.2	3.3	5.4	3.8	3.7	3.3	2.9	3.6	2.9	3.2	5.3
8	2.9	5.2	3.2	4.3	3.7	3.8	2.9	3.0	4.0	3.4	3.4	4.3
9	1.5	2.6	3.4	3.8	3.3	3.6	2.8	3.0	3.9	2.9	3.4	3.8
10	3.0	2.4	12	4.1	2.8	4.1	2.4	2.8	4.2	2.4	3.1	4.1
11	2.7	3.5	4.2	3.6	2.5	3.5	2.5	2.9	3.7	3.3	2.8	3.7
12	3.1	3.5	3.6	4.0	3.0	3.5	2.1	2.8	3.6	4.0	2.8	3.6
13	3.2	18	3.3	3.7	3.0	2.9	2.7	2.8	2.9	3.9	2.9	3.1
14	2.9	4.1	10	4.3	3.0	3.8	2.4	3.8	3.7	3.8	2.1	3.1
15	2.8	2.3	13	3.8	1.5	3.2	2.5	4.0	3.3	3.6	2.3	2.5
16	3.4	2.1	4.6	4.5	1.7	3.4	3.1	6.7	2.8	3.7	3.2	2.4
17	2.6	2.1	3.0	3.7	5.2	4.7	2.3	4.3	2.7	3.1	3.3	2.7
18	2.6	1.9	3.5	3.9	7.7	23	2.2	3.4	2.9	3.0	3.1	2.9
19	2.5	2.2	3.1	3.6	3.0	3.9	2.8	3.2	3.5	3.3	2.7	2.9
20	3.2	2.1	3.5	4.4	3.6	3.1	2.7	3.4	2.5	3.9	3.2	3.3
21	3.1	2.3	17	3.6	3.5	2.8	2.3	3.2	3.5	3.4	3.0	2.9
22	3.1	2.0	9.3	4.3	2.8	2.8	2.1	3.2	3.7	3.5	2.9	2.9
23	2.2	2.1	3.5	3.7	2.2	3.6	2.1	3.1	3.5	3.5	3.1	2.8
24	2.8	82	3.8	3.8	2.3	2.9	7.4	3.4	3.4	3.1	2.6	3.2
25	2.9	84	3.3	3.7	2.5	1.7	13	3.4	3.3	3.0	2.5	3.4
26	3.4	6.8	4.0	4.4	2.5	1.3	3.6	3.6	3.1	3.1	2.8	3.6
27	3.3	3.1	3.4	3.7	2.2	1.1	2.9	3.5	2.2	3.2	3.1	3.6
28	3.7	2.3	4.1	9.0	2.0	2.8	2.7	3.5	2.7	3.4	3.1	4.0
29	3.5	4.6	3.8	6.7	---	2.8	2.3	3.3	3.0	3.1	2.4	4.1
30	3.6	5.2	5.0	6.2	---	2.8	2.6	3.2	2.9	3.3	3.2	3.9
31	2.5	---	7.2	3.6	---	2.8	---	3.4	---	3.3	3.4	---
TOTAL	87.8	262.2	161.3	133.9	100.5	113.4	95.4	104.0	98.5	99.0	97.9	106.0
MEAN	2.832	8.740	5.203	4.319	3.589	3.658	3.180	3.355	3.283	3.194	3.158	3.533
MAX	3.7	84	17	9.0	12	23	13	6.7	4.2	4.0	5.4	5.3
MIN	1.5	1.9	3.0	3.6	1.5	1.1	2.1	2.8	2.2	2.0	2.1	2.4
AC-FT	174	520	320	266	199	225	189	206	195	196	194	210

SANTA MARGARITA RIVER BASIN

11043000 MURRIETA CREEK AT TEMECULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1973, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.58	2.57	7.27	18.2	36.5	32.0	7.85	.92	.55	.41	.40	.65
MAX	1.87	47.3	63.2	289	604	479	167	9.65	1.73	1.20	1.23	9.40
(WY)	1969	1966	1941	1943	1969	1938	1958	1941	1941	1941	1941	1939
MIN	.10	.055	.11	.078	.20	.21	.18	.20	.13	.10	.092	.12
(WY)	1971	1970	1970	1970	1968	1965	1970	1968	1970	1970	1969	1970

SUMMARY STATISTICS

WATER YEARS 1931 - 1973

ANNUAL TOTAL	
ANNUAL MEAN	8.86
HIGHEST ANNUAL MEAN	56.9 1969
LOWEST ANNUAL MEAN	.39 1964
HIGHEST DAILY MEAN	7200 Mar 2 1938
LOWEST DAILY MEAN	.02 Jun 10 1969
ANNUAL SEVEN-DAY MINIMUM	.03 Nov 16 1969
MAXIMUM PEAK FLOW	17500 Jan 23 1943
MAXIMUM PEAK STAGE	13.80 Jan 23 1943
ANNUAL RUNOFF (AC-FT)	6420
10 PERCENT EXCEEDS	2.9
50 PERCENT EXCEEDS	.60
90 PERCENT EXCEEDS	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, 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	
MEAN	1.626	1.972	3.780	60.48	91.42	61.83	10.41	5.302	1.689	1.426	1.464	2.105																		
MAX	3.57	11.1	28.6	818	838	420	85.4	44.2	4.96	3.19	3.16	10.6																		
(WY)	2001	1997	1998	1993	1980	1978	1980	1980	1978	2002	2002	1976																		
MIN	0.18	0.000	0.000	0.12	0.55	0.093	0.073	0.19	0.13	0.13	0.15	0.17																		
(WY)	1994	1990	1990	2000	1977	1990	1989	1988	1994	1994	1993	1977																		

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1974 - 2002

ANNUAL TOTAL	3568.65	1459.9	
ANNUAL MEAN	9.777	4.000	19.93
HIGHEST ANNUAL MEAN			121 1993
LOWEST ANNUAL MEAN			1.02 1977
HIGHEST DAILY MEAN	393 Jan 11	84 Nov 25	7790 Jan 16 1993
LOWEST DAILY MEAN	0.73 Jan 6	1.1 Mar 27	0.00 Dec 11 1976
ANNUAL SEVEN-DAY MINIMUM	1.1 Jan 1	2.1 Nov 16	0.00 Nov 28 1988
MAXIMUM PEAK FLOW		647 Nov 24	25000 Jan 16 1993
MAXIMUM PEAK STAGE		3.60 Nov 24	17.24 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	7080	2900	14440
10 PERCENT EXCEEDS	8.5	4.4	8.2
50 PERCENT EXCEEDS	3.1	3.2	1.1
90 PERCENT EXCEEDS	2.0	2.3	0.15

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 mi².

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 sea level, from topographic map. Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

REMARKS.—Records 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, 800,00 acre-ft ([see station 11042800](#)). See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,000 ft³/s, Jan. 16, 1993, gage height, 22.5 ft, from rating curve extended above 4,000 ft³/s, on basis of slope-area measurement of peak flow; minimum daily, 0.16 ft³/s, Mar. 31, Apr. 1, 11, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	2.5	4.4	4.6	3.8	3.0	3.1	3.0	3.2	3.1	5.2	3.9
2	3.7	2.8	4.0	4.6	5.3	3.0	3.0	3.5	3.6	3.3	6.2	4.7
3	3.2	2.6	4.7	4.4	3.9	2.5	2.9	3.2	3.1	3.5	4.3	4.4
4	2.7	2.6	6.0	4.7	12	2.0	2.9	3.2	2.4	3.3	3.8	4.6
5	3.4	2.9	4.1	4.5	5.4	3.4	3.7	3.3	3.8	3.1	3.7	4.2
6	3.9	2.6	3.9	4.7	4.6	3.9	3.8	3.2	4.5	2.4	3.4	4.5
7	2.9	3.1	3.9	5.9	4.2	3.9	3.8	3.2	3.7	3.1	3.3	5.7
8	3.8	6.0	3.7	4.8	4.1	3.9	3.0	3.3	4.1	3.6	3.4	4.7
9	2.3	3.0	3.9	4.3	3.7	3.7	3.0	3.3	4.1	3.1	3.7	4.4
10	3.7	2.9	13	4.3	3.1	5.0	2.9	3.2	4.4	2.5	3.5	5.0
11	3.7	4.1	6.3	3.9	2.7	4.1	2.6	3.2	3.9	3.3	3.2	4.3
12	4.0	3.7	5.3	4.2	2.8	4.3	2.6	3.0	3.8	4.3	3.1	4.1
13	4.2	17	4.9	3.9	3.0	3.0	2.8	2.9	3.1	4.1	2.9	3.5
14	3.8	4.9	12	4.6	3.1	3.9	2.7	4.0	3.8	4.0	3.1	3.5
15	3.7	3.0	14	4.2	1.9	3.3	2.7	4.4	3.3	3.8	2.6	2.8
16	4.1	2.7	5.1	4.8	2.0	3.6	3.3	6.8	3.0	3.9	4.0	3.1
17	3.3	2.8	3.3	4.0	5.7	4.8	2.7	5.8	3.0	3.3	4.8	3.3
18	3.2	2.7	3.8	4.2	11	25	2.5	3.9	3.5	3.7	4.7	3.1
19	3.2	2.8	3.5	3.9	4.4	4.6	3.0	3.7	4.2	3.7	2.9	3.4
20	3.8	2.7	3.8	4.5	5.2	3.6	2.9	3.9	3.2	4.6	3.1	3.4
21	3.7	3.0	21	3.9	5.2	3.7	2.6	3.7	4.2	3.9	3.0	3.1
22	3.9	2.7	10	4.6	4.5	3.6	2.4	3.7	4.5	4.1	2.9	3.0
23	2.9	2.8	3.9	3.9	3.3	4.0	2.3	3.5	4.2	4.1	3.0	2.9
24	3.2	118	4.1	4.3	3.5	2.5	7.8	3.6	3.9	3.7	2.7	3.2
25	3.5	103	3.6	4.0	3.3	1.5	15	3.6	3.5	3.3	2.6	3.4
26	3.9	8.8	4.4	4.7	3.4	1.5	4.1	3.8	3.5	3.6	2.8	3.7
27	3.9	5.7	3.9	4.1	3.0	1.7	3.2	3.7	2.7	3.6	3.4	3.7
28	4.3	4.4	4.4	8.7	2.7	3.3	2.9	3.7	3.1	3.9	3.3	4.3
29	4.1	7.5	4.2	6.8	---	3.0	2.6	3.4	3.5	3.5	2.6	4.4
30	4.2	5.5	5.4	6.2	---	2.9	2.7	3.3	3.4	3.6	3.4	4.2
31	3.3	---	7.4	3.9	---	3.1	---	3.5	---	3.6	3.6	---
TOTAL	110.8	338.8	185.9	144.1	120.8	125.3	105.5	113.5	108.2	110.6	108.2	116.5
MEAN	3.574	11.29	5.997	4.648	4.314	4.042	3.517	3.661	3.607	3.568	3.490	3.883
MAX	4.3	118	21	8.7	12	25	15	6.8	4.5	4.6	6.2	5.7
MIN	2.3	2.5	3.3	3.9	1.9	1.5	2.3	2.9	2.4	2.4	2.6	2.8
AC-FT	220	672	369	286	240	249	209	225	215	219	215	231

SANTA MARGARITA RIVER BASIN

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 - 2002, BY WATER YEAR (WY)

MEAN	3.159	4.635	6.230	82.97	118.5	79.41	14.12	8.090	3.298	2.654	2.773	3.357
MAX	10.8	32.8	32.4	1255	1105	438	85.6	46.6	6.87	4.55	9.99	13.9
(WY)	1994	1986	1998	1993	1980	1978	1980	1980	1978	1980	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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1974 - 2002

ANNUAL TOTAL	4697.58	1688.2	
ANNUAL MEAN	12.87	4.625	26.98
HIGHEST ANNUAL MEAN			183 1993
LOWEST ANNUAL MEAN			2.17 1987
HIGHEST DAILY MEAN	546 Jan 11	118 Nov 24	13000 Jan 16 1993
LOWEST DAILY MEAN	0.98 Jan 6	1.5 Mar 25	0.16 Mar 31 1988
ANNUAL SEVEN-DAY MINIMUM	1.5 Jan 1	2.3 Mar 24	0.18 Mar 31 1988
MAXIMUM PEAK FLOW		842 Nov 24	31000 Jan 16 1993
MAXIMUM PEAK STAGE		4.35 Nov 24	22.50 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	9320	3350	19540
10 PERCENT EXCEEDS	10	5.2	13
50 PERCENT EXCEEDS	3.8	3.7	2.8
90 PERCENT EXCEEDS	2.7	2.7	1.1

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—December 1999 to current year.

DISSOLVED OXYGEN: December 1999 to current year.

pH: December 1999 to current year.

SPECIFIC CONDUCTANCE: December 1999 to current year.

WATER TEMPERATURE: December 1999 to current year.

PERIOD OF DAILY RECORD.—December 1999 to current year.

DISSOLVED OXYGEN: December 1999 to current year.

pH: December 1999 to current year.

SPECIFIC CONDUCTANCE: December 1999 to current year.

WATER TEMPERATURE: December 1999 to current year.

INSTRUMENTATION.—Water-quality monitor since December 1999.

REMARKS.—Dissolved oxygen records rated fair except for Oct. 1 to Nov. 7, Apr. 22 to June 11, July 1–11, and Aug. 24 to Sept. 9, which are rated poor. pH records rated good. Specific conductance records rated excellent except for Oct. 1 to Nov. 10, which are rated good, and Nov. 10–20, which are rated fair. Temperature records rated excellent. Interruptions in record at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 17.4 mg/L, Mar. 25, 2000; minimum recorded, 4.1 mg/L, June 23, 24, 2002.

pH: Maximum recorded, 8.8 standard units, Mar. 23, 2000; minimum recorded, 6.4 standard units, July 27–29, 2001.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,450 microsiemens, Nov. 7, 2001; minimum recorded, 220 microsiemens, Jan. 11, 2001.

WATER TEMPERATURE: Maximum recorded, 27.5°C, July 19, 27, Aug. 1, 4, 10, 2000; minimum recorded, 4.5°C, Jan. 8, 2000.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 11.5 mg/L, Jan. 26, Feb. 2; minimum recorded, 4.1 mg/L, June 23, 24.

pH: Maximum recorded, 8.2 standard units, Dec. 10; minimum recorded, 7.0 standard units, Oct. 7–12, 16.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,450 microsiemens, Nov. 7; minimum recorded, 302 microsiemens, Nov. 25.

WATER TEMPERATURE: Maximum recorded, 26.0°C, July 16; minimum recorded, 4.8°C, Jan. 31.

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	BARO- METRIC PRES- SURE OF (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)
NOV								
20...	1412	730	8.4	--	7.5	1400	--	38.0
20...	1415	730	8.4	84	7.5	1400	13.4	34.0
20...	1417	730	8.5	85	7.5	1400	13.4	30.0
20...	1419	730	8.5	85	7.5	1400	13.4	26.0
20...	1421	730	8.5	86	7.5	1390	13.5	22.0
20...	1424	730	8.6	87	7.5	1390	13.5	18.0
20...	1426	730	8.6	87	7.5	1400	13.5	14.0
20...	1429	730	8.5	86	7.5	1400	13.5	10.0
20...	1432	730	8.4	85	7.5	1400	13.5	6.00
MAY								
10...	1405	720	8.9	107	7.7	1230	21.5	33.0
10...	1407	720	8.9	107	7.7	1230	21.5	29.0
10...	1410	720	9.1	109	7.7	1230	21.4	25.0
10...	1412	720	9.1	110	7.8	1230	21.5	21.0
10...	1415	720	9.0	109	7.8	1230	21.4	17.0
10...	1418	720	9.1	109	7.8	1230	21.3	13.0
10...	1420	720	9.1	109	7.8	1230	21.2	9.00
10...	1423	720	9.1	109	7.8	1230	21.2	5.00
10...	1425	720	9.0	108	7.8	1230	21.2	1.00

* Instantaneous discharge at time of cross-sectional measurements: Nov. 20, 3.1 ft³/s; May 10, 2.8 ft³/s.

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.1	6.1	9.2	7.6	---	---	7.5	6.8	11.1	8.9	8.8	6.5
2	9.9	8.5	9.8	8.1	---	---	7.6	6.8	11.5	9.0	9.1	6.8
3	9.7	8.3	9.7	8.4	---	---	7.6	6.8	11.2	8.9	9.3	7.1
4	9.0	7.8	9.2	8.2	---	---	7.7	6.7	10.6	8.6	8.9	7.6
5	9.0	8.0	9.6	8.0	---	---	8.3	6.9	9.9	8.0	8.7	6.8
6	9.4	8.1	9.2	8.1	---	---	8.7	7.3	9.9	8.0	8.7	6.7
7	9.4	7.9	9.1	7.8	8.4	6.8	8.6	7.3	10.1	8.0	7.7	6.3
8	9.7	8.3	---	---	8.8	5.9	8.3	6.7	9.9	7.8	8.1	6.2
9	8.7	7.7	---	---	9.7	8.6	8.0	6.8	9.7	7.7	8.1	6.1
10	9.7	7.7	---	---	9.7	7.8	7.8	6.6	9.8	8.0	7.8	5.9
11	9.2	8.1	---	---	---	---	8.4	6.9	9.6	7.9	7.7	5.8
12	9.4	8.0	---	---	---	---	8.8	7.2	9.7	7.7	7.4	5.6
13	9.5	8.4	---	---	---	---	9.0	7.4	9.9	7.8	7.0	5.2
14	9.4	8.3	---	---	9.1	8.0	9.3	7.5	9.7	7.8	7.6	5.8
15	9.4	8.2	---	---	8.3	7.7	8.5	7.4	9.4	7.2	7.8	5.9
16	9.2	8.1	---	---	8.8	8.1	8.9	7.2	8.8	7.0	8.0	6.2
17	9.2	8.2	---	---	8.9	8.2	9.3	7.5	9.0	6.9	8.0	6.6
18	9.5	8.3	---	---	8.9	8.2	9.5	7.5	8.9	7.2	7.3	5.9
19	9.9	8.1	---	---	9.1	8.2	9.8	7.9	9.2	7.3	7.0	5.8
20	9.5	8.3	---	---	9.0	8.3	10.1	8.2	9.2	7.0	6.9	5.5
21	9.7	8.1	8.3	7.5	8.5	7.6	10.2	8.3	9.1	6.6	7.1	5.3
22	9.2	8.0	8.0	7.4	7.8	7.3	9.7	7.8	8.9	6.5	7.0	5.4
23	9.5	8.0	7.6	6.9	8.0	7.4	10.0	8.0	8.9	6.2	7.0	5.2
24	9.3	7.7	8.1	7.0	8.2	7.5	11.4	8.5	8.8	6.6	6.9	5.6
25	9.0	7.8	---	---	8.6	7.9	11.3	9.2	8.7	6.2	6.8	5.6
26	8.8	7.5	---	---	9.0	8.2	11.5	8.8	8.8	6.4	6.5	5.3
27	8.8	7.5	---	---	8.9	8.3	11.1	9.1	9.0	6.4	6.4	4.7
28	8.2	7.1	---	---	8.9	8.1	10.0	8.1	9.2	6.8	6.4	4.6
29	8.6	7.1	---	---	8.3	7.7	9.6	8.2	---	---	7.1	5.8
30	8.5	7.1	---	---	8.4	7.1	10.8	8.5	---	---	6.8	5.3
31	9.2	6.9	---	---	7.6	6.8	11.0	9.2	---	---	6.6	5.1
MONTH	10.1	6.1	---	---	---	---	11.5	6.6	11.5	6.2	9.3	4.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.8	5.0	8.0	5.8	---	---	7.5	5.7	6.5	5.0	7.4	5.6
2	6.9	4.7	8.0	5.9	---	---	7.5	5.6	6.6	5.2	7.3	5.6
3	6.8	4.9	8.1	5.7	---	---	7.3	5.6	6.5	5.2	7.4	5.7
4	6.8	4.9	8.1	5.6	---	---	7.3	5.4	6.8	5.2	7.5	5.8
5	6.7	5.0	7.9	5.5	---	---	7.4	5.4	6.8	5.2	7.0	5.9
6	6.4	5.4	7.7	5.5	---	---	7.6	5.5	7.0	5.1	6.4	5.8
7	7.4	5.8	7.3	5.3	---	---	7.7	5.5	7.3	5.2	6.8	5.9
8	6.9	5.1	7.6	5.5	---	---	7.1	5.4	7.9	5.1	7.4	6.3
9	7.2	5.0	7.5	5.3	---	---	7.4	5.4	8.0	5.6	7.4	6.1
10	7.1	4.8	8.8	5.1	---	---	7.0	5.4	7.4	5.3	7.1	5.6
11	7.0	4.8	8.8	5.4	---	---	7.2	5.7	7.3	4.7	6.3	5.2
12	7.3	4.9	8.6	5.3	8.2	5.6	7.4	5.6	7.5	4.6	6.6	5.2
13	7.0	5.0	8.1	5.0	7.8	5.0	6.9	5.3	7.7	5.2	6.6	5.3
14	6.8	4.6	7.7	5.0	7.7	4.8	6.7	5.2	7.9	4.9	6.5	5.3
15	6.1	4.4	7.9	5.0	7.7	5.1	6.9	5.2	7.8	5.3	6.5	5.0
16	7.0	5.2	7.5	5.3	7.3	4.7	6.6	5.1	7.4	5.1	6.5	4.9
17	7.2	5.3	7.7	5.3	7.2	4.7	6.9	5.4	7.1	5.4	6.8	5.4
18	7.7	5.5	7.6	5.3	7.1	4.7	6.8	5.4	7.2	5.3	6.7	5.6
19	8.1	5.9	7.4	5.5	7.4	5.0	6.8	5.3	7.2	5.1	6.8	5.5
20	8.2	5.8	7.4	5.7	7.2	4.9	6.6	5.3	7.4	5.2	6.7	5.3
21	8.3	5.7	8.5	6.2	6.8	4.9	6.9	5.2	7.3	5.5	6.7	5.7
22	8.2	5.6	8.6	6.1	7.0	5.1	6.9	5.2	7.6	5.6	6.5	5.4
23	7.9	5.4	8.7	5.9	6.4	4.1	6.9	5.2	7.6	5.5	6.5	5.4
24	6.8	5.2	8.8	6.0	6.8	4.1	6.8	5.1	7.8	5.7	6.7	5.4
25	5.9	4.3	9.1	6.2	7.1	5.1	7.1	5.0	7.9	5.6	7.0	5.8
26	5.7	4.3	9.0	6.2	7.2	5.2	7.1	5.1	7.3	5.3	6.9	5.8
27	6.5	4.8	9.2	6.4	7.5	5.2	7.1	5.2	7.4	5.8	6.9	5.8
28	7.7	5.3	9.1	6.1	7.7	5.2	7.0	5.1	7.4	5.8	6.4	5.9
29	7.8	5.4	8.8	6.0	7.6	5.6	7.0	5.1	7.4	5.8	7.0	6.1
30	7.9	5.4	8.7	5.8	7.7	5.4	6.6	5.2	7.7	5.9	7.0	6.1
31	---	---	8.4	5.9	---	---	6.8	5.2	7.4	6.1	---	---
MONTH	8.3	4.3	9.2	5.0	---	---	7.7	5.0	8.0	4.6	7.5	4.9

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.2	7.5	7.3	7.8	7.7	7.7	7.7	7.8	7.6	7.6	7.5
2	7.6	7.4	7.6	7.4	7.8	7.7	7.8	7.6	7.9	7.6	7.7	7.5
3	7.5	7.3	7.5	7.3	7.9	7.8	7.8	7.7	7.9	7.6	7.6	7.5
4	7.3	7.2	7.6	7.4	7.9	7.8	7.9	7.7	7.9	7.6	7.6	7.5
5	7.3	7.2	7.5	7.4	7.8	7.8	7.9	7.8	7.8	7.6	7.7	7.5
6	7.3	7.1	7.5	7.3	8.0	7.8	7.8	7.7	7.7	7.6	7.8	7.5
7	7.2	7.0	7.6	7.3	8.0	7.9	7.9	7.7	7.8	7.6	7.6	7.5
8	7.1	7.0	7.6	7.4	8.0	8.0	7.8	7.6	7.8	7.6	7.8	7.5
9	7.1	7.0	7.6	7.4	8.1	8.0	7.8	7.6	7.8	7.6	7.8	7.5
10	7.1	7.0	7.6	7.5	8.2	8.0	7.8	7.6	7.8	7.7	7.8	7.6
11	7.1	7.0	7.6	7.5	8.1	7.9	7.8	7.7	7.7	7.6	7.7	7.6
12	7.2	7.0	7.6	7.5	7.9	7.8	7.8	7.6	7.8	7.6	7.7	7.6
13	7.3	7.1	7.6	7.2	7.9	7.8	7.8	7.7	7.8	7.6	7.7	7.6
14	7.3	7.1	7.3	7.1	7.9	7.7	7.9	7.7	7.8	7.6	7.8	7.6
15	7.2	7.1	7.4	7.2	7.8	7.6	7.8	7.7	7.8	7.6	7.8	7.6
16	7.3	7.0	7.5	7.3	7.7	7.6	7.9	7.7	7.7	7.6	7.8	7.6
17	7.3	7.1	7.5	7.4	7.7	7.6	7.9	7.7	7.7	7.6	7.8	7.6
18	7.2	7.1	7.5	7.4	7.7	7.6	7.9	7.7	7.7	7.5	7.7	7.4
19	7.4	7.2	7.5	7.4	7.8	7.7	7.9	7.7	7.6	7.5	7.5	7.4
20	7.5	7.1	7.8	7.4	7.8	7.7	7.9	7.7	7.6	7.5	7.5	7.4
21	7.5	7.2	7.8	7.8	7.8	7.5	7.9	7.7	7.7	7.5	7.6	7.4
22	7.6	7.4	7.8	7.8	7.6	7.5	8.0	7.7	7.7	7.5	7.6	7.5
23	7.6	7.4	7.8	7.8	7.6	7.5	7.9	7.7	7.7	7.5	7.6	7.5
24	7.6	7.3	7.9	7.7	7.6	7.6	7.9	7.7	7.7	7.6	7.6	7.5
25	7.6	7.4	7.8	7.4	7.7	7.6	7.9	7.7	7.7	7.6	7.6	7.5
26	7.6	7.3	7.6	7.5	7.8	7.7	8.0	7.7	7.8	7.6	7.6	7.5
27	7.6	7.4	7.7	7.6	7.7	7.7	8.0	7.7	7.7	7.5	7.6	7.5
28	7.6	7.5	7.7	7.7	7.8	7.7	7.9	7.6	7.8	7.5	7.6	7.5
29	7.6	7.5	7.8	7.7	7.8	7.7	7.7	7.5	---	---	7.7	7.6
30	7.7	7.4	7.8	7.7	7.8	7.7	7.8	7.5	---	---	7.7	7.6
31	7.7	7.3	---	---	7.8	7.7	7.7	7.5	---	---	7.7	7.6
MONTH	7.7	7.0	7.9	7.1	8.2	7.5	8.0	7.5	7.9	7.5	7.8	7.4
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.7	7.6	7.8	7.6	7.8	7.5	7.6	7.5	7.7	7.6	7.6	7.4
2	7.7	7.6	7.8	7.6	7.8	7.5	7.6	7.5	7.8	7.6	7.6	7.3
3	7.7	7.6	7.8	7.6	7.7	7.5	7.6	7.5	7.7	7.6	7.6	7.3
4	7.7	7.6	7.9	7.6	7.8	7.5	7.6	7.5	7.8	7.6	7.6	7.4
5	7.7	7.6	7.9	7.6	7.7	7.5	7.7	7.4	7.7	7.6	7.4	7.4
6	7.7	7.6	7.8	7.6	7.7	7.6	7.7	7.5	7.8	7.6	7.4	7.4
7	7.8	7.6	7.8	7.6	7.7	7.5	7.7	7.5	7.8	7.6	7.4	7.4
8	7.7	7.6	7.9	7.6	7.8	7.5	7.7	7.5	7.8	7.5	7.5	7.4
9	7.8	7.5	7.9	7.6	7.7	7.6	7.7	7.5	7.8	7.5	7.6	7.4
10	7.6	7.5	7.9	7.6	7.7	7.5	7.6	7.5	7.8	7.5	7.6	7.5
11	7.7	7.5	7.8	7.6	7.8	7.6	7.7	7.5	7.8	7.5	7.5	7.5
12	7.7	7.5	7.8	7.6	7.8	7.6	7.7	7.6	7.8	7.5	7.6	7.5
13	7.7	7.5	7.8	7.5	7.8	7.6	7.7	7.6	7.8	7.5	7.6	7.5
14	7.7	7.5	7.8	7.6	7.8	7.6	7.7	7.6	7.8	7.4	7.6	7.5
15	7.6	7.5	7.8	7.6	7.8	7.6	7.7	7.6	7.7	7.4	7.6	7.5
16	7.6	7.5	7.8	7.6	7.7	7.5	7.7	7.6	7.7	7.4	7.6	7.5
17	7.6	7.5	7.8	7.6	7.8	7.5	7.7	7.6	7.7	7.4	7.6	7.5
18	7.7	7.5	7.8	7.6	7.7	7.6	7.7	7.6	7.7	7.4	7.6	7.5
19	7.7	7.5	7.8	7.6	7.8	7.6	7.7	7.6	7.6	7.4	7.6	7.5
20	7.7	7.5	7.8	7.6	7.8	7.6	7.7	7.6	7.7	7.4	7.6	7.5
21	7.7	7.5	7.8	7.5	7.8	7.6	7.8	7.6	7.7	7.5	7.6	7.5
22	7.7	7.5	7.7	7.5	7.8	7.6	7.8	7.6	7.7	7.5	7.6	7.5
23	7.7	7.5	7.7	7.5	7.7	7.5	7.7	7.6	7.7	7.4	7.6	7.5
24	7.6	7.5	7.7	7.5	7.6	7.4	7.8	7.6	7.7	7.5	7.6	7.5
25	7.5	7.2	7.8	7.5	7.7	7.5	7.8	7.6	7.7	7.4	7.7	7.6
26	7.4	7.2	7.8	7.5	7.7	7.5	7.8	7.6	7.6	7.4	7.7	7.6
27	7.6	7.4	7.8	7.5	7.7	7.5	7.8	7.6	7.7	7.5	7.6	7.6
28	7.7	7.5	7.8	7.5	7.7	7.5	7.8	7.6	7.6	7.4	7.6	7.6
29	7.7	7.6	7.8	7.5	7.7	7.5	7.7	7.6	7.6	7.2	7.6	7.6
30	7.8	7.6	7.8	7.5	7.7	7.5	7.7	7.6	7.6	7.4	7.6	7.6
31	---	---	7.7	7.5	---	---	7.7	7.6	7.5	7.4	---	---
MONTH	7.8	7.2	7.9	7.5	7.8	7.4	7.8	7.4	7.8	7.2	7.7	7.3

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1210	1140	1390	1300	1250	1160	1090	996	1100	1040	1300	1290
2	1160	1100	1390	1360	1190	1160	1070	997	1210	1100	1300	1290
3	1180	1110	1410	1390	1240	1190	1160	1070	1210	1190	1310	1290
4	1140	1040	1410	1370	1230	1150	1220	1160	1200	973	1300	1260
5	1170	1030	1420	1390	1190	1060	1230	1220	1200	1100	1280	1270
6	1160	1080	1420	1410	1190	1080	1250	1220	1160	1100	1290	1280
7	1200	1120	1450	1420	1230	1180	1250	1210	1180	1150	1280	1250
8	1170	1090	1440	911	1250	1190	1230	1170	1210	1160	1250	1230
9	1190	1140	1400	1320	1220	1190	1200	1170	1240	1210	1250	1240
10	1180	1130	1400	1360	1220	952	1230	1190	1250	1230	1260	1240
11	1220	1170	1380	1320	1250	980	1240	1230	1270	1250	1280	1260
12	1180	1120	1320	1170	1260	1180	1240	1220	1290	1270	1310	1250
13	1200	1160	1230	954	1230	1180	1240	1220	1300	1290	1260	1250
14	1200	1170	1050	954	1240	852	1240	1220	1300	1290	1270	1260
15	1170	1160	1140	1050	924	705	1240	1220	1300	1290	1290	1270
16	1170	1130	1210	1140	810	704	1240	1220	1290	1270	1300	1290
17	1140	1120	1310	1210	1040	810	1240	1220	1280	1250	1290	1100
18	1140	1140	1340	1310	1200	1040	1230	1220	1280	1010	1100	595
19	1160	1140	1360	1340	1250	1200	1250	1220	1010	933	849	657
20	1160	1150	1410	1360	1280	1240	1250	1220	1020	921	953	849
21	1190	1160	1410	1400	1280	659	1240	1220	1070	1020	1120	953
22	1210	1190	1410	1390	735	595	1230	1210	1080	1040	1230	1120
23	1230	1210	1400	1390	923	735	1240	1220	1150	1080	1260	1230
24	1260	1230	1390	413	1080	923	1230	1200	1230	1150	1280	1250
25	1260	1250	565	302	1160	1080	1240	1220	1270	1230	1280	1270
26	1250	1220	628	554	1260	1160	1240	1220	1290	1260	1270	1230
27	1220	1220	797	564	1260	1210	1240	1220	1300	1280	1230	1200
28	1240	1220	1030	658	1230	1210	1220	1070	1290	1280	1220	1190
29	1250	1230	1190	992	1240	1200	1070	898	---	---	1330	1220
30	1260	1220	1260	1190	1210	1190	989	865	---	---	1360	1330
31	1300	1200	---	---	1190	1090	1040	989	---	---	1340	1260
MONTH	1300	1030	1450	302	1280	595	1250	865	1300	921	1360	595
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX		MIN		MAX		MIN		MAX		MIN	
1	1340	1320	1200	1150	1220	1180	1160	1100	1310	1030	1150	1070
2	1330	1320	1170	1130	1210	1170	1150	1080	1360	1180	1120	1060
3	1330	1320	1180	1150	1220	1180	1170	1120	1340	1150	1120	1060
4	1330	1310	1180	1130	1190	1140	1170	1110	1180	1120	1110	1010
5	1330	1320	1190	1160	1150	1090	1200	1070	1180	1120	1120	1020
6	1330	1300	1190	1150	1200	866	1190	1020	1170	1130	1160	1060
7	1330	1320	1200	1160	1210	1130	1120	995	1160	1070	1250	1130
8	1330	1320	1190	1160	1200	1150	1160	1090	1160	1030	1200	1120
9	1320	1270	1220	1170	1200	1150	1180	1130	1180	1150	1150	1110
10	1300	1290	1230	1170	1190	1150	1140	1050	1160	1100	1140	1020
11	1300	1290	1240	1180	1200	1170	1140	1030	1140	1080	1160	1020
12	1310	1290	1230	1180	1220	632	1140	1050	1120	1050	1170	1050
13	1310	1290	1230	1200	1200	627	1170	1090	1140	1060	1170	1120
14	1310	1300	1270	1140	1230	1090	1130	1070	1140	982	1170	1110
15	1300	1290	1180	1150	1230	1150	1120	1080	1020	970	1180	1120
16	1290	1280	1240	1130	1210	1140	1130	1040	1120	1000	1160	1050
17	1290	1280	1250	1180	1200	1130	1130	1100	1150	1070	1170	1040
18	1280	1270	1180	1120	1190	1140	1140	1090	1190	1080	1190	1110
19	1270	1250	1140	1120	1190	1100	1160	1110	1130	1020	1200	1090
20	1270	1240	1150	1100	1180	1080	1240	1100	1160	1010	1180	1070
21	1270	1240	1210	1120	1230	984	1190	1160	1170	1090	1180	1150
22	1270	1180	1200	1150	1200	1110	1160	1120	1180	1080	1180	1120
23	1280	1260	1210	1150	1200	1150	1160	1130	1130	1050	1180	1090
24	1280	1030	1200	1160	1180	1120	1150	1130	1170	1090	1170	1090
25	1080	622	1220	1170	1160	1120	1130	1070	1140	1030	1150	1040
26	840	694	1210	1160	1160	1120	1130	1080	1100	984	1150	1060
27	981	840	1230	1190	1120	1080	1140	1090	1120	1060	1140	1060
28	1110	981	1210	1170	1110	1020	1150	1090	1120	1040	1160	1070
29	1190	1110	1210	1170	1170	1110	1160	1120	1080	1000	1150	1090
30	1220	1190	1210	1170	1180	1100	1150	1080	1110	982	1170	1070
31	---	---	1230	1150	---	---	1180	1100	1110	1090	---	---
MONTH	1340	622	1270	1100	1230	627	1240	995	1360	970	1250	1010

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.8	19.1	17.4	15.9	11.6	9.2	13.2	12.1	8.3	6.1	16.6	14.4
2	22.0	19.0	16.5	14.8	11.9	9.3	13.6	11.9	9.8	5.5	14.9	12.0
3	21.7	19.1	16.6	14.9	13.2	11.7	13.8	12.4	9.0	5.8	14.4	11.2
4	21.8	18.8	17.2	16.1	12.1	10.5	13.9	12.5	12.2	6.5	14.3	10.4
5	21.5	19.4	17.5	15.8	10.9	8.7	13.1	10.8	10.7	6.8	13.5	10.7
6	20.6	18.7	17.6	15.8	10.7	8.7	12.0	9.6	10.6	7.4	13.4	10.8
7	20.8	18.2	17.7	16.2	10.5	8.2	12.6	10.0	10.8	7.5	14.6	13.4
8	19.8	17.6	18.0	15.9	11.1	9.3	12.9	9.8	11.9	8.5	16.0	12.8
9	20.2	18.2	16.3	14.6	10.3	7.9	13.4	11.1	12.2	9.5	15.5	12.3
10	19.6	17.3	17.0	15.5	13.1	8.3	13.6	11.8	11.9	9.3	16.1	13.0
11	19.0	16.3	16.8	15.4	12.3	9.5	12.7	9.8	12.3	9.1	16.7	12.8
12	19.3	16.8	15.9	14.8	9.9	7.9	11.7	9.3	12.0	9.2	17.4	13.7
13	18.4	15.4	16.1	14.5	9.6	7.2	11.1	8.2	11.4	9.5	17.2	14.4
14	18.5	15.8	15.0	12.8	9.5	7.7	11.6	8.2	12.3	10.0	15.1	12.7
15	18.5	15.8	14.2	12.3	9.8	7.9	11.6	10.8	14.3	11.4	14.8	11.8
16	18.5	16.2	14.0	12.2	8.9	6.3	12.0	10.7	14.7	12.1	14.4	12.0
17	18.0	15.3	13.7	12.3	8.6	6.5	11.0	8.6	13.1	11.7	13.2	12.0
18	18.0	15.6	13.6	12.0	8.9	6.6	10.6	8.3	13.3	10.2	15.0	10.0
19	17.6	15.7	12.9	11.1	8.6	6.5	10.0	7.8	13.1	10.0	15.0	10.3
20	18.2	16.2	13.5	11.7	9.0	7.2	9.9	6.9	14.5	10.8	16.0	12.1
21	17.9	16.4	13.4	12.0	10.7	8.3	10.0	6.4	15.9	11.7	15.9	13.0
22	18.6	17.0	14.2	12.7	11.6	9.4	10.5	8.8	16.2	13.1	16.8	13.6
23	17.9	15.4	15.0	13.6	10.8	8.9	10.2	8.2	15.8	13.7	16.9	14.6
24	17.7	15.5	14.0	12.4	10.4	8.2	9.1	5.8	17.1	14.0	17.1	14.0
25	18.2	15.6	13.9	12.4	9.4	7.3	9.8	6.3	16.3	13.6	17.4	13.5
26	18.1	15.8	12.8	11.1	9.5	6.8	10.1	7.0	16.8	13.4	18.7	13.5
27	18.0	15.8	11.4	8.9	9.5	7.4	10.9	8.0	15.9	13.8	17.5	13.8
28	17.9	17.2	10.2	7.9	10.1	8.2	11.3	9.5	15.6	13.0	15.5	14.3
29	18.5	16.8	10.0	9.6	11.3	9.6	9.7	7.8	---	---	17.2	13.2
30	18.2	16.6	11.6	9.8	12.4	10.3	9.1	5.7	---	---	18.9	15.2
31	18.3	16.5	---	---	13.9	11.8	7.8	4.8	---	---	19.6	15.8
MONTH	22.0	15.3	18.0	7.9	13.9	6.3	13.9	4.8	17.1	5.5	19.6	10.0
DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.9	16.2	18.6	15.2	24.1	19.6	24.2	20.1	24.1	20.7	24.7	20.7
2	19.8	16.6	19.8	15.6	23.3	19.9	24.7	19.7	24.7	20.4	24.8	21.8
3	19.7	16.6	20.0	15.7	22.5	19.1	24.8	20.4	24.9	21.7	24.1	20.8
4	20.4	17.0	20.3	16.3	23.4	18.6	24.7	20.2	24.1	20.4	23.9	20.9
5	17.6	15.7	20.7	16.7	24.1	19.5	24.2	19.9	24.2	20.2	22.9	21.3
6	16.1	15.2	20.2	16.6	24.6	19.9	23.8	19.9	23.5	20.1	22.7	21.7
7	18.4	14.2	18.7	17.1	23.1	19.3	24.1	19.3	22.6	19.1	22.4	20.9
8	19.7	16.3	21.0	16.4	24.0	20.1	25.6	21.1	23.5	19.4	21.5	19.6
9	20.5	16.7	21.6	17.2	21.4	18.8	25.0	21.7	23.8	20.2	22.4	19.0
10	21.1	17.2	21.9	17.8	22.5	19.1	24.5	21.5	24.1	20.7	22.4	19.6
11	21.0	17.1	21.5	17.4	22.5	17.9	23.4	21.0	24.8	21.1	22.4	19.5
12	20.2	16.9	22.2	17.2	23.3	18.5	24.8	20.9	24.7	21.9	22.5	19.4
13	21.6	17.5	22.1	18.2	23.5	19.1	25.8	21.8	24.5	20.7	22.6	19.5
14	21.3	17.7	23.0	18.7	23.3	19.1	25.6	21.7	24.2	21.0	22.7	19.7
15	18.9	16.9	22.4	18.8	23.3	18.9	25.3	21.5	24.0	21.0	22.9	19.7
16	17.6	15.7	22.0	18.4	23.9	18.6	26.0	21.6	24.1	21.0	22.9	20.2
17	18.5	15.5	22.4	18.3	24.0	19.5	24.6	21.2	24.3	20.7	21.7	18.8
18	19.0	14.5	22.0	18.9	23.8	19.4	25.1	21.1	23.6	21.2	22.0	19.7
19	18.5	15.1	21.1	18.4	23.7	19.4	24.7	21.1	24.1	20.9	22.0	18.9
20	19.0	14.2	19.9	18.0	24.2	20.1	24.4	21.4	23.8	21.2	22.1	19.6
21	19.6	14.9	20.5	16.0	23.7	19.7	23.5	19.8	24.1	20.9	22.1	19.0
22	20.5	15.5	21.0	16.4	24.2	19.9	24.3	20.4	23.8	20.9	22.7	19.6
23	21.3	16.9	21.4	16.9	24.1	19.4	25.0	20.7	23.0	19.6	22.5	19.4
24	17.9	16.3	21.8	17.8	24.4	19.9	25.0	21.3	23.0	19.8	22.2	19.7
25	20.4	15.7	21.4	17.3	23.7	19.0	24.2	20.9	22.6	18.9	21.7	19.2
26	18.6	16.2	21.6	18.3	24.1	20.1	24.2	20.7	23.7	19.9	22.2	19.8
27	17.5	15.7	22.3	17.8	23.6	19.4	24.2	20.6	22.9	20.2	21.1	19.8
28	19.5	14.3	22.9	18.6	23.5	18.9	24.6	20.6	23.3	20.4	20.3	19.4
29	20.1	15.8	23.9	18.8	23.8	19.2	23.9	20.3	23.1	19.9	20.8	18.8
30	19.5	16.2	23.5	19.8	24.6	19.6	23.3	21.0	23.0	19.6	20.0	18.4
31	---	---	22.3	19.3	---	---	23.5	19.8	22.9	20.0	---	---
MONTH	21.6	14.2	23.9	15.2	24.6	17.9	26.0	19.3	24.9	18.9	24.8	18.4

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 mi².

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 sea level, 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 ft³/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, 0.01ft³/s, Sept. 22, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 712 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1900	69	4.14

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.03	0.23	0.23	0.19	0.16	0.13	0.09	0.05	0.02	0.03	0.03
2	0.04	0.04	0.20	0.24	0.25	0.16	0.12	0.11	0.05	0.02	0.03	0.03
3	0.04	0.05	0.23	0.27	0.26	0.16	0.11	0.11	0.04	0.02	0.03	0.03
4	0.04	0.05	0.28	0.29	0.25	0.17	0.12	0.11	0.04	0.02	0.03	0.02
5	0.04	0.05	0.21	0.28	0.23	0.16	0.13	0.10	0.04	0.02	0.03	0.02
6	0.04	0.05	0.18	0.29	0.22	0.16	0.13	0.08	0.04	0.03	0.02	0.03
7	0.03	0.06	0.17	0.29	0.21	0.16	0.13	0.10	0.04	0.03	0.03	0.02
8	0.04	0.06	0.17	0.29	0.23	0.17	0.13	0.10	0.05	0.03	0.03	0.02
9	0.04	0.06	0.17	0.28	0.25	0.16	0.12	0.08	0.05	0.03	0.02	0.02
10	0.04	0.06	0.37	0.27	0.25	0.15	0.11	0.08	0.05	0.03	0.02	0.02
11	0.04	0.06	0.34	0.29	0.26	0.15	0.10	0.08	0.04	0.03	0.02	0.02
12	0.04	0.06	0.31	0.28	0.28	0.16	0.09	0.09	0.04	0.03	0.02	0.02
13	0.04	0.09	0.32	0.28	0.28	0.16	0.08	0.10	0.04	0.03	0.02	0.02
14	0.04	0.06	1.3	0.29	0.29	0.16	0.08	0.11	0.04	0.03	0.03	0.03
15	0.04	0.05	0.49	0.28	0.30	0.16	0.09	0.11	0.04	0.03	0.03	0.02
16	0.04	0.04	0.23	0.27	0.30	0.17	0.10	0.10	0.04	0.03	0.03	0.02
17	0.03	0.04	0.20	0.28	0.26	0.18	0.09	0.06	0.04	0.03	0.03	0.02
18	0.03	0.04	0.17	0.29	0.16	0.81	0.09	0.06	0.04	e0.03	0.03	0.03
19	0.03	0.04	0.17	0.29	0.16	0.25	0.09	0.06	0.04	0.03	0.03	0.03
20	0.04	0.04	0.17	0.29	0.17	0.17	0.09	0.06	0.04	0.03	0.04	0.02
21	0.04	0.05	0.89	0.28	0.17	0.15	0.09	0.06	0.04	0.02	0.04	0.02
22	0.04	0.06	0.43	0.28	0.18	0.14	0.10	0.06	0.04	0.02	0.03	0.01
23	0.04	0.06	0.30	0.28	0.18	0.14	0.08	0.05	0.04	0.02	0.03	0.02
24	0.04	5.7	0.25	0.26	0.18	0.14	0.11	0.05	0.04	0.02	0.03	0.02
25	0.04	1.4	0.22	0.26	0.18	0.14	0.11	0.05	0.04	0.02	0.02	0.03
26	0.04	0.34	0.19	0.25	0.18	0.14	0.10	0.05	e0.03	0.03	0.02	0.02
27	0.04	0.24	0.18	0.25	0.19	0.14	0.12	0.05	0.04	0.03	0.02	0.02
28	0.03	0.19	0.19	0.26	0.18	0.15	0.11	0.05	0.03	0.03	0.02	0.02
29	0.03	0.23	0.23	0.43	---	0.13	0.09	0.04	0.03	0.03	0.03	0.02
30	0.04	0.28	0.28	0.31	---	0.13	0.09	0.04	0.02	0.03	0.03	0.02
31	0.03	---	0.26	0.16	---	0.13	---	0.04	---	0.03	0.02	---
TOTAL	1.17	9.58	9.33	8.59	6.24	5.51	3.13	2.33	1.20	0.83	0.84	0.67
MEAN	0.038	0.319	0.301	0.277	0.223	0.178	0.104	0.075	0.040	0.027	0.027	0.022
MAX	0.04	5.7	1.3	0.43	0.30	0.81	0.13	0.11	0.05	0.03	0.04	0.03
MIN	0.03	0.03	0.17	0.16	0.16	0.13	0.08	0.04	0.02	0.02	0.02	0.01
AC-FT	2.3	19	19	17	12	11	6.2	4.6	2.4	1.6	1.7	1.3

e Estimated.

11044250 RAINBOW CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.446	0.802	1.011	12.07	12.56	9.240	2.739	1.199	0.643	0.334	0.285	0.386
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	0.038	0.15	0.20	0.28	0.22	0.18	0.10	0.075	0.040	0.027	0.027	0.022
(WY)	2002	2000	2000	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1990 - 2002	
ANNUAL TOTAL	348.33		49.42			
ANNUAL MEAN	0.954		0.135		3.620	
HIGHEST ANNUAL MEAN					14.4	1993
LOWEST ANNUAL MEAN					0.14	2002
HIGHEST DAILY MEAN	39	Jan 11	5.7	Nov 24	800	Jan 16 1993
LOWEST DAILY MEAN	0.02	Aug 17	0.01	Sep 22	0.01	Sep 22 2002
ANNUAL SEVEN-DAY MINIMUM	0.02	Aug 17	0.02	Sep 7	0.02	Aug 17 2001
MAXIMUM PEAK FLOW			69	Nov 24	e8000	Jan 16 1993
MAXIMUM PEAK STAGE			4.14	Nov 24	8.35	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	691		98		2620	
10 PERCENT EXCEEDS	1.5		0.28		4.8	
50 PERCENT EXCEEDS	0.18		0.06		0.48	
90 PERCENT EXCEEDS	0.03		0.02		0.07	

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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	6.1	6.2	7.8	7.6	3.5	3.8	3.4	1.8	2.9	4.9	1.4
2	2.0	4.3	4.7	5.1	6.7	3.7	3.8	4.3	2.4	2.1	5.5	1.3
3	2.4	3.5	4.2	4.7	8.0	4.0	4.4	4.8	2.3	2.1	7.2	1.1
4	3.1	4.7	5.2	4.6	6.6	3.9	4.6	6.4	2.9	2.9	6.5	1.2
5	2.2	4.3	6.7	5.2	15	3.2	4.6	6.1	1.9	3.2	3.9	1.6
6	3.2	4.0	4.3	5.0	7.5	3.7	4.6	7.8	1.6	2.9	3.6	2.7
7	3.7	3.7	3.8	5.4	6.6	4.7	4.4	7.9	4.8	3.1	3.4	2.9
8	3.7	6.6	3.2	6.5	6.4	5.1	4.6	7.9	4.0	2.8	3.0	3.7
9	2.7	6.0	3.9	5.5	6.1	4.9	4.6	7.3	4.4	3.1	2.5	3.4
10	2.7	3.6	5.8	5.6	5.1	4.1	4.5	8.0	5.3	3.2	3.2	1.8
11	2.2	3.8	14	5.8	5.3	4.1	4.5	8.1	4.3	3.0	3.5	1.7
12	3.7	5.2	4.9	5.6	5.6	4.4	4.4	8.4	4.4	3.2	3.1	2.3
13	2.9	12	4.2	6.2	5.9	4.6	4.0	7.0	3.5	4.2	2.3	1.8
14	3.7	26	5.6	6.0	5.7	4.5	4.2	5.4	2.8	4.7	2.6	1.6
15	2.8	10	21	6.8	5.3	4.6	3.9	8.9	1.7	4.3	2.7	1.2
16	2.6	6.2	10	6.7	6.0	4.8	3.8	9.0	3.0	4.1	2.1	1.2
17	2.7	5.0	6.2	7.3	5.8	5.9	3.2	11	1.8	3.8	2.2	1.2
18	3.4	5.4	4.4	7.1	10	18	3.2	7.1	1.3	4.3	4.0	1.1
19	2.8	5.3	4.5	7.1	8.6	12	2.3	6.0	1.5	3.5	4.7	1.7
20	3.7	4.9	4.5	7.0	5.0	3.4	2.5	4.4	3.3	4.0	3.2	1.8
21	4.7	5.5	8.9	8.2	4.4	2.6	3.5	3.2	3.5	5.0	2.6	1.6
22	5.0	5.9	22	6.8	4.0	3.5	3.0	3.3	2.3	4.8	2.8	2.3
23	5.2	6.4	10	6.4	4.5	5.3	2.3	2.7	4.5	3.8	3.1	1.6
24	4.4	12	5.6	6.2	3.9	5.2	2.7	2.6	4.4	3.9	2.3	1.2
25	3.5	160	4.2	6.1	4.0	3.7	22	2.5	3.2	3.5	2.4	0.99
26	4.5	29	4.0	6.7	3.7	3.3	16	3.4	2.6	3.2	2.1	1.6
27	5.3	8.6	4.6	7.2	3.5	3.1	5.6	3.2	2.9	3.5	2.0	2.6
28	6.4	5.2	4.3	8.3	4.1	3.2	4.2	3.0	2.1	4.3	3.5	3.1
29	6.5	4.3	4.9	15	---	3.7	3.3	2.1	1.4	4.5	3.9	3.8
30	6.3	6.0	4.8	13	---	3.8	3.6	2.1	2.9	4.6	3.3	4.1
31	6.1	---	6.1	10	---	3.8	---	1.8	---	4.4	1.1	---
TOTAL	116.6	373.5	206.7	214.9	170.9	148.3	146.1	169.1	88.8	112.9	103.2	59.59
MEAN	3.761	12.45	6.668	6.932	6.104	4.784	4.870	5.455	2.960	3.642	3.329	1.986
MAX	6.5	160	22	15	15	18	22	11	5.3	5.0	7.2	4.1
MIN	2.0	3.5	3.2	4.6	3.5	2.6	2.3	1.8	1.3	2.1	1.1	0.99
AC-FT	231	741	410	426	339	294	290	335	176	224	205	118

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

MEAN	6.338	7.504	11.82	157.6	176.0	98.48	23.32	16.16	7.910	5.078	4.588	4.676
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	3.76	1.48	1.66	3.19	6.10	2.50	4.51	5.45	2.43	2.11	1.00	1.22
(WY)	2002	1992	1990	2000	2002	1990	1990	2002	1997	1990	1990	1990

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1990 - 2002

ANNUAL TOTAL	5636.2	1910.59		
ANNUAL MEAN	15.44	5.234	42.64	
HIGHEST ANNUAL MEAN			220	1993
LOWEST ANNUAL MEAN			5.23	2002
HIGHEST DAILY MEAN	434	Feb 26	160	Nov 25
LOWEST DAILY MEAN	1.4	Sep 17	0.99	Sep 25
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 13	1.4	Sep 13
MAXIMUM PEAK FLOW			437	Nov 25
MAXIMUM PEAK STAGE			2.88	Nov 25
ANNUAL RUNOFF (AC-FT)	11180	3790	30890	
10 PERCENT EXCEEDS	19	7.7	35	
50 PERCENT EXCEEDS	5.6	4.2	5.9	
90 PERCENT EXCEEDS	2.8	2.1	2.4	

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 current year.

DISSOLVED OXYGEN: December 1999 to current year.

pH: December 1999 to current year.

SPECIFIC CONDUCTANCE: December 1999 to current year.

WATER TEMPERATURE: December 1999 to current year.

PERIOD OF DAILY RECORD.—December 1999 to current year.

DISSOLVED OXYGEN: December 1999 to current year.

pH: December 1999 to current year.

SPECIFIC CONDUCTANCE: December 1999 to current year.

WATER TEMPERATURE: December 1999 to current year.

INSTRUMENTATION.—Water-quality monitor since December 1999.

REMARKS.—Dissolved oxygen records rated fair except for May 17–July 12, which are poor. pH records rated good. Specific conductance records rated excellent. Temperature records rated excellent. Interruptions in record at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 17.9 mg/L, Mar. 23, 2000; minimum recorded, 3.8 mg/L, Aug. 17, 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, 474 microsiemens, Feb. 21, 2000.

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, 16.2 mg/L, Feb. 28; minimum recorded, 3.8mg/L, Aug. 17.

pH: Maximum recorded, 8.5 standard units, Feb. 10, Mar. 1; minimum recorded, 7.3 standard units, May 31–June 7.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,760 microsiemens, Nov. 14; minimum recorded, 575 microsiemens, Nov. 25.

WATER TEMPERATURE: Maximum recorded, 27.8°C, July 8; minimum recorded, 5.1°C, Jan. 31.

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)
NOV								
20...	1050	730	8.8	86	7.6	1440	12.2	95.0
20...	1052	730	8.9	87	7.6	1440	12.2	85.0
20...	1055	730	8.9	87	7.6	1440	12.2	75.0
20...	1058	730	8.9	87	7.6	1440	12.3	65.0
20...	1100	730	9.0	88	7.6	1450	12.3	55.0
20...	1103	730	9.0	88	7.6	1450	12.3	45.0
20...	1105	730	8.9	87	7.6	1440	12.3	35.0
20...	1107	730	8.9	87	7.6	1440	12.2	25.0
20...	1109	730	8.9	87	7.6	1440	12.2	15.0
20...	1112	730	9.0	88	7.6	1440	12.2	5.00
MAY								
10...	1108	735	7.0	78	7.6	1420	18.7	95.0
10...	1111	735	7.1	79	7.6	1420	18.8	85.0
10...	1113	735	7.1	79	7.6	1420	18.8	75.0
10...	1116	735	7.2	81	7.6	1420	18.8	65.0
10...	1119	735	7.2	81	7.6	1430	18.8	55.0
10...	1123	735	7.1	79	7.7	1430	18.8	45.0
10...	1126	735	7.2	81	7.7	1430	18.8	35.0
10...	1130	735	7.2	81	7.7	1430	18.8	25.0
10...	1133	735	7.1	80	7.6	1420	18.9	15.0
10...	1135	735	7.1	80	7.6	1420	18.9	5.00

* Instantaneous discharge at time of cross-sectional measurements: Nov. 20, 4.6 ft³/s; May 10, 9.4 ft³/s.

11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.1	5.7	9.0	7.4	---	---	8.8	8.0	14.7	11.5	15.9	7.1
2	9.1	6.3	9.2	7.4	---	---	8.6	7.8	14.1	11.2	15.6	7.9
3	9.1	6.5	9.2	7.2	---	---	8.6	7.6	14.2	11.2	15.9	8.6
4	9.2	6.5	8.5	7.0	---	---	8.6	7.7	13.9	10.9	13.0	7.9
5	9.3	6.6	8.7	6.8	---	---	9.3	8.0	13.0	10.8	13.6	7.3
6	9.2	6.6	8.6	6.7	---	---	9.5	8.4	13.4	10.8	14.0	7.1
7	9.2	6.9	8.5	6.7	---	---	9.5	8.2	13.6	10.7	11.3	6.7
8	9.5	7.0	9.0	6.8	---	---	9.5	8.3	13.2	10.3	12.4	6.8
9	9.2	7.0	8.4	7.1	---	---	9.7	8.2	13.2	10.2	12.7	6.8
10	9.7	7.2	8.5	7.1	---	---	9.7	8.1	13.1	9.3	12.3	6.6
11	9.8	7.2	8.4	6.9	---	---	10.3	8.4	12.6	9.3	11.9	6.3
12	9.3	7.1	8.9	7.1	---	---	10.6	9.0	13.7	9.3	11.6	6.1
13	9.8	7.1	8.6	7.2	---	---	11.0	9.1	14.0	9.6	11.1	5.8
14	9.7	7.5	9.1	8.1	9.8	9.2	11.3	9.0	14.0	9.2	11.7	6.5
15	9.8	7.5	9.0	8.1	10.5	9.6	10.2	8.7	14.1	8.8	11.5	6.9
16	10.0	7.5	9.1	8.0	10.7	9.8	10.7	8.6	14.1	8.6	11.4	7.2
17	10.0	7.5	9.2	7.9	10.4	9.6	11.3	8.9	13.4	8.2	11.4	7.0
18	10.1	7.6	9.3	8.0	10.2	9.4	11.8	9.5	14.7	8.8	10.0	7.1
19	10.1	7.7	9.6	8.2	10.0	9.4	12.4	9.8	13.7	9.6	9.7	7.6
20	9.7	7.4	9.2	7.2	9.9	9.2	12.4	10.0	14.3	9.1	9.2	6.8
21	9.4	7.4	8.8	7.3	9.6	9.0	12.4	9.8	14.1	8.5	9.2	6.6
22	---	---	8.4	7.2	10.3	9.3	12.0	9.2	14.2	8.2	8.9	6.6
23	---	---	8.3	7.1	9.9	9.1	12.3	9.2	14.8	8.0	8.7	6.5
24	---	---	9.0	7.4	9.8	9.0	13.7	9.8	14.8	7.7	8.8	6.5
25	---	---	---	---	9.9	9.1	14.0	10.4	15.3	7.7	9.1	6.7
26	---	---	---	---	10.0	9.2	14.4	10.4	15.6	7.7	9.4	6.5
27	---	---	---	---	9.8	9.2	13.9	10.0	15.6	7.6	9.5	6.5
28	---	---	---	---	9.7	8.8	12.9	9.7	16.2	7.9	8.5	6.8
29	---	---	---	---	9.0	8.5	12.4	9.9	---	---	9.7	7.2
30	---	---	---	---	8.8	8.1	13.4	11.0	---	---	9.3	6.6
31	---	---	---	---	8.5	7.9	14.2	11.6	---	---	9.1	6.5
MONTH	---	---	---	---	---	---	14.4	7.6	16.2	7.6	15.9	5.8
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	6.1	7.6	5.0	---	---	---	---	8.3	5.0	8.2	5.2
2	9.0	6.3	7.9	5.5	---	---	---	---	8.2	4.2	8.0	5.0
3	8.4	6.4	7.8	5.4	---	---	---	---	8.6	4.2	7.8	4.7
4	8.2	6.2	7.7	5.3	---	---	---	---	8.4	4.6	7.7	5.0
5	8.6	6.2	7.5	5.0	---	---	---	---	8.2	5.1	7.2	5.0
6	8.5	6.7	7.5	5.0	---	---	---	---	8.2	4.7	6.8	5.3
7	8.8	6.6	7.1	5.2	---	---	---	---	8.4	4.9	7.2	5.5
8	8.5	6.4	7.4	5.2	8.2	5.4	---	---	9.0	5.0	7.8	6.0
9	7.4	5.1	7.2	4.8	6.6	4.8	---	---	9.0	5.4	8.4	6.1
10	7.2	4.9	8.3	4.8	8.3	5.1	---	---	9.0	5.0	7.9	5.7
11	7.3	4.8	8.4	5.5	8.4	5.8	---	---	9.0	5.0	8.2	5.4
12	7.1	4.9	7.7	5.3	8.3	5.8	8.8	4.7	8.8	4.9	8.2	5.7
13	7.0	4.8	8.6	5.4	8.4	5.8	8.6	5.0	8.7	4.7	8.2	5.8
14	6.9	4.6	8.5	5.3	8.4	5.8	8.2	5.2	8.6	4.3	8.4	5.7
15	6.7	4.5	8.6	5.2	8.8	5.7	8.4	5.1	8.5	4.8	8.3	5.6
16	7.5	5.4	8.6	5.9	8.9	6.0	8.4	5.2	8.2	4.1	8.1	5.4
17	7.2	5.4	8.5	5.9	8.9	5.9	8.3	4.0	8.3	3.8	8.3	5.6
18	7.6	5.4	8.2	6.2	8.8	5.3	8.3	5.1	8.3	4.9	8.1	5.2
19	7.8	5.6	8.4	6.6	9.2	5.2	8.4	4.8	8.3	5.2	8.6	5.3
20	8.0	5.6	8.7	6.8	8.9	5.1	8.3	4.8	8.2	5.4	8.4	5.8
21	8.0	5.6	8.8	6.9	7.7	5.5	8.4	5.0	8.1	4.9	8.8	5.6
22	8.0	5.4	9.0	6.8	---	---	8.6	5.1	8.3	5.0	8.5	5.7
23	7.8	5.3	8.6	6.6	---	---	8.4	5.0	8.3	5.0	8.5	5.7
24	7.3	5.1	8.7	6.3	---	---	8.4	4.7	8.2	5.1	8.6	5.2
25	7.7	5.6	9.0	6.3	---	---	8.4	4.4	8.4	5.0	8.6	5.3
26	7.1	5.8	8.9	6.4	---	---	8.4	4.3	8.5	5.2	8.2	5.6
27	7.3	5.8	9.3	6.6	---	---	8.3	4.0	8.2	5.1	7.7	5.8
28	7.7	5.6	9.5	6.8	---	---	8.4	4.8	8.2	4.8	7.7	6.2
29	7.5	5.5	9.4	6.8	---	---	8.3	4.7	8.1	5.2	8.3	6.6
30	7.2	5.2	9.6	6.7	---	---	8.4	4.9	8.2	5.3	8.5	6.8
31	---	---	8.6	6.4	---	---	8.3	4.5	8.3	5.1	---	---
MONTH	9.0	4.5	9.6	4.8	---	---	---	---	9.0	3.8	8.8	4.7

11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.9	7.5	7.6	7.4	8.0	7.9	7.9	7.8	8.1	7.8	8.5	7.7
2	7.7	7.5	7.6	7.4	8.0	7.9	7.9	7.8	8.0	7.8	8.4	7.8
3	7.8	7.5	7.6	7.4	8.0	7.8	7.9	7.8	8.1	7.8	8.4	7.8
4	7.8	7.6	7.8	7.5	8.0	7.9	7.9	7.8	8.0	7.8	8.4	7.8
5	7.8	7.6	7.7	7.5	8.0	8.0	7.9	7.8	8.0	7.8	8.4	7.8
6	7.9	7.6	7.7	7.5	8.0	7.9	7.9	7.8	8.0	7.8	8.4	7.7
7	7.9	7.7	7.7	7.5	7.9	7.9	7.9	7.8	8.0	7.8	8.2	7.7
8	7.9	7.7	7.8	7.5	7.9	7.8	7.9	7.8	8.1	7.8	8.4	7.7
9	7.9	7.7	7.8	7.7	7.9	7.8	8.0	7.8	8.1	7.8	8.4	7.8
10	8.0	7.8	7.8	7.7	7.9	7.8	8.0	7.8	8.5	7.8	8.3	7.7
11	8.0	7.7	7.8	7.7	8.0	7.8	8.0	7.9	8.0	7.8	8.3	7.7
12	8.0	7.8	7.9	7.7	7.9	7.9	8.0	7.9	8.0	7.7	8.3	7.6
13	8.0	7.8	8.0	7.8	7.9	7.7	8.0	7.9	8.1	7.7	8.3	7.6
14	8.0	7.8	8.0	7.9	7.9	7.8	8.0	7.9	8.1	7.7	8.1	7.6
15	8.1	7.8	7.9	7.9	8.0	7.8	8.0	7.8	8.2	7.7	8.1	7.7
16	8.1	7.8	7.9	7.8	7.9	7.8	8.1	7.8	8.3	7.7	8.1	7.7
17	8.1	7.8	7.9	7.8	7.8	7.8	8.1	7.9	8.2	7.7	8.1	7.7
18	8.1	7.9	8.0	7.8	7.8	7.7	8.1	7.9	8.4	7.7	8.0	7.6
19	8.1	7.8	8.0	7.9	7.8	7.7	8.2	7.9	8.2	7.9	8.0	7.7
20	8.1	7.8	8.3	7.9	7.8	7.8	8.1	7.9	8.2	7.8	7.9	7.6
21	8.1	7.9	8.2	8.1	7.9	7.7	8.1	7.9	8.3	7.8	7.9	7.6
22	---	---	8.2	8.0	7.9	7.9	8.2	7.9	8.3	7.8	7.8	7.6
23	---	---	8.1	8.0	7.9	7.8	8.2	7.9	8.4	7.8	7.8	7.6
24	---	---	8.2	8.0	7.8	7.7	8.1	7.8	8.4	7.8	7.8	7.6
25	---	---	8.0	7.9	7.8	7.7	8.1	7.8	8.4	7.8	7.8	7.6
26	---	---	7.9	7.9	7.8	7.7	8.1	7.8	8.4	7.8	7.8	7.6
27	---	---	8.0	7.9	7.8	7.7	8.1	7.8	8.4	7.8	7.8	7.6
28	---	---	7.9	7.8	7.8	7.8	8.1	7.8	8.4	7.8	7.7	7.6
29	---	---	7.9	7.8	7.8	7.8	8.0	7.8	---	---	7.8	7.6
30	---	---	8.0	7.9	7.8	7.8	8.1	7.8	---	---	7.8	7.7
31	---	---	---	---	7.8	7.8	8.1	7.8	---	---	7.8	7.6
MONTH	---	---	8.3	7.4	8.0	7.7	8.2	7.8	8.5	7.7	8.5	7.6
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.8	7.6	7.7	7.5	7.4	7.3	7.7	7.5	7.7	7.5	7.7	7.5
2	7.8	7.6	7.7	7.5	7.4	7.3	7.7	7.5	7.7	7.5	7.7	7.5
3	7.8	7.6	7.7	7.5	7.5	7.3	7.7	7.5	7.8	7.5	7.7	7.5
4	7.7	7.5	7.7	7.5	7.5	7.3	7.7	7.4	7.8	7.5	7.7	7.5
5	7.7	7.5	7.7	7.5	7.4	7.3	7.7	7.5	7.7	7.5	7.6	7.5
6	7.7	7.6	7.7	7.5	7.4	7.3	7.7	7.5	7.7	7.5	7.6	7.5
7	7.8	7.6	7.7	7.5	7.7	7.3	7.7	7.5	7.7	7.5	7.7	7.6
8	7.8	7.6	7.7	7.6	7.7	7.6	7.7	7.5	7.7	7.5	7.8	7.6
9	7.8	7.5	7.7	7.6	7.7	7.6	7.7	7.5	7.7	7.5	7.8	7.6
10	7.8	7.6	7.8	7.6	7.8	7.6	7.7	7.5	7.7	7.5	7.8	7.6
11	7.8	7.6	7.8	7.6	7.7	7.6	7.7	7.5	7.7	7.5	7.7	7.6
12	7.8	7.6	7.7	7.6	7.7	7.6	7.7	7.5	7.7	7.5	7.8	7.6
13	7.8	7.6	7.8	7.6	7.7	7.6	7.8	7.5	7.7	7.5	7.7	7.7
14	7.8	7.6	7.7	7.5	7.7	7.6	7.8	7.6	7.7	7.4	7.8	7.6
15	7.8	7.6	7.7	7.4	7.7	7.6	7.8	7.6	7.7	7.5	7.7	7.6
16	7.8	7.7	7.6	7.5	7.7	7.6	7.8	7.6	7.6	7.4	7.7	7.6
17	7.8	7.7	7.6	7.5	7.7	7.6	7.8	7.5	7.7	7.4	7.7	7.6
18	7.9	7.7	7.6	7.5	7.7	7.6	7.8	7.6	7.7	7.5	7.7	7.6
19	7.8	7.7	7.6	7.5	7.7	7.5	7.7	7.5	7.8	7.5	7.6	7.5
20	7.8	7.7	7.7	7.5	7.8	7.5	7.8	7.5	7.7	7.5	7.6	7.5
21	7.9	7.7	7.7	7.6	7.8	7.6	7.8	7.6	7.7	7.5	7.6	7.5
22	7.9	7.7	7.7	7.5	7.7	7.6	7.8	7.6	7.7	7.5	7.7	7.5
23	7.8	7.6	7.5	7.4	7.8	7.6	7.8	7.6	7.7	7.5	7.6	7.5
24	7.8	7.6	7.5	7.4	7.8	7.6	7.8	7.5	7.7	7.5	7.6	7.5
25	7.8	7.5	7.5	7.4	7.8	7.6	7.8	7.5	7.7	7.5	7.6	7.5
26	7.8	7.6	7.5	7.4	7.6	7.5	7.8	7.5	7.7	7.5	7.6	7.5
27	7.7	7.6	7.6	7.4	7.7	7.5	7.8	7.6	7.7	7.5	7.7	7.5
28	7.7	7.6	7.6	7.4	7.7	7.5	7.8	7.5	7.7	7.5	7.7	7.6
29	7.7	7.5	7.6	7.4	7.6	7.5	7.7	7.5	7.7	7.6	7.7	7.6
30	7.7	7.5	7.6	7.4	7.7	7.5	7.7	7.5	7.7	7.6	7.8	7.6
31	---	---	7.6	7.3	---	---	7.7	7.5	7.7	7.5	---	---
MONTH	7.9	7.5	7.8	7.3	7.8	7.3	7.8	7.4	7.8	7.4	7.8	7.5

11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1460	1440	1440	1430	1300	1280	1410	1400	1350	1350	1380	1360
2	1460	1460	1450	1440	1360	1300	1420	1410	1350	1350	1380	1380
3	1460	1460	1460	1450	1390	1360	1430	1420	1350	1300	1400	1380
4	1460	1460	1470	1460	1440	1390	1430	1420	1300	1290	1410	1370
5	1460	1460	1480	1470	1470	1440	1420	1410	1300	1240	1420	1400
6	1470	1460	1480	1470	1470	1460	1410	1390	1330	1280	1430	1410
7	1470	1460	1470	1470	1480	1450	1390	1370	1340	1330	1440	1410
8	1460	1460	1620	1470	1500	1480	1380	1370	1340	1310	1440	1420
9	1460	1460	1690	1600	1490	1480	1420	1380	1320	1310	1440	1430
10	1460	1450	1670	1610	1500	1480	1430	1410	1360	1320	1440	1430
11	1470	1460	1610	1600	1500	1430	1440	1430	1370	1350	1450	1440
12	1460	1440	1600	1580	1480	1450	1440	1430	1380	1370	1450	1440
13	1450	1440	1700	1580	1500	1480	1440	1440	1380	1380	1460	1440
14	1450	1430	1760	1600	1480	1410	1440	1390	1390	1380	1450	1450
15	1450	1440	1600	1510	1430	1320	1440	1400	1390	1380	1450	1450
16	1450	1440	1510	1490	1380	1330	1440	1370	1410	1390	1450	1440
17	1450	1440	1490	1480	1330	1300	1450	1370	1420	1410	1450	1370
18	1450	1440	1480	1460	1320	1300	1450	1430	1420	1410	1440	1380
19	1450	1440	1460	1440	1320	1300	1450	1440	1420	1410	1420	1300
20	1450	1450	1540	1440	1300	1290	1450	1440	1430	1420	1300	1280
21	1450	1450	1540	1520	1300	1270	1460	1440	1430	1410	1300	1290
22	1480	1450	1540	1520	1330	1220	1460	1440	1410	1410	1300	1270
23	1470	1460	1550	1540	1310	1190	1460	1450	1410	1350	1280	1260
24	1460	1460	1600	1450	1230	1200	1450	1380	1390	1370	1260	1240
25	1460	1460	1700	575	1230	1210	1390	1380	1380	1350	1250	1230
26	1460	1460	1040	695	1220	1200	1390	1380	1360	1350	1290	1250
27	1460	1460	1170	1040	1230	1210	1400	1390	1360	1350	1320	1290
28	---	---	1230	1170	1270	1230	1390	1380	1370	1360	1340	1320
29	---	---	1260	1230	1310	1270	1410	1370	---	---	1360	1340
30	---	---	1290	1260	1370	1310	1410	1360	---	---	1380	1360
31	---	---	---	---	1400	1370	1380	1350	---	---	1400	1380
MONTH	---	---	1760	575	1500	1190	1460	1350	1430	1240	1460	1230
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1420	1400	1280	1260	1440	1430	1460	1450	1450	1450	1450	1440
2	1430	1170	1270	1260	1440	1430	1470	1460	1450	1440	1440	1430
3	1440	1430	1270	1250	1440	1430	1470	1460	1450	1420	1440	1430
4	1440	1430	1280	1270	1440	1430	1470	1460	1430	1410	1440	1430
5	1440	1430	1310	1280	1450	1440	1470	1460	1440	1430	1430	1430
6	1460	1440	1340	1310	1450	1440	1460	1450	1440	1440	1430	1420
7	1470	1450	1360	1340	1500	1440	1450	1440	1440	1440	1420	1410
8	1470	1470	1380	1360	1500	1490	1470	1450	1450	1440	1410	1390
9	1490	1440	1380	1370	1500	1480	1460	1460	1470	1440	1400	1390
10	1490	1470	1460	1380	1480	1480	1460	1450	1470	1450	1420	1400
11	1480	1460	1460	1450	1480	1460	1480	1460	1470	1460	1430	1420
12	1480	1470	1470	1450	1460	1310	1480	1470	1480	1470	1430	1420
13	1480	1470	1470	1460	1460	1450	1480	1460	1480	1480	1420	1420
14	1470	1460	1480	1470	1470	1460	1460	1450	1490	1480	1430	1420
15	1480	1460	1480	1480	1480	1460	1450	1440	1480	1480	1450	1430
16	1470	1460	1480	1470	1480	1460	1440	1430	1480	1480	1460	1450
17	1470	1460	1480	1480	1480	1470	1430	1430	1490	1480	1470	1460
18	1470	1460	1480	1460	1480	1470	1430	1410	1480	1470	1480	1470
19	1470	1460	1460	1450	1490	1480	1420	1410	1470	1460	1480	1470
20	1470	1450	1450	1440	1490	1480	1420	1410	1470	1460	1480	1470
21	1460	1450	1440	1430	1490	1480	1410	1410	1470	1460	1470	1460
22	1470	1460	1430	1420	1500	1490	1430	1410	1460	1450	1470	1460
23	1470	1400	1450	1430	1500	1480	1430	1420	1450	1440	1470	1460
24	1480	1460	1450	1440	1480	1470	1430	1420	1450	1440	1480	1470
25	1490	1460	1450	1440	1470	1460	1440	1420	1440	1440	1480	1480
26	1460	1400	1450	1430	1460	1450	1450	1440	1450	1440	1490	1480
27	1400	1360	1430	1430	1460	1440	1450	1440	1450	1440	1480	1470
28	1360	1320	1430	1420	1450	1440	1450	1450	1450	1440	1470	1470
29	1320	1290	1430	1420	1460	1440	1460	1450	1440	1440	1470	1460
30	1290	1280	1430	1420	1460	1440	1460	1450	1450	1440	1460	1450
31	---	---	1430	1420	---	---	1460	1420	1450	1430	---	---
MONTH	1490	1170	1480	1250	1500	1310	1480	1410	1490	1410	1490	1390

11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.1	18.3	17.5	15.7	11.5	9.3	12.9	11.2	8.3	5.4	17.1	13.6
2	22.1	18.3	17.0	15.0	11.7	9.4	13.3	11.9	9.1	5.6	16.5	12.0
3	21.8	19.0	16.8	14.3	13.4	11.6	13.8	12.1	9.0	5.8	15.4	10.1
4	21.2	17.6	17.6	16.0	12.3	10.2	13.7	11.8	9.7	6.2	15.3	9.2
5	21.5	19.2	17.6	15.6	10.7	8.7	12.6	10.4	9.7	6.2	15.3	9.5
6	20.8	18.5	18.0	16.3	11.3	8.9	12.0	9.6	10.0	6.4	14.5	10.3
7	20.7	18.1	18.3	16.2	12.0	9.3	12.6	10.2	10.0	6.4	14.6	12.9
8	19.6	16.8	16.8	14.3	12.5	10.4	12.3	10.0	11.5	8.4	16.6	12.4
9	19.9	18.0	17.1	15.4	10.8	8.5	12.7	10.5	11.7	8.2	16.4	11.1
10	19.4	15.6	17.7	16.1	10.3	8.6	12.8	10.6	12.4	9.0	17.3	11.6
11	20.1	16.4	17.7	15.8	10.0	8.4	11.5	8.9	13.3	8.6	17.9	11.8
12	19.9	16.7	16.2	14.5	9.9	8.0	11.2	8.4	13.0	8.5	18.4	12.5
13	18.7	15.0	16.1	14.6	9.3	7.2	10.4	7.7	12.4	8.6	17.7	13.9
14	18.3	14.7	15.1	13.0	9.1	7.4	10.5	7.8	13.4	9.7	16.6	11.2
15	17.9	14.6	14.6	12.5	8.6	7.4	11.6	10.3	13.9	10.2	16.5	10.6
16	18.0	14.7	14.3	12.0	8.4	6.3	12.1	10.1	14.5	11.7	16.5	10.9
17	17.6	14.4	14.3	12.0	8.6	6.4	10.7	8.4	13.5	11.6	15.2	11.8
18	17.2	13.6	14.3	12.0	8.7	6.3	10.0	7.6	13.8	10.3	15.9	11.2
19	16.7	13.8	13.7	11.2	8.8	6.5	9.5	7.1	13.1	9.1	15.7	10.1
20	18.1	15.6	15.0	11.8	9.2	6.7	9.4	6.6	14.3	9.8	17.3	10.8
21	17.4	15.6	14.4	12.1	10.0	8.3	9.5	6.6	15.7	10.5	17.4	11.8
22	18.2	16.3	15.1	13.5	9.6	7.9	11.0	8.4	16.5	11.6	18.4	11.9
23	17.4	15.2	15.9	13.8	9.8	8.0	10.5	8.0	15.8	11.7	18.1	13.5
24	18.0	15.8	14.1	12.3	9.8	7.7	9.4	6.5	17.5	13.4	18.6	13.8
25	17.5	14.2	14.0	12.3	9.7	7.4	10.1	6.6	17.0	12.0	18.0	12.3
26	16.8	13.9	12.6	11.0	9.3	7.0	9.7	7.0	17.2	12.0	19.4	12.6
27	16.8	14.6	11.8	9.9	10.0	7.5	10.1	7.9	16.3	12.3	15.6	12.9
28	---	---	11.0	8.8	10.1	8.0	11.3	9.7	16.2	11.8	14.6	13.4
29	---	---	11.1	9.9	11.2	9.7	9.7	8.1	---	---	17.8	12.0
30	---	---	12.4	10.6	12.3	10.3	8.8	6.4	---	---	19.2	13.9
31	---	---	---	---	13.0	11.9	8.0	5.1	---	---	20.4	15.0
MONTH	---	---	18.3	8.8	13.4	6.3	13.8	5.1	17.5	5.4	20.4	9.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.6	15.5	18.9	14.3	24.9	19.3	25.6	20.0	25.4	21.3	24.8	19.8
2	19.6	16.0	20.4	14.9	23.9	19.6	26.1	20.5	25.6	21.2	24.8	21.1
3	19.0	15.8	20.9	14.8	23.4	19.2	26.5	21.1	26.0	21.5	24.7	20.5
4	21.0	15.9	21.4	15.9	24.1	17.6	25.8	21.0	25.6	20.5	24.5	20.5
5	17.7	14.9	21.6	16.6	25.5	19.0	25.5	20.5	25.6	20.5	22.8	21.1
6	16.1	14.8	20.9	16.4	25.8	19.6	25.9	20.6	24.9	19.7	22.4	21.0
7	19.2	13.9	18.0	16.8	24.2	19.9	26.7	20.9	24.6	19.0	22.3	20.4
8	20.2	15.7	21.8	16.4	24.6	20.1	27.8	21.6	24.9	18.8	21.7	18.8
9	21.5	16.3	22.5	16.8	21.6	19.4	27.0	21.3	25.4	19.7	22.4	18.1
10	22.0	17.0	22.5	17.7	23.4	18.7	25.9	21.2	25.4	20.1	22.9	18.7
11	22.0	16.7	22.3	16.8	23.1	18.1	24.8	21.5	25.4	20.5	23.0	18.5
12	20.7	17.0	23.0	16.4	24.1	18.2	26.3	20.9	25.4	20.6	22.5	18.2
13	22.7	17.0	23.0	16.8	24.8	19.3	26.8	21.1	25.6	21.1	22.8	18.3
14	22.7	17.5	23.8	17.0	25.3	19.6	26.2	21.6	25.3	20.9	23.1	18.3
15	19.3	17.0	22.7	18.5	25.8	18.6	25.2	20.8	25.0	20.8	23.2	18.6
16	19.2	15.0	23.0	18.2	25.0	18.1	26.4	21.1	24.6	20.8	23.0	19.4
17	18.9	15.4	23.0	18.4	25.1	18.4	26.6	21.4	24.3	20.8	22.3	18.2
18	19.5	13.5	21.3	18.8	25.6	18.9	26.6	21.7	23.5	21.0	22.9	19.0
19	19.4	14.0	19.7	18.1	25.8	20.2	26.9	21.8	23.3	20.9	22.2	17.8
20	19.9	13.8	19.8	17.3	24.9	20.6	26.0	21.5	24.4	20.9	23.1	19.2
21	20.3	13.7	20.9	15.2	24.2	20.1	24.8	20.6	24.8	21.2	22.7	18.4
22	21.4	14.3	21.0	14.8	26.0	20.3	25.7	20.6	24.8	21.0	22.6	18.4
23	21.8	15.5	22.2	16.1	25.6	20.2	26.5	20.7	24.0	19.9	23.2	18.4
24	17.8	16.1	22.1	16.6	25.8	20.3	26.8	21.2	24.2	19.4	23.1	18.7
25	20.0	15.7	21.9	17.0	25.8	20.2	26.7	21.1	23.3	18.5	22.0	18.4
26	18.3	15.8	22.1	17.6	26.1	20.6	26.9	21.2	23.3	18.5	22.4	19.2
27	17.3	15.4	22.6	17.3	25.8	20.6	26.4	21.5	23.8	19.6	20.6	19.5
28	19.9	13.3	23.1	17.9	25.5	19.9	26.2	21.3	23.9	20.3	19.5	18.7
29	20.4	14.3	24.1	18.0	26.4	20.6	25.7	19.9	23.9	19.9	20.6	18.1
30	20.1	14.9	22.7	18.5	25.7	20.2	25.6	21.1	23.9	19.5	18.7	17.0
31	---	---	22.8	18.8	---	---	24.6	20.3	23.2	19.7	---	---
MONTH	22.7	13.3	24.1	14.3	26.4	17.6	27.8	19.9	26.0	18.5	24.8	17.0

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 mi².

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 sea level, 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 ft³/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 ft³/s, or maximum, from rating curve extended above 536 ft³/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1945	39	2.35

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.0	5.0	4.4	4.2	4.0	3.4	2.9	1.4	1.2	1.3	0.72
2	2.3	3.3	4.8	4.3	4.1	2.9	3.5	3.1	1.1	1.4	2.3	0.93
3	2.1	2.8	4.9	4.3	3.5	2.2	3.8	2.7	1.7	1.3	0.99	0.70
4	2.4	2.5	4.9	4.2	3.8	2.9	3.6	2.0	2.4	2.2	0.77	0.95
5	2.5	3.6	4.7	4.0	3.9	3.3	3.6	2.0	1.8	2.3	1.3	2.3
6	1.8	3.2	4.5	3.8	3.8	3.5	2.9	2.3	2.5	1.1	1.2	2.5
7	1.0	3.1	4.1	3.6	3.9	4.1	2.3	3.2	1.8	0.58	1.2	1.3
8	2.0	3.5	3.1	3.4	4.4	3.7	3.7	3.3	1.2	1.4	2.0	0.92
9	2.7	3.4	2.8	3.5	3.2	2.6	3.6	2.9	1.1	1.6	2.0	1.1
10	2.7	3.4	4.5	4.0	2.3	2.4	3.3	2.8	2.0	1.1	0.72	1.4
11	2.7	3.6	4.3	3.2	3.5	2.7	3.3	1.5	2.5	2.0	0.61	1.4
12	2.6	3.8	4.1	2.9	3.7	3.2	2.9	1.2	2.0	2.3	0.63	2.2
13	1.6	4.9	4.1	2.6	3.5	3.4	2.4	1.5	2.6	0.65	0.72	2.2
14	1.0	4.1	5.8	3.7	3.6	3.5	2.2	1.5	2.6	0.50	0.87	0.82
15	1.8	3.8	5.7	3.7	3.8	3.4	3.1	1.9	1.4	0.94	2.0	0.63
16	2.3	3.7	4.5	4.1	4.0	2.5	3.9	2.6	0.77	1.5	2.2	0.80
17	2.4	3.6	4.4	4.3	4.9	3.1	3.6	2.7	1.5	1.3	1.2	2.2
18	2.4	3.6	4.3	4.0	4.4	5.1	3.5	1.6	1.7	2.1	1.1	1.6
19	2.5	3.0	4.3	3.0	3.1	4.0	3.4	1.8	1.3	2.2	1.7	2.4
20	1.9	3.1	4.3	2.7	3.8	3.6	2.7	2.3	2.4	0.70	2.4	2.4
21	1.4	2.9	6.1	3.8	4.2	3.6	2.2	3.2	2.5	0.56	1.5	0.83
22	2.6	2.7	5.2	3.6	3.8	3.4	2.8	2.5	1.6	1.3	2.3	0.66
23	2.9	3.9	4.8	3.8	2.9	2.5	2.8	2.7	0.56	1.3	2.2	0.82
24	2.9	10	4.5	3.7	2.3	2.4	3.2	2.7	1.1	1.4	0.93	0.84
25	2.9	13	4.2	3.8	3.2	3.1	3.7	2.2	1.7	1.7	0.66	1.0
26	2.7	7.0	4.1	2.9	3.7	3.5	3.1	1.9	2.1	0.83	0.74	2.3
27	2.3	7.0	4.1	2.5	3.5	3.5	2.4	1.8	2.3	0.60	1.3	2.5
28	2.2	5.7	4.1	4.5	3.6	3.2	2.2	2.2	2.2	0.57	1.5	1.1
29	2.9	5.6	4.3	4.8	---	3.0	2.5	2.0	0.73	1.4	2.3	1.0
30	3.0	5.5	4.3	4.4	---	2.6	3.1	1.9	0.49	1.7	2.2	2.3
31	2.9	---	4.4	3.7	---	2.4	---	2.6	---	1.0	0.96	---
TOTAL	71.1	132.3	139.2	115.2	102.6	99.3	92.7	71.5	51.05	40.73	43.80	42.82
MEAN	2.294	4.410	4.490	3.716	3.664	3.203	3.090	2.306	1.702	1.314	1.413	1.427
MAX	3.0	13	6.1	4.8	4.9	5.1	3.9	3.3	2.6	2.3	2.4	2.5
MIN	1.0	2.5	2.8	2.5	2.3	2.2	2.2	1.2	0.49	0.50	0.61	0.63
AC-FT	141	262	276	228	204	197	184	142	101	81	87	85

11044350 SANDIA CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.646	2.608	3.660	29.93	28.94	22.43	10.18	6.133	3.904	2.052	1.281	1.215
MAX	3.57	4.41	8.12	237	128	79.8	28.0	18.3	9.49	5.40	2.73	3.21
(WY)	2001	2002	1997	1993	1993	1995	1995	1998	1998	1998	1998	1998
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1990 - 2002	
ANNUAL TOTAL	2130.93		1002.30			
ANNUAL MEAN	5.838		2.746		9.406	
HIGHEST ANNUAL MEAN					36.8	1993
LOWEST ANNUAL MEAN					2.62	1999
HIGHEST DAILY MEAN	53	Feb 27	13	Nov 25	2000	Jan 16 1993
LOWEST DAILY MEAN	0.53	Aug 19	0.49	Jun 30	0.00	Jul 26 1996
ANNUAL SEVEN-DAY MINIMUM	1.6	Aug 15	1.1	Jul 26	0.00	Aug 14 1996
MAXIMUM PEAK FLOW			39	Nov 24	5100	Jan 16 1993
MAXIMUM PEAK STAGE			2.35	Nov 24	17.60	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	4230		1990		6810	
10 PERCENT EXCEEDS	11		4.3		15	
50 PERCENT EXCEEDS	4.2		2.6		2.8	
90 PERCENT EXCEEDS	1.8		1.00		0.68	

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 mi².

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 sea level, 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 except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,700 ft³/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 ft³/s, or maximum, from rating curve extended above 385 ft³/s, on basis of flow-over-road computation:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1730	27	4.91

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.50	0.98	1.0	0.48	0.14	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.49	1.1	0.89	0.32	0.14	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.55	1.1	0.58	0.29	0.57	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.64	0.86	4.6	0.31	0.52	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.63	0.75	1.0	0.33	0.49	0.00	0.00	0.00	0.00	0.00
6	0.00	0.04	0.69	0.60	0.55	0.33	0.52	0.00	0.00	0.00	0.00	0.00
7	0.00	0.46	0.59	0.52	0.38	0.49	0.89	0.00	0.00	0.00	0.00	0.00
8	0.00	0.47	0.42	0.58	0.32	0.88	0.56	0.00	0.00	0.00	0.00	e0.00
9	0.00	0.51	0.49	0.47	0.35	0.96	0.09	0.00	0.00	0.00	0.00	e0.00
10	0.00	0.69	0.93	0.58	0.16	0.72	0.14	0.00	0.00	0.00	0.00	e0.00
11	0.00	0.76	0.89	0.52	0.09	0.60	0.11	0.00	0.00	0.00	0.00	e0.00
12	0.00	0.90	0.70	0.53	0.13	0.46	0.04	0.00	0.00	0.00	0.00	e0.00
13	0.00	0.94	0.69	0.38	0.10	0.18	0.04	0.00	0.00	0.00	0.00	e0.00
14	0.00	0.64	1.4	0.37	0.08	0.24	0.00	0.00	0.00	0.00	0.00	e0.00
15	0.00	0.43	1.8	0.23	0.08	0.38	0.15	0.00	0.00	0.00	0.00	e0.00
16	0.00	0.34	1.0	0.17	0.10	0.53	0.67	0.00	0.00	0.00	0.00	e0.00
17	0.00	0.35	1.00	0.19	0.29	0.80	0.51	0.00	0.00	0.00	0.00	0.00
18	0.00	0.39	0.91	0.12	0.44	2.1	0.39	0.00	0.00	0.00	0.00	e0.00
19	0.00	0.16	0.91	0.13	0.38	1.3	0.24	0.00	0.00	0.00	0.00	e0.00
20	0.00	0.03	0.89	0.62	0.32	0.89	0.03	0.00	0.00	0.00	0.00	e0.00
21	0.00	0.00	2.4	0.79	0.18	0.69	0.02	0.00	0.00	0.00	0.00	0.00
22	0.00	0.15	2.1	0.68	0.76	0.50	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	2.7	1.6	0.51	0.88	0.44	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	9.1	1.5	0.41	0.87	0.79	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	12	0.99	0.52	0.72	0.72	0.12	0.00	0.00	0.00	0.00	0.00
26	0.00	4.7	0.92	0.66	0.66	0.69	0.44	0.00	0.00	0.00	0.00	0.00
27	0.00	3.2	0.96	0.67	0.46	0.71	0.68	0.00	0.00	0.00	0.00	0.00
28	0.00	2.3	0.70	1.7	0.45	0.88	0.24	0.00	0.00	0.00	0.00	0.00
29	0.00	2.3	0.70	2.1	---	0.84	0.02	0.00	0.00	0.00	0.00	0.00
30	0.00	0.59	0.90	1.5	---	0.65	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.92	1.0	---	0.33	---	0.00	---	0.00	0.00	---
TOTAL	0.00	44.15	29.81	21.34	16.82	19.83	7.76	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	1.472	0.962	0.688	0.601	0.640	0.259	0.000	0.000	0.000	0.000	0.000
MAX	0.00	12	2.4	2.1	4.6	2.1	0.89	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.42	0.12	0.08	0.18	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	88	59	42	33	39	15	0.00	0.00	0.00	0.00	0.00

e Estimated.

11044800 DE LUZ CREEK NEAR DE LUZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.320	0.991	2.415	55.68	61.11	34.07	10.92	6.704	2.649	0.939	0.377	0.153
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 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1993 - 2002

ANNUAL TOTAL		1304.86		139.71								
ANNUAL MEAN		3.575		0.383					14.46			
HIGHEST ANNUAL MEAN									53.9			1993
LOWEST ANNUAL MEAN									0.38			2002
HIGHEST DAILY MEAN		111	Feb 26	12	Nov 25				3220		Jan 16	1993
LOWEST DAILY MEAN		0.00	Jun 27	0.00	Oct 1				0.00		Aug 1	1994
ANNUAL SEVEN-DAY MINIMUM		0.00	Jun 27	0.00	Oct 1				0.00		Aug 1	1994
MAXIMUM PEAK FLOW				27	Nov 24				9700		Jan 16	1993
MAXIMUM PEAK STAGE				4.91	Nov 24				15.13		Jan 16	1993
ANNUAL RUNOFF (AC-FT)		2590		277					10470			
10 PERCENT EXCEEDS		5.4		0.90					21			
50 PERCENT EXCEEDS		0.74		0.00					0.94			
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 mi².

PERIOD OF RECORD.—February 1951 to September 1965, October 1989 to September 1990, April 2002 to September 2002.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 155 ft above sea level, from topographic map. February 1951 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 ft³/s, Apr. 1, 1958, gage height, 9.95 ft, site and datum then in use, from rating curve extended above 450 ft³/s; no flow for all or part of most years.

EXTREMES FOR CURRENT YEAR.—No flow April 1 to September 30.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	1.028	3.329	9.723	7.693	15.89	13.46	0.939	0.130	0.020	0.000	0.000
MAX	0.000	17.3	34.7	61.1	39.3	127	192	7.27	0.69	0.17	0.000	0.003
(WY)	1952	1966	1967	1952	1962	1958	1958	1958	1952	1967	1952	1963
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	1954	1955	1961	1961	1961	1957	1955	1953	1952	1952

SUMMARY STATISTICS

WATER YEARS 1952 - 2002

ANNUAL MEAN	4.404
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
MAXIMUM PEAK DISCHARGE	2800 Apr 1 1958
MAXIMUM PEAK STAGE	9.95 Apr 1 1958
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 mi².

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 sea level, 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 ft³/s, Feb. 23, 1998, gage height, 9.73 ft, from rating curve extended above 140 ft³/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 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1615	1.3	0.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.46	0.45	0.40	0.33	0.43	0.23	0.0	0.00	0.00	0.00
2	0.00	0.00	0.37	0.43	0.40	0.31	0.43	0.27	0.0	0.00	0.00	0.00
3	0.00	0.00	0.36	0.43	0.40	0.31	0.43	0.33	0.0	0.00	0.00	0.00
4	0.00	0.00	0.42	0.43	0.40	0.29	0.42	0.40	0.0	0.00	0.00	0.00
5	0.00	0.00	0.48	0.43	0.40	0.29	0.43	0.42	0.00	0.00	0.00	0.00
6	0.00	0.00	0.47	0.43	0.40	0.26	0.43	0.41	0.00	0.00	0.00	0.00
7	0.00	0.00	0.48	0.43	0.40	0.27	0.40	0.42	0.00	0.00	0.00	0.00
8	0.00	0.00	0.47	0.43	0.38	0.27	0.39	0.41	0.00	0.00	0.00	0.00
9	0.00	0.00	0.44	0.43	0.37	0.31	0.38	0.41	0.00	0.00	0.00	0.00
10	0.00	0.00	0.48	0.43	0.38	0.32	0.38	0.39	0.00	0.00	0.00	0.00
11	0.00	0.00	0.44	0.43	0.43	0.32	0.37	0.24	0.00	0.00	0.00	0.00
12	0.00	0.0	0.38	0.43	0.42	0.30	0.37	0.13	0.00	0.00	0.00	0.00
13	0.00	0.00	0.38	0.43	0.40	0.29	0.36	0.15	0.00	0.00	0.00	0.00
14	0.00	0.00	0.39	0.43	0.40	0.27	0.36	0.09	0.00	0.00	0.00	0.00
15	0.00	0.00	0.42	0.43	0.40	0.28	0.36	0.06	0.00	0.00	0.00	0.00
16	0.00	0.00	0.44	0.43	0.40	0.28	0.35	0.04	0.00	0.00	0.00	0.00
17	0.00	0.00	0.43	0.43	0.39	0.31	0.33	0.02	0.00	0.00	0.00	0.00
18	0.00	0.00	0.42	0.43	0.37	0.37	0.32	0.01	0.00	0.00	0.00	0.00
19	0.00	0.00	0.43	0.43	0.38	0.40	0.31	0.02	0.00	0.00	0.00	0.00
20	0.00	0.00	0.45	0.42	0.38	0.40	0.29	0.02	0.00	0.00	0.00	0.00
21	0.00	0.00	0.46	0.41	0.37	0.30	0.27	0.01	0.00	0.00	0.00	0.00
22	0.00	0.00	0.45	0.41	0.36	0.23	0.24	0.0	0.00	0.00	0.00	0.00
23	0.00	0.00	0.44	0.39	0.35	0.25	0.22	0.0	0.00	0.00	0.00	0.00
24	0.00	0.06	0.43	0.39	0.35	0.28	0.23	0.0	0.00	0.00	0.00	0.00
25	0.00	0.08	0.43	0.39	0.35	0.33	0.21	0.0	0.00	0.00	0.00	0.00
26	0.00	0.48	0.43	0.38	0.35	0.37	0.24	0.0	0.00	0.00	0.00	0.00
27	0.00	0.39	0.43	0.38	0.33	0.42	0.23	0.00	0.00	0.00	0.00	0.00
28	0.00	0.38	0.43	0.39	0.33	0.43	0.24	0.00	0.00	0.00	0.00	0.00
29	0.00	0.41	0.43	0.40	---	0.43	0.23	0.0	0.00	0.00	0.00	0.00
30	0.00	0.52	0.45	0.40	---	0.43	0.23	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.45	0.40	---	0.43	---	0.0	---	0.00	0.00	---
TOTAL	0.00	2.32	13.44	12.95	10.69	10.08	9.88	4.48	0.00	0.00	0.00	0.00
MEAN	0.000	0.077	0.434	0.418	0.382	0.325	0.329	0.145	0.000	0.000	0.000	0.000
MAX	0.00	0.52	0.48	0.45	0.43	0.43	0.43	0.42	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.36	0.38	0.33	0.23	0.21	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	4.6	27	26	21	20	20	8.9	0.00	0.00	0.00	0.00

SANTA MARGARITA RIVER BASIN

11045300 FALLBROOK CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.120	0.770	0.993	4.244	6.632	4.589	1.826	0.985	0.467	0.213	0.105	0.081
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	0.37	0.38	0.33	0.33	0.14	0.000	0.000	0.000	0.000
(WY)	2002	2000	2000	2000	2002	2002	2002	2002	2002	2002	2000	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1994 - 2002
ANNUAL TOTAL	316.04	63.84	
ANNUAL MEAN	0.866	0.175	1.726
HIGHEST ANNUAL MEAN			4.77 1998
LOWEST ANNUAL MEAN			0.17 2002
HIGHEST DAILY MEAN	48 Jan 11	0.52 Nov 30	256 Mar 5 1995
LOWEST DAILY MEAN	0.00 Jul 28	0.00 Oct 1	0.00 Sep 5 1994
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 2	0.00 Oct 1	0.00 Sep 5 1994
MAXIMUM PEAK FLOW		1.3 Nov 24	895 Feb 23 1998
MAXIMUM PEAK STAGE		0.63 Nov 24	9.73 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	627	127	1250
10 PERCENT EXCEEDS	0.95	0.43	2.2
50 PERCENT EXCEEDS	0.31	0.00	0.43
90 PERCENT EXCEEDS	0.00	0.00	0.00

11045370 O'NEILL LAKE TRIBUTARY NEAR FALLBROOK, CA

LOCATION.—Lat 33°19'40", long 117°19'04", in NW 1/4 NE 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, 0.4 mi northeast from dam on unnamed road, 200 ft upstream from O'Neill Lake, and 5.1 mi southwest of Fallbrook.

DRAINAGE AREA.—0.03 mi².

PERIOD OF RECORD.—October 2001 to September 2002.

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 115 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, unknown, Nov. 24, 2001, gage height, unknown, from rating curve developed using a standard 90° V-notch weir rating table; no flow for many days.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 25 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	unknown	unknown	unknown

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	e0.00	e0.00	e0.10	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	e0.00	e0.00	e0.00	e0.00	e0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00
8	e0.00	e0.00	e0.00	e0.00	e0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
9	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	e0.00	e0.20	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	e0.00	e0.00	e0.20	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	e0.00	e0.00	e0.00	e0.00	e0.00	0.25	0.01	0.00	0.00	0.00	0.00	0.00
17	e0.00	e0.00	e0.00	e0.00	e0.12	0.23	0.00	0.00	0.00	0.00	0.00	0.00
18	e0.00	e0.00	e0.00	e0.00	e0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
19	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	e0.00	e0.00	e0.11	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	e0.00	e0.00	e0.14	e0.00	e0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
22	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	e0.00	e0.00	e0.00	e0.00	e0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00
24	e0.00	e1.20	e0.00	e0.00	e0.00	0.16	0.03	0.00	0.00	0.00	0.00	0.00
25	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	e0.00	e0.00	e0.00	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	e0.00	e0.00	e0.00	e0.14	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	e0.00	e0.10	e0.00	e0.11	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	e0.00	e0.00	e0.00	e0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	e0.00	---	e0.00	e0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	1.50	0.55	0.25	0.12	1.15	0.04	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.050	0.018	0.008	0.004	0.037	0.001	0.000	0.000	0.000	0.000	0.000
MAX	0.00	1.2	0.20	0.14	0.12	0.26	0.03	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	3.0	1.1	0.5	0.2	2.3	0.08	0.00	0.00	0.00	0.00	0.00

e Estimated.

11045370 O'NEILL LAKE TRIBUTARY NEAR FALLBROOK, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.050	0.018	0.008	0.004	0.037	0.001	0.000	0.000	0.000	0.000	0.000
MAX	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
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 WATER YEAR

ANNUAL TOTAL	3.61
ANNUAL MEAN	0.010
HIGHEST DAILY MEAN	1.2 Nov 24
LOWEST DAILY MEAN	0.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00 Oct 1
MAXIMUM PEAK FLOW	a Nov 24
MAXIMUM PEAK STAGE	a Nov 24
ANNUAL RUNOFF (AC-FT)	7.2
10 PERCENT EXCEEDS	0.00
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	0.00

a Maximum peak flow and stage unknown, but occurred on Nov 24.

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 mi².

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder and concrete control with low-water V-notch weir. Elevation of gage is 100 ft above sea level, 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 ft³/s, Nov. 29, 2001, gage height, 2.59 ft; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	18	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	18	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	17	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	15	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	13	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	10	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	9.4	0.01	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00
16	0.00	0.00	8.4	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
17	0.00	0.00	7.3	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
18	0.00	0.00	6.0	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
19	0.00	0.00	4.4	0.0	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
20	0.00	0.00	3.1	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
21	0.00	0.00	2.5	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00
22	0.00	0.00	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	1.7	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
24	0.00	0.00	1.2	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	0.00
25	0.00	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	11	0.12	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	19	0.07	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.04	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	30.00	247.77	0.13	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
MEAN	0.000	1.000	7.993	0.004	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
MAX	0.00	19	18	0.03	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
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	0.00	60	491	0.3	0.00	0.00	0.00	0.2	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

MEAN	0.089	1.334	2.481	0.135	0.124	0.136	0.131	0.105	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	0.017	0.004	0.004	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
(WY)	2001	2000	2000	2002	2002	2002	2000	2000	2000	2000	2000	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1999 - 2002

ANNUAL TOTAL	283.69	277.98	
ANNUAL MEAN	0.777	0.762	0.398
HIGHEST ANNUAL MEAN			0.76 2002
LOWEST ANNUAL MEAN			0.004 2000
HIGHEST DAILY MEAN	19 Nov 30	19 Nov 30	19 Nov 30 2001
LOWEST DAILY MEAN	0.00 Feb 12	0.00 Oct 1	0.00 Sep 26 1999
ANNUAL SEVEN-DAY MINIMUM	0.00 Sep 10	0.00 Oct 1	0.00 Oct 9 1999
MAXIMUM PEAK FLOW		20 Nov 29	20 Nov 29 2001
MAXIMUM PEAK STAGE		2.59 Nov 29	2.59 Nov 29 2001
ANNUAL RUNOFF (AC-FT)	563	551	288
10 PERCENT EXCEEDS	0.11	0.02	0.43
50 PERCENT EXCEEDS	0.01	0.00	0.01
90 PERCENT EXCEEDS	0.00	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 mi².

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder and sharp-crested weir (wooden flashboards in four weir boxes). Elevation of gage is 110 ft above sea level, 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 ft³/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 for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, 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	0.103	0.201	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL TOTAL	36.89		0.00			
ANNUAL MEAN	0.101		0.000		0.034	
HIGHEST ANNUAL MEAN					0.10 2001	
LOWEST ANNUAL MEAN					0.000 1999	
HIGHEST DAILY MEAN	2.8	Mar 11	0.00	Oct 1	2.8	Mar 11 2001
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 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)	73		0.00		24	
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	

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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	6.2	30	12	5.1	20	11	e3.4	2.4	0.00	0.00	0.00
2	0.00	6.4	31	12	5.0	25	5.6	3.4	2.5	0.00	0.00	0.00
3	0.00	6.6	32	9.9	5.4	26	4.1	3.6	2.8	0.00	0.00	0.00
4	0.00	6.7	32	8.5	5.7	29	4.5	3.7	2.9	0.00	0.00	0.00
5	0.00	6.6	29	8.1	5.3	21	3.7	4.0	2.8	0.00	0.00	0.00
6	0.00	6.6	30	11	6.0	9.0	4.1	4.0	2.5	0.00	0.00	0.00
7	0.00	7.1	29	12	6.2	4.4	4.7	3.9	2.2	0.00	0.00	0.00
8	0.00	6.7	31	11	6.8	6.4	4.7	3.9	2.1	0.00	0.00	0.00
9	0.00	6.2	26	8.8	6.2	17	4.2	3.8	2.2	0.00	0.00	0.00
10	0.00	7.0	25	7.8	7.5	18	4.5	4.7	2.0	0.00	0.00	0.00
11	0.00	7.1	24	6.9	8.6	20	4.4	4.9	1.8	0.00	0.00	0.00
12	0.00	6.1	26	6.7	9.2	21	4.2	4.9	1.7	0.00	0.00	0.00
13	0.00	6.3	24	6.5	9.0	21	4.4	5.1	1.6	0.00	0.00	0.00
14	0.00	7.1	23	6.6	8.8	4.3	4.6	4.6	1.4	0.00	0.00	0.00
15	0.00	8.6	22	8.6	9.4	5.2	4.1	4.2	1.2	0.00	0.00	0.00
16	0.00	8.3	22	7.5	9.2	2.0	3.1	4.1	1.1	0.00	0.00	0.00
17	0.00	7.5	21	6.4	6.1	2.3	3.2	2.8	0.92	0.00	0.00	0.00
18	0.00	7.0	20	6.4	7.1	2.7	2.8	3.0	0.80	0.00	0.00	0.00
19	0.00	7.2	20	5.9	7.1	11	2.9	3.8	0.64	0.00	0.00	0.00
20	0.00	6.4	19	6.0	8.5	13	3.1	4.2	0.52	0.00	0.00	0.00
21	0.00	5.6	19	5.9	11	11	3.0	5.5	0.45	0.00	0.00	0.00
22	0.17	5.1	18	7.2	15	12	3.0	5.5	0.14	0.00	0.00	0.00
23	3.9	5.5	20	6.1	13	8.0	3.5	4.0	0.02	0.00	0.00	0.00
24	5.2	6.0	17	5.0	15	4.5	3.6	3.1	0.00	0.00	0.00	0.00
25	5.6	27	16	5.0	15	9.9	3.8	2.7	0.00	0.00	0.00	0.00
26	5.5	63	14	5.3	24	13	3.5	2.4	0.00	0.00	0.00	0.00
27	5.5	35	14	5.5	24	2.9	3.6	2.7	0.00	0.00	0.00	0.00
28	6.3	30	14	5.6	13	2.7	3.1	2.8	0.00	0.00	0.00	0.00
29	6.5	28	13	5.1	---	6.9	3.4	2.4	0.00	0.00	0.00	0.00
30	6.4	30	13	4.8	---	12	e3.7	2.4	0.00	0.00	0.00	0.00
31	6.4	---	12	5.1	---	12	---	2.2	---	0.00	0.00	---
TOTAL	51.47	372.9	686	229.2	272.2	373.2	122.1	115.7	36.69	0.00	0.00	0.00
MEAN	1.660	12.43	22.13	7.394	9.721	12.04	4.070	3.732	1.223	0.000	0.000	0.000
MAX	6.5	63	32	12	24	29	11	5.5	2.9	0.00	0.00	0.00
MIN	0.00	5.1	12	4.8	5.0	2.0	2.8	2.2	0.00	0.00	0.00	0.00
AC-FT	102	740	1360	455	540	740	242	229	73	0.00	0.00	0.00

e Estimated.

SANTA MARGARITA RIVER BASIN

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 - 2002, BY WATER YEAR (WY)

MEAN	4.967	16.07	29.74	186.5	203.0	186.6	52.03	25.56	10.28	3.098	2.848	1.544
MAX	39.3	62.0	124	2261	1296	896	202	121	36.6	10.1	31.6	6.98
(WY)	1984	1984	1984	1993	1993	1995	1983	1998	1998	1998	1983	1998
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 WATER YEAR

WATER YEARS 1981 - 2002

ANNUAL TOTAL	2259.46	
ANNUAL MEAN	6.190	60.28
HIGHEST ANNUAL MEAN		337 1993
LOWEST ANNUAL MEAN		4.59 1989
HIGHEST DAILY MEAN	63 Nov 26	22000 Jan 16 1993
LOWEST DAILY MEAN	0.00 Oct 1	0.00 Jun 19 1981
ANNUAL SEVEN-DAY MINIMUM	0.00 Oct 1	0.00 Jun 19 1981
MAXIMUM PEAK FLOW	140 Mar 11	e44000 Jan 16 1993
MAXIMUM PEAK STAGE	5.89 Mar 11	20.47 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	4480	43670
10 PERCENT EXCEEDS	19	75
50 PERCENT EXCEEDS	3.9	7.0
90 PERCENT EXCEEDS	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 mi².

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 sea level.

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, 7.65 ft, Dec. 30; minimum recorded gage height, 3.82 ft, Dec. 9, 18, 19.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.78	4.49	5.70	4.39	6.65	4.15	7.42	4.60	5.00	4.55	6.21	4.41
2	5.77	4.52	6.02	4.36	6.66	4.11	6.85	4.64	4.71	4.44	5.88	4.28
3	5.77	4.49	6.21	4.39	6.71	4.05	6.22	4.68	4.67	4.42	5.50	4.11
4	5.76	4.48	6.24	4.37	6.57	4.24	5.13	4.81	4.75	4.43	5.29	4.10
5	5.82	4.38	6.04	4.35	5.24	4.02	4.86	4.69	4.92	4.44	5.12	4.09
6	5.66	4.29	5.62	4.33	4.62	3.93	4.91	4.70	5.13	4.44	4.88	4.08
7	5.41	4.26	4.90	4.29	4.21	3.86	5.42	4.72	5.40	4.42	4.87	4.07
8	5.23	4.25	4.71	4.24	4.31	3.83	6.57	4.75	6.07	4.43	5.33	4.08
9	5.35	4.24	4.72	4.29	5.02	3.82	7.31	4.91	6.36	4.45	5.25	4.12
10	5.43	4.37	4.85	4.32	6.26	4.06	7.23	5.03	5.95	4.44	5.19	4.08
11	5.64	4.74	5.37	4.34	7.02	4.12	6.79	4.89	6.35	4.40	5.51	4.11
12	5.93	4.73	6.06	4.38	6.86	4.05	6.75	4.85	6.30	4.46	5.52	4.15
13	6.30	4.75	6.55	4.42	6.62	3.91	6.98	4.83	6.00	4.44	5.56	4.14
14	6.51	4.80	7.11	4.40	7.05	3.88	6.71	4.78	5.59	4.43	5.49	4.28
15	6.40	4.81	7.04	4.31	7.06	4.07	6.33	4.75	4.97	4.39	4.85	4.25
16	6.64	4.81	7.03	4.24	6.47	3.89	5.58	4.72	4.57	4.30	4.75	4.12
17	6.87	4.80	6.55	4.18	5.95	3.83	5.01	4.71	4.54	4.27	4.55	4.03
18	6.79	4.77	6.16	4.12	5.54	3.82	4.74	4.59	4.99	4.30	4.64	4.09
19	6.60	4.57	5.42	4.07	5.08	3.82	4.65	4.56	4.58	4.26	4.38	3.98
20	6.07	4.43	4.91	4.03	4.69	3.86	4.67	4.54	4.42	4.20	4.16	3.94
21	5.43	4.32	5.19	4.09	4.76	3.86	4.73	4.52	4.58	4.21	4.29	3.95
22	4.92	4.30	5.32	4.51	4.41	3.86	4.70	4.55	5.02	4.27	4.97	4.25
23	4.52	4.28	5.42	5.32	4.24	3.84	4.95	4.59	5.85	4.30	5.37	4.09
24	4.37	4.27	5.55	5.42	4.84	3.84	4.91	4.58	6.30	4.16	5.01	4.07
25	4.41	4.29	5.61	5.55	4.95	4.08	5.39	4.57	6.69	4.19	5.46	4.12
26	4.44	4.30	5.67	5.61	6.06	4.12	6.32	4.63	7.03	4.21	5.79	4.12
27	4.55	4.32	5.72	5.65	6.51	4.17	6.96	4.65	7.25	4.34	5.92	4.21
28	4.65	4.34	5.76	5.69	6.97	4.07	7.33	4.62	6.92	4.47	5.94	4.26
29	4.76	4.37	5.91	5.67	7.31	4.27	7.31	4.64	---	---	5.91	4.25
30	5.08	4.41	6.69	4.27	7.65	4.38	7.01	4.62	---	---	5.92	4.16
31	5.40	4.44	---	---	7.64	4.49	5.87	4.59	---	---	5.75	4.10
MONTH	6.87	4.24	7.11	4.03	7.65	3.82	7.42	4.52	7.25	4.16	6.21	3.94

SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.77	4.07	5.63	4.20	5.00	4.26	4.34	4.13	5.05	4.88	5.26	4.44
2	5.30	4.05	5.02	4.16	4.40	4.23	4.47	4.05	5.19	5.05	5.58	4.31
3	4.90	4.02	4.32	4.03	4.52	4.34	4.65	4.04	5.30	5.19	6.09	4.24
4	4.44	3.99	4.11	3.96	4.77	4.52	5.15	4.07	5.59	5.30	7.22	4.44
5	4.42	3.99	4.17	3.97	5.01	4.61	5.53	4.11	6.19	5.15	7.36	4.36
6	4.51	4.01	4.33	4.02	5.15	4.27	5.91	4.12	6.86	4.09	7.49	4.40
7	4.69	4.08	4.71	4.22	5.55	4.27	6.32	4.16	7.19	4.12	7.13	4.39
8	4.63	4.08	4.72	4.24	5.98	4.28	6.75	4.18	7.24	4.15	6.61	4.38
9	4.52	4.08	4.83	4.17	6.40	4.30	7.06	4.21	7.19	4.22	6.71	4.46
10	4.63	4.07	5.43	4.24	6.56	4.34	7.22	4.22	6.80	4.28	6.73	4.44
11	4.87	4.13	5.58	4.24	6.56	4.29	7.18	4.22	6.70	4.28	6.39	4.35
12	5.09	4.10	5.71	4.17	6.36	4.29	6.89	4.23	6.06	4.30	6.05	4.17
13	5.29	4.09	6.02	4.22	6.26	4.28	6.80	4.23	5.66	4.27	5.71	4.13
14	5.57	4.10	6.14	4.27	5.98	4.28	6.28	4.27	5.64	4.13	5.60	4.15
15	5.67	4.09	6.14	4.29	5.60	4.29	5.46	4.25	5.73	4.04	5.66	4.21
16	5.73	4.06	5.73	4.27	5.15	4.33	5.20	4.14	5.71	4.04	6.03	4.29
17	5.42	4.04	5.20	4.25	4.65	4.31	5.58	4.04	5.92	4.05	6.47	4.36
18	5.01	4.03	4.90	4.23	4.81	4.29	6.01	4.04	6.29	4.14	6.55	4.39
19	5.10	4.05	4.58	4.23	5.42	4.34	6.47	4.05	6.51	4.21	6.40	4.38
20	4.87	4.04	4.43	4.23	5.86	4.42	6.67	4.10	6.56	4.19	6.25	4.38
21	4.49	4.03	4.72	4.26	6.32	4.54	6.88	4.10	6.45	4.20	5.81	4.33
22	4.51	4.06	5.37	4.55	6.74	4.35	7.07	4.13	6.23	4.17	5.56	4.34
23	4.71	4.12	5.89	4.39	7.02	4.38	6.96	4.14	6.05	4.19	5.77	4.40
24	5.26	4.23	6.28	4.38	6.92	4.32	6.75	4.10	5.75	4.22	6.02	4.41
25	5.83	4.24	6.59	4.43	6.76	4.28	6.74	4.17	5.47	4.28	5.85	4.55
26	6.54	4.30	6.69	4.29	6.38	4.24	6.49	4.25	4.99	4.31	5.58	4.51
27	6.44	4.26	6.59	4.26	6.22	4.19	6.33	4.20	4.84	4.34	5.37	4.39
28	6.37	4.21	6.28	4.21	6.03	4.22	5.53	4.21	4.79	4.23	5.05	4.38
29	6.34	4.19	6.22	4.21	5.58	4.23	4.81	4.20	4.72	4.22	e5.20	4.58
30	5.96	4.19	5.83	4.22	4.84	4.20	4.63	4.25	4.96	4.55	e5.50	e4.55
31	---	---	5.35	4.24	---	---	4.88	4.63	4.98	4.58	---	---
MONTH	6.54	3.99	6.69	3.96	7.02	4.19	7.22	4.04	7.24	4.04	7.49	4.13

e Estimated.

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1993 to current year.

DISSOLVED OXYGEN: October 1993 to current year.

pH: October 1993 to current year.

SPECIFIC CONDUCTANCE: October 1993 to current year.

WATER TEMPERATURE: October 1993 to current year.

PERIOD OF DAILY RECORD.—October 1993 to current year.

DISSOLVED OXYGEN: October 1993 to current year.

pH: October 1993 to current year.

SPECIFIC CONDUCTANCE: October 1993 to current year.

WATER TEMPERATURE: October 1993 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1993.

REMARKS.—Dissolved oxygen records rated poor. pH records rated fair through Jan. 23, poor from Jan. 24 to May 7, and good for the remainder of year. Specific conductance records rated good through June 25, and fair thereafter. Temperature records rated excellent. Interruptions in record at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 20.9 mg/L, May 1, 1996, April 5, 2002; minimum recorded, 0.0 mg/L, May 19, Aug. 29, 1994.

pH: Maximum recorded, 9.6 standard units, Dec. 21, 22, 1996, Dec. 30, 31, 1999; minimum recorded, 6.2 standard units, Nov. 26, 1993.

SPECIFIC CONDUCTANCE: Maximum recorded, 58,700 microsiemens, June 21, 2002; minimum recorded, 119 microsiemens, Feb. 24, 1998.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 29, 1995, June 9, and Aug. 14, 16, 1996; minimum recorded, 5.0°C, Nov. 21, 1994.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 20.9 mg/L, Apr. 5; minimum recorded, 0.1 mg/L, May 23.

pH: Maximum recorded, 9.2 standard units, May 21; minimum recorded, 7.0 standard units, Nov. 1, 2, Jan. 7, 16, 19.

SPECIFIC CONDUCTANCE: Maximum recorded, 58,700 microsiemens, June 21; minimum recorded, 24,700 microsiemens, June 19.

WATER TEMPERATURE: Maximum recorded, 28.7°C, July 17; minimum recorded, 10.0°C, Dec. 17.

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	5.3	0.3	7.3	4.4	8.5	3.7	13.8	4.2	7.9	5.4
2	---	---	3.8	0.3	8.0	4.4	9.5	4.2	14.6	4.4	7.0	4.7
3	---	---	5.3	0.3	7.4	3.9	14.1	3.7	14.1	5.4	7.0	4.4
4	---	---	4.7	0.4	8.0	2.4	16.9	3.4	13.2	3.6	7.2	5.3
5	---	---	6.5	0.8	5.6	2.4	13.4	3.4	11.6	1.3	6.9	5.0
6	---	---	6.0	1.0	10.7	2.7	9.3	4.4	11.0	1.6	6.9	5.0
7	---	---	8.4	1.3	9.2	2.1	5.8	0.5	10.4	3.1	6.2	3.0
8	---	---	12.2	2.3	9.9	2.4	7.9	4.5	8.5	4.6	7.7	3.0
9	---	---	6.7	1.6	8.7	4.5	6.4	4.5	11.1	3.5	7.2	5.0
10	---	---	5.7	0.5	8.6	5.1	8.6	4.4	11.2	4.4	6.5	3.2
11	---	---	6.3	0.7	9.3	5.5	10.4	4.9	11.2	4.8	7.3	2.9
12	---	---	6.3	1.5	9.3	5.2	11.0	5.2	10.6	1.7	8.2	3.7
13	---	---	8.8	3.2	9.0	5.2	11.3	5.4	12.4	3.7	7.3	4.0
14	---	---	8.7	4.0	8.3	5.1	10.6	5.7	14.5	4.1	7.7	3.6
15	---	---	8.3	4.3	9.8	3.4	8.8	5.7	18.2	4.6	7.1	3.7
16	---	---	7.5	4.2	10.2	5.1	9.0	3.5	17.2	5.2	10.2	4.1
17	---	---	7.7	2.9	10.0	4.6	15.6	4.5	17.4	3.0	8.8	3.4
18	---	---	8.7	2.8	9.2	4.0	12.9	6.4	15.8	2.8	10.0	5.3
19	12.1	7.6	8.0	3.4	8.7	3.5	12.1	5.3	18.1	4.5	8.4	3.4
20	13.5	6.7	7.7	4.0	14.1	4.0	12.0	7.8	15.6	5.8	10.3	4.6
21	15.0	8.4	10.4	3.6	10.3	2.8	14.2	6.6	8.9	1.0	10.3	3.1
22	15.5	8.7	10.1	3.5	13.3	4.0	13.2	8.8	6.1	0.7	9.7	3.8
23	12.7	8.0	8.8	5.7	13.0	4.1	12.2	3.1	5.6	2.3	12.9	5.5
24	9.6	5.5	8.8	5.7	12.3	3.8	16.0	7.1	7.5	3.2	10.4	3.5
25	8.5	4.0	13.7	3.4	12.4	4.5	11.5	0.9	7.8	3.0	12.2	5.6
26	6.6	4.2	11.9	5.6	10.3	6.3	11.5	3.8	8.4	4.3	13.0	6.4
27	6.9	3.9	12.8	5.6	10.7	5.8	9.9	6.3	8.2	4.1	13.9	5.2
28	6.1	2.6	14.1	8.7	7.8	5.9	11.1	4.5	8.4	5.4	12.5	6.2
29	6.6	2.4	14.1	7.0	8.1	5.3	9.1	4.1	---	---	16.7	6.5
30	7.6	1.6	7.6	2.8	8.8	4.4	11.2	4.6	---	---	19.3	5.8
31	3.4	0.3	---	---	7.8	4.1	12.7	3.7	---	---	13.4	4.7
MONTH	---	---	14.1	0.3	14.1	2.1	16.9	0.5	18.2	0.7	19.3	2.9

SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	6.1	14.9	5.1	9.3	3.6	10.3	1.6	8.6	2.7	11.1	1.5
2	12.9	5.4	13.3	5.2	12.6	5.0	11.8	1.3	9.8	2.8	12.2	1.2
3	11.8	5.1	---	---	8.9	3.7	12.2	1.4	---	---	11.6	1.2
4	20.4	3.6	---	---	9.4	1.4	14.2	1.5	---	---	12.4	1.9
5	20.9	2.5	---	---	6.6	1.5	14.4	1.6	---	---	8.7	2.7
6	18.1	4.4	---	---	7.8	0.8	13.1	1.8	---	---	9.2	2.5
7	13.1	2.8	---	---	6.0	0.7	11.2	2.1	14.1	1.2	10.6	3.8
8	13.2	2.1	15.6	6.2	7.3	0.6	11.6	2.2	12.5	1.2	10.4	4.6
9	17.4	2.3	16.9	5.0	10.8	0.7	14.6	2.8	10.5	1.6	11.8	4.9
10	14.6	1.6	13.6	1.4	9.0	0.8	11.9	3.4	9.9	2.7	11.3	4.3
11	19.8	2.4	17.1	1.8	11.9	1.2	10.9	3.3	10.0	2.8	11.0	4.3
12	10.5	1.1	15.7	2.3	12.8	1.9	8.6	3.1	9.7	2.7	12.2	3.9
13	7.9	1.9	15.1	2.1	12.4	2.1	5.9	2.9	8.9	1.8	12.4	2.7
14	8.1	3.9	17.8	2.9	12.0	2.0	5.6	3.0	---	---	13.1	2.8
15	8.8	3.8	14.7	3.4	12.3	1.4	11.2	2.2	---	---	10.3	2.5
16	9.4	5.3	14.7	2.3	13.7	1.4	15.9	1.6	---	---	13.8	2.6
17	9.7	4.0	12.2	4.0	12.4	3.3	17.8	1.4	---	---	15.7	2.8
18	11.2	5.1	10.5	2.8	11.0	1.8	14.3	1.4	---	---	16.4	3.4
19	10.8	6.5	11.6	2.8	9.4	1.5	10.8	1.2	---	---	13.8	2.7
20	11.4	6.5	15.0	6.2	9.3	1.3	8.0	0.9	---	---	12.8	2.8
21	13.0	6.4	16.3	5.5	11.4	1.4	10.7	1.5	---	---	12.5	2.8
22	11.9	4.4	16.0	2.7	12.2	1.6	10.7	1.5	---	---	12.0	2.3
23	14.9	6.8	17.5	0.1	11.8	1.7	11.1	1.9	---	---	11.2	2.3
24	12.8	4.6	14.4	0.8	11.0	1.7	11.7	2.2	---	---	11.2	4.0
25	14.6	4.3	13.0	0.6	12.8	2.3	13.3	2.1	---	---	8.7	4.6
26	10.4	4.8	13.1	1.1	10.3	1.5	13.6	3.1	---	---	9.3	4.9
27	14.2	5.3	12.3	2.6	13.4	1.8	13.1	3.0	5.5	4.9	8.1	4.6
28	13.4	5.3	10.5	2.7	13.8	2.0	11.0	2.8	13.0	4.1	8.2	3.6
29	11.9	5.4	10.9	2.3	11.5	1.3	11.2	2.5	12.6	2.4	11.9	5.5
30	12.2	5.2	9.5	2.0	10.5	1.1	8.1	2.5	11.8	2.1	10.3	2.5
31	---	---	9.7	1.8	---	---	8.6	2.7	9.9	1.9	---	---
MONTH	20.9	1.1	---	---	13.8	0.6	17.8	0.9	---	---	16.4	1.2

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.0	7.0	8.1	8.0	7.5	7.2	8.0	7.5	7.9	7.7
2	---	---	7.8	7.0	8.1	7.9	7.5	7.2	8.0	7.6	7.9	7.6
3	---	---	7.8	7.2	8.0	7.8	7.7	7.2	8.0	7.6	7.9	7.6
4	---	---	7.8	7.3	8.0	7.7	7.8	7.2	7.9	7.5	7.9	7.7
5	---	---	7.7	7.3	7.9	7.7	7.7	7.3	7.8	7.4	7.8	7.7
6	---	---	7.8	7.3	8.0	7.7	7.5	7.3	7.8	7.3	7.8	7.7
7	---	---	7.8	7.4	7.9	7.6	7.4	7.0	7.8	7.3	7.8	7.5
8	---	---	8.1	7.5	7.9	7.6	7.4	7.2	7.6	7.2	7.9	7.5
9	---	---	7.8	7.5	7.9	7.7	7.3	7.1	7.8	7.3	7.9	7.8
10	---	---	7.8	7.5	7.9	7.7	7.4	7.2	7.8	7.4	7.8	7.7
11	---	---	7.9	7.4	7.8	7.7	7.5	7.2	7.8	7.4	7.9	7.6
12	---	---	7.8	7.4	7.9	7.7	7.5	7.3	7.8	7.4	7.9	7.7
13	---	---	7.9	7.6	7.9	7.7	7.5	7.2	7.8	7.4	7.9	7.7
14	---	---	7.9	7.6	7.8	7.7	7.5	7.1	7.9	7.5	7.9	7.7
15	---	---	7.8	7.6	7.8	7.6	7.5	7.1	8.0	7.5	7.8	7.6
16	---	---	7.8	7.5	7.8	7.6	7.3	7.0	8.3	7.6	8.0	7.6
17	---	---	7.8	7.4	7.9	7.6	7.6	7.2	8.3	7.7	8.0	7.6
18	---	---	7.8	7.4	7.8	7.6	7.5	7.2	8.2	7.6	8.0	7.7
19	8.3	8.1	7.7	7.4	7.8	7.6	7.4	7.0	8.1	7.6	7.9	7.7
20	8.4	8.0	7.7	7.5	8.0	7.7	7.4	7.1	8.1	7.7	8.0	7.8
21	8.4	8.1	7.8	7.5	7.8	7.6	7.4	7.2	8.0	7.6	8.1	7.7
22	8.5	8.1	7.8	7.4	7.9	7.6	7.5	7.3	7.8	7.2	8.1	7.5
23	8.4	8.2	7.7	7.5	7.9	7.6	7.9	7.2	7.5	7.2	8.2	7.7
24	8.2	8.0	7.7	7.6	7.8	7.5	8.1	7.7	7.4	7.3	8.1	7.6
25	8.2	8.0	8.0	7.3	7.8	7.5	8.0	7.6	7.6	7.2	8.2	7.7
26	8.2	8.1	8.0	7.6	7.7	7.5	8.0	7.7	7.7	7.4	8.2	7.9
27	8.3	8.0	8.4	8.0	7.7	7.5	8.0	7.8	7.9	7.3	8.2	7.6
28	8.1	7.8	8.5	8.2	7.6	7.5	8.0	7.7	7.9	7.7	8.1	7.8
29	8.0	7.8	8.4	8.2	7.6	7.4	7.9	7.6	---	---	8.3	7.9
30	8.2	7.7	8.2	8.0	7.6	7.4	8.0	7.5	---	---	8.5	7.9
31	8.1	7.7	---	---	7.6	7.2	7.7	7.4	---	---	8.3	7.8
MONTH	---	---	8.5	7.0	8.1	7.2	8.1	7.0	8.3	7.2	8.5	7.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	7.8	---	---	8.6	8.2	8.3	7.8	8.2	8.0	8.8	8.3
2	8.2	7.8	---	---	8.8	8.4	8.4	7.9	8.3	7.9	8.8	7.9
3	8.1	7.8	---	---	8.9	8.5	8.5	8.0	8.2	7.9	8.6	7.9
4	8.5	8.0	---	---	8.9	8.5	8.6	7.8	8.2	8.0	8.5	7.8
5	8.5	8.0	---	---	8.8	8.5	8.6	7.7	8.2	7.8	8.2	7.8
6	8.3	7.9	---	---	8.7	8.3	8.5	7.7	8.5	7.7	8.1	7.7
7	8.1	7.8	---	---	8.3	7.6	8.4	7.7	8.5	7.8	8.2	7.7
8	8.2	7.8	8.9	8.5	8.2	7.3	8.4	7.7	8.5	7.8	8.2	7.8
9	8.2	7.9	9.0	8.4	8.3	7.5	8.5	7.8	8.3	7.8	8.2	7.8
10	8.2	7.9	9.0	8.1	8.2	7.6	8.4	7.8	8.3	7.8	8.2	7.7
11	8.3	7.8	9.0	7.9	8.4	7.7	8.2	7.7	8.3	7.7	8.3	7.8
12	8.0	7.7	8.8	7.9	8.5	7.8	8.2	7.7	8.3	7.7	8.3	7.8
13	8.0	7.7	8.7	7.8	8.6	7.8	8.0	7.7	8.2	7.6	8.4	7.8
14	8.0	7.8	9.0	7.8	8.6	7.8	7.9	7.6	8.3	7.6	8.6	7.8
15	8.0	7.8	8.8	7.8	8.6	7.6	8.0	7.5	8.3	7.7	8.3	7.8
16	8.0	7.8	8.8	7.7	8.7	7.7	8.2	7.6	8.2	7.6	8.5	7.8
17	8.0	7.8	8.6	8.0	8.6	8.2	8.5	7.7	8.2	7.6	8.5	7.7
18	8.1	7.8	8.6	8.3	8.7	8.2	8.5	7.8	8.3	7.6	8.6	7.9
19	8.1	7.9	8.6	8.3	8.7	8.0	8.3	7.7	8.1	7.6	8.5	7.8
20	8.1	7.9	8.9	8.5	8.6	7.7	8.1	7.6	8.3	7.5	8.5	7.9
21	8.2	8.0	9.2	8.7	8.6	7.6	8.2	7.6	8.4	7.6	8.5	7.9
22	8.2	8.0	9.1	8.7	8.6	7.7	8.3	7.7	8.4	7.6	8.5	7.8
23	8.3	8.0	9.0	7.8	8.5	7.6	8.3	7.7	8.5	7.6	8.5	7.8
24	---	---	8.7	7.7	8.3	7.6	8.3	7.7	8.4	7.6	8.5	8.0
25	---	---	8.6	7.7	---	---	8.4	7.7	8.4	7.6	8.3	8.0
26	---	---	8.6	7.7	8.3	7.7	8.4	7.8	8.4	7.8	8.4	8.0
27	---	---	8.6	7.8	8.4	7.7	8.4	7.7	8.4	7.9	8.3	8.1
28	---	---	8.5	7.9	8.5	7.6	8.3	7.7	8.6	8.1	8.3	8.0
29	---	---	8.5	7.9	8.4	7.6	8.3	7.7	8.6	8.2	8.6	8.2
30	---	---	8.5	7.8	8.3	7.7	8.2	7.9	8.7	8.3	8.5	8.1
31	---	---	8.5	7.8	---	---	8.3	7.9	8.7	8.3	---	---
MONTH	---	---	---	---	---	---	8.6	7.5	8.7	7.5	8.8	7.7

SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	---	---	47800	38400	48800	41200	49100	42000	44700	39300	50300	44100				
2	---	---	49100	43300	48800	43700	49100	40400	43600	36300	50400	43000				
3	---	---	49700	42500	48100	43600	47200	39800	39300	34200	50400	44700				
4	---	---	49800	43100	48700	44900	45700	39900	38000	32200	50100	42700				
5	---	---	49500	41900	46800	43100	43000	38300	40600	32400	50200	42900				
6	---	---	49100	42500	46600	42000	39100	36200	45000	34100	49900	42900				
7	---	---	48100	41600	44800	41600	45800	37200	46700	36900	49800	40000				
8	---	---	44900	40500	44500	41400	48600	39100	48400	37500	49800	40000				
9	---	---	42000	39900	48300	41000	48900	42700	48700	39600	49900	41600				
10	---	---	45300	41000	49100	44300	48800	44700	48200	39300	49400	40800				
11	---	---	47500	41500	49100	45000	49100	44800	48000	39400	48600	39800				
12	---	---	48400	41600	48800	42100	49000	40900	48100	38800	49900	41200				
13	---	---	48600	42900	48800	42500	49100	43000	47800	38800	51100	41400				
14	---	---	49100	45000	48700	41100	49200	41500	45100	39900	49500	42700				
15	---	---	49300	44200	48500	44600	48700	43000	43400	37200	48800	42400				
16	---	---	49400	44700	48500	44000	47700	44200	42400	36900	45300	39600				
17	---	---	49100	43300	48200	43600	48500	41100	40400	34900	46300	34300				
18	---	---	48600	43000	47500	44500	42900	38300	45100	33900	45400	33300				
19	48400	45700	47400	41100	46100	42600	39400	35200	40600	32300	41000	31700				
20	46800	44900	44200	42100	44900	40700	36300	31800	35000	31500	34100	29800				
21	45800	43500	45500	42100	44600	38000	33400	30300	36800	30700	36200	29700				
22	43500	42100	47300	45200	44800	39800	30800	27800	45200	30400	48000	31200				
23	42100	40200	46900	45500	42700	38400	34400	28800	47600	34600	46500	36000				
24	40300	37500	45500	40900	47400	39000	33400	30300	48100	38100	48200	34600				
25	37900	36400	43000	41500	47300	41000	45400	30300	47900	38200	49800	39500				
26	36600	35300	42000	40500	48500	42200	49500	31900	48100	41200	49900	40700				
27	39000	35400	41400	38400	49300	43900	49300	40200	50100	41900	50100	40600				
28	39700	37200	39500	38600	49500	44900	48200	41400	50900	44600	50300	44000				
29	39100	36200	39600	38100	49400	44800	48900	44800	---	---	50700	42600				
30	40400	36500	49500	38700	49500	44000	47600	42400	---	---	51000	43100				
31	42500	36900	---	---	49300	43600	47000	39800	---	---	50400	41600				
MONTH	---	---	49800	38100	49500	38000	49500	27800	50900	30400	51100	29700				
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	51400	43400	49800	43200	50500	44600	46600	42400	47400	44900	44800	38600				
2	51100	38400	48900	41700	46400	40500	44600	39100	48100	43400	49100	40800				
3	49400	42200	---	---	45000	41000	44800	38800	46100	43600	49800	42500				
4	44500	37900	---	---	47800	39500	49800	38700	45800	43000	49800	45200				
5	41600	37500	---	---	48400	42600	50700	40700	47900	42600	49800	45800				
6	41100	36400	---	---	49400	42800	51100	41800	50900	42900	49600	46900				
7	44700	35400	---	---	54500	45300	51200	44700	51200	44900	49600	45800				
8	45600	33800	40300	36400	55400	47600	51200	45500	51200	45700	49400	43400				
9	40600	33000	44100	37500	56000	45500	51300	45400	51200	45300	49300	45400				
10	45800	35200	48600	35300	56400	48600	51100	44900	51200	45800	49200	45400				
11	48200	37800	50000	43700	56600	50100	51300	43800	51200	45900	48900	44600				
12	48400	39800	50400	37200	56900	50400	51300	44400	51100	45800	48400	43600				
13	50700	39100	50500	45200	57100	50600	51100	43500	50700	44900	48000	43400				
14	51400	40000	50700	45500	57300	50000	50400	45700	50700	43100	47700	42300				
15	51600	40300	50600	46400	57500	52200	---	---	51300	41000	47600	41400				
16	51600	42500	50600	46400	57200	51600	49500	42800	51300	41900	47600	41600				
17	50000	42100	49500	44300	54300	50400	50000	42700	51600	42900	50000	44800				
18	50600	43000	47400	42900	53500	49500	51000	42300	51800	40900	50100	45300				
19	51200	42600	44500	39600	56200	24700	51300	44500	51900	42200	50200	44900				
20	49300	43200	39600	31300	58300	49500	51600	44200	51700	42800	50100	44600				
21	45600	38900	39400	34100	58700	51400	51800	47300	51600	43800	50000	44200				
22	42900	39300	44200	36700	58200	49500	52000	47300	51100	44100	49700	44800				
23	45800	39600	50200	40300	56000	48600	52000	46800	51000	44800	49200	45100				
24	48200	41200	51000	43700	52000	43800	52100	46500	50600	45100	49100	45100				
25	49800	39900	51300	45200	50600	45000	52300	47200	49900	44300	48400	44900				
26	50000	41200	51900	45700	50600	43700	52300	46500	48000	43800	46900	41900				
27	49900	41400	52100	46100	50700	44600	52400	45800	45700	41800	46400	44000				
28	50000	43100	52300	46500	50900	45600	52300	47900	43700	40000	46100	42500				
29	49900	43400	52500	47600	50700	44100	51600	47000	44200	41600	44700	40500				
30	49900	43200	52800	47700	50000	44300	49500	46300	45300	41700	45800	41700				
31	---	---	52700	45700	---	---	49200	46000	45000	39900	---	---				
MONTH	51600	33000	---	---	58700	24700	---	---	51900	39900	50200	38600				

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	18.8	18.1	14.9	12.6	14.7	13.7	12.0	11.1	17.9	15.3
2	---	---	18.8	16.8	14.9	13.6	14.8	13.9	13.7	10.9	18.1	15.5
3	---	---	17.9	16.0	16.2	14.8	15.9	14.7	14.0	11.2	18.2	14.7
4	---	---	18.2	16.4	15.6	13.9	16.6	15.3	14.8	11.3	17.6	13.7
5	---	---	17.6	16.3	15.3	14.0	16.2	14.7	14.7	11.3	17.6	13.4
6	---	---	18.0	16.8	15.2	14.3	15.9	13.9	14.4	11.6	17.0	13.8
7	---	---	18.9	17.2	15.9	14.9	15.2	13.7	14.7	12.0	17.3	14.8
8	---	---	19.4	17.7	15.5	13.3	15.3	13.8	14.6	13.1	17.1	14.2
9	---	---	19.3	18.4	14.0	12.2	15.6	14.4	15.1	12.8	18.5	13.8
10	---	---	19.0	18.2	14.6	12.7	15.9	14.3	15.3	12.0	19.3	13.9
11	---	---	19.0	17.3	14.2	12.7	15.6	14.0	15.5	11.7	19.4	14.0
12	---	---	18.8	16.4	14.1	10.9	15.4	11.9	14.7	11.3	18.3	14.7
13	---	---	18.2	16.1	13.9	10.9	15.2	11.9	14.8	12.3	19.5	15.2
14	---	---	17.6	15.4	13.5	10.7	14.5	11.8	15.7	13.5	16.6	14.5
15	---	---	17.2	15.2	12.9	10.5	14.8	13.8	16.9	15.0	17.1	13.5
16	---	---	16.9	15.0	12.8	11.3	14.8	14.2	17.7	16.1	16.2	13.5
17	---	---	16.9	15.8	12.9	10.0	14.7	13.1	16.8	15.6	17.4	13.8
18	---	---	16.9	15.9	13.2	11.5	14.4	12.2	17.2	13.9	18.0	13.3
19	20.1	18.6	17.0	15.1	13.6	11.8	13.4	11.3	17.1	13.8	18.8	14.4
20	21.0	19.3	17.4	16.7	13.6	12.8	12.6	10.2	17.9	14.4	20.1	15.6
21	21.0	20.2	17.4	15.9	14.4	12.7	13.2	10.8	19.1	14.8	19.5	15.7
22	21.7	20.6	16.8	16.1	14.7	13.1	13.5	11.7	18.6	14.0	18.9	13.6
23	21.6	20.9	17.9	16.6	14.3	12.9	13.5	12.3	17.2	13.8	20.7	14.7
24	21.5	20.9	17.7	16.5	13.8	12.6	13.6	10.9	17.7	14.4	18.3	13.8
25	21.3	21.0	16.7	14.8	13.7	12.4	13.4	10.6	17.2	13.8	18.9	12.1
26	21.2	20.8	15.6	14.4	13.6	12.2	13.8	10.8	17.5	14.3	19.3	12.9
27	20.8	19.9	15.0	12.8	13.8	12.0	14.0	12.8	16.5	14.6	16.5	12.7
28	20.4	20.1	13.1	11.3	13.7	12.0	14.2	12.8	16.9	15.0	15.0	13.4
29	20.3	19.4	11.9	10.9	14.1	13.4	14.2	12.8	---	---	17.3	13.8
30	20.1	19.0	14.6	11.6	14.1	13.2	13.4	12.0	---	---	18.5	14.5
31	19.8	18.2	---	---	14.7	14.1	12.1	11.0	---	---	17.6	14.4
MONTH	---	---	19.4	10.9	16.2	10.0	16.6	10.2	19.1	10.9	20.7	12.1
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.7	14.2	20.6	14.2	23.2	20.8	26.1	23.0	26.9	24.4	27.1	24.8
2	16.3	14.3	21.6	15.6	23.8	22.5	27.5	24.9	26.8	25.6	28.5	23.1
3	16.3	14.4	22.6	17.2	24.2	22.8	27.0	25.4	27.3	24.9	26.0	21.2
4	19.3	15.6	23.0	20.5	25.2	23.5	26.2	23.2	27.4	25.2	25.5	21.2
5	19.4	16.5	22.7	20.9	25.3	24.7	25.8	22.4	27.5	24.6	23.9	20.5
6	20.6	16.2	22.5	20.7	24.8	23.5	25.3	21.8	28.1	22.6	21.6	18.9
7	21.6	15.6	21.7	18.3	23.5	20.7	24.3	21.4	27.0	22.4	21.7	19.2
8	21.1	16.5	22.4	20.6	22.3	19.9	24.1	21.3	27.0	21.0	21.8	18.8
9	21.6	18.1	22.6	20.5	21.7	19.7	24.0	21.2	25.5	19.4	22.6	18.4
10	21.4	17.8	22.6	19.1	23.0	19.6	24.2	21.1	24.9	18.7	22.6	19.0
11	22.3	17.3	21.8	18.1	24.2	19.8	24.5	21.3	24.7	18.7	24.2	21.2
12	19.0	16.6	22.1	17.9	24.8	20.0	25.3	21.3	24.6	19.8	24.8	22.2
13	20.8	16.4	22.1	17.6	24.7	20.1	26.0	21.3	24.6	21.0	25.3	22.7
14	18.4	16.4	22.5	17.4	24.5	19.5	25.9	21.6	26.6	23.0	26.8	23.6
15	18.3	16.0	21.1	17.8	25.0	19.4	27.0	21.7	27.9	24.2	24.6	21.5
16	19.3	15.9	21.1	17.9	26.2	20.2	28.4	24.6	26.2	23.8	25.2	20.8
17	20.6	16.2	21.3	19.2	26.8	23.6	28.7	25.1	25.7	22.7	23.4	20.5
18	21.0	16.2	21.2	20.1	28.2	25.0	26.6	24.5	24.2	21.4	23.8	20.9
19	21.1	16.0	20.7	19.4	26.8	23.5	25.8	23.2	23.4	21.3	24.4	20.4
20	21.4	15.8	21.5	20.3	23.6	20.8	25.2	23.0	25.3	21.3	25.2	21.5
21	22.5	17.3	22.0	20.0	24.4	20.6	24.9	22.2	26.4	21.7	24.6	21.0
22	23.0	17.7	23.1	20.5	26.1	21.6	26.6	21.9	26.2	21.8	24.3	20.4
23	24.0	17.5	23.9	19.2	25.9	20.9	27.5	21.1	26.4	21.5	23.4	20.5
24	20.4	16.0	22.7	18.5	26.4	20.8	27.8	21.4	26.4	21.2	23.4	20.3
25	22.1	16.4	21.3	18.3	25.9	20.6	27.8	21.4	25.9	20.8	22.4	21.2
26	20.0	15.7	22.0	18.4	25.1	20.4	26.3	21.2	26.0	21.6	22.9	21.8
27	19.8	15.8	23.1	18.5	25.5	19.9	25.7	21.1	25.3	23.1	22.8	21.9
28	21.6	15.1	23.2	18.9	25.0	20.1	26.4	21.6	25.1	23.4	22.0	21.4
29	21.1	14.9	22.5	18.9	24.9	20.2	26.5	22.0	26.6	24.1	23.4	21.8
30	20.3	14.1	21.6	18.8	24.0	21.3	27.7	24.4	26.3	24.7	22.9	21.6
31	---	---	21.9	18.7	---	---	26.5	25.0	26.0	24.8	---	---
MONTH	24.0	14.1	23.9	14.2	28.2	19.4	28.7	21.1	28.1	18.7	28.5	18.4

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 Nov. 26 to April 1, which are poor. Specific conductance records rated good except for Feb. 1 to Mar. 27, which are poor. Temperature records rated excellent. 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, 21.0 mg/L, Apr. 22; minimum recorded, 0.0 mg/L, several days in May, July, and August.

pH: Maximum recorded, 9.3 standard units, Apr. 21, 23, May 2–4, 6; minimum recorded, 7.0 standard units, May 19, 20.

SPECIFIC CONDUCTANCE: Maximum recorded, 54,000 microsiemens, Dec. 29, Jan. 2; minimum recorded, 32,800 microsiemens, Mar. 30.

WATER TEMPERATURE: Maximum recorded, 31.8°C, July 25; minimum recorded, 5.4°C, Feb. 1.

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.2	2.9	12.0	4.1	13.4	7.8	9.6	4.0	13.0	5.9	---	---
2	6.8	2.4	11.1	4.8	13.6	7.3	9.7	3.5	13.4	7.3	---	---
3	7.4	3.0	10.6	5.2	11.9	7.2	10.6	3.6	11.0	6.8	---	---
4	7.5	3.0	9.9	4.4	10.2	5.2	12.0	3.8	10.7	5.9	---	---
5	7.5	3.5	9.8	4.1	13.7	6.5	13.2	4.8	15.6	6.2	---	---
6	8.5	4.5	9.9	3.4	14.2	7.9	14.0	5.2	16.1	6.7	---	---
7	8.3	5.4	11.5	2.6	14.0	8.6	16.1	6.4	14.4	7.6	---	---
8	7.9	4.6	15.8	3.3	13.3	6.9	11.9	6.6	14.3	6.8	---	---
9	8.2	4.7	13.9	3.0	12.2	7.6	11.1	6.4	13.4	6.5	---	---
10	8.0	4.5	12.0	1.8	11.6	5.2	11.7	5.8	14.5	4.5	---	---
11	8.4	4.8	16.6	2.8	10.9	5.0	14.8	6.5	12.2	5.3	---	---
12	9.8	4.0	13.1	3.2	10.4	5.0	14.5	7.2	14.2	3.1	---	---
13	9.9	3.6	11.8	2.9	13.9	4.0	15.6	8.1	---	---	---	---
14	10.9	2.6	13.4	3.5	9.2	3.3	18.3	6.7	---	---	---	---
15	9.2	3.2	16.4	4.1	14.8	1.5	13.4	4.4	---	---	---	---
16	8.6	3.6	11.7	5.9	14.4	1.7	12.6	3.5	---	---	---	---
17	8.7	3.2	13.7	3.7	19.3	1.7	14.4	5.6	---	---	---	---
18	8.3	3.4	14.4	3.7	19.8	1.4	14.6	3.9	---	---	---	---
19	8.5	3.4	15.2	3.5	15.3	1.6	14.3	5.6	---	---	---	---
20	8.9	3.3	14.9	5.4	13.1	1.9	17.9	7.2	---	---	---	---
21	10.3	2.6	15.0	6.4	12.4	2.6	16.8	6.4	---	---	---	---
22	11.2	3.0	12.6	8.1	12.8	7.5	16.2	6.5	---	---	---	---
23	16.0	2.2	13.2	7.7	12.1	7.2	19.7	7.0	---	---	---	---
24	14.6	2.7	11.7	6.3	12.0	7.3	17.9	9.6	---	---	---	---
25	17.9	3.2	14.4	8.3	11.8	7.8	14.7	6.5	---	---	---	---
26	11.7	3.1	13.6	6.2	11.5	8.0	13.7	6.6	---	---	---	---
27	14.9	2.8	15.0	9.5	11.7	8.3	13.3	6.6	---	---	---	---
28	12.0	1.1	14.6	10.1	10.9	7.8	11.6	4.6	---	---	---	---
29	18.6	3.1	12.4	10.2	9.6	6.5	12.0	5.4	---	---	---	---
30	15.4	2.6	13.7	8.7	9.8	6.2	11.5	5.5	---	---	---	---
31	11.8	5.0	---	---	8.8	4.8	11.4	6.6	---	---	---	---
MONTH	18.6	1.1	16.6	1.8	19.8	1.4	19.7	3.5	---	---	---	---

331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	7.9	8.2	7.9	8.1	7.9	8.0	7.6	8.6	8.2	8.7	7.9
2	8.2	7.8	8.1	7.8	8.0	7.8	8.0	7.5	8.6	8.2	9.0	8.2
3	8.1	7.8	8.1	7.8	8.0	7.7	7.9	7.4	8.6	8.2	8.8	8.4
4	8.2	7.8	8.0	7.7	7.8	7.6	8.1	7.5	8.6	8.3	8.9	8.4
5	8.2	7.8	8.0	7.6	8.0	7.5	8.1	7.6	8.8	8.3	8.8	8.4
6	8.3	8.0	7.9	7.5	8.0	7.7	8.1	7.8	8.8	8.3	8.9	8.4
7	8.3	8.1	7.9	7.3	8.1	7.8	8.2	7.8	8.7	8.2	8.9	8.3
8	8.3	8.0	8.1	7.4	8.1	7.8	8.1	7.9	8.7	8.2	8.9	8.0
9	8.2	8.0	8.2	7.6	8.2	7.9	8.1	7.9	8.7	8.2	9.2	8.2
10	8.2	7.9	8.0	7.6	8.1	7.9	8.2	7.9	8.7	8.2	9.1	8.3
11	8.3	8.0	8.2	7.6	8.0	7.8	8.2	7.9	8.8	8.2	8.9	8.1
12	8.4	8.0	8.0	7.7	7.9	7.7	8.3	8.0	8.7	8.3	9.0	8.2
13	8.4	8.0	8.0	7.7	7.9	7.7	8.3	8.0	8.7	8.1	9.0	8.1
14	8.3	7.9	8.0	7.6	7.8	7.6	8.4	8.0	8.7	8.1	8.9	8.1
15	8.2	7.7	8.0	7.6	7.8	7.5	8.2	7.9	8.7	7.9	9.1	8.3
16	8.1	7.8	7.9	7.6	7.8	7.6	8.2	7.8	8.7	8.0	9.0	8.3
17	8.0	7.7	7.9	7.5	7.8	7.5	8.3	7.9	8.7	8.1	8.9	8.3
18	8.1	7.7	7.8	7.4	7.8	7.6	8.4	7.9	8.8	8.0	9.0	8.0
19	8.0	7.7	7.9	7.4	7.8	7.5	8.3	8.0	8.7	8.2	9.0	8.4
20	8.0	7.6	8.0	7.5	7.9	7.5	8.5	8.1	8.8	8.3	9.1	8.5
21	8.1	7.4	8.0	7.6	8.2	7.5	8.5	8.2	8.8	8.4	9.1	8.6
22	8.0	7.3	7.9	7.7	8.2	7.9	8.6	8.2	8.9	8.3	8.8	8.1
23	7.9	7.3	8.0	7.7	8.2	7.9	8.8	8.1	8.8	8.1	9.0	8.3
24	7.9	7.4	7.8	7.7	8.2	8.0	8.8	8.5	8.8	8.0	8.8	7.9
25	7.9	7.6	7.9	7.6	8.2	8.0	8.6	8.1	8.7	8.1	8.8	8.0
26	7.9	7.5	8.1	7.7	8.2	8.0	8.6	8.1	8.5	8.1	8.4	7.8
27	7.8	7.5	8.1	7.9	8.2	8.0	8.7	8.2	8.6	8.0	8.5	7.6
28	7.7	7.3	8.2	8.0	8.1	8.0	8.6	8.1	8.6	8.0	8.5	8.0
29	7.8	7.4	8.1	8.0	8.0	7.9	8.6	8.1	---	---	8.7	7.9
30	8.4	7.4	8.1	8.0	8.1	7.8	8.6	8.0	---	---	8.9	8.0
31	8.2	8.1	---	---	8.0	7.7	8.5	8.2	---	---	8.8	7.8
MONTH	8.4	7.3	8.2	7.3	8.2	7.5	8.8	7.4	8.9	7.9	9.2	7.6
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.7	7.8	9.0	8.2	7.9	7.3	8.2	7.8	8.1	7.8	---	---
2	8.6	8.0	9.3	8.4	7.6	7.4	8.3	7.7	8.0	7.6	---	---
3	8.7	8.0	9.3	8.5	7.7	7.3	8.2	7.8	8.1	7.6	---	---
4	8.8	8.1	9.3	8.6	7.6	7.3	8.2	7.8	8.1	7.7	---	---
5	8.9	8.4	9.2	8.6	7.7	7.4	8.3	7.8	8.1	7.8	8.1	7.7
6	8.8	8.4	9.3	8.6	7.9	7.4	8.2	7.7	8.1	7.7	8.0	7.4
7	8.7	8.2	9.2	8.7	7.9	7.5	8.2	7.7	8.1	7.7	8.0	7.5
8	8.8	8.2	9.2	8.7	7.8	7.5	8.2	7.7	8.1	7.6	8.2	7.6
9	8.8	8.3	9.1	8.6	7.8	7.5	8.2	7.6	8.2	7.6	8.1	7.8
10	8.7	8.3	9.0	8.6	8.0	7.5	8.2	7.6	8.0	7.6	8.1	7.7
11	8.7	8.2	8.9	8.5	8.0	7.4	8.1	7.5	8.1	7.5	8.1	7.6
12	8.7	8.1	8.6	8.0	8.1	7.6	8.2	7.5	8.2	7.7	8.0	7.6
13	8.7	8.0	8.5	8.1	8.3	7.7	8.3	7.5	8.2	7.6	8.0	7.6
14	8.6	7.8	8.6	7.9	8.2	7.8	8.2	7.5	8.2	7.6	8.0	7.5
15	8.4	7.7	8.6	7.8	8.3	7.8	8.2	7.6	8.2	7.7	8.0	7.6
16	8.7	7.9	8.3	7.8	8.3	7.8	8.3	7.8	8.1	7.7	8.2	7.7
17	9.0	8.1	8.2	7.7	8.3	7.9	8.3	7.8	8.1	7.7	8.2	7.6
18	9.0	8.2	8.0	7.5	8.5	8.1	8.2	7.9	8.2	7.6	8.3	7.6
19	9.0	8.3	7.7	7.0	8.6	8.3	8.2	7.7	8.0	7.6	8.2	7.6
20	9.1	8.6	8.1	7.0	8.4	8.1	8.1	7.6	8.2	7.6	8.3	7.6
21	9.3	8.7	8.0	7.2	8.4	7.9	8.2	7.4	8.3	7.7	8.2	7.7
22	9.1	8.7	8.2	7.1	8.7	8.0	8.4	7.5	8.3	7.8	8.2	7.8
23	9.3	8.7	8.4	7.3	8.6	8.0	8.6	7.6	8.2	7.8	8.2	7.7
24	8.9	8.1	8.2	7.4	8.5	7.8	8.5	7.7	8.3	7.9	8.3	7.8
25	8.6	7.8	8.2	7.4	8.5	7.7	8.6	7.7	8.2	8.0	8.2	7.7
26	8.6	7.5	8.0	7.3	8.4	7.7	8.6	7.7	8.4	8.0	8.3	7.7
27	8.5	7.4	8.0	7.3	8.5	7.6	8.7	7.8	8.6	8.1	8.3	7.9
28	9.0	7.8	8.0	7.3	8.6	7.6	8.6	7.9	---	---	8.3	8.0
29	9.0	7.8	7.9	7.3	8.4	7.7	8.5	7.9	---	---	8.4	8.0
30	9.0	7.7	7.9	7.4	8.3	7.7	8.4	8.0	---	---	8.3	8.0
31	---	---	7.7	7.3	---	---	8.2	7.9	---	---	---	---
MONTH	9.3	7.4	9.3	7.0	8.7	7.3	8.7	7.4	---	---	---	---

331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	47800	42900	50500	49000	43700	41900	53400	50400	49100	46300	49500	47600
2	45200	42000	50700	49600	44300	43500	54000	49700	48400	46000	49500	45900
3	45900	41600	50900	49900	44900	44100	51800	49200	47100	44600	49400	46900
4	45300	42600	50700	50000	44900	43100	50800	47200	47000	44600	49000	46400
5	50000	41600	50700	49800	44100	42900	49800	48800	46200	45100	48600	46400
6	49800	48400	50600	49700	43800	43700	49500	47200	46700	45200	48900	46100
7	49400	47800	50400	49500	43800	43700	48900	46500	46800	45100	47000	44700
8	49300	47700	50300	49200	44100	43800	50000	45600	46900	45700	47500	44600
9	48800	47500	50000	49600	44100	43400	49700	48000	48200	45300	47700	44700
10	48500	47900	50000	49400	43400	42700	50900	49400	48500	45600	47700	44700
11	48400	46100	50500	49500	45100	43400	51600	50100	48500	45600	46100	44000
12	47600	45600	50800	49600	46000	44800	50700	49800	48100	45300	45700	43600
13	47700	45500	51400	49500	45900	44800	50700	49500	48400	44800	45200	42900
14	47700	45800	51900	50300	46400	44700	50600	49700	47300	43300	46200	43400
15	47600	46100	51500	50200	46400	44200	50400	48500	47100	43200	45900	42200
16	47400	45900	51300	50200	46100	44400	50000	49500	45500	40700	45100	41600
17	47100	45700	51300	50400	46800	44900	50000	48900	44100	39600	43900	40200
18	46900	45500	51200	50300	46800	44700	49700	46600	45800	41200	43400	40600
19	46700	45200	51400	50400	45800	44400	49000	47700	42700	42000	43200	40400
20	46200	45000	51400	50800	46900	44700	48500	48000	44300	42400	42700	40400
21	46300	45100	51300	50600	52900	44300	48300	45200	42600	41900	42000	39500
22	46300	44800	51100	49700	53000	52800	45600	42600	43600	41400	42000	37500
23	46100	44600	50300	49600	53000	52900	48200	41200	44500	41000	42100	37200
24	45800	45000	50400	44900	53100	52500	47200	46200	45600	42600	43300	36600
25	45600	45100	47100	44900	52800	52400	49200	45300	45900	43500	45300	40800
26	45400	44600	47100	44000	52700	52100	50000	45400	45300	44200	46900	43000
27	45200	44100	44800	44200	52500	52000	49100	48200	49600	44300	49800	45300
28	44700	44200	44400	42600	52500	51700	50100	48600	49800	48600	48200	45200
29	44500	43700	43200	40900	54000	51700	48900	46800	---	---	49300	41900
30	49900	43700	42000	40900	53200	50900	50000	47300	---	---	45400	32800
31	50000	48600	---	---	53300	50900	48900	45900	---	---	38600	33600
MONTH	50000	41600	51900	40900	54000	41900	54000	41200	49800	39600	49800	32800
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	49700	37200	52100	50100	51300	49400	51900	48100	50900	50100	---	---
2	---	---	52000	50000	51000	50300	50800	47300	51100	49900	---	---
3	49500	47900	52400	50100	51100	50500	49800	47000	50800	49500	---	---
4	49200	47700	52600	51700	51400	50700	49200	46900	50200	48500	---	---
5	48500	47600	53200	51600	51100	48800	49300	46400	49500	47800	52000	50400
6	47900	46000	52000	50400	51400	46400	50100	49300	50900	49200	52300	50600
7	46400	45100	50700	48200	50200	46700	50300	47800	51000	49900	51700	50500
8	46900	44000	50500	47900	47800	46300	50500	48600	51800	50600	51300	50200
9	46100	43200	50200	47300	48300	45600	50600	48900	52300	50500	51600	49900
10	45300	43300	49400	46600	48800	46700	51000	49700	52400	50600	51400	50000
11	44600	43100	49300	46900	50200	48200	51400	49400	52200	49300	50900	49600
12	45300	43800	50500	48200	50100	48600	51300	49300	51800	50200	50500	49400
13	46100	44400	50700	49400	50200	48900	51100	48600	51600	50200	50400	48800
14	48000	45600	51000	48900	50000	48700	50000	48000	51200	49300	50100	48100
15	47500	46700	51900	49500	52000	48100	50600	48400	51000	49600	50100	49400
16	48800	47000	52700	49400	52600	51000	50800	48400	50900	50100	50100	48300
17	48900	47800	52700	50000	52200	50600	50400	49100	50800	50000	50200	49700
18	49900	48200	52100	50300	51700	49300	50700	48800	50900	49500	51000	49600
19	50000	48400	52600	49400	51000	49300	50700	47800	51000	50100	51000	50100
20	50900	48400	52100	49200	51400	49800	50600	47700	51000	49300	51500	50000
21	50400	47000	51300	48300	51300	50500	51200	49100	51000	49000	51600	50000
22	49400	47400	50800	47400	51400	50200	50900	48500	50900	49500	51100	49700
23	48500	46200	50600	45900	51600	50200	51700	49400	51400	49600	50800	49100
24	---	---	50200	46700	51700	50000	51500	50000	51300	49900	50100	49000
25	49200	46800	51000	48500	52600	50100	51800	49500	51500	50000	49800	48800
26	50100	47700	51500	50100	52500	50500	52000	49900	51200	49300	49800	48800
27	50300	48300	52000	49900	52500	49400	52300	50100	51300	50200	49600	47600
28	50800	48900	53400	50000	52200	50100	51200	48500	---	---	48500	47400
29	51300	49600	53100	50400	52000	47500	50700	47900	---	---	49500	46700
30	51600	50300	51600	49800	52100	48200	50600	48600	---	---	49600	49000
31	---	---	51400	49900	---	---	50200	49600	---	---	---	---
MONTH	---	---	53400	45900	52600	45600	52300	46400	---	---	---	---

SANTA MARGARITA RIVER BASIN

331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	27.8	20.2	22.4	17.8	14.7	11.1	16.0	13.7	10.3	5.4	19.1	15.2
2	24.8	20.5	20.8	16.7	14.8	11.4	15.9	13.9	11.2	6.1	20.1	12.7
3	25.3	20.1	20.1	15.4	16.2	13.6	16.9	14.1	15.5	6.3	18.8	11.2
4	26.3	20.3	20.0	17.1	15.1	12.5	16.5	14.0	15.4	7.3	18.8	10.2
5	23.2	20.3	19.6	16.7	14.7	10.5	16.6	12.6	13.4	9.2	18.4	10.2
6	23.7	18.6	19.1	17.6	14.9	11.2	15.4	11.9	13.1	9.4	17.7	11.9
7	24.7	19.8	19.7	17.6	16.0	11.8	16.3	13.2	15.3	12.3	18.6	15.3
8	21.6	19.7	19.9	16.1	14.4	11.3	16.5	12.9	15.3	12.7	19.5	14.1
9	21.2	19.1	20.6	17.9	13.4	9.4	16.3	13.8	15.5	12.2	20.4	13.3
10	22.8	18.1	19.9	18.0	13.8	9.9	16.3	13.4	15.0	11.4	20.8	14.1
11	23.7	20.1	22.3	17.1	13.8	10.6	16.1	12.7	16.5	10.7	21.0	14.2
12	24.3	20.4	20.8	16.4	14.0	10.3	15.7	12.2	14.6	10.3	21.0	15.8
13	24.5	19.2	20.1	15.8	13.2	10.0	14.4	11.1	14.8	10.0	20.8	15.0
14	24.4	18.6	19.1	14.4	12.1	10.2	14.7	11.0	16.3	11.3	17.2	11.2
15	23.6	18.3	19.3	13.9	12.9	9.3	14.4	13.0	15.4	11.7	19.1	11.0
16	22.4	18.4	18.0	14.0	12.0	8.5	14.7	12.4	18.1	14.3	17.8	11.9
17	22.7	18.2	17.8	15.5	12.9	8.7	15.4	10.6	16.0	13.7	18.7	12.5
18	22.4	18.0	18.2	15.2	13.6	8.3	15.0	10.2	16.6	13.4	18.9	12.9
19	20.6	18.2	18.7	14.5	14.0	8.8	11.8	9.0	18.0	11.3	19.8	11.9
20	22.6	18.4	18.7	14.8	14.1	10.4	13.6	8.5	19.5	12.3	21.6	14.0
21	22.2	19.0	17.7	15.4	14.8	11.5	13.8	9.1	19.7	14.4	21.2	15.8
22	22.6	19.2	17.9	15.9	14.5	10.7	14.8	10.5	21.1	13.7	21.2	16.6
23	21.5	18.8	19.2	16.5	13.6	10.9	14.8	11.4	18.9	14.1	22.5	17.2
24	21.2	18.8	17.6	15.0	13.7	10.4	13.4	10.2	18.7	14.9	19.4	15.1
25	21.2	17.6	16.4	13.8	13.7	9.5	13.9	10.3	17.9	13.9	21.3	14.6
26	20.2	18.1	15.3	13.6	13.2	9.0	13.9	11.0	19.7	14.3	18.6	13.6
27	21.0	17.7	14.4	12.5	13.3	10.0	14.4	11.8	18.9	14.6	16.6	13.4
28	20.3	18.4	12.9	10.6	13.1	10.5	14.9	12.4	18.6	15.0	16.3	14.0
29	21.9	17.4	11.1	10.3	13.8	11.9	14.4	11.8	---	---	18.2	13.1
30	21.0	17.2	14.8	10.3	15.6	12.7	12.3	8.6	---	---	21.0	14.7
31	21.3	17.0	---	---	16.5	14.2	12.3	5.9	---	---	19.1	15.4
MONTH	27.8	17.0	22.4	10.3	16.5	8.3	16.9	5.9	21.1	5.4	22.5	10.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.1	15.3	23.7	15.3	27.1	19.8	29.3	22.7	28.7	23.6	---	---
2	17.9	15.3	24.2	16.7	26.8	21.5	29.7	24.5	27.7	24.7	---	---
3	16.8	14.9	24.6	17.7	26.4	21.1	28.4	24.6	28.6	24.2	---	---
4	21.7	14.9	25.0	19.3	27.1	20.9	27.4	23.0	29.0	24.7	---	---
5	21.1	15.2	24.3	19.4	26.0	23.1	27.6	22.6	28.8	24.1	25.0	20.7
6	22.7	17.4	24.8	19.0	24.7	21.9	27.2	22.8	29.2	23.2	22.9	19.4
7	23.4	17.6	23.1	19.5	24.0	20.9	25.6	22.7	28.9	21.3	23.5	19.1
8	22.4	18.8	25.4	19.4	23.6	19.8	25.9	21.8	27.9	20.6	23.4	18.1
9	23.4	17.7	25.9	20.3	23.1	18.6	25.7	21.7	27.6	19.4	25.2	18.3
10	21.6	18.1	26.5	19.6	25.0	19.6	25.5	21.5	25.4	19.0	25.8	19.4
11	22.5	18.4	26.1	18.6	26.3	19.9	27.3	21.2	26.2	19.0	26.0	20.1
12	21.0	18.3	26.6	16.8	27.6	20.7	28.4	22.0	25.1	20.2	25.4	21.1
13	23.4	17.1	27.2	17.8	26.9	19.9	30.8	22.2	26.6	21.9	25.7	20.1
14	20.8	18.5	26.4	18.8	27.1	20.2	30.6	22.4	26.4	22.6	25.3	22.1
15	19.8	16.2	25.9	19.6	27.8	20.2	29.9	22.8	27.9	23.0	25.6	21.3
16	20.9	15.1	24.3	18.5	28.2	21.5	30.1	24.1	26.5	22.6	26.2	20.7
17	23.0	15.8	25.4	19.0	29.1	23.5	29.5	24.3	25.4	22.4	24.6	19.2
18	22.5	13.6	23.8	19.6	29.6	24.3	27.9	23.3	24.7	21.4	26.7	20.8
19	22.5	14.6	23.3	18.1	28.0	24.5	26.1	23.1	23.7	21.3	26.4	19.3
20	23.5	14.6	24.1	18.1	25.5	21.7	25.7	21.3	26.3	21.1	27.8	21.8
21	24.1	16.5	25.1	17.9	25.7	20.5	25.9	21.4	27.2	22.1	26.0	21.1
22	23.1	17.0	25.6	18.5	28.2	21.6	29.2	21.5	27.9	21.8	24.8	19.9
23	25.5	19.0	27.5	19.4	28.0	22.1	30.0	21.2	26.6	20.9	23.7	20.0
24	22.0	17.6	26.6	19.5	28.1	21.8	31.4	22.5	28.2	21.4	25.7	20.0
25	22.1	16.4	24.2	19.3	28.3	20.4	31.8	22.7	25.9	20.5	24.5	19.9
26	21.8	16.7	25.4	19.1	27.4	21.3	31.2	22.4	26.8	21.6	24.6	21.9
27	21.1	15.4	26.6	18.7	28.2	21.2	30.3	22.0	26.5	22.7	22.9	21.1
28	23.5	15.4	27.2	19.1	28.0	21.3	29.4	22.2	---	---	22.8	20.0
29	23.9	14.8	25.4	19.6	27.5	22.1	29.1	22.6	---	---	24.6	20.8
30	23.3	14.5	23.6	19.8	26.6	22.6	28.9	24.2	---	---	23.0	19.4
31	---	---	24.6	18.5	---	---	27.2	24.2	---	---	---	---
MONTH	25.5	13.6	27.5	15.3	29.6	18.6	31.8	21.2	---	---	---	---

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 mi².

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 110 ft above sea level, from topographic map.

REMARKS.—Records fair. 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, 29 ft³/s, Mar. 8, 2000, gage height, 8.22 ft, from rating curve extended above 6.0 ft³/s; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 18	0615	1.5	7.14

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.30	0.33	0.30	0.23	0.01	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.30	0.31	0.27	0.27	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.35	0.30	0.22	0.24	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.27	0.30	0.23	0.26	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.27	0.30	0.22	0.25	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.35	0.31	0.22	0.32	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.32	0.34	0.28	0.25	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.32	0.35	0.28	0.25	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.30	0.36	0.24	0.20	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.31	0.29	0.24	0.19	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.30	0.31	0.24	0.19	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.33	0.29	0.24	0.20	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.33	0.28	0.23	0.19	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.09	0.34	0.28	0.21	0.20	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.22	0.35	0.28	0.22	0.25	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.15	0.36	0.30	0.27	0.23	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.17	0.36	0.35	0.30	0.18	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.19	0.36	0.34	0.70	0.17	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.20	0.37	0.29	0.39	0.18	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.21	0.36	0.29	0.37	0.18	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.28	0.33	0.28	0.31	0.15	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.29	0.32	0.27	0.27	0.12	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.24	0.30	0.25	0.38	0.08	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.23	0.29	0.25	0.53	0.15	0.00	0.00	0.00	0.00	0.00
25	0.00	0.03	0.23	0.31	0.25	0.39	0.21	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.24	0.31	0.26	0.32	0.18	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.23	0.30	0.27	0.30	0.15	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.23	0.39	0.28	0.33	0.09	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.24	0.45	---	0.28	0.03	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.25	0.36	---	0.27	0.03	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.27	0.32	---	0.25	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.03	3.96	10.23	8.31	9.30	5.62	0.01	0.00	0.00	0.00	0.00
MEAN	0.000	0.001	0.128	0.330	0.297	0.300	0.187	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.03	0.29	0.45	0.36	0.70	0.32	0.01	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.27	0.25	0.21	0.03	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.06	7.9	20	16	18	11	0.02	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	0.500	0.695	0.716	1.007	1.389	1.166	0.827	0.459	0.079	0.049	0.059	0.057
MAX (WY)	1.86	2.52	2.15	2.09	1.98	1.77	1.85	1.29	0.24	0.19	0.24	0.23
MIN (WY)	0.000	0.001	0.13	0.33	0.30	0.30	0.19	0.000	0.000	0.000	0.000	0.000

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1999 - 2002
ANNUAL TOTAL	146.35	37.46	
ANNUAL MEAN	0.401	0.103	0.579
HIGHEST ANNUAL MEAN			1.36 1999
LOWEST ANNUAL MEAN			0.10 2002
HIGHEST DAILY MEAN	11 Jan 11	0.70 Mar 18	11 Jan 11 2001
LOWEST DAILY MEAN	0.00 Jun 16	0.00 Oct 1	0.00 Jun 4 2000
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 16	0.00 Oct 1	0.00 Jun 4 2000
MAXIMUM PEAK FLOW		1.5 Mar 18	29 Mar 8 2000
MAXIMUM PEAK STAGE		7.14 Mar 18	8.22 Mar 8 2000
ANNUAL RUNOFF (AC-FT)	290	74	420
10 PERCENT EXCEEDS	0.98	0.31	1.9
50 PERCENT EXCEEDS	0.07	0.00	0.23
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 mi².

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 sea level, 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 ft³/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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.07	0.08	0.28	0.21	0.14	0.14	0.14	0.13	0.05	0.06	0.07	0.02
2	0.08	0.08	0.24	0.20	0.16	0.14	0.18	0.13	0.05	0.07	e0.07	0.02
3	0.07	0.08	0.22	0.20	0.15	0.13	0.15	0.14	0.05	0.06	e0.07	0.02
4	0.05	0.08	0.20	0.21	0.15	0.14	0.14	0.15	0.04	0.06	e0.06	0.02
5	0.06	0.08	0.16	0.21	0.15	0.13	0.12	0.15	0.04	0.06	e0.06	0.02
6	0.05	0.11	0.13	0.15	0.14	0.12	0.12	0.15	0.04	0.06	e0.05	0.02
7	0.05	0.10	0.12	0.12	0.14	0.14	0.12	0.13	0.04	0.06	e0.04	0.02
8	0.05	0.11	0.12	0.13	0.15	0.15	0.12	0.11	0.05	0.07	e0.03	0.02
9	0.06	0.09	0.12	0.14	0.14	0.15	0.13	0.09	0.07	0.07	e0.02	0.02
10	0.07	0.08	0.13	0.14	0.14	0.12	0.12	0.08	0.07	0.07	e0.01	0.02
11	0.07	0.08	0.16	0.15	0.13	0.12	0.13	0.09	0.06	0.07	0.01	0.02
12	0.08	0.10	0.13	0.14	0.12	0.13	0.12	0.09	0.05	0.07	0.01	0.02
13	0.09	0.16	0.13	0.16	0.12	0.14	0.16	0.10	0.04	0.07	0.01	0.02
14	0.09	0.14	0.15	0.16	0.10	0.14	0.15	0.11	0.04	0.06	0.00	0.02
15	0.11	0.14	0.16	0.17	0.12	0.14	0.14	0.11	0.04	0.06	0.00	0.02
16	0.11	0.15	0.16	0.18	0.14	0.14	0.14	0.11	0.04	0.06	0.00	0.02
17	0.11	0.17	0.16	0.16	0.16	0.15	0.13	0.10	0.04	0.07	0.00	0.02
18	0.09	0.19	0.16	0.18	0.16	0.21	0.11	0.08	0.05	0.07	0.00	0.02
19	0.10	0.17	0.15	0.16	0.15	0.18	0.12	0.08	0.07	0.07	0.00	0.02
20	0.12	0.16	0.14	0.16	0.14	0.16	0.15	0.07	0.07	0.07	0.00	0.02
21	0.14	0.13	0.15	0.17	0.13	0.16	0.14	0.07	0.07	0.07	0.00	0.02
22	0.11	0.12	0.16	0.16	0.13	0.20	0.12	0.06	0.07	0.07	0.00	0.02
23	0.11	0.13	0.16	0.16	0.12	0.21	0.11	0.06	0.07	0.08	0.00	0.02
24	0.10	0.27	0.16	0.13	0.12	0.25	0.11	0.06	0.06	0.08	0.00	0.02
25	0.09	0.52	0.16	0.12	0.12	0.24	0.10	0.06	0.06	0.08	0.00	0.02
26	0.08	0.37	0.16	0.13	0.12	0.21	0.11	0.05	0.06	0.08	0.00	0.0
27	0.09	0.24	0.16	0.14	0.13	0.20	0.11	0.04	0.06	0.09	0.01	0.01
28	0.09	0.23	0.18	0.18	0.14	0.21	0.12	0.04	0.06	0.08	0.01	0.01
29	0.10	0.24	0.19	0.21	---	0.19	0.12	0.04	0.06	0.08	0.02	0.01
30	0.09	0.27	0.20	0.18	---	0.14	0.13	0.04	0.06	0.08	0.02	0.0
31	0.08	---	0.21	0.14	---	0.14	---	0.04	---	0.08	0.02	---
TOTAL	2.66	4.87	5.11	5.05	3.81	5.02	3.86	2.76	1.63	2.18	0.59	0.53
MEAN	0.086	0.162	0.165	0.163	0.136	0.162	0.129	0.089	0.054	0.070	0.019	0.018
MAX	0.14	0.52	0.28	0.21	0.16	0.25	0.18	0.15	0.07	0.09	0.07	0.02
MIN	0.05	0.08	0.12	0.12	0.10	0.12	0.10	0.04	0.04	0.06	0.00	0.00
AC-FT	5.3	9.7	10	10	7.6	10	7.7	5.5	3.2	4.3	1.2	1.1

e Estimated.

11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.082	0.265	0.736	3.848	6.391	8.626	1.983	0.401	0.153	0.116	0.102	0.118
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1952 - 2002	
ANNUAL TOTAL	127.12		38.07			
ANNUAL MEAN	0.348		0.104		1.882	
HIGHEST ANNUAL MEAN					17.9 1978	
LOWEST ANNUAL MEAN					0.006 1961	
HIGHEST DAILY MEAN	12	Feb 26	0.52	Nov 25	1050	Feb 24 1998
LOWEST DAILY MEAN	0.02	Aug 16	0.00	Aug 14	0.00	Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	0.02	Sep 9	0.00	Aug 14	0.00	Oct 1 1951
MAXIMUM PEAK FLOW			0.94	Nov 24	e7300	Mar 4 1978
MAXIMUM PEAK STAGE			0.85	Aug 9	13.67	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	252		76		1360	
10 PERCENT EXCEEDS	0.51		0.18		0.72	
50 PERCENT EXCEEDS	0.22		0.11		0.01	
90 PERCENT EXCEEDS	0.05		0.02		0.00	

e Estimated.

11046250 SAN ONOFRE CREEK AT SAN ONOFRE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.491	2.949	2.915	2.425	3.084	2.735	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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1947 - 2002
ANNUAL TOTAL	85.40	0.02	
ANNUAL MEAN	0.234	0.000	1.239
HIGHEST ANNUAL MEAN			8.48 1958
LOWEST ANNUAL MEAN			0.000 1947
HIGHEST DAILY MEAN	53 Feb 26	0.02 Nov 24	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		0.88 Nov 24	2600 Apr 1 1958
MAXIMUM PEAK STAGE		2.84 Nov 24	6.90 Apr 1 1958
ANNUAL RUNOFF (AC-FT)	169	0.04	898
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

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 mi².

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 sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,500 ft³/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 ft³/s, gage height, 11.12 ft, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum, from rating curve extended above 167 ft³/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 19	0445	0.65	2.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.27	0.27	0.39	0.56	0.15	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.27	0.27	0.36	0.52	0.13	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.25	0.27	0.38	0.52	0.11	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.24	0.29	0.36	0.50	0.09	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.24	0.29	0.34	0.48	0.07	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.22	0.30	0.34	0.45	0.04	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.21	0.31	0.35	0.48	0.01	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.20	0.31	0.43	0.47	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.20	0.31	0.47	0.45	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.09	0.20	0.32	0.48	0.45	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.14	0.20	0.32	0.47	0.40	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.18	0.20	0.34	0.45	0.36	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.18	0.20	0.34	0.44	0.36	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.19	0.20	0.36	0.40	0.32	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.19	0.20	0.36	0.39	0.31	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.21	0.21	0.36	0.39	0.31	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.22	0.22	0.41	0.40	0.29	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.21	0.22	0.48	0.51	0.29	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.20	0.22	0.52	0.64	0.29	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.20	0.22	0.52	0.63	0.24	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.21	0.22	0.48	0.53	0.22	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.25	0.23	0.48	0.46	0.20	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.27	0.24	0.45	0.44	0.17	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.28	0.22	0.44	0.46	0.15	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.29	0.22	0.45	0.54	0.16	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.28	0.22	0.44	0.56	0.16	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.27	0.22	0.41	0.53	0.17	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.27	0.27	0.39	0.51	0.16	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.27	0.35	---	0.48	0.17	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.25	0.35	---	0.48	0.18	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.25	0.30	---	0.51	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	4.90	7.23	10.49	14.12	9.79	0.60	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.158	0.233	0.375	0.455	0.326	0.019	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.29	0.35	0.52	0.64	0.56	0.15	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.20	0.27	0.34	0.15	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	9.7	14	21	28	19	1.2	0.00	0.00	0.00	0.00

11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.131	3.270	9.974	16.44	37.05	33.51	23.06	5.638	2.018	0.588	0.141	0.077
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1953 - 2002
ANNUAL TOTAL	1611.60	47.13	
ANNUAL MEAN	4.415	0.129	10.83
HIGHEST ANNUAL MEAN			65.7 1998
LOWEST ANNUAL MEAN			0.019 1961
HIGHEST DAILY MEAN	232 Feb 26	0.64 Mar 19	3150 Feb 24 1998
LOWEST DAILY MEAN	0.00 Jun 19	0.00 Oct 1	0.00 Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 19	0.00 Oct 1	0.00 Oct 1 1952
MAXIMUM PEAK FLOW		0.65 Mar 19	12500 Feb 23 1998
MAXIMUM PEAK STAGE		2.52 Feb 18	12.83 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	3200	93	7850
10 PERCENT EXCEEDS	7.6	0.44	12
50 PERCENT EXCEEDS	0.18	0.00	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 mi².

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 sea level, 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 ft³/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 ft³/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 ft³/s, or maximum, from rating curve extended above 162 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2000	58	4.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.02	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	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.44	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	1.8	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	6.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.62	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	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	1.6	0.00	0.63	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.02	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	8.74	2.19	1.93	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.291	0.071	0.062	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	6.5	1.8	1.3	0.00	0.44	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	17	4.3	3.8	0.00	1.0	0.00	0.00	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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.011	0.090	0.334	4.933	31.82	17.91	4.727	1.222	0.278	0.018	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1994 - 2002	
ANNUAL TOTAL	324.64		13.38			
ANNUAL MEAN	0.889		0.037		4.950	
HIGHEST ANNUAL MEAN					25.2 1998	
LOWEST ANNUAL MEAN					0.000 1999	
HIGHEST DAILY MEAN	73	Feb 26	6.5	Nov 24	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			58	Nov 24	e5800	Feb 23 1998
MAXIMUM PEAK STAGE			4.77	Nov 24	a	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	644		27		3590	
10 PERCENT EXCEEDS	0.05		0.00		1.8	
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 mi².

PERIOD OF RECORD.—October 1946 to September 1967 and October 1984 to September 1985. Discharge measurements only, October 1998 to current year.

SEDIMENT DATA: Water years 1982–85.

GAGE.—None. Elevation of station is 20 ft above sea level, from topographic map.

REMARKS.—Flow partly regulated by small detention reservoirs.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft³/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 2001 TO SEPTEMBER 2002

Date	Time	Discharge (ft ³ /s)
Oct. 2	1120	.27
Nov. 14	1153	.23
Apr. 4	1140	.29
Jul. 3	0835	.36
Aug. 8	0916	.11
Aug. 27	1130	.19

11046500 SAN JUAN CREEK NEAR SAN JUAN CAPISTRANO, CA

LOCATION.—Lat 33°31'08", long 117°37'27", in NE 1/4 SE 1/4 sec.32, T.7 S., R.7 W., [Orange County](#), Hydrologic Unit 18070301, at bridge on State Highway 74 and 2.5 mi northeast of San Juan Capistrano.

DRAINAGE AREA.—106 mi².

PERIOD OF RECORD.—October 1928 to September 1969, October 2000 to current year (instantaneous values only, based on discharge measurements, since October 2000).

GAGE.—None. Elevation of station is 150 ft above sea level, from topographic map. October 1928 to September 1969, water-stage recorder on creek; water-stage recorder and Parshall flume on diversion canal. Combined flow records for creek and diversion canal published as station 11046501 during previous period of station operation.

REMARKS.—No regulation above station. Capistrano Water Co. diverts water 500 ft upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,400 ft³/s, Feb. 25, 1969; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Maximum discharge observed, 4.12 ft³/s, Dec. 21; minimum discharge observed, 0.04 ft³/s, Oct. 9, 18, Nov. 20, July 2, and Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	0.06	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	0.04	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	0.06
6	---	---	---	---	---	---	---	---	0.10	---	---	---
7	---	---	---	0.99	---	---	---	---	---	---	0.06	---
8	---	---	---	---	---	3.6	---	---	---	---	---	---
9	0.04	---	---	---	---	---	---	0.19	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	0.89	---	---	---	---	---	---	---	---	---
12	---	---	---	---	1.3	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	1.0	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	0.04	---	---	---	---	---	---	---	---	0.06	---	---
19	---	---	---	---	---	---	---	---	---	---	---	0.04
20	---	0.04	---	---	---	---	---	---	---	---	---	---
21	---	---	4.1	---	---	---	---	---	0.08	---	0.07	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	0.53	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	2.4	---	---	---	---	---	---
27	---	---	---	---	1.4	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	0.85	---	---	---	---	---
31	---	---	---	---	---	---	---	0.06	---	---	---	---

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 mi².

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 sea level, 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 ft³/s, estimated, Mar. 5, 1995, gage height, 20.66 ft, from rating curve extended above 3,420 ft³/s; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 22,400 ft³/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 ft³/s, from rating curve extended above 3,510 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1545	946	12.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	5.0	2.1	0.33	0.49	2.1	2.0	0.00	0.00	0.00	0.00
2	0.00	0.00	2.5	1.4	0.15	0.23	1.8	0.63	0.00	0.00	0.00	0.00
3	0.00	0.00	2.3	1.2	0.15	0.00	1.6	0.00	0.00	0.00	0.00	0.00
4	0.00	0.01	1.9	1.1	0.24	0.00	0.93	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.95	0.60	0.24	0.00	0.53	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.30	0.79	0.00	0.00	2.2	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.08	0.91	0.00	0.12	1.9	0.12	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.56	0.00	1.8	1.9	0.40	0.00	0.00	0.00	0.00
9	0.00	0.00	0.54	0.35	0.00	1.3	1.4	1.1	0.00	0.00	0.00	0.00
10	0.00	0.00	0.26	0.34	0.00	0.61	1.2	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.20	0.00	0.32	1.9	0.00	0.00	0.00	0.00	0.00
12	0.00	2.8	0.00	0.05	0.08	0.00	0.80	0.00	0.00	0.00	0.00	0.00
13	0.00	0.05	0.00	0.89	0.00	0.11	0.75	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.75	1.8	0.00	0.08	0.51	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.98	2.2	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.43	2.6	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	3.0	3.9	1.9	1.0	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.31	3.2	2.6	4.1	0.51	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.52	2.4	2.3	4.4	0.06	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.06	2.6	2.0	2.4	0.15	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	9.2	2.8	1.6	1.8	0.35	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	7.9	2.1	1.6	1.1	0.26	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	2.9	1.6	1.6	6.7	0.02	0.00	0.00	0.00	0.00	0.00
24	0.00	88	1.7	0.67	1.2	5.9	1.5	0.00	0.00	0.00	0.00	0.00
25	0.00	99	1.3	1.5	0.74	4.7	1.1	0.00	0.00	0.00	0.00	0.00
26	0.00	25	1.2	2.0	1.0	3.5	1.4	0.00	0.00	0.00	0.00	0.00
27	0.00	8.6	1.1	2.3	0.89	2.1	2.4	0.00	0.00	0.00	0.00	0.00
28	0.00	5.2	0.85	6.8	0.84	2.2	2.8	0.00	0.00	0.00	0.00	0.00
29	0.00	13	0.78	3.8	---	2.0	2.6	0.00	0.00	0.00	0.00	0.00
30	0.00	7.0	1.6	1.9	---	2.3	2.3	0.00	0.00	0.00	0.00	0.00
31	0.00	---	2.6	0.74	---	2.3	---	0.00	---	0.00	0.00	---
TOTAL	0.00	248.66	48.01	54.50	21.46	52.46	37.15	4.25	0.00	0.00	0.00	0.00
MEAN	0.000	8.289	1.549	1.758	0.766	1.692	1.238	0.137	0.000	0.000	0.000	0.000
MAX	0.00	99	9.2	6.8	3.9	6.7	2.8	2.0	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	493	95	108	43	104	74	8.4	0.00	0.00	0.00	0.00

SAN JUAN CREEK BASIN

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.550	2.451	4.696	58.40	99.23	70.43	18.68	10.38	3.459	1.172	0.523	0.428
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	0.43	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1986 - 2002	
ANNUAL TOTAL	2419.36		466.49			
ANNUAL MEAN	6.628		1.278		22.13	
HIGHEST ANNUAL MEAN					106 1993	
LOWEST ANNUAL MEAN					0.61 1989	
HIGHEST DAILY MEAN	233	Jan 11	99	Nov 25	5700	Mar 5 1995
LOWEST DAILY MEAN	0.00	Jun 26	0.00	Oct 1	0.00	May 20 1986
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 26	0.00	Oct 1	0.00	May 20 1986
MAXIMUM PEAK FLOW			946	Nov 24	e25600	Mar 5 1995
MAXIMUM PEAK STAGE			12.68	Nov 24	20.66	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	4800		925		16030	
10 PERCENT EXCEEDS	9.2		2.3		23	
50 PERCENT EXCEEDS	0.52		0.00		0.97	
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 mi².

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 sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft³/s, Feb. 23, 1998, gage height, 19.81 ft, from rating curve extended above 1,600 ft³/s; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 800 ft³/s, from rating curve extended above 1,600 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1915	1200	13.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.0	8.3	6.4	5.1	4.5	4.3	3.7	2.4	1.5	1.6	1.2
2	1.4	1.9	7.9	5.8	4.8	4.3	4.5	3.5	2.2	1.6	1.4	1.2
3	1.5	2.0	38	5.6	4.7	4.0	4.7	3.6	2.3	1.5	1.4	1.2
4	1.8	2.8	9.3	5.4	4.8	4.0	4.7	3.5	2.2	1.5	1.4	1.2
5	1.7	3.3	7.0	5.3	4.8	3.8	4.8	3.2	2.2	1.7	1.4	1.2
6	1.7	2.6	6.3	5.1	5.1	4.1	10	3.1	2.0	1.6	1.7	1.3
7	1.6	2.5	6.2	5.3	5.1	46	5.6	3.0	1.9	1.6	2.3	1.3
8	1.8	2.2	6.0	5.2	5.1	18	5.1	3.2	2.2	1.6	1.4	1.2
9	2.1	2.2	6.5	5.2	5.1	4.9	5.0	3.2	2.3	1.4	1.1	1.1
10	2.2	2.1	8.5	5.2	4.7	4.1	4.8	2.8	2.3	1.4	1.3	1.2
11	2.1	2.4	9.7	5.2	4.8	3.9	4.8	2.8	2.2	1.4	1.2	1.2
12	2.1	27	6.2	5.2	5.0	3.8	4.8	2.9	2.1	1.6	1.3	1.3
13	1.9	48	6.1	5.1	5.0	3.7	4.7	2.8	2.3	1.6	1.6	1.3
14	1.8	6.1	37	5.2	5.1	3.5	4.3	2.7	2.3	1.4	1.5	1.3
15	1.8	4.9	14	5.4	5.2	3.4	10	2.8	2.1	1.5	1.3	1.3
16	1.9	4.4	7.1	6.1	5.3	3.3	5.4	2.8	2.0	1.7	1.4	1.3
17	2.0	4.2	6.6	7.3	28	7.4	4.3	3.0	2.0	1.5	1.4	1.3
18	1.5	4.2	6.5	5.7	7.5	30	4.2	2.9	2.0	1.3	1.5	1.3
19	1.0	4.1	6.6	5.3	5.2	4.0	4.2	3.4	2.0	1.6	1.6	1.4
20	1.8	4.1	6.6	5.2	4.8	3.5	4.3	3.9	2.1	1.5	1.7	1.4
21	1.9	4.1	120	5.5	4.6	3.2	4.2	4.3	1.7	1.4	1.7	1.3
22	2.0	4.1	14	5.3	4.6	3.3	4.4	3.3	1.5	1.3	1.5	1.3
23	2.0	4.3	7.9	5.3	4.4	15	4.6	2.9	1.5	1.3	1.4	1.3
24	2.1	244	7.1	4.8	4.6	6.0	29	2.7	1.4	1.3	1.3	1.3
25	2.0	58	6.6	5.1	4.4	3.6	8.2	2.7	1.4	1.2	1.2	1.4
26	2.0	12	6.5	5.2	4.3	3.5	4.7	2.6	1.4	1.4	1.2	1.5
27	1.9	8.2	6.4	7.7	4.2	3.4	4.3	2.6	1.6	1.4	1.3	1.5
28	1.9	7.2	6.3	109	4.2	3.9	4.2	2.8	1.6	1.3	1.3	1.5
29	2.1	37	15	22	---	3.8	4.0	2.5	1.6	1.3	1.2	1.6
30	2.1	16	28	6.3	---	4.0	3.9	2.4	1.5	1.4	1.3	1.4
31	2.1	---	16	5.5	---	4.0	---	2.6	---	1.5	1.2	---
TOTAL	57.2	527.9	444.2	291.9	160.5	217.9	176.0	94.2	58.3	45.3	44.1	39.3
MEAN	1.845	17.60	14.33	9.416	5.732	7.029	5.867	3.039	1.943	1.461	1.423	1.310
MAX	2.2	244	120	109	28	46	29	4.3	2.4	1.7	2.3	1.6
MIN	1.0	1.9	6.0	4.8	4.2	3.2	3.9	2.4	1.4	1.2	1.1	1.1
AC-FT	113	1050	881	579	318	432	349	187	116	90	87	78

SAN JUAN CREEK BASIN

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.885	11.58	20.15	20.55	72.39	23.52	11.91	6.066	2.858	1.552	1.551	2.335
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1973 - 2002	
ANNUAL TOTAL	7455.5		2156.8			
ANNUAL MEAN	20.43		5.909		14.52	
HIGHEST ANNUAL MEAN					74.1 1998	
LOWEST ANNUAL MEAN					3.17 1976	
HIGHEST DAILY MEAN	998	Feb 12	244	Nov 24	2560	Feb 23 1998
LOWEST DAILY MEAN	1.0	Oct 19	1.0	Oct 19	0.00	Oct 1 1972
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 11	1.2	Aug 29	0.00	Oct 1 1972
MAXIMUM PEAK FLOW			1200	Nov 24	10000	Feb 23 1998
MAXIMUM PEAK STAGE			13.11	Nov 24	19.81	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	14790		4280		10520	
10 PERCENT EXCEEDS	32		7.3		18	
50 PERCENT EXCEEDS	4.2		3.1		2.1	
90 PERCENT EXCEEDS	1.6		1.3		0.40	

11047350 SAN JUAN CREEK AT STONEHILL DRIVE, NEAR DANA POINT, CA

LOCATION.—Lat 33°28'26", long 117°40'40", in NE 1/4 SE 1/4 sec.14, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, at Stonehill Drive crossing, 0.8 mi northwest of Capistrano Beach, and 1.2 mi northeast of Dana Point.

DRAINAGE AREA.—174 mi².

PERIOD OF RECORD.—October 1998 to current year (instantaneous values only, based on discharge measurements).

GAGE.—None. Elevation of station is 20 ft above sea level, from topographic map.

REMARKS.—No regulation upstream from station. Capistrano Water Co. diverts water 4.8 mi upstream. Various amounts of diverted water reach station as irrigation return flow.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 42 ft³/s, Dec. 2, 1998; minimum discharge observed, 2.1 ft³/s, Sept. 20, 2000.

EXTREMES FOR CURRENT YEAR.—Maximum discharge observed, 19 ft³/s, Mar. 8; minimum discharge observed, 3.2 ft³/s, Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	4.5	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	3.7	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	3.5	---	---	3.9
7	---	---	---	7.6	---	---	---	4.1	---	---	3.2	---
8	---	---	---	---	---	1.9	---	---	---	---	---	---
9	4.4	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	9.6	---	---	---	---	---	---	---	---	---
12	---	---	---	---	7.4	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	8.0	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	4.2	---	---	---	---	---	---	---	---	3.9	---	---
19	---	---	---	---	---	---	---	---	---	---	---	3.4
20	---	4.7	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	3.7	---	4.2	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	6.2	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	11	---	---	---	---	---	---
27	---	---	---	---	6.4	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	6.2	---	---	---	---	---
31	---	---	---	---	---	---	---	4.4	---	---	---	---

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 mi².

PERIOD OF RECORD.—July 2002 to September 2002.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 440 ft above sea level, from topographic map.

REMARKS.—Records fair. No diversion upstream from station. Irrigation return flow can cause low-flow fluctuations in discharge at times.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1.8 ft³/s, Aug. 8, 2002, gage height, 1.13 ft; no flow at times during water year 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 8	1545	1.8	1.13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
2	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
3	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
4	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
5	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
6	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
7	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
8	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
9	---	---	---	---	---	---	---	---	---	e0.00	0.32	0.00
10	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
11	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
12	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
13	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
14	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
15	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
16	---	---	---	---	---	---	---	---	---	e0.00	0.00	0.00
17	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
18	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
19	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
20	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
21	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
22	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
23	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
24	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
25	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
26	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
27	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
28	---	---	---	---	---	---	---	---	---	0.00	0.00	0.01
29	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
30	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
31	---	---	---	---	---	---	---	---	---	0.00	0.00	---
TOTAL	---	---	---	---	---	---	---	---	---	0.00	0.32	0.01
MEAN	---	---	---	---	---	---	---	---	---	0.000	0.010	0.000
MAX	---	---	---	---	---	---	---	---	---	0.00	0.32	0.01
MIN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	---	0.00	0.6	0.02

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

	2002	2002	2002
MEAN	---	---	---
MAX	---	---	---
(WY)	---	---	---
MIN	---	---	---
(WY)	---	---	---

SUMMARY STATISTICS FOR 2002 WATER YEAR

ANNUAL TOTAL	0.33
ANNUAL MEAN	0.004
HIGHEST DAILY MEAN	0.32 Aug 9
LOWEST DAILY MEAN	0.00 Jul 16
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 16
MAXIMUM PEAK FLOW	1.8 Aug 8
MAXIMUM PEAK STAGE	1.13 Aug 8
ANNUAL RUNOFF (AC-FT)	0.7
10 PERCENT EXCEEDS	0.00
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	0.00

e Estimated.

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 to September 2002.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 275 ft above sea level, 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, 3.1 ft³/s, Aug. 19, 2002, gage height, 1.16 ft, from rating curve extended above 1.90 ft³/s; no flow at times during water year 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 1.90 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 19	0530	3.1	1.16

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	0.00	0.01	0.00
2	---	---	---	---	---	---	---	---	---	0.00	0.00	0.04
3	---	---	---	---	---	---	---	---	---	0.00	0.01	0.10
4	---	---	---	---	---	---	---	---	---	0.00	0.00	0.01
5	---	---	---	---	---	---	---	---	---	0.00	0.02	0.08
6	---	---	---	---	---	---	---	---	---	0.00	0.00	0.01
7	---	---	---	---	---	---	---	---	---	0.00	0.04	0.01
8	---	---	---	---	---	---	---	---	---	0.00	0.01	0.06
9	---	---	---	---	---	---	---	---	---	0.07	0.02	0.01
10	---	---	---	---	---	---	---	---	---	0.03	0.04	0.10
11	---	---	---	---	---	---	---	---	---	0.01	0.00	0.01
12	---	---	---	---	---	---	---	---	---	0.11	0.00	0.11
13	---	---	---	---	---	---	---	---	---	0.05	0.00	0.01
14	---	---	---	---	---	---	---	---	---	0.00	0.06	0.07
15	---	---	---	---	---	---	---	---	---	0.05	0.00	0.01
16	---	---	---	---	---	---	---	---	---	0.06	0.00	0.11
17	---	---	---	---	---	---	---	---	---	0.00	0.11	0.01
18	---	---	---	---	---	---	---	---	---	0.05	0.00	0.07
19	---	---	---	---	---	---	---	---	---	0.04	0.38	0.01
20	---	---	---	---	---	---	---	---	---	0.00	0.00	0.11
21	---	---	---	---	---	---	---	---	---	0.00	0.00	0.03
22	---	---	---	---	---	---	---	---	---	0.00	0.60	0.01
23	---	---	---	---	---	---	---	---	---	0.00	0.06	0.06
24	---	---	---	---	---	---	---	---	---	0.05	0.02	0.01
25	---	---	---	---	---	---	---	---	---	0.05	0.01	0.14
26	---	---	---	---	---	---	---	---	---	0.01	0.01	0.06
27	---	---	---	---	---	---	---	---	---	0.01	0.02	0.12
28	---	---	---	---	---	---	---	---	---	0.00	0.02	0.03
29	---	---	---	---	---	---	---	---	---	0.00	0.07	0.05
30	---	---	---	---	---	---	---	---	---	0.01	0.02	0.00
31	---	---	---	---	---	---	---	---	---	0.07	0.03	---
TOTAL	---	---	---	---	---	---	---	---	---	0.67	1.56	1.45
MEAN	---	---	---	---	---	---	---	---	---	0.022	0.050	0.048
MAX	---	---	---	---	---	---	---	---	---	0.11	0.60	0.14
MIN	---	---	---	---	---	---	---	---	---	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	---	---	---	1.3	3.1	2.9

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

MEAN	---	---	---	---	---	---	---	---	---	0.022	0.050	0.048
MAX	---	---	---	---	---	---	---	---	---	0.022	0.050	0.048
(WY)	---	---	---	---	---	---	---	---	---	2002	2002	2002
MIN	---	---	---	---	---	---	---	---	---	0.022	0.050	0.048
(WY)	---	---	---	---	---	---	---	---	---	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	3.68
ANNUAL MEAN	0.040
HIGHEST DAILY MEAN	0.60 Aug 22
LOWEST DAILY MEAN	0.00 Jul 1
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 1
MAXIMUM PEAK FLOW	3.1 Aug 19
MAXIMUM PEAK STAGE	1.16 Aug 19
ANNUAL RUNOFF (AC-FT)	7.3
10 PERCENT EXCEEDS	0.11
50 PERCENT EXCEEDS	0.01
90 PERCENT EXCEEDS	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 mi².

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 sea level, 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, 18 ft³/s, Jan. 28, 2002, gage height, 4.09 ft, from rating curve extended above 0.58 ft³/s; maximum gage height, 4.11 ft, Nov. 24, 2001; no flow at times on Sept. 11–14, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 0.58 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	0200	18	4.09

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.08	0.12	0.13	0.25	0.30	0.30	0.23	0.09	0.13	0.16	0.18	0.07
2	0.06	0.10	0.10	0.22	0.26	0.30	0.23	0.09	0.12	0.13	0.17	0.06
3	0.08	0.16	0.41	0.21	0.18	0.28	0.24	0.09	0.13	0.17	0.15	0.06
4	0.09	0.65	0.22	0.20	0.18	0.31	0.20	0.10	0.10	0.17	0.14	0.07
5	0.12	0.34	0.18	0.18	0.17	0.32	0.18	0.10	0.11	0.17	0.18	0.07
6	0.11	0.17	0.17	0.17	0.18	0.35	0.32	0.13	0.13	0.19	0.14	0.08
7	0.10	0.10	0.17	0.17	0.18	1.5	0.20	0.10	0.09	0.18	0.19	0.07
8	0.11	0.06	0.19	0.17	0.20	0.57	0.17	0.13	0.08	0.18	0.16	0.07
9	0.11	0.12	0.24	0.16	0.19	0.48	0.11	0.18	0.08	0.16	0.18	0.08
10	0.11	0.15	0.36	0.19	0.16	0.44	0.13	0.17	0.10	0.22	0.21	0.04
11	0.10	0.28	0.27	0.17	0.16	0.44	0.12	0.14	0.08	0.23	0.20	0.05
12	0.10	0.99	0.23	0.17	0.15	0.45	0.17	0.12	0.09	0.25	0.20	0.03
13	0.10	0.73	0.19	0.17	0.19	0.45	0.16	0.13	0.09	0.25	0.19	0.04
14	0.09	0.29	0.77	0.17	0.17	0.43	0.14	0.11	0.11	0.22	0.15	0.04
15	0.10	0.20	0.32	0.21	0.18	0.42	0.19	0.13	0.11	0.23	0.14	0.11
16	0.09	0.13	0.18	0.23	0.17	0.41	0.12	0.16	0.11	0.19	0.15	0.13
17	0.10	0.12	0.17	0.14	2.3	0.75	0.09	0.18	0.12	0.20	0.17	0.22
18	0.10	0.13	0.18	0.14	0.35	0.91	0.10	0.18	0.12	0.25	0.17	0.19
19	0.11	0.27	0.19	0.14	0.26	0.40	0.13	0.15	0.15	0.23	0.20	0.18
20	0.09	0.21	0.24	0.13	0.23	0.32	0.12	0.18	0.14	0.23	0.19	0.20
21	0.08	0.18	3.0	0.14	0.22	0.35	0.07	0.18	0.15	0.21	0.15	0.21
22	0.08	0.12	0.37	0.16	0.23	0.35	0.07	0.16	0.17	0.21	0.13	0.16
23	0.08	0.11	0.26	0.13	0.26	0.56	0.06	0.15	0.16	0.17	0.12	0.09
24	0.08	1.2	0.22	0.12	0.27	0.46	0.18	0.17	0.14	0.18	0.11	0.12
25	0.07	0.59	0.18	0.16	0.28	0.36	0.15	0.13	0.14	0.24	0.08	0.13
26	0.15	0.31	0.18	0.19	0.33	0.33	0.41	0.12	0.17	0.22	0.11	0.12
27	0.08	0.15	0.19	0.39	0.82	0.33	0.16	0.12	0.15	0.19	0.09	0.11
28	0.07	0.07	0.18	3.3	0.37	0.29	0.11	0.14	0.16	0.15	0.10	0.09
29	0.08	0.94	1.2	0.44	---	0.28	0.10	0.14	0.15	0.15	0.08	0.11
30	0.12	0.27	1.4	0.34	---	0.31	0.10	0.13	0.15	0.16	0.08	0.09
31	0.14	---	0.52	0.31	---	0.24	---	0.16	---	0.18	0.08	---
TOTAL	2.98	9.26	12.61	9.27	8.94	13.69	4.76	4.26	3.73	6.07	4.59	3.09
MEAN	0.096	0.309	0.407	0.299	0.319	0.442	0.159	0.137	0.124	0.196	0.148	0.103
MAX	0.15	1.2	3.0	3.3	2.3	1.5	0.41	0.18	0.17	0.25	0.21	0.22
MIN	0.06	0.06	0.10	0.12	0.15	0.24	0.06	0.09	0.08	0.13	0.08	0.03
AC-FT	5.9	18	25	18	18	27	9.4	8.4	7.4	12	9.1	6.1

11048553 SAND CANYON CREEK AT IRVINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.096	0.309	0.407	0.299	0.319	0.442	0.159	0.137	0.124	0.169	0.152	0.122
MAX	0.096	0.31	0.41	0.30	0.32	0.44	0.16	0.14	0.12	0.20	0.16	0.14
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001
MIN	0.096	0.31	0.41	0.30	0.32	0.44	0.16	0.14	0.12	0.14	0.15	0.10
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 2001 - 2002

ANNUAL TOTAL	83.25		
ANNUAL MEAN	0.228		0.228
HIGHEST ANNUAL MEAN			0.23 2002
LOWEST ANNUAL MEAN			0.23 2002
HIGHEST DAILY MEAN	3.3	Jan 28	3.3 Jan 28 2002
LOWEST DAILY MEAN	0.03	Sep 12	0.03 Sep 12 2002
ANNUAL SEVEN-DAY MINIMUM	0.05	Sep 8	0.05 Sep 8 2002
MAXIMUM PEAK FLOW	18	Jan 28	18 Jan 28 2002
MAXIMUM PEAK STAGE	4.11	Nov 24	4.11 Nov 24 2001
ANNUAL RUNOFF (AC-FT)	165		165
10 PERCENT EXCEEDS	0.36		0.36
50 PERCENT EXCEEDS	0.17		0.17
90 PERCENT EXCEEDS	0.08		0.08

SAN DIEGO CREEK BASIN

11048553 SAND CANYON CREEK AT IRVINE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 2001 to September 2002.

SEDIMENT DATA: October 2001 to September 2002.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
JAN						
08...	1235	.16	10.5	62	6.0	<.01
FEB						
11...	1340	.16	10.0	36	26	.01
MAR						
07...	1135	2.8	16.0	73	18	.14
APR						
05...	1355	.18	14.0	61	14	.01
MAY						
21...	0910	.35	15.0	38	20	.02
JUN						
11...	1200	.11	18.0	82	6.0	<.01

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 mi².

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 sea level, 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, 20 ft³/s, Nov. 24, 2001, gage height, 10.54 ft, from rating curve extended above 2.0 ft³/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 ft³/s, or maximum, from rating curve extended above 2.0 ft³/s as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1645	20	10.54

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	0.58	1.0	0.69	0.34	4.2	0.89	0.49	0.33	0.69	0.54	0.33
2	0.36	0.35	1.3	0.67	0.35	4.3	0.67	0.44	0.33	0.67	0.53	0.34
3	0.39	0.57	2.2	0.76	0.33	4.1	0.54	0.44	0.33	0.59	0.49	0.33
4	0.41	0.90	1.7	0.75	0.33	4.4	0.48	0.41	0.33	0.34	0.41	0.33
5	0.46	0.56	1.3	0.63	0.36	4.5	0.34	0.47	0.33	0.35	0.45	0.41
6	0.40	0.67	1.3	0.56	0.37	4.7	0.39	0.48	0.33	0.43	0.44	0.48
7	0.41	0.60	1.2	0.58	0.41	5.7	0.33	0.41	0.33	0.43	0.33	0.46
8	0.38	0.53	1.0	0.52	0.38	3.7	0.38	0.45	0.33	0.48	0.33	0.50
9	0.40	0.57	1.0	0.41	0.35	3.1	0.46	0.48	0.33	0.48	0.35	0.50
10	0.58	0.52	0.97	0.50	0.32	3.6	0.59	0.34	0.33	0.47	0.36	0.44
11	0.44	0.85	0.77	0.43	0.52	3.6	0.63	0.36	0.33	0.59	0.33	0.44
12	0.40	2.3	0.75	0.48	0.86	3.8	0.50	0.33	0.33	0.68	0.33	0.59
13	0.40	1.8	0.71	0.50	1.2	3.9	0.55	0.33	0.33	0.52	0.33	0.56
14	0.48	0.49	1.2	0.55	1.6	3.5	0.54	0.33	0.33	0.39	0.33	0.34
15	0.69	0.46	0.66	0.52	1.9	3.4	0.61	0.33	0.33	0.50	0.33	0.34
16	0.67	0.45	0.38	0.50	1.9	3.3	0.51	0.33	0.33	0.59	0.33	0.33
17	0.41	0.50	0.39	0.50	3.1	3.2	0.50	0.33	0.33	0.61	0.33	0.34
18	0.36	0.50	0.35	0.44	2.1	2.8	0.50	0.33	0.33	0.72	0.33	0.33
19	0.47	0.69	0.38	0.50	1.9	1.9	0.51	0.40	0.41	0.51	0.33	0.33
20	0.56	0.59	0.43	0.47	2.0	1.9	0.50	0.37	0.37	0.52	0.33	0.33
21	0.43	0.52	1.9	0.39	2.3	1.9	0.51	0.29	0.37	0.49	0.33	0.33
22	0.36	0.55	0.64	0.46	2.4	2.0	0.50	0.27	0.48	0.47	0.33	0.36
23	0.41	0.53	0.50	0.36	2.7	2.3	0.50	0.26	0.40	0.51	0.33	0.39
24	0.51	3.1	0.50	0.38	3.1	1.9	0.51	0.26	0.45	0.46	0.33	0.40
25	0.38	1.3	0.50	0.40	3.5	1.9	0.34	0.28	0.47	0.35	0.33	0.41
26	0.38	0.68	0.55	0.42	3.7	1.8	0.46	0.30	0.53	0.40	0.33	0.36
27	0.46	0.63	0.57	0.62	3.8	1.6	0.37	0.33	0.57	0.47	0.33	0.64
28	0.38	0.50	0.65	1.6	4.1	1.4	0.40	0.33	0.59	0.46	0.35	0.78
29	0.49	2.2	1.1	0.99	---	1.2	0.46	0.33	0.73	0.50	0.36	0.42
30	0.59	1.2	1.3	0.47	---	1.1	0.48	0.33	0.77	0.55	0.37	0.35
31	0.70	---	1.0	0.39	---	1.0	---	0.33	---	0.51	0.36	---
TOTAL	14.02	25.69	28.20	17.44	46.22	91.7	14.95	11.16	12.08	15.73	11.28	12.49
MEAN	0.452	0.856	0.910	0.563	1.651	2.958	0.498	0.360	0.403	0.507	0.364	0.416
MAX	0.70	3.1	2.2	1.6	4.1	5.7	0.89	0.49	0.77	0.72	0.54	0.78
MIN	0.26	0.35	0.35	0.36	0.32	1.0	0.33	0.26	0.33	0.34	0.33	0.33
AC-FT	28	51	56	35	92	182	30	22	24	31	22	25

SAN DIEGO CREEK BASIN

11048600 BONITA CREEK AT IRVINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.452	0.856	0.910	0.563	1.651	2.958	0.498	0.360	0.403	0.431	0.370	0.397
MAX	0.45	0.86	0.91	0.56	1.65	2.96	0.50	0.36	0.40	0.51	0.38	0.42
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002
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 WATER YEAR

WATER YEARS 2001 - 2002

ANNUAL TOTAL	300.96		
ANNUAL MEAN	0.825		0.825
HIGHEST ANNUAL MEAN			0.82 2002
LOWEST ANNUAL MEAN			0.82 2002
HIGHEST DAILY MEAN	5.7	Mar 7	5.7 Mar 7 2002
LOWEST DAILY MEAN	0.26	Oct 1	0.15 Aug 13 2001
ANNUAL SEVEN-DAY MINIMUM	0.28	May 21	0.27 Jul 28 2001
MAXIMUM PEAK FLOW	20	Nov 24	20 Nov 24 2001
MAXIMUM PEAK STAGE	10.54	Nov 24	10.54 Nov 24 2001
ANNUAL RUNOFF (AC-FT)	597		597
10 PERCENT EXCEEDS	1.9		1.9
50 PERCENT EXCEEDS	0.48		0.48
90 PERCENT EXCEEDS	0.33		0.33

11048600 BONITA CREEK AT IRVINE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 2001 to September 2002.

SEDIMENT DATA: October 2001 to September 2002.

PARTICLES-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. FALL DIAM. % FINER THAN .062 MM (70342)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
JAN						
08...	1415	.50	13.0	50	10	.01
FEB						
11...	1540	.75	11.5	42	12	.02
MAR						
07...	1315	5.8	15.0	86	13	.20
APR						
05...	1300	.33	13.5	34	14	.01
MAY						
21...	1100	.33	16.5	40	56	.05
JUN						
11...	1100	.33	17.5	48	38	.03

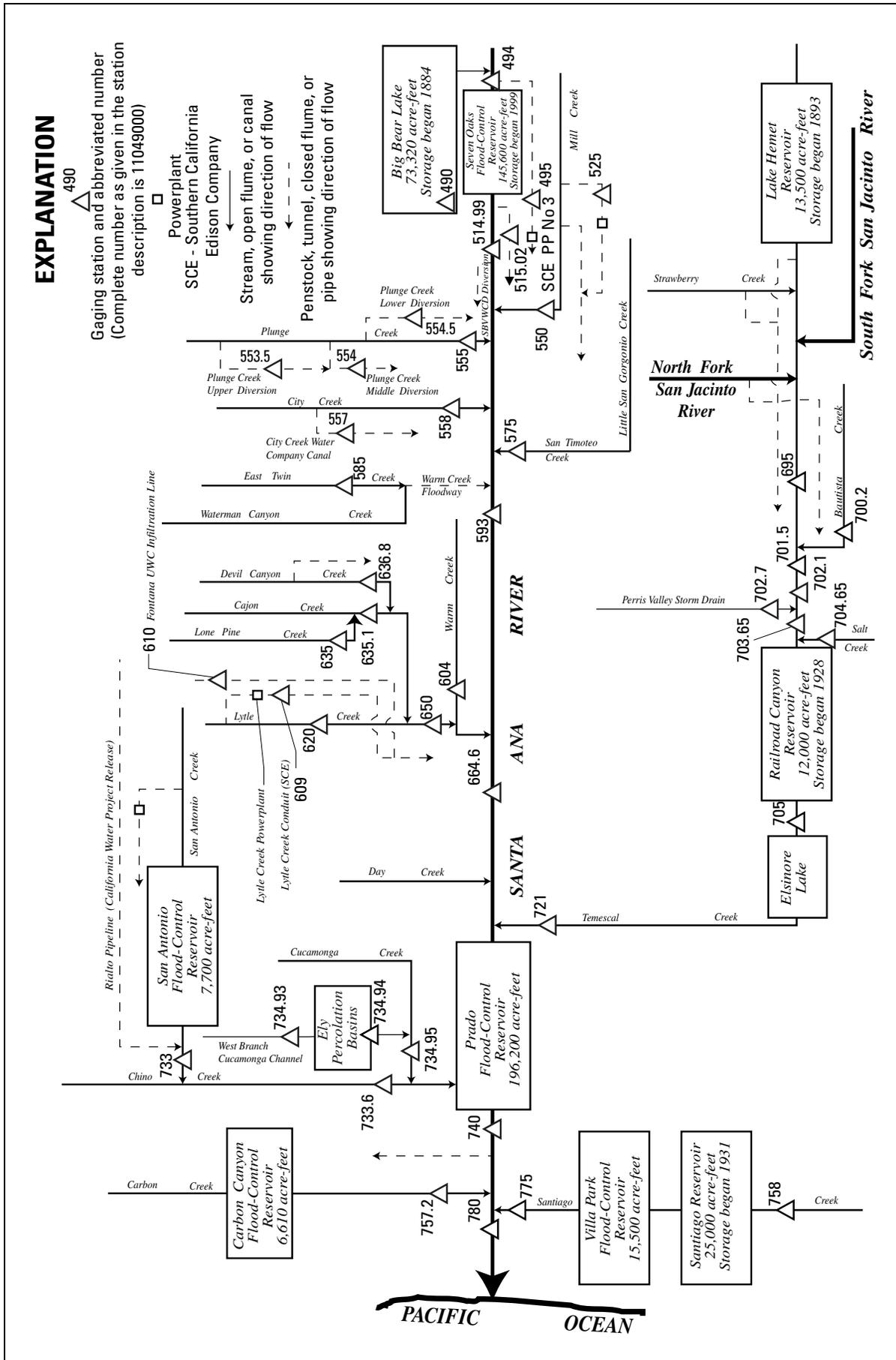


Figure 17. Diversions and storage in Santa Ana River Basin.

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 mi², 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 sea level (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, 667 acre-ft was released. Between November 2001 and March 2002, 1,040 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, 48,700 acre-ft, Oct. 1; minimum contents observed, 37,990 acre-ft, Sept. 30.

MONTHEND CONTENTS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Contents (acre-ft)	Change in contents (acre-ft)
Sept. 30	48,770	—
Oct. 31	47,540	-1,230
Nov. 30	47,300	-240
Dec. 31	46,820	-480
CAL YR 2001	—	-5,480
Jan. 31	46,450	-370
Feb. 28	46,150	-300
Mar. 31	45,840	-310
Apr. 30	45,080	-760
May 31	43,900	-1,180
June 30	42,410	-1,490
July 31	40,820	-1,590
Aug. 31	39,130	-1,690
Sept. 30	37,990	-1,140
WTR YR 2002	—	-10,780

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 mi².

PERIOD OF RECORD.—February 2000, October 2001 to September 2002.

CHEMICAL DATA: February 2000, October 2001 to September 2002.

SEDIMENT DATA: February 2000, October 2001 to September 2002.

REMARKS.—Discharge values on Feb. 16, 17, 20, 2000, were provided by U.S. Army Corps of Engineers (not reviewed by U.S. Geological Survey). Water-quality data collected for the National Water-Quality Assessment (NAWQA) Program.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
(NOT PREVIOUSLY PUBLISHED)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, PH DIS- SOLVED WATER WHOLE FIELD CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD CON- DUCT- ANCE (STAND- ARD UNITS) (00400)	SPE- CIFIC TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	
FEB										
16...	1030	e20	697	9.8	95	8.0	259	10.5	10.0	91
17...	0950	e118	697	10.6	97	8.1	232	8.0	7.5	83
20...	1740	e137	693	9.6	97	8.1	218	10.5	11.5	77

Date	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ALKA- LINITY WAT DIS TOT IT FIELD SODIUM MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
FEB									
16...	28.6	4.86	1.71	.8	17.6	29	108	132	5.80
17...	25.8	4.46	1.53	.7	15.3	28	101	123	5.62
20...	23.8	4.33	1.74	.7	14.2	28	91	111	5.23

Date	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
FEB									
16...	.5	20.0	14.8	.23	169	160	.02	.13	.12
17...	.4	18.7	12.6	.20	146	146	<.02	.11	.23
20...	.4	16.6	12.6	.19	142	135	<.02	.12	.76

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
FEB									
16...	.32	<.010	<.05	.01	<.05	1.2	<.2	<10	<2.2
17...	.31	<.010	.008	<.01	.040	3.1	1.1	11	e1.7
20...	.26	<.010	.008	<.01	.130	2.5	4.5	e8	<2.2

e Estimated.

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

11049400 SANTA ANA RIVER ABOVE SEVEN OAKS DAM, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
(NOT PREVIOUSLY PUBLISHED)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (80155)
FEB						
16...	1030	e20	10.0	95	4.0	e.22
17...	0950	e118	7.5	94	36	e11.5
20...	1740	e137	11.5	94	117	e43.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE OF HG (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	
OCT										
16...	1500	e1.0	697	8.4	96	7.9	318	29.5	17.5	128
DEC										
13...	1400	.83	699	8.4	88	8.0	286	8.5	13.5	120
JAN										
17...	1400	.87	695	9.1	94	8.0	305	10.5	12.5	130
FEB										
14...	1300	.94	695	9.2	96	7.9	317	18.5	13.0	129
MAR										
14...	1530	.86	690	9.4	100	8.1	310	10.0	13.5	128
APR										
18...	1320	.86	694	9.1	99	8.1	314	15.0	15.0	122
JUN										
13...	1430	.73	695	8.0	99	8.1	321	28.5	21.0	131
AUG										
15...	1330	.54	694	8.4	102	8.1	325	32.5	20.0	135

Date	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED MG/L AS CL (00940)	SULFATE DIS- SOLVED MG/L AS SO4 (00945)	NITRO- GEN, AMMONIA DIS- SOLVED MG/L AS N (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL MG/L AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED MG/L AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED MG/L AS N (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED MG/L AS P (00671)	PHOS- PHORUS TOTAL MG/L AS P (00665)
OCT									
16...	157	6.49	22.0	<.04	e.07	.06	<.008	<.02	.010
DEC									
13...	146	6.37	21.5	<.04	<.10	.18	<.008	<.02	.010
JAN									
17...	159	6.25	22.6	<.04	.28	.13	<.008	.02	.007
FEB									
14...	158	6.88	24.0	<.04	e.05	.06	<.008	<.02	.009
MAR									
14...	156	7.01	23.6	<.04	e.05	<.05	<.008	<.02	.007
APR									
18...	149	5.92	24.6	<.04	<.10	<.05	<.008	<.02	.006
JUN									
13...	160	7.19	26.0	<.04	.15	<.05	<.008	<.02	.006
AUG									
15...	165	7.13	26.0	<.04	<.10	<.05	<.008	<.02	.006

SS Suspended-sediment data determined from sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocols.

e Estimated.

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

SANTA ANA RIVER BASIN

11049400 SANTA ANA RIVER ABOVE SEVEN OAKS DAM, CA—Continued

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)
MAR								
14...*	1541	690	9.4	100	7.8	311	13.5	.90
14...*	1542	690	9.4	100	7.9	310	13.5	2.10
14...*	1543	690	9.4	100	7.9	311	13.5	3.40
14...*	1544	690	9.5	101	8.0	311	13.5	4.50
14...*	1545	690	9.6	102	8.0	311	13.5	5.70

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT						
16...SS	1500	e1.0	17.5	67	<.5	<.01
DEC						
13...SS	1400	.83	13.5	57	1.0	<.01
JAN						
17...SS	1400	.87	12.5	64	1.0	<.01
FEB						
14...SS	1300	.94	13.0	50	<.5	<.01
MAR						
14...SS	1530	.86	13.5	33	<.5	<.01
APR						
18...SS	1320	.86	15.0	38	2.0	<.01
JUN						
13...SS	1430	.73	21.0	83	1.0	<.01
AUG						
15...SS	1330	.54	20.0	40	1.0	<.01

* Instantaneous discharge at the time of cross-sectional measurements: Mar. 14, 0.86 ft³/s.

SS Suspended-sediment data determined from sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocols.

e Estimated.

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

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 mi², 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 sea level, 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 ft³/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 ft³/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 ft³/s, from notes provided by F.C. Finkle, consulting engineer, Los Angeles.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.51	1.9	1.7	1.7	1.1	1.0	1.1	0.48	0.37	0.31	0.25
2	0.10	0.52	1.7	1.6	1.7	1.0	0.93	1.1	0.48	0.36	0.31	0.24
3	0.20	0.50	1.7	1.6	1.6	1.0	0.95	1.1	0.53	0.35	0.30	0.24
4	0.22	0.52	1.6	1.6	1.7	1.0	0.95	1.0	0.54	0.37	0.29	0.25
5	0.24	0.50	1.5	1.6	1.6	1.0	0.96	0.98	0.46	0.37	0.29	0.26
6	0.24	0.48	1.5	1.5	1.5	1.0	1.0	0.97	0.44	0.37	0.28	0.28
7	0.27	0.79	1.4	1.5	1.5	1.1	1.1	0.98	0.44	0.36	0.28	0.29
8	0.29	0.38	1.4	1.5	1.4	1.4	1.0	1.0	0.45	0.34	0.28	0.27
9	0.40	0.38	1.7	1.4	1.4	1.2	1.0	0.88	0.45	0.32	0.27	0.25
10	0.38	0.38	1.7	1.4	1.4	1.1	0.96	0.85	0.45	0.32	0.27	0.25
11	0.39	0.39	1.7	1.4	1.4	1.1	0.92	0.87	0.45	0.34	0.26	0.26
12	0.42	0.52	1.7	1.4	1.3	1.1	0.90	0.83	0.44	0.37	0.26	0.25
13	0.42	0.46	1.7	1.4	1.3	1.1	0.85	0.82	0.44	0.35	0.23	0.25
14	0.44	0.44	1.9	1.4	1.3	1.1	0.80	0.79	0.43	0.33	0.30	0.24
15	0.45	0.44	2.0	1.4	1.3	1.1	0.84	0.80	0.42	0.31	0.41	0.23
16	0.45	0.45	1.8	1.5	1.3	1.2	0.94	0.79	0.41	0.30	0.34	0.24
17	0.43	0.45	1.9	1.5	1.3	1.3	0.92	0.79	0.38	0.30	0.29	0.24
18	0.45	0.45	1.8	1.5	1.3	2.0	0.93	0.78	0.38	0.31	0.29	0.26
19	0.51	0.44	1.7	1.4	1.3	1.5	0.93	0.76	0.38	0.33	0.28	0.25
20	0.53	0.45	1.7	1.5	1.3	1.4	0.93	0.74	0.38	0.33	0.27	0.23
21	0.53	0.46	2.0	1.4	1.3	1.3	0.90	0.68	0.37	0.33	0.27	0.23
22	0.52	0.49	2.2	1.4	1.3	1.3	0.85	0.69	0.38	0.33	0.26	0.17
23	0.51	0.49	2.1	1.4	1.3	1.2	0.79	0.69	0.38	0.31	0.25	0.13
24	0.50	0.78	2.0	1.4	1.2	1.4	0.87	0.70	0.38	0.30	0.25	0.18
25	0.48	3.7	2.1	1.4	1.0	1.4	0.96	0.41	0.37	0.29	0.25	0.20
26	0.47	6.2	2.0	1.4	0.99	1.3	1.1	0.39	0.37	0.30	0.25	0.22
27	0.47	3.9	1.9	1.4	1.1	1.3	1.3	0.50	0.36	0.30	0.24	0.22
28	0.47	2.3	1.7	1.7	1.1	1.2	1.2	0.52	0.37	0.30	0.25	0.23
29	0.49	2.1	1.7	1.9	---	1.3	1.1	0.50	0.37	0.30	0.25	0.22
30	0.50	2.1	1.7	1.7	---	1.2	1.1	0.50	0.37	0.30	0.25	0.21
31	0.50	---	1.7	1.7	---	1.1	---	0.47	---	0.30	0.26	---
TOTAL	12.32	31.97	55.1	46.6	37.89	37.8	28.98	23.98	12.55	10.16	8.59	7.04
MEAN	0.397	1.066	1.777	1.503	1.353	1.219	0.966	0.774	0.418	0.328	0.277	0.235
MAX	0.53	6.2	2.2	1.9	1.7	2.0	1.3	1.1	0.54	0.37	0.41	0.29
MIN	0.05	0.38	1.4	1.4	0.99	1.0	0.79	0.39	0.36	0.29	0.23	0.13
AC-FT	24	63	109	92	75	75	57	48	25	20	17	14

SANTA ANA RIVER BASIN

11051500 SANTA ANA RIVER NEAR MENTONE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.926	8.952	25.05	40.98	80.86	93.30	62.36	47.96	21.48	11.40	6.275	6.385
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1915 - 2002
ANNUAL TOTAL	727.53	312.98	
ANNUAL MEAN	1.993	0.857	32.79
HIGHEST ANNUAL MEAN			283 1969
LOWEST ANNUAL MEAN			0.012 1961
HIGHEST DAILY MEAN	11 Mar 10	6.2 Nov 26	15500 Mar 2 1938
LOWEST DAILY MEAN	0.00 Jan 12	0.05 Oct 1	0.00 Nov 21 1932
ANNUAL SEVEN-DAY MINIMUM	0.11 Sep 28	0.19 Oct 1	0.00 Nov 21 1932
MAXIMUM PEAK FLOW		16 Nov 7	52300 Mar 2 1938
MAXIMUM PEAK STAGE			14.30 Mar 2 1938
ANNUAL RUNOFF (AC-FT)	1440	621	23760
10 PERCENT EXCEEDS	6.1	1.7	70
50 PERCENT EXCEEDS	0.82	0.68	1.8
90 PERCENT EXCEEDS	0.32	0.25	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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	14	19	21	21	19	19	18	11	7.2	5.6	e6.2
2	9.3	14	19	21	22	19	18	17	11	6.9	5.7	e6.1
3	9.6	12	20	21	22	19	18	17	13	6.8	5.8	e6.2
4	10	13	20	21	22	19	18	17	12	7.4	5.9	e5.7
5	10	12	18	21	22	19	18	16	10	7.6	5.9	e5.9
6	11	12	20	20	22	19	19	16	10	7.5	6.0	e7.0
7	11	10	18	20	22	22	19	17	9.8	7.0	6.2	e7.2
8	12	11	17	20	21	22	18	17	10	5.8	6.3	e7.3
9	12	11	18	20	21	20	18	16	10	6.1	5.7	e7.5
10	11	12	19	20	21	20	14	16	10	5.7	5.5	e7.2
11	11	12	19	20	21	19	9.6	16	10	6.3	5.2	e7.3
12	11	14	18	19	21	19	8.6	15	10	7.3	5.5	e7.7
13	10	15	18	19	20	19	8.4	15	10	7.5	5.5	e7.0
14	10	13	20	20	20	19	8.3	16	9.8	6.7	5.6	e6.8
15	10	13	19	20	20	19	8.9	16	9.4	6.3	5.7	e6.7
16	10	13	19	20	20	20	13	16	9.0	6.5	5.7	e6.6
17	11	13	19	20	22	20	18	16	8.8	6.6	5.7	e6.2
18	11	13	19	20	22	24	18	16	8.8	6.6	5.7	e6.7
19	12	13	19	20	21	22	18	16	8.8	6.5	5.9	e6.7
20	12	13	19	20	21	21	18	e16	9.0	6.4	6.2	e6.5
21	12	13	22	21	20	20	17	14	9.5	6.2	e6.3	e6.4
22	12	14	20	20	20	19	17	16	9.5	6.1	e6.5	e6.4
23	13	14	20	20	20	20	16	15	9.0	5.9	e6.0	e6.5
24	12	14	19	19	20	24	18	15	8.5	5.7	e5.7	e6.1
25	11	3.7	20	21	20	22	19	13	8.3	5.8	e5.5	e6.2
26	11	17	20	20	19	20	21	13	7.4	5.7	e5.5	e6.7
27	11	21	20	20	19	20	22	14	7.5	5.8	e5.7	e6.6
28	12	19	20	25	19	20	19	13	7.8	6.0	e6.0	e7.4
29	12	20	20	23	---	20	18	12	7.7	6.0	e6.0	e8.2
30	12	20	22	21	---	19	18	12	7.3	5.7	e6.0	e9.0
31	14	---	21	20	---	19	---	11	---	5.6	e6.2	---
TOTAL	347.9	408.7	601	633	581	623	492.8	473	282.9	199.2	180.7	204.0
MEAN	11.22	13.62	19.39	20.42	20.75	20.10	16.43	15.26	9.430	6.426	5.829	6.800
MAX	14	21	22	25	22	24	22	18	13	7.6	6.5	9.0
MIN	9.3	3.7	17	19	19	19	8.3	11	7.3	5.6	5.2	5.7
AC-FT	690	811	1190	1260	1150	1240	977	938	561	395	358	405

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2002, BY WATER YEAR (WY)

	47.90	44.79	57.50	89.39	121.4	133.3	114.7	100.2	72.52	61.78	55.32	52.85
MEAN	47.90	44.79	57.50	89.39	121.4	133.3	114.7	100.2	72.52	61.78	55.32	52.85
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	10.4	12.5	14.4	19.0	18.3	20.1	16.4	15.3	9.43	6.43	5.83	6.80
(WY)	1991	1991	1991	1991	1991	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1912 - 2002

ANNUAL TOTAL	7842.01	5027.2		
ANNUAL MEAN	21.48	13.77	79.09	
HIGHEST ANNUAL MEAN			366	1916
LOWEST ANNUAL MEAN			13.8	2002
HIGHEST DAILY MEAN	64	Feb 20	16000	Jan 27 1916
LOWEST DAILY MEAN	0.00	Jan 12	0.00	Feb 17 2000
ANNUAL SEVEN-DAY MINIMUM	8.0	Aug 14	5.5	Aug 9 2002
MAXIMUM PEAK FLOW			58	Nov 7
ANNUAL RUNOFF (AC-FT)	15550	9970	52300	Mar 2 1938
10 PERCENT EXCEEDS	39	21	136	
50 PERCENT EXCEEDS	19	14	48	
90 PERCENT EXCEEDS	11	6.0	22	

e Estimated.

11052500 MILL CREEK POWER CANALS NOS. 2 AND 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 Nos. 2 and 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 and water-stage recorder. Elevation of gage is 4,840 ft above sea level, from topographic map.

REMARKS.—Mill Creek Power Canals Nos. 2 and 3 divert from points 3 mi and 6 mi upstream from station, respectively. Canal No. 2, damaged during earthquake in 1992, was not used during water year 2002. Prior to October 1993, records collected at powerplant at terminus of penstock. October 1993 to September 1995, records collected at auxiliary gage at Canal No. 3 intake. 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 ft³/s, May 6, 1995; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	6.1	6.2	6.0	6.0	5.8	5.8	5.3	4.7	4.0	3.8	3.7
2	6.1	6.0	6.2	5.8	6.1	5.7	5.7	5.3	4.7	3.9	3.8	3.7
3	6.0	6.0	6.5	5.8	6.0	5.7	5.6	5.3	4.6	4.0	3.8	3.7
4	6.1	6.1	6.2	5.9	6.0	5.6	5.5	5.2	4.4	3.9	3.7	3.7
5	6.0	6.1	6.3	6.0	6.0	5.6	5.4	5.2	4.5	3.8	3.8	3.7
6	6.1	6.1	6.2	6.0	5.9	5.6	5.5	5.2	4.5	3.8	3.9	4.4
7	6.1	6.0	6.1	6.0	5.9	6.3	5.4	5.1	4.3	3.7	3.8	4.5
8	6.2	5.9	6.1	6.0	5.9	6.3	5.3	5.2	4.5	3.8	3.8	4.2
9	6.2	6.0	6.1	5.9	5.8	6.0	5.3	5.1	4.5	3.9	3.8	4.0
10	6.1	6.0	6.1	6.0	5.9	6.0	5.3	5.1	1.6	3.9	3.9	4.2
11	5.9	6.0	6.1	6.0	5.8	6.1	5.3	5.1	0.00	4.0	3.8	3.5
12	6.1	6.1	6.1	6.0	5.8	6.1	5.3	5.0	0.01	4.0	3.9	3.9
13	6.0	0.00	6.1	6.0	5.8	5.9	5.2	5.2	0.00	4.0	3.8	4.2
14	6.0	2.8	6.3	6.0	5.8	5.8	5.3	5.1	2.6	3.8	3.8	4.3
15	6.0	5.9	6.1	6.0	5.8	5.8	5.3	5.1	4.3	3.9	3.8	4.0
16	6.0	5.9	6.3	6.0	5.7	5.9	5.5	5.1	4.1	4.0	3.8	3.7
17	6.0	5.9	6.2	5.8	6.1	6.0	5.5	5.0	4.3	3.9	3.9	4.1
18	6.0	5.9	6.2	5.9	5.8	6.1	5.5	5.0	4.2	3.9	3.8	4.3
19	6.0	5.9	5.8	6.0	6.0	6.2	5.4	4.9	4.2	3.9	3.9	3.5
20	6.0	6.0	5.8	5.9	5.9	6.1	5.3	5.0	4.2	3.8	3.8	3.9
21	6.0	5.8	6.1	6.0	5.8	5.9	5.3	5.0	4.1	3.7	3.8	3.7
22	6.0	5.9	6.1	5.9	6.1	5.8	5.1	5.1	4.1	3.8	3.8	3.7
23	6.0	6.0	6.1	5.8	5.8	5.9	5.1	4.8	4.1	3.8	3.8	3.7
24	5.9	5.2	6.0	5.9	5.8	6.2	5.9	4.8	4.1	3.9	3.8	3.7
25	5.9	0.00	6.0	6.0	6.3	6.3	5.6	4.8	3.9	3.9	3.7	3.7
26	5.9	0.00	6.0	5.9	9.7	6.7	6.0	4.9	3.7	3.8	3.7	3.7
27	5.9	2.9	6.1	5.9	4.6	6.3	5.7	4.9	4.0	3.8	3.7	3.7
28	5.9	6.1	6.0	6.2	5.2	6.0	5.5	4.8	4.0	3.7	3.8	3.7
29	5.9	6.4	6.6	5.9	---	5.9	5.3	4.8	3.9	3.8	3.6	3.7
30	6.0	6.2	6.9	5.7	---	5.8	5.3	4.6	4.0	3.8	3.7	3.8
31	6.2	---	6.2	5.9	---	5.8	---	4.6	---	3.8	3.7	---
TOTAL	186.6	155.20	191.1	184.1	167.3	185.2	163.2	155.6	110.11	119.7	117.5	116.3
MEAN	6.019	5.173	6.165	5.939	5.975	5.974	5.440	5.019	3.670	3.861	3.790	3.877
MAX	6.2	6.4	6.9	6.2	9.7	6.7	6.0	5.3	4.7	4.0	3.9	4.5
MIN	5.9	0.00	5.8	5.7	4.6	5.6	5.1	4.6	0.00	3.7	3.6	3.5
AC-FT	370	308	379	365	332	367	324	309	218	237	233	231

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, 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	
MEAN	15.75	14.77	14.37	14.59	15.06	17.30	19.52	20.18	19.33	16.76	15.64	15.01																		
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	6.02	5.17	0.000	4.08	4.55	5.33	4.50	5.02	3.67	2.74	3.79	3.01																		
(WY)	2002	2002	2001	2001	2000	2000	2000	2002	2002	1999	2002	1997																		

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1974 - 2002

ANNUAL TOTAL	2447.50	1851.91		
ANNUAL MEAN	6.705	5.074	16.53	
HIGHEST ANNUAL MEAN			26.2	1979
LOWEST ANNUAL MEAN			5.07	2002
HIGHEST DAILY MEAN	13	Apr 24	9.7	Feb 26
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Nov 13
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	1.8	Jun 10
ANNUAL RUNOFF (AC-FT)	4850	3670	11970	
10 PERCENT EXCEEDS	12	6.1	26	
50 PERCENT EXCEEDS	6.8	5.5	17	
90 PERCENT EXCEEDS	0.00	3.7	6.7	

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 mi².

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 sea level, 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, 2, and 3 divert from points 3.8 mi, 6.8 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. Canal No. 2, damaged during an earthquake in 1992, was not used during water year 2002. 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 2002. 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 ft³/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.—No flow observed many times during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	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
3	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
5	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
7	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
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
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
25	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
27	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
29	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
31	0.00	---	---	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	---	---	---	0.00	---	0.00	---	0.00	0.00	0.00	0.00
MEAN	0.000	---	---	---	0.000	---	0.000	---	0.000	0.000	0.000	0.000
MAX	0.00	---	---	---	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
AC-FT	0.00	---	---	---	0.00	---	0.00	---	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 mi².

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 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 sea level, 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 ft³/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 ft³/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.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum, from rating curve extended above 356 ft³/s, on basis of slope-conveyance measurement at gage height 7.41 ft:

Date	Time	Creek only Discharge (ft ³ /s)	Gage height (ft)	Combined creek and diversions Discharge (ft ³ /s)
Nov. 25	0015	9.7	2.98	9.7

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.21	0.58	1.5	1.6	1.9	1.5	0.96	1.0	0.27	0.08	0.10	0.08
2	0.24	0.58	1.4	1.6	1.8	1.4	0.97	1.0	0.31	0.06	0.10	0.06
3	0.24	0.53	1.6	1.8	1.8	1.4	1.00	0.95	0.41	0.07	0.10	0.07
4	0.29	0.52	1.5	1.8	1.8	1.5	1.1	0.82	0.42	0.08	0.09	0.07
5	0.39	0.55	1.5	1.8	1.8	1.4	1.1	0.77	0.25	0.10	0.07	0.07
6	0.48	0.50	1.4	1.8	1.8	1.4	1.3	0.77	0.17	0.09	0.08	0.11
7	0.55	0.54	1.3	1.8	1.8	1.7	1.3	0.86	0.16	0.09	0.09	0.14
8	0.58	0.49	1.3	1.8	1.8	1.7	1.3	0.98	0.18	0.06	0.08	0.10
9	0.58	0.44	1.3	1.8	1.7	1.5	1.2	0.77	0.26	0.06	0.07	0.09
10	0.56	0.51	1.4	1.7	1.6	1.4	1.0	0.69	0.33	0.05	0.07	0.08
11	0.39	0.62	1.4	1.7	1.6	1.4	0.98	0.67	0.30	0.05	0.07	0.08
12	0.37	0.76	1.4	1.7	1.6	1.3	0.93	0.52	0.26	0.07	0.07	0.08
13	0.34	1.3	1.4	1.7	1.6	1.3	0.88	0.41	0.22	0.07	0.07	0.08
14	0.33	0.86	1.5	1.8	1.6	1.3	0.77	0.38	0.19	0.07	0.07	0.07
15	0.31	0.68	1.5	1.8	1.6	1.3	0.86	0.42	0.15	0.06	0.07	0.07
16	0.29	0.61	1.4	2.0	1.6	1.3	1.0	0.53	0.13	0.06	0.08	0.07
17	0.30	0.63	1.4	1.8	2.0	1.5	1.1	0.54	0.13	0.07	0.10	0.09
18	0.32	0.62	1.4	1.8	2.0	2.2	1.1	0.47	0.12	0.07	0.10	0.10
19	0.31	0.59	1.4	1.8	1.8	1.7	1.1	0.53	0.13	0.08	0.10	0.10
20	0.31	0.58	1.4	1.7	1.7	1.5	1.1	0.66	0.13	0.09	0.11	0.10
21	0.35	0.59	2.1	1.6	1.6	1.3	1.0	0.77	0.15	0.09	0.12	0.09
22	0.44	0.67	1.7	1.7	1.6	1.2	0.85	0.65	0.16	0.09	0.12	0.08
23	0.46	0.70	1.6	1.6	1.6	1.3	0.74	0.53	0.12	0.08	0.10	0.08
24	0.41	1.6	1.5	1.6	1.6	1.6	0.91	0.47	0.09	0.07	0.09	0.07
25	0.34	3.3	1.6	1.6	1.5	1.5	1.1	0.46	0.09	0.06	0.09	0.07
26	0.34	1.6	1.6	1.6	1.5	1.4	1.1	0.47	0.08	0.06	0.08	0.07
27	0.35	1.5	1.5	1.6	1.5	1.3	1.6	0.47	0.08	0.07	0.08	0.10
28	0.50	1.4	1.5	3.7	1.5	1.3	1.1	0.43	0.09	0.08	0.09	0.14
29	0.60	1.5	1.6	2.4	---	1.3	0.99	0.35	0.09	0.08	0.09	0.27
30	0.47	1.6	1.6	1.9	---	1.2	0.97	0.27	0.09	0.08	0.08	0.24
31	0.57	---	1.6	1.9	---	1.0	---	0.23	---	0.07	0.07	---
TOTAL	12.22	26.95	46.3	56.5	47.3	44.1	31.41	18.84	5.56	2.26	2.70	2.92
MEAN	0.394	0.898	1.494	1.823	1.689	1.423	1.047	0.608	0.185	0.073	0.087	0.097
MAX	0.60	3.3	2.1	3.7	2.0	2.2	1.6	1.0	0.42	0.10	0.12	0.27
MIN	0.21	0.44	1.3	1.6	1.5	1.0	0.74	0.23	0.08	0.05	0.07	0.06
AC-FT	24	53	92	112	94	87	62	37	11	4.5	5.4	5.8

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.287	1.906	6.349	12.35	21.54	22.26	12.56	4.127	1.075	0.313	0.162	0.336
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1919 - 2002
ANNUAL TOTAL	842.77	297.06	
ANNUAL MEAN	2.309	0.814	6.904
HIGHEST ANNUAL MEAN			42.5 1969
LOWEST ANNUAL MEAN			0.050 1961
HIGHEST DAILY MEAN	19 Feb 13	3.7 Jan 28	1840 Jan 25 1969
LOWEST DAILY MEAN	0.06 Aug 19	0.05 Jul 10	0.00 May 1 1919
ANNUAL SEVEN-DAY MINIMUM	0.09 Aug 14	0.06 Jul 8	0.00 May 1 1919
MAXIMUM PEAK FLOW		9.7 Nov 25	5340 Mar 2 1938
MAXIMUM PEAK STAGE		2.98 Nov 25	7.41 Nov 29 1970
ANNUAL RUNOFF (AC-FT)	1670	589	5000
10 PERCENT EXCEEDS	6.5	1.7	14
50 PERCENT EXCEEDS	1.4	0.60	0.20
90 PERCENT EXCEEDS	0.21	0.07	0.00

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 mi².

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 sea level, 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 ft³/s, Feb. 25, 1969, gage height, 9.39 ft, from rating curve extended above 580 ft³/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 ft³/s, Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 110 ft³/s, or maximum:

Date	Time	Creek only		Combined creek and canal
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)
Nov. 25	0100	—	—	11
Jan. 28	0700	8.7	3.51	—

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.13	1.2	1.8	1.9	1.6	2.1	2.0	0.44	0.10	0.09	0.06
2	0.05	0.14	1.1	1.9	1.8	1.6	2.1	2.0	0.47	0.09	0.10	0.05
3	0.07	0.12	1.4	1.9	1.8	1.6	2.2	1.8	0.55	0.09	0.09	0.06
4	0.08	0.11	1.3	1.9	1.8	1.6	2.1	1.7	0.56	0.11	0.08	0.07
5	0.10	0.10	1.3	1.9	1.8	1.6	2.1	1.6	0.39	0.12	0.08	0.12
6	0.11	0.11	1.2	1.9	1.8	1.6	2.3	1.5	0.28	0.12	0.07	0.15
7	0.11	0.13	1.2	1.8	1.8	1.9	2.4	1.7	0.25	0.11	0.07	0.15
8	0.12	0.12	1.2	1.9	1.8	1.9	2.3	1.8	0.25	0.10	0.06	0.12
9	0.13	0.12	1.2	1.9	1.7	1.8	2.3	1.6	0.32	0.09	0.06	0.11
10	0.11	0.14	1.3	1.8	1.6	1.7	2.1	1.4	0.33	0.09	0.05	0.11
11	0.10	0.16	1.3	1.8	1.6	1.7	2.0	1.4	0.33	0.10	0.05	0.11
12	0.07	0.20	1.3	1.8	1.6	1.6	2.0	1.2	0.29	0.10	0.04	0.11
13	0.06	0.29	1.3	1.8	1.7	1.8	1.9	1.0	0.24	0.09	0.04	0.10
14	0.05	0.21	1.5	1.8	1.7	1.8	1.8	0.90	0.20	0.09	0.05	0.09
15	0.05	0.19	1.6	1.8	1.7	1.8	1.9	0.95	0.17	0.08	0.06	0.09
16	0.05	0.19	1.4	1.9	1.7	1.8	2.1	1.1	0.16	0.08	0.08	0.10
17	0.07	0.22	1.5	1.9	2.0	2.0	2.0	1.1	0.14	0.08	0.09	0.11
18	0.07	0.22	1.5	1.8	2.2	3.2	2.0	0.99	0.13	0.09	0.10	0.11
19	0.08	0.24	1.4	1.8	2.0	2.4	1.9	1.0	0.13	0.09	0.11	0.10
20	0.10	0.24	1.5	1.8	1.9	2.3	1.9	1.2	0.14	0.09	0.12	0.08
21	0.12	0.24	2.1	1.8	1.8	2.3	1.8	1.5	0.15	0.10	0.11	0.07
22	0.12	0.29	1.9	1.8	1.8	2.2	1.7	1.3	0.15	0.11	0.11	0.07
23	0.12	0.30	1.8	1.8	1.7	2.2	1.7	1.1	0.13	0.10	0.09	0.06
24	0.13	0.63	1.7	1.7	1.7	3.2	1.8	0.95	0.13	0.08	0.08	0.06
25	0.10	0.72	1.6	1.7	1.6	2.8	2.0	0.90	0.12	0.07	0.07	0.08
26	0.11	0.27	1.6	1.7	1.6	2.4	2.1	0.88	0.11	0.07	0.06	0.10
27	0.11	0.57	1.7	1.7	1.6	2.3	2.8	0.86	0.11	0.08	0.07	0.13
28	0.14	0.98	1.6	4.9	1.6	2.3	2.2	0.80	0.11	0.08	0.09	0.18
29	0.13	1.0	1.7	2.7	---	2.5	2.0	0.67	0.11	0.08	0.09	0.20
30	0.11	1.2	1.8	2.2	---	2.4	1.9	0.52	0.11	0.08	0.08	0.20
31	0.12	---	1.8	2.0	---	2.3	---	0.44	---	0.08	0.08	---
TOTAL	2.94	9.58	46.0	60.9	49.3	64.2	61.5	37.86	7.00	2.84	2.42	3.15
MEAN	0.095	0.319	1.484	1.965	1.761	2.071	2.050	1.221	0.233	0.092	0.078	0.105
MAX	0.14	1.2	2.1	4.9	2.2	3.2	2.8	2.0	0.56	0.12	0.12	0.20
MIN	0.05	0.10	1.1	1.7	1.6	1.6	1.7	0.44	0.11	0.07	0.04	0.05
AC-FT	5.8	19	91	121	98	127	122	75	14	5.6	4.8	6.2

SANTA ANA RIVER BASIN

11055800 CITY CREEK NEAR HIGHLAND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.076	3.330	8.420	16.43	30.32	28.85	17.67	7.435	2.848	1.089	0.600	0.626
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1920 - 2002
ANNUAL TOTAL	1142.38	347.69	
ANNUAL MEAN	3.130	0.953	9.779
HIGHEST ANNUAL MEAN			75.3 1969
LOWEST ANNUAL MEAN			0.46 1961
HIGHEST DAILY MEAN	39 Feb 13	4.9 Jan 28	3360 Feb 25 1969
LOWEST DAILY MEAN	0.03 Sep 28	0.04 Aug 12	0.00 Jul 18 1920
ANNUAL SEVEN-DAY MINIMUM	0.04 Sep 24	0.05 Aug 8	0.00 Jul 18 1920
MAXIMUM PEAK FLOW		8.7 Jan 28	7000 Feb 25 1969
MAXIMUM PEAK STAGE		3.51 Jan 28	9.39 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	2270	690	7080
10 PERCENT EXCEEDS	9.8	2.0	19
50 PERCENT EXCEEDS	1.0	0.72	1.4
90 PERCENT EXCEEDS	0.07	0.08	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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.58	1.2	1.8	1.9	1.6	2.1	2.0	0.44	0.10	0.09	0.06
2	0.12	0.56	1.1	1.9	1.8	1.6	2.1	2.0	0.47	0.09	0.10	0.05
3	0.14	0.39	1.4	1.9	1.8	1.6	2.2	1.8	0.55	0.09	0.09	0.06
4	0.15	0.33	1.3	1.9	1.8	1.6	2.1	1.7	0.56	0.11	0.08	0.07
5	0.20	0.31	1.3	1.9	1.8	1.6	2.1	1.6	0.39	0.12	0.08	0.12
6	0.26	0.28	1.2	1.9	1.8	1.6	2.3	1.5	0.28	0.12	0.07	0.15
7	0.31	0.27	1.2	1.8	1.8	1.9	2.4	1.7	0.25	0.11	0.07	0.15
8	0.40	0.21	1.2	1.9	1.8	1.9	2.3	1.8	0.25	0.10	0.06	0.12
9	0.47	0.19	1.2	1.9	1.7	1.8	2.3	1.6	0.32	0.09	0.06	0.11
10	0.36	0.27	1.3	1.8	1.6	1.7	2.1	1.4	0.33	0.09	0.05	0.11
11	0.23	0.30	1.3	1.8	1.6	1.7	2.0	1.4	0.33	0.10	0.05	0.11
12	0.17	0.65	1.3	1.8	1.6	1.6	2.0	1.2	0.29	0.10	0.04	0.11
13	0.13	1.6	1.3	1.8	1.7	1.8	1.9	1.0	0.24	0.09	0.04	0.10
14	0.18	0.70	1.5	1.8	1.7	1.8	1.8	0.90	0.20	0.09	0.05	0.09
15	0.15	0.57	1.6	1.8	1.7	1.8	1.9	0.95	0.17	0.08	0.06	0.09
16	0.12	0.58	1.4	1.9	1.7	1.8	2.1	1.1	0.16	0.08	0.08	0.10
17	0.14	0.68	1.5	1.9	2.0	2.0	2.0	1.1	0.14	0.08	0.09	0.11
18	0.15	0.76	1.5	1.8	2.2	3.2	2.0	0.99	0.13	0.09	0.10	0.11
19	0.17	0.80	1.4	1.8	2.0	2.4	1.9	1.0	0.13	0.09	0.11	0.10
20	0.22	0.88	1.5	1.8	1.9	2.3	1.9	1.2	0.14	0.09	0.12	0.08
21	0.30	0.97	2.1	1.8	1.8	2.3	1.8	1.5	0.15	0.10	0.11	0.07
22	0.40	1.1	1.9	1.8	1.8	2.2	1.7	1.3	0.15	0.11	0.11	0.07
23	0.32	1.4	1.8	1.8	1.7	2.2	1.7	1.1	0.13	0.10	0.09	0.06
24	0.24	3.5	1.7	1.7	1.7	3.2	1.8	0.95	0.13	0.08	0.08	0.06
25	0.18	7.9	1.6	1.7	1.6	2.8	2.0	0.90	0.12	0.07	0.07	0.08
26	0.21	4.9	1.6	1.7	1.6	2.4	2.1	0.88	0.11	0.07	0.06	0.10
27	0.23	3.0	1.7	1.7	1.6	2.3	2.8	0.86	0.11	0.08	0.07	0.13
28	0.35	0.98	1.6	4.9	1.6	2.3	2.2	0.80	0.11	0.08	0.09	0.18
29	0.39	1.0	1.7	2.7	---	2.5	2.0	0.67	0.11	0.08	0.09	0.20
30	0.41	1.2	1.8	2.2	---	2.4	1.9	0.52	0.11	0.08	0.08	0.20
31	0.48	---	1.8	2.0	---	2.3	---	0.44	---	0.08	0.08	---
TOTAL	7.68	36.86	46.0	60.9	49.3	64.2	61.5	37.86	7.00	2.84	2.42	3.15
MEAN	0.248	1.229	1.484	1.965	1.761	2.071	2.050	1.221	0.233	0.092	0.078	0.105
MAX	0.48	7.9	2.1	4.9	2.2	3.2	2.8	2.0	0.56	0.12	0.12	0.20
MIN	0.10	0.19	1.1	1.7	1.6	1.6	1.7	0.44	0.11	0.07	0.04	0.05
AC-FT	15	73	91	121	98	127	122	75	14	5.6	4.8	6.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002, BY WATER YEAR (WY)

MEAN	2.163	4.605	8.831	17.33	31.37	30.03	19.20	9.964	5.344	2.579	1.605	1.547
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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1924 - 2002

ANNUAL TOTAL	1201.51	379.71	
ANNUAL MEAN	3.292	1.040	11.10
HIGHEST ANNUAL MEAN			77.8 1969
LOWEST ANNUAL MEAN			1.04 2002
HIGHEST DAILY MEAN	39 Feb 13	7.9 Nov 25	3360 Feb 25 1969
LOWEST DAILY MEAN	0.08 Sep 30	0.04 Aug 12	0.00 Nov 8 1924
ANNUAL SEVEN-DAY MINIMUM	0.10 Aug 14	0.05 Aug 8	0.00 Aug 12 1951
MAXIMUM PEAK FLOW		11 Nov 25	7000 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	2380	753	8040
10 PERCENT EXCEEDS	9.8	2.1	19
50 PERCENT EXCEEDS	1.3	0.97	3.7
90 PERCENT EXCEEDS	0.14	0.08	0.40

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 mi².

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 sea level, 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 ft³/s, Feb. 25, 1969, gage height, 8.2 ft, from floodmark, from rating curve extended above 2,100 ft³/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 ft³/s, or maximum, from rating curve extended above 79 ft³/s, on basis of step-backwater analysis:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	2015	153	1.57	Nov. 24	1630	324	1.94

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.54	0.17	0.27	0.40	0.27	0.22	0.54	e0.18	0.03	0.06	0.04	0.03
2	0.74	0.16	0.27	0.45	0.27	0.38	0.53	e0.15	0.00	0.03	0.04	0.03
3	0.60	0.15	0.27	0.93	0.27	1.0	0.66	e0.12	0.00	0.04	0.03	0.03
4	0.65	0.10	0.21	0.75	0.26	0.76	0.54	e0.10	0.01	0.03	0.05	0.04
5	0.41	0.08	0.19	0.30	0.26	0.75	0.54	e0.08	0.07	0.02	0.05	0.06
6	0.33	0.08	0.17	0.38	0.22	0.51	1.9	e0.06	0.03	0.06	0.05	0.06
7	0.25	0.06	0.14	0.37	0.18	0.83	0.58	e0.04	0.00	0.06	0.03	0.06
8	0.22	0.03	0.11	0.19	0.17	2.2	0.54	0.00	0.00	0.05	0.01	0.05
9	0.24	0.04	0.04	0.22	0.06	1.2	0.34	0.00	0.02	0.04	0.02	0.04
10	0.24	0.05	0.02	0.01	0.03	0.53	0.13	0.00	0.03	0.02	0.03	0.04
11	0.24	0.07	0.19	0.04	0.07	0.40	0.26	0.00	0.03	0.03	0.03	0.04
12	0.27	7.5	0.68	0.08	0.40	0.40	1.2	0.05	0.04	0.05	0.02	0.05
13	0.13	1.9	1.0	0.18	0.57	0.45	0.89	0.03	0.04	0.04	0.04	0.13
14	0.08	0.75	6.3	0.18	0.91	0.40	0.31	0.00	0.09	0.06	0.06	0.08
15	0.19	0.80	1.2	0.31	0.95	0.40	0.52	0.00	0.06	0.04	0.05	0.06
16	0.24	0.60	0.50	0.40	0.95	0.40	0.68	0.00	0.03	0.02	0.05	0.06
17	0.18	0.47	0.50	0.39	1.1	8.0	0.54	0.03	0.04	0.12	0.05	0.06
18	0.18	0.37	0.52	0.29	1.2	0.55	0.52	0.01	0.06	0.04	0.05	0.08
19	0.12	0.19	0.64	0.35	1.2	0.20	0.09	0.01	0.04	0.02	0.05	0.09
20	0.07	0.22	0.68	0.35	1.3	0.25	0.18	0.04	0.04	0.04	0.16	0.08
21	0.08	0.39	2.7	0.39	1.4	0.29	0.66	0.05	0.11	0.11	0.59	0.05
22	0.08	0.74	0.65	0.40	0.89	0.49	0.45	0.01	0.16	0.09	0.57	0.04
23	0.08	0.75	0.62	0.40	0.15	0.55	0.17	0.00	0.13	0.06	0.45	0.02
24	0.09	30	0.61	0.43	0.22	0.74	e3.0	0.00	0.05	0.00	0.14	0.02
25	0.10	3.9	0.75	0.49	0.30	0.71	e1.0	0.00	0.05	0.01	0.14	0.03
26	0.11	0.28	0.58	0.54	0.33	0.62	e0.80	0.00	0.03	0.03	0.11	0.04
27	0.11	0.22	0.43	0.54	0.39	0.58	e0.50	0.02	0.07	0.06	0.12	0.08
28	0.11	0.26	0.35	5.1	0.25	0.54	e0.30	0.00	0.05	0.05	0.12	0.06
29	0.11	0.27	0.32	0.33	---	0.54	e0.25	0.00	0.01	0.03	0.11	0.06
30	0.12	0.27	0.40	0.28	---	0.54	e0.20	0.00	0.02	0.00	0.06	0.06
31	0.17	---	0.40	0.21	---	0.54	---	0.05	---	0.02	0.01	---
TOTAL	7.08	50.87	21.71	15.68	14.57	25.97	18.82	1.03	1.34	1.33	3.33	1.63
MEAN	0.228	1.696	0.700	0.506	0.520	0.838	0.627	0.033	0.045	0.043	0.107	0.054
MAX	0.74	30	6.3	5.1	1.4	8.0	3.0	0.18	0.16	0.12	0.59	0.13
MIN	0.07	0.03	0.02	0.01	0.03	0.20	0.09	0.00	0.00	0.00	0.01	0.02
AC-FT	14	101	43	31	29	52	37	2.0	2.7	2.6	6.6	3.2

e Estimated.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.845	1.476	1.946	9.052	11.60	6.687	1.546	0.829	0.744	0.631	0.590	0.730
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL TOTAL	653.00		163.36			
ANNUAL MEAN	1.789		0.448		3.035	
HIGHEST ANNUAL MEAN					21.7 1969	
LOWEST ANNUAL MEAN					0.45 2002	
HIGHEST DAILY MEAN	97	Jan 11	30	Nov 24	3500	Feb 25 1969
LOWEST DAILY MEAN	0.00	Feb 9	0.00	May 08	0.00	Feb 4 1968
ANNUAL SEVEN-DAY MINIMUM	0.04	Apr 25	0.00	May 23	0.00	Apr 15 1969
MAXIMUM PEAK FLOW			324	Nov 24	15000	Feb 25 1969
MAXIMUM PEAK STAGE			1.94	Nov 24	8.20	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	1300		324		2200	
10 PERCENT EXCEEDS	2.4		0.75		1.9	
50 PERCENT EXCEEDS	0.24		0.15		0.57	
90 PERCENT EXCEEDS	0.04		0.02		0.00	

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA

LOCATION.—Lat 34°10'45", long 117°15'53", in NE 1/4 NE 1/4 sec.14, T.1 N., R.4 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, 1,000 ft upstream from Del Rosa Water Co.'s Diversion, 0.5 mi south of Arrowhead Springs, and 1.0 mi downstream from Strawberry Creek.

DRAINAGE AREA.—8.80 mi².

PERIOD OF RECORD.—December 1919 to current year. Prior to October 1952, published as "Strawberry Creek near Arrowhead Springs."

REVISED RECORDS.—WSP 1635: 1924(M), 1927, 1928(M), 1929, 1932(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 1,590 ft above sea level, from topographic map.

REMARKS.—Records poor. No regulation upstream from station. One small diversion dam for domestic use upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,710 ft³/s, Jan. 29, 1980, gage height, 8.35 ft, on basis of slope-area measurement of peak flow; no flow at times in 1929, 1931–35, and a portion of May 31, 2002 (during fire suppression activities).

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 40 ft³/s, or maximum, from rating curve extended above 120 ft³/s, on basis of slope-area measurement at gage height 8.35 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1945	14	2.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.48	0.65	1.2	1.3	1.4	0.90	1.2	0.95	0.58	0.58	0.58	0.58
2	0.48	0.63	1.1	1.3	1.3	0.87	0.99	0.85	0.58	0.58	0.58	0.58
3	0.48	0.62	1.8	1.3	1.3	0.93	0.94	0.81	0.58	0.58	0.58	0.58
4	0.48	0.68	1.4	1.1	1.3	0.84	1.0	0.86	0.58	0.57	0.58	0.58
5	0.51	0.64	1.3	0.85	1.2	0.84	0.99	0.90	0.58	0.58	0.58	0.58
6	0.51	0.63	1.2	0.93	1.0	0.83	1.2	0.77	0.58	0.58	0.58	0.58
7	0.51	0.63	1.1	1.0	1.1	1.6	1.3	0.90	0.58	0.56	0.58	0.58
8	0.48	0.63	1.1	1.1	1.00	1.3	1.2	0.80	0.58	0.58	0.58	0.58
9	0.50	0.63	1.2	1.1	0.89	1.2	1.1	0.83	0.52	0.58	0.58	0.58
10	0.52	0.65	1.2	1.1	1.3	1.2	1.0	0.85	0.48	0.58	0.58	0.58
11	0.52	0.74	1.1	0.93	1.2	1.1	1.0	0.80	0.48	0.58	0.58	0.58
12	0.54	0.69	1.2	1.0	0.86	0.98	0.99	0.68	0.49	0.58	0.58	0.58
13	0.55	0.80	1.1	1.0	1.0	1.00	0.93	0.49	0.48	0.58	0.58	0.58
14	0.55	0.76	1.1	0.98	0.93	0.86	0.90	0.48	0.48	0.58	0.58	0.58
15	0.55	0.76	1.4	1.1	1.2	0.88	1.1	0.61	0.53	0.58	0.58	0.58
16	0.55	0.69	1.4	1.1	1.0	0.89	1.0	0.76	0.58	0.58	0.58	0.58
17	0.56	0.67	1.4	1.3	2.1	1.3	1.0	0.62	0.58	0.58	0.58	0.58
18	0.57	0.69	1.3	1.2	1.7	2.4	1.1	0.58	0.58	0.58	0.58	0.58
19	0.57	0.68	1.3	1.2	1.4	1.5	1.0	0.74	0.58	0.58	0.58	0.58
20	0.58	0.67	1.3	1.2	1.4	1.5	1.1	0.73	0.58	0.58	0.58	0.57
21	0.61	0.62	2.1	1.2	1.3	1.2	0.97	0.72	0.58	0.58	0.58	0.54
22	0.60	0.68	1.8	1.2	1.2	0.99	0.88	0.59	0.58	0.58	0.58	0.54
23	0.58	0.67	1.6	0.96	1.0	1.1	0.77	0.55	0.51	0.58	0.57	0.57
24	0.60	3.8	1.4	0.96	1.1	1.5	0.94	0.45	0.52	0.58	0.58	0.58
25	0.58	2.3	1.3	0.98	0.97	1.2	1.2	0.50	0.58	0.58	0.58	0.58
26	0.58	1.3	1.3	1.1	0.98	1.1	1.2	0.54	0.58	0.58	0.58	0.55
27	0.58	1.1	1.1	1.2	0.90	1.0	1.2	0.46	0.58	0.58	0.58	0.52
28	0.63	1.2	1.1	4.7	0.96	1.2	0.92	0.40	0.58	0.58	0.58	0.48
29	0.61	1.2	1.2	1.8	---	1.3	0.93	0.35	0.58	0.58	0.58	0.49
30	0.59	1.2	1.3	1.5	---	1.3	1.1	0.25	0.58	0.58	0.58	0.50
31	0.64	---	1.3	1.4	---	1.2	---	0.43	---	0.58	0.58	---
TOTAL	17.09	27.61	40.7	39.09	32.99	36.01	31.15	20.25	16.67	17.95	17.97	16.94
MEAN	0.551	0.920	1.313	1.261	1.178	1.162	1.038	0.653	0.556	0.579	0.580	0.565
MAX	0.64	3.8	2.1	4.7	2.1	2.4	1.3	0.95	0.58	0.58	0.58	0.58
MIN	0.48	0.62	1.1	0.85	0.86	0.83	0.77	0.25	0.48	0.56	0.57	0.48
AC-FT	34	55	81	78	65	71	62	40	33	36	36	34

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.494	2.488	4.747	7.732	12.19	13.30	8.054	4.894	2.879	1.662	1.257	1.149
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	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1921 - 2002
ANNUAL TOTAL	673.28	314.42	
ANNUAL MEAN	1.845	0.861	5.118
HIGHEST ANNUAL MEAN			23.1 1993
LOWEST ANNUAL MEAN			0.85 1961
HIGHEST DAILY MEAN	18 Feb 12	4.7 Jan 28	795 Feb 25 1969
LOWEST DAILY MEAN	0.44 Sep 14	0.25 May 30	0.10 Aug 23 1929
ANNUAL SEVEN-DAY MINIMUM	0.45 Sep 10	0.42 May 25	0.11 Jul 11 1964
MAXIMUM PEAK FLOW		14 Nov 24	3710 Jan 29 1980
MAXIMUM PEAK STAGE		2.11 Nov 24	8.35 Jan 29 1980
ANNUAL RUNOFF (AC-FT)	1340	624	3710
10 PERCENT EXCEEDS	4.0	1.3	9.2
50 PERCENT EXCEEDS	1.1	0.68	1.9
90 PERCENT EXCEEDS	0.48	0.54	0.51

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 mi².

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 sea level, 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 ft³/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 ft³/s, from rating curve extended above 5,930 ft³/s, on basis of critical-depth computations, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1800	2,670	5.21	Mar. 17	2345	1,140	4.62

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	2.5	0.70	3.4	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.01	0.84	0.00	3.5	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.32	0.92	0.69	4.8	0.04	0.10	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.01	0.01	2.6	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.16	0.00	4.5	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	2.9	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	2.2	0.00	3.9	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.35	0.00	5.2	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.18	0.00	0.22	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	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	11	0.64	0.00	0.00	1.6	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	5.0	0.10	0.00	0.00	5.3	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.92	17	0.40	0.00	5.8	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	1.1	9.2	0.01	0.90	3.5	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.73	6.2	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.66	4.4	0.00	2.9	47	0.00	0.00	0.00	0.00	0.00	0.00
18	0.51	0.47	3.9	0.00	0.36	54	0.00	0.00	0.00	0.00	0.00	0.00
19	0.94	0.53	3.6	0.00	2.0	1.2	0.00	0.00	0.00	0.00	0.00	0.00
20	2.1	1.1	4.8	0.00	5.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.64	2.1	26	0.00	5.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.50	0.83	3.9	0.94	2.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.31	0.65	2.2	2.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.14	251	1.2	2.2	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00
25	0.24	15	0.29	1.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.12	1.3	0.09	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	1.2	0.87	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.02	0.00	25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.47	0.81	0.22	5.5	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	1.5	1.3	1.6	2.9	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	1.8	---	2.3	2.7	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	9.60	300.15	90.72	68.17	23.05	127.88	1.21	0.00	0.00	0.00	0.00	0.00
MEAN	0.310	10.01	2.926	2.199	0.823	4.125	0.040	0.000	0.000	0.000	0.000	0.000
MAX	2.1	251	26	25	5.4	54	1.1	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	19	595	180	135	46	254	2.4	0.00	0.00	0.00	0.00	0.00

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.40	20.64	19.71	64.41	165.3	37.84	36.59	63.14	18.10	5.386	10.71	13.00
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	0.31	0.67	1.16	2.20	0.82	0.10	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2001	2001	2002	2002	1997	1997	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1996 - 2002

ANNUAL TOTAL	3757.70	620.78	
ANNUAL MEAN	10.30	1.701	38.10
HIGHEST ANNUAL MEAN			152 1998
LOWEST ANNUAL MEAN			1.70 2002
HIGHEST DAILY MEAN	756 Jan 11	251 Nov 24	5050 Feb 24 1998
LOWEST DAILY MEAN	0.00 Jan 13	0.00 Oct 1	0.00 Mar 22 1996
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 13	0.00 Oct 4	0.00 Mar 22 1996
MAXIMUM PEAK FLOW		2670 Nov 24	21100 Feb 23 1998
MAXIMUM PEAK STAGE		5.21 Nov 24	7.70 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	7450	1230	27600
10 PERCENT EXCEEDS	13	2.2	53
50 PERCENT EXCEEDS	0.00	0.00	1.5
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 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN (70333)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, CHARGE, SUS- PENDE (T/DAY) (80155)
NOV								
29...	1245	.37	9.5	96	--	--	18	.02
JAN								
29...	1125	5.9	8.5	74	--	--	10	.16
MAR								
07...	1115	10	15.0	94	98	100	104	2.8
18...	1340	12	17.5	99	100	--	35	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 mi².

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 sea level, 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 ft³/s, Mar. 4, 1978, gage height, 4.88 ft, from rating curve extended above 420 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.24	0.26	0.32	0.36	0.25	0.52	0.13	0.46	0.74	0.03	1.8	0.20
2	0.30	0.22	0.33	0.33	0.32	0.50	0.18	0.41	0.61	0.03	1.7	0.09
3	0.35	0.19	1.0	0.89	0.34	0.50	0.17	0.23	0.54	0.02	1.2	0.06
4	0.20	0.45	0.42	0.83	0.34	0.46	0.16	0.27	0.43	0.01	1.3	0.16
5	0.25	0.24	0.43	0.74	0.26	0.48	0.22	0.41	0.44	0.01	1.3	1.8
6	0.19	0.30	0.42	0.65	0.28	0.51	12	0.45	0.54	0.01	1.8	3.5
7	0.18	0.23	0.49	0.45	0.26	4.7	0.20	0.27	0.62	0.04	1.4	3.1
8	0.16	0.18	0.32	0.49	0.31	1.5	0.16	0.24	0.66	0.03	0.84	3.2
9	0.25	0.22	0.33	0.46	0.31	1.0	0.16	0.24	0.72	0.04	2.2	2.8
10	0.25	0.21	0.35	0.46	0.34	1.0	0.18	0.23	0.74	0.03	2.1	2.2
11	0.26	0.25	0.33	0.43	0.39	1.1	0.22	0.24	0.93	0.04	2.1	2.3
12	0.27	17	0.36	0.57	0.43	1.0	0.27	0.20	0.96	0.04	2.3	1.1
13	0.27	1.2	0.42	0.58	0.43	0.94	0.28	0.21	0.83	0.04	2.1	0.11
14	0.28	0.40	10	0.59	0.48	0.83	0.31	0.28	0.63	0.05	1.4	0.10
15	0.27	0.43	0.41	0.62	0.43	0.66	1.2	0.22	0.53	0.14	1.2	0.15
16	0.29	0.43	0.32	2.0	0.48	0.77	0.42	0.27	0.56	0.04	2.3	0.11
17	0.30	0.43	0.33	0.66	9.8	45	0.24	0.23	0.68	0.08	2.2	0.14
18	0.33	0.43	0.45	0.68	0.58	9.9	0.24	0.23	0.72	0.06	2.2	0.12
19	0.38	0.43	0.32	0.90	0.26	0.55	0.23	0.30	0.66	0.04	2.2	0.13
20	0.36	0.51	0.33	0.96	0.24	0.34	0.24	0.33	0.67	0.02	1.2	0.12
21	0.33	0.46	23	0.58	0.29	0.33	0.25	0.32	0.69	0.02	0.10	0.11
22	0.32	0.56	0.64	0.58	0.32	0.29	0.25	0.30	0.31	0.04	0.85	0.09
23	0.29	0.64	0.48	0.52	0.34	0.67	0.27	0.36	0.44	0.03	2.1	0.11
24	0.30	92	0.55	0.57	0.54	0.65	8.1	0.32	0.58	0.03	2.2	0.10
25	0.32	1.2	0.58	0.58	0.47	0.18	0.46	0.36	0.17	0.04	2.1	0.12
26	0.39	0.88	0.56	0.58	0.45	0.27	0.41	0.38	0.66	0.05	2.1	0.17
27	0.40	1.0	0.41	0.58	0.72	0.23	0.24	0.36	0.06	0.03	2.2	0.20
28	0.42	0.72	0.40	21	0.53	1.4	0.23	0.61	0.08	0.03	2.2	0.25
29	0.35	0.33	0.49	1.5	---	0.33	0.24	0.40	0.05	0.04	2.2	0.29
30	1.4	0.32	0.43	0.27	---	0.28	0.30	0.43	0.02	0.04	1.1	0.42
31	0.37	---	0.44	0.30	---	0.15	---	0.45	---	0.67	0.13	---
TOTAL	10.27	122.12	45.66	40.71	20.19	77.04	27.96	10.01	16.27	1.82	52.12	23.35
MEAN	0.331	4.071	1.473	1.313	0.721	2.485	0.932	0.323	0.542	0.059	1.681	0.778
MAX	1.4	92	23	21	9.8	45	12	0.61	0.96	0.67	2.3	3.5
MIN	0.16	0.18	0.32	0.27	0.24	0.15	0.13	0.20	0.02	0.01	0.10	0.06
AC-FT	20	242	91	81	40	153	55	20	32	3.6	103	46

11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	CHLO- RIDE, DIS- SOLVED MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED MG/L AS F) (00950)	SILICA, DIS- SOLVED MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT									
16...	359	--	--	36.0	--	--	181	--	--
DEC									
13...	389	--	--	37.4	--	--	245	--	--
JAN									
17...	371	--	--	39.8	--	--	238	--	--
FEB									
14...	365	--	--	35.3	--	--	197	--	--
MAR									
14...	244	--	--	41.3	--	--	123	--	--
APR									
18...	337	--	--	32.0	--	--	191	--	--
JUN									
13...	150	11	--	40.0	2.0	27.7	73.5	.50	369
AUG									
15...	e105	e63	e2	22.7	--	--	56.2	--	--
Date	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT									
16...	--	e.02	--	.55	.10	<.008	--	<.02	.033
DEC									
13...	--	e.02	--	.16	.15	<.008	--	<.02	.010
JAN									
17...	--	e.03	--	.18	.19	e.004	--	.02	.011
FEB									
14...	--	<.04	--	.24	1.01	.026	--	<.02	.015
MAR									
14...	--	e.02	--	.36	1.00	.019	--	<.02	.047
APR									
18...	--	<.04	--	.27	.08	<.008	--	<.02	.019
JUN									
13...	346	<.04	.39	1.2	.10	.009	.023	<.02	.089
AUG									
15...	--	<.04	--	2.6	<.05	<.008	--	.23	.66
Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
OCT									
16...	--	--	<.002	<.004	<.002	<.005	<.007	<.010	<.002
DEC									
13...	--	--	<.002	<.004	<.002	<.005	<.007	<.010	<.002
JAN									
17...	--	--	<.006	<.006	<.004	<.005	<.011	<.010	<.002
FEB									
14...	--	--	<.006	<.006	<.004	<.005	<.007	<.010	<.002
MAR									
14...	--	--	<.006	<.006	<.004	<.005	<.007	<.010	<.002
APR									
18...	--	--	<.006	<.006	<.004	<.005	<.007	<.010	<.002
JUN									
13...	19	e3.1	<.006	<.006	<.004	<.005	<.007	<.010	<.002
AUG									
15...	--	--	<.006	<.006	<.004	<.005	<.007	<.010	<.002

e Estimated.

< 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 2001 TO SEPTEMBER 2002

Date	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
	OCT 16...	<.041	<.020	<.005	<.018	e.002	<.006	.007	<.005
DEC 13...	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02
JAN 17...	<.041	<.020	<.005	<.018	e.001	<.006	e.004	<.005	<.02
FEB 14...	<.041	<.020	<.005	<.018	<.003	<.006	.011	<.005	<.02
MAR 14...	e.013	<.020	<.005	<.018	<.003	<.006	.015	<.005	<.02
APR 18...	<.041	<.020	<.005	<.018	.003	<.006	.013	<.005	<.02
JUN 13...	<.041	<.020	<.005	<.018	<.003	<.006	<.006	<.005	<.02
AUG 15...	<.041	<.020	<.005	<.018	e.002	e.003	.018	<.005	<.02

Date	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL-AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL-PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
	OCT 16...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
DEC 13...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
JAN 17...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
FEB 14...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
MAR 14...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
APR 18...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
JUN 13...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
AUG 15...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006

Date	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
	OCT 16...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010
DEC 13...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006
JAN 17...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
FEB 14...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
MAR 14...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
APR 18...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
JUN 13...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
AUG 15...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006

< 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 2001 TO SEPTEMBER 2002

Date	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, FLTRD DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, FLTRD DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, FLTRD DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)
OCT 16...	<.011	M	<.004	<.010	<.011	<.02	.025	<.02	<.034
DEC 13...	<.011	M	<.004	<.010	<.011	<.02	<.011	<.02	<.034
JAN 17...	<.011	<.01	<.004	<.010	<.011	<.02	.011	<.02	<.034
FEB 14...	<.011	<.01	<.004	<.010	<.011	<.02	.011	<.02	<.034
MAR 14...	<.011	<.01	<.004	<.010	<.011	<.02	.067	<.02	<.034
APR 18...	<.011	e.01	<.004	<.010	<.011	<.02	.008	<.02	<.034
JUN 13...	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034
AUG 15...	<.011	.02	<.004	<.010	<.011	<.02	<.005	<.02	<.034

Date	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
OCT 16...	<.02	<.005	<.002	<.009
DEC 13...	<.02	<.005	<.002	<.009
JAN 17...	<.02	<.005	<.002	<.009
FEB 14...	<.02	<.005	<.002	<.009
MAR 14...	<.02	<.005	<.002	<.009
APR 18...	<.02	<.005	<.002	<.009
JUN 13...	<.02	<.005	<.002	<.009
AUG 15...	<.02	<.005	<.002	<.009

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)
MAR								
14...*	0921	734	9.1	90	7.6	811	13.0	1.00
14...*	0922	734	9.7	94	7.8	706	12.0	2.00
14...*	0923	734	11.0	105	8.0	670	11.5	3.00
14...*	0924	734	11.2	107	8.1	720	11.5	4.00
14...*	0925	734	11.1	107	8.0	760	12.0	5.00
JUN								
13...*	0945	736	8.9	113	9.0	559	25.5	.50
13...*	0946	736	9.1	117	9.0	558	26.0	1.50
13...*	0947	736	9.1	117	8.9	548	26.0	2.50
13...*	0948	736	8.9	114	8.7	534	26.0	3.50
13...*	0949	736	8.6	108	8.6	530	25.0	4.50

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

M Presence of material verified, but not quantified.

e Estimated.

* Instantaneous discharge at the time of cross-sectional measurements: Mar. 14, 1.0 ft³/s; June 13, 1.3 ft³/s.

11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT						
16...SS	0900	.32	21.0	76	6.0	.01
DEC						
13...SS	0900	.43	11.5	52	2.0	<.01
JAN						
17...SS	0900	.43	12.5	65	3.0	<.01
FEB						
14...SS	0900	.58	15.0	59	2.0	<.01
MAR						
14...SS	0900	.77	11.5	37	15	.03
APR						
18...SS	0850	.23	16.5	70	3.0	<.01
JUN						
13...SS	0930	1.3	22.5	92	47	.16
AUG						
15...SS	0900	.16	20.5	77	8.0	<.01

SS Suspended-sediment data determined from sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocols.

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

11062000 LYTLE CREEK NEAR FONTANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.131	7.566	9.853	25.69	41.63	51.54	28.92	19.84	14.70	10.89	7.408	5.770
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1919 - 2002
ANNUAL TOTAL	1219.53	181.83	
ANNUAL MEAN	3.341	0.498	19.09
HIGHEST ANNUAL MEAN			177 1969
LOWEST ANNUAL MEAN			0.000 1919
HIGHEST DAILY MEAN	83 Feb 13	59 Jan 28	8950 Mar 2 1938
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		151 Jan 28	25200 Mar 2 1938
MAXIMUM PEAK STAGE		2.84 Jan 28	15.00 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	2420	361	13830
10 PERCENT EXCEEDS	13	0.17	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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	17	19	17	20	15	13	12	10	7.7	6.6	5.9
2	12	17	19	17	19	15	13	12	9.0	7.6	6.7	6.0
3	11	16	20	16	20	15	13	12	9.7	7.6	6.7	6.0
4	12	15	19	18	18	14	13	12	9.6	7.6	6.4	6.0
5	12	16	19	17	17	14	13	12	9.3	7.8	6.6	5.8
6	12	16	19	17	17	14	14	12	8.9	7.7	6.4	6.1
7	13	7.5	18	17	17	14	13	12	8.8	7.3	6.5	6.0
8	13	3.5	18	17	17	14	14	12	9.0	7.4	6.5	5.9
9	13	16	19	17	9.4	14	13	11	9.0	7.3	6.6	6.1
10	13	17	20	17	9.8	14	13	11	9.1	7.0	6.2	5.8
11	14	17	18	17	17	15	13	11	9.2	7.1	6.1	5.9
12	13	18	19	17	17	14	13	11	8.9	7.2	6.2	5.9
13	14	18	18	17	17	15	13	11	8.8	7.1	6.1	6.0
14	13	18	19	17	17	15	12	11	8.7	6.8	6.3	5.7
15	14	18	18	17	17	15	12	11	8.5	7.1	6.3	5.5
16	14	18	18	17	17	14	13	11	8.6	6.8	6.4	5.9
17	14	18	18	17	17	14	13	10	8.3	6.8	6.2	5.6
18	14	17	18	17	16	15	13	11	8.4	6.7	6.0	5.9
19	14	18	18	17	17	15	12	11	8.3	6.9	6.4	5.6
20	14	18	18	17	16	15	13	11	8.3	6.4	6.4	5.6
21	13	18	19	17	15	14	12	11	8.2	6.6	6.4	5.6
22	14	18	19	16	16	14	12	11	8.5	6.7	6.5	5.5
23	16	19	19	17	16	14	12	10	8.3	6.9	6.3	5.6
24	16	39	18	17	15	14	12	10	8.2	6.6	6.3	5.7
25	16	57	18	17	15	14	12	10	8.1	6.7	6.1	5.4
26	17	37	18	17	15	14	12	10	8.0	6.6	6.2	5.4
27	16	25	17	21	15	14	12	10	7.9	6.6	6.3	5.7
28	16	23	17	78	15	13	12	10	8.0	6.5	6.0	5.7
29	16	22	18	32	---	13	12	9.9	7.6	6.7	6.0	5.9
30	16	21	17	21	---	13	12	9.8	7.7	6.5	6.1	6.0
31	16	---	17	21	---	13	---	9.6	---	6.5	6.1	---
TOTAL	432	598.0	569	614	454.2	440	379	338.3	258.9	216.8	195.9	173.7
MEAN	13.94	19.93	18.35	19.81	16.22	14.19	12.63	10.91	8.630	6.994	6.319	5.790
MAX	17	57	20	78	20	15	14	12	10	7.8	6.7	6.1
MIN	11	3.5	17	16	9.4	13	12	9.6	7.6	6.4	6.0	5.4
AC-FT	857	1190	1130	1220	901	873	752	671	514	430	389	345

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2002, BY WATER YEAR (WY)

MEAN	26.31	28.30	30.67	55.37	67.50	77.60	55.95	46.48	38.78	32.79	29.71	27.26
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	7.54	8.05	7.65	11.0	11.7	12.1	10.8	10.9	8.63	6.99	6.32	5.79
(WY)	1962	1991	1951	1951	1899	1965	1899	1961	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1899 - 2002

ANNUAL TOTAL	7660.3	4669.8	
ANNUAL MEAN	20.99	12.79	43.21
HIGHEST ANNUAL MEAN			194
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	90	Feb 13	8960
LOWEST DAILY MEAN	3.5	Nov 8	2.6
ANNUAL SEVEN-DAY MINIMUM	9.3	Jan 31	5.5
MAXIMUM PEAK FLOW			168
ANNUAL RUNOFF (AC-FT)	15190	9260	31300
10 PERCENT EXCEEDS	39	18	78
50 PERCENT EXCEEDS	17	13	26
90 PERCENT EXCEEDS	11	6.1	13

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 mi².

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 sea level. 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 ft³/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 ft³/s, or maximum, from rating curve extended above 322 ft³/s, on basis of slope-conveyance measurement at gage height 9.07 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1530	3.1	1.32

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.38	0.38	0.20	0.28	0.28	0.28	0.20	0.28	0.19	0.28	0.14	0.17
2	0.32	0.38	0.20	0.28	0.28	0.28	0.20	0.28	0.20	0.27	0.13	0.14
3	0.39	0.38	0.20	0.28	0.28	0.28	0.23	0.27	0.20	0.28	0.14	0.14
4	0.44	0.38	0.20	0.28	0.28	0.28	0.22	0.26	e0.22	0.28	0.12	0.14
5	0.47	0.41	0.20	0.35	0.28	0.28	0.20	0.27	e0.23	0.28	0.10	0.14
6	0.47	0.38	0.20	0.38	0.28	0.28	0.26	0.28	e0.25	0.28	0.10	0.17
7	0.46	0.38	0.20	0.38	0.28	0.28	0.28	0.28	e0.25	0.25	0.10	0.17
8	0.45	0.38	0.20	0.34	0.36	0.30	0.28	0.28	e0.25	0.20	0.09	0.14
9	0.47	0.38	0.25	0.28	0.38	0.28	0.28	0.28	e0.24	0.20	0.07	0.14
10	0.42	0.42	0.28	0.28	0.38	0.28	0.28	0.28	e0.23	0.20	0.07	0.14
11	0.38	0.47	0.28	0.28	0.38	0.28	0.28	0.24	e0.23	0.20	0.10	0.14
12	0.41	0.50	0.28	0.30	0.38	0.28	0.28	0.21	e0.24	0.22	0.10	0.14
13	0.42	0.58	0.20	0.31	0.38	0.28	0.28	0.20	e0.25	0.27	0.13	0.14
14	0.38	0.46	0.29	0.36	0.38	0.28	0.26	0.20	e0.25	0.22	0.14	0.14
15	0.40	0.38	0.33	0.38	0.38	0.28	0.28	0.24	e0.23	0.22	0.14	0.14
16	0.40	0.38	0.28	0.38	0.38	0.28	0.28	0.28	e0.24	0.29	0.14	0.14
17	0.44	0.38	0.28	0.38	0.38	0.28	0.28	0.28	e0.24	0.28	0.14	0.14
18	0.45	0.38	0.31	0.38	0.28	0.28	0.28	e0.28	e0.25	0.34	0.14	0.11
19	0.43	0.38	0.30	0.38	0.28	0.28	0.28	e0.28	e0.26	0.28	0.14	0.10
20	0.44	0.38	0.36	0.38	0.28	0.24	0.28	e0.25	e0.28	0.28	0.14	0.10
21	0.38	0.38	0.42	0.38	0.28	0.20	0.28	e0.25	e0.27	0.28	0.14	0.10
22	0.38	0.38	0.38	0.38	0.23	0.20	0.24	e0.26	e0.26	0.24	0.12	0.10
23	0.38	0.38	0.38	0.38	0.26	0.28	0.24	e0.24	e0.29	e0.22	0.10	0.10
24	0.36	0.55	0.38	0.38	0.24	0.23	0.28	e0.23	e0.28	e0.20	0.12	0.10
25	0.35	0.28	0.38	0.38	0.20	0.20	0.28	e0.24	e0.27	e0.19	0.13	0.10
26	0.33	0.28	0.38	0.38	0.21	0.20	0.28	e0.24	e0.27	e0.19	0.14	0.10
27	0.36	0.28	0.38	0.60	0.28	0.20	0.28	e0.25	e0.27	e0.18	0.14	0.10
28	0.38	0.23	0.28	0.55	0.28	0.20	0.28	0.25	e0.27	e0.17	0.16	0.10
29	0.38	0.20	0.28	0.28	---	0.20	0.25	0.23	e0.26	e0.15	0.20	0.10
30	0.38	0.20	0.28	0.28	---	0.20	0.27	0.22	e0.26	e0.15	0.17	0.10
31	0.38	---	0.28	0.28	---	0.20	---	0.23	---	e0.14	0.17	---
TOTAL	12.48	11.32	8.86	10.93	8.56	7.89	7.89	7.86	7.43	7.23	3.96	3.78
MEAN	0.403	0.377	0.286	0.353	0.306	0.255	0.263	0.254	0.248	0.233	0.128	0.126
MAX	0.47	0.58	0.42	0.60	0.38	0.30	0.28	0.28	0.29	0.34	0.20	0.17
MIN	0.32	0.20	0.20	0.28	0.20	0.20	0.20	0.20	0.19	0.14	0.07	0.10
AC-FT	25	22	18	22	17	16	16	16	15	14	7.9	7.5

e Estimated.

SANTA ANA RIVER BASIN

11063500 LONE PINE CREEK NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.975	1.170	1.833	2.282	4.051	4.402	2.015	1.614	1.312	1.096	1.056	1.017
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1920 - 2002	
ANNUAL TOTAL	250.75		98.19			
ANNUAL MEAN	0.687		0.269		1.906	
HIGHEST ANNUAL MEAN					11.4 1938	
LOWEST ANNUAL MEAN					0.11 1964	
HIGHEST DAILY MEAN	30	Feb 13	0.60	Jan 27	1480	Mar 2 1938
LOWEST DAILY MEAN	0.20	Nov 29	0.07	Aug 9	0.00	Aug 6 1965
ANNUAL SEVEN-DAY MINIMUM	0.20	Nov 29	0.09	Aug 5	0.06	Aug 2 1965
MAXIMUM PEAK FLOW			3.1	Nov 24	6180	Mar 2 1938
MAXIMUM PEAK STAGE			1.32	Nov 24	10.70	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	497		195		1380	
10 PERCENT EXCEEDS	0.80		0.38		4.0	
50 PERCENT EXCEEDS	0.50		0.28		0.60	
90 PERCENT EXCEEDS	0.36		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 mi².

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 sea level, 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. 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 ft³/s, Feb. 8, 1993, gage height, 8.48 ft, from rating curve extended above 180 ft³/s, on basis of slope-area measurement at gage height 8.48 ft; minimum daily, 1.7 ft³/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft³/s, or maximum, from rating curve extended above 373 ft³/s, on basis of slope-area measurement at gage height 8.48 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	0000	30	4.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.0	3.2	3.3	3.9	3.0	3.2	3.1	2.6	2.9	3.1	3.2
2	2.9	3.0	3.2	3.3	4.0	3.1	3.2	3.1	2.7	2.9	3.1	3.1
3	3.0	3.0	3.4	3.3	4.0	3.3	3.2	3.1	2.8	2.9	3.1	3.1
4	3.0	3.0	3.2	3.3	3.8	3.3	3.2	3.0	2.6	3.0	3.0	3.1
5	3.1	2.9	3.3	3.3	3.8	3.3	3.3	2.9	2.5	3.0	2.9	3.1
6	3.2	2.9	3.2	3.3	3.7	3.4	3.4	2.9	2.4	3.0	3.0	3.1
7	3.2	2.9	3.2	3.3	3.6	3.6	3.3	3.0	2.4	3.0	2.9	3.1
8	3.2	2.9	3.1	3.3	3.6	3.6	3.3	3.0	2.5	2.9	2.9	3.0
9	3.2	2.9	3.3	3.3	3.6	3.5	3.2	2.9	2.7	2.9	2.9	3.0
10	3.1	3.0	3.4	3.3	3.6	3.5	3.2	2.9	2.5	2.9	2.9	2.9
11	3.1	3.2	3.3	3.3	3.6	3.4	3.1	2.9	2.6	3.0	2.9	3.0
12	3.1	3.3	3.3	3.3	3.5	3.4	3.1	2.8	2.5	3.0	2.9	2.9
13	3.0	3.3	3.3	3.3	3.5	3.5	3.0	2.7	2.5	3.0	2.9	2.9
14	3.0	3.1	3.5	3.3	3.3	3.5	2.9	2.7	2.5	2.9	2.9	2.9
15	2.9	3.1	3.5	3.3	3.4	3.5	3.1	2.8	2.4	3.0	2.9	2.9
16	2.9	3.1	3.5	3.3	3.4	3.5	3.2	2.9	2.4	3.0	3.0	2.9
17	2.9	3.1	3.4	3.3	3.6	3.7	3.2	2.8	2.4	3.0	3.0	2.9
18	3.0	3.2	3.4	3.4	3.6	3.7	3.2	2.8	2.4	3.0	3.0	2.9
19	2.9	3.1	3.5	3.4	3.6	3.5	3.2	2.9	2.4	3.0	3.1	2.8
20	2.8	3.1	3.5	3.5	3.5	3.5	3.2	3.0	2.5	3.0	3.1	2.8
21	2.9	3.1	3.8	3.5	3.5	3.4	3.1	3.0	2.6	3.0	3.2	2.7
22	2.9	3.3	3.3	3.6	3.3	3.3	3.0	2.9	2.5	3.1	3.1	2.6
23	2.9	3.2	3.3	3.5	3.4	3.4	2.9	2.8	2.5	3.1	3.1	2.5
24	2.8	6.1	3.3	3.6	3.4	3.4	3.2	2.8	2.4	3.1	3.0	2.6
25	2.8	3.4	3.3	3.6	3.3	3.4	3.2	2.8	2.4	3.1	3.0	2.6
26	2.8	3.2	3.3	3.6	3.1	3.4	3.2	2.8	2.4	3.0	2.9	2.5
27	2.9	3.1	3.3	5.5	3.0	3.3	3.3	2.8	2.6	3.1	3.1	2.5
28	3.0	3.1	3.3	8.7	3.0	3.4	3.2	2.7	2.8	3.1	3.2	2.6
29	3.1	3.1	3.3	4.2	---	3.5	3.1	2.6	2.8	3.0	3.1	2.5
30	3.0	3.2	3.3	3.9	---	3.3	3.1	2.5	2.9	3.0	3.1	2.4
31	3.1	---	3.3	3.8	---	3.2	---	2.5	---	3.0	3.2	---
TOTAL	92.6	95.9	103.5	113.9	98.6	105.8	95.0	88.4	76.2	92.9	93.5	85.1
MEAN	2.987	3.197	3.339	3.674	3.521	3.413	3.167	2.852	2.540	2.997	3.016	2.837
MAX	3.2	6.1	3.8	8.7	4.0	3.7	3.4	3.1	2.9	3.1	3.2	3.2
MIN	2.8	2.9	3.1	3.3	3.0	3.0	2.9	2.5	2.4	2.9	2.9	2.4
AC-FT	184	190	205	226	196	210	188	175	151	184	185	169

SANTA ANA RIVER BASIN

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.244	5.687	8.797	18.42	24.10	16.44	10.18	7.963	5.959	5.003	4.661	5.418
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1972 - 2002	
ANNUAL TOTAL	3024.1		1141.4			
ANNUAL MEAN	8.285		3.127		9.750	
HIGHEST ANNUAL MEAN					35.5	1993
LOWEST ANNUAL MEAN					3.13	2002
HIGHEST DAILY MEAN	249	Feb 13	8.7	Jan 28	1100	Feb 23 1998
LOWEST DAILY MEAN	2.6	Aug 25	2.4	Jun 6	1.7	Sep 5 1989
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 23	2.4	Jun 13	1.8	Sep 2 1989
MAXIMUM PEAK FLOW			30	Jan 28	6700	Feb 8 1993
MAXIMUM PEAK STAGE			4.70	Jan 28	8.48	Feb 8 1993
ANNUAL RUNOFF (AC-FT)	6000		2260		7060	
10 PERCENT EXCEEDS	16		3.5		15	
50 PERCENT EXCEEDS	3.6		3.1		5.6	
90 PERCENT EXCEEDS	2.8		2.7		2.9	

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 mi².

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 sea level, 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 ft³/s and fair below. 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 ft³/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 ft³/s, or maximum, from rating curve extended above 158 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	0115	13	5.41

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.04	0.00	0.38	1.2	0.38	1.3	1.3	0.16	0.03	0.00	0.33
2	0.00	0.04	0.00	0.36	1.1	0.39	1.4	1.2	0.15	0.01	0.00	0.33
3	0.00	0.04	0.09	0.34	1.0	0.38	1.7	1.2	0.13	0.01	0.00	0.33
4	0.00	0.07	0.03	0.33	1.4	0.98	1.9	1.2	0.12	0.02	0.00	0.34
5	0.00	0.07	0.02	0.33	1.2	1.7	2.0	1.2	0.10	0.02	0.00	0.36
6	0.00	0.07	0.08	0.33	0.42	1.5	2.1	1.2	0.10	0.02	0.00	0.37
7	0.00	0.08	0.09	0.33	0.36	1.5	2.1	1.2	0.09	0.03	0.00	0.36
8	0.00	0.08	0.52	0.33	0.30	1.9	1.8	1.2	0.10	0.02	0.00	0.36
9	0.00	0.09	0.84	0.33	0.26	1.8	1.7	1.4	0.10	0.01	0.00	0.35
10	0.00	0.11	1.0	0.34	0.22	1.8	1.7	1.4	0.10	0.01	0.00	0.35
11	0.00	0.14	0.99	0.33	0.18	1.8	1.7	1.4	0.10	0.01	0.00	0.35
12	0.00	0.18	0.82	0.33	0.20	1.8	1.7	1.2	0.09	0.01	0.00	0.35
13	0.01	0.23	0.67	0.33	0.16	1.8	1.6	1.1	0.08	0.01	0.00	0.35
14	0.00	0.20	0.86	0.32	0.19	1.8	1.5	1.1	0.07	0.00	0.07	0.34
15	0.00	0.20	1.0	0.33	0.19	1.8	1.9	1.2	0.07	0.00	0.17	0.34
16	0.00	0.20	1.1	0.32	0.19	1.8	2.0	1.3	0.06	0.00	0.20	0.36
17	0.00	0.21	1.1	0.33	0.87	2.1	1.6	1.2	0.06	0.00	0.21	0.37
18	0.00	0.23	1.1	0.31	0.64	2.4	1.2	1.3	0.06	0.00	0.23	0.39
19	0.00	0.34	1.1	0.33	0.49	1.9	1.2	1.5	0.06	0.00	0.26	0.34
20	0.00	0.46	1.2	0.31	0.44	1.9	1.1	1.6	0.05	0.00	0.29	0.34
21	0.00	0.52	2.0	0.31	0.36	1.8	1.1	1.6	0.05	0.00	0.31	0.34
22	0.00	0.30	1.8	0.30	0.35	1.8	1.1	1.5	0.04	0.00	0.32	0.33
23	0.01	0.05	1.7	0.28	0.34	2.0	1.1	1.4	0.04	0.00	0.33	0.32
24	0.01	0.61	2.0	0.24	0.34	2.1	1.2	1.3	0.04	0.00	0.33	0.34
25	0.03	0.08	1.8	0.23	0.30	2.0	1.2	1.2	0.04	0.00	0.34	0.35
26	0.03	0.05	0.76	0.23	0.33	1.8	1.3	1.2	0.04	0.00	0.34	0.36
27	0.03	0.05	0.60	0.37	0.35	1.6	1.6	1.2	0.04	0.00	0.35	0.39
28	0.06	0.03	0.56	4.3	0.36	1.5	1.4	1.1	0.05	0.00	0.37	0.45
29	0.03	0.00	0.48	2.6	---	1.5	1.3	0.91	0.05	0.00	0.37	0.43
30	0.02	0.00	0.45	2.4	---	1.4	1.3	0.49	0.04	0.00	0.37	0.45
31	0.03	---	0.41	1.7	---	1.4	---	0.37	---	0.00	0.36	---
TOTAL	0.26	4.77	25.17	19.60	13.74	50.33	45.8	37.67	2.28	0.21	5.22	10.77
MEAN	0.008	0.159	0.812	0.632	0.491	1.624	1.527	1.215	0.076	0.007	0.168	0.359
MAX	0.06	0.61	2.0	4.3	1.4	2.4	2.1	1.6	0.16	0.03	0.37	0.45
MIN	0.00	0.00	0.00	0.23	0.16	0.38	1.1	0.37	0.04	0.00	0.00	0.32
AC-FT	0.5	9.5	50	39	27	100	91	75	4.5	0.4	10	21

SANTA ANA RIVER BASIN

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.363	0.960	1.746	3.651	6.821	7.392	4.385	2.232	1.004	0.538	0.344	0.332
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1920 - 2002
ANNUAL TOTAL	513.53	215.82	
ANNUAL MEAN	1.407	0.591	2.438
HIGHEST ANNUAL MEAN			16.1 1980
LOWEST ANNUAL MEAN			0.000 1951
HIGHEST DAILY MEAN	16 Feb 12	4.3 Jan 28	556 Jan 25 1969
LOWEST DAILY MEAN	0.00 Jun 27	0.00 Oct 1	0.00 Sep 23 1921
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 27	0.00 Oct 1	0.00 Sep 23 1921
MAXIMUM PEAK FLOW		13 Jan 28	3720 Jan 25 1969
MAXIMUM PEAK STAGE		5.41 Jan 28	8.40 Mar 4 1978
ANNUAL RUNOFF (AC-FT)	1020	428	1770
10 PERCENT EXCEEDS	4.0	1.7	5.2
50 PERCENT EXCEEDS	0.45	0.33	0.20
90 PERCENT EXCEEDS	0.00	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 sea level (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, 1,630 ft³/s, Sept. 24, 2002; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	914	729	520	634	940	972	813	1100	1190	1120	1460	1420
2	1040	945	259	830	857	892	922	1150	1180	1140	1450	1400
3	912	1120	462	1040	862	784	1010	1120	1260	1050	1440	1370
4	1040	947	668	1030	1010	914	992	1080	1170	1150	1510	1510
5	1170	992	933	1030	1010	874	1010	985	1200	1210	1480	1470
6	1010	1180	914	1150	1030	853	992	1080	1160	1240	1360	1560
7	1020	963	932	1190	1050	847	897	1070	1200	1270	1460	1510
8	1150	1130	1020	1180	1040	892	1040	1070	1130	1370	1460	1540
9	1050	1100	740	1020	991	991	981	1170	1260	1360	1570	1560
10	1190	1040	863	1010	1050	647	784	1170	1310	1320	1350	1530
11	1000	1080	833	1080	1090	861	842	1070	1210	1320	1430	1440
12	938	1010	829	970	1060	841	724	1200	1290	1490	1450	1460
13	956	809	808	1020	1080	870	937	1180	1070	823	1370	1570
14	880	962	654	1100	1190	876	903	1200	1290	1330	1460	1500
15	936	966	527	1040	1110	854	848	1170	1150	1340	1430	1450
16	922	1040	324	1070	1110	822	932	1310	1110	1410	1460	1420
17	1040	1010	594	1070	1100	858	888	1440	1210	1380	1430	1570
18	953	1030	827	1090	1080	850	936	1160	1220	1300	1420	1500
19	935	1110	681	1030	974	877	998	1260	1200	1400	1450	1580
20	936	1060	863	1020	896	807	766	1320	1180	1280	1420	1500
21	1060	1160	754	995	941	667	867	1130	1250	1300	1460	1540
22	1020	996	566	1030	959	988	943	1110	1130	1340	1390	1470
23	1090	1190	602	1010	938	738	913	1220	1180	1410	1440	1490
24	989	1030	1370	967	990	797	966	1310	1160	1240	1440	1630
25	1140	998	1150	979	975	881	952	1410	1220	1160	1450	1580
26	980	803	1220	908	862	822	945	983	1200	1410	1320	1590
27	1070	614	1200	869	969	800	946	1100	1330	1400	1310	1570
28	850	752	1080	935	828	855	1020	1090	1210	1440	1300	1500
29	621	366	339	928	---	738	944	1190	1190	1440	1280	1570
30	486	379	678	847	---	869	1050	1160	1190	1490	1430	1540
31	527	---	801	923	---	796	---	1180	---	1400	1310	---
TOTAL	29825	28511	24011	30995	27992	26133	27761	36188	36050	40333	43990	45340
MEAN	962.1	950.4	774.5	999.8	999.7	843.0	925.4	1167	1202	1301	1419	1511
MAX	1190	1190	1370	1190	1190	991	1050	1440	1330	1490	1570	1630
MIN	486	366	259	634	828	647	724	983	1070	823	1280	1370
AC-FT	59160	56550	47630	61480	55520	51830	55060	71780	71510	80000	87250	89930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

MEAN	662.1	523.4	535.0	505.1	461.1	562.5	902.5	947.5	969.9	1063	1088	1025
MAX	1135	1337	1313	1096	1069	1208	1163	1167	1202	1301	1419	1511
(WY)	2000	2001	2001	2000	2000	2000	2000	2002	2002	2002	2002	2002
MIN	189	145	119	82.6	3.23	102	577	585	712	749	825	631
(WY)	1996	1996	1999	1997	1997	1997	1999	1999	1998	1998	1998	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL TOTAL	330354		397129			
ANNUAL MEAN	905.1		1088		771.7	
HIGHEST ANNUAL MEAN					1088	
LOWEST ANNUAL MEAN					515	
HIGHEST DAILY MEAN	1410	Jan 5	1630	Sep 24	1630	Sep 24 2002
LOWEST DAILY MEAN	237	Jan 27	259	Dec 2	0.00	Dec 12 1996
ANNUAL SEVEN-DAY MINIMUM	353	Jan 22	479	Nov 27	0.00	Jan 21 1997
ANNUAL RUNOFF (AC-FT)	655300		787700		559100	
10 PERCENT EXCEEDS	1140		1450		1250	
50 PERCENT EXCEEDS	947		1070		872	
90 PERCENT EXCEEDS	578		802		131	

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 mi².

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 sea level, 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 ft³/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 ft³/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge since at least 1927, 100,000 ft³/s, Mar. 2, 1938, on basis of slope-area measurement, at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2245	3,440	9.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	81	93	92	112	79	107	110	104	79	71	76
2	85	89	90	94	109	83	106	107	107	82	67	78
3	90	83	96	86	105	79	108	104	112	78	68	81
4	76	92	106	95	91	86	122	113	108	78	73	78
5	87	82	99	94	86	82	114	113	108	87	80	74
6	85	96	95	92	88	84	124	117	109	86	80	72
7	87	90	88	92	88	95	120	117	107	82	78	73
8	81	84	98	99	89	95	111	122	107	86	77	77
9	86	84	83	97	79	90	120	120	110	85	78	76
10	84	85	91	88	84	93	106	117	103	84	79	70
11	85	90	84	91	86	88	107	121	76	81	81	65
12	73	97	96	84	84	97	108	120	e73	80	81	66
13	84	169	81	93	85	100	109	117	e77	81	78	72
14	80	97	128	98	79	93	108	118	98	83	73	71
15	77	94	121	89	82	86	110	113	91	83	67	72
16	83	98	94	112	91	96	104	103	87	83	68	72
17	80	96	107	110	84	102	118	108	82	81	59	70
18	78	e91	105	98	87	297	109	108	81	83	74	66
19	75	e89	98	112	87	109	101	108	81	83	76	75
20	70	e88	90	87	84	118	101	101	78	82	80	75
21	82	87	202	109	86	113	101	113	93	80	75	71
22	83	88	114	98	85	101	101	101	93	84	78	73
23	81	90	104	100	87	111	103	101	89	85	84	64
24	77	612	111	96	85	98	127	107	98	80	79	67
25	79	383	114	93	84	92	116	109	96	86	73	69
26	78	125	104	97	84	100	108	105	91	86	68	73
27	76	146	101	96	82	96	107	106	73	80	62	74
28	77	139	106	161	87	109	102	118	82	80	62	79
29	80	103	108	103	---	103	101	101	75	79	74	76
30	86	96	105	105	---	112	108	111	79	84	77	70
31	86	---	100	99	---	103	---	109	---	75	84	---
TOTAL	2525	3744	3212	3060	2460	3190	3287	3438	2768	2546	2304	2175
MEAN	81.45	124.8	103.6	98.71	87.86	102.9	109.6	110.9	92.27	82.13	74.32	72.50
MAX	94	612	202	161	112	297	127	122	112	87	84	81
MIN	70	81	81	84	79	79	101	101	73	75	59	64
AC-FT	5010	7430	6370	6070	4880	6330	6520	6820	5490	5050	4570	4310

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.02	80.54	102.6	227.7	281.7	307.8	145.1	118.0	79.58	55.03	54.33	55.69
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL TOTAL	39791		34709			
ANNUAL MEAN	109.0		95.09		131.1	
HIGHEST ANNUAL MEAN					416	
LOWEST ANNUAL MEAN					29.0	
HIGHEST DAILY MEAN	1960	Jan 11	612	Nov 24	11500	Mar 2 1983
LOWEST DAILY MEAN	56	Aug 23	59	Aug 17	15	Sep 7 1980
ANNUAL SEVEN-DAY MINIMUM	62	Aug 22	70	Sep 10	16	Jul 1 1981
MAXIMUM PEAK FLOW			3440	Nov 24	31300	Feb 24 1998
MAXIMUM PEAK STAGE			9.74	Nov 24	20.23	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	78930		68850		94980	
10 PERCENT EXCEEDS	123		113		189	
50 PERCENT EXCEEDS	87		89		69	
90 PERCENT EXCEEDS	69		74		23	

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 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT					
02...	1330	85	921	24.0	584
16...	1330	88	939	24.0	576
NOV					
06...	1245	96	926	21.5	574
23...	1030	90	873	19.0	580
DEC					
04...	1300	113	898	18.0	582
19...	1300	99	914	18.5	568
JAN					
03...	1230	93	858	19.0	540
16...	1245	119	869	18.5	540
FEB					
04...	1300	88	926	18.0	592
22...	1200	85	925	20.0	576
MAR					
05...	1115	82	916	17.0	580
20...	1135	119	870	22.0	541
APR					
10...	1000	104	885	19.0	549
23...	1300	96	894	24.0	565
MAY					
06...	1245	116	875	22.0	553
20...	1030	107	848	20.5	530
JUN					
04...	1245	104	918	25.0	560
18...	1145	93	864	24.5	558
JUL					
01...	1200	82	905	25.0	569
18...	1000	85	912	24.5	563
AUG					
01...	1120	76	935	24.0	574
16...	0910	72	930	21.5	584
30...	1030	80	916	23.0	571
SEP					
12...	1230	67	920	24.0	584

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 mi².

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 sea level, 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 poor. 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 ft³/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 ft³/s, or maximum, from rating curve extended above 275 ft³/s, on basis of critical depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1915	0.61	2.82

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.15	0.15	0.07	0.01	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.15	0.15	0.14	0.08	0.02	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.15	0.15	0.13	0.09	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.15	0.17	0.12	0.11	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.16	0.15	0.12	0.13	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.17	0.15	0.13	0.16	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.14	0.17	0.16	0.13	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.14	0.18	0.13	0.11	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.14	0.16	0.12	0.09	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.02	0.13	0.15	0.15	0.08	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.07	0.14	0.16	0.13	0.06	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.09	0.20	0.17	0.13	0.04	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.09	0.22	0.16	0.14	0.03	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.19	0.19	0.15	0.14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.14	0.22	0.15	0.14	0.01	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.10	0.24	0.14	0.14	0.05	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.08	0.24	0.15	0.14	0.07	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.08	0.24	0.15	0.16	0.07	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.07	0.21	0.15	0.13	0.08	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.07	0.24	0.15	0.12	0.07	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.19	0.24	0.15	0.10	0.05	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.12	0.25	0.15	0.09	0.01	0.0	0.00	0.00	0.00	0.00
23	0.00	0.00	0.11	0.24	0.15	0.11	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.10	0.24	0.15	0.11	0.03	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.08	0.24	0.14	0.11	0.05	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.09	0.24	0.15	0.09	0.08	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.10	0.27	0.15	0.10	0.09	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.12	0.25	0.15	0.11	0.05	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.17	0.16	---	0.10	0.0	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.13	0.15	---	0.09	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.09	0.15	---	0.08	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	2.30	6.00	4.30	3.81	1.89	0.03	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.074	0.194	0.154	0.123	0.063	0.001	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.19	0.27	0.18	0.16	0.16	0.02	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.10	0.14	0.08	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	4.6	12	8.5	7.6	3.7	0.06	0.00	0.00	0.00	0.00

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.689	4.014	14.72	18.89	54.07	65.45	47.58	22.13	6.253	1.231	1.087	1.164
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1921 - 2002	
ANNUAL TOTAL	518.60		18.33			
ANNUAL MEAN	1.421		0.050		19.35	
HIGHEST ANNUAL MEAN					156	1980
LOWEST ANNUAL MEAN					0.050	2002
HIGHEST DAILY MEAN	35	Feb 28	0.27	Jan 27	7590	Feb 21 1980
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1920
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1920
MAXIMUM PEAK FLOW			0.61	Dec 14	45000	Feb 16 1927
MAXIMUM PEAK STAGE			2.82	Dec 14	a	Feb 16 1927
ANNUAL RUNOFF (AC-FT)	1030		36		14020	
10 PERCENT EXCEEDS	2.1		0.15		37	
50 PERCENT EXCEEDS	0.00		0.00		0.10	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Maximum peak stage for period of record is unknown, but probably occurred on Feb. 16, 1927.

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 mi².

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 sea level, 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 ft³/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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.004	0.014	0.014	2.767	2.854	3.153	0.386	0.054	0.001	0.075	0.049	0.034
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1988 - 2002	
ANNUAL TOTAL	0.07		0.00			
ANNUAL MEAN	0.000		0.000		0.776	
HIGHEST ANNUAL MEAN					4.35 1993	
LOWEST ANNUAL MEAN					0.000 1989	
HIGHEST DAILY MEAN	0.07 Jan 11		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)	0.1		0.00		562	
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 mi².

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 sea level, 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 ft³/s, Feb. 23, 1998, gage height, 4.53 ft, from rating curve extended above 880 ft³/s; 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 1997 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.000	0.000	0.013	16.56	6.484	22.51	13.31	0.000	0.000	0.000	0.000
MAX	0.000	0.000	0.000	0.081	99.9	38.9	135	79.9	0.000	0.000	0.000	0.000
(WY)	1997	1997	1997	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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1997 - 2002
ANNUAL TOTAL	0.00	0.00	
ANNUAL MEAN	0.000	0.000	4.807
HIGHEST ANNUAL MEAN			28.9 1998
LOWEST ANNUAL MEAN			0.000 1999
HIGHEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	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			1570 Feb 23 1998
MAXIMUM PEAK STAGE			4.53 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	0.00	0.00	3480
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 mi².

PERIOD OF RECORD.—October 2000 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,420 ft above sea level, 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, 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, 2.7 ft³/s, Jan. 26, 2001, gage height, 7.88 ft, from rating curve extended above 2.6 ft³/s, maximum gage height, 8.03 ft, July 9, 2001; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 13	1245	0.19	7.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	0.02	0.00	0.06	0.02	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.06	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.06	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.06	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.05	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.05	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.05	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.05	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.04	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.04	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.04	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.04	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.04	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.04	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.05	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.04	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.02	0.04	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.03	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.02	0.04	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.04	0.04	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.04	0.05	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.04	0.05	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.04	0.03	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.04	0.03	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.04	0.04	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.05	0.04	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.05	0.04	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.06	0.04	---	0.00	0.03	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.07	0.04	---	0.03	0.02	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.07	0.02	---	0.04	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.61	1.37	0.02	0.07	2.73	0.02	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.020	0.044	0.001	0.002	0.091	0.001	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.07	0.07	0.02	0.04	0.17	0.02	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	1.2	2.7	0.04	0.1	5.4	0.04	0.00	0.00	0.00	0.00

11070210 SAN JACINTO RIVER AT RAMONA EXPRESSWAY, NEAR LAKEVIEW, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.299	0.427	0.422	0.709	0.915	0.497	0.580	0.404	0.385	0.477	0.215	2.320
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	0.020	0.044	0.001	0.002	0.091	0.001	0.000	0.000	0.000	0.000
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL TOTAL	248.25		4.82			
ANNUAL MEAN	0.680		0.013		0.441	
HIGHEST ANNUAL MEAN					0.87 2001	
LOWEST ANNUAL MEAN					0.013 2002	
HIGHEST DAILY MEAN	2.6	Jan 28	0.17	Apr 13	9.1	Aug 23 2000
LOWEST DAILY MEAN	0.00	Aug 22	0.00	Oct 1	0.00	Oct 16 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 22	0.00	Oct 1	0.00	Aug 22 2001
MAXIMUM PEAK FLOW			0.19	Apr 13	2.7	Jan 26 2001
MAXIMUM PEAK STAGE			7.44	Apr 13	8.03	Jul 9 2001
ANNUAL RUNOFF (AC-FT)	492		9.6		320	
10 PERCENT EXCEEDS	1.5		0.05		1.1	
50 PERCENT EXCEEDS	0.74		0.00		0.04	
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 mi².

PERIOD OF RECORD.—October 1969 to September 1975, October 1989 to September 1997, and October 1998 to current year.

PRECIPITATION DATA: October 1989 to September 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 sea level, from topographic map. October 1969 to September 1975, at same site at different datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. 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 ft³/s, Feb. 12, 1992, gage height, 7.81 ft, from rating curve extended above 2,120 ft³/s, on basis of slope area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,100 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2330	230	2.69

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	7.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.03
2	0.00	0.00	10	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.01	0.03
3	0.00	0.00	0.74	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.06
4	0.00	0.00	0.87	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.05	0.02
5	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.02
6	0.00	0.00	0.06	0.00	0.00	0.03	0.14	0.00	0.00	0.00	0.00	0.27
7	0.00	0.00	0.00	0.00	0.00	3.8	0.09	0.00	0.00	0.00	0.00	0.06
8	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.02
9	0.01	0.00	0.00	0.07	0.00	0.04	0.04	0.00	0.00	0.00	0.04	0.00
10	0.03	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.02	0.00	0.08	0.03
11	0.00	0.00	0.00	e0.00	0.35	0.00	0.07	0.00	0.00	0.00	0.04	0.03
12	0.00	0.19	0.00	e0.00	0.00	0.00	0.05	0.03	0.00	0.02	0.00	e0.00
13	0.00	18	0.02	e0.00	0.00	0.00	0.04	0.00	0.08	0.00	0.07	e0.00
14	0.00	1.7	1.6	e0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.05	e0.00
15	0.00	0.02	1.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	e0.00
16	0.00	0.00	0.39	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	e0.00
17	0.00	0.00	0.00	0.00	1.9	0.07	0.00	0.00	0.00	0.00	0.00	e0.00
18	0.00	0.00	0.00	0.00	0.90	9.1	0.00	0.00	0.00	0.00	0.00	e0.00
19	0.00	0.00	0.04	0.00	0.05	0.84	0.00	0.01	0.00	0.00	0.03	e0.00
20	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	e0.00
21	0.00	0.00	26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
22	0.00	0.00	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
23	0.00	0.00	0.30	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.00	e0.00
24	0.00	19	0.00	0.00	0.05	0.04	2.3	0.00	0.03	0.00	0.02	e0.00
25	0.00	59	0.00	0.00	0.00	0.00	6.1	0.03	0.10	0.00	0.00	e0.00
26	0.00	1.2	0.00	0.00	0.00	0.00	0.33	0.04	0.02	0.00	0.00	e0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.01	e0.00
28	0.00	0.43	0.07	1.4	0.00	0.02	0.00	0.03	0.02	0.00	0.06	e0.00
29	0.00	0.62	1.4	3.1	---	0.05	0.00	0.02	0.00	0.03	0.03	e0.00
30	0.00	0.10	0.49	0.35	---	0.11	0.00	0.01	0.00	0.02	0.00	e0.00
31	0.00	---	0.27	0.00	---	0.01	---	0.01	---	0.04	0.01	---
TOTAL	0.04	100.26	62.11	4.92	3.25	14.37	9.87	0.18	0.33	0.14	0.61	0.57
MEAN	0.001	3.342	2.004	0.159	0.116	0.464	0.329	0.006	0.011	0.005	0.020	0.019
MAX	0.03	59	26	3.1	1.9	9.1	6.1	0.04	0.10	0.04	0.08	0.27
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	0.08	199	123	9.8	6.4	29	20	0.4	0.7	0.3	1.2	1.1

e Estimated.

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.266	1.257	3.308	19.97	18.40	11.32	1.005	0.143	0.166	0.113	0.019	0.241
MAX	1.68	9.87	35.1	167	87.5	70.7	4.87	1.06	1.73	1.85	0.18	4.21
(WY)	1997	1997	1993	1993	1993	1991	1994	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL TOTAL	1451.82		196.65			
ANNUAL MEAN	3.978		0.539		4.623	
HIGHEST ANNUAL MEAN					24.4	1993
LOWEST ANNUAL MEAN					0.30	1971
HIGHEST DAILY MEAN	410	Jan 11	59	Nov 25	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			230	Nov 24	4400	Feb 12 1992
MAXIMUM PEAK STAGE			2.69	Nov 24	7.81	Feb 12 1992
ANNUAL RUNOFF (AC-FT)	2880		390		3350	
10 PERCENT EXCEEDS	1.7		0.16		0.23	
50 PERCENT EXCEEDS	0.02		0.00		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 mi².

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 sea level, 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, 1,020 ft³/s, Jan. 11, 2001, gage height, 11.04 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	1130	49	7.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	44	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	7.7	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	2.8	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.01	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	43	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	4.2	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	2.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.16	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	---	2.4	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	40	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	44	---	0.00	---	0.00	0.00	---
TOTAL	0.00	46.16	38.42	0.00	0.00	86.40	432.26	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	1.539	1.239	0.000	0.000	2.787	14.41	0.000	0.000	0.000	0.000	0.000
MAX	0.00	34	24	0.00	0.00	44	44	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	92	76	0.00	0.00	171	857	0.00	0.00	0.00	0.00	0.00

11070365 SAN JACINTO RIVER NEAR SUN CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.290	0.771	0.620	9.750	14.32	3.891	8.873	0.000	0.000	0.000	0.000	0.000
MAX	0.58	1.54	1.24	19.5	28.6	4.99	14.4	0.000	0.000	0.000	0.000	0.000
(WY)	2001	2002	2002	2001	2001	2001	2002	2001	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL TOTAL	1745.87		603.24			
ANNUAL MEAN	4.783		1.653		3.127	
HIGHEST ANNUAL MEAN					4.60 2001	
LOWEST ANNUAL MEAN					1.65 2002	
HIGHEST DAILY MEAN	436	Jan 11	44	Mar 31	436	Jan 11 2001
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			49	Nov 25	1020	Jan 11 2001
MAXIMUM PEAK STAGE			7.88	Nov 25	11.04	Jan 11 2001
ANNUAL RUNOFF (AC-FT)	3460		1200		2270	
10 PERCENT EXCEEDS	1.4		0.00		0.20	
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 mi².

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 sea level, from topographic map.

REMARKS.—Records fair. 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, 224 ft³/s, Aug. 17, 1984, gage height, 3.02 ft, datum then in use; maximum gage height, 7.83 ft, Jan. 11, 2001; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 4,120 ft³/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 2001 TO SEPTEMBER 2002
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	0.01
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	1.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	1.1	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.34	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	0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.35	0.03	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.02	0.95	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	6.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.10	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	8.2	0.00	0.00	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00
25	0.00	1.4	0.00	0.15	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.01	0.00	0.00	0.03	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	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.19	0.85	0.04	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.04	0.70	0.03	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.21	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	10.19	9.59	2.77	0.39	0.98	1.15	0.00	0.00	0.00	0.00	0.01
MEAN	0.000	0.340	0.309	0.089	0.014	0.032	0.038	0.000	0.000	0.000	0.000	0.000
MAX	0.00	8.2	6.7	1.1	0.35	0.95	1.1	0.00	0.00	0.00	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	20	19	5.5	0.8	1.9	2.3	0.00	0.00	0.00	0.00	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	1984	1985	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
MEAN	0.520	0.266	2.872	1.140	2.972	0.407	0.142	0.025	0.000	0.063	0.314	0.028	
MAX	1.98	0.61	10.0	4.19	11.0	1.60	0.27	0.099	0.000	0.25	1.26	0.11	
(WY)	1984	1985	1985	2001	2001	2001	1984	2001	1984	1984	1984	1984	1984
MIN	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
(WY)	1985	2001	2001	1984	1984	1984	1985	1984	1984	1984	1985	1985	1985

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1984 - 2002

ANNUAL TOTAL	519.35	25.08		
ANNUAL MEAN	1.423	0.069	0.719	
HIGHEST ANNUAL MEAN			1.38	2001
LOWEST ANNUAL MEAN			0.069	2002
HIGHEST DAILY MEAN	70	Jan 11	8.2	Nov 24
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			53	Nov 24
MAXIMUM PEAK STAGE			7.15	Nov 24
ANNUAL RUNOFF (AC-FT)	1030	50	521	
10 PERCENT EXCEEDS	0.87	0.00	0.01	
50 PERCENT EXCEEDS	0.00	0.00	0.00	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

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 mi².

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 sea level, 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 ft³/s, Feb. 17, 1927, gage height, 11.8 ft, from rating curve extended above 2,000 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.25	0.51	0.93	0.70	0.60	0.49	0.30	0.03	0.00	0.00	0.00
2	0.00	0.26	0.51	0.96	0.70	0.58	0.49	0.30	0.04	0.00	0.00	0.00
3	0.00	0.26	0.52	0.97	0.69	0.58	0.48	0.28	0.04	0.00	0.00	0.00
4	0.00	0.28	0.52	0.94	0.68	0.58	0.48	0.27	0.03	0.00	0.00	0.00
5	0.00	0.28	0.52	0.90	0.69	0.58	0.46	0.25	0.02	0.00	0.00	0.00
6	0.00	0.27	0.53	0.83	0.70	0.58	0.47	0.25	0.02	0.00	0.00	0.00
7	0.00	0.29	0.53	0.80	0.69	0.60	0.45	0.24	0.01	0.00	0.00	0.00
8	0.00	0.30	0.53	0.78	0.70	0.61	0.44	0.24	0.01	0.00	0.00	0.00
9	0.00	0.29	0.56	0.76	0.68	0.63	0.43	0.22	0.02	0.00	0.00	0.00
10	0.00	0.31	0.56	0.75	0.66	0.63	0.41	0.22	0.02	0.00	0.00	0.00
11	0.00	0.32	0.56	0.73	0.66	0.59	0.41	0.20	0.02	0.00	0.00	0.00
12	0.00	0.33	0.56	0.73	0.66	0.58	0.39	0.19	0.02	0.00	0.00	0.00
13	0.00	0.35	0.57	0.74	0.65	0.58	0.38	0.16	0.02	0.00	0.00	0.00
14	0.00	0.34	0.62	0.75	0.64	0.57	0.38	0.15	0.02	0.00	0.00	0.00
15	0.00	0.33	0.65	0.76	0.64	0.56	0.39	0.14	0.02	0.00	0.00	0.00
16	0.00	0.33	0.64	0.75	0.64	0.56	0.39	0.15	0.01	0.00	0.00	0.00
17	0.00	0.34	0.64	0.73	0.65	0.57	0.37	0.14	0.01	0.00	0.00	0.00
18	0.00	0.36	0.64	0.73	0.65	0.59	0.36	0.14	0.00	0.00	0.00	0.00
19	0.00	0.37	0.67	0.73	0.65	0.57	0.36	0.14	0.00	0.00	0.00	0.00
20	0.01	0.37	0.70	0.70	0.64	0.53	0.37	0.14	0.00	0.00	0.00	0.00
21	0.03	0.38	0.90	0.70	0.64	0.53	0.37	0.13	0.01	0.00	0.00	0.00
22	0.04	0.39	0.77	0.70	0.63	0.53	0.34	0.12	0.01	0.00	0.00	0.00
23	0.05	0.40	0.75	0.70	0.64	0.53	0.30	0.11	0.01	0.00	0.00	0.00
24	0.06	0.48	0.76	0.68	0.64	0.53	0.35	0.10	0.00	0.00	0.00	0.00
25	0.08	0.49	0.76	0.70	0.63	0.52	0.35	0.09	0.00	0.00	0.00	0.00
26	0.09	0.44	0.76	0.67	0.62	0.52	0.34	0.09	0.00	0.00	0.00	0.00
27	0.11	0.44	0.79	0.66	0.60	0.52	0.33	0.09	0.00	0.00	0.00	0.00
28	0.14	0.44	0.83	0.70	0.61	0.53	0.32	0.08	0.00	0.00	0.00	0.0
29	0.17	0.48	0.88	0.70	---	0.52	0.30	0.06	0.01	0.00	0.00	0.00
30	0.20	0.51	0.97	0.70	---	0.50	0.30	0.05	0.01	0.00	0.00	0.01
31	0.22	---	0.97	0.71	---	0.50	---	0.04	---	0.00	0.00	---
TOTAL	1.20	10.68	20.68	23.59	18.38	17.40	11.70	5.08	0.41	0.00	0.00	0.01
MEAN	0.039	0.356	0.667	0.761	0.656	0.561	0.390	0.164	0.014	0.000	0.000	0.000
MAX	0.22	0.51	0.97	0.97	0.70	0.63	0.49	0.30	0.04	0.00	0.00	0.01
MIN	0.00	0.25	0.51	0.66	0.60	0.50	0.30	0.04	0.00	0.00	0.00	0.00
AC-FT	2.4	21	41	47	36	35	23	10	0.8	0.00	0.00	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2002, BY WATER YEAR (WY)

MEAN	0.572	0.752	4.902	34.52	86.36	70.10	22.63	5.398	0.762	0.576	0.379	0.488
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1916 - 2002
ANNUAL TOTAL	562.22	109.13	
ANNUAL MEAN	1.540	0.299	16.70
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	82	Mar 1	14000
LOWEST DAILY MEAN	0.00	Jun 17	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 17	0.00
MAXIMUM PEAK FLOW		1.6	16000
MAXIMUM PEAK STAGE		3.02	11.80
ANNUAL RUNOFF (AC-FT)	1120	216	12100
10 PERCENT EXCEEDS	2.3	0.70	3.3
50 PERCENT EXCEEDS	0.34	0.26	0.10
90 PERCENT EXCEEDS	0.00	0.00	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 mi², excludes 768 mi² 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 sea level, from topographic map. October 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. 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 ft³/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 ft³/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 8,850 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e13	14	13	9.5	1.2	9.4	11	11	13	15	14	13
2	e13	14	13	10	1.4	8.9	12	12	13	13	10	11
3	e14	14	21	14	1.1	8.3	11	14	13	12	3.1	12
4	15	15	12	10	1.2	7.4	12	14	13	15	3.6	13
5	15	13	12	11	3.5	7.9	12	13	13	16	5.2	14
6	15	14	13	11	2.1	9.1	14	14	13	15	7.6	16
7	14	15	13	10	1.9	11	13	13	12	15	14	16
8	14	16	13	11	1.9	13	12	12	12	15	13	13
9	15	14	12	12	4.3	11	11	12	13	15	14	15
10	14	14	15	11	13	11	6.9	11	13	14	15	16
11	14	15	15	12	13	11	15	11	13	15	16	15
12	15	49	14	12	13	11	13	11	14	15	15	14
13	14	17	14	10	14	10	10	11	17	15	15	13
14	14	13	36	11	14	9.5	14	11	15	15	15	14
15	14	13	14	14	15	11	14	13	16	14	13	15
16	15	13	14	15	15	11	15	13	13	14	14	16
17	15	13	13	15	21	17	15	13	13	14	13	15
18	15	12	12	15	15	22	14	13	13	13	12	14
19	15	12	13	14	15	8.6	12	13	14	16	13	12
20	16	12	18	15	15	5.0	13	15	15	17	14	16
21	15	13	50	16	16	14	13	13	17	16	16	19
22	15	13	15	15	16	9.7	16	12	17	13	15	17
23	15	14	13	15	14	9.5	16	12	17	14	14	12
24	12	101	12	15	15	10	39	13	18	13	15	15
25	12	25	12	16	15	8.4	13	14	19	15	8.0	16
26	12	22	13	15	13	8.5	17	15	22	15	9.2	16
27	12	20	12	9.7	11	10	12	15	21	15	17	18
28	11	17	11	17	11	13	11	14	19	13	16	17
29	11	27	26	4.4	---	12	11	13	18	13	15	15
30	13	15	18	3.0	---	12	11	12	17	15	15	14
31	14	---	11	1.5	---	11	---	12	---	15	15	---
TOTAL	431	579	493	370.1	292.6	331.2	408.9	395	456	450	394.7	442
MEAN	13.90	19.30	15.90	11.94	10.45	10.68	13.63	12.74	15.20	14.52	12.73	14.73
MAX	16	101	50	17	21	22	39	15	22	17	17	19
MIN	11	12	11	1.5	1.1	5.0	6.9	11	12	12	3.1	11
AC-FT	855	1150	978	734	580	657	811	783	904	893	783	877

e Estimated.

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 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	12.26	14.43	16.42	42.13	86.66	63.12	35.99	22.50	15.48	13.44	12.20	12.62
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	11.9	10.5	5.19	2.89	3.24	7.33	3.56	6.98	7.08
(WY)	1996	1996	1999	2002	2002	2001	1991	1992	1992	1994	1994	1995

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1991 - 2002

ANNUAL TOTAL	5543.6	5043.5	
ANNUAL MEAN	15.19	13.82	28.60
HIGHEST ANNUAL MEAN			81.8 1995
LOWEST ANNUAL MEAN			12.8 1999
HIGHEST DAILY MEAN	287 Feb 12	101 Nov 24	2090 Feb 24 1998
LOWEST DAILY MEAN	1.3 Mar 12	1.1 Feb 3	0.34 Jul 3 1992
ANNUAL SEVEN-DAY MINIMUM	1.5 Mar 11	1.7 Jan 31	0.89 Jan 13 1992
MAXIMUM PEAK FLOW		875 Nov 24	3660 Feb 24 1998
MAXIMUM PEAK STAGE		4.52 Nov 24	6.54 Feb 24 1998
ANNUAL RUNOFF (AC-FT)	11000	10000	20720
10 PERCENT EXCEEDS	20	17	40
50 PERCENT EXCEEDS	12	14	13
90 PERCENT EXCEEDS	2.6	10	4.5

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 mi².

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 sea level, from topographic map.

REMARKS.—Records poor. 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 2,940 acre-ft. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,750 ft³/s, Nov. 24, 2001, gage height, 4.84 ft, from rating curve extended above 576 ft³/s, on basis of step-backwater analysis; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.14	0.50	0.56	1.6	1.1	1.1	0.77	0.78	0.62	0.54	e54	0.62
2	0.13	0.54	0.90	1.2	0.96	0.83	0.91	0.72	0.66	0.55	e53	0.61
3	0.23	0.54	5.6	1.0	0.95	1.1	1.2	0.79	1.0	0.57	e57	0.72
4	0.31	0.68	0.64	1.6	0.73	1.0	1.2	0.62	1.0	0.56	e57	0.77
5	0.39	0.49	0.40	2.4	0.65	0.89	0.72	0.59	0.94	0.52	e60	0.62
6	0.20	0.44	0.29	2.4	0.68	1.0	1.00	0.69	1.5	0.50	e59	0.73
7	0.19	0.44	0.31	2.0	0.58	1.6	1.4	1.5	1.2	0.49	e51	0.58
8	0.34	0.46	0.44	1.4	0.70	1.0	1.0	1.4	0.95	1.0	e51	0.57
9	0.25	0.50	0.18	1.1	0.72	0.83	0.85	1.6	0.93	0.78	e50	0.54
10	0.32	0.47	0.21	0.51	0.55	0.98	1.2	1.1	1.5	1.3	e52	0.57
11	0.50	0.55	0.15	0.75	0.77	0.75	1.1	1.4	0.88	1.6	e50	0.67
12	0.15	13	0.17	0.90	1.2	0.92	1.2	0.93	0.70	0.68	e51	0.74
13	0.22	0.83	0.26	0.52	3.1	0.74	0.70	1.2	1.1	0.57	e48	0.68
14	0.23	0.46	23	0.77	0.61	0.76	0.62	1.2	1.6	0.43	e50	0.60
15	0.33	0.38	0.78	0.70	0.63	0.94	0.68	1.2	0.70	0.68	e50	0.67
16	0.40	0.56	0.99	0.57	0.72	0.76	0.62	0.83	1.1	0.53	e50	0.78
17	0.16	0.37	0.47	0.64	22	33	0.95	1.0	1.2	0.62	e50	0.98
18	0.17	0.31	0.56	0.87	1.3	5.4	0.82	0.81	1.5	0.68	e52	0.77
19	0.27	0.33	0.43	0.72	0.77	0.93	1.0	0.78	1.0	0.70	e54	0.86
20	0.24	0.28	6.7	0.86	0.73	0.92	1.5	4.3	0.76	0.74	e48	0.65
21	0.34	0.21	31	1.0	0.77	1.1	1.1	0.67	0.92	0.74	e52	0.57
22	0.41	0.11	0.65	0.84	0.80	1.1	0.86	0.64	0.71	1.2	e49	0.64
23	0.29	0.23	1.1	0.98	0.96	8.8	0.69	0.81	0.64	2.0	e48	0.67
24	0.43	157	0.72	1.00	0.88	1.1	4.5	0.94	0.94	1.3	e47	0.73
25	0.54	1.7	0.89	0.88	1.3	1.3	0.61	1.2	1.0	5.6	22	0.86
26	0.47	0.76	0.44	0.78	1.6	1.1	0.98	0.79	1.2	27	1.1	1.1
27	0.51	0.57	0.41	24	0.94	0.92	0.65	0.50	0.97	39	0.62	0.63
28	0.34	0.75	0.46	20	1.00	1.5	0.57	0.84	1.3	36	0.60	0.56
29	0.40	1.2	6.1	1.0	---	1.4	0.55	0.96	0.65	37	0.57	1.0
30	0.70	0.52	1.9	1.4	---	0.79	0.74	1.2	0.54	49	0.67	0.78
31	0.47	---	1.0	1.4	---	0.73	---	0.59	---	47	0.69	---
TOTAL	10.07	185.18	87.71	75.79	47.70	75.29	30.69	32.58	29.71	259.88	1269.25	21.27
MEAN	0.325	6.173	2.829	2.445	1.704	2.429	1.023	1.051	0.990	8.383	40.94	0.709
MAX	0.70	157	31	24	22	33	4.5	4.3	1.6	49	60	1.1
MIN	0.13	0.11	0.15	0.51	0.55	0.73	0.55	0.50	0.54	0.43	0.57	0.54
AC-FT	20	367	174	150	95	149	61	65	59	515	2520	42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

MEAN	45.14	23.31	16.65	17.90	19.84	3.493	4.063	0.351	0.552	2.782	10.51	0.340
MAX	98.1	63.2	46.9	53.9	55.3	6.71	7.15	1.05	0.99	8.38	40.9	0.71
(WY)	2000	2001	2000	2000	2000	2000	2000	2002	2002	2002	2002	2002
MIN	0.32	0.59	0.19	2.44	1.70	1.47	1.02	0.006	0.11	0.43	0.20	0.040
(WY)	2002	2000	2001	2002	2002	2001	2002	1999	2001	2000	2000	1999

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL TOTAL	1306.81		2125.12			
ANNUAL MEAN	3.580		5.822		13.19	
HIGHEST ANNUAL MEAN					22.6	2000
LOWEST ANNUAL MEAN					5.82	2002
HIGHEST DAILY MEAN	243	Feb 12	157	Nov 24	243	Feb 12 2001
LOWEST DAILY MEAN	0.00	Jan 14	0.11	Nov 22	0.00	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 2	0.23	Oct 1	0.00	Dec 26 1998
MAXIMUM PEAK FLOW			2750	Nov 24	2750	Nov 24 2001
MAXIMUM PEAK STAGE			4.84	Nov 24	4.84	Nov 24 2001
ANNUAL RUNOFF (AC-FT)	2590		4220		9560	
10 PERCENT EXCEEDS	1.8		22		50	
50 PERCENT EXCEEDS	0.23		0.78		0.46	
90 PERCENT EXCEEDS	0.01		0.40		0.01	

e Estimated.

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 mi².

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 sea level, from topographic map.

REMARKS.—Records fair above 10 ft³/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, 2,940 acre-ft was released. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,700 ft³/s, Feb. 27, 1983, gage height, 10.32 ft, from rating curve extended above 560 ft³/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 ft³/s, on basis of contracted-opening measurement at site 6.1 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.9	2.1	2.6	2.0	2.0	2.2	2.3	1.9	1.9	56	1.7
2	1.3	1.8	2.4	2.4	2.3	1.8	2.4	1.9	1.8	1.9	55	1.7
3	1.4	1.8	17	2.5	2.9	2.2	2.5	2.0	2.0	1.8	59	1.8
4	1.4	3.0	2.3	2.8	2.2	2.0	2.5	2.9	2.2	1.9	60	1.8
5	2.1	1.9	1.9	3.4	1.7	1.9	1.8	2.2	2.1	2.3	63	1.8
6	1.8	2.1	2.1	3.6	e1.6	2.1	2.0	1.9	2.1	1.8	61	1.8
7	1.7	1.9	1.9	3.3	e1.6	3.8	2.1	2.4	2.0	1.6	52	1.6
8	1.9	1.8	2.4	3.1	e1.7	2.2	2.1	1.7	2.0	2.8	53	1.6
9	1.8	1.3	1.9	2.5	1.8	2.0	2.0	1.7	1.9	1.9	52	1.5
10	1.7	1.4	2.0	1.8	1.8	2.1	2.8	1.9	1.9	2.8	54	1.5
11	2.1	2.6	1.7	1.8	1.8	2.2	1.8	1.7	2.1	3.7	52	1.6
12	1.6	23	1.6	2.1	2.0	2.3	1.9	1.7	2.1	1.6	53	1.6
13	1.8	2.9	1.7	1.9	4.7	2.0	1.7	1.8	2.3	1.5	50	1.7
14	1.5	2.2	38	2.7	1.6	2.0	1.7	2.0	2.3	1.3	52	1.8
15	1.6	2.2	2.5	1.7	1.5	2.2	1.9	1.9	1.9	1.8	51	1.8
16	2.3	2.4	2.8	1.7	1.4	1.8	1.9	2.0	1.7	1.8	52	1.8
17	2.0	2.0	1.9	1.8	29	67	2.3	2.1	2.7	1.8	52	1.9
18	2.1	1.9	2.2	1.8	2.3	9.3	1.9	1.9	3.2	1.5	53	1.7
19	2.1	2.0	1.9	1.6	1.7	2.6	2.0	2.0	2.2	1.4	56	2.0
20	2.1	2.4	11	2.0	1.5	2.3	2.3	12	1.8	1.5	49	1.9
21	2.4	2.1	55	2.2	1.5	2.2	2.2	2.2	1.8	1.2	53	1.7
22	3.1	1.8	2.0	1.7	1.4	2.2	2.2	2.1	1.9	1.3	50	1.7
23	2.1	2.2	2.3	2.1	1.6	14	2.2	2.2	1.8	1.4	50	2.0
24	2.5	224	2.4	2.2	1.5	2.2	9.8	2.1	2.4	1.4	50	2.0
25	2.6	4.8	2.0	2.1	1.6	2.2	2.2	2.1	2.5	6.6	25	2.1
26	2.6	2.5	1.9	1.9	2.0	2.3	4.3	2.0	2.8	27	2.3	2.4
27	2.8	1.8	1.6	45	1.3	2.1	2.1	2.0	2.5	39	1.7	1.8
28	2.8	2.3	1.9	29	1.5	2.3	1.9	2.1	2.7	38	1.7	1.7
29	3.3	4.6	14	2.3	---	2.6	1.9	2.3	1.9	39	1.7	2.3
30	5.0	2.1	4.4	2.2	---	2.1	2.0	2.2	1.8	49	1.7	2.1
31	2.3	---	2.3	2.3	---	2.0	---	2.2	---	50	1.8	---
TOTAL	67.0	310.7	191.1	140.1	79.5	152.0	72.6	73.5	64.3	292.5	1323.9	54.4
MEAN	2.161	10.36	6.165	4.519	2.839	4.903	2.420	2.371	2.143	9.435	42.71	1.813
MAX	5.0	224	55	45	29	67	9.8	12	3.2	50	63	2.4
MIN	1.2	1.3	1.6	1.6	1.3	1.8	1.7	1.7	1.7	1.2	1.7	1.5
AC-FT	133	616	379	278	158	301	144	146	128	580	2630	108

e Estimated.

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.44	16.85	26.44	33.90	38.12	28.46	9.959	13.07	18.83	19.42	16.90	13.89
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1970 - 2002	
ANNUAL TOTAL	3617.36		2821.6			
ANNUAL MEAN	9.911		7.730		20.96	
HIGHEST ANNUAL MEAN					92.4	
LOWEST ANNUAL MEAN					3.24	
HIGHEST DAILY MEAN	624	Feb 12	224	Nov 24	2060	Mar 1 1978
LOWEST DAILY MEAN	0.96	Sep 26	1.2	Oct 1	0.00	May 21 1977
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 22	1.4	Jul 18	0.02	Oct 28 1977
MAXIMUM PEAK FLOW			3070	Nov 24	12700	Feb 27 1983
MAXIMUM PEAK STAGE			6.87	Nov 24	10.32	Feb 27 1983
ANNUAL RUNOFF (AC-FT)	7180		5600		15190	
10 PERCENT EXCEEDS	5.6		28		76	
50 PERCENT EXCEEDS	2.4		2.1		1.2	
90 PERCENT EXCEEDS	1.6		1.6		0.34	

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 mi².

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 sea level, 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, 1,660 ft³/s, Jan. 11, 2001, gage height, 4.50 ft, from floodmarks, from rating curve extended above 415 ft³/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 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1530	1,300	4.04	Mar. 17	2100	442	2.65
Jan. 27	2345	414	2.59				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.12	0.92	0.01	0.00	2.0	2.1	1.9	2.0	0.17	0.25	2.6	1.6
2	0.13	0.88	0.00	0.00	2.0	2.3	1.9	2.1	0.10	0.24	2.9	1.9
3	0.08	0.85	6.6	0.57	1.9	2.0	1.8	2.3	0.17	0.23	2.8	1.8
4	0.08	1.6	0.01	1.2	2.0	1.9	1.8	2.1	0.33	0.29	2.3	1.8
5	0.09	1.2	0.01	1.0	2.0	2.1	1.7	1.9	0.23	0.31	2.3	1.7
6	0.08	1.1	0.01	0.91	2.1	2.2	1.6	0.86	0.41	0.29	2.3	1.7
7	0.08	0.85	0.01	0.95	2.1	2.3	1.5	1.5	0.32	0.22	2.5	1.6
8	1.4	1.5	0.06	0.97	2.0	2.1	1.6	2.0	0.31	0.24	2.3	1.6
9	1.8	1.6	0.06	1.3	2.0	1.9	1.8	2.0	0.23	0.27	2.4	1.6
10	1.4	1.8	0.02	0.71	2.2	2.0	2.0	2.2	0.22	0.31	2.6	1.5
11	1.7	1.6	0.01	1.6	2.0	2.0	2.0	2.2	0.26	0.83	2.6	1.4
12	1.6	6.7	0.01	1.6	1.9	2.4	2.1	2.1	0.21	1.6	2.9	1.3
13	1.5	2.4	0.02	1.7	1.9	2.7	2.1	2.2	0.23	2.4	2.4	1.8
14	1.5	0.69	12	1.7	1.9	1.9	1.8	2.6	0.27	2.3	2.6	1.7
15	0.91	1.3	2.0	1.6	1.7	1.7	2.1	2.4	0.26	2.6	2.7	1.7
16	0.78	1.6	0.00	1.6	1.1	1.7	1.6	1.4	0.20	3.4	2.5	2.0
17	1.6	1.5	0.02	1.6	9.7	30	1.5	0.25	0.18	2.9	2.5	1.9
18	1.8	1.3	0.07	1.5	0.25	17	2.0	0.21	0.17	1.3	2.3	1.5
19	1.9	1.4	0.06	1.7	0.13	1.6	2.1	0.19	0.29	1.3	2.1	0.64
20	1.9	1.5	2.2	1.7	0.15	1.6	2.1	7.2	0.34	2.8	2.2	1.2
21	2.0	1.3	26	1.7	0.26	2.3	1.8	0.54	0.29	3.0	2.1	1.6
22	1.7	1.3	0.85	1.9	0.80	2.1	2.0	0.36	0.29	3.3	2.2	1.5
23	2.1	1.3	1.1	1.6	1.8	7.6	2.2	0.36	0.22	3.5	1.9	1.7
24	2.0	125	1.1	1.6	1.7	1.9	7.2	0.21	0.24	3.7	1.7	1.7
25	2.0	3.7	1.1	1.6	1.6	1.9	2.0	0.38	0.25	3.7	1.7	1.7
26	1.8	0.00	1.1	1.8	1.8	1.8	1.7	0.49	0.30	3.3	1.9	1.8
27	1.8	0.00	0.85	18	2.1	1.8	1.8	0.39	0.31	3.0	1.8	1.8
28	1.8	0.38	0.00	32	2.3	1.9	1.4	0.44	0.30	2.8	1.6	1.7
29	1.2	0.42	1.7	2.1	---	1.9	1.8	0.29	0.33	2.9	1.6	1.7
30	0.67	0.01	0.04	1.8	---	1.9	2.0	0.18	0.30	2.7	1.5	1.8
31	0.92	---	0.00	1.7	---	1.7	---	0.10	---	2.5	0.70	---
TOTAL	38.44	165.70	57.02	89.71	53.39	110.3	60.9	43.45	7.73	58.48	68.50	48.94
MEAN	1.240	5.523	1.839	2.894	1.907	3.558	2.030	1.402	0.258	1.886	2.210	1.631
MAX	2.1	125	26	32	9.7	30	7.2	7.2	0.41	3.7	2.9	2.0
MIN	0.08	0.00	0.00	0.00	0.13	1.6	1.4	0.10	0.10	0.22	0.70	0.64
AC-FT	76	329	113	178	106	219	121	86	15	116	136	97

11073493 WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.748	3.699	3.650	7.861	13.07	3.888	3.934	2.725	1.021	0.980	0.943	1.304
MAX	3.02	8.22	10.0	20.3	38.6	8.82	5.29	8.92	2.71	2.45	2.21	2.19
(WY)	1997	1997	1997	1997	1998	1998	1999	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002	
ANNUAL TOTAL	1228.20		802.56			
ANNUAL MEAN	3.365		2.199		3.676	
HIGHEST ANNUAL MEAN					7.57	1998
LOWEST ANNUAL MEAN					1.94	1999
HIGHEST DAILY MEAN	190	Feb 12	125	Nov 24	234	Feb 23 1998
LOWEST DAILY MEAN	0.00	Feb 15	0.00	Nov 26	0.00	Jun 11 1997
ANNUAL SEVEN-DAY MINIMUM	0.02	Dec 4	0.03	Dec 4	0.01	Jul 15 1997
MAXIMUM PEAK FLOW			1300	Nov 24	1660	Jan 11 2001
MAXIMUM PEAK STAGE			4.04	Nov 24	4.50	Jan 11 2001
ANNUAL RUNOFF (AC-FT)	2440		1590		2660	
10 PERCENT EXCEEDS	2.4		2.6		3.7	
50 PERCENT EXCEEDS	0.78		1.7		1.6	
90 PERCENT EXCEEDS	0.06		0.17		0.08	

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 mi².

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 and concrete-lined flood-control channel. Elevation of gage is 660 ft above sea level, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.—Records poor. 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 ft³/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 ft³/s, June 6, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	40	49	46	39	38	46	38	47	44	51	48
2	42	37	71	45	36	38	47	40	48	41	50	52
3	43	40	111	46	39	44	46	40	46	42	50	51
4	44	46	47	44	41	49	47	43	46	42	52	54
5	41	41	40	43	43	37	48	46	43	40	48	54
6	39	39	45	42	42	40	48	40	41	45	43	47
7	40	38	51	43	43	42	47	40	42	50	44	50
8	39	40	38	44	46	34	49	37	43	46	42	64
9	39	39	39	42	48	36	44	38	43	44	42	52
10	37	45	44	40	44	41	40	38	45	44	46	43
11	37	44	46	37	46	41	39	39	43	46	52	39
12	34	86	43	41	51	39	43	44	46	37	48	41
13	40	69	37	41	47	36	46	41	47	42	46	41
14	48	44	105	45	44	45	53	44	42	41	47	34
15	40	45	37	39	45	39	55	43	43	41	45	36
16	38	42	35	38	43	39	45	44	45	41	43	45
17	38	42	39	38	83	164	42	44	47	39	43	49
18	38	45	39	38	39	107	46	48	49	37	45	51
19	38	48	40	39	42	40	46	51	44	40	41	52
20	39	42	46	43	48	42	49	86	40	37	43	52
21	40	41	167	46	43	44	55	49	41	34	47	49
22	42	43	37	44	44	43	56	47	41	35	45	50
23	37	39	38	34	34	74	52	44	46	34	43	48
24	38	565	39	54	37	48	97	45	42	39	46	47
25	52	69	38	47	47	45	44	46	52	38	52	52
26	45	51	39	44	45	41	59	46	46	40	53	52
27	45	49	43	151	39	41	53	50	41	42	51	51
28	44	46	39	227	41	45	50	50	42	45	52	50
29	45	51	37	40	---	44	48	43	46	43	50	45
30	42	43	46	40	---	40	39	46	46	47	53	44
31	48	---	50	41	---	44	---	43	---	50	49	---
TOTAL	1279	1909	1575	1602	1239	1500	1479	1393	1333	1286	1462	1443
MEAN	41.26	63.63	50.81	51.68	44.25	48.39	49.30	44.94	44.43	41.48	47.16	48.10
MAX	52	565	167	227	83	164	97	86	52	50	53	64
MIN	34	37	35	34	34	34	39	37	40	34	41	34
AC-FT	2540	3790	3120	3180	2460	2980	2930	2760	2640	2550	2900	2860

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 - 2002, BY WATER YEAR (WY)

MEAN	35.79	39.16	43.93	77.18	93.43	62.20	40.76	33.34	33.51	31.78	32.21	36.30
MAX	52.9	65.7	83.0	265	304	198	65.5	63.0	57.1	46.5	51.8	52.0
(WY)	1988	1997	1993	1993	1998	1995	2001	1998	1992	2001	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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1986 - 2002

ANNUAL TOTAL	22129	17500	
ANNUAL MEAN	60.63	47.95	46.38
HIGHEST ANNUAL MEAN			71.4 1993
LOWEST ANNUAL MEAN			26.6 1987
HIGHEST DAILY MEAN	1180 Feb 12	565 Nov 24	2490 Feb 20 1996
LOWEST DAILY MEAN	26 Jan 3	34 Oct 12	2.5 Jun 6 1987
ANNUAL SEVEN-DAY MINIMUM	38 Oct 6	37 Jul 17	12 Aug 25 1988
MAXIMUM PEAK FLOW		7390 Nov 24	10400 Jan 7 1993
MAXIMUM PEAK STAGE		4.77 Nov 24	5.40 Jan 7 1993
ANNUAL RUNOFF (AC-FT)	43890	34710	33600
10 PERCENT EXCEEDS	60	52	53
50 PERCENT EXCEEDS	44	44	34
90 PERCENT EXCEEDS	38	38	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 mi², excludes 768 mi² 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 sea level (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.—Records good. 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 2,940 acre-ft to the basin. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,440 ft³/s, Feb. 21, 1980, gage height, 6.88 ft; maximum gage height, 7.29 ft, Jan. 19, 1993; minimum daily, 2.4 ft³/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 ft³/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	235	190	207	326	250	289	286	224	213	234	188
2	198	236	190	225	322	236	303	256	222	198	234	182
3	207	223	217	269	321	234	306	243	219	199	233	186
4	210	237	307	291	282	256	293	242	222	194	229	180
5	208	242	330	286	307	255	280	243	222	195	227	186
6	209	241	313	281	315	239	273	244	220	195	231	185
7	211	237	337	279	312	237	270	243	218	196	226	179
8	214	238	332	277	308	253	270	240	216	199	221	188
9	211	234	333	276	297	251	269	238	215	194	219	187
10	216	232	331	271	291	251	266	239	214	187	216	178
11	216	234	343	268	308	250	261	237	214	191	221	169
12	211	239	349	268	312	227	261	233	213	183	218	165
13	203	291	344	267	308	233	261	232	213	180	217	164
14	209	261	324	289	306	232	266	233	211	176	216	161
15	214	262	269	307	302	227	270	236	210	177	219	157
16	208	258	268	304	298	230	267	233	209	174	225	162
17	212	249	309	301	296	230	229	231	215	172	223	170
18	218	243	328	298	296	266	286	230	216	167	231	167
19	217	260	321	295	287	300	272	231	213	171	230	168
20	218	262	276	294	263	314	258	235	216	183	227	173
21	224	248	257	291	260	317	255	237	210	186	228	170
22	231	242	331	291	259	313	259	233	205	187	232	175
23	232	242	329	266	257	312	260	233	207	183	228	174
24	241	264	322	254	254	311	272	234	211	178	227	163
25	238	276	321	255	267	309	269	234	207	167	228	169
26	237	335	318	255	270	308	257	234	206	181	186	169
27	227	365	316	255	277	305	265	231	208	204	192	173
28	231	289	258	217	271	303	266	232	201	214	211	180
29	238	189	206	241	---	300	266	231	199	213	210	183
30	237	190	207	265	---	295	285	227	201	215	216	187
31	242	---	207	302	---	293	---	225	---	223	204	---
TOTAL	6793	7554	9083	8445	8172	8337	8104	7356	6377	5895	6859	5238
MEAN	219.1	251.8	293.0	272.4	291.9	268.9	270.1	237.3	212.6	190.2	221.3	174.6
MAX	242	365	349	307	326	317	306	286	224	223	234	188
MIN	198	189	190	207	254	227	229	225	199	167	186	157
AC-FT	13470	14980	18020	16750	16210	16540	16070	14590	12650	11690	13600	10390

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110.6	139.1	204.3	318.3	409.2	391.4	247.1	178.9	146.9	121.2	99.29	94.60
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	109749		88213			
ANNUAL MEAN	300.7		241.7		204.1	
HIGHEST ANNUAL MEAN					789	
LOWEST ANNUAL MEAN					36.4	
HIGHEST DAILY MEAN	4780	Feb 13	365	Nov 27	6440	Feb 23 1980
LOWEST DAILY MEAN	167	Aug 21	157	Sep 15	2.4	Jul 29 1978
ANNUAL SEVEN-DAY MINIMUM	176	Aug 15	164	Sep 12	3.0	Sep 24 1973
MAXIMUM PEAK FLOW			457	Nov 1	7440	Feb 21 1980
MAXIMUM PEAK STAGE			3.71	Nov 1	7.29	Jan 19 1993
ANNUAL RUNOFF (AC-FT)	217700		175000		147800	
10 PERCENT EXCEEDS	416		308		350	
50 PERCENT EXCEEDS	233		234		125	
90 PERCENT EXCEEDS	184		184		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.

SEDIMENT DATA: Water years 1974–94, 1999 to current year.

CHLORIDE: October 1970 to September 1971.

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 Mar. 13 to June 20, which are rated good, and Sept. 12–30, which are rated poor.

Temperature records rated good for Oct. 1 to Nov. 16 and Apr. 9 to Sept. 30, and poor for remainder of year. 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, 1,040 microsiemens, Feb. 14; minimum recorded, 223 microsiemens, Nov. 24.

WATER TEMPERATURE: Maximum recorded, 28.5°C, July 9; minimum recorded, 10.0°C, Feb. 2.

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION) (00301)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK) (00009)
NOV							
30...*	1203	--	--	--	848	13.0	30.0
30...*	1206	--	--	--	845	13.0	24.0
30...*	1209	--	--	--	846	13.0	18.0
30...*	1212	--	--	--	847	13.0	12.0
30...*	1215	--	--	--	848	13.0	6.00
MAR							
13...*	1726	746	9.6	103	991	17.5	4.00
13...*	1727	746	9.5	102	991	17.5	12.0
13...*	1728	746	9.5	102	991	17.5	20.0
13...*	1730	746	9.4	101	990	17.5	28.0
13...*	1732	746	9.4	101	991	17.5	36.0
SEP							
06...*	1303	--	--	--	950	24.0	7.00
06...*	1306	--	--	--	944	24.0	13.0
06...*	1309	--	--	--	946	24.0	19.0
06...*	1312	--	--	--	944	24.0	27.0
06...*	1315	--	--	--	940	24.5	33.0

* Instantaneous discharge at the time of cross-sectional measurements: Nov. 30, 188 ft³/s; Mar. 13, 234 ft³/s; Sept. 6, 184 ft³/s.

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)
OCT									
05...	1140	207	--	--	--	--	970	--	22.0
15...	1430	217	749	8.6	100	8.2	1000	30.5	22.0
19...	1140	215	--	--	--	--	958	--	19.0
NOV									
02...	1120	237	--	--	--	--	950	--	18.5
16...	1120	257	--	--	--	--	935	--	16.5
30...	1300	190	--	--	--	--	835	--	13.0
DEC									
12...	1600	346	753	9.1	86	7.9	940	16.5	12.0
13...	1220	339	--	--	--	--	948	--	12.0
JAN									
04...	1130	283	--	--	--	--	940	--	14.5
16...	1430	304	750	9.8	96	8.0	949	16.5	13.5
18...	1200	295	--	--	--	--	970	--	13.0
FEB									
01...	1200	323	--	--	--	--	754	--	11.0
13...	1400	304	749	10.0	98	8.1	1040	24.5	13.5
15...	1115	301	--	--	--	--	994	18.5	14.5
MAR									
01...	1220	248	--	--	--	--	996	18.5	16.5
13...	1630	234	746	9.5	102	8.1	988	18.0	17.5
15...	1150	226	--	--	--	--	940	16.0	15.0
APR									
09...	1150	269	--	--	--	--	930	18.5	17.0
17...	1530	301	751	9.2	99	8.1	991	20.5	18.0
19...	1130	271	--	--	--	--	950	16.5	17.5
MAY									
03...	1140	241	--	--	--	--	944	20.0	19.0
17...	1200	232	--	--	--	--	959	22.5	21.0
JUN									
07...	1130	218	--	--	--	--	923	22.5	24.0
12...	1600	208	748	8.3	96	8.2	942	28.0	21.5
20...	1010	218	--	--	--	--	940	21.0	23.0
JUL									
05...	1145	195	--	--	--	--	960	27.0	22.0
18...	1120	165	--	--	--	--	978	26.5	23.5
AUG									
02...	1145	234	--	--	--	--	868	26.5	23.0
14...	1530	205	745	7.7	97	8.2	858	31.5	25.5
15...	1150	209	--	--	--	--	899	26.0	23.5
SEP									
06...	1200	182	--	--	--	--	950	31.0	24.0
19...	0935	166	--	--	--	--	989	21.0	20.0

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT									
05...	--	--	--	--	608	--	--	--	--
15...	204	249	114	104	--	.08	1.0	4.88	.050
19...	--	--	--	--	600	--	--	--	--
NOV									
02...	--	--	--	--	604	--	--	--	--
16...	--	--	--	--	588	--	--	--	--
30...	--	--	--	--	532	--	--	--	--
DEC									
12...	197	240	105	99.7	--	.10	.91	4.89	.114
13...	--	--	--	--	606	--	--	--	--
JAN									
04...	--	--	--	--	600	--	--	--	--
16...	195	238	114	103	--	.04	.82	5.79	.065
18...	--	--	--	--	604	--	--	--	--
FEB									
01...	--	--	--	--	462	--	--	--	--
13...	217	264	114	108	--	<.04	.86	6.55	.068
15...	--	--	--	--	612	--	--	--	--
MAR									
01...	--	--	--	--	628	--	--	--	--
13...	206	251	105	103	--	.06	.72	6.51	.052
15...	--	--	--	--	616	--	--	--	--
APR									
09...	--	--	--	--	597	--	--	--	--
17...	196	239	107	105	--	.07	.76	6.03	.059
19...	--	--	--	--	605	--	--	--	--
MAY									
03...	--	--	--	--	612	--	--	--	--
17...	--	--	--	--	583	--	--	--	--
JUN									
07...	--	--	--	--	584	--	--	--	--
12...	228	278	103	96.6	--	.08	.92	4.43	.078
20...	--	--	--	--	595	--	--	--	--
JUL									
05...	--	--	--	--	585	--	--	--	--
18...	--	--	--	--	607	--	--	--	--
AUG									
02...	--	--	--	--	543	--	--	--	--
14...	179	219	101	85.6	--	.04	.82	3.33	.048
15...	--	--	--	--	542	--	--	--	--
SEP									
06...	--	--	--	--	594	--	--	--	--
19...	--	--	--	--	607	--	--	--	--

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

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)
OCT									
05...	--	--	--	--	--	--	--	--	--
15...	.97	1.16	<.002	<.004	<.002	<.005	e.006	<.010	<.002
19...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
12...	.95	.98	<.002	<.004	<.002	<.005	e.005	<.010	<.002
13...	--	--	--	--	--	--	--	--	--
JAN									
04...	--	--	--	--	--	--	--	--	--
16...	.80	.85	<.006	<.006	<.004	<.005	.008	<.010	<.002
18...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
13...	.70	.81	<.006	<.006	<.004	<.005	<.007	<.010	<.002
15...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
13...	.64	.72	<.006	<.006	<.004	<.005	.007	<.010	<.002
15...	--	--	--	--	--	--	--	--	--
APR									
09...	--	--	--	--	--	--	--	--	--
17...	.73	.82	<.006	<.006	<.004	<.005	.009	<.010	<.002
19...	--	--	--	--	--	--	--	--	--
MAY									
03...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
JUN									
07...	--	--	--	--	--	--	--	--	--
12...	.87	.99	<.006	<.006	<.004	<.005	<.008	<.010	<.002
20...	--	--	--	--	--	--	--	--	--
JUL									
05...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
14...	.58	.79	<.006	<.006	<.004	<.005	e.007	<.010	<.002
15...	--	--	--	--	--	--	--	--	--
SEP									
06...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

e Estimated.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)
OCT									
05...	--	--	--	--	--	--	--	--	--
15...	e.003	<.020	<.005	<.018	<.003	e.004	.028	<.005	<.02
19...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
12...	<.041	<.020	<.005	<.018	e.002	<.006	.024	<.005	<.02
13...	--	--	--	--	--	--	--	--	--
JAN									
04...	--	--	--	--	--	--	--	--	--
16...	e.003	<.020	<.005	<.018	e.001	e.004	.017	<.005	<.02
18...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
13...	<.041	<.020	<.005	<.018	<.003	<.006	.008	<.005	<.02
15...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
13...	e.005	<.020	<.005	<.018	<.003	e.004	.016	<.005	<.02
15...	--	--	--	--	--	--	--	--	--
APR									
09...	--	--	--	--	--	--	--	--	--
17...	e.009	<.020	<.005	<.018	e.003	<.006	.018	<.005	<.02
19...	--	--	--	--	--	--	--	--	--
MAY									
03...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
JUN									
07...	--	--	--	--	--	--	--	--	--
12...	<.041	<.020	<.005	<.018	<.003	e.007	.009	<.005	<.02
20...	--	--	--	--	--	--	--	--	--
JUL									
05...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
14...	<.041	<.020	<.005	<.018	e.001	e.004	.025	<.005	<.02
15...	--	--	--	--	--	--	--	--	--
SEP									
06...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

e Estimated.

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

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)
OCT									
05...	--	--	--	--	--	--	--	--	--
15...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
19...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
12...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
13...	--	--	--	--	--	--	--	--	--
JAN									
04...	--	--	--	--	--	--	--	--	--
16...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
18...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
13...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
15...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
13...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
15...	--	--	--	--	--	--	--	--	--
APR									
09...	--	--	--	--	--	--	--	--	--
17...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
19...	--	--	--	--	--	--	--	--	--
MAY									
03...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
JUN									
07...	--	--	--	--	--	--	--	--	--
12...	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006
20...	--	--	--	--	--	--	--	--	--
JUL									
05...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
14...	<.002	<.009	<.005	<.003	<.011	<.035	<.051	<.050	<.006
15...	--	--	--	--	--	--	--	--	--
SEP									
06...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)
OCT									
05...	--	--	--	--	--	--	--	--	--
15...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006
19...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
12...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006
13...	--	--	--	--	--	--	--	--	--
JAN									
04...	--	--	--	--	--	--	--	--	--
16...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
18...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
13...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
15...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
13...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
15...	--	--	--	--	--	--	--	--	--
APR									
09...	--	--	--	--	--	--	--	--	--
17...	e.010	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
19...	--	--	--	--	--	--	--	--	--
MAY									
03...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
JUN									
07...	--	--	--	--	--	--	--	--	--
12...	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
20...	--	--	--	--	--	--	--	--	--
JUL									
05...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
14...	e.007	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
15...	--	--	--	--	--	--	--	--	--
SEP									
06...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, FLTRD DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, FLTRD DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, FLTRD DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)
OCT									
05...	--	--	--	--	--	--	--	--	--
15...	<.011	e.01	<.004	<.010	<.011	<.02	.024	<.02	<.034
19...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--
DEC									
12...	<.011	e.01	<.004	<.010	<.011	<.02	.055	<.02	<.034
13...	--	--	--	--	--	--	--	--	--
JAN									
04...	--	--	--	--	--	--	--	--	--
16...	<.011	<.01	<.004	<.010	<.011	<.02	.041	<.02	<.034
18...	--	--	--	--	--	--	--	--	--
FEB									
01...	--	--	--	--	--	--	--	--	--
13...	<.011	e.01	<.004	<.010	<.011	<.02	.044	<.02	<.034
15...	--	--	--	--	--	--	--	--	--
MAR									
01...	--	--	--	--	--	--	--	--	--
13...	<.011	e.01	<.004	<.010	<.011	<.02	.060	<.02	<.034
15...	--	--	--	--	--	--	--	--	--
APR									
09...	--	--	--	--	--	--	--	--	--
17...	<.011	.02	<.004	<.010	<.011	<.02	.040	<.02	<.034
19...	--	--	--	--	--	--	--	--	--
MAY									
03...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
JUN									
07...	--	--	--	--	--	--	--	--	--
12...	<.011	e.01	<.004	<.010	<.011	<.02	.226	<.02	<.034
20...	--	--	--	--	--	--	--	--	--
JUL									
05...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
02...	--	--	--	--	--	--	--	--	--
14...	<.011	e.01	<.004	<.010	<.011	<.02	.031	<.02	<.034
15...	--	--	--	--	--	--	--	--	--
SEP									
06...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
OCT				
05...	--	--	--	--
15...	<.02	<.005	<.002	<.009
19...	--	--	--	--
NOV				
02...	--	--	--	--
16...	--	--	--	--
30...	--	--	--	--
DEC				
12...	<.02	<.005	<.002	<.009
13...	--	--	--	--
JAN				
04...	--	--	--	--
16...	<.02	<.005	<.002	<.009
18...	--	--	--	--
FEB				
01...	--	--	--	--
13...	<.02	<.005	<.002	<.009
15...	--	--	--	--
MAR				
01...	--	--	--	--
13...	<.02	<.005	<.002	<.009
15...	--	--	--	--
APR				
09...	--	--	--	--
17...	<.02	<.005	<.002	<.009
19...	--	--	--	--
MAY				
03...	--	--	--	--
17...	--	--	--	--
JUN				
07...	--	--	--	--
12...	<.02	<.005	<.002	<.009
20...	--	--	--	--
JUL				
05...	--	--	--	--
18...	--	--	--	--
AUG				
02...	--	--	--	--
14...	<.02	<.005	<.002	<.009
15...	--	--	--	--
SEP				
06...	--	--	--	--
19...	--	--	--	--

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

SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT						
15...SS	1430	217	22.0	92	81	47.5
DEC						
12...SS	1600	346	12.0	65	6.0	5.6
JAN						
16...SS	1430	304	13.5	62	6.0	4.9
FEB						
13...SS	1400	304	13.5	83	12	9.8
MAR						
13...SS	1630	234	17.5	96	14	8.8
APR						
17...SS	1530	301	18.0	93	25	20.3
JUN						
12...SS	1600	208	21.5	96	30	16.8
AUG						
14...SS	1530	205	25.5	83	52	28.8

SS Suspended-sediment data determined from sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocol.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	994	958	1010	977	913	859	944	916	829	710	1000	966
2	998	964	982	952	929	912	923	859	849	707	984	964
3	1010	973	982	952	941	864	913	849	894	808	980	964
4	1010	966	978	950	950	875	963	891	877	803	980	966
5	994	963	982	957	933	882	924	871	888	793	991	973
6	984	945	987	961	943	868	902	847	888	833	981	938
7	980	925	991	953	973	854	882	847	952	849	956	911
8	973	930	972	943	967	853	927	839	946	916	933	912
9	994	940	964	949	973	856	942	913	984	897	968	931
10	973	942	966	944	969	895	970	917	907	836	957	926
11	974	948	973	942	989	927	976	908	923	866	951	934
12	986	956	984	885	997	934	963	915	907	870	963	924
13	1000	956	938	618	1000	937	964	891	1030	892	979	945
14	1010	961	963	850	963	941	983	923	1040	999	971	953
15	1000	974	955	943	969	899	979	938	1020	963	963	931
16	1010	972	953	941	907	838	981	935	997	968	949	925
17	1010	957	949	931	853	780	978	882	982	924	950	927
18	978	945	942	924	832	768	971	905	924	806	929	576
19	968	940	970	916	954	826	985	897	935	852	701	555
20	973	936	968	950	952	895	938	859	965	901	801	598
21	968	936	992	944	954	894	942	846	966	950	906	782
22	965	942	965	937	906	775	939	850	995	951	941	882
23	964	939	954	930	775	690	935	854	968	931	960	908
24	980	939	951	223	810	716	955	883	955	928	963	853
25	964	931	559	347	801	717	957	890	1030	929	928	854
26	956	937	708	551	906	781	945	879	1020	994	950	917
27	973	949	734	604	903	860	935	859	996	980	945	908
28	990	942	942	723	920	869	932	849	1030	982	940	908
29	979	957	857	820	939	895	865	671	---	---	959	914
30	1020	970	889	824	942	917	827	667	---	---	966	918
31	993	971	---	---	942	918	838	718	---	---	965	931
MONTH	1020	925	1010	223	1000	690	985	667	1040	707	1000	555
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	986	931	946	916	917	888	934	870	817	795	932	882
2	966	938	936	916	917	900	949	878	879	809	935	882
3	964	940	960	911	913	886	961	895	871	792	955	898
4	961	931	946	911	898	863	897	861	831	790	948	885
5	952	919	941	913	919	881	964	895	850	786	912	884
6	942	922	940	911	936	912	971	914	820	783	943	912
7	938	920	938	910	928	915	944	921	854	811	938	844
8	933	913	935	915	927	904	953	913	837	796	847	817
9	933	911	936	911	925	892	968	934	845	793	904	830
10	939	903	932	912	948	886	985	948	839	805	939	882
11	938	913	928	902	935	909	948	917	834	805	952	917
12	932	914	933	861	944	903	939	921	834	806	939	885
13	947	911	929	865	947	923	938	899	843	810	903	860
14	945	922	924	907	936	910	1010	874	855	821	890	866
15	951	915	933	915	929	898	984	909	892	838	940	872
16	927	913	940	922	957	889	952	912	862	831	988	917
17	993	910	953	906	945	914	962	924	859	821	976	936
18	959	930	928	897	941	909	983	942	852	817	993	950
19	964	934	918	892	950	919	951	844	844	812	990	930
20	956	927	932	889	945	897	872	821	851	813	964	929
21	945	921	897	813	929	905	908	826	865	816	965	910
22	943	919	889	808	930	895	914	851	840	805	923	873
23	961	933	903	866	927	893	968	890	849	782	923	880
24	950	671	909	864	931	896	946	902	819	799	968	914
25	881	739	918	884	940	912	937	891	847	805	966	925
26	915	878	929	845	940	899	900	809	890	847	965	922
27	892	797	934	887	927	896	809	752	902	758	955	886
28	908	812	932	894	925	863	801	763	876	858	910	884
29	951	891	930	889	926	869	859	773	900	830	939	901
30	952	891	912	896	912	800	869	829	914	876	963	918
31	---	---	910	890	---	---	870	814	909	887	---	---
MONTH	993	671	960	808	957	800	1010	752	914	758	993	817

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	26.0	22.5	21.0	18.5	13.0	12.5	13.5	13.0	11.0	10.5	18.5	16.5				
2	25.5	21.5	20.0	18.0	13.0	12.5	14.0	13.0	11.5	10.0	17.0	14.0				
3	25.0	22.0	20.5	17.5	13.0	12.5	14.5	13.5	11.5	10.5	17.0	12.5				
4	24.5	21.5	20.5	19.0	13.5	13.0	15.0	14.0	12.0	10.5	18.0	13.0				
5	23.5	21.5	21.5	18.5	13.5	13.0	14.5	14.0	11.5	11.0	18.0	13.5				
6	23.0	20.5	21.0	19.0	14.0	13.0	14.0	13.5	12.0	11.5	17.5	14.0				
7	23.5	20.5	21.0	19.0	14.0	13.0	14.0	13.5	12.5	11.5	18.0	16.0				
8	22.0	19.5	21.0	17.5	13.5	12.5	14.0	13.5	13.0	12.0	18.0	15.5				
9	22.0	20.5	20.0	17.5	13.0	12.5	14.0	13.5	13.5	12.5	19.0	15.0				
10	23.0	19.0	20.5	18.5	13.0	12.5	15.0	14.0	13.0	12.0	19.0	16.0				
11	22.5	19.0	21.0	19.0	12.5	12.0	14.5	13.5	13.0	12.0	20.0	16.0				
12	22.5	19.5	20.5	18.0	12.5	12.0	14.0	13.5	13.5	12.5	20.0	17.0				
13	23.0	19.0	19.5	17.5	12.5	12.0	13.5	13.0	14.0	13.0	19.5	17.5				
14	23.0	18.5	19.0	17.0	12.0	11.5	13.5	13.0	14.5	13.5	18.0	14.5				
15	23.0	19.0	18.5	17.0	12.5	11.5	13.5	13.0	15.5	14.0	17.0	14.5				
16	22.5	19.5	18.5	16.5	11.5	11.0	13.5	13.0	16.0	15.0	16.0	14.5				
17	22.5	18.5	18.5	16.5	11.5	11.0	13.5	13.0	15.5	15.0	15.5	13.5				
18	22.0	18.0	18.5	16.0	11.0	10.5	13.5	12.5	15.0	14.0	14.5	13.5				
19	21.5	18.5	18.5	15.5	11.5	11.0	12.5	12.0	15.0	14.0	13.5	12.5				
20	22.0	19.0	18.5	16.5	11.5	11.0	12.0	11.5	16.0	14.5	14.5	13.0				
21	21.5	19.5	18.5	16.0	12.0	11.0	12.0	11.5	17.0	15.5	16.0	14.5				
22	21.5	19.5	18.5	16.0	12.0	11.5	12.0	11.5	17.5	16.5	16.5	16.0				
23	21.0	18.5	18.5	16.0	12.0	11.5	12.0	11.0	17.5	17.0	17.0	16.5				
24	22.0	19.0	17.0	14.5	12.5	11.5	11.5	11.0	18.0	17.0	17.0	16.5				
25	22.5	19.0	15.0	14.5	12.0	11.5	11.5	10.5	18.0	17.0	17.0	16.5				
26	22.0	18.5	14.5	14.0	12.0	11.5	11.5	11.0	18.5	17.0	17.5	16.5				
27	21.5	18.5	14.0	13.5	12.0	11.5	12.0	11.5	19.0	17.0	18.0	17.0				
28	20.5	19.0	13.5	13.0	12.0	12.0	12.5	12.0	18.5	16.5	18.0	17.5				
29	21.5	19.5	13.0	13.0	12.5	12.0	12.5	12.0	---	---	17.5	16.5				
30	20.5	18.5	13.5	12.5	13.0	12.0	12.0	11.5	---	---	17.5	16.5				
31	21.0	19.0	---	---	13.0	12.5	11.5	11.0	---	---	18.5	17.5				
MONTH	26.0	18.0	21.5	12.5	14.0	10.5	15.0	10.5	19.0	10.0	20.0	12.5				
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	19.0	18.5	20.0	18.5	23.5	23.0	26.5	22.0	25.5	22.0	28.0	22.5				
2	19.0	18.5	19.0	18.5	23.5	22.0	26.5	21.5	26.0	22.5	28.0	23.0				
3	19.0	18.0	20.0	19.0	23.0	21.5	26.0	21.5	26.0	22.5	27.5	23.0				
4	20.0	17.5	20.5	19.5	23.5	21.5	25.5	21.0	26.0	22.0	27.0	23.0				
5	20.0	16.5	20.5	19.5	25.0	23.0	25.5	21.0	26.0	22.0	25.5	23.5				
6	18.5	16.5	20.5	19.5	25.5	24.0	26.5	21.5	25.5	21.5	25.5	23.0				
7	19.5	16.5	20.5	19.5	25.5	23.5	27.0	21.5	25.5	21.0	25.5	21.5				
8	20.0	17.5	20.5	19.5	25.0	23.5	28.0	22.5	26.0	21.5	24.0	20.0				
9	21.5	17.0	21.0	20.0	24.5	22.0	28.5	23.0	26.0	21.5	24.5	20.0				
10	22.0	18.0	21.5	20.5	23.5	22.0	28.0	23.5	26.5	22.0	25.0	20.5				
11	22.5	19.0	21.5	20.0	23.5	21.5	26.5	24.0	27.0	23.0	25.0	20.5				
12	22.0	19.0	22.0	20.0	24.0	22.0	28.0	23.0	27.0	23.0	25.0	21.0				
13	23.5	19.0	22.5	21.0	24.5	22.5	28.0	23.0	26.5	23.0	25.0	21.0				
14	23.5	20.0	22.5	21.5	25.0	22.5	28.0	23.0	26.5	22.5	25.5	21.0				
15	23.0	20.0	22.5	21.5	25.5	22.5	28.0	23.0	26.0	22.5	25.5	21.0				
16	22.0	18.5	22.0	20.5	26.0	22.5	27.5	23.0	25.5	22.5	24.5	21.0				
17	20.5	18.0	22.0	20.5	26.5	23.0	27.5	22.5	25.5	22.5	24.5	20.5				
18	21.0	17.5	22.0	21.0	26.5	23.0	27.5	22.5	25.0	22.5	24.0	21.0				
19	21.0	17.0	21.5	20.5	26.5	23.5	27.0	22.5	24.5	22.5	25.0	20.0				
20	21.5	16.5	21.0	20.0	26.0	23.0	26.5	22.5	24.0	22.0	25.0	21.0				
21	22.5	17.5	20.5	18.5	25.5	22.5	26.0	22.0	25.0	22.0	25.5	20.5				
22	23.5	18.0	20.5	19.5	26.0	21.5	26.5	22.0	25.0	22.0	26.0	21.0				
23	23.5	18.5	21.5	20.5	26.5	22.0	27.5	22.0	25.0	21.5	26.0	21.5				
24	22.5	18.0	21.5	20.5	26.0	22.5	27.5	22.5	25.0	21.0	25.0	21.5				
25	21.5	18.5	21.5	21.0	26.5	22.0	27.5	22.5	25.5	21.0	25.5	22.0				
26	21.5	18.5	21.5	21.0	26.5	22.0	27.5	22.0	26.0	21.5	25.0	22.0				
27	18.5	17.0	21.5	21.0	26.0	21.5	26.5	22.0	25.5	21.5	23.5	21.0				
28	18.5	17.0	22.5	21.0	26.0	21.0	26.0	21.0	26.0	22.5	22.0	20.5				
29	20.0	18.5	23.5	22.0	26.0	21.0	26.0	21.0	25.5	21.5	22.5	20.0				
30	20.0	19.5	24.0	23.0	26.5	21.5	26.0	21.5	26.5	21.5	21.5	19.0				
31	---	---	24.0	23.0	---	---	25.5	22.0	25.5	22.5	---	---				
MONTH	23.5	16.5	24.0	18.5	26.5	21.0	28.5	21.0	27.0	21.0	28.0	19.0				

11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA

LOCATION.—Lat 33°54'48", long 117°50'30", in SW 1/4 NE 1/4 sec.17, T.3 S., R.9 W., [Orange County](#), Hydrologic Unit 18070106, on right wall of outlet channel, 250 ft downstream from toe of Carbon Canyon Dam, and 2.4 mi northwest of Yorba Linda.

DRAINAGE AREA.—19.5 mi².

PERIOD OF RECORD.—October 1961 to current year.

REVISED RECORDS.—WDR CA-88-1: 1983(M).

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Datum of gage is 396.35 ft above sea level, U.S. Army Corps of Engineers datum. Prior to Dec. 3, 1971, at datum 2.00 ft higher.

REMARKS.—Records fair except for discharges below 10 ft³/s, which are poor. Flow regulated by Carbon Canyon Flood-Control Reservoir, capacity, 6,610 acre-ft. No diversion upstream from station. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 796 ft³/s, Mar. 1, 1983, gage height, 5.11 ft, present datum, from rating curve extended above 110 ft³/s, on basis of optical current-meter measurement at 241 ft³/s and normal depth solution for discharge computation at gage height 4.27 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	0.00	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	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.02	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	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.02	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.01	---	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	1.60	0.00	1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.053	0.000	0.053	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.91	0.00	1.6	0.00	0.00	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	3.2	0.00	3.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	0.067	0.218	0.510	2.662	5.702	4.629	0.849	0.436	0.158	0.066	0.024	0.020
MEAN	0.067	0.218	0.510	2.662	5.702	4.629	0.849	0.436	0.158	0.066	0.024	0.020
MAX	0.73	1.94	6.36	32.4	46.9	36.2	6.08	7.40	1.99	0.95	0.36	0.37
(WY)	1996	1997	1967	1993	1980	1983	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)	1962	1962	1963	1963	1964	1962	1962	1962	1962	1962	1962	1962

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1962 - 2002

ANNUAL TOTAL	361.70	3.23	
ANNUAL MEAN	0.991	0.009	1.256
HIGHEST ANNUAL MEAN			7.27
LOWEST ANNUAL MEAN			0.004
HIGHEST DAILY MEAN	69	Feb 13	362
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			796
MAXIMUM PEAK STAGE			5.11
ANNUAL RUNOFF (AC-FT)	717		910
10 PERCENT EXCEEDS	0.34	0.00	0.96
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

11075800 SANTIAGO CREEK AT MODJESKA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.177	1.646	5.214	16.08	37.28	22.13	6.265	3.398	1.425	0.384	0.127	0.067
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1962 - 2002
ANNUAL TOTAL	403.05	0.04	
ANNUAL MEAN	1.104	0.000	7.688
HIGHEST ANNUAL MEAN			47.2 1969
LOWEST ANNUAL MEAN			0.000 2002
HIGHEST DAILY MEAN	47 Feb 26	0.04 Dec 21	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		3.4 Dec 21	6520 Feb 25 1969
MAXIMUM PEAK STAGE		4.26 Dec 21	12.03 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	799	0.08	5570
10 PERCENT EXCEEDS	2.8	0.00	10
50 PERCENT EXCEEDS	0.00	0.00	0.17
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, 50 ft upstream from Bristol Street Bridge at Santa Ana, and 1,625 ft upstream from mouth at Santa Ana River.

DRAINAGE AREA.—98.6 mi².

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 sea level, 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 except for estimated daily discharges, which are poor. 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 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
2	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	e0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.00	0.00	0.00	e0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.17	4.8	0.00	0.00	0.00	e0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
7	0.00	4.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00
8	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
9	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
10	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
11	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
12	0.00	6.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
13	0.00	2.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	e0.00	e0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	7.2	0.00	0.00	0.00	e0.00	e0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	8.7	0.00	0.00	0.00	e0.00	e0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.00	0.00	0.00	e0.00	e0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
21	0.00	0.00	8.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
24	0.00	14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
25	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
27	0.00	0.00	0.00	3.2	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
28	0.00	0.00	0.00	15	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
29	0.00	0.00	0.48	0.00	---	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
30	0.00	0.00	2.5	0.00	---	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00
31	0.00	---	0.92	0.00	---	0.00	---	e0.00	---	0.00	e0.00	---
TOTAL	0.00	27.08	12.80	18.20	0.00	0.00	21.40	8.10	0.00	0.00	0.13	0.00
MEAN	0.000	0.903	0.413	0.587	0.000	0.000	0.713	0.261	0.000	0.000	0.004	0.000
MAX	0.00	14	8.9	15	0.00	0.00	8.7	4.8	0.00	0.00	0.13	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	25	36	0.00	0.00	42	16	0.00	0.00	0.3	0.00

e Estimated.

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 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.207	1.715	2.012	11.31	39.60	22.04	0.654	0.150	0.010	0.016	0.055	0.098
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

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1964 - 2002

ANNUAL TOTAL	822.25	87.71	
ANNUAL MEAN	2.253	0.240	6.305
HIGHEST ANNUAL MEAN			71.7 1969
LOWEST ANNUAL MEAN			0.18 1987
HIGHEST DAILY MEAN	230 Feb 12	15 Jan 28	4270 Feb 25 1969
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		178 Nov 24	6600 Feb 25 1969
MAXIMUM PEAK STAGE		7.37 Nov 24	11.57 Jan 4 1995
ANNUAL RUNOFF (AC-FT)	1630	174	4570
10 PERCENT EXCEEDS	0.30	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	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 mi², excludes 768 mi² 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 sea level, 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 ft³/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 ft³/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 2001 TO SEPTEMBER 2002

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	22	0.06	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	1.7	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	0.12	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.39	0.89	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.05	0.00	0.00	9.5	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	2.3	0.10	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	4.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	26	15	0.00	0.00	2.6	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	2.0	14	0.00	0.00	2.9	0.48	0.00	0.00	0.00	0.04	0.00
16	0.00	0.08	0.40	0.00	0.00	0.28	1.5	0.00	0.00	0.0	0.02	0.00
17	0.00	0.00	0.00	0.00	2.0	0.93	3.2	0.00	0.00	0.00	0.0	0.00
18	0.00	0.00	0.00	0.00	1.7	17	2.7	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.04	5.4	0.20	0.00	0.00	0.00	0.00	0.00
20	0.00	0.11	0.00	0.00	0.00	1.7	0.28	0.17	0.00	0.02	0.0	0.00
21	0.00	0.26	41	0.00	0.00	0.12	0.06	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	674	0.38	0.00	0.00	4.7	0.54	0.00	0.00	0.02	0.00	0.00
25	0.00	53	12	0.00	0.00	1.4	0.04	0.00	0.00	0.00	0.00	0.00
26	0.00	0.83	9.9	0.00	0.00	0.33	0.13	0.00	0.00	0.01	0.00	0.00
27	0.00	0.00	1.4	3.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	289	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	56	15	5.9	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
30	0.00	6.5	10	0.41	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
31	0.00	---	2.7	0.00	---	0.00	---	0.00	---	0.02	0.00	---
TOTAL	0.00	886.28	146.33	299.27	3.76	52.47	10.33	0.17	0.00	0.10	0.06	0.06
MEAN	0.000	29.54	4.720	9.654	0.134	1.693	0.344	0.005	0.000	0.003	0.002	0.002
MAX	0.00	674	41	289	2.0	17	3.2	0.17	0.00	0.03	0.04	0.03
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	1760	290	594	7.5	104	20	0.3	0.00	0.2	0.1	0.1

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 - 2002, BY WATER YEAR (WY)

	1940	1940	1940	1976	1949	1949	1949	1940	1940	1940	1940	1940
MEAN	3.513	12.13	35.49	170.2	284.9	243.8	60.53	26.81	8.318	0.896	1.849	1.391
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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1940 - 2002

ANNUAL TOTAL	40956.40	1398.83	
ANNUAL MEAN	112.2	3.832	69.76
HIGHEST ANNUAL MEAN			612 1993
LOWEST ANNUAL MEAN			0.006 1949
HIGHEST DAILY MEAN	7740 Feb 13	674 Nov 24	11400 Feb 25 1969
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1939
MAXIMUM PEAK FLOW		8080 Nov 24	31700 Jan 4 1995
MAXIMUM PEAK STAGE		5.02 Nov 24	9.09 Jan 4 1995
ANNUAL RUNOFF (AC-FT)	81240	2770	50540
10 PERCENT EXCEEDS	40	1.4	13
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

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 mi².

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 sea level (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; 9.9 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 ft³/s, Jan. 26, 1969, gage height, 22.20 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.00	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	0.07	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	0.00	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	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.07	0.00	0.00	0.00	0.00	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	0.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2002, BY WATER YEAR (WY)

MEAN	2.621	16.08	28.29	123.9	226.0	194.9	57.17	65.41	23.98	8.780	5.609	9.394
MAX	74.6	577	514	2151	3259	2465	616	768	414	170	121	206
(WY)	1993	1966	1947	1969	1969	1978	1978	1998	1958	1962	1962	1946
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)	1943	1943	1943	1945	1947	1947	1945	1945	1945	1943	1943	1943

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1943 - 2002
ANNUAL TOTAL	15.31	0.07	
ANNUAL MEAN	0.042	0.000	62.70
HIGHEST ANNUAL MEAN			540
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	8.5	Jan 11	0.07
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			0.57
MAXIMUM PEAK STAGE			11.28
ANNUAL RUNOFF (AC-FT)	30	0.1	45420
10 PERCENT EXCEEDS	0.00	0.00	63
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 mi².

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 sea level, 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 9.9 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 ft³/s, Jan. 25, 1969, gage height, 10.90 ft, from rating curve extended above 29,000 ft³/s; no flow for part of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	147	157	37	32	75	71	71	69	70	58	65
2	30	149	154	114	44	74	72	78	66	68	67	72
3	28	163	290	386	43	48	75	80	70	67	69	62
4	29	156	382	380	30	53	63	72	64	68	60	74
5	30	152	388	385	22	76	65	76	63	67	52	74
6	30	167	375	378	32	80	79	75	67	67	60	70
7	30	357	378	381	27	88	77	72	68	69	55	69
8	34	364	384	381	27	87	72	72	69	69	62	67
9	29	374	383	296	29	79	70	75	68	66	65	73
10	70	386	360	154	29	79	70	75	57	67	65	61
11	111	286	285	148	34	79	53	74	65	65	61	73
12	113	238	283	149	28	78	69	71	60	66	65	68
13	113	116	281	149	25	80	78	78	62	67	52	57
14	109	236	592	151	29	72	73	70	66	62	56	73
15	109	386	75	146	26	75	80	68	72	63	66	71
16	111	394	47	145	35	74	38	67	70	58	67	74
17	130	395	109	146	203	255	65	68	71	66	68	59
18	150	397	285	150	43	130	74	79	51	63	65	73
19	155	391	288	150	37	74	78	76	63	64	67	69
20	162	396	357	157	69	75	75	143	71	69	74	73
21	154	400	552	159	80	72	79	76	74	66	64	71
22	150	405	217	154	74	75	66	74	66	65	75	72
23	148	383	285	151	76	115	50	67	72	52	78	51
24	162	1700	298	152	72	77	88	73	73	65	73	46
25	148	54	289	153	78	81	70	70	71	62	64	64
26	149	98	294	121	75	77	104	68	68	64	74	65
27	163	260	354	246	73	75	83	67	69	68	68	48
28	162	388	295	529	71	71	82	68	73	63	56	64
29	149	197	226	82	---	79	65	69	76	67	59	67
30	152	153	62	47	---	79	73	69	76	64	71	42
31	146	---	44	34	---	84	---	63	---	63	66	---
TOTAL	3291	9688	8769	6211	1443	2616	2157	2304	2030	2020	2002	1967
MEAN	106.2	322.9	282.9	200.4	51.54	84.39	71.90	74.32	67.67	65.16	64.58	65.57
MAX	163	1700	592	529	203	255	104	143	76	70	78	74
MIN	28	54	44	34	22	48	38	63	51	52	52	42
AC-FT	6530	19220	17390	12320	2860	5190	4280	4570	4030	4010	3970	3900

SAN GABRIEL RIVER BASIN

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.09	149.3	160.2	368.4	567.1	382.0	119.5	114.0	70.05	56.79	54.75	72.85
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1956 - 2002	
ANNUAL TOTAL	54170		44498			
ANNUAL MEAN	148.4		121.9		181.6	
HIGHEST ANNUAL MEAN					810 1993	
LOWEST ANNUAL MEAN					24.4 1977	
HIGHEST DAILY MEAN	3600	Feb 12	1700	Nov 24	24800	Jan 26 1969
LOWEST DAILY MEAN	23	Jul 18	22	Feb 5	0.00	Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	28	Aug 5	28	Feb 4	0.00	Oct 1 1955
MAXIMUM PEAK FLOW			20900	Nov 24	46600	Jan 25 1969
MAXIMUM PEAK STAGE			9.52	Nov 24	10.90	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	107400		88260		131600	
10 PERCENT EXCEEDS	355		294		215	
50 PERCENT EXCEEDS	43		73		68	
90 PERCENT EXCEEDS	30		48		1.8	

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 mi².

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 sea level, from topographic map. Prior to Dec. 4, 1964, at datum 1.03 ft higher.

REMARKS.—Records poor below 50 ft³/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 ft³/s, Feb. 18, 1980; no flow for parts of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	0.87	0.43	2.2	1.8	2.0	1.2	0.93	1.4	0.85	1.2	1.2
2	1.3	1.1	0.70	2.0	1.7	2.2	1.2	0.98	1.6	0.81	1.2	1.3
3	1.2	1.1	8.6	2.6	1.6	2.3	1.2	0.87	1.5	0.99	1.3	1.0
4	1.6	0.90	0.97	2.0	2.2	e1.1	1.3	0.92	1.6	1.0	1.3	1.0
5	0.68	0.31	0.80	1.7	e1.3	3.1	1.3	0.91	2.5	0.97	1.2	0.89
6	0.51	0.42	0.75	1.7	1.9	e1.6	1.4	0.90	0.96	1.0	1.1	1.5
7	0.45	0.45	0.66	1.7	1.9	8.5	1.2	0.89	1.1	1.4	0.84	0.65
8	0.97	0.49	0.62	1.7	1.8	5.4	1.6	1.00	1.2	1.7	0.68	0.20
9	0.49	0.50	0.70	1.8	2.0	2.8	1.2	0.91	1.3	0.96	0.65	0.19
10	0.77	0.63	0.91	1.8	e1.3	2.4	1.1	0.87	1.4	1.3	0.62	1.3
11	0.86	2.0	0.98	1.9	1.9	2.3	1.4	1.0	1.3	0.79	0.66	0.81
12	0.92	1.6	1.1	2.1	1.8	2.2	2.1	0.84	1.3	0.63	0.58	0.81
13	0.72	6.8	1.2	2.1	1.8	1.7	1.7	0.80	1.3	1.1	0.50	0.50
14	0.64	1.5	2.6	2.4	1.7	1.6	1.3	0.82	1.6	1.3	0.55	0.46
15	1.1	1.4	e1.6	2.5	1.8	1.6	3.5	0.76	0.85	1.2	0.50	0.45
16	1.3	1.3	1.7	2.5	1.8	e1.1	1.3	0.82	0.98	0.96	0.54	0.45
17	1.3	1.4	1.5	2.5	12	8.6	1.2	0.95	0.90	1.0	0.57	0.54
18	1.3	1.5	1.6	2.6	3.5	12	1.3	1.0	0.77	1.4	0.63	0.58
19	1.2	1.4	1.5	2.5	e1.7	4.2	1.0	1.2	0.78	1.3	0.84	0.48
20	0.76	1.4	1.8	2.6	2.7	2.2	1.1	7.1	1.3	1.1	1.3	1.6
21	0.92	1.7	3.1	2.8	2.8	1.7	0.98	2.8	1.7	2.0	1.3	0.61
22	1.5	1.6	3.7	3.0	e1.5	1.5	0.94	1.9	1.7	5.6	1.1	0.86
23	1.2	1.6	2.7	3.1	2.4	9.4	0.85	1.8	1.2	1.5	1.3	0.82
24	1.0	5.5	2.2	2.9	2.2	2.2	2.5	1.9	1.4	1.5	1.7	0.84
25	0.93	3.7	1.7	3.2	2.2	1.7	1.6	1.7	1.6	1.4	1.3	0.85
26	1.1	2.9	1.7	3.4	2.1	1.3	6.9	2.1	1.9	1.2	1.6	0.96
27	0.86	1.7	1.6	2.1	2.1	1.4	1.9	1.9	2.1	1.2	1.7	0.81
28	0.94	1.4	1.5	3.0	2.2	1.5	1.5	2.0	1.2	1.4	1.8	1.2
29	0.81	4.6	6.8	4.0	---	1.6	1.2	1.2	1.3	1.5	1.7	1.0
30	0.81	0.62	4.0	2.5	---	1.5	1.0	1.6	1.0	1.4	1.9	1.1
31	1.1	---	3.4	2.0	---	1.2	---	1.5	---	1.3	1.8	---
TOTAL	30.94	116.29	128.82	120.8	65.7	93.9	47.97	44.87	40.74	41.76	33.96	24.96
MEAN	0.998	3.876	4.155	3.897	2.346	3.029	1.599	1.447	1.358	1.347	1.095	0.832
MAX	1.7	5.5	3.1	3.0	12	12	6.9	7.1	2.5	5.6	1.9	1.6
MIN	0.45	0.31	0.43	1.7	1.3	1.1	0.85	0.76	0.77	0.63	0.50	0.19
AC-FT	61	231	256	240	130	186	95	89	81	83	67	50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

MEAN	1.144	3.210	4.718	10.19	15.20	9.862	3.454	1.446	0.827	0.596	0.663	0.908
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1942 - 2002
ANNUAL TOTAL	2381.97	790.71	
ANNUAL MEAN	6.526	2.166	4.300
HIGHEST ANNUAL MEAN			23.9
LOWEST ANNUAL MEAN			0.001
HIGHEST DAILY MEAN	278	Feb 12	1700
LOWEST DAILY MEAN	0.31	Nov 5	0.00
ANNUAL SEVEN-DAY MINIMUM	0.53	Nov 4	0.00
MAXIMUM PEAK FLOW		515	Nov 24
MAXIMUM PEAK STAGE		3.31	Nov 24
ANNUAL RUNOFF (AC-FT)	4720	1570	3110
10 PERCENT EXCEEDS	6.8	2.8	3.8
50 PERCENT EXCEEDS	1.5	1.3	0.26
90 PERCENT EXCEEDS	0.74	0.67	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 mi².

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 sea level, 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 fair. 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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.37	0.36	0.32	0.37	0.41	0.35	0.38	0.34	0.38	0.33	0.54	0.25
2	0.40	0.36	0.32	0.35	0.40	0.30	0.40	0.39	0.35	0.41	0.53	0.25
3	0.39	0.39	3.9	0.60	0.34	0.29	0.41	0.37	0.37	0.34	0.46	0.26
4	0.40	0.37	0.34	0.35	0.32	0.30	0.41	0.39	0.42	0.38	0.34	0.26
5	0.39	0.37	0.34	0.34	0.38	0.37	0.38	0.30	0.39	0.35	0.37	0.34
6	0.39	0.38	0.30	0.30	0.37	0.37	0.38	0.33	0.45	0.35	0.32	0.32
7	0.37	0.35	0.30	0.52	0.38	5.7	0.34	0.39	0.42	0.34	0.43	0.37
8	0.36	0.33	0.28	0.46	0.36	0.83	0.37	0.40	0.42	0.35	0.33	0.32
9	0.41	0.36	0.30	0.34	0.33	0.41	0.38	0.39	0.35	0.38	0.37	0.33
10	0.39	0.37	0.33	0.43	0.29	0.32	0.38	0.37	0.39	0.31	0.38	0.33
11	0.39	0.35	0.34	0.34	0.31	0.30	0.39	0.31	0.45	0.51	0.33	0.37
12	0.38	7.0	0.34	0.37	0.37	0.34	0.39	0.29	0.44	0.40	0.31	0.33
13	0.36	1.3	0.37	0.35	0.34	0.33	0.38	0.31	0.46	0.36	0.30	0.41
14	0.34	0.44	7.4	0.37	0.39	0.32	0.35	0.34	0.42	0.33	0.25	0.45
15	0.35	0.35	0.61	0.40	0.34	0.42	1.2	0.33	0.40	0.34	0.37	0.39
16	0.37	0.34	0.34	0.40	0.35	0.35	0.44	0.37	0.31	0.37	0.40	0.40
17	0.35	0.32	0.36	0.38	3.6	1.1	0.41	0.39	0.34	0.40	0.25	0.50
18	0.45	0.31	0.38	0.33	0.49	1.4	0.38	0.41	0.42	0.42	0.25	0.47
19	0.39	0.31	0.39	0.40	0.37	0.38	0.38	0.44	0.39	0.41	0.14	0.44
20	0.41	0.40	0.37	0.32	0.36	0.39	0.39	4.5	0.44	0.48	0.40	0.44
21	0.41	0.37	18	0.38	0.35	0.39	0.32	0.48	0.43	0.47	0.42	0.45
22	0.41	0.30	0.52	0.40	0.33	0.40	0.36	0.39	0.42	0.41	0.35	0.37
23	0.41	0.36	0.35	0.34	0.36	3.7	0.39	0.40	0.35	0.43	0.36	0.39
24	0.37	33	0.37	0.32	0.33	0.43	0.89	0.37	0.37	0.41	0.40	0.48
25	0.40	3.6	0.40	0.35	0.31	0.38	0.49	0.30	0.44	0.45	0.29	0.47
26	0.36	0.45	0.32	0.38	0.32	0.45	1.2	0.29	0.39	0.47	0.29	0.51
27	0.41	0.31	0.32	8.2	0.35	0.46	0.49	0.31	0.43	0.44	0.37	0.57
28	0.38	0.38	1.1	13	0.36	0.90	0.36	0.41	0.39	0.33	0.37	0.59
29	0.42	2.9	2.8	0.60	---	0.45	0.51	0.44	0.39	0.36	0.40	0.88
30	0.37	0.40	1.1	0.53	---	0.40	0.44	0.44	0.32	0.52	0.29	1.0
31	0.42	---	0.71	0.41	---	0.37	---	0.41	---	0.45	0.21	---
TOTAL	12.02	56.83	43.62	32.63	13.21	22.90	13.99	15.60	11.94	12.30	10.82	12.94
MEAN	0.388	1.894	1.407	1.053	0.472	0.739	0.466	0.503	0.398	0.397	0.349	0.431
MAX	0.45	33	18	13	3.6	5.7	1.2	4.5	0.46	0.52	0.54	1.0
MIN	0.34	0.30	0.28	0.30	0.29	0.29	0.32	0.29	0.31	0.31	0.14	0.25
AC-FT	24	113	87	65	26	45	28	31	24	24	21	26

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 - 2002, BY WATER YEAR (WY)

	1955	1955	1955	1963	1964	1966	1955	1961	1955	1955	1955	1955
MEAN	0.560	1.187	1.951	4.200	5.311	3.238	1.006	0.511	0.354	0.315	0.362	0.450
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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1955 - 2002

ANNUAL TOTAL	917.47	258.80	
ANNUAL MEAN	2.514	0.709	1.602
HIGHEST ANNUAL MEAN			5.16 1993
LOWEST ANNUAL MEAN			0.028 1964
HIGHEST DAILY MEAN	147 Jan 11	33 Nov 24	221 Mar 1 1983
LOWEST DAILY MEAN	0.20 Apr 20	0.14 Aug 19	0.00 Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	0.24 Apr 14	0.27 Aug 30	0.00 Oct 1 1954
MAXIMUM PEAK FLOW		112 Nov 24	392 Mar 1 1983
MAXIMUM PEAK STAGE		5.47 Nov 24	8.25 Mar 1 1983
INSTANTANEOUS LOW FLOW		0.09 Aug 19	0.09 Aug 19 2002
ANNUAL RUNOFF (AC-FT)	1820	513	1160
10 PERCENT EXCEEDS	0.82	0.52	1.0
50 PERCENT EXCEEDS	0.36	0.38	0.33
90 PERCENT EXCEEDS	0.30	0.31	0.00

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 mi².

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 sea level (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 ft³/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 ft³/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 ft³/s, estimated, Mar. 2, 1938.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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	0.01	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
12	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.43	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	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00
25	0.01	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	0.01	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	0.04	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	0.00	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	0.01	0.16	0.00	0.00	0.01	0.08	0.05	0.00	0.72	0.00	0.00	0.00
MEAN	0.000	0.005	0.000	0.000	0.000	0.003	0.002	0.000	0.024	0.000	0.000	0.000
MAX	0.01	0.08	0.00	0.00	0.01	0.08	0.04	0.00	0.43	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	0.02	0.3	0.00	0.00	0.02	0.2	0.10	0.00	1.4	0.00	0.00	0.00
a	119	644	218	269	119	194	121	134	108	122	118	149

a Combined discharge, in acre-feet, of creek and diversion.

11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.406	7.411	3.711	38.20	91.94	78.21	27.48	23.76	7.006	2.550	2.043	3.033
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1948 - 2002
ANNUAL TOTAL	811.05	1.03	
ANNUAL MEAN	2.222	0.003	23.61
HIGHEST ANNUAL MEAN			224 1993
LOWEST ANNUAL MEAN			0.000 1950
HIGHEST DAILY MEAN	227 Feb 14	0.43 Jun 20	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		41 Jun 20	15200 Feb 10 1978
MAXIMUM PEAK STAGE		1.18 Jun 20	7.64 Mar 2 1983
ANNUAL RUNOFF (AC-FT)	1610	2.0	17100
10 PERCENT EXCEEDS	3.8	0.00	18
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 mi².

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 sea level. 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 ft³/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 ft³/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 ft³/s, or maximum, from rating curve extended above 1,170 ft³/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 28	0215	41	2.13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.20	0.52	1.4	2.1	1.1	0.81	0.53	0.29	0.19	0.14	0.08
2	0.13	0.24	0.40	1.4	1.9	1.0	0.74	0.50	0.32	0.17	0.15	0.03
3	0.15	0.22	1.0	1.4	1.8	0.96	0.74	0.48	0.35	0.18	0.14	0.05
4	0.18	0.19	0.81	1.3	1.7	0.94	0.70	0.46	0.31	0.21	0.10	0.06
5	0.22	0.18	0.85	1.3	1.6	0.93	0.73	0.66	0.26	0.22	0.08	0.03
6	0.25	0.20	e0.84	1.3	1.6	0.99	0.77	0.68	0.25	0.21	0.08	0.10
7	0.23	0.23	e0.83	1.3	1.5	1.5	0.75	0.63	0.28	0.19	0.09	0.11
8	0.19	0.22	e0.90	1.3	1.5	1.2	0.74	0.58	0.32	0.16	0.08	0.07
9	0.17	0.26	e0.88	1.2	1.5	1.2	0.71	0.53	0.37	0.14	0.07	0.04
10	0.15	0.23	e0.87	1.2	1.4	1.2	0.70	0.57	0.33	0.13	0.07	0.04
11	0.11	0.31	e0.86	1.1	1.5	1.1	0.67	0.53	0.31	0.17	0.04	0.03
12	0.10	0.57	0.86	1.2	1.4	1.0	0.68	0.37	0.29	0.15	0.04	0.03
13	0.09	0.63	0.88	1.1	1.4	1.00	0.61	0.32	0.27	0.12	0.05	0.05
14	0.09	0.37	1.2	1.1	1.4	0.89	0.57	0.35	0.26	0.12	0.07	0.03
15	0.08	0.31	1.2	1.2	1.4	0.91	0.72	0.40	0.25	0.14	0.09	0.04
16	0.08	0.32	1.1	1.4	1.4	0.87	0.65	0.47	0.23	0.14	0.13	0.06
17	0.10	0.24	1.1	1.2	1.8	1.00	0.64	0.42	0.20	0.16	0.19	0.07
18	0.11	0.21	1.1	1.2	1.6	1.3	0.62	0.42	0.23	0.16	0.25	0.14
19	0.11	0.22	1.1	1.2	1.5	0.88	0.58	0.47	0.24	0.15	0.28	0.14
20	0.12	0.22	1.2	1.0	1.6	0.97	0.54	0.68	0.26	0.15	0.18	0.13
21	0.15	0.25	2.2	0.78	1.5	0.99	0.51	0.49	0.38	0.15	0.20	0.10
22	0.15	0.28	1.8	0.77	1.5	0.96	0.48	0.40	0.32	0.14	0.20	0.02
23	0.16	0.49	1.9	0.75	1.4	1.0	0.47	0.37	0.26	0.11	0.13	0.02
24	0.15	1.7	1.6	0.69	1.3	1.0	0.58	0.35	0.29	0.08	0.08	0.03
25	0.11	0.58	1.5	0.68	1.3	1.0	0.55	0.37	0.27	0.07	0.05	0.03
26	0.09	0.30	1.5	0.59	1.3	0.92	0.59	0.37	0.26	0.08	0.07	0.06
27	0.11	0.39	1.4	3.2	1.2	0.93	0.60	0.36	0.25	0.13	0.07	0.16
28	0.18	0.62	1.3	17	1.1	0.97	0.51	0.36	0.21	0.13	0.16	0.25
29	0.18	0.75	1.4	5.2	---	1.0	0.48	0.27	0.21	0.14	0.27	0.48
30	0.18	0.73	1.4	3.0	---	0.94	0.50	0.27	0.20	0.12	0.19	0.25
31	0.22	---	1.4	2.3	---	0.89	---	0.26	---	0.13	0.10	---
TOTAL	4.45	11.66	35.90	59.76	42.2	31.54	18.94	13.92	8.27	4.54	3.84	2.73
MEAN	0.144	0.389	1.158	1.928	1.507	1.017	0.631	0.449	0.276	0.146	0.124	0.091
MAX	0.25	1.7	2.2	17	2.1	1.5	0.81	0.68	0.38	0.22	0.28	0.48
MIN	0.08	0.18	0.40	0.59	1.1	0.87	0.47	0.26	0.20	0.07	0.04	0.02
AC-FT	8.8	23	71	119	84	63	38	28	16	9.0	7.6	5.4

e Estimated.

11098000 ARROYO SECO NEAR PASADENA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.146	3.771	8.558	18.10	33.01	27.82	13.92	7.114	3.465	1.671	1.002	1.026
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1911 - 2002	
ANNUAL TOTAL	1631.13		237.75			
ANNUAL MEAN	4.469		0.651		9.949	
HIGHEST ANNUAL MEAN					57.8	1969
LOWEST ANNUAL MEAN					0.65	2002
HIGHEST DAILY MEAN	169	Feb 13	17	Jan 28	3690	Feb 20 1914
LOWEST DAILY MEAN	0.08	Sep 26	0.02	Sep 22	0.00	Aug 18 1920
ANNUAL SEVEN-DAY MINIMUM	0.09	Sep 24	0.04	Sep 9	0.00	Aug 18 1920
MAXIMUM PEAK FLOW			41	Jan 28	8620	Mar 2 1938
MAXIMUM PEAK STAGE			2.13	Jan 28	9.42	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	3240		472		7210	
10 PERCENT EXCEEDS	11		1.4		16	
50 PERCENT EXCEEDS	0.86		0.37		1.8	
90 PERCENT EXCEEDS	0.13		0.08		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 mi².

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 sea level, from topographic map.

REMARKS.—Records good except for discharges below 500 ft³/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. 23, Nov. 25 to Dec. 2, Dec. 4–13, 15–20, 22–28, Dec. 30 to Jan. 15, Jan. 17–26, Jan. 28 to Feb. 16, Feb. 18 to Mar. 6, Mar. 8–16, and Mar. 18 to Sept. 30.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,800 ft³/s, Jan. 25, 1969, gage height, 13.82 ft, from rating curve extended above 15,000 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	102	112	12	25	76	48	61	48	84	0.00	0.00
2	0.00	102	111	19	24	70	80	66	47	81	0.00	0.00
3	0.00	103	209	162	31	54	60	68	49	82	0.00	4.5
4	0.00	104	146	165	32	43	54	61	51	77	0.00	0.00
5	0.00	117	144	165	14	72	50	65	54	76	0.00	0.00
6	0.00	104	141	165	18	74	61	e60	55	78	0.00	0.00
7	0.00	95	137	164	13	259	68	67	59	76	0.00	0.00
8	0.00	87	136	164	15	82	51	e59	57	73	0.00	0.00
9	0.00	141	136	161	15	72	34	e55	54	75	0.00	0.00
10	0.00	138	138	138	16	70	11	e53	47	77	0.00	0.00
11	0.00	141	142	132	18	75	60	e53	55	74	0.00	0.00
12	0.00	71	141	129	17	66	55	e52	49	71	1.0	0.00
13	0.00	19	143	130	9.4	57	61	e53	53	73	30	0.00
14	0.00	127	410	69	16	57	64	e54	57	66	25	0.00
15	0.00	137	56	2.0	15	56	76	56	58	70	34	0.00
16	0.00	140	e30	116	16	54	36	52	58	66	39	0.00
17	0.00	141	e40	1.6	133	410	56	56	62	74	42	0.00
18	0.00	142	141	1.0	7.7	125	57	55	41	70	42	0.00
19	37	143	158	0.62	6.7	12	63	52	e38	69	45	0.00
20	53	142	185	0.00	16	32	59	97	e70	74	48	0.00
21	58	143	566	0.00	61	62	65	63	82	65	39	0.00
22	66	146	157	0.00	58	61	61	61	77	70	41	2.0
23	66	144	149	0.00	57	78	48	50	79	57	0.00	0.00
24	79	1420	139	0.00	56	64	75	52	84	64	0.00	0.00
25	80	333	131	0.00	68	65	65	49	81	63	0.00	0.00
26	86	20	125	0.00	74	66	75	47	78	65	0.00	0.00
27	89	41	141	476	72	66	71	44	80	73	0.00	0.00
28	95	112	153	265	71	61	69	48	82	68	0.00	9.1
29	102	111	379	93	---	68	57	51	78	29	0.00	0.00
30	108	108	62	45	---	66	66	48	78	0.00	0.00	0.00
31	109	---	41	26	---	66	---	44	---	0.00	0.00	---
TOTAL	1028.00	4874	4899	2801.22	974.8	2539	1756	1752	1861	2040.00	386.00	15.60
MEAN	33.16	162.5	158.0	90.36	34.81	81.90	58.53	56.52	62.03	65.81	12.45	0.520
MAX	109	1420	566	476	133	410	80	97	84	84	48	9.1
MIN	0.00	19	30	0.00	6.7	12	11	44	38	0.00	0.00	0.00
AC-FT	2040	9670	9720	5560	1930	5040	3480	3480	3690	4050	766	31

e Estimated.

LOS ANGELES RIVER BASIN

11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.74	135.0	156.0	333.1	504.2	328.2	117.7	108.3	98.37	67.78	50.34	68.04
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002	
ANNUAL TOTAL	29585.00		24926.62			
ANNUAL MEAN	81.05		68.29		170.3	
HIGHEST ANNUAL MEAN					638	
LOWEST ANNUAL MEAN					40.9	
HIGHEST DAILY MEAN	3210	Jan 11	1420	Nov 24	21200	Mar 2 1983
LOWEST DAILY MEAN	0.00	Apr 16	0.00	Oct 1	0.00	Oct 29 1966
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 24	0.00	Oct 1	0.00	Sep 10 1969
MAXIMUM PEAK FLOW			12500	Nov 24	38800	Jan 25 1969
MAXIMUM PEAK STAGE			7.57	Nov 24	13.82	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	58680		49440		123400	
10 PERCENT EXCEEDS	147		141		246	
50 PERCENT EXCEEDS	0.00		57		73	
90 PERCENT EXCEEDS	0.00		0.00		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 mi².

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 sea level (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 ft³/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 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	2105	1,740	3.37

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	27	33	36	33	21	21	14	11	9.7	7.5	7.4
2	17	27	31	34	34	22	20	16	15	8.9	4.9	5.8
3	21	26	61	72	32	22	19	16	12	9.1	6.7	5.0
4	17	28	31	37	32	19	21	17	14	9.5	9.2	5.4
5	18	29	28	33	28	18	19	19	19	17	7.1	5.8
6	23	29	31	32	24	21	19	15	22	16	6.9	3.9
7	24	26	30	29	24	29	25	14	22	12	8.9	3.6
8	21	25	27	29	24	20	21	16	22	12	7.7	7.5
9	21	25	30	30	24	20	22	19	25	9.8	6.5	5.6
10	21	21	29	30	27	21	23	17	19	10	8.2	3.8
11	24	50	29	29	23	22	22	11	16	13	8.3	3.7
12	23	189	29	27	23	23	23	16	17	17	5.1	4.2
13	26	187	28	29	23	23	24	15	17	13	5.9	4.2
14	27	35	36	30	22	22	28	12	16	15	8.4	3.6
15	26	29	30	30	23	24	24	14	13	16	9.9	5.4
16	22	27	24	33	24	25	19	16	16	19	8.9	4.5
17	24	26	25	31	68	30	18	14	16	17	10	3.4
18	23	28	21	33	37	36	20	14	14	16	12	3.2
19	26	26	22	29	31	25	18	17	17	16	12	4.6
20	28	27	30	35	22	24	17	20	14	17	24	5.6
21	32	27	141	31	25	23	19	20	11	20	15	6.0
22	30	28	39	32	25	28	16	14	12	16	5.7	9.3
23	28	26	31	29	23	30	15	12	15	9.2	6.7	5.7
24	27	383	30	33	23	29	21	9.4	18	9.2	5.2	3.4
25	26	120	29	30	24	28	18	13	16	8.4	9.0	4.2
26	26	34	28	32	23	28	20	17	14	8.2	6.1	5.6
27	24	30	28	137	22	27	20	10	11	11	5.6	5.7
28	24	28	29	159	19	22	19	15	12	12	6.9	5.8
29	25	89	157	47	---	19	17	19	11	9.7	5.4	12
30	32	43	69	39	---	16	13	9.1	9.5	11	7.1	5.3
31	48	---	52	37	---	22	---	13	---	9.5	6.1	---
TOTAL	772	1695	1238	1274	762	739	601	463.5	466.5	397.2	256.9	159.2
MEAN	24.90	56.50	39.94	41.10	27.21	23.84	20.03	14.95	15.55	12.81	8.287	5.307
MAX	48	383	157	159	68	36	28	20	25	20	24	12
MIN	17	21	21	27	19	16	13	9.1	9.5	8.2	4.9	3.2
AC-FT	1530	3360	2460	2530	1510	1470	1190	919	925	788	510	316

CALLEGUAS CREEK BASIN

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.97	28.64	45.66	95.76	171.9	110.4	27.05	18.86	14.01	11.95	11.27	13.47
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1969 - 2002	
ANNUAL TOTAL	26407		8824.3			
ANNUAL MEAN	72.35		24.18		46.23	
HIGHEST ANNUAL MEAN					149	1998
LOWEST ANNUAL MEAN					8.46	1970
HIGHEST DAILY MEAN	4020	Mar 6	383	Nov 24	9690	Mar 1 1983
LOWEST DAILY MEAN	17	Jul 21	3.2	Sep 18	0.00	Apr 24 1970
ANNUAL SEVEN-DAY MINIMUM	19	Sep 29	4.1	Sep 12	0.00	Jul 19 1970
MAXIMUM PEAK FLOW			1740	Nov 24	25900	Mar 1 1983
MAXIMUM PEAK STAGE			3.37	Nov 24	10.54	Feb 16 1980
ANNUAL RUNOFF (AC-FT)	52380		17500		33490	
10 PERCENT EXCEEDS	63		33		42	
50 PERCENT EXCEEDS	29		21		15	
90 PERCENT EXCEEDS	21		6.6		2.9	

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 current year.

SEDIMENT DATA: Water years 1969–78, October 1996 to current year (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.—

SEDIMENT CONCENTRATION: Maximum daily mean, 62,900 mg/L, Jan. 25, 1969; no flow for many days.

SEDIMENT LOAD: Maximum daily, 1,700,000 tons, Jan. 25, 1969; minimum daily, 0 ton on many days during most years.

EXTREMES FOR CURRENT YEAR.—

SEDIMENT CONCENTRATION: Maximum daily mean, 347 mg/L, May 16; minimum daily mean, 4 mg/L, Sept. 18.

SEDIMENT LOAD: Maximum daily, 16 tons, June 9; minimum daily, 0.05 ton, Sept. 11, 18.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT					
05...	1315	19	21.0	44	2.3
NOV					
08...	1610	23	20.5	42	2.6
DEC					
07...	1140	29	14.5	16	1.3
18...	1145	26	12.5	252	17.7
JAN					
09...	1220	30	16.0	12	.97
FEB					
12...	1200	22	15.0	199	11.8

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	17.0	24.0	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	23.5	---
3	---	---	---	---	---	---	17.5	---	---	---	---	---
4	---	---	---	---	---	---	---	---	26.0	---	---	26.5
5	21.0	---	---	---	---	---	18.5	---	---	29.0	---	---
6	---	---	---	---	---	---	---	22.5	25.0	---	26.0	24.0
7	---	---	14.5	---	---	---	---	---	---	---	---	---
8	---	20.5	---	---	---	---	---	24.0	---	---	24.5	23.0
9	---	---	---	16.0	---	---	---	18.0	---	27.0	---	---
10	---	---	---	---	---	---	22.5	---	---	23.5	---	---
11	---	---	---	---	---	---	---	---	26.5	25.0	---	---
12	---	---	---	---	15.0	---	22.5	---	---	---	---	---
13	---	---	---	---	---	---	---	---	27.5	---	---	---
14	---	---	---	---	---	17.5	---	---	---	---	---	---
15	---	---	---	---	---	---	22.5	24.5	---	---	23.5	---
16	---	---	---	---	---	---	---	---	---	27.0	---	23.5
17	---	---	---	---	---	---	22.0	---	---	---	---	---
18	---	---	12.5	---	---	---	---	---	27.5	26.5	---	---
19	---	---	---	---	---	---	22.5	---	---	---	---	---
20	---	---	---	---	---	---	---	---	22.5	---	---	---
21	---	---	---	---	---	---	---	---	---	---	23.5	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	23.0	---	24.5
24	---	---	---	---	---	---	24.0	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	25.0	26.0	---	25.0	---
29	---	---	---	---	---	21.0	23.5	---	---	---	---	---
30	---	---	---	---	---	---	---	29.0	---	---	25.0	22.0
31	---	---	---	---	---	---	---	---	---	25.5	---	---

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	18	---	---	27	---	---	33	---	---
2	17	---	---	27	---	---	31	---	---
3	21	---	---	26	---	---	61	---	---
4	17	---	---	28	---	---	31	---	---
5	18	---	---	29	---	---	28	---	---
6	23	---	---	29	---	---	31	---	---
7	24	---	---	26	---	---	30	---	---
8	21	---	---	25	---	---	27	---	---
9	21	---	---	25	---	---	30	---	---
10	21	---	---	21	---	---	29	---	---
11	24	---	---	50	---	---	29	---	---
12	23	---	---	189	---	---	29	---	---
13	26	---	---	187	---	---	28	---	---
14	27	---	---	35	---	---	36	---	---
15	26	---	---	29	---	---	30	---	---
16	22	---	---	27	---	---	24	---	---
17	24	---	---	26	---	---	25	---	---
18	23	---	---	28	---	---	21	---	---
19	26	---	---	26	---	---	22	---	---
20	28	---	---	27	---	---	30	---	---
21	32	---	---	27	---	---	141	---	---
22	30	---	---	28	---	---	39	---	---
23	28	---	---	26	---	---	31	---	---
24	27	---	---	383	---	---	30	---	---
25	26	---	---	120	---	---	29	---	---
26	26	---	---	34	---	---	28	---	---
27	24	---	---	30	---	---	28	---	---
28	24	---	---	28	---	---	29	---	---
29	25	---	---	89	---	---	157	---	---
30	32	---	---	43	---	---	69	---	---
31	48	---	---	---	---	---	52	---	---
TOTAL	772	---	---	1695	---	---	1238	---	---
	JANUARY			FEBRUARY			MARCH		
1	36	---	---	33	---	---	21	44	2.6
2	34	---	---	34	---	---	22	44	2.7
3	72	---	---	32	---	---	22	48	2.9
4	37	---	---	32	---	---	19	25	1.4
5	33	---	---	28	---	---	18	23	1.2
6	32	---	---	24	---	---	21	45	2.6
7	29	---	---	24	---	---	29	85	7.0
8	29	---	---	24	---	---	20	38	2.1
9	30	---	---	24	---	---	20	35	1.9
10	30	---	---	27	---	---	21	33	1.9
11	29	---	---	23	---	---	22	41	2.5
12	27	---	---	23	---	---	23	42	2.6
13	29	---	---	23	---	---	23	40	2.5
14	30	---	---	22	---	---	22	47	2.9
15	30	---	---	23	---	---	24	50	3.3
16	33	---	---	24	---	---	25	54	3.7
17	31	---	---	68	---	---	30	80	6.7
18	33	---	---	37	---	---	36	103	10.0
19	29	---	---	31	---	---	25	63	4.5
20	35	---	---	22	---	---	24	51	3.4
21	31	---	---	25	---	---	23	53	3.4
22	32	---	---	25	---	---	28	64	4.8
23	29	---	---	23	---	---	30	65	5.4
24	33	---	---	23	---	---	29	59	4.6
25	30	---	---	24	---	---	28	56	4.1
26	32	---	---	23	---	---	28	58	4.4
27	137	---	---	22	---	---	27	44	3.4
28	159	---	---	19	---	---	22	24	1.5
29	47	---	---	---	---	---	19	25	1.3
30	39	---	---	---	---	---	16	25	1.2
31	37	---	---	---	---	---	22	45	2.8
TOTAL	1274	---	---	762	---	---	739	---	105.3

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	APRIL			MAY			JUNE		
1	21	41	2.5	14	64	2.5	11	128	4.1
2	20	27	1.5	16	58	2.7	15	165	6.5
3	19	27	1.4	16	31	1.4	12	111	3.8
4	21	29	1.6	17	26	1.2	14	172	6.7
5	19	21	1.2	19	33	1.7	19	168	8.5
6	19	15	0.85	15	41	1.6	22	151	9.3
7	25	37	2.5	14	84	3.2	22	225	15.0
8	21	32	2.0	16	148	6.5	22	200	12.0
9	22	30	1.8	19	188	10.0	25	236	16.0
10	23	37	2.4	17	176	8.4	19	164	9.9
11	22	33	2.0	11	92	3.0	16	87	3.6
12	23	30	1.9	16	226	11.0	17	97	4.9
13	24	45	2.9	15	248	11.0	17	58	2.8
14	28	48	3.6	12	222	7.6	16	84	3.8
15	24	37	2.5	14	315	12.0	13	51	2.5
16	19	23	1.3	16	347	15.0	16	76	4.3
17	18	21	0.99	14	312	12.0	16	106	5.5
18	20	28	1.5	14	229	8.4	14	47	2.1
19	18	20	1.2	17	249	11.0	17	97	4.4
20	17	23	1.1	20	272	15.0	14	56	3.0
21	19	27	1.4	20	254	15.0	11	33	1.0
22	16	24	1.1	14	206	8.1	12	39	1.5
23	15	18	0.76	12	157	5.9	15	70	2.8
24	21	32	1.8	9.4	125	3.3	18	102	5.1
25	18	26	1.3	13	144	5.0	16	82	3.9
26	20	30	1.6	17	205	9.8	14	66	2.9
27	20	28	1.5	10	135	3.8	11	47	1.6
28	19	31	1.7	15	177	7.1	12	42	1.4
29	17	29	1.3	19	211	13.0	11	36	1.1
30	13	43	1.7	9.1	79	2.4	9.5	37	0.96
31	---	---	---	13	142	5.3	---	---	---
TOTAL	601	---	50.90	463.5	---	223.9	466.5	---	150.96
	JULY			AUGUST			SEPTEMBER		
1	9.7	32	1.2	7.5	37	0.79	7.4	15	0.32
2	8.9	38	0.97	4.9	32	0.45	5.8	13	0.27
3	9.1	35	1.1	6.7	42	0.78	5.0	8	0.13
4	9.5	33	0.98	9.2	44	1.1	5.4	11	0.17
5	17	46	2.6	7.1	32	0.70	5.8	14	0.27
6	16	49	2.5	6.9	35	0.68	3.9	10	0.12
7	12	38	1.3	8.9	45	1.2	3.6	6	0.07
8	12	25	0.88	7.7	25	0.61	7.5	11	0.23
9	9.8	19	0.55	6.5	20	0.41	5.6	11	0.19
10	10	32	0.91	8.2	30	0.65	3.8	6	0.07
11	13	33	1.3	8.3	27	0.66	3.7	4	0.05
12	17	58	2.5	5.1	17	0.32	4.2	6	0.07
13	13	51	2.1	5.9	23	0.38	4.2	6	0.08
14	15	51	2.0	8.4	34	0.78	3.6	5	0.06
15	16	52	2.3	9.9	41	1.2	5.4	10	0.17
16	19	69	3.6	8.9	36	0.90	4.5	8	0.12
17	17	67	3.2	10	42	1.2	3.4	9	0.10
18	16	48	2.1	12	53	1.7	3.2	5	0.05
19	16	47	2.1	12	57	1.9	4.6	11	0.14
20	17	52	2.4	24	105	6.7	5.6	10	0.17
21	20	73	3.9	15	58	3.2	6.0	14	0.26
22	16	57	2.7	5.7	17	0.27	9.3	25	0.68
23	9.2	21	0.59	6.7	23	0.44	5.7	15	0.34
24	9.2	33	0.83	5.2	18	0.30	3.4	12	0.11
25	8.4	35	0.82	9.0	29	0.72	4.2	15	0.18
26	8.2	33	0.76	6.1	24	0.52	5.6	22	0.33
27	11	48	1.5	5.6	19	0.31	5.7	20	0.34
28	12	53	1.8	6.9	12	0.24	5.8	20	0.31
29	9.7	46	1.3	5.4	12	0.20	12	36	1.3
30	11	43	1.4	7.1	13	0.28	5.3	16	0.28
31	9.5	41	1.2	6.1	10	0.18	---	---	---
TOTAL	397.2	---	53.39	256.9	---	29.77	159.2	---	6.98

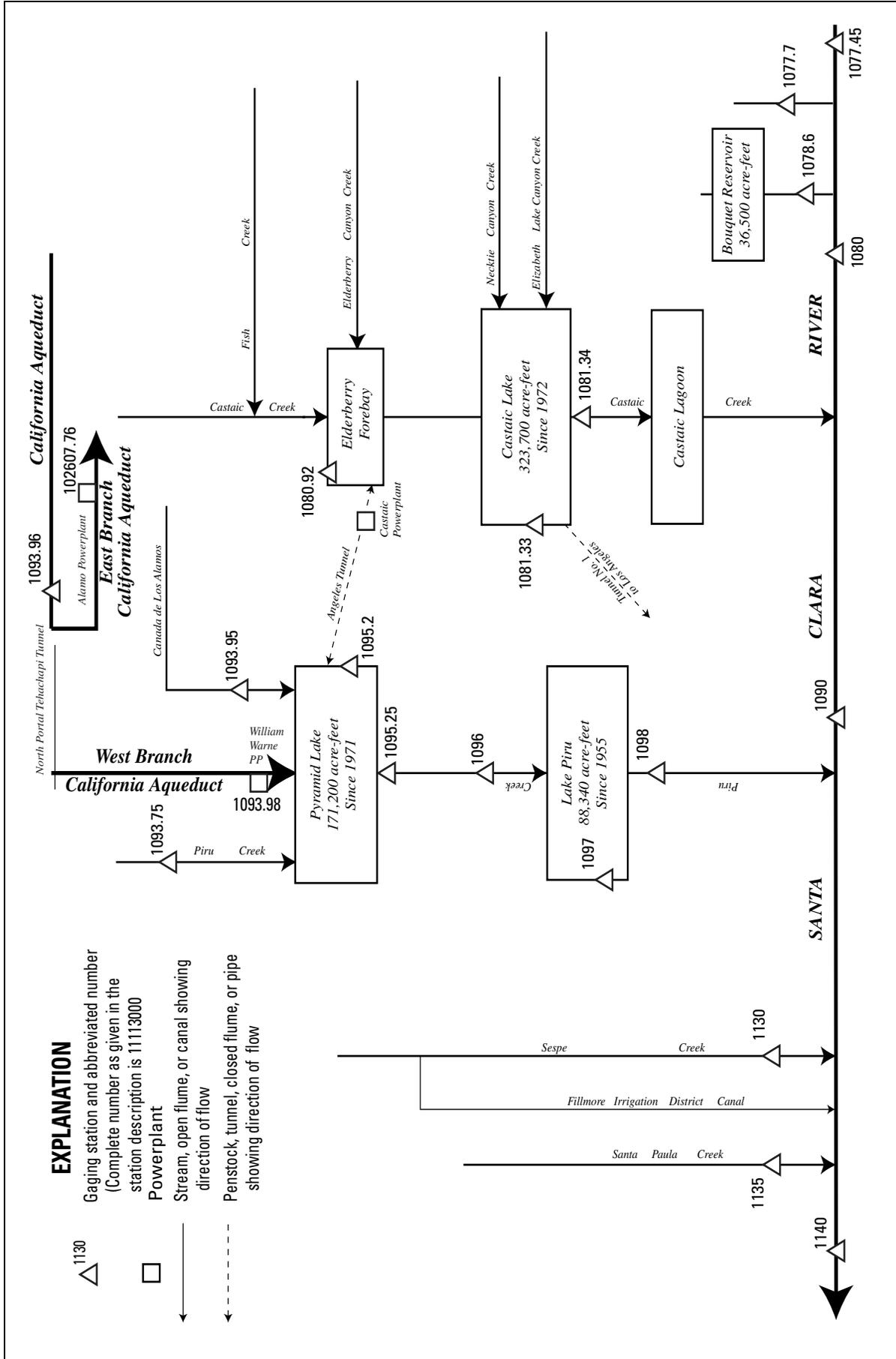


Figure 19. Diversions and storage in Santa Clara River Basin.

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 mi².

PERIOD OF RECORD.—October 1949 to September 1968, October 1969 to September 1977, February to September 2002. 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. Elevation of gage is 1,790 ft above sea level, from topographic map.

REMARKS.—No regulation above station. Small diversions for irrigation and recreation above station. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,200 ft³/s, Jan. 16, 1952, Nov. 21, 1967, gage height, unknown; maximum recorded gage height, 4.44 ft, Nov. 29, 1970, at site and datum then in use; no flow for all or most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 5,910 ft³/s, estimated, Feb. 25, 1969.

EXTREMES FOR CURRENT YEAR.—No flow from February to September 2002.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.032	2.609	4.891	9.844	6.542	9.310	8.118	3.966	1.940	1.070	0.881	0.797
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

WATER YEARS 1950 - 2002

ANNUAL MEAN	4.324
HIGHEST ANNUAL MEAN	29.3 1952
LOWEST ANNUAL MEAN	0.20 1977
HIGHEST DAILY MEAN	1280 Jan 18 1952
LOWEST DAILY MEAN	0.00 Sep 4 1971
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 30 1972
MAXIMUM PEAK FLOW	4200 Jan 16 1952
MAXIMUM PEAK STAGE	4.44 Nov 29 1970
ANNUAL RUNOFF (AC-FT)	3130
10 PERCENT EXCEEDS	7.1
50 PERCENT EXCEEDS	1.3
90 PERCENT EXCEEDS	0.20

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 mi².

PERIOD OF RECORD.—November 2001 to September 2002.

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 sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3.0 ft³/s, Nov. 24, 2001, gage height, 8.74 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1445	3.0	8.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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
2	---	---	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	---	---	0.08	0.20	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
4	---	---	0.00	0.00	0.00	0.00	0.01	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
6	---	0.00	0.00	0.05	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
7	---	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
8	---	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	0.00	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
11	---	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
13	---	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	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	---	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	---	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	---	0.00	0.00	0.00	0.24	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	---	0.00	0.00	0.00	0.00	e0.01	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
20	---	0.00	0.37	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	---	0.00	0.22	0.00	0.00	0.02	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
23	---	0.00	0.00	0.16	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
24	---	0.31	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
26	---	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	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	---	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	---	0.42	0.70	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	---	0.00	0.38	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	---	---	0.00	0.05	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	---	---	1.75	1.44	0.25	0.39	0.01	0.00	0.00	0.00	0.00	0.00
MEAN	---	---	0.056	0.046	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000
MAX	---	---	0.70	0.74	0.24	0.21	0.01	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
AC-FT	---	---	3.5	2.9	0.5	0.8	0.02	0.00	0.00	0.00	0.00	0.00

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

MEAN	---	0.028	0.056	0.046	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000
MAX	---	0.028	0.056	0.046	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	---	0.028	0.056	0.046	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	---	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

ANNUAL TOTAL	4.57
ANNUAL MEAN	0.014
HIGHEST DAILY MEAN	0.74 Jan 27
LOWEST DAILY MEAN	0.00 Nov 5
ANNUAL SEVEN-DAY MINIMUM	0.00 Nov 5
MAXIMUM PEAK FLOW	3.0 Nov 24
MAXIMUM PEAK STAGE	8.74 Nov 24
ANNUAL RUNOFF (AC-FT)	9.1
10 PERCENT EXCEEDS	0.00
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	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 mi².

PERIOD OF RECORD.—October 1929 to September 1955, February to September 2002.

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 sea level, from topographic map. From September 21, 1938 to September 1955, at same site at different datum. Prior to September 21, 1938, at site 1,000 ft downstream at different datum.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,000 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	6.7	6.3	e6.3	6.3	5.3	3.4	2.3
2	---	---	---	---	---	6.0	6.3	e6.2	6.2	5.4	3.4	2.3
3	---	---	---	---	---	6.5	6.3	6.4	6.1	5.6	3.4	2.3
4	---	---	---	---	---	6.9	6.4	6.3	6.1	5.7	4.5	2.3
5	---	---	---	---	---	6.5	6.9	6.4	6.1	5.6	3.2	2.4
6	---	---	---	---	---	6.5	6.8	6.3	6.2	5.6	3.1	2.4
7	---	---	---	---	---	7.4	6.4	6.3	6.4	5.5	3.1	2.2
8	---	---	---	---	---	6.0	6.4	6.3	6.5	5.4	3.1	2.2
9	---	---	---	---	---	6.2	e6.3	6.3	6.3	5.3	2.9	2.2
10	---	---	---	---	---	6.3	e6.2	6.2	6.1	4.9	2.8	2.3
11	---	---	---	---	---	6.4	e6.2	6.2	6.3	4.8	2.6	2.2
12	---	---	---	---	---	6.4	e6.2	6.2	5.6	4.8	2.6	2.3
13	---	---	---	---	---	6.6	e6.1	6.2	5.9	4.8	2.6	2.3
14	---	---	---	---	---	6.4	e6.2	6.1	6.0	4.5	2.6	2.3
15	---	---	---	---	11	6.4	e6.2	6.1	6.0	4.4	2.6	2.4
16	---	---	---	---	11	6.3	e6.2	6.2	6.0	4.3	2.7	2.4
17	---	---	---	---	17	7.2	e6.3	6.1	5.9	4.3	2.7	2.4
18	---	---	---	---	9.3	6.3	e6.3	6.4	6.1	4.3	2.7	2.4
19	---	---	---	---	9.8	6.5	e6.2	6.5	6.1	4.3	2.7	2.4
20	---	---	---	---	11	6.5	e6.1	6.8	6.1	4.2	2.8	2.3
21	---	---	---	---	7.8	6.7	e6.1	6.1	6.2	4.1	2.8	2.2
22	---	---	---	---	6.7	6.7	e6.2	6.0	6.2	4.0	2.7	2.2
23	---	---	---	---	6.9	6.9	e6.1	5.8	5.8	3.9	2.5	2.2
24	---	---	---	---	6.3	6.7	e6.1	5.8	5.7	3.7	2.4	2.2
25	---	---	---	---	5.7	6.6	e6.2	6.1	5.8	3.5	2.4	2.2
26	---	---	---	---	6.6	6.8	6.1	6.3	5.8	3.6	2.4	2.3
27	---	---	---	---	6.8	7.1	6.0	6.2	5.9	3.6	2.4	2.4
28	---	---	---	---	6.9	7.1	5.8	6.2	5.7	3.6	2.4	2.5
29	---	---	---	---	---	6.6	6.0	6.0	5.7	3.6	2.5	2.4
30	---	---	---	---	---	6.2	6.5	6.2	5.6	3.5	2.4	2.3
31	---	---	---	---	---	6.4	---	6.2	---	3.5	2.3	---
TOTAL	---	---	---	---	---	203.8	187.4	192.7	180.7	139.6	86.7	69.2
MEAN	---	---	---	---	---	6.574	6.247	6.216	6.023	4.503	2.797	2.307
MAX	---	---	---	---	---	7.4	6.9	6.8	6.5	5.7	4.5	2.5
MIN	---	---	---	---	---	6.0	5.8	5.8	5.6	3.5	2.3	2.2
AC-FT	---	---	---	---	---	404	372	382	358	277	172	137

e Estimated.

11108000 SANTA CLARA RIVER NEAR SAUGUS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.203	2.052	8.247	31.10	43.29	60.62	13.38	4.308	2.419	1.588	1.154	1.056
MAX	6.45	11.6	35.5	297	504	396	139	32.4	10.1	6.39	4.35	4.57
(WY)	1945	1945	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 2002 WATER YEAR

WATER YEARS 1930 - 2002

ANNUAL TOTAL	1182.9		
ANNUAL MEAN	5.188	14.08	
HIGHEST ANNUAL MEAN		68.6	1944
LOWEST ANNUAL MEAN		0.30	1951
HIGHEST DAILY MEAN	17	Feb 17	9360 Feb 22 1944
LOWEST DAILY MEAN	2.2	Sep 7	0.00 Jul 16 1933
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 20	0.00 Jul 16 1933
MAXIMUM PEAK FLOW	38	Feb 17	e24000 Mar 2 1938
MAXIMUM PEAK STAGE	1.35	Aug 4	15.07 Jan 1 1934
ANNUAL RUNOFF (AC-FT)	2350		10200
10 PERCENT EXCEEDS	6.7		14
50 PERCENT EXCEEDS	6.0		0.90
90 PERCENT EXCEEDS	2.4		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 sea level (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, 30,642 acre-ft, Oct. 26, elevation, 1,536.25 ft; minimum, 16,145 acre-ft, Nov. 11, elevation, 1,501.76 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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24339	23420	29081	21976	21511	18063	20187	23966	21881	23313	25731	25883
2	25544	20712	25282	20029	21027	19950	19762	27197	21708	23177	26206	24387
3	28652	20966	21165	23202	21339	20258	19864	27969	21124	24330	21980	28146
4	25982	19856	24636	24649	18809	23326	20720	23772	19872	18003	19649	26609
5	26130	19528	23668	23339	19813	21099	21716	21815	19284	21593	20700	27469
6	21515	24287	25816	20449	17780	23806	18055	23249	21976	20528	21679	27395
7	19281	23668	25914	18291	19180	21548	18885	25243	24693	20226	22079	23518
8	22188	24396	25344	22522	16961	23198	19532	25633	18821	22146	23096	19273
9	26405	27941	24256	22238	17397	20612	17755	27561	18672	22593	27649	20849
10	27257	24736	19219	25256	17599	20548	19134	27876	20640	25870	24339	21055
11	22409	16145	21503	25389	19111	22724	19840	24348	22321	27188	20037	20897
12	23236	21773	20708	23888	16597	20266	21494	20946	22229	28342	22434	23780
13	19057	24291	20664	20064	19257	16543	22876	22079	23871	23578	24122	25606
14	19447	24057	21213	21462	18977	20512	19521	22275	25606	19672	24859	21225
15	22375	28398	21531	23600	17095	17460	18760	21914	28548	24352	26166	20893
16	22673	28408	21014	22375	17496	18555	17892	26568	24723	25464	25816	21527
17	23931	21307	21095	21662	17496	20405	20175	28572	23668	23634	21712	21299
18	27992	17456	24921	22589	18430	16982	19891	21099	22359	25544	20361	22313
19	25031	22421	24374	22994	18419	20736	23168	19346	24322	26577	22113	21193
20	20869	23699	25154	20135	21107	17618	22400	20214	25598	20765	21934	21035
21	18336	25544	28807	19797	21120	20520	18506	19719	23236	19338	20341	19180
22	21934	23729	26781	17862	18855	23776	22539	24470	20740	22964	22669	20568
23	22778	19703	26193	20913	18149	23253	23802	27543	21039	23703	26577	23987
24	22581	19358	21794	19111	17925	20001	24487	29152	21120	24605	23910	23458
25	27101	20817	23104	20116	18638	19923	26215	24890	22375	24987	19486	26482
26	30642	22681	23347	20377	19778	19797	27681	22046	23897	28642	19989	25798
27	25829	23849	27612	20572	21926	20238	25282	18775	22539	22606	22547	24596
28	23923	25079	27427	19520	19404	19629	22719	22421	23574	19707	26206	20970
29	26786	25397	27556	22204	---	19123	22812	23656	29034	22055	26859	19513
30	24912	27225	25638	21006	---	19000	23979	23879	24274	24732	26527	21831
31	22175	---	21790	22342	---	19696	---	24505	---	25509	23181	---
MAX	30642	28408	29081	25389	21926	23806	27681	29152	29034	28642	27649	28146
MIN	18336	16145	19219	17862	16597	16543	17755	18775	18672	18003	19486	19180
a	1517.47	1529.01	1516.54	1517.87	1510.57	1511.32	1521.72	1522.93	1522.40	1525.21	1519.86	1516.64
b	+2241	+5050	-5435	+552	-2938	-292	+4283	+526	-231	+1235	-2328	-1350

CAL YR 2001 b +828

WTR YR 2002 b +1897

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 mi², excludes 18.1 mi² 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 sea level.

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, 319,114 acre-ft, July 27, elevation, 1,512.94 ft; minimum, 260,483 acre-ft, Apr. 28, elevation, 1,484.91 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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285029	273697	283621	280324	275319	270249	265461	264923	293207	304071	315799	312724
2	284594	275950	282011	282836	273737	268260	266718	266838	291312	305965	316527	314106
3	282073	275970	283435	281846	272100	266279	269002	268360	292511	306778	317167	312002
4	283559	274304	282485	283601	274163	264246	270810	269464	293797	306042	315381	313118
5	280920	276418	285818	284366	272403	266698	271616	267539	295066	308666	313513	311149
6	281681	274710	285009	283435	273940	264545	271959	269686	295956	310233	314040	312790
7	279339	277233	286920	285860	272100	266638	270027	271213	297038	308209	315227	313776
8	277009	279955	285610	284739	273859	264445	270851	272968	297612	306085	316174	312002
9	274548	278152	284283	286442	272120	265162	272059	274609	295892	307645	316836	310167
10	275909	277948	286005	285133	270491	263015	272908	276846	296528	308948	317719	311302
11	277192	280242	284470	286671	268500	260917	273332	278254	297187	310494	315843	312220
12	274812	278520	282981	285158	270189	263670	270891	276520	298080	312198	313996	310058
13	276764	279688	281434	283725	268200	266139	268601	278070	298656	313184	314853	310451
14	274507	282341	280119	282052	269364	263869	266199	279339	299125	310756	315711	311761
15	275136	280735	278541	280612	270649	266439	267018	280694	297081	308383	316174	310058
16	276173	282423	277131	282032	268862	264167	267759	282320	295108	309797	316924	308361
17	276907	284843	278725	282630	267298	262084	268761	283994	296316	311302	318250	309601
18	274710	283043	277254	283580	265620	265301	268360	285569	297378	312571	316703	307970
19	275441	281064	278704	282093	267438	263273	267518	283704	298400	314303	315117	309209
20	276418	283497	279790	280694	266059	267679	264943	281970	299637	315491	314853	310385
21	274163	284242	280488	279319	268561	265640	264047	282836	301049	313381	314787	311630
22	271959	282341	279196	280037	270571	263471	264167	283869	299253	311193	315975	309993
23	273353	284325	277825	278336	269283	261233	264405	284469	297399	313031	316174	308231
24	275848	285922	278500	280632	268059	261530	264744	284988	298592	314413	314193	309601
25	273474	284180	277274	278909	266798	263015	265162	285922	300450	316130	312155	307515
26	274446	282423	278889	277131	268842	264147	265481	284180	301821	317454	312833	309645
27	275482	283869	277662	275665	267218	264624	262975	285797	303109	319114	313579	310953
28	273171	285216	281434	276601	269042	265361	260483	287858	304250	317056	311477	312702
29	270951	283601	280386	275076	---	265900	262123	288714	305394	315007	312330	311062
30	273130	285175	279278	276255	---	266618	263372	290200	304188	315337	313513	309623
31	275157	---	281373	274791	---	264445	---	291754	---	315513	314567	---
MAX	285029	285922	286920	286671	275319	270249	273332	291754	305394	319114	318250	314106
MIN	270951	273697	277131	274791	265620	260917	260483	264923	291312	304071	311477	307515
a	1492.24	1497.12	1495.28	1492.06	1489.21	1486.91	1486.37	1500.27	1506.12	1511.31	1510.88	1508.60
b	-11867	+10018	-3802	-6582	-5749	-4597	-1073	+28382	+12434	+11325	-946	-4944

CAL YR 2001 b -7195

WTR YR 2002 b +22599

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 mi², excludes 18.1 mi² 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 sea level, 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 ft³/s, Feb. 23, 1998; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 7,670 ft³/s, Mar. 2, 1983, at station 11108135; no flow for many days in each year.

NOTE: No flow for all of 2002 water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.617	1.371	2.516	3.657	47.50	43.83	30.11	23.85	11.08	7.065	4.625	0.975
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1995 - 2002	
ANNUAL TOTAL	1359.0		0.0			
ANNUAL MEAN	3.723		0.000		14.56	
HIGHEST ANNUAL MEAN					63.9	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	76	Mar 14	0.00	Oct 1	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)	2700		0.00		10550	
10 PERCENT EXCEEDS	13		0.00		23	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

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 mi².

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 sea level, 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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.8	8.6	12	10	9.1	7.6	6.4	2.8	1.3	0.98	1.4
2	4.0	5.7	9.0	13	10	9.0	7.6	6.4	2.7	1.2	0.97	1.5
3	4.1	5.7	8.9	12	10	8.7	7.5	6.0	2.6	1.2	0.99	1.5
4	4.3	5.6	8.9	11	11	8.6	7.3	5.8	2.4	1.2	1.1	1.6
5	4.6	6.0	8.7	11	10	9.0	7.1	5.6	2.2	1.2	1.1	1.6
6	4.7	6.3	8.3	11	9.9	9.0	7.2	5.4	2.1	1.2	1.1	1.8
7	4.8	5.9	8.3	11	10	9.4	7.2	5.2	2.0	1.2	1.1	2.0
8	4.8	5.9	8.2	11	10	9.8	7.1	5.2	2.0	1.1	1.2	2.0
9	4.7	5.8	8.1	10	9.9	9.6	6.8	5.0	2.0	1.0	1.1	1.9
10	4.8	5.8	8.0	10	9.6	9.4	6.7	4.9	2.1	0.88	1.0	1.9
11	4.8	6.0	8.0	9.8	9.1	9.4	6.6	4.9	2.0	0.83	0.95	1.8
12	4.9	6.5	7.9	9.7	9.3	9.2	6.4	4.7	1.9	1.0	0.90	1.8
13	4.7	15	7.7	9.6	9.2	9.1	6.3	4.5	1.9	1.0	0.84	1.8
14	4.6	16	7.9	9.4	9.1	9.1	6.1	4.4	1.9	0.88	0.78	1.7
15	4.6	9.0	7.8	9.5	9.1	9.3	6.1	4.3	1.8	0.86	0.76	1.6
16	4.7	7.9	7.5	9.2	9.1	9.4	6.2	4.1	1.7	0.86	0.74	1.7
17	4.8	7.5	7.6	8.4	9.4	9.3	6.4	4.0	1.6	0.94	0.73	1.8
18	4.8	7.3	7.8	10	9.8	9.5	6.5	3.9	1.5	0.97	0.75	1.8
19	4.8	7.2	7.7	9.3	9.7	9.3	6.5	4.0	1.4	0.99	0.86	1.8
20	4.8	7.1	7.9	10	9.5	9.1	6.4	4.1	1.5	1.0	0.97	1.7
21	4.9	7.2	10	9.5	9.5	8.9	6.4	4.5	1.6	0.97	1.0	1.7
22	4.8	7.1	9.2	9.7	9.4	8.8	6.2	4.4	1.7	0.96	1.1	1.7
23	4.8	7.0	9.2	8.4	9.4	8.8	6.0	4.1	1.6	0.98	1.2	1.7
24	4.8	7.0	9.3	9.2	9.4	8.7	6.1	3.9	1.5	0.95	1.2	1.8
25	4.8	11	9.3	9.8	9.4	8.7	6.1	3.8	1.4	0.91	1.3	1.8
26	5.0	12	9.4	10	9.2	8.7	6.3	3.6	1.4	0.92	1.3	2.0
27	5.1	9.3	9.2	10	9.1	8.5	6.8	3.5	1.4	0.91	1.2	2.1
28	5.2	8.6	9.5	13	9.1	8.5	6.7	3.4	1.4	0.98	1.3	2.3
29	5.8	8.4	10	11	---	8.4	6.4	3.2	1.4	1.0	1.3	2.5
30	6.0	9.1	12	9.9	---	8.1	6.3	3.0	1.3	1.0	1.4	2.8
31	5.8	---	12	9.9	---	8.6	---	2.8	---	0.98	1.4	---
TOTAL	149.4	234.7	271.9	317.3	268.2	279.0	198.9	139.0	54.8	31.37	32.62	55.1
MEAN	4.819	7.823	8.771	10.24	9.579	9.000	6.630	4.484	1.827	1.012	1.052	1.837
MAX	6.0	16	12	13	11	9.8	7.6	6.4	2.8	1.3	1.4	2.8
MIN	4.0	5.6	7.5	8.4	9.1	8.1	6.0	2.8	1.3	0.83	0.73	1.4
AC-FT	296	466	539	629	532	553	395	276	109	62	65	109

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

	5.933	7.563	18.38	74.03	213.1	175.3	88.04	46.34	19.34	9.286	5.464	5.633
MEAN	5.933	7.563	18.38	74.03	213.1	175.3	88.04	46.34	19.34	9.286	5.464	5.633
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	19593.4		2032.29			
ANNUAL MEAN	53.68		5.568		54.77	
HIGHEST ANNUAL MEAN					163	
LOWEST ANNUAL MEAN					2.45	
HIGHEST DAILY MEAN	2490	Mar 6	16	Nov 14	11700	Feb 23 1998
LOWEST DAILY MEAN	3.2	Aug 17	0.73	Aug 17	0.00	Sep 6 1977
ANNUAL SEVEN-DAY MINIMUM	3.3	Aug 13	0.78	Aug 13	0.00	Sep 6 1977
MAXIMUM PEAK FLOW			61	Nov 13	11700	Feb 23 1998
MAXIMUM PEAK STAGE			2.67	Nov 13	16.45	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	38860		4030		39680	
10 PERCENT EXCEEDS	100		9.8		122	
50 PERCENT EXCEEDS	9.0		5.8		9.3	
90 PERCENT EXCEEDS	4.3		1.0		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 mi².

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 sea level, 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 ft³/s, Dec. 6, 1997, gage height, 5.73 ft; minimum daily, 0.30 ft³/s, May 10, 1977.

DISCHARGE,CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.5	3.4	3.2	3.8	4.2	3.4	3.7	2.9	1.3	2.4	2.3
2	2.7	3.2	3.3	3.3	3.8	4.1	3.4	3.2	2.9	1.3	2.5	2.5
3	3.0	3.1	3.3	3.4	3.7	3.9	3.5	3.2	2.9	1.7	2.5	2.5
4	3.1	3.2	3.3	3.5	3.6	3.8	3.5	3.3	2.8	1.9	2.5	2.5
5	3.3	3.2	3.2	3.7	3.5	3.5	3.6	3.2	2.8	2.1	2.6	3.0
6	3.2	3.2	3.3	3.8	3.4	3.4	3.8	3.1	2.6	2.2	2.8	3.2
7	3.2	3.2	3.3	4.1	3.4	3.2	3.8	3.2	2.7	2.1	2.7	3.2
8	3.1	3.2	3.2	4.2	3.2	3.2	3.9	3.1	2.8	2.1	2.5	3.4
9	3.0	3.2	3.4	4.5	3.2	3.2	3.7	3.1	2.8	2.3	2.5	2.9
10	2.9	3.3	3.4	4.9	3.0	3.1	3.4	3.1	2.5	2.1	2.4	2.7
11	3.0	3.5	3.4	4.7	3.1	3.3	3.1	3.1	2.4	2.4	2.3	2.6
12	3.0	7.8	3.6	4.7	3.1	3.4	3.1	3.0	2.5	2.0	2.4	2.6
13	3.0	4.1	3.6	4.9	3.0	3.3	3.0	2.9	2.5	1.9	2.4	2.6
14	3.0	3.5	3.8	4.9	3.0	3.3	2.9	2.9	2.5	1.8	2.3	2.5
15	3.0	3.5	3.5	4.9	3.0	3.4	2.8	2.9	2.5	2.0	2.3	2.5
16	3.1	3.4	3.3	4.9	3.0	3.4	2.9	2.9	2.4	2.3	2.7	2.9
17	3.0	3.7	3.2	4.9	3.1	3.4	3.0	2.8	2.3	2.3	3.0	2.9
18	2.9	3.7	3.2	4.9	3.0	3.3	3.1	2.9	2.5	2.3	3.5	2.8
19	2.9	3.7	3.2	4.9	3.0	3.3	2.9	3.2	2.6	2.3	4.1	2.8
20	3.0	3.7	3.4	5.2	3.0	3.4	3.0	3.3	2.9	2.3	3.3	2.8
21	2.8	3.8	3.9	5.2	3.0	3.4	3.0	3.4	3.1	2.2	2.7	2.9
22	2.9	3.7	3.4	5.2	3.2	3.4	3.3	3.4	2.9	2.3	3.0	2.8
23	2.7	3.8	3.2	5.2	3.4	3.4	3.7	3.5	2.7	2.2	3.0	2.7
24	2.8	5.0	3.2	5.2	3.6	3.4	4.2	3.4	2.6	2.1	2.8	2.8
25	2.9	4.1	3.2	4.9	3.6	3.4	4.3	3.4	2.6	2.1	2.9	2.8
26	3.0	3.9	3.2	4.7	3.8	3.4	4.3	3.5	2.6	2.2	2.8	2.9
27	3.1	3.7	3.2	4.6	3.5	3.4	4.3	3.7	2.2	2.3	2.3	3.2
28	3.2	3.7	3.2	4.4	3.7	3.5	4.3	3.7	1.8	2.4	2.1	3.4
29	3.6	3.8	3.2	4.5	---	3.4	4.3	2.8	1.9	2.4	2.6	3.4
30	3.4	3.6	3.2	4.1	---	3.4	4.3	2.6	1.8	2.3	2.2	3.6
31	3.8	---	3.2	4.1	---	3.4	---	2.7	---	2.3	2.1	---
TOTAL	94.1	112.0	103.4	139.6	92.7	106.6	105.8	98.2	77.0	65.5	82.2	85.7
MEAN	3.035	3.733	3.335	4.503	3.311	3.439	3.527	3.168	2.567	2.113	2.652	2.857
MAX	3.8	7.8	3.9	5.2	3.8	4.2	4.3	3.7	3.1	2.4	4.1	3.6
MIN	2.5	3.1	3.2	3.2	3.0	3.1	2.8	2.6	1.8	1.3	2.1	2.3
AC-FT	187	222	205	277	184	211	210	195	153	130	163	170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

MEAN	2.355	2.795	5.551	5.006	12.41	7.443	3.311	2.705	2.220	1.950	1.899	2.075
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	1520.2		1162.8			
ANNUAL MEAN	4.165		3.186		4.097	
HIGHEST ANNUAL MEAN					10.1	1998
LOWEST ANNUAL MEAN					1.54	1977
HIGHEST DAILY MEAN	125	Mar 5	7.8	Nov 12	1220	Feb 10 1978
LOWEST DAILY MEAN	2.0	Jul 13	1.3	Jul 1	0.30	May 10 1977
ANNUAL SEVEN-DAY MINIMUM	2.2	Jul 22	1.7	Jun 28	0.36	May 10 1977
MAXIMUM PEAK FLOW			21	Nov 12	3640	Dec 6 1997
MAXIMUM PEAK STAGE			2.98	Nov 12	5.73	Dec 6 1997
ANNUAL RUNOFF (AC-FT)	3020		2310		2970	
10 PERCENT EXCEEDS	4.3		4.1		4.1	
50 PERCENT EXCEEDS	3.2		3.2		2.6	
90 PERCENT EXCEEDS	2.6		2.3		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 sea level, 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, 4,060 ft³/s, Oct. 28, 2001; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1790	1780	1260	2640	1550	1430	2570	2480	2600	2820	2750	2920
2	1850	2090	1630	1270	2150	2140	2570	2530	3900	2680	2730	2920
3	1990	1700	1070	1360	2270	1950	2540	2600	2630	2470	2840	1990
4	1950	2980	1210	1330	1690	1610	2560	2640	2670	2940	3450	1960
5	2080	1090	1890	1490	1130	1620	2680	3250	2690	2900	2380	2460
6	2300	935	1470	2270	1660	1640	2720	2780	2590	3280	2560	2230
7	2600	1840	1170	1340	1760	830	2590	2730	2260	3900	2690	3110
8	1850	2330	1190	1410	1560	1760	2020	1150	2380	3260	2730	3680
9	1930	2260	1950	1410	2270	2440	2050	2820	3300	3340	2750	2630
10	2190	2420	1310	1260	2270	3250	1990	2820	2160	3310	2900	2570
11	1980	1760	1520	1480	1760	1540	1210	2850	2420	3480	3130	2450
12	2030	1310	1050	1710	1760	1570	1910	3650	2680	3410	2460	2600
13	2110	2320	1050	2270	1870	1650	2200	2370	2590	416	2720	2450
14	3710	2330	852	1480	1870	1690	3030	2630	2370	3730	2670	3170
15	1900	2310	705	1460	1730	1700	1990	2620	2610	2800	2680	3580
16	2120	2310	1620	1410	2100	2710	1880	2750	3170	2800	2490	2260
17	2230	2560	1440	1540	2820	2600	1960	2820	2200	2900	2800	2340
18	2200	3900	1230	1460	1540	1770	1960	3100	2330	2850	3750	2430
19	2030	2320	1470	1560	1560	1940	2060	3900	2370	2820	2200	2440
20	2040	2330	1730	2070	1230	825	2100	2420	2370	3180	2120	2300
21	2610	2270	1690	1540	1770	828	3000	2420	2220	3760	2130	3520
22	1760	2920	1530	1540	1570	2070	2030	2420	2630	2820	2120	3570
23	1800	2400	2420	1540	1760	2740	1980	2310	3480	2810	2120	2160
24	2030	2200	1800	1620	2920	2820	2460	2420	2830	2990	2690	2350
25	1990	2840	2490	1600	1430	2340	2450	3260	2850	3030	3200	2330
26	2000	2090	1570	1720	1790	2380	2450	3470	2740	2890	2410	2410
27	2130	1480	1580	2270	1800	2370	2590	3280	2780	3190	2400	2410
28	4060	1470	1590	1460	1270	2370	3030	2560	2770	3320	2450	3900
29	1880	1530	1550	1490	---	2420	2560	2560	2930	2370	2430	3580
30	1930	1600	2540	1280	---	2710	2550	2980	3740	2520	2430	2410
31	1880	---	1210	1310	---	2920	---	2880	---	2490	2440	---
TOTAL	66950	63675	46787	49590	50860	62633	69690	85470	81260	91476	81620	81130
MEAN	2160	2122	1509	1600	1816	2020	2323	2757	2709	2951	2633	2704
MAX	4060	3900	2540	2640	2920	3250	3030	3900	3900	3900	3750	3900
MIN	1760	935	705	1260	1130	825	1210	1150	2160	416	2120	1960
AC-FT	132800	126300	92800	98360	100900	124200	138200	169500	161200	181400	161900	160900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	1410	1279	1209	970.2	811.0	1333	1872
MAX	2429	2944	2780	1930	1816	2020	2658
(WY)	2001	2001	2001	2000	2002	2002	2002
MIN	104	349	213	62.5	48.1	219	970
(WY)	1996	1996	1999	1999	1999	1998	1998

SUMMARY STATISTICS

	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL TOTAL	649702	831141	
ANNUAL MEAN	1780	2277	1516
HIGHEST ANNUAL MEAN			2277
LOWEST ANNUAL MEAN			941
HIGHEST DAILY MEAN	4060	Oct 28	4060
LOWEST DAILY MEAN	206	Jan 29	416
ANNUAL SEVEN-DAY MINIMUM	630	Feb 23	1140
ANNUAL RUNOFF (AC-FT)	1289000	1649000	1098000
10 PERCENT EXCEEDS	2450	3170	2620
50 PERCENT EXCEEDS	1870	2330	1490
90 PERCENT EXCEEDS	860	1440	359

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 sea level.

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 ft³/s, Sept. 6, 2000; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	923	988	812	862	630	716	1560	1590	1490	1560	1090	1160
2	1030	1100	807	1020	600	721	1620	1570	1400	1580	953	998
3	867	1220	797	681	716	696	1620	1570	1440	1560	1160	918
4	938	1210	756	605	736	802	1610	1460	1510	1510	933	943
5	953	1100	827	696	433	761	1640	1550	1500	1480	973	958
6	1150	1120	817	963	731	877	1620	1620	1570	1540	1300	1060
7	0.00	797	832	565	731	756	837	1660	1550	1580	1030	756
8	993	1210	721	555	736	1160	928	1120	1440	1600	1040	908
9	933	1190	792	456	726	1190	908	1590	472	1630	1080	978
10	1090	771	19	519	751	1150	908	1610	1180	1640	1040	1030
11	988	1530	0.00	550	726	943	716	1660	1070	1650	1020	908
12	1010	1320	0.00	600	726	928	1230	1400	1270	1490	1090	1020
13	1060	1140	0.00	701	726	1050	1090	1260	1230	433	1110	1010
14	1140	1010	142	565	731	1030	1040	1610	1200	1620	1060	1040
15	1190	1140	316	570	731	943	1080	1550	1280	1460	1030	993
16	1020	1040	696	376	721	1650	1090	1560	353	1600	998	887
17	1310	1360	751	524	555	1610	1040	1510	1160	1530	1020	903
18	1120	1030	661	347	640	691	1010	1450	1270	1510	1010	903
19	1130	938	807	504	736	1040	1020	1470	1390	1510	1210	897
20	973	1040	766	570	635	267	1030	872	1360	1470	676	953
21	1170	948	797	590	736	348	1090	1140	1140	1060	716	1060
22	1080	1160	852	610	741	993	948	1030	1560	1480	676	1060
23	1220	1160	832	590	741	1650	1120	892	495	1510	655	1050
24	1170	1120	943	595	741	1650	1580	978	1280	1460	1040	908
25	1090	1020	1550	605	716	1650	1590	1660	1590	1440	726	973
26	1160	857	640	625	731	1600	1590	1620	1620	1340	1010	968
27	1140	812	736	625	726	1560	1520	1490	1610	1320	1020	963
28	1180	822	782	655	731	1620	1460	1570	1660	1310	1020	968
29	1100	822	812	666	---	1520	1520	1410	1630	1050	1000	1330
30	1100	746	812	615	---	1550	1540	1650	1260	1080	1040	953
31	1110	---	877	640	---	1580	---	1660	---	1140	1020	---
TOTAL	32338.00	31721	20952.00	19045	19580	34702	37555	44782	38980	44143	30746	29456
MEAN	1043	1057	675.9	614.4	699.3	1119	1252	1445	1299	1424	991.8	981.9
MAX	1310	1530	1550	1020	751	1650	1640	1660	1660	1650	1300	1330
MIN	0.00	746	0.00	347	433	267	716	872	353	433	655	756
AC-FT	64140	62920	41560	37780	38840	68830	74490	88830	77320	87560	60980	58430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	657.2	770.3	534.5	456.8	363.7	612.2	791.8
MAX	1113	1562	1196	821	699	1119	1350
(WY)	2001	2001	2001	2001	2002	2002	2002
MIN	71.4	131	0.000	0.000	0.000	0.000	0.000
(WY)	1996	1999	1999	1999	1999	1998	1998

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL TOTAL	273549.50	384000.00	
ANNUAL MEAN	749.5	1052	607.2
HIGHEST ANNUAL MEAN			1052
LOWEST ANNUAL MEAN			318
HIGHEST DAILY MEAN	1640	Jan 19	2830
LOWEST DAILY MEAN	0.00	Jan 26	0.00
ANNUAL SEVEN-DAY MINIMUM	75	Feb 24	0.00
ANNUAL RUNOFF (AC-FT)	542600	761700	439900
10 PERCENT EXCEEDS	1190	1580	1340
50 PERCENT EXCEEDS	826	1030	574
90 PERCENT EXCEEDS	97	621	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 mi².

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 sea level.

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, 167,997 acre-ft, Feb. 18, elevation, 2,576.52 ft; minimum, 152,749 acre-ft, May 24, elevation, 2,564.25 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 2001 TO SEPTEMBER 2002

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159332	159332	154819	165485	162546	163627	166451	161995	159989	161009	158159	159419
2	157925	163300	160250	165765	164182	163048	166566	157642	162810	160039	156771	159332
3	156391	163841	162860	164005	165257	164056	164928	156416	163111	158516	160648	157139
4	156783	167319	160710	160921	165396	162471	163099	160411	164068	166553	164725	156795
5	158467	165866	159567	161895	165080	161570	162283	165396	164144	160859	165498	158023
6	162258	163312	158961	166655	165320	160449	166566	163011	161458	161096	164535	156575
7	164434	161021	157126	166388	162422	159989	167357	160623	158529	164472	162960	158973
8	163375	158171	159072	163199	165523	160449	165511	158813	164548	165346	160996	164978
9	160834	156869	161595	161358	166299	162521	165676	156330	165549	164169	155707	165130
10	158233	160138	163879	159307	167588	164826	162948	154758	163199	159914	158036	163791
11	161420	167882	162033	157175	167421	164333	160635	158368	160884	157900	164396	162609
12	162396	164788	162860	159778	167831	163791	161271	164535	160548	155244	163980	161583
13	164321	161745	162860	164966	166553	164662	162208	162446	158529	157482	161433	159072
14	166095	159617	162571	164675	165358	162559	167639	161633	156391	164472	159840	162408
15	162647	157323	162734	163501	165587	162584	167102	161545	155805	162534	157962	164586
16	161221	156012	164472	162509	166553	164662	166923	156110	160349	160536	157274	165523
17	159406	161508	162709	162220	167664	166006	162986	153159	160362	161458	160473	164359
18	157384	167536	160200	159245	167997	165447	163212	159964	160772	158529	163980	164953
19	159530	164093	159295	159778	165955	163652	159989	164523	158159	156526	164270	164725
20	162233	160175	157495	163791	164485	160847	162722	165206	156086	161645	164258	163753
21	167038	157384	153340	165181	162459	158578	167076	165346	157568	165042	165561	164624
22	165460	161533	156942	165968	163061	157102	162170	159505	163061	164220	161508	165118
23	163099	163791	159134	163955	165232	160884	159989	155147	163955	162296	156550	163564
24	160623	163312	163514	162772	166898	164801	159270	152749	163074	160312	161258	162471
25	158073	163778	165118	162998	167549	164194	157531	157224	161021	158467	167025	161196
26	153220	163551	163048	163854	164321	163766	155939	163212	159060	153449	165739	159691
27	157040	160598	160101	165080	163564	163350	161233	165879	160063	158208	162070	159543
28	161171	157667	156697	164725	164018	164056	166592	161246	158652	163489	160250	161445
29	160287	158986	158122	163199	---	164624	165118	159529	152821	163099	158455	165447
30	160312	155220	161570	162822	---	164902	162948	159010	160250	159902	157581	164902
31	161645	---	164144	162910	---	167179	---	157962	---	158800	159964	---
MAX	167038	167882	165118	166655	167997	167179	167639	165879	165549	166553	167025	165523
MIN	153220	155220	153340	157175	162422	157102	155939	152749	152821	153449	155707	156575
a	2571.50	2566.29	2573.49	2572.51	2573.39	2575.88	2572.54	2568.53	2570.38	2569.21	2570.15	2574.09
b	-350	-6425	+8924	-1234	+1108	+3161	-4231	-4986	+2288	-1450	+1164	+4938

CAL YR 2001 b -2218

WTR YR 2002 b +2907

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 mi².

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 ft³/s, Feb. 23 1998; minimum daily, 4.0 ft³/s, Nov. 1–5, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	6.1	6.1	6.2	6.2	13	12	35	27	25	35	35
2	9.0	6.1	6.1	6.2	6.2	13	26	35	27	25	35	35
3	8.9	6.1	6.2	6.2	6.2	13	26	26	27	25	35	35
4	8.1	6.1	6.2	6.2	6.2	13	26	26	27	25	35	35
5	8.0	6.1	6.1	6.2	6.2	12	26	27	27	25	35	35
6	7.2	6.1	6.1	6.2	6.2	12	26	27	27	25	35	35
7	6.1	6.1	6.1	6.2	6.2	12	26	26	27	25	35	35
8	6.3	6.1	6.1	6.2	6.3	12	26	26	27	25	35	35
9	6.3	5.9	6.1	6.2	6.2	12	26	26	27	25	35	35
10	6.2	5.9	6.2	6.2	6.3	12	26	26	27	25	35	35
11	6.2	6.0	6.2	6.1	6.3	12	26	26	26	25	35	35
12	6.2	6.1	6.2	6.1	6.3	12	26	26	26	25	35	35
13	6.2	6.1	6.2	6.2	10	12	26	27	26	25	35	35
14	6.1	6.0	6.2	6.2	10	12	26	26	26	25	35	35
15	6.2	6.2	6.2	6.2	10	12	26	27	26	25	35	35
16	6.2	6.1	6.2	6.2	10	12	26	26	27	27	35	35
17	6.1	6.1	6.2	6.2	10	12	26	26	27	27	35	35
18	6.1	6.2	6.1	6.2	10	12	26	26	27	28	35	35
19	6.1	6.2	6.2	6.1	10	12	26	26	26	29	35	35
20	6.1	6.2	6.1	6.1	10	12	26	27	26	30	35	35
21	6.1	6.2	6.1	6.2	10	12	26	27	27	31	35	35
22	6.1	6.1	6.1	6.2	10	12	26	26	26	31	35	35
23	6.2	6.2	6.1	6.2	10	12	26	26	27	32	35	35
24	6.2	6.2	6.2	6.2	10	12	26	26	27	33	35	35
25	6.2	6.3	6.2	6.2	10	12	26	26	26	34	35	35
26	6.1	6.2	6.2	6.2	10	12	32	26	26	35	35	35
27	6.1	6.2	6.2	6.2	10	12	32	27	26	35	35	35
28	6.1	6.1	6.2	6.2	10	12	32	26	26	36	35	35
29	6.2	6.1	6.1	6.2	---	12	32	26	26	36	35	35
30	6.2	6.1	6.1	6.2	---	12	32	27	26	36	35	35
31	6.2	---	6.2	6.2	---	12	---	26	---	35	35	---
TOTAL	204.3	183.5	190.8	191.8	234.8	376	796	832	796	890	1085	1050
MEAN	6.590	6.117	6.155	6.187	8.386	12.13	26.53	26.84	26.53	28.71	35.00	35.00
MAX	9.0	6.3	6.2	6.2	10	13	32	35	27	36	35	35
MIN	6.1	5.9	6.1	6.1	6.2	12	12	26	26	25	35	35
AC-FT	405	364	378	380	466	746	1580	1650	1580	1770	2150	2080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	21.73	24.82	24.94	75.36	145.0	104.6	41.05	29.38	24.76	24.43	23.62	24.50		
MAX	75.6	90.2	64.0	422	780	492	132	97.3	41.0	32.9	35.0	54.7		
(WY)	1999	1999	1996	1995	1998	2001	1993	1991	1993	1993	2002	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 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1989 - 2002

ANNUAL TOTAL	21605.6	6830.2	
ANNUAL MEAN	59.19	18.71	
HIGHEST ANNUAL MEAN			46.47
LOWEST ANNUAL MEAN			119
HIGHEST DAILY MEAN	2610	Mar 6	36
LOWEST DAILY MEAN	5.0	Jan 1	5.9
ANNUAL SEVEN-DAY MINIMUM	5.0	Jan 1	6.0
ANNUAL RUNOFF (AC-FT)	42850		13550
10 PERCENT EXCEEDS	50		35
50 PERCENT EXCEEDS	25		13
90 PERCENT EXCEEDS	5.0		6.1

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 mi².

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 sea level (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 ft³/s, Feb. 23, 1998, gage height, 13.38 ft, from floodmark, from rating curve extended above 20,000 ft³/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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	8.6	10	9.6	10	11	14	39	24	25	33	33
2	9.0	8.5	9.8	9.6	9.8	12	14	35	24	25	33	33
3	8.1	8.4	12	9.6	9.3	13	14	31	25	24	33	32
4	7.8	9.1	13	9.4	9.2	13	22	27	24	25	33	33
5	7.7	8.9	10	9.5	9.1	13	25	26	24	25	33	33
6	7.5	8.4	9.8	9.4	9.0	14	25	27	24	25	33	33
7	7.1	8.5	8.9	9.4	9.1	13	26	26	25	24	33	33
8	7.1	8.2	8.7	9.4	9.0	13	26	26	25	24	33	33
9	6.7	8.0	8.7	9.4	8.8	12	26	26	25	24	33	33
10	6.2	8.2	8.6	9.3	8.7	12	26	25	25	24	33	33
11	5.6	9.6	8.5	9.0	8.7	12	25	25	25	25	33	33
12	5.2	12	8.6	9.1	8.8	12	25	25	25	25	33	33
13	5.0	16	8.6	9.0	8.8	12	25	24	25	24	33	32
14	5.1	11	8.6	9.1	9.6	12	25	24	24	24	33	32
15	5.3	9.6	8.3	9.3	11	13	26	24	24	25	34	32
16	5.3	9.2	8.5	9.2	11	13	26	25	24	25	34	32
17	5.3	9.2	8.4	9.2	13	13	26	25	24	26	33	32
18	5.6	9.1	8.2	9.1	12	14	27	24	24	26	33	32
19	6.0	8.6	8.2	9.1	12	13	27	24	24	27	34	32
20	5.9	8.6	8.7	9.0	12	13	27	25	24	27	34	32
21	6.2	8.6	13	9.1	11	12	27	25	25	28	34	32
22	6.7	8.6	10	9.1	11	13	27	25	25	29	34	32
23	6.5	8.3	9.4	8.9	11	13	27	24	24	29	34	32
24	6.2	18	9.2	8.8	11	14	27	24	24	30	34	32
25	6.2	19	9.2	8.8	11	13	27	24	25	30	33	32
26	6.3	11	9.2	8.9	11	13	38	24	24	31	33	32
27	6.7	10	9.2	10	11	13	39	24	25	32	33	32
28	7.2	9.7	9.1	18	11	14	41	24	25	33	34	33
29	7.6	12	9.7	12	---	14	41	24	25	34	34	33
30	8.6	12	9.9	11	---	14	40	24	25	34	34	33
31	9.3	---	9.7	10	---	14	---	24	---	34	33	---
TOTAL	208.3	304.9	291.7	300.3	286.9	400	811	799	735	843	1034	974
MEAN	6.719	10.16	9.410	9.687	10.25	12.90	27.03	25.77	24.50	27.19	33.35	32.47
MAX	9.3	19	13	18	13	14	41	39	25	34	34	33
MIN	5.0	8.0	8.2	8.8	8.7	11	14	24	24	24	33	32
AC-FT	413	605	579	596	569	793	1610	1580	1460	1670	2050	1930

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 - 2002, BY WATER YEAR (WY)

	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	
MEAN	16.00	19.75	36.98	107.5	252.5	201.4	82.82	49.59	30.27	21.57	18.42	17.68																				
MAX	85.0	97.3	180	1154	2110	1126	289	204	93.7	47.3	40.0	56.4																				
(WY)	1999	1999	1984	1995	1998	1983	1983	1983	1978	1998	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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1972 - 2002

ANNUAL TOTAL	35593.6	6988.1	
ANNUAL MEAN	97.52	19.15	70.21
HIGHEST ANNUAL MEAN			240 1998
LOWEST ANNUAL MEAN			9.52 1990
HIGHEST DAILY MEAN	5030 Mar 6	41 Apr 28	15000 Feb 23 1998
LOWEST DAILY MEAN	5.0 Oct 13	5.0 Oct 13	0.07 Jun 9 1972
ANNUAL SEVEN-DAY MINIMUM	5.3 Oct 11	5.3 Oct 11	0.09 Sep 3 1972
MAXIMUM PEAK FLOW		50 Nov 24	38000 Feb 23 1998
MAXIMUM PEAK STAGE		1.91 Nov 24	13.38 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	70600	13860	50870
10 PERCENT EXCEEDS	188	33	114
50 PERCENT EXCEEDS	24	18	22
90 PERCENT EXCEEDS	8.1	8.4	6.3

SANTA CLARA RIVER BASIN

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 mi².

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 sea level (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, 65,800 acre-ft, Oct. 1, elevation, 1,035.19 ft; minimum contents, 27,600 acre-ft, Sept. 30; elevation, 991.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by United Water Conservation District in October 1985)

970	14,800	1,000	33,900	1,030	60,500	1,050	82,300
980	20,300	1,010	42,000	1,040	70,900	1,060	94,600
990	26,700	1,020	50,800				

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65800	e46000	41600	42000	42500	42800	43000	43900	44500	44800	45100	46300
2	65000	e45500	41700	42100	42500	42800	43000	43900	44500	44800	45100	46400
3	64300	e45100	41700	42100	42500	42800	43000	44000	44500	44800	45100	46400
4	63500	e44600	41700	42100	42500	42800	43000	44000	44500	44800	45200	46000
5	62800	e44100	41700	42100	42500	42800	43100	44000	44600	44800	45200	45200
6	62100	e43700	41700	42100	42500	42900	43100	44000	44600	44800	45300	44500
7	61300	e43300	41800	42100	42500	42900	43100	44000	44600	44800	45300	43700
8	60600	e42900	41700	42100	42500	42900	43200	44100	44600	44800	45300	42900
9	60000	e42600	41700	42100	42500	42900	43200	44100	44600	44800	45400	42200
10	59200	e42200	41800	42100	42500	42900	43200	44100	44600	44800	45400	41400
11	58600	e41900	41800	42100	42500	42900	43200	44100	44600	44800	45400	40700
12	58000	e41700	41800	42200	42500	42900	43300	44200	44600	44800	45500	39900
13	57400	e41500	41800	42200	42500	42900	43300	44200	44600	44800	45500	39200
14	56700	e41300	41800	42200	42600	42900	43300	44200	44700	44800	45600	38400
15	56100	41300	41800	42200	42600	42900	43400	44200	44700	44800	45600	37700
16	55500	41300	41800	42200	42600	42900	43400	44200	44700	44800	45600	37000
17	54900	41300	41800	42200	42600	42900	43400	44300	44700	44800	45700	36200
18	54300	41300	41800	42200	42700	43000	43400	44300	44700	44800	45700	35500
19	53700	41300	41800	42200	42700	43000	43400	44300	44700	44800	45800	34800
20	53100	41400	41800	42200	42700	43000	43500	44300	44700	44900	45800	34100
21	52500	41400	41900	42200	42700	43000	43500	44300	44700	44900	45900	33400
22	51800	41400	41900	42200	42700	43000	43500	44400	44700	44900	45900	e32600
23	e51200	41400	41900	42200	42700	43000	43500	44400	44700	44900	45900	e32000
24	e50600	41500	41900	42200	42800	43000	43500	44400	44700	44900	46000	e31300
25	e50000	41500	41900	42300	42800	43000	43600	44400	44700	44900	46000	30600
26	e49400	41600	41900	42300	42800	43000	43600	44400	44700	44900	46100	29900
27	e48800	41500	41900	42400	42800	43000	43700	44400	44700	44900	46100	29300
28	e48200	41500	41900	42400	42800	43000	43700	44500	44800	45000	46200	28700
29	e47600	41600	42000	42400	---	43000	43800	44500	44800	45000	46200	28100
30	e47100	41600	42000	42400	---	43000	43800	44500	44800	45000	46200	27600
31	e46600	---	42000	42500	---	43000	---	44500	---	45000	46300	---
MAX	65800	46000	42000	42500	42800	43000	43800	44500	44800	45000	46300	46400
MIN	46600	41300	41600	42000	42500	42800	43000	43900	44500	44800	45100	27600
a	1028.58	1009.58	1010.04	1010.55	1010.93	1011.22	1012.16	1012.92	1013.25	1013.56	1014.96	991.28
b	-19900	-5000	+400	+300	+300	+200	+800	+700	+300	+200	+1300	-18700
CAL YR 2001	b	10700										
WTR YR 2002	b	-38900										

e Estimated.

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 mi².

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 sea level (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 ft³/s, Sept. 6, 2000, gage height, 4.47 ft; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412	281	7.2	7.5	6.6	6.3	10	10	10	11	5.0	6.9
2	411	280	7.3	7.5	6.6	6.2	9.9	10	10	11	5.1	6.9
3	410	280	7.3	7.5	6.6	6.3	9.8	10	10	11	5.1	18
4	408	277	7.4	7.5	6.6	8.5	9.8	10	10	11	5.0	185
5	408	275	7.5	7.5	6.6	9.8	9.8	10	10	11	5.0	418
6	406	274	7.5	7.5	6.6	9.8	9.8	10	10	11	5.1	416
7	404	273	7.5	7.5	6.6	9.8	9.8	10	11	11	5.2	409
8	375	273	7.5	7.5	6.6	9.9	9.8	10	11	11	5.1	406
9	368	272	7.5	7.5	6.6	9.9	9.8	10	11	11	5.2	405
10	390	271	7.5	7.5	6.6	10	9.8	10	11	11	5.2	399
11	361	91	7.5	7.5	6.6	10	9.8	10	11	11	5.2	397
12	344	12	7.5	7.5	6.2	10	9.8	10	11	10	5.2	396
13	340	77	7.5	7.5	6.1	10	9.8	9.8	11	10	5.2	398
14	340	188	7.5	7.5	6.1	10	9.9	11	11	10	5.2	400
15	340	4.1	7.4	7.5	6.6	10	9.8	7.5	11	10	5.5	398
16	340	5.7	7.5	7.5	7.2	10	10	7.5	11	10	5.7	397
17	345	6.9	7.5	6.4	7.2	10	10	7.5	11	9.8	5.7	398
18	348	6.9	7.5	5.3	7.2	10	10	7.5	11	9.8	5.7	397
19	341	6.9	7.5	5.2	7.2	10	10	7.5	11	9.8	5.7	396
20	349	7.3	7.5	5.3	7.2	10	9.9	8.6	11	9.8	5.7	377
21	348	7.5	7.5	5.2	7.2	10	9.8	10	11	9.9	8.5	368
22	348	7.5	7.5	5.3	7.2	10	9.8	10	11	10	5.6	370
23	344	7.5	7.5	5.3	7.2	10	9.9	10	11	10	5.5	371
24	311	7.6	7.5	4.2	7.2	10	9.9	10	11	10	5.2	372
25	291	7.5	7.5	6.5	7.2	10	10	10	11	10	5.2	369
26	291	7.5	7.5	6.5	7.3	10	10	10	11	7.0	5.2	345
27	289	7.5	7.5	6.6	7.4	10	10	10	11	4.8	5.4	336
28	288	7.6	7.5	6.6	6.9	10	10	10	11	4.8	5.6	336
29	287	7.5	7.5	6.6	---	10	10	10	11	4.8	5.2	336
30	277	7.4	7.5	6.6	---	10	10	10	11	4.9	6.6	336
31	282	---	7.5	6.6	---	10	---	10	---	5.0	6.7	---
TOTAL	10796	3236.9	231.6	208.2	191.2	296.5	296.7	296.9	324	291.4	170.5	10162.8
MEAN	348.3	107.9	7.471	6.716	6.829	9.565	9.890	9.577	10.80	9.400	5.500	338.8
MAX	412	281	7.5	7.5	7.4	10	10	11	11	11	8.5	418
MIN	277	4.1	7.2	4.2	6.1	6.2	9.8	7.5	10	4.8	5.0	6.9
AC-FT	21410	6420	459	413	379	588	589	589	643	578	338	20160

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 mi².

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 sea level, 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. 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 ft³/s, Feb. 10, 1978, gage height, 22.40 ft, from rating curve extended above 17,000 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1500	93	4.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	6.2	23	23	21	17	15	11	3.8	2.8	2.5	2.4
2	3.8	6.0	23	24	21	17	14	10	3.7	2.8	2.5	2.4
3	3.5	5.3	27	23	21	16	14	10	3.7	2.7	2.4	2.5
4	3.1	5.5	27	22	21	17	14	9.9	3.7	2.7	2.5	2.4
5	3.6	5.1	26	21	21	17	14	9.4	3.3	2.7	2.5	2.3
6	3.9	5.2	25	21	21	17	14	8.7	3.2	2.8	2.4	2.5
7	4.3	6.1	24	21	21	17	14	8.4	3.5	2.8	2.3	2.6
8	4.2	5.1	23	21	20	17	14	8.4	3.5	2.8	2.3	2.6
9	4.1	4.1	23	21	20	17	14	8.5	3.8	2.7	2.3	2.5
10	4.5	4.1	23	21	19	16	14	7.9	3.9	2.5	2.3	2.6
11	4.5	7.8	22	21	20	17	13	7.6	3.9	2.5	2.3	2.8
12	5.0	11	22	21	20	16	12	6.8	4.1	2.4	2.3	2.8
13	4.0	16	22	21	19	16	12	5.9	4.0	2.3	2.3	2.7
14	4.3	14	21	21	19	16	12	5.8	3.8	2.4	2.4	2.7
15	4.0	15	22	20	19	15	12	5.2	4.2	2.4	2.4	2.6
16	3.9	14	22	20	19	16	12	4.8	4.1	2.4	2.5	2.6
17	4.0	13	22	20	20	16	12	5.0	3.9	2.3	2.5	2.7
18	4.5	12	22	20	20	17	12	4.5	3.5	2.3	2.6	2.7
19	5.0	12	21	20	20	16	12	4.4	3.2	2.4	2.6	2.7
20	4.7	12	21	20	20	17	12	4.5	3.0	2.4	2.7	2.7
21	3.8	12	23	21	19	16	12	5.4	2.9	2.4	2.9	2.6
22	4.1	12	23	20	18	16	12	7.1	3.6	2.5	3.1	2.5
23	3.7	12	23	20	18	16	12	6.8	3.4	2.5	3.0	2.4
24	4.0	30	22	20	18	16	11	6.6	3.4	2.5	3.0	2.4
25	3.6	29	22	20	18	16	11	6.0	3.3	2.3	2.9	2.5
26	4.1	25	22	20	17	16	11	5.8	3.1	2.2	2.8	2.5
27	3.1	25	21	22	17	16	11	6.0	3.2	2.3	2.8	2.6
28	4.2	23	21	24	17	15	11	6.1	2.8	2.4	2.7	2.8
29	4.9	24	21	23	---	16	11	5.9	2.9	2.5	2.7	2.8
30	5.5	24	21	22	---	15	11	5.0	2.9	2.4	2.7	3.0
31	6.4	---	22	21	---	15	---	4.3	---	2.4	2.6	---
TOTAL	130.1	395.5	702	655	544	503	375	211.7	105.3	77.5	79.8	77.9
MEAN	4.197	13.18	22.65	21.13	19.43	16.23	12.50	6.829	3.510	2.500	2.574	2.597
MAX	6.4	30	27	24	21	17	15	11	4.2	2.8	3.1	3.0
MIN	3.1	4.1	21	20	17	15	11	4.3	2.8	2.2	2.3	2.3
AC-FT	258	784	1390	1300	1080	998	744	420	209	154	158	155

SANTA CLARA RIVER BASIN

11113000 SESPE CREEK NEAR FILLMORE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.299	39.39	96.12	236.7	490.8	370.9	163.8	54.35	19.78	7.984	4.160	3.907
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1911 - 2002
ANNUAL TOTAL	74280.2	3856.8	
ANNUAL MEAN	203.5	10.57	122.4
HIGHEST ANNUAL MEAN			641 1969
LOWEST ANNUAL MEAN			1.78 1951
HIGHEST DAILY MEAN	15700 Mar 5	30 Nov 24	29100 Jan 25 1969
LOWEST DAILY MEAN	3.1 Sep 26	2.2 Jul 26	0.00 Jul 11 1912
ANNUAL SEVEN-DAY MINIMUM	3.5 Sep 26	2.3 Aug 7	0.00 Jul 11 1912
MAXIMUM PEAK FLOW		93 Nov 24	73000 Feb 10 1978
MAXIMUM PEAK STAGE		4.93 Nov 24	24.95 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	147300	7650	88690
10 PERCENT EXCEEDS	369	22	177
50 PERCENT EXCEEDS	22	7.1	10
90 PERCENT EXCEEDS	4.5	2.5	0.20

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA

LOCATION.—Lat 34°24'48", long 119°04'53", 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 mi².

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 sea level, from topographic map. Prior to Oct. 22, 1980, at various sites and datums 1.3 mi downstream. See WDR CA-79-1 for history of changes prior to Oct. 22, 1980. Prior to Feb. 12, 1992, at datum 5.0 ft higher at same site. High-flow data for 1996 recorded by sonic-sensor gage set to sea level datum.

REMARKS.—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 ft³/s, Feb. 25, 1969, gage height, 15.18 ft, from floodmark, site and datum then in use, from rating curve extended above 2,300 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1430	35	767.96

NOTE.—Maximum gage height, 768.05 ft, Mar. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	6.4	6.2	5.6	6.3	4.1	4.1	2.6	1.3	1.4	0.89	1.1
2	3.6	5.6	6.3	5.7	5.8	5.1	3.9	2.8	1.3	1.4	0.91	0.89
3	4.0	4.7	6.6	5.7	6.1	6.0	3.8	2.7	1.5	1.5	0.97	0.92
4	3.2	5.1	9.6	5.9	6.1	6.6	3.7	2.6	1.5	1.5	1.0	0.84
5	3.3	4.3	8.0	7.0	5.2	4.3	4.0	2.4	1.6	1.5	0.99	e0.95
6	3.1	3.0	6.2	5.6	4.2	3.7	3.6	2.4	1.5	1.6	0.93	e0.95
7	3.0	3.0	11	5.7	3.4	3.9	4.1	2.6	1.7	1.6	0.94	e0.95
8	3.3	3.7	8.5	5.6	3.4	3.7	3.7	2.5	1.8	1.7	1.0	e0.95
9	3.1	4.6	7.2	5.1	8.5	4.2	4.0	2.6	1.7	1.5	0.94	e0.95
10	3.2	2.7	9.6	6.3	8.6	3.9	3.9	2.3	2.0	1.6	0.79	e0.95
11	4.5	3.2	9.9	8.4	5.6	4.2	3.8	2.3	1.9	1.5	0.84	e0.95
12	5.4	5.1	9.7	6.1	5.0	3.7	3.3	2.5	1.9	1.6	0.86	e0.95
13	5.2	5.1	7.4	6.0	3.2	3.8	3.7	2.3	1.8	1.4	0.87	e0.95
14	4.8	4.4	5.9	5.1	3.0	5.5	3.3	2.1	1.7	1.3	0.92	e0.95
15	4.4	4.1	9.9	4.4	3.0	4.7	3.2	2.1	1.7	1.2	0.92	e0.95
16	3.6	4.8	11	4.8	3.0	3.9	3.5	2.1	1.7	1.1	0.92	e0.95
17	3.5	4.6	9.0	4.7	3.4	4.2	3.4	2.1	1.8	0.90	0.94	e0.95
18	3.7	6.1	9.4	5.0	3.4	4.7	3.5	2.0	1.8	0.83	1.0	e0.95
19	3.0	6.8	9.9	5.8	3.5	4.8	3.9	2.1	1.6	e0.82	1.0	e0.95
20	2.7	4.4	6.8	6.1	3.6	4.6	3.4	2.1	1.8	0.81	0.80	e0.95
21	2.8	4.3	6.7	4.9	3.8	4.1	3.3	2.0	1.8	0.83	0.83	e0.95
22	2.8	4.2	6.5	5.3	4.2	4.0	3.7	1.9	1.6	0.82	0.87	e0.95
23	3.1	4.1	6.7	8.4	3.6	4.1	3.2	1.9	1.6	0.90	0.91	e0.96
24	3.2	11	8.8	9.6	3.7	3.9	3.0	1.9	1.5	e0.90	0.88	e0.96
25	3.3	8.0	8.6	5.2	4.2	4.8	3.0	1.7	1.4	e0.90	0.91	e0.96
26	3.4	7.6	6.9	3.9	5.8	4.9	3.2	1.5	1.4	e0.89	0.89	e0.96
27	3.1	8.1	5.7	4.3	4.3	4.5	3.1	1.6	1.6	e0.89	0.81	e0.96
28	3.6	6.2	5.7	4.9	3.4	4.1	2.9	1.7	1.5	0.89	1.0	e0.96
29	3.9	5.5	5.8	5.8	---	4.2	2.9	1.8	1.4	0.91	1.2	e0.96
30	3.6	6.3	6.0	7.2	---	4.3	2.4	1.5	1.4	0.82	1.0	e0.96
31	5.1	---	5.8	6.4	---	4.4	---	1.5	---	0.83	1.2	---
TOTAL	112.5	157.0	241.3	180.5	127.3	136.9	104.5	66.2	48.8	36.34	28.93	28.53
MEAN	3.629	5.233	7.784	5.823	4.546	4.416	3.483	2.135	1.627	1.172	0.933	0.951
MAX	5.4	11	11	9.6	8.6	6.6	4.1	2.8	2.0	1.7	1.2	1.1
MIN	2.7	2.7	5.7	3.9	3.0	3.7	2.4	1.5	1.3	0.81	0.79	0.84
AC-FT	223	311	479	358	252	272	207	131	97	72	57	57

e Estimated.

SANTA CLARA RIVER BASIN

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.125	7.973	15.38	44.56	83.63	69.77	34.00	14.01	8.036	4.943	3.206	3.083
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1928 - 2002	
ANNUAL TOTAL	12574.5		1268.80			
ANNUAL MEAN	34.45		3.476		23.99	
HIGHEST ANNUAL MEAN					156	
LOWEST ANNUAL MEAN					1.37	
HIGHEST DAILY MEAN	2050	Mar 5	11	Nov 24	8900	Feb 25 1969
LOWEST DAILY MEAN	2.5	Jan 3	0.79	Aug 10	0.00	Oct 1 1927
ANNUAL SEVEN-DAY MINIMUM	2.7	Jan 3	0.84	Jul 17	0.00	Oct 1 1927
MAXIMUM PEAK FLOW			35	Nov 24	21000	Feb 25 1969
MAXIMUM PEAK STAGE			768.05	Mar 4	772.21	Mar 5 2001
ANNUAL RUNOFF (AC-FT)	24940		2520		17380	
10 PERCENT EXCEEDS	66		6.4		36	
50 PERCENT EXCEEDS	8.6		3.3		4.8	
90 PERCENT EXCEEDS	3.7		0.94		0.90	

11114000 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 mi².

PERIOD OF RECORD.—October 1927 to September 1932, October 1949 to September 1988, October 1989 to September 1993, October 1995 to September 1996. 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, June 1999 to current year at present site. 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 sea level, 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. June 25, 1999, to current year at present site.

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 ft³/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 ft³/s, estimated by Ventura County Flood Control District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	23	16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	23	15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	22	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	e1.3	21	12	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	21	10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	22	7.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	22	6.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	e0.60	22	5.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	22	5.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	e1.3	21	4.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	3.0	21	4.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	3.2	24	3.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	3.7	36	3.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	4.1	29	3.1	6.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	19	28	2.7	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	20	32	2.3	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	21	26	2.0	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	21	26	1.6	5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	22	25	3.1	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	21	25	1.2	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	20	23	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	20	23	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	20	22	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	20	111	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	21	98	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	21	45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	22	48	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	22	43	0.00	6.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	22	44	0.27	0.05	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	23	35	0.13	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	23	---	0.00	0.00	---	0.00	---	0.00	---	0.00	---	---
TOTAL	375.20	983	126.46	53.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	12.10	32.77	4.079	1.716	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX	23	111	16	11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN	0.00	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	744	1950	251	106	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

e Estimated.

SANTA CLARA RIVER BASIN

11114000 SANTA CLARA RIVER AT MONTALVO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.412	50.27	99.12	304.1	862.8	545.4	198.2	44.11	10.41	4.040	0.627	1.370
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1928 - 2002
ANNUAL TOTAL	77819.81	1537.86	
ANNUAL MEAN	213.2	4.213	173.1
HIGHEST ANNUAL MEAN			1229 1969
LOWEST ANNUAL MEAN			0.000 1951
HIGHEST DAILY MEAN	23000 Mar 5	111 Nov 24	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 1	0.00 Jan 5	0.00 Oct 1 1927
MAXIMUM PEAK FLOW		331 Nov 24	165000 Jan 25 1969
MAXIMUM PEAK STAGE		9.15 Nov 24	17.41 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	154400	3050	125400
10 PERCENT EXCEEDS	164	21	92
50 PERCENT EXCEEDS	8.8	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

11114495 MATILIJIA CREEK NEAR RESERVOIR, NEAR MATILIJIA 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—February 2002 to September 2002 (seasonal records only).

GAGE.—Water-stage recorder. Elevation of gage is 1380 ft above sea level, from topographic map.

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

COOPERATION.—Station constructed, maintained, and operated in cooperation with the Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 7.1 ft³/s, Feb. 17, gage height, 5.03 ft; minimum daily discharge, 4.2 ft³/s, Apr. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	5.5	4.8	---	---	---	---	---
2	---	---	---	---	---	5.5	4.8	---	---	---	---	---
3	---	---	---	---	---	5.4	4.7	---	---	---	---	---
4	---	---	---	---	---	5.3	4.7	---	---	---	---	---
5	---	---	---	---	---	5.3	4.6	---	---	---	---	---
6	---	---	---	---	---	5.3	4.7	---	---	---	---	---
7	---	---	---	---	---	5.3	4.7	---	---	---	---	---
8	---	---	---	---	---	5.3	4.7	---	---	---	---	---
9	---	---	---	---	---	5.2	4.6	---	---	---	---	---
10	---	---	---	---	---	5.1	4.6	---	---	---	---	---
11	---	---	---	---	---	5.1	4.5	---	---	---	---	---
12	---	---	---	---	---	5.0	4.6	---	---	---	---	---
13	---	---	---	---	---	5.1	4.6	---	---	---	---	---
14	---	---	---	---	---	5.3	4.5	---	---	---	---	---
15	---	---	---	---	---	6.4	5.3	---	---	---	---	---
16	---	---	---	---	---	6.3	5.3	---	---	---	---	---
17	---	---	---	---	---	6.4	5.3	---	---	---	---	---
18	---	---	---	---	---	6.2	5.3	---	---	---	---	---
19	---	---	---	---	---	6.2	5.3	---	---	---	---	---
20	---	---	---	---	---	6.1	5.3	---	---	---	---	---
21	---	---	---	---	---	6.0	5.1	---	---	---	---	---
22	---	---	---	---	---	5.9	5.1	---	---	---	---	---
23	---	---	---	---	---	5.8	5.0	---	---	---	---	---
24	---	---	---	---	---	5.8	5.0	---	---	---	---	---
25	---	---	---	---	---	5.7	5.0	---	---	---	---	---
26	---	---	---	---	---	5.7	4.9	---	---	---	---	---
27	---	---	---	---	---	5.7	4.8	---	---	---	---	---
28	---	---	---	---	---	5.6	4.8	---	---	---	---	---
29	---	---	---	---	---	---	4.8	---	---	---	---	---
30	---	---	---	---	---	---	4.8	---	---	---	---	---
31	---	---	---	---	---	---	4.8	---	---	---	---	---
TOTAL	---	---	---	---	---	159.6	---	---	---	---	---	---
MEAN	---	---	---	---	---	5.148	---	---	---	---	---	---
MAX	---	---	---	---	---	5.5	---	---	---	---	---	---
MIN	---	---	---	---	---	4.8	---	---	---	---	---	---
AC-FT	---	---	---	---	---	317	---	---	---	---	---	---

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

MEAN	---	---	---	---	---	5.200	---	---	---	---	---	---
MAX	---	---	---	---	---	5.20	---	---	---	---	---	---
(WY)	---	---	---	---	---	2002	---	---	---	---	---	---
MIN	---	---	---	---	---	5.20	---	---	---	---	---	---
(WY)	---	---	---	---	---	2002	---	---	---	---	---	---

11114495 MATILLO CREEK NEAR MATILLO HOT SPRINGS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—December 2001 to September 2002.

WATER TEMPERATURE: December 2001 to September 2002.

SEDIMENT DATA: December 2001 to September 2002.

PERIOD OF DAILY RECORD.—December 2001 to September 2002.

WATER TEMPERATURE: December 2001 to September 2002.

SUSPENDED-SEDIMENT DISCHARGE: December 2001 to September 2002.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
DEC					
19...	1205	6.7	12.0	2.0	.04
MAR					
21...	1415	5.2	18.5	4.0	.06
APR					
03...	1415	4.6	18.0	3.0	.04
25...	1210	4.2	19.5	1.0	.01

1118500 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 mi².

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 sea level, 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 ft³/s, Feb. 10, 1978, gage height, 24.14 ft, from rating curve extended above 34,000 ft³/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 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	4.6	6.2	4.7	5.5	5.2	5.9	4.9	3.2	1.8	0.22	0.00
2	6.3	4.6	6.0	4.5	5.4	5.4	5.9	4.8	3.3	1.7	0.21	0.00
3	6.1	4.3	7.6	4.3	5.2	5.4	5.8	4.6	3.3	1.8	0.19	0.00
4	6.1	4.3	6.9	4.7	5.0	5.3	5.7	4.6	3.1	1.7	0.17	0.00
5	6.2	4.3	6.4	4.5	5.2	5.4	5.9	4.7	2.9	1.7	0.13	0.00
6	6.2	4.1	5.9	4.3	5.2	5.5	5.7	4.8	2.8	2.1	0.11	0.00
7	6.1	4.1	5.5	4.4	5.0	5.5	5.8	4.9	2.7	2.1	0.24	0.00
8	6.1	4.1	6.1	4.4	4.9	5.6	5.7	4.7	2.6	2.0	0.39	0.00
9	7.0	4.4	5.2	4.4	4.8	5.6	5.7	4.6	2.6	1.9	0.33	0.00
10	6.7	4.1	4.8	4.3	4.8	5.5	5.6	4.5	2.4	1.7	0.43	0.00
11	6.1	4.6	4.5	4.4	4.9	5.5	5.6	4.5	2.5	1.8	0.44	0.00
12	5.9	6.3	4.4	4.5	4.9	5.4	5.3	4.4	2.5	1.7	0.39	0.00
13	5.5	8.1	4.2	4.6	4.9	5.5	5.2	4.1	2.4	1.3	0.40	0.00
14	5.4	6.1	4.0	4.5	4.9	5.9	5.1	4.0	2.4	1.3	0.46	0.00
15	5.3	5.5	3.7	4.2	4.8	6.0	5.0	4.1	2.2	1.3	0.47	0.00
16	5.3	5.3	3.5	4.2	4.9	6.0	5.0	4.2	2.2	1.2	0.50	0.00
17	5.2	5.2	3.3	4.2	5.9	6.3	5.1	4.1	2.2	1.0	0.46	0.00
18	5.2	4.9	3.1	4.2	5.8	7.2	5.1	3.9	2.2	0.90	0.46	0.00
19	5.1	4.9	3.1	4.3	5.4	6.9	5.0	3.8	2.2	0.83	0.46	0.00
20	5.0	4.8	3.2	4.2	5.2	6.9	5.0	3.9	2.1	0.98	0.44	0.00
21	5.0	4.7	4.0	4.2	5.1	6.8	5.0	3.9	2.1	1.1	0.34	0.00
22	5.3	4.4	3.7	4.3	5.0	6.6	5.1	4.0	2.1	1.1	0.32	0.00
23	5.3	4.3	3.6	4.5	5.0	6.2	4.9	3.9	2.1	1.0	0.25	0.00
24	5.0	36	3.5	4.5	5.1	6.1	4.9	3.6	2.1	0.96	0.30	0.00
25	5.0	13	3.5	4.6	5.1	6.1	4.9	3.6	1.9	0.93	0.17	0.04
26	4.8	8.0	3.6	4.7	5.1	6.0	5.0	3.6	1.9	0.75	0.16	0.09
27	4.8	7.0	3.5	5.6	5.2	6.0	5.1	3.5	1.9	0.55	0.13	0.13
28	5.0	6.5	3.5	6.7	5.3	5.9	5.0	3.7	2.0	0.48	0.11	0.19
29	5.3	7.4	4.6	5.9	---	5.9	5.0	4.1	1.9	0.40	0.10	0.23
30	5.3	6.8	5.1	5.7	---	5.9	4.9	4.4	1.8	0.28	0.06	0.25
31	5.0	---	4.8	5.4	---	5.8	---	3.4	---	0.25	0.04	---
TOTAL	173.0	196.7	141.0	143.9	143.5	183.3	158.9	129.8	71.6	38.61	8.88	0.93
MEAN	5.581	6.557	4.548	4.642	5.125	5.913	5.297	4.187	2.387	1.245	0.286	0.031
MAX	7.0	36	7.6	6.7	5.9	7.2	5.9	4.9	3.3	2.1	0.50	0.25
MIN	4.8	4.1	3.1	4.2	4.8	5.2	4.9	3.4	1.8	0.25	0.04	0.00
AC-FT	343	390	280	285	285	364	315	257	142	77	18	1.8

11118501 VENTURA RIVER NEAR VENTURA, CA—Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA, CA

DISCHARGE,CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	13	11	12	12	13	12	10	8.1	6.8	5.1
2	13	12	13	11	12	12	13	12	10	8.0	6.7	5.1
3	13	11	14	11	12	12	13	11	10	8.1	6.6	5.0
4	13	11	14	11	12	12	12	11	9.9	8.0	6.5	5.0
5	13	11	13	11	11	12	13	12	9.7	7.5	6.4	4.9
6	13	11	13	11	12	12	12	12	9.6	6.7	6.4	4.9
7	13	11	12	11	12	12	13	12	9.5	7.4	6.4	4.9
8	13	11	10	11	12	12	12	12	9.4	7.3	6.6	4.8
9	11	11	12	11	11	12	12	11	9.3	7.2	6.4	4.8
10	13	11	12	11	11	12	12	11	9.1	6.9	6.5	4.7
11	13	12	11	10	11	12	12	11	9.2	7.0	6.5	4.7
12	13	13	11	10	11	12	12	11	9.2	7.6	6.3	4.6
13	12	15	11	10	11	12	12	11	9.1	7.6	5.7	4.6
14	12	13	11	11	11	13	12	11	9.1	7.5	6.5	4.6
15	12	12	10	11	11	13	12	11	8.9	7.4	6.5	4.5
16	12	12	10	11	9.0	13	12	11	8.9	8.1	6.3	4.5
17	12	12	9.9	11	11	13	12	11	8.9	8.3	6.4	4.4
18	12	12	9.7	11	12	13	12	11	8.8	8.0	6.4	3.7
19	12	12	9.7	11	12	13	12	11	8.8	7.0	6.3	2.9
20	12	12	9.8	11	12	13	12	11	8.7	6.7	6.2	2.6
21	12	12	11	11	12	13	12	11	8.7	6.9	6.0	2.7
22	12	11	10	11	12	13	12	11	8.7	6.9	6.0	2.9
23	12	11	10	11	12	13	12	11	8.7	6.8	5.8	2.9
24	12	43	10	11	12	13	12	10	8.7	6.8	5.8	3.0
25	12	20	10	11	12	13	12	10	8.4	7.4	5.6	3.0
26	12	15	10	11	12	13	12	10	8.4	7.7	5.6	3.2
27	12	14	10	12	12	13	12	10	8.4	7.3	5.5	3.2
28	11	13	10	13	12	13	12	9.3	8.5	7.3	5.4	3.3
29	12	14	11	13	---	13	12	9.0	8.4	7.1	5.3	3.3
30	12	14	12	12	---	13	12	9.3	8.1	6.9	5.3	3.4
31	12	---	12	12	---	13	---	10	---	6.8	5.2	---
TOTAL	381	404	345.1	345	324.0	390	365	336.6	271.1	228.3	189.9	121.2
MEAN	12.29	13.47	11.13	11.13	11.57	12.58	12.17	10.86	9.037	7.365	6.126	4.040
MAX	13	43	14	13	12	13	13	12	10	8.3	6.8	5.1
MIN	11	11	9.7	10	9.0	12	12	9.0	8.1	6.7	5.2	2.6
AC-FT	756	801	685	684	643	774	724	668	538	453	377	240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1957, BY WATER YEAR (WY)

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

VENTURA RIVER BASIN

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 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.536	18.91	28.85	141.0	318.5	222.1	80.74	43.75	24.11	16.07	11.44	9.783
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL TOTAL	38182.77		3701.2			
ANNUAL MEAN	104.6		10.14		75.64	
HIGHEST ANNUAL MEAN					384	1995
LOWEST ANNUAL MEAN					2.22	1961
HIGHEST DAILY MEAN	12300	Mar 5	43	Nov 24	22000	Feb 9 1978
LOWEST DAILY MEAN	0.46	Jan 7	2.6	Sep 20	0.00	Nov 28 1977
ANNUAL SEVEN-DAY MINIMUM	0.53	Jan 3	2.9	Sep 19	0.00	Sep 7 1994
MAXIMUM PEAK FLOW					63600	Feb 10 1978
MAXIMUM PEAK STAGE					29.30	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	75740		7340		54800	
10 PERCENT EXCEEDS	94		13		60	
50 PERCENT EXCEEDS	14		11		12	
90 PERCENT EXCEEDS	8.8		5.6		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.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
DEC 18...	1600	3.0	12.5	6	.05

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 mi².

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 sea level, 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 ft³/s, Dec. 27, 1971, gage height, 14.10 ft, from floodmark, from rating curve extended above 130 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1415	13	3.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
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	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.59	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	0.03	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	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	2.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.03	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	2.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.09	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	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.08	0.18	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.05	0.23	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.06	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	7.09	2.69	0.50	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.236	0.087	0.016	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	2.7	0.89	0.46	0.00	0.03	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	14	5.3	1.0	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.125	0.775	2.441	12.72	17.61	10.44	4.203	1.081	0.445	0.226	0.113	0.114
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	2067.18		10.31			
ANNUAL MEAN	5.664		0.028		3.957	
HIGHEST ANNUAL MEAN					33.5	1969
LOWEST ANNUAL MEAN					0.000	1951
HIGHEST DAILY MEAN	651	Mar 5	2.7	Nov 24	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			13	Nov 24	8880	Dec 27 1971
MAXIMUM PEAK STAGE			3.70	Nov 24	14.10	Dec 27 1971
INSTANTANEOUS LOW FLOW			0.00	Oct 1		
ANNUAL RUNOFF (AC-FT)	4100		20		2870	
10 PERCENT EXCEEDS	6.5		0.00		3.6	
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 mi².

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 sea level, 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 ft³/s, Feb. 3, 1998, gage height, 9.52 ft, from rating curve extended above 838 ft³/s; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1300	36	4.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.35	0.22	0.43	0.30	0.18	0.14	0.06	0.05	0.07	0.05	0.05
2	0.16	0.36	1.3	0.41	0.27	0.18	0.14	0.06	0.05	0.07	0.05	0.04
3	0.20	0.35	1.8	0.42	0.27	0.16	0.15	0.05	0.05	0.07	0.06	0.05
4	0.26	0.35	0.60	0.39	0.27	0.15	0.15	0.05	0.06	0.07	0.05	0.05
5	0.29	0.36	0.52	0.38	0.26	0.14	0.14	0.05	0.05	0.07	0.05	0.05
6	0.35	0.30	0.49	0.38	0.25	0.17	0.13	0.07	0.05	0.06	0.04	0.06
7	0.34	0.32	0.45	0.38	0.25	0.22	0.13	0.10	0.05	0.06	0.04	0.05
8	0.32	0.44	0.46	0.37	0.27	0.22	0.16	0.09	0.06	0.06	0.04	0.05
9	0.35	0.28	0.46	0.36	0.26	0.19	0.24	0.08	0.06	0.06	0.04	0.04
10	0.34	0.25	0.48	0.34	0.25	0.16	0.12	0.06	0.05	0.05	0.04	0.04
11	0.33	1.4	0.52	0.34	0.25	0.15	0.11	0.05	0.06	0.05	0.04	0.04
12	0.33	4.2	0.53	0.33	0.25	0.15	0.11	0.04	0.05	0.05	0.04	0.05
13	0.29	0.79	0.50	0.33	0.25	0.13	0.13	0.03	0.05	0.05	0.04	0.05
14	0.28	0.31	0.55	0.33	0.24	0.12	0.13	0.03	0.04	0.05	0.05	0.05
15	0.30	0.24	0.54	0.34	0.23	0.12	0.13	0.03	0.04	0.05	0.05	0.05
16	0.30	0.21	0.51	0.36	0.22	0.14	0.11	0.03	0.04	0.06	0.06	0.05
17	0.30	0.20	0.53	0.35	0.38	0.15	0.11	0.04	0.04	0.06	0.06	0.05
18	0.32	0.18	0.54	0.35	0.31	0.23	0.11	0.04	0.03	0.07	0.06	0.05
19	0.34	0.17	0.57	0.35	0.27	0.16	0.09	0.04	0.05	0.06	0.06	0.05
20	0.37	0.15	0.91	0.34	0.27	0.15	0.09	0.05	0.06	0.06	0.06	0.05
21	0.40	0.12	1.2	0.34	0.24	0.13	0.09	0.03	0.07	0.06	0.06	0.05
22	0.42	0.14	0.54	0.41	0.21	0.12	0.08	0.04	0.07	0.05	0.07	0.05
23	0.41	0.21	0.51	0.33	0.19	0.14	0.08	0.04	0.08	0.04	0.06	0.05
24	0.39	4.8	0.48	0.34	0.19	0.17	0.08	0.03	0.07	0.04	0.06	0.05
25	0.30	0.27	0.46	0.34	0.18	0.12	0.07	0.04	0.08	0.04	0.06	0.05
26	0.25	0.11	0.48	0.35	0.19	0.12	0.07	0.04	0.09	0.04	0.05	0.05
27	0.22	0.11	0.45	4.2	0.18	0.11	0.10	0.07	0.09	0.05	0.05	0.05
28	0.24	0.12	0.61	2.2	0.18	0.12	0.10	0.10	0.09	0.05	0.05	0.05
29	0.31	0.66	1.8	0.71	---	0.14	0.08	0.07	0.08	0.05	0.06	0.07
30	0.62	0.31	1.1	1.0	---	0.14	0.07	0.06	0.08	0.05	0.06	0.06
31	0.46	---	0.67	0.44	---	0.14	---	0.06	---	0.05	0.06	---
TOTAL	9.95	18.06	20.78	17.94	6.88	4.72	3.44	1.63	1.79	1.72	1.62	1.50
MEAN	0.321	0.602	0.670	0.579	0.246	0.152	0.115	0.053	0.060	0.055	0.052	0.050
MAX	0.62	4.8	1.8	4.2	0.38	0.23	0.24	0.10	0.09	0.07	0.07	0.07
MIN	0.16	0.11	0.22	0.33	0.18	0.11	0.07	0.03	0.03	0.04	0.04	0.04
AC-FT	20	36	41	36	14	9.4	6.8	3.2	3.6	3.4	3.2	3.0

11119745 MISSION CREEK AT ROCKY NOOK PARK, AT SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.302	0.493	2.434	1.810	22.29	7.647	2.100	1.421	0.645	0.372	0.264	0.181
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	1655.77		90.03			
ANNUAL MEAN	4.536		0.247		3.536	
HIGHEST ANNUAL MEAN					14.4	1998
LOWEST ANNUAL MEAN					0.25	2002
HIGHEST DAILY MEAN	437	Mar 5	4.8	Nov 24	524	Feb 3 1998
LOWEST DAILY MEAN	0.07	Aug 15	0.03	May 13	0.00	Aug 15 1984
ANNUAL SEVEN-DAY MINIMUM	0.09	Aug 13	0.03	May 12	0.00	Aug 15 1984
MAXIMUM PEAK FLOW			36	Nov 24	1010	Feb 3 1998
MAXIMUM PEAK STAGE			4.63	Nov 24	9.52	Feb 3 1998
INSTANTANEOUS LOW FLOW			0.02	May 14	0.00	Aug 15 1984
ANNUAL RUNOFF (AC-FT)	3280		179		2560	
10 PERCENT EXCEEDS	5.0		0.46		3.2	
50 PERCENT EXCEEDS	0.51		0.13		0.29	
90 PERCENT EXCEEDS	0.17		0.05		0.01	

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.206	1.021	2.379	8.304	15.09	9.674	2.193	1.002	0.168	0.020	0.034	0.126
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1971 - 2002	
ANNUAL TOTAL	1725.48		61.10			
ANNUAL MEAN	4.727		0.167		3.290	
HIGHEST ANNUAL MEAN					18.4	1998
LOWEST ANNUAL MEAN					0.12	1990
HIGHEST DAILY MEAN	484	Mar 5	16	Nov 24	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			221	Nov 24	3090	Feb 23 1998
MAXIMUM PEAK STAGE			2.45	Nov 24	6.60	Jan 10 1995
INSTANTANEOUS LOW FLOW			0.00	Oct 1		
ANNUAL RUNOFF (AC-FT)	3420		121		2380	
10 PERCENT EXCEEDS	6.1		0.00		3.6	
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 mi².

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 60 ft above sea level, 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 ft³/s, Mar. 10, 1995, gage height, 10.16 ft, from rating curve extended above 3,000 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1315	38	1.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.25	0.25	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.08	1.5	0.30	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	1.2	0.29	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.34	0.19	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.23	0.17	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.13	0.00	0.17	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.13	0.07	0.06	0.26	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.12	0.03	0.0	0.17	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.91	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	3.5	0.22	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.59	0.29	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.10	0.48	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.02	0.24	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.20	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.21	0.00	0.60	0.04	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.06	0.09	0.00	0.12	0.31	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.17	0.10	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.53	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	5.4	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.72	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.32	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.16	0.00	2.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.20	0.02	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
29	0.00	1.7	1.5	0.27	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.66	0.45	0.94	0.15	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.11	---	0.49	0.25	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.90	14.38	10.93	5.77	1.20	0.86	0.00	0.00	0.00	0.00	0.00	0.01
MEAN	0.029	0.479	0.353	0.186	0.043	0.028	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.66	5.4	1.5	2.9	0.60	0.31	0.00	0.00	0.00	0.00	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	1.8	29	22	11	2.4	1.7	0.00	0.00	0.00	0.00	0.00	0.02

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.130	0.254	1.248	5.476	9.080	8.119	1.489	0.719	0.340	0.266	0.106	0.075
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1971 - 2002	
ANNUAL TOTAL	1932.96		34.05			
ANNUAL MEAN	5.296		0.093		2.243	
HIGHEST ANNUAL MEAN					11.4 1998	
LOWEST ANNUAL MEAN					0.039 1990	
HIGHEST DAILY MEAN	571	Mar 5	5.4	Nov 24	629	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 7	0.00	Oct 1 1970
MAXIMUM PEAK FLOW			38	Nov 24	4600	Mar 10 1995
MAXIMUM PEAK STAGE			1.92	Nov 24	11.16	Mar 5 2001
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Oct 1 1970
ANNUAL RUNOFF (AC-FT)	3830		68		1620	
10 PERCENT EXCEEDS	6.7		0.20		1.9	
50 PERCENT EXCEEDS	0.12		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 mi².

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 sea level, 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 ft³/s, Mar. 10, 1995, gage height, 12.45 ft, present datum, from rating curve extended above 6,900 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1630	341	3.08	Jan. 27	1300	290	3.00
Nov. 24	1230	799	3.63				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.40	0.45	0.94	0.66	0.21	0.50	0.24	0.10	0.06	0.57	0.33	0.05
2	0.11	0.23	18	0.84	0.23	0.52	0.21	0.10	0.07	0.61	0.07	0.01
3	0.08	0.18	12	1.3	0.21	0.44	0.19	0.08	0.05	0.54	0.04	0.00
4	0.10	0.16	4.5	0.48	0.17	0.48	0.18	0.11	0.01	0.54	0.03	0.03
5	0.10	0.16	0.99	0.44	0.17	0.46	0.14	0.09	0.04	0.47	0.02	0.01
6	0.10	0.16	0.80	0.52	0.16	1.8	0.14	0.09	0.08	0.19	0.01	0.02
7	0.10	0.16	0.71	1.9	0.14	2.1	0.14	0.14	0.08	0.08	0.00	0.01
8	0.11	0.16	0.62	0.37	0.12	0.74	0.22	0.25	0.09	0.11	0.00	0.01
9	0.10	0.16	0.50	0.33	0.15	0.62	0.16	0.16	0.09	0.14	0.00	0.00
10	0.11	0.17	0.47	0.33	0.09	0.36	0.14	0.05	0.05	0.09	0.00	0.00
11	0.12	9.7	0.50	0.33	0.07	0.47	0.14	0.02	0.05	0.05	0.00	0.01
12	0.15	45	0.52	0.29	0.35	0.44	0.19	0.05	0.04	0.07	0.00	0.02
13	0.17	3.2	0.48	0.25	0.53	0.37	0.15	0.04	0.09	0.08	0.00	0.03
14	0.18	e1.5	1.6	0.25	0.41	0.45	0.14	0.01	0.03	0.09	0.00	0.06
15	0.18	e0.92	0.70	0.28	0.34	0.29	e0.72	0.03	0.00	0.06	0.02	0.05
16	0.18	e0.82	0.51	0.23	0.35	0.34	0.34	0.03	0.00	0.07	0.04	0.06
17	0.18	e0.73	0.90	0.29	4.6	0.70	0.12	0.03	0.00	0.07	0.07	0.05
18	0.19	e0.70	0.62	0.31	0.66	0.63	0.09	0.06	0.00	0.10	0.10	0.44
19	0.19	e0.68	0.51	0.20	0.45	0.38	0.07	0.03	0.22	0.01	0.30	0.39
20	0.20	e0.65	5.3	0.17	0.39	0.24	0.11	0.60	0.23	0.12	0.26	0.13
21	0.18	0.62	5.5	0.18	0.46	0.28	0.12	0.45	0.03	e0.16	0.18	0.10
22	0.16	0.57	0.69	0.18	e1.1	0.31	0.16	0.42	0.00	0.09	0.10	0.10
23	0.16	0.54	0.56	0.12	e1.1	0.62	0.26	0.29	0.00	0.02	0.10	0.12
24	0.61	71	0.78	0.21	e1.0	0.33	0.17	0.06	0.00	0.04	0.10	0.12
25	0.47	2.0	e1.4	0.68	0.46	0.24	0.13	0.02	0.29	0.02	0.08	0.11
26	0.18	1.0	e1.2	e0.58	0.39	0.87	0.23	0.01	0.46	0.00	0.02	0.10
27	0.16	0.94	0.52	41	0.46	1.0	0.19	0.03	0.48	0.01	0.57	0.10
28	0.16	e1.5	0.46	1.7	0.46	0.33	0.11	0.05	0.47	0.00	0.38	0.30
29	0.15	18	15	0.52	---	0.30	0.10	0.03	0.52	0.00	0.17	0.91
30	5.9	1.6	7.1	0.38	---	0.25	0.08	0.03	0.69	e0.20	0.07	0.22
31	1.2	---	1.8	0.21	---	0.23	---	0.03	---	e0.39	0.03	---
TOTAL	12.38	163.66	86.18	55.53	15.23	17.09	5.38	3.49	4.22	4.99	3.09	3.56
MEAN	0.399	5.455	2.780	1.791	0.544	0.551	0.179	0.113	0.141	0.161	0.100	0.119
MAX	5.9	71	18	41	4.6	2.1	0.72	0.60	0.69	0.61	0.57	0.91
MIN	0.08	0.16	0.46	0.12	0.07	0.23	0.07	0.01	0.00	0.00	0.00	0.00
AC-FT	25	325	171	110	30	34	11	6.9	8.4	9.9	6.1	7.1

e Estimated.

11120000 ATASCADERO CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.378	3.226	5.226	17.35	23.10	18.58	4.253	0.987	0.242	0.110	0.091	0.251
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1942 - 2002	
ANNUAL TOTAL	6295.22		374.80			
ANNUAL MEAN	17.25		1.027		6.068	
HIGHEST ANNUAL MEAN					40.7 1998	
LOWEST ANNUAL MEAN					0.018 1951	
HIGHEST DAILY MEAN	1940	Mar 5	71	Nov 24	2410	Jan 25 1969
LOWEST DAILY MEAN	0.08	Oct 3	0.00	Jun 15	0.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	0.10	Oct 3	0.00	Aug 7	0.00	Oct 1 1941
MAXIMUM PEAK FLOW			799	Nov 24	10200	Mar 10 1995
MAXIMUM PEAK STAGE			3.63	Nov 24	17.30	Dec 3 1974
INSTANTANEOUS LOW FLOW			0.00	May 12	0.00	Oct 1 1941
ANNUAL RUNOFF (AC-FT)	12490		743		4400	
10 PERCENT EXCEEDS	13		0.94		3.5	
50 PERCENT EXCEEDS	0.57		0.18		0.04	
90 PERCENT EXCEEDS	0.13		0.02		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 mi².

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 sea level, 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 fair except for estimated daily discharges, which are poor. No regulation upstream from station. Many small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,520 ft³/s, Mar. 4, 2001, gage height, 9.04 ft, from rating curve extended above 400 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	2145	13	3.05

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.24	0.49	0.72	0.97	0.71	0.44	e0.68	0.39	0.16	0.05	0.05	0.02
2	0.19	0.49	1.0	0.99	0.71	0.48	0.51	0.47	0.16	0.12	0.05	0.02
3	0.22	0.48	4.8	0.96	0.71	0.44	0.39	0.26	0.15	0.11	0.02	0.01
4	0.30	0.49	1.7	0.84	0.71	0.38	0.54	0.24	0.13	0.17	0.02	0.02
5	0.27	0.49	1.1	0.81	0.71	0.39	0.40	0.29	0.12	0.15	0.02	0.04
6	0.37	0.48	0.83	0.80	0.70	0.39	0.58	0.35	0.11	0.07	0.01	0.02
7	0.36	0.47	0.75	0.79	0.71	0.65	0.62	0.34	0.11	0.10	0.02	0.01
8	0.37	0.45	0.71	0.77	0.70	0.72	0.62	0.46	0.12	0.19	0.02	0.02
9	0.27	0.36	0.71	0.75	0.69	0.60	0.44	0.30	0.14	0.07	0.03	0.02
10	0.27	0.33	0.76	0.74	0.67	0.53	0.40	0.19	0.14	0.05	0.02	0.00
11	0.28	0.71	0.74	0.74	0.61	0.46	0.53	0.23	0.17	0.05	0.03	0.00
12	0.29	3.1	0.74	0.74	0.63	0.37	0.42	0.18	0.16	0.05	0.03	0.00
13	0.32	2.7	0.74	0.74	0.56	0.35	0.43	0.19	0.10	0.03	0.03	0.00
14	0.35	0.81	0.81	0.74	0.61	0.36	0.57	0.12	0.07	0.04	0.02	0.00
15	0.35	0.63	0.74	0.79	0.61	0.28	0.59	0.13	0.06	0.04	0.02	0.00
16	0.25	0.58	0.72	0.77	0.54	0.28	0.54	0.18	0.06	0.04	0.02	0.00
17	0.26	0.56	0.72	0.75	0.78	0.41	0.35	0.19	0.04	0.05	0.02	0.00
18	0.23	0.56	0.73	0.75	0.73	0.61	0.36	0.18	0.04	0.06	0.02	0.00
19	0.25	0.53	0.72	0.75	0.68	0.50	0.35	0.17	0.03	0.05	0.04	0.00
20	0.29	0.50	0.78	0.74	0.65	0.51	0.34	0.23	0.05	0.04	0.02	0.00
21	0.32	0.49	1.1	0.74	0.52	e0.42	0.42	0.22	0.05	0.07	0.04	0.00
22	0.42	0.50	0.86	0.71	0.51	e0.42	0.43	0.11	0.06	0.14	0.08	0.00
23	0.38	0.53	0.74	0.68	0.58	e0.46	0.31	0.09	0.06	0.06	0.03	0.00
24	0.42	3.4	0.74	0.66	0.48	e0.67	0.29	0.12	0.06	0.06	0.02	0.00
25	0.31	2.3	0.73	0.67	0.56	e0.61	0.34	0.15	0.07	0.05	0.02	0.00
26	0.36	0.89	0.74	0.69	0.42	e0.41	0.34	0.17	0.06	0.05	0.02	0.01
27	0.42	0.70	0.73	1.3	0.40	e0.46	0.31	0.18	0.05	0.02	0.02	0.00
28	0.35	0.77	0.73	0.99	0.37	e0.41	0.34	0.17	0.10	0.02	0.03	0.00
29	0.39	1.1	1.1	0.81	---	e0.53	0.29	0.16	0.05	0.03	0.02	0.01
30	0.54	0.85	1.2	0.74	---	e0.44	0.29	0.19	0.05	0.02	0.02	0.00
31	0.55	---	1.0	0.71	---	e0.64	---	0.15	---	0.04	0.01	---
TOTAL	10.19	26.74	30.19	24.63	17.26	14.62	13.02	6.80	2.73	2.09	0.82	0.20
MEAN	0.329	0.891	0.974	0.795	0.616	0.472	0.434	0.219	0.091	0.067	0.026	0.007
MAX	0.55	3.4	4.8	1.3	0.78	0.72	0.68	0.47	0.17	0.19	0.08	0.04
MIN	0.19	0.33	0.71	0.66	0.37	0.28	0.29	0.09	0.03	0.02	0.01	0.00
AC-FT	20	53	60	49	34	29	26	13	5.4	4.1	1.6	0.4

e Estimated.

11120500 SAN JOSE CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.266	1.072	2.328	5.564	12.26	7.621	2.870	0.939	0.368	0.219	0.152	0.152
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	1926.74		149.29			
ANNUAL MEAN	5.279		0.409		2.647	
HIGHEST ANNUAL MEAN					37.4	1998
LOWEST ANNUAL MEAN					0.042	1948
HIGHEST DAILY MEAN	501	Mar 5	4.8	Dec 3	1000	Feb 3 1998
LOWEST DAILY MEAN	0.15	Sep 29	0.00	Sep 10	0.00	Jan 2 1941
ANNUAL SEVEN-DAY MINIMUM	0.19	Sep 25	0.00	Sep 10	0.00	Aug 18 1942
MAXIMUM PEAK FLOW			13	Nov 12	2520	Mar 4 2001
MAXIMUM PEAK STAGE			3.05	Nov 12	12.74	Jan 21 1943
INSTANTANEOUS LOW FLOW			0.00	Jul 13		
ANNUAL RUNOFF (AC-FT)	3820		296		1920	
10 PERCENT EXCEEDS	5.8		0.75		2.2	
50 PERCENT EXCEEDS	0.73		0.35		0.27	
90 PERCENT EXCEEDS	0.27		0.02		0.00	

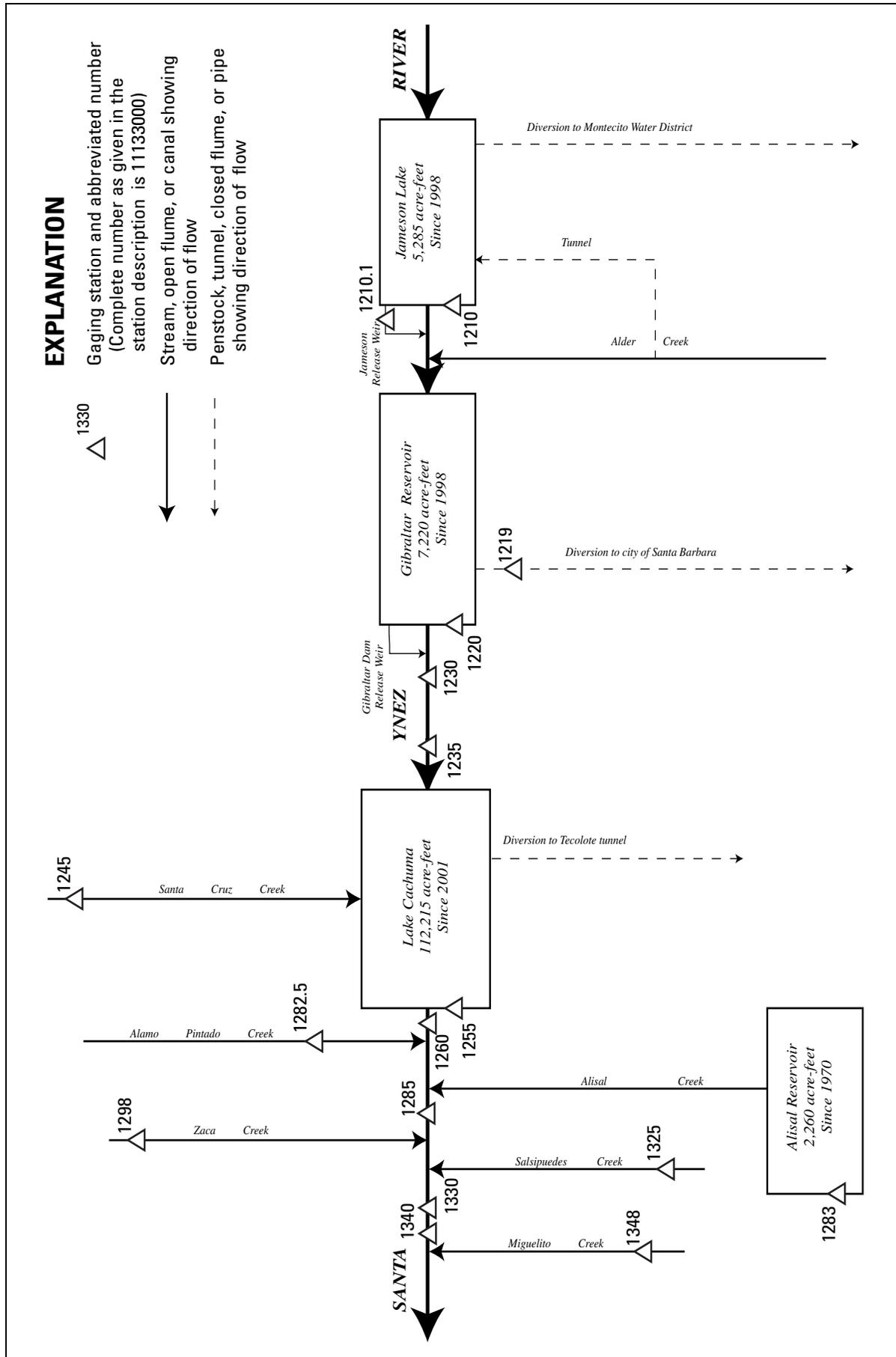


Figure 20. Diversions and storage in Santa Ynez River Basin.

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 mi², 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 sea level.

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.—71 years (water years 1932–02), spill and release, 9.81 ft³/s, 7,110 acre-ft/yr.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Elevation (ft) ^a	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. 3	2,218.00	4,590	—	—	—	—	—	—	—
Oct. 31	2,216.42	4,410	-180	160	0	33	13	5	8
Nov. 30	2,215.71	4,330	-80	120	0	10	50	38	12
Dec. 31	2,215.22	4,270	-60	111	0	4	55	30	25
CAL YR 2001	—	—	260	1,417	8,447	430	10,555	362	10,193
Jan. 31	2,214.46	4,190	-80	135	0	13	68	13	55
Feb. 28	2,213.80	4,120	-70	116	0	22	68	4	64
Mar. 31	2,213.05	4,030	-90	117	0	22	49	7	42
Apr. 30	2,211.93	3,910	-120	129	0	51	60	1	59
May 31	2,210.49	3,760	-150	138	0	54	42	1	41
June 30	2,208.60	3,570	-190	160	0	55	25	0	25
July 31	2,206.45	3,360	-210	169	0	62	21	0	21
Aug. 31	2,204.16	3,140	-220	178	0	52	10	0	10
Sept. 30	2,201.75	2,920	-220	196	0	32	8	1	7
WTR YR 2002	—	—	-1,670	1,729	0	410	469	100	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 mi².

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 sea level. 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) ^a	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.....	1,385.75	4,210	—	—	—	—	—	—	0
Oct. 31.....	1,378.61	2,860	-1,350	585	595	72	-98	9	-89
Nov. 30.....	1,376.40	2,500	-360	445	0	28	113	60	53
Dec. 31.....	1,374.09	2,150	-350	468	0	20	138	36	102
CAL YR 2001	—	—	-240	5,097	66,273	1,154	72,284	761	71,541
Jan. 31.....	1,373.30	2,040	-110	437	0	22	349	12	337
Feb. 28.....	1,375.35	2,340	300	5	0	35	340	4	336
Mar. 31.....	1,377.27	2,640	300	0	0	51	351	11	340
Apr. 30.....	1,378.05	2,760	120	1	0	78	199	1	198
May 31.....	1,377.96	2,750	-10	0	0	103	93	1	92
June 30.....	1,377.42	2,660	-90	1	0	125	36	0	36
July 31.....	1,376.26	2,480	-180	80	0	139	39	0	39
Aug. 31.....	1,373.42	2,050	-430	347	0	121	38	0	38
Sept. 30.....	1,367.09	1,250	-800	761	0	87	48	1	47
WTR YR 2002	—	—	-2,960	3,130	595	881	1,646	135	1,529

^a 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—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.829	6.026	25.28	123.3	251.8	248.5	102.5	30.45	8.178	3.527	1.713	0.620
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1934 - 2002	
ANNUAL TOTAL	33415.81		299.75			
ANNUAL MEAN	91.55		0.821		65.91	
HIGHEST ANNUAL MEAN					437 1969	
LOWEST ANNUAL MEAN					0.000 1961	
HIGHEST DAILY MEAN	10300	Mar 5	13	Oct 12	26600	Jan 25 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 30	0.00	Dec 16 1933
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 30	0.00	Dec 16 1933
MAXIMUM PEAK FLOW			14	Oct 13	54200	Jan 25 1969
MAXIMUM PEAK STAGE			8.10	Oct 13	25.80	Jan 25 1969
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Dec 16 1933
ANNUAL RUNOFF (AC-FT)	66280		595		47750	
10 PERCENT EXCEEDS	97		0.00		79	
50 PERCENT EXCEEDS	0.74		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 mi².

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 sea level.

REMARKS.—Records good 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 ft³/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft³/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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	3.4	3.8	7.0	5.0	2.7	1.9	0.80	e0.00	e0.00	0.00	0.00
2	0.64	3.0	3.7	6.5	5.4	2.7	1.9	0.88	e0.00	e0.00	0.00	0.00
3	0.75	2.7	6.0	6.4	5.0	2.7	2.1	0.73	e0.00	e0.00	0.00	0.00
4	0.71	2.6	5.1	5.9	4.7	2.8	1.9	0.44	e0.00	e0.00	0.00	0.00
5	1.8	2.4	4.6	5.6	4.3	2.7	2.0	0.41	e0.00	e0.00	0.00	0.00
6	2.0	2.3	4.7	5.4	3.7	2.6	2.0	0.70	e0.00	e0.00	0.00	0.00
7	2.1	1.8	4.6	5.2	4.8	2.4	2.0	0.43	e0.00	e0.00	0.00	0.00
8	4.0	1.8	4.2	5.0	4.6	2.9	1.9	0.60	e0.00	e0.00	0.00	0.00
9	6.4	1.8	4.2	5.0	4.6	2.7	1.8	0.53	e0.00	0.00	0.00	0.00
10	8.2	2.0	4.0	4.8	4.1	2.7	1.8	0.57	e0.00	0.00	0.00	0.00
11	8.8	2.9	3.8	4.7	3.4	2.4	1.7	0.52	e0.00	0.00	0.00	0.00
12	9.6	8.0	3.6	4.7	3.5	2.9	1.6	0.63	e0.00	0.00	0.00	0.00
13	8.9	7.3	3.5	4.5	3.4	2.5	1.4	0.73	e0.00	0.00	0.00	0.00
14	9.1	4.1	3.7	4.5	3.9	2.2	1.4	0.22	e0.00	0.00	0.00	0.00
15	9.6	3.4	3.6	4.5	3.4	2.5	1.6	0.25	e0.00	0.00	0.00	0.00
16	9.5	3.0	3.5	4.5	3.5	2.5	1.5	0.28	e0.00	0.00	0.00	0.00
17	10	2.9	3.4	4.5	4.8	2.6	1.5	0.21	e0.00	0.00	0.00	0.00
18	10	2.7	3.4	4.5	4.5	2.7	1.4	0.11	e0.00	0.00	0.00	0.00
19	10	2.7	3.6	4.4	4.3	3.2	1.4	0.09	e0.00	0.00	0.00	0.00
20	11	2.6	4.2	4.4	3.7	2.6	1.5	0.44	e0.00	0.00	0.00	0.00
21	12	2.7	6.3	4.4	3.4	2.4	1.5	0.44	e0.00	0.00	0.00	0.00
22	12	2.8	5.8	4.2	3.7	2.2	1.4	0.56	e0.00	0.00	0.00	0.00
23	11	2.8	5.8	3.9	3.6	2.2	1.2	e0.02	e0.00	0.00	0.00	0.00
24	11	5.3	5.6	3.9	3.5	2.2	1.1	e0.00	e0.00	0.00	0.00	0.00
25	10	5.4	5.1	3.6	3.4	2.3	1.1	e0.00	e0.00	0.00	0.00	0.00
26	10	4.3	5.1	4.2	2.8	2.1	1.2	e0.00	e0.00	0.00	0.00	0.00
27	5.6	3.6	5.0	5.4	3.0	2.1	1.3	e0.00	e0.00	0.00	0.00	0.00
28	4.3	3.3	4.9	6.0	3.3	1.8	1.3	e0.00	e0.00	0.00	0.00	0.00
29	3.8	5.0	5.4	5.5	---	1.7	1.0	e0.00	e0.00	0.00	0.00	0.00
30	3.8	5.1	6.4	5.2	---	2.0	0.83	e0.00	e0.00	0.00	0.00	0.00
31	3.8	---	6.8	4.8	---	2.0	---	e0.00	---	0.00	0.00	---
TOTAL	211.90	103.7	143.4	153.1	111.3	76.0	46.23	10.59	0.00	0.00	0.00	0.00
MEAN	6.835	3.457	4.626	4.939	3.975	2.452	1.541	0.342	0.000	0.000	0.000	0.000
MAX	12	8.0	6.8	7.0	5.4	3.2	2.1	0.88	0.00	0.00	0.00	0.00
MIN	0.64	1.8	3.4	3.6	2.8	1.7	0.83	0.00	0.00	0.00	0.00	0.00
AC-FT	420	206	284	304	221	151	92	21	0.00	0.00	0.00	0.00

e Estimated.

SANTA YNEZ RIVER BASIN

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.684	7.665	36.11	181.3	357.3	315.8	127.2	42.07	12.02	3.892	1.169	0.522
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1947 - 2002	
ANNUAL TOTAL	44901.12		856.22			
ANNUAL MEAN	123.0		2.346		89.06	
HIGHEST ANNUAL MEAN					595 1998	
LOWEST ANNUAL MEAN					0.013 1961	
HIGHEST DAILY MEAN	9010	Mar 5	12	Oct 21	33700	Jan 25 1969
LOWEST DAILY MEAN	0.09	Aug 21	0.00	May 24	0.00	Jun 24 1947
ANNUAL SEVEN-DAY MINIMUM	0.39	Aug 15	0.00	May 24	0.00	Jul 5 1947
MAXIMUM PEAK FLOW			20	Nov 12	67500	Jan 25 1969
MAXIMUM PEAK STAGE			0.95	Nov 12	18.88	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	89060		1700		64520	
10 PERCENT EXCEEDS	197		5.4		97	
50 PERCENT EXCEEDS	8.1		1.8		0.20	
90 PERCENT EXCEEDS	1.5		0.00		0.00	

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1973–89, 1991 to current year.
 CHEMICAL DATA: Water years 1973–89, 1991 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
OCT 02...	1520	.59	--	--	--	7.6	1160	24.5	--
NOV 06...	1535	2.4	--	--	--	7.6	1170	20.0	--
DEC 19...	1450	3.8	--	--	--	7.9	1140	14.5	--
JAN 15...	1650	4.7	--	--	--	7.9	1150	14.0	--
FEB 14...	1415	4.0	--	--	--	7.9	1130	16.0	--
APR 05...	1035	2.3	765	8.8	87	7.8	1160	15.0	300

Date	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)
OCT 02...	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	--	--	--
APR 05...	520	122	52.2	1.80	.9	46.8	17	222

Date	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)
OCT 02...	--	--	--	--	--	--	--	832
NOV 06...	--	--	--	--	--	--	--	884
DEC 19...	--	--	--	--	--	--	--	840
JAN 15...	--	--	--	--	--	--	--	860
FEB 14...	--	--	--	--	--	--	--	869
APR 05...	269	1	27.3	.3	18.3	390	1.14	836

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L) AS P (00671)	BORON, DIS- SOLVED (UG/L) AS B (01020)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)
OCT 02...	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--
DEC 19...	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	--	--	--
APR 05...	792	<.04	<.05	<.008	<.02	290	<10	3.9

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

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 mi².

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 sea level. See WSP 1735 for history of changes prior to Sept. 27, 1952, 1952, to June 24, 1969, at datum 3.25 ft higher.

REMARKS.—Records good. No regulation or diversion upstream from station. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,050 ft³/s, Feb. 24, 1969, gage height, 14.45 ft, from floodmark, present datum, from rating curve extended above 2,500 ft³/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 ft³/s, from rating curve extended above 5,000 ft³/s, on basis of slope-area measurement at gage height 12.10 ft, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 30	0345	44	7.73

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	2.1	14	4.2	3.0	2.7	1.1	0.00	0.00	0.00	0.00
2	0.00	0.00	2.1	10	4.1	3.0	2.6	1.0	0.00	0.00	0.00	0.00
3	0.00	0.00	2.2	7.8	3.9	3.0	2.6	0.96	0.00	0.00	0.00	0.00
4	0.00	0.00	4.0	6.2	3.9	3.0	2.5	0.91	0.00	0.00	0.00	0.00
5	0.00	0.00	3.0	5.4	3.9	3.0	2.6	0.81	0.00	0.00	0.00	0.00
6	0.00	0.00	2.5	5.4	3.8	3.2	2.6	0.75	0.00	0.00	0.00	0.00
7	0.00	0.00	2.2	5.2	3.8	4.3	2.6	0.73	0.00	0.00	0.00	0.00
8	0.00	0.00	2.2	4.7	3.8	4.4	2.5	0.66	0.00	0.00	0.00	0.00
9	0.00	0.00	2.2	4.7	3.8	3.4	2.5	0.52	0.00	0.00	0.00	0.00
10	0.00	0.00	2.3	4.7	3.8	3.2	2.3	0.41	0.00	0.00	0.00	0.00
11	0.00	0.00	2.2	4.5	3.8	3.1	2.0	0.32	0.00	0.00	0.00	0.00
12	0.00	0.00	2.2	4.3	4.0	2.9	1.7	0.27	0.00	0.00	0.00	0.00
13	0.00	0.81	2.3	4.4	4.1	2.6	1.4	0.15	0.00	0.00	0.00	0.00
14	0.00	0.55	2.7	4.3	4.1	2.6	1.3	0.07	0.00	0.00	0.00	0.00
15	0.00	0.23	3.3	4.5	4.2	2.7	1.2	0.12	0.00	0.00	0.00	0.00
16	0.00	0.18	2.9	4.7	4.2	2.7	1.2	0.17	0.00	0.00	0.00	0.00
17	0.00	0.15	2.7	4.7	5.3	3.1	1.3	0.14	0.00	0.00	0.00	0.00
18	0.00	0.20	3.0	4.7	5.9	4.2	1.4	0.10	0.00	0.00	0.00	0.00
19	0.00	0.23	3.4	4.3	4.9	3.4	1.4	0.07	0.00	0.00	0.00	0.00
20	0.00	0.24	4.1	4.3	4.9	2.9	1.4	0.17	0.00	0.00	0.00	0.00
21	0.00	0.32	14	4.2	4.7	2.8	1.3	0.26	0.00	0.00	0.00	0.00
22	0.00	0.39	10	4.2	4.7	2.8	1.2	0.31	0.00	0.00	0.00	0.00
23	0.00	0.53	6.4	4.0	4.1	3.0	1.0	0.29	0.00	0.00	0.00	0.00
24	0.00	2.4	5.1	4.0	4.2	3.2	0.96	0.19	0.00	0.00	0.00	0.00
25	0.00	17	4.7	4.0	3.9	3.2	0.84	0.10	0.00	0.00	0.00	0.00
26	0.00	4.0	4.3	3.8	3.8	3.0	1.1	0.10	0.00	0.00	0.00	0.00
27	0.00	2.4	4.2	5.1	3.3	2.8	1.2	0.09	0.00	0.00	0.00	0.00
28	0.00	1.9	4.2	7.2	3.0	2.7	1.2	0.07	0.00	0.00	0.00	0.00
29	0.00	2.3	7.3	5.0	---	2.7	1.1	0.07	0.00	0.00	0.00	0.00
30	0.00	2.5	28	4.5	---	2.7	1.1	0.04	0.00	0.00	0.00	0.00
31	0.00	---	19	4.2	---	2.7	---	0.00	---	0.00	0.00	---
TOTAL	0.00	36.33	160.8	163.0	116.1	95.3	50.80	10.95	0.00	0.00	0.00	0.00
MEAN	0.000	1.211	5.187	5.258	4.146	3.074	1.693	0.353	0.000	0.000	0.000	0.000
MAX	0.00	17	28	14	5.9	4.4	2.7	1.1	0.00	0.00	0.00	0.00
MIN	0.00	0.00	2.1	3.8	3.0	2.6	0.84	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	72	319	323	230	189	101	22	0.00	0.00	0.00	0.00

SANTA YNEZ RIVER BASIN

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.630	3.009	11.64	36.42	71.40	63.02	36.30	14.97	6.166	2.243	0.925	0.533
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1942 - 2002	
ANNUAL TOTAL	10331.36		633.28			
ANNUAL MEAN	28.31		1.735		20.32	
HIGHEST ANNUAL MEAN					134	1969
LOWEST ANNUAL MEAN					0.066	1990
HIGHEST DAILY MEAN	2080	Mar 5	28	Dec 30	5000	Feb 24 1969
LOWEST DAILY MEAN	0.00	Aug 23	0.00	Oct 1	0.00	Jul 6 1953
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 23	0.00	Oct 1	0.00	Jul 6 1953
MAXIMUM PEAK FLOW			44	Dec 30	7050	Feb 24 1969
MAXIMUM PEAK STAGE			7.73	Dec 30	14.45	Feb 24 1969
ANNUAL RUNOFF (AC-FT)	20490		1260		14720	
10 PERCENT EXCEEDS	46		4.3		34	
50 PERCENT EXCEEDS	3.7		0.19		1.3	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

SANTA YNEZ RIVER BASIN

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L) AS N) (00608)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L) AS N) (00631)	NITRO- GEN, NITRITE DIS-SOLVED (MG/L) AS N) (00613)	ORTHO- PHOS- PHATE, DIS-SOLVED (MG/L) AS P) (00671)	BORON, DIS-SOLVED (UG/L) AS B) (01020)	IRON, DIS-SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS-SOLVED (UG/L) AS MN) (01056)
DEC 18...	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--
APR 04...	710	<.04	<.05	<.008	<.02	280	<10	e2.2
MAY 15...	--	--	--	--	--	--	--	--

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

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 mi².

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 sea level (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, 173,308 acre-ft, Oct. 1, elevation, 744.99 ft; minimum, 129,370 acre-ft, Sept. 30, elevation, 727.78 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 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173308	170306	169503	169060	168423	166283	163915	160817	157120	150913	145225	135249
2	173139	170250	169531	169032	168340	166201	163807	160709	156961	150709	144803	135011
3	173027	170195	169531	169032	168313	166119	163753	160602	156804	150530	144381	134773
4	172915	170112	169503	169005	168257	165982	163672	160468	156646	150326	143937	134559
5	172774	170056	169447	169005	168147	165845	163590	160361	156515	150147	143519	134394
6	172718	169973	169392	168977	168063	165763	163482	160254	156358	149943	143077	134253
7	172634	169946	169337	169005	168008	165736	163374	160120	156201	149765	142586	134064
8	172549	169835	169364	168949	167870	165709	163265	160012	156018	149586	142144	133853
9	172465	169724	169281	168949	167842	165626	163157	159932	155887	149382	141702	133688
10	172381	169669	169254	168949	167759	165544	163103	159798	155729	149204	141386	133523
11	172297	169752	169115	168922	167677	165517	163022	159611	155625	149053	141070	133311
12	172156	169724	169088	168894	167568	165435	162968	159531	155467	148877	140754	133075
13	172100	169946	169060	168839	167486	165271	162886	159425	155284	148701	140438	132863
14	171960	169918	169005	168839	167431	165162	162751	159319	155153	148500	140195	132581
15	171847	169918	168894	168811	167349	165080	162616	159187	154970	148299	139879	132298
16	171707	169890	168922	168783	167240	164971	162453	159081	154786	148098	139490	132064
17	171594	169835	168866	168755	167185	164863	162345	158975	154655	147897	139104	131762
18	171538	169780	168839	168700	167103	164836	162238	158816	154264	147721	138743	131552
19	171426	169752	168783	168645	167021	164700	162157	158710	153901	147494	138406	131366
20	171342	169697	168811	168589	166966	164619	162050	158604	153617	147318	138069	131156
21	171229	169641	168949	168534	166939	164565	161969	158471	153280	147117	137805	130947
22	171201	169558	168949	168423	166884	164538	161835	158392	152996	146916	137588	130761
23	171145	169558	168949	168396	166802	164484	161755	158233	152685	146765	137396	130574
24	171033	169531	168894	168396	166693	164402	161621	158127	152401	146591	137180	130365
25	170976	169641	168866	168340	166638	164321	161487	157994	152142	146392	136963	130179
26	170864	169614	168811	168340	166556	164267	161380	157862	151909	146218	136772	130016
27	170752	169558	168811	168313	166501	164240	161272	157756	151678	146045	136534	129807
28	170639	169531	168811	168479	166392	164186	161192	157650	151448	145920	136273	129692
29	170499	169475	168949	168479	---	164105	161112	157517	151295	145722	136035	129508
30	170416	169558	168922	168479	---	164078	160951	157411	151091	145548	135773	129370
31	170389	---	169005	168451	---	163996	---	157252	---	145399	135511	---
MAX	173308	170306	169531	169060	168423	166283	163915	160817	157120	150913	145225	135249
MIN	170389	169475	168783	168313	166392	163996	160951	157252	151091	145399	135511	129370
a	743.95	743.65	743.45	743.25	742.50	741.62	740.49	739.10	736.73	734.47	730.40	727.78
b	-3090	-831	-553	-554	-2059	-2396	-3045	-3699	-6161	-5692	-9888	-6141
c	4881	2416	2059	2402	4413	5476	5703	7301	6738	7309	7135	5607

CAL YR 2001 b +6651
WTR YR 2002 b -44109

- 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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 2002 to September 2002.

GAGE.—Water-stage recorder. Elevation of gage is 740 ft above sea level, from topographic map.

REMARKS.—Records poor.

EXTREMES FOR CURRENT YEAR.— Maximum discharge, 4.5 ft³/s, May 18, 19, June 1, gage height, 1.13 ft; no flow for several months.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.02	0.00	2.5	0.46	0.48	0.55
2	---	---	---	---	---	---	0.02	0.00	0.60	0.47	0.49	0.57
3	---	---	---	---	---	---	0.02	0.00	0.63	0.47	0.48	0.59
4	---	---	---	---	---	---	0.01	0.00	0.66	0.47	0.47	0.59
5	---	---	---	---	---	---	0.00	0.00	0.65	0.48	0.45	0.57
6	---	---	---	---	---	---	0.00	1.6	0.54	0.48	0.45	0.58
7	---	---	---	---	---	---	0.00	3.3	0.52	0.49	0.43	0.60
8	---	---	---	---	---	---	0.00	3.6	0.47	0.49	0.44	0.60
9	---	---	---	---	---	---	0.00	3.9	0.43	0.49	0.43	0.60
10	---	---	---	---	---	---	0.00	4.0	0.39	0.51	0.43	0.62
11	---	---	---	---	---	---	0.00	4.1	0.40	0.51	0.43	0.63
12	---	---	---	---	---	---	0.00	4.1	0.41	0.51	0.43	0.62
13	---	---	---	---	---	---	0.00	4.1	0.42	0.49	0.45	0.62
14	---	---	---	---	---	---	0.00	4.1	0.47	0.47	0.46	0.63
15	---	---	---	---	---	---	0.00	4.1	0.51	0.48	0.44	0.64
16	---	---	---	---	---	---	0.00	4.2	0.49	0.45	0.43	0.67
17	---	---	---	---	---	---	0.00	4.2	0.47	0.46	0.44	0.66
18	---	---	---	---	---	---	0.00	4.2	0.46	0.44	0.44	0.67
19	---	---	---	---	---	---	0.00	4.2	0.46	0.41	0.43	0.67
20	---	---	---	---	---	---	0.00	4.2	0.45	0.40	0.42	0.64
21	---	---	---	---	---	---	0.00	4.2	0.46	0.40	0.40	0.61
22	---	---	---	---	---	---	0.00	4.1	0.44	0.41	0.39	0.59
23	---	---	---	---	---	0.00	0.00	4.1	0.44	0.40	0.39	0.57
24	---	---	---	---	---	0.01	0.00	4.1	0.45	0.40	0.40	0.54
25	---	---	---	---	---	0.03	0.00	4.1	0.44	0.41	0.39	0.53
26	---	---	---	---	---	0.02	0.00	4.1	0.44	0.42	0.43	0.52
27	---	---	---	---	---	0.02	0.00	4.1	0.43	e0.42	0.53	0.49
28	---	---	---	---	---	0.02	0.00	4.1	0.44	e0.43	0.57	e0.50
29	---	---	---	---	---	0.02	0.00	4.2	0.44	e0.43	0.53	e0.51
30	---	---	---	---	---	0.02	0.00	4.2	0.45	0.43	0.54	e0.52
31	---	---	---	---	---	0.02	---	4.3	---	0.49	0.54	---
TOTAL	---	---	---	---	---	---	0.07	103.50	16.36	14.07	14.03	17.70
MEAN	---	---	---	---	---	---	0.002	3.339	0.545	0.454	0.453	0.590
MAX	---	---	---	---	---	---	0.02	4.3	2.5	0.51	0.57	0.67
MIN	---	---	---	---	---	---	0.00	0.00	0.39	0.40	0.39	0.49
AC-FT	---	---	---	---	---	---	0.1	205	32	28	28	35

e Estimated.

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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—December 1928 to September 1931, October 1932 to September 1976, May 1994 to September 2001 (seasonal records only); October 2001 to September 2002.

GAGE.—Water-stage recorder. Elevation of gage is 545.66 ft above sea level (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 for beaver dam backwater condition from October 1 to July 31, good for open channel condition from August 1 to September 30. No records computed above 250 ft³/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 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	2.9	2.4	2.1	2.1	2.7	1.4	1.9	2.0	15	96	64
2	3.7	3.1	2.6	2.0	2.2	1.8	1.5	1.6	2.2	14	135	58
3	2.6	3.3	2.9	2.0	2.3	1.4	1.4	3.7	2.3	12	135	42
4	2.4	3.6	2.8	1.7	2.0	1.1	1.3	1.6	2.0	11	135	29
5	2.3	3.3	2.6	1.6	2.1	1.0	1.3	1.5	2.0	12	137	35
6	2.5	3.2	2.9	1.7	2.0	1.1	1.5	1.7	1.9	13	138	37
7	2.7	3.3	3.0	1.5	1.8	2.0	1.6	1.2	1.8	17	139	39
8	3.0	3.5	3.4	1.5	1.7	2.1	1.6	1.4	1.7	15	134	42
9	7.4	3.5	3.6	1.3	1.7	1.5	5.1	1.4	1.4	15	92	49
10	9.1	3.5	3.6	1.3	1.8	2.3	4.4	1.6	1.4	15	63	69
11	9.6	3.4	3.1	1.6	1.7	5.3	4.0	2.2	1.1	13	65	78
12	11	4.1	3.3	1.6	1.7	2.8	2.5	1.9	4.2	12	66	91
13	10	3.3	4.0	1.5	1.7	3.6	2.2	3.1	2.2	15	66	70
14	12	3.2	4.9	1.5	1.9	3.7	1.7	2.1	2.3	17	79	99
15	13	2.8	5.6	1.5	1.8	2.9	1.1	1.8	2.0	20	103	71
16	12	2.4	6.2	1.7	1.6	2.4	1.0	2.2	1.8	15	114	74
17	8.2	2.5	6.0	1.9	1.4	3.5	1.4	2.2	50	24	114	69
18	7.9	2.6	5.6	2.2	1.6	4.4	1.4	2.8	90	34	115	52
19	8.7	2.9	4.0	2.5	1.6	2.7	1.5	2.3	75	27	115	51
20	11	3.7	4.1	2.4	1.6	1.6	1.8	2.2	65	16	101	54
21	4.4	3.0	3.5	2.5	1.5	1.6	2.0	3.4	64	15	55	56
22	4.1	3.0	2.5	5.0	1.4	1.8	1.9	2.5	62	12	43	54
23	4.1	2.8	2.7	2.0	1.6	2.1	3.7	2.6	61	2.4	44	51
24	3.7	3.2	2.4	2.1	1.7	2.2	1.8	2.6	54	3.1	45	43
25	3.3	3.1	2.1	2.2	1.8	1.7	1.7	2.4	32	5.0	44	42
26	3.2	2.7	2.0	2.3	2.1	1.4	2.2	2.7	25	3.1	52	42
27	3.1	2.4	2.4	3.1	6.2	1.4	2.7	3.5	20	2.5	65	39
28	3.1	2.4	2.3	3.1	2.6	1.5	2.9	3.8	17	2.8	64	42
29	3.0	2.6	2.5	2.9	---	1.3	2.5	3.1	14	3.7	62	55
30	3.2	2.4	3.1	2.7	---	1.3	1.9	2.4	16	1.8	61	59
31	2.8	---	2.4	2.3	---	1.3	---	2.4	---	15	62	---
TOTAL	184.8	91.7	104.5	65.3	55.2	67.5	63.0	71.8	677.3	398.4	2739	1656
MEAN	5.961	3.057	3.371	2.106	1.971	2.177	2.100	2.316	22.58	12.85	88.35	55.20
MAX	13	4.1	6.2	5.0	6.2	5.3	5.1	3.8	90	34	139	99
MIN	2.3	2.4	2.0	1.3	1.4	1.0	1.0	1.2	1.1	1.8	43	29
AC-FT	367	182	207	130	109	134	125	142	1340	790	5430	3280

SANTA YNEZ RIVER BASIN

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1976, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.666	2.246	14.73	146.4	232.9	292.7	131.5	35.36	11.01	5.090	3.185	2.284
MAX	28.2	26.9	104	2498	3971	3098	2034	364	122	51.6	38.8	48.1
(WY)	1958	1947	1942	1969	1969	1941	1941	1941	1941	1941	1976	1957
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	1948	1931	1931	1931	1931	1929	1929

SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1929 - 1976

ANNUAL TOTAL	6174.5		
ANNUAL MEAN	16.92		73.88
HIGHEST ANNUAL MEAN			666 1969
LOWEST ANNUAL MEAN			0.000 1948
HIGHEST DAILY MEAN	139	Aug 7	38900 Jan 25 1969
LOWEST DAILY MEAN	1.0	Mar 5	0.00 Jul 22 1929
ANNUAL SEVEN-DAY MINIMUM	1.4	Mar 29	0.00 Jul 22 1929
MAXIMUM PEAK FLOW	143	Aug 8	79000 Jan 25 1969
MAXIMUM PEAK STAGE	3.96	Aug 8	22.00 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	12250		53520
10 PERCENT EXCEEDS	62		69
50 PERCENT EXCEEDS	2.9		1.0
90 PERCENT EXCEEDS	1.5		0.00

SANTA YNEZ RIVER BASIN

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	BICAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CAR- CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT								
01...	--	--	--	--	--	--	--	564
NOV								
08...	--	--	--	--	--	--	--	--
DEC								
20...	--	--	--	--	--	--	--	580
JAN								
17...	--	--	--	--	--	--	--	584
FEB								
13...	--	--	--	--	--	--	--	587
APR								
04...	217	1	13.2	.3	16.2	249	.81	596
MAY								
06...	--	--	--	--	--	--	--	589
JUL								
12...	--	--	--	--	--	--	--	580
AUG								
01...	--	--	--	--	--	--	--	564
SEP								
06...	--	--	--	--	--	--	--	488

Date	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
01...	--	--	--	--	--	--	--	--
NOV								
08...	--	--	--	--	--	--	--	--
DEC								
20...	--	--	--	--	--	--	--	--
JAN								
17...	--	--	--	--	--	--	--	--
FEB								
13...	--	--	--	--	--	--	--	--
APR								
04...	546	<.04	<.05	<.008	.02	270	e7	32.1
MAY								
06...	--	--	--	--	--	--	--	--
JUL								
12...	--	--	--	--	--	--	--	--
AUG								
01...	--	--	--	--	--	--	--	--
SEP								
06...	--	--	--	--	--	--	--	--

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

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	825	813	858	798	855	819	836	816	825	818	830	823
2	824	815	837	829	865	814	832	816	825	816	826	821
3	830	822	837	827	873	815	838	816	825	816	826	821
4	834	825	837	829	854	810	838	821	823	819	827	823
5	---	---	837	829	829	774	829	820	825	819	827	823
6	832	824	837	831	829	805	830	818	825	821	844	816
7	833	816	837	828	834	809	829	818	825	820	845	817
8	833	827	835	826	830	826	830	821	824	817	826	811
9	837	822	836	826	846	827	832	819	822	817	819	816
10	831	821	837	829	870	822	834	821	822	819	822	818
11	829	825	864	815	830	822	827	820	823	819	829	820
12	830	820	868	804	829	824	826	822	823	818	829	816
13	826	816	867	813	830	812	826	822	822	820	829	822
14	825	820	841	814	858	821	831	825	823	819	828	821
15	826	815	834	826	845	824	830	821	824	821	826	814
16	827	819	837	829	830	820	830	823	823	819	825	821
17	823	814	838	829	830	822	847	823	834	815	834	818
18	822	816	836	827	830	821	826	821	826	818	832	812
19	825	818	837	829	830	824	829	824	823	819	824	817
20	828	818	834	831	861	793	830	823	826	817	825	817
21	828	819	834	827	843	785	827	821	823	819	826	816
22	829	819	841	828	850	798	829	825	823	819	825	820
23	829	822	842	828	824	816	831	822	823	819	837	815
24	829	820	867	805	827	822	829	820	825	821	824	814
25	834	821	865	812	826	820	829	818	825	821	823	817
26	835	829	863	798	829	820	829	816	825	820	824	813
27	835	822	---	---	830	818	833	812	832	818	824	817
28	838	828	833	805	828	818	829	814	830	823	824	814
29	837	823	873	800	845	805	836	818	---	---	823	815
30	895	809	873	814	855	797	839	817	---	---	824	814
31	872	811	---	---	837	800	824	817	---	---	824	808
MONTH	---	---	---	---	873	774	847	812	834	815	845	808
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	823	812	827	820	853	845	812	805	844	793	911	894
2	825	814	827	823	845	839	811	800	793	773	896	872
3	823	816	829	825	844	838	815	804	774	770	882	862
4	824	808	830	826	844	835	819	812	775	768	872	846
5	822	817	830	826	845	835	818	802	777	772	891	845
6	824	815	834	827	847	836	820	797	778	772	882	849
7	827	818	837	833	845	837	822	808	778	774	866	837
8	825	817	844	836	845	837	822	803	785	772	860	840
9	832	821	841	836	843	835	825	811	790	782	856	820
10	830	818	840	834	841	835	826	811	788	766	855	841
11	830	823	842	837	841	833	828	811	776	761	863	851
12	828	823	843	833	876	839	833	817	769	759	868	855
13	829	819	846	841	846	836	832	822	769	759	870	859
14	829	818	847	843	843	836	833	823	771	757	880	868
15	831	825	848	843	844	834	848	824	865	771	885	873
16	837	825	849	844	844	834	846	825	872	863	883	872
17	837	825	850	843	860	829	828	815	875	866	885	873
18	832	821	851	845	829	806	827	822	878	866	884	869
19	827	819	850	845	810	795	827	820	877	866	881	868
20	826	822	862	841	808	797	827	817	876	867	879	867
21	827	823	851	834	807	798	826	822	878	856	878	866
22	828	822	844	841	808	794	829	819	867	839	878	867
23	833	824	844	840	809	795	841	824	854	834	879	869
24	832	828	848	837	806	793	848	832	845	829	880	867
25	833	826	848	841	809	799	850	841	842	828	880	869
26	857	823	847	835	812	798	848	841	843	830	884	870
27	833	819	846	840	813	802	845	833	853	842	886	874
28	832	820	847	841	812	802	846	841	861	851	884	872
29	830	823	851	838	811	800	858	841	870	855	894	877
30	831	819	851	834	813	802	853	843	896	870	891	878
31	---	---	866	843	---	---	848	837	905	894	---	---
MONTH	857	808	866	820	876	793	858	797	905	757	911	820

11126400 SANTA YNEZ RIVER AT HIGHWAY 154, NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	896	889	---	---	844	835
2	---	---	---	---	---	---	900	885	---	---	843	829
3	---	---	---	---	---	---	900	889	---	---	835	827
4	---	---	---	---	---	---	905	891	---	---	837	829
5	---	---	---	---	---	---	904	891	---	---	834	829
6	---	---	---	---	---	---	905	890	---	---	833	828
7	---	---	---	---	---	---	905	889	---	---	830	826
8	---	---	---	---	---	---	904	891	---	---	830	819
9	---	---	---	---	---	---	904	883	---	---	831	822
10	---	---	---	---	---	---	910	892	---	---	825	816
11	---	---	---	---	---	---	913	906	---	---	823	815
12	---	---	---	---	---	---	912	907	---	---	825	801
13	---	---	---	---	---	---	909	897	---	---	843	813
14	---	---	---	---	---	---	905	890	---	---	839	822
15	---	---	---	---	---	---	906	888	---	---	837	829
16	---	---	---	---	---	---	902	879	---	---	834	818
17	---	---	---	---	---	---	885	879	---	---	826	812
18	---	---	---	---	---	---	886	878	---	---	826	814
19	---	---	---	---	---	---	887	881	---	---	827	813
20	---	---	---	---	---	---	892	878	---	---	824	813
21	---	---	---	---	---	---	886	878	---	---	825	813
22	---	---	---	---	870	850	884	870	---	---	827	816
23	---	---	---	---	880	850	892	881	---	---	831	820
24	---	---	---	---	870	840	904	888	---	---	834	822
25	---	---	---	---	880	850	913	900	---	---	830	822
26	---	---	---	---	890	860	919	907	---	---	835	823
27	---	---	---	---	890	860	921	913	822	812	834	824
28	---	---	---	---	880	860	---	---	832	816	835	829
29	---	---	---	---	900	880	924	918	828	816	836	830
30	---	---	---	---	900	880	926	918	833	816	837	829
31	---	---	---	---	---	---	---	---	839	828	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	844	801

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	19.0	17.5	---	---	19.5	17.0
2	---	---	---	---	---	---	18.5	17.5	---	---	20.0	17.5
3	---	---	---	---	---	---	18.5	17.5	---	---	20.0	18.0
4	---	---	---	---	---	---	18.0	17.5	---	---	20.5	18.5
5	---	---	---	---	---	---	18.0	17.0	---	---	19.5	18.5
6	---	---	---	---	---	---	18.5	17.5	---	---	20.0	18.0
7	---	---	---	---	---	---	18.5	17.5	---	---	20.0	18.0
8	---	---	---	---	---	---	19.0	17.5	---	---	20.0	18.0
9	---	---	---	---	---	---	19.0	17.5	---	---	20.0	17.5
10	---	---	---	---	---	---	19.0	18.0	---	---	20.5	18.0
11	---	---	---	---	---	---	18.5	17.5	---	---	20.5	18.0
12	---	---	---	---	---	---	18.5	17.5	---	---	20.0	18.0
13	---	---	---	---	---	---	19.5	17.5	---	---	20.0	18.0
14	---	---	---	---	---	---	20.5	18.0	---	---	19.5	17.0
15	---	---	---	---	---	---	20.0	18.0	---	---	19.5	17.5
16	---	---	---	---	---	---	21.5	18.5	---	---	19.5	17.5
17	---	---	---	---	---	---	21.0	19.0	---	---	19.5	17.0
18	---	---	---	---	---	---	21.0	18.5	---	---	19.5	17.5
19	---	---	---	---	---	---	21.0	18.5	---	---	20.0	17.5
20	---	---	---	---	---	---	20.5	18.5	---	---	20.0	17.5
21	---	---	---	---	19.0	---	20.5	18.5	---	---	20.0	17.5
22	---	---	---	---	19.0	15.5	20.5	18.5	---	---	20.0	17.5
23	---	---	---	---	19.0	15.5	21.0	18.0	---	---	20.0	18.0
24	---	---	---	---	19.0	15.5	19.5	18.5	---	---	20.0	18.0
25	---	---	---	---	19.5	16.0	19.5	18.0	---	---	20.0	18.5
26	---	---	---	---	19.0	17.0	18.5	18.0	20.5	---	19.5	18.0
27	---	---	---	---	18.5	17.0	18.5	18.0	20.5	17.5	19.0	18.0
28	---	---	---	---	19.0	17.5	18.5	18.0	20.0	17.5	19.0	18.5
29	---	---	---	---	19.0	17.5	19.0	18.0	19.5	18.0	19.0	18.5
30	---	---	---	---	19.0	17.5	19.0	18.5	20.0	17.5	19.5	17.5
31	---	---	---	---	---	---	---	---	19.5	17.0	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	20.5	17.0

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 mi².

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 sea level, 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 ft³/s, Feb. 3, 1998, gage height, 11.69 ft, from rating curve extended above 1,050 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1345	54	2.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.60	e0.90	0.86	1.8	0.76	1.2	0.73	1.5	3.5	0.94	0.77	1.0
2	0.65	e0.88	1.0	2.3	0.84	1.0	0.76	1.9	2.9	0.75	0.85	0.81
3	0.61	e0.85	0.95	1.5	0.92	1.1	0.79	1.6	2.5	0.78	0.89	0.67
4	0.59	e0.85	0.88	1.7	1.0	1.2	0.87	1.1	2.5	0.76	0.91	0.35
5	0.60	e0.84	0.87	1.7	0.99	1.1	0.91	1.1	2.1	0.76	1.1	0.42
6	0.64	e0.83	0.85	1.8	0.91	1.4	1.1	1.1	1.9	0.73	1.1	0.38
7	0.60	e0.82	0.86	1.7	1.2	1.3	1.3	1.1	2.0	0.60	1.1	0.57
8	0.59	e0.80	0.85	1.5	1.2	1.5	1.2	1.0	2.3	0.59	0.95	0.51
9	0.51	e0.80	0.89	1.4	1.0	1.8	1.2	1.4	2.5	0.56	0.80	0.47
10	0.49	e0.91	0.88	1.4	0.98	1.7	1.2	1.3	2.0	0.53	0.84	0.33
11	0.50	e1.0	0.87	1.5	1.2	1.6	1.1	1.1	2.1	0.26	0.85	0.31
12	0.51	e1.5	0.95	1.5	1.3	1.6	1.1	0.70	2.0	0.30	0.94	0.37
13	0.51	e0.93	0.97	1.8	1.3	1.6	0.94	0.69	2.0	0.37	1.1	0.37
14	0.61	0.78	1.3	1.9	1.3	2.1	0.99	1.0	2.0	0.39	1.2	0.35
15	0.57	e0.80	1.2	1.9	1.4	2.2	0.97	2.2	1.8	0.48	0.99	0.38
16	0.59	e0.78	1.4	1.6	1.2	2.0	1.1	2.2	1.8	0.51	1.1	0.30
17	0.69	e0.75	1.9	1.5	1.4	2.3	1.1	1.5	1.4	0.47	1.1	0.38
18	0.78	e0.75	2.1	1.7	1.3	2.4	1.3	1.5	1.4	0.46	1.1	0.37
19	0.57	e0.75	1.9	1.7	1.2	2.3	1.2	2.1	1.3	0.56	1.2	0.33
20	0.46	e0.71	3.2	1.7	1.5	1.7	1.1	3.1	1.5	0.57	1.2	0.31
21	e0.50	e0.70	4.2	1.9	1.5	1.5	1.1	2.9	1.5	0.55	1.3	0.32
22	e0.51	e0.66	2.6	1.9	1.5	1.5	0.94	2.5	1.5	0.72	1.3	0.35
23	e0.51	e0.65	2.6	1.7	1.7	1.6	0.96	2.9	1.1	0.96	1.4	0.36
24	e0.59	e3.2	2.9	1.5	2.0	1.3	0.95	3.1	0.99	0.70	1.4	0.24
25	e0.57	0.68	2.7	1.5	1.9	1.2	1.3	2.7	1.0	0.74	1.2	0.23
26	e0.57	0.69	2.5	1.6	1.5	1.2	1.2	3.1	0.95	0.87	1.3	0.27
27	e0.57	0.70	2.2	1.9	1.3	1.2	1.2	2.5	0.93	0.84	1.5	0.36
28	e0.55	0.65	2.4	1.1	1.2	1.3	1.3	3.4	1.2	0.78	1.1	0.34
29	e0.56	1.3	3.9	0.94	---	1.3	0.98	3.4	0.96	0.99	1.1	0.29
30	e1.1	0.84	2.5	0.83	---	1.2	1.3	3.3	0.95	0.79	1.4	0.29
31	e0.95	---	1.9	0.78	---	0.95	---	3.3	---	0.79	1.3	---
TOTAL	18.65	27.30	55.08	49.25	35.50	47.35	32.19	62.29	52.58	20.10	34.39	12.03
MEAN	0.602	0.910	1.777	1.589	1.268	1.527	1.073	2.009	1.753	0.648	1.109	0.401
MAX	1.1	3.2	4.2	2.3	2.0	2.4	1.3	3.4	3.5	0.99	1.5	1.0
MIN	0.46	0.65	0.85	0.78	0.76	0.95	0.73	0.69	0.93	0.26	0.77	0.23
AC-FT	37	54	109	98	70	94	64	124	104	40	68	24

e Estimated.

SANTA YNEZ RIVER BASIN

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.474	0.663	0.790	3.924	12.77	8.335	2.303	1.115	0.834	0.493	0.578	0.432
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1971 - 2002
ANNUAL TOTAL	1469.82	446.71	
ANNUAL MEAN	4.027	1.224	2.669
HIGHEST ANNUAL MEAN			25.3 1998
LOWEST ANNUAL MEAN			0.000 1990
HIGHEST DAILY MEAN	277 Mar 5	4.2 Dec 21	1150 Feb 3 1998
LOWEST DAILY MEAN	0.46 Oct 20	0.23 Sep 25	0.00 Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	0.53 Oct 9	0.29 Sep 24	0.00 Oct 1 1970
MAXIMUM PEAK FLOW		54 Nov 24	3680 Feb 3 1998
MAXIMUM PEAK STAGE		2.93 Nov 24	11.69 Feb 3 1998
ANNUAL RUNOFF (AC-FT)	2920	886	1930
10 PERCENT EXCEEDS	5.7	2.2	3.3
50 PERCENT EXCEEDS	1.4	1.1	0.00
90 PERCENT EXCEEDS	0.67	0.51	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 mi².

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 sea level.

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, 2,200 acre-ft, Feb. 17–Mar. 14, maximum elevation, 598.02 ft, Feb. 22–27; minimum contents, 1,740 acre-ft, Sept. 28–30, minimum elevation, 592.47 ft, Sept. 30.

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 2001 TO SEPTEMBER 2002												
DAILY OBSERVATION AT 2400 HOURS												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	1990	2050	2140	2180	2200	2170	2120	2050	1970	1880	e1810
2	2050	1990	2060	2140	2180	2200	2170	2120	2050	1970	1880	e1810
3	2050	1990	2080	2140	2180	2200	2170	2120	2050	1970	1870	e1810
4	2050	1990	2080	2150	2190	2200	2170	2120	2050	1970	1870	e1800
5	2040	1990	2090	2150	2190	2200	2170	2120	2050	1960	1870	e1800
6	2040	1990	2090	2150	2190	2200	2170	2120	2040	1960	1860	e1800
7	2040	1980	2090	2150	2190	2200	2170	2110	2040	1960	1860	e1800
8	2040	1980	2090	2150	2190	2200	2170	2110	2040	1960	1860	e1790
9	2030	1980	2100	2150	2190	2200	2160	2110	2030	1950	1850	e1790
10	2030	1980	2100	2160	2190	2200	2160	2100	2030	1950	1850	e1790
11	2030	1990	2100	2160	2190	2200	2160	2100	2030	1940	1850	e1790
12	2020	2010	2100	2160	2190	2200	2160	2100	2020	1940	1840	e1780
13	2020	2010	2100	2160	2190	2200	2160	2100	2020	1940	1840	e1780
14	2020	2010	2100	2160	2190	2200	2160	2090	2020	1930	1840	e1780
15	2020	2010	2100	2160	2190	2190	2160	2090	2010	1930	1830	e1780
16	2020	2010	2100	2160	2190	2190	2160	2090	2010	1930	1830	e1770
17	2010	2010	2110	2160	2200	2190	2160	2090	2010	1920	1830	e1770
18	2010	2010	2110	2160	2200	2190	2150	2090	2010	1920	1820	e1770
19	2010	2010	2110	2160	2200	2190	2150	2080	2000	1920	1820	e1770
20	2010	2010	2120	2170	2200	2190	2150	2080	2000	1910	e1810	e1760
21	2000	2010	2120	2170	2200	2190	2150	2080	2000	1910	e1810	e1760
22	2000	2010	2120	2170	2200	2190	2150	2080	1990	1910	e1810	e1760
23	2000	2010	2120	2170	2200	2190	2140	2080	1990	1910	e1810	e1760
24	2000	2020	2120	2170	2200	2190	2140	2070	1990	1900	e1810	e1750
25	2000	2030	2120	2170	2200	2190	2140	2070	1990	1900	e1810	e1750
26	1990	2030	2120	2170	2200	2180	2140	2070	1980	1900	e1810	e1750
27	1990	2030	2130	2180	2200	2180	2130	2070	1980	1890	e1810	e1750
28	1990	2030	2130	2180	2200	2180	2130	2070	1980	1890	e1810	e1740
29	1990	2040	2130	2180	---	2180	2130	2060	1980	1890	e1810	e1740
30	1990	2040	2140	2180	---	2180	2130	2060	1980	1890	e1810	e1740
31	1990	---	2140	2180	---	2180	---	2060	---	1880	e1810	---
MAX	2060	2040	2140	2180	2200	2200	2170	2120	2050	1970	1880	1810
MIN	1990	1980	2050	2140	2180	2180	2130	2060	1980	1880	1810	1740
a	595.62	596.26	597.30	597.80	597.99	597.73	597.18	596.40	595.47	594.29	593.37	592.47
b	-70	+50	+100	+40	+20	-20	-50	-70	-80	-100	-70	-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 mi².

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 September 2002.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 357.43 ft above sea level. 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 500 ft 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).—Maximum discharge, 82,000 ft³/s, Jan. 25, 1969, estimated on basis of discharge measurements up to 81,000 ft³/s for Santa Ynez River near Buellton, gage height, 17.1 ft, from floodmark; no flow for several months in many years.

DISCHARGE (BRIDGE), CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	0.00	50
2	---	---	---	---	---	---	---	---	---	---	0.00	53
3	---	---	---	---	---	---	---	---	---	---	70	44
4	---	---	---	---	---	---	---	---	---	---	100	32
5	---	---	---	---	---	---	---	---	---	---	110	25
6	---	---	---	---	---	---	---	---	---	---	116	23
7	---	---	---	---	---	---	---	---	---	---	120	23
8	---	---	---	---	---	---	---	---	---	---	121	25
9	---	---	---	---	---	---	---	---	---	---	95	27
10	---	---	---	---	---	---	---	---	---	---	62	28
11	---	---	---	---	---	---	---	---	---	---	52	31
12	---	---	---	---	---	---	---	---	---	0.00	50	37
13	---	---	---	---	---	---	---	---	---	0.00	51	42
14	---	---	---	---	---	---	---	---	---	0.00	52	59
15	---	---	---	---	---	---	---	---	---	0.00	71	56
16	---	---	---	---	---	---	---	---	---	0.00	91	57
17	---	---	---	---	---	---	---	---	---	0.00	95	54
18	---	---	---	---	---	---	---	---	---	0.00	94	44
19	---	---	---	---	---	---	---	---	---	0.00	94	36
20	---	---	---	---	---	---	---	---	---	0.00	93	34
21	---	---	---	---	---	---	---	---	---	0.00	62	34
22	---	---	---	---	---	---	---	---	---	0.00	40	38
23	---	---	---	---	---	---	---	---	---	0.00	36	42
24	---	---	---	---	---	---	---	---	---	0.00	35	40
25	---	---	---	---	---	---	---	---	---	0.00	34	36
26	---	---	---	---	---	---	---	---	---	0.00	33	34
27	---	---	---	---	---	---	---	---	---	0.00	44	31
28	---	---	---	---	---	---	---	---	---	0.00	45	28
29	---	---	---	---	---	---	---	---	---	0.00	45	26
30	---	---	---	---	---	---	---	---	---	0.00	47	28
31	---	---	---	---	---	---	---	---	---	0.00	50	---
TOTAL	---	---	---	---	---	---	---	---	---	---	2008.00	1117
MEAN	---	---	---	---	---	---	---	---	---	---	64.77	37.23
MAX	---	---	---	---	---	---	---	---	---	---	121	59
MIN	---	---	---	---	---	---	---	---	---	---	0.00	23
AC-FT	---	---	---	---	---	---	---	---	---	---	3980	2220

SANTA YNEZ RIVER BASIN

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SI02) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
NOV								
19...	--	--	--	--	--	--	--	762
DEC								
21...	--	--	--	--	--	--	--	748
JAN								
22...	--	--	--	--	--	--	--	748
FEB								
01...	--	--	--	--	--	--	--	734
APR								
02...	328	4	48.6	.3	23.2	260	1.04	765
AUG								
05...	--	--	--	--	--	--	--	646
SEP								
06...	--	--	--	--	--	--	--	632
Date	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV								
19...	--	--	--	--	--	--	--	--
DEC								
21...	--	--	--	--	--	--	--	--
JAN								
22...	--	--	--	--	--	--	--	--
FEB								
01...	--	--	--	--	--	--	--	--
APR								
02...	706	<.04	.43	e.004	e.02	240	<10	<2.0
AUG								
05...	--	--	--	--	--	--	--	--
SEP								
06...	--	--	--	--	--	--	--	--

< Actual value is know to be less than value shown.

e Estimated.

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

OXYGEN DISSOLVED (POOL), MG/L, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	8.6	4.7
2	---	---	---	---	---	---	---	---	---	---	7.5	4.2
3	---	---	---	---	---	---	---	---	---	---	7.3	3.4
4	---	---	---	---	---	---	---	---	8.3	6.9	6.8	3.1
5	---	---	---	---	---	---	11.7	4.7	8.7	6.8	9.5	3.3
6	---	---	---	---	---	---	10.9	4.4	8.9	6.8	10.0	4.2
7	---	---	---	---	---	---	10.8	4.2	9.1	6.3	9.0	3.2
8	---	---	---	---	---	---	---	---	9.1	6.1	7.2	2.6
9	---	---	---	---	---	---	---	---	8.7	5.5	6.3	2.3
10	---	---	---	---	---	---	---	---	8.4	5.6	5.8	2.1
11	---	---	---	---	---	---	---	---	7.3	5.5	3.9	2.2
12	---	---	---	---	---	---	---	---	7.5	5.4	4.5	2.1
13	---	---	---	---	---	---	---	---	7.4	5.4	4.5	2.0
14	---	---	---	---	---	---	---	---	7.6	5.2	3.6	1.9
15	---	---	---	---	---	---	---	---	8.1	5.2	3.7	2.1
16	---	---	---	---	---	---	---	---	9.0	5.9	3.3	1.9
17	---	---	---	---	---	---	---	---	9.0	5.9	3.0	2.0
18	---	---	---	---	---	---	---	---	8.3	5.2	2.8	2.1
19	---	---	---	---	---	---	---	---	8.0	4.9	2.7	2.2
20	---	---	---	---	---	---	---	---	8.7	4.9	3.9	2.1
21	---	---	---	---	---	---	---	---	8.6	4.4	3.5	2.2
22	---	---	---	---	---	---	---	---	8.8	4.3	3.6	2.4
23	---	---	---	---	---	---	---	---	8.9	4.1	3.3	2.2
24	---	---	---	---	---	---	---	---	9.1	4.9	3.5	2.3
25	---	---	---	---	---	---	---	---	9.5	5.0	4.2	2.5
26	---	---	---	---	---	---	---	---	8.8	4.6	4.3	2.6
27	---	---	---	---	---	---	---	---	8.3	4.8	3.3	2.3
28	---	---	---	---	---	---	---	---	9.4	5.4	3.0	2.3
29	---	---	---	---	---	---	---	---	9.0	5.2	3.9	2.2
30	---	---	---	---	---	---	---	---	8.6	5.0	3.7	2.2
31	---	---	---	---	---	---	---	---	9.1	5.0	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	10.0	1.9

SPECIFIC CONDUCTANCE (POOL), US/CM @ 25C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	1000	902
2	---	---	---	---	---	---	---	---	---	---	1020	961
3	---	---	---	---	---	---	---	---	---	---	1070	985
4	---	---	---	---	---	---	---	---	1000	966	1100	1010
5	---	---	---	---	---	---	1210	1100	972	949	1090	954
6	---	---	---	---	---	---	1240	1120	964	939	1090	958
7	---	---	---	---	---	---	1230	1150	997	939	1100	995
8	---	---	---	---	---	---	---	---	995	937	1120	1060
9	---	---	---	---	---	---	---	---	1080	954	1130	1060
10	---	---	---	---	---	---	---	---	1060	966	1140	1080
11	---	---	---	---	---	---	---	---	1060	1010	1130	1090
12	---	---	---	---	---	---	---	---	1060	950	1130	1070
13	---	---	---	---	---	---	---	---	1040	997	1130	1100
14	---	---	---	---	---	---	---	---	1020	988	1130	1090
15	---	---	---	---	---	---	---	---	1020	943	1120	1110
16	---	---	---	---	---	---	---	---	993	924	1120	1100
17	---	---	---	---	---	---	---	---	968	925	1120	1100
18	---	---	---	---	---	---	---	---	---	---	1120	1110
19	---	---	---	---	---	---	---	---	1000	951	1130	1110
20	---	---	---	---	---	---	---	---	1020	948	1130	1080
21	---	---	---	---	---	---	---	---	1040	969	1130	1090
22	---	---	---	---	---	---	---	---	1060	973	1130	1090
23	---	---	---	---	---	---	---	---	1050	982	1120	1100
24	---	---	---	---	---	---	---	---	1040	974	1130	1090
25	---	---	---	---	---	---	---	---	1030	982	1130	1070
26	---	---	---	---	---	---	---	---	1060	981	1160	1120
27	---	---	---	---	---	---	---	---	1040	935	1150	1130
28	---	---	---	---	---	---	---	---	965	925	1150	1140
29	---	---	---	---	---	---	---	---	968	912	1160	1150
30	---	---	---	---	---	---	---	---	1010	927	1160	1130
31	---	---	---	---	---	---	---	---	1010	898	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	1160	902

NOTE: Dissolved oxygen mg/L calculated from percent saturation.

SANTA YNEZ RIVER BASIN

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

WATER TEMPERATURE (POOL), DEGREES C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	24.0	19.0
2	---	---	---	---	---	---	---	---	---	---	23.5	19.5
3	---	---	---	---	---	---	---	---	---	---	23.0	19.5
4	---	---	---	---	---	---	24.0	---	24.0	19.5	22.0	19.5
5	---	---	---	---	---	---	25.0	18.5	23.5	19.0	22.5	19.5
6	---	---	---	---	---	---	24.5	19.0	23.0	18.0	22.0	19.5
7	---	---	---	---	---	---	23.5	19.0	23.5	18.5	22.0	19.0
8	---	---	---	---	---	---	---	---	23.5	18.5	20.5	19.0
9	---	---	---	---	---	---	---	---	24.0	19.0	19.5	18.5
10	---	---	---	---	---	---	---	---	24.5	19.5	19.5	18.5
11	---	---	---	---	---	---	---	---	23.5	19.5	19.5	18.5
12	---	---	---	---	---	---	---	---	23.0	19.5	19.5	19.0
13	---	---	---	---	---	---	---	---	24.0	19.5	19.5	19.0
14	---	---	---	---	---	---	---	---	23.5	19.5	19.5	19.0
15	---	---	---	---	---	---	---	---	25.0	20.0	19.5	19.0
16	---	---	---	---	---	---	---	---	23.5	19.5	19.0	19.0
17	---	---	---	---	---	---	---	---	23.0	19.5	19.0	19.0
18	---	---	---	---	---	---	---	---	22.5	19.5	19.5	19.0
19	---	---	---	---	---	---	---	---	22.0	19.5	19.5	19.0
20	---	---	---	---	---	---	---	---	22.0	19.0	19.5	18.5
21	---	---	---	---	---	---	---	---	22.5	19.0	19.5	19.0
22	---	---	---	---	---	---	---	---	22.5	19.5	19.5	19.0
23	---	---	---	---	---	---	---	---	22.5	19.5	19.5	19.0
24	---	---	---	---	---	---	---	---	22.5	19.0	19.5	19.0
25	---	---	---	---	---	---	---	---	23.0	19.0	20.0	19.0
26	---	---	---	---	---	---	---	---	22.5	19.0	20.0	19.0
27	---	---	---	---	---	---	---	---	24.0	19.0	19.5	19.0
28	---	---	---	---	---	---	---	---	24.0	19.0	19.0	19.0
29	---	---	---	---	---	---	---	---	24.0	19.5	19.5	18.5
30	---	---	---	---	---	---	---	---	23.5	19.5	19.5	18.5
31	---	---	---	---	---	---	---	---	24.0	19.0	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	24.0	18.5

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 mi².

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 sea level.

REMARKS.—Records fair except for estimated daily discharges, which 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 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1515	9.8	2.73

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	0.00	e0.06	0.14	0.11	0.10	0.07	0.00	0.00	0.00	0.00	0.00
2	e0.00	0.00	e0.06	0.19	0.11	0.09	0.05	0.00	0.00	0.00	0.00	0.00
3	e0.00	0.00	e0.06	0.19	0.14	0.10	0.05	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	e0.06	0.12	0.10	0.11	0.05	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	e0.06	0.12	0.10	0.12	0.04	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	e0.06	0.13	0.11	0.15	0.03	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	e0.06	0.13	0.11	0.15	0.03	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	e0.06	0.14	0.13	0.12	0.02	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	e0.06	0.13	0.13	0.10	0.02	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	e0.06	0.12	0.13	0.11	0.01	0.00	0.00	0.00	0.00	0.00
11	0.00	0.18	e0.06	0.10	0.11	0.11	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.54	e0.06	0.11	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.14	e0.06	0.13	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.05	e0.06	0.12	0.10	0.09	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.04	e0.06	0.12	0.10	0.14	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.05	e0.06	0.10	0.11	0.10	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.06	e0.06	0.10	0.15	0.17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.05	0.06	0.11	0.10	0.14	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.05	0.06	0.12	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.07	0.14	0.12	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.09	0.25	0.14	0.10	0.08	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.09	0.07	0.14	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.06	0.05	0.12	0.11	0.19	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	1.4	0.06	0.12	0.10	0.11	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.10	0.07	0.15	0.11	0.07	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.16	0.08	0.17	0.11	0.08	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.23	0.08	0.34	0.11	0.14	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.10	0.09	0.18	0.11	0.10	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	e0.08	0.38	0.57	---	0.16	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	e0.06	0.25	0.13	---	0.07	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.20	0.10	---	0.08	---	0.00	---	0.00	0.00	---
TOTAL	0.00	3.60	2.86	4.70	3.09	3.38	0.37	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.120	0.092	0.152	0.110	0.109	0.012	0.000	0.000	0.000	0.000	0.000
MAX	0.00	1.4	0.38	0.57	0.15	0.19	0.07	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.05	0.10	0.10	0.07	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	7.1	5.7	9.3	6.1	6.7	0.7	0.00	0.00	0.00	0.00	0.00

e Estimated.

SANTA YNEZ RIVER BASIN

11129800 ZACA CREEK NEAR BUELLTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.009	0.064	0.454	2.979	9.519	5.120	1.358	0.505	0.172	0.028	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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1964 - 2002
ANNUAL TOTAL	866.78	18.00	
ANNUAL MEAN	2.375	0.049	1.641
HIGHEST ANNUAL MEAN			11.6 1998
LOWEST ANNUAL MEAN			0.000 1990
HIGHEST DAILY MEAN	317 Mar 5	1.4 Nov 24	598 Feb 3 1998
LOWEST DAILY MEAN	0.00 Jun 11	0.00 Oct 1	0.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 11	0.00 Oct 1	0.00 Oct 1 1963
MAXIMUM PEAK FLOW		9.8 Nov 24	1390 Feb 24 1969
MAXIMUM PEAK STAGE		2.73 Nov 24	12.59 Feb 3 1998
ANNUAL RUNOFF (AC-FT)	1720	36	1190
10 PERCENT EXCEEDS	3.0	0.13	0.99
50 PERCENT EXCEEDS	0.06	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 mi².

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 sea level, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are 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 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1500	309	2.59

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.4	3.0	3.8	3.3	2.5	2.5	1.9	0.29	0.53	0.98	0.32
2	1.8	2.2	44	3.9	3.2	2.4	2.6	1.8	0.36	0.49	1.2	0.14
3	1.9	2.2	19	4.7	3.2	2.5	2.6	1.8	0.37	0.51	1.2	0.07
4	2.0	2.2	4.5	4.0	3.2	2.5	2.5	1.7	0.33	0.58	1.1	0.04
5	2.0	2.2	e4.0	3.8	3.2	2.5	2.6	1.6	0.21	e0.56	0.94	0.07
6	2.1	2.2	e3.8	3.9	3.0	2.8	2.8	1.4	0.19	e0.53	0.70	0.09
7	2.1	2.2	e3.8	3.9	3.1	2.9	2.5	1.3	0.22	e0.50	0.66	0.04
8	2.1	2.2	e3.8	3.9	3.2	2.7	2.3	1.4	e0.70	e0.45	0.47	0.04
9	2.1	2.1	e3.7	3.9	3.1	2.5	2.4	1.1	e0.70	0.40	0.25	0.04
10	2.0	2.1	e3.7	3.8	3.0	2.5	2.4	1.1	e0.70	1.4	0.09	0.03
11	2.1	6.3	3.3	3.8	2.9	2.6	2.2	1.0	0.76	0.86	0.16	0.03
12	2.0	30	3.2	3.8	2.9	2.6	2.0	1.1	0.81	0.59	0.18	0.04
13	1.9	4.3	e3.2	3.8	2.9	2.3	1.9	0.91	0.73	0.36	0.25	0.10
14	1.9	2.8	e3.2	3.7	2.9	2.2	1.9	0.90	0.73	0.37	0.32	0.21
15	1.8	2.5	e3.2	3.6	2.9	2.2	1.9	0.92	0.71	0.43	0.34	0.18
16	1.9	2.4	e3.2	3.8	2.8	2.3	1.9	0.94	0.61	0.48	0.51	0.30
17	2.0	2.3	3.2	3.6	5.1	2.3	2.1	0.91	0.31	0.45	0.59	0.32
18	2.0	2.3	3.3	3.6	3.2	2.4	2.1	0.87	0.28	0.50	0.77	0.51
19	2.0	2.1	3.3	3.5	2.8	2.2	2.2	0.86	0.32	0.64	1.2	0.35
20	2.0	2.1	3.8	3.5	2.7	2.1	2.7	0.92	0.54	0.65	1.2	0.36
21	2.0	2.2	5.4	3.5	2.6	2.0	2.8	1.1	0.73	0.89	1.1	0.33
22	2.0	2.2	3.8	3.5	2.5	2.0	2.8	1.0	0.66	0.69	0.82	0.26
23	1.9	2.1	3.6	3.3	2.5	2.4	2.8	0.93	0.54	0.38	0.72	0.36
24	1.9	39	3.5	3.2	2.4	2.3	2.5	0.80	0.48	0.20	0.55	0.23
25	1.9	4.4	3.4	3.3	2.4	2.1	2.5	0.92	0.59	0.19	0.55	0.13
26	1.9	2.9	3.4	3.4	2.3	2.1	2.8	1.0	0.57	0.19	0.47	0.55
27	1.9	2.7	3.4	4.5	2.4	2.2	2.7	1.0	0.56	0.35	0.42	0.81
28	1.9	2.5	3.2	4.5	2.5	2.4	2.5	0.94	0.74	0.41	0.21	1.1
29	2.1	21	4.8	3.8	---	2.4	2.2	0.75	0.86	0.47	0.20	1.2
30	2.7	3.8	4.8	3.4	---	2.2	2.0	0.59	0.63	0.52	0.33	1.2
31	2.9	---	4.3	3.3	---	2.6	---	0.63	---	1.1	0.49	---
TOTAL	62.7	161.9	169.8	116.0	82.2	73.7	71.7	34.09	16.23	16.67	18.97	9.45
MEAN	2.023	5.397	5.477	3.742	2.936	2.377	2.390	1.100	0.541	0.538	0.612	0.315
MAX	2.9	39	44	4.7	5.1	2.9	2.8	1.9	0.86	1.4	1.2	1.2
MIN	1.8	2.1	3.0	3.2	2.3	2.0	1.9	0.59	0.19	0.19	0.09	0.03
AC-FT	124	321	337	230	163	146	142	68	32	33	38	19

e Estimated.

SANTA YNEZ RIVER BASIN

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.871	2.281	7.365	23.62	44.10	40.92	15.80	4.796	2.460	1.439	1.004	0.835
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	10247.4		833.41			
ANNUAL MEAN	28.08		2.283		11.70	
HIGHEST ANNUAL MEAN					80.6	
LOWEST ANNUAL MEAN					0.17	
HIGHEST DAILY MEAN	1990	Mar 5	44	Dec 2	5390	Mar 11 1995
LOWEST DAILY MEAN	1.8	Oct 2	0.03	Sep 10	0.00	Jul 23 1948
ANNUAL SEVEN-DAY MINIMUM	1.9	Oct 22	0.04	Sep 6	0.00	Jul 23 1948
MAXIMUM PEAK FLOW			309	Nov 24	11400	Mar 15 1952
MAXIMUM PEAK STAGE			2.59	Nov 24	20.80	Mar 15 1952
ANNUAL RUNOFF (AC-FT)	20330		1650		8480	
10 PERCENT EXCEEDS	26		3.8		12	
50 PERCENT EXCEEDS	3.8		2.0		1.5	
90 PERCENT EXCEEDS	2.0		0.32		0.10	

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT									
01...	--	--	--	--	--	--	852	--	--
NOV									
08...	--	--	--	--	--	--	860	--	--
DEC									
10...	--	--	--	--	--	--	828	--	--
JAN									
08...	--	--	--	--	--	--	896	--	--
FEB									
12...	--	--	--	--	--	--	868	--	--
MAR									
06...	--	--	--	--	--	--	872	--	--
APR									
03...	4	103	.5	22.5	253	1.15	845	824	<.04
MAY									
06...	--	--	--	--	--	--	853	--	--
JUN									
10...	--	--	--	--	--	--	899	--	--
JUL									
09...	--	--	--	--	--	--	951	--	--
AUG									
09...	--	--	--	--	--	--	1020	--	--
30...	--	--	--	--	--	--	997	--	--

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT						
01...	--	--	--	--	--	--
NOV						
08...	--	--	--	--	--	--
DEC						
10...	--	--	--	--	--	--
JAN						
08...	--	--	--	--	--	--
FEB						
12...	--	--	--	--	--	--
MAR						
06...	--	--	--	--	--	--
APR						
03...	<.05	<.008	.05	580	e6	10.6
MAY						
06...	--	--	--	--	--	--
JUN						
10...	--	--	--	--	--	--
JUL						
09...	--	--	--	--	--	--
AUG						
09...	--	--	--	--	--	--
30...	--	--	--	--	--	--

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

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 mi².

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 sea level, 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 sea level.

REMARKS.—Records fair except for estimated daily discharges, which are 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, 80,000 ft³/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 ft³/s, from mean-depth study.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.5	22	30	24	20	e7.7	2.0	0.86	0.54	0.00	55
2	1.4	2.7	32	29	25	e20	e7.4	1.9	0.84	0.63	0.00	61
3	1.4	3.2	60	30	24	e20	e7.0	2.0	1.1	0.43	0.00	57
4	1.7	3.1	30	29	24	e20	e6.6	2.0	0.83	0.25	0.00	51
5	1.8	3.3	26	27	24	e20	e6.3	2.1	0.90	0.19	0.00	38
6	1.6	3.0	24	27	23	e19	e5.9	2.0	0.70	0.11	0.00	29
7	2.2	2.8	22	26	23	e19	e5.5	2.2	0.65	0.04	0.00	21
8	2.5	2.6	21	26	23	e18	e5.0	2.3	0.55	0.02	0.00	16
9	2.1	2.7	21	26	22	e16	e4.7	1.9	0.44	0.02	0.00	14
10	2.1	2.7	22	25	22	e16	e4.5	1.6	0.49	0.04	0.00	11
11	2.1	6.5	21	24	21	e15	e4.3	1.5	0.43	0.03	0.00	8.7
12	2.1	20	20	24	21	e15	e4.0	1.5	0.35	0.03	0.00	7.6
13	1.7	15	20	25	21	e14	e3.8	1.5	0.32	0.02	0.00	7.1
14	1.6	6.2	22	24	20	e14	e3.6	1.5	0.46	0.05	0.00	9.5
15	1.7	6.7	22	24	20	e14	e3.4	1.6	0.46	0.04	0.02	14
16	1.8	8.8	21	23	21	e13	e3.2	1.6	0.37	0.06	4.3	43
17	1.9	9.9	21	23	21	e12	e3.0	1.6	0.34	0.09	30	44
18	1.6	11	20	22	e21	e12	e2.8	1.2	0.41	0.14	67	45
19	1.8	11	19	23	e22	e11	2.8	1.1	0.42	0.13	94	40
20	2.5	12	21	22	e22	e10	2.6	1.2	0.39	0.06	110	32
21	3.0	13	30	22	e23	e9.9	2.6	1.0	0.36	0.00	112	27
22	3.0	13	27	22	e20	e9.6	2.6	0.99	0.35	0.00	91	24
23	2.4	14	27	21	e20	e9.4	2.6	0.91	0.34	0.00	44	24
24	2.0	39	25	21	20	e9.2	2.5	0.91	0.35	0.00	25	26
25	2.1	30	24	22	20	e9.0	2.2	0.84	0.40	0.00	18	30
26	2.2	21	24	23	20	e8.9	2.3	0.90	0.46	0.00	17	29
27	2.1	20	24	25	e19	e8.8	2.4	1.1	0.48	0.00	16	24
28	1.9	19	25	28	e20	e8.6	2.3	1.1	0.46	0.00	17	24
29	2.1	39	29	26	---	e8.5	2.2	1.0	0.46	0.00	28	26
30	4.0	27	27	22	---	8.6	2.0	0.89	0.48	0.00	34	29
31	2.4	---	31	23	---	8.2	---	0.77	---	0.00	43	---
TOTAL	63.9	369.7	780	764	606	416.7	117.8	44.71	15.45	2.92	750.32	866.9
MEAN	2.061	12.32	25.16	24.65	21.64	13.44	3.927	1.442	0.515	0.094	24.20	28.90
MAX	4.0	39	60	30	25	20	7.7	2.3	1.1	0.63	112	61
MIN	1.1	1.5	19	21	19	8.2	2.0	0.77	0.32	0.00	0.00	7.1
AC-FT	127	733	1550	1520	1200	827	234	89	31	5.8	1490	1720

e Estimated.

SANTA YNEZ RIVER BASIN

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.266	7.090	30.73	231.2	509.8	486.4	188.0	69.89	18.64	5.170	3.628	4.015
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1952 - 2002
ANNUAL TOTAL	125970.0	4798.40	
ANNUAL MEAN	345.1	13.15	127.8
HIGHEST ANNUAL MEAN			941 1998
LOWEST ANNUAL MEAN			0.000 1990
HIGHEST DAILY MEAN	35400 Mar 6	112 Aug 21	38000 Jan 25 1969
LOWEST DAILY MEAN	1.1 Sep 30	0.00 Jul 21	0.00 Sep 18 1953
ANNUAL SEVEN-DAY MINIMUM	1.3 Sep 28	0.00 Jul 21	0.00 Oct 23 1953
MAXIMUM PEAK FLOW		175 Dec 2	80000 Jan 25 1969
MAXIMUM PEAK STAGE		5.91 Dec 2	24.20 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	249900	9520	92560
10 PERCENT EXCEEDS	388	28	117
50 PERCENT EXCEEDS	20	7.6	2.1
90 PERCENT EXCEEDS	2.0	0.06	0.00

SANTA YNEZ RIVER BASIN

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT								
05...	--	--	--	--	--	--	--	1060
NOV								
16...	--	--	--	--	--	--	--	1220
DEC								
21...	--	--	--	--	--	--	--	1060
JAN								
22...	--	--	--	--	--	--	--	1110
FEB								
01...	--	--	--	--	--	--	--	1080
APR								
03...	387	3	108	.4	22.4	447	1.63	1200
MAY								
07...	--	--	--	--	--	--	--	1140
AUG								
16...	--	--	--	--	--	--	--	1340
SEP								
06...	--	--	--	--	--	--	--	950

Date	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
05...	--	--	--	--	--	--	--	--
NOV								
16...	--	--	--	--	--	--	--	--
DEC								
21...	--	--	--	--	--	--	--	--
JAN								
22...	--	--	--	--	--	--	--	--
FEB								
01...	--	--	--	--	--	--	--	--
APR								
03...	1090	<.04	<.05	<.008	.05	470	<10	32.6
MAY								
07...	--	--	--	--	--	--	--	--
AUG								
16...	--	--	--	--	--	--	--	--
SEP								
06...	--	--	--	--	--	--	--	--

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

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1530	1490	1610	1540	---	---	---	---	---	---	---	---
2	1530	1490	1600	1520	---	---	---	---	---	---	---	---
3	1540	1500	1630	1590	---	---	---	---	---	---	---	---
4	1550	1480	1630	1590	---	---	---	---	---	---	---	---
5	1540	1480	1620	1590	---	---	---	---	---	---	---	---
6	1540	1460	1610	1590	---	---	---	---	---	---	---	---
7	1530	1450	1620	1580	---	---	---	---	---	---	---	---
8	1540	1510	1630	1580	---	---	---	---	---	---	---	---
9	1540	1500	1640	1580	---	---	---	---	---	---	---	---
10	1530	1500	1660	1610	---	---	---	---	---	---	---	---
11	1520	1490	1640	1540	---	---	---	---	---	---	---	---
12	1520	1500	1630	1180	---	---	---	---	---	---	---	---
13	1520	1490	1800	1170	---	---	---	---	---	---	---	---
14	1520	1490	1680	1590	---	---	---	---	---	---	---	---
15	1510	1490	1680	1610	---	---	---	---	---	---	---	---
16	1540	1490	1700	1670	---	---	---	---	---	---	---	---
17	1510	1490	1700	1680	---	---	---	---	---	---	---	---
18	1530	1490	1690	1650	---	---	---	---	---	---	---	---
19	1530	1470	1680	1640	---	---	---	---	---	---	---	---
20	1510	1400	1670	1600	---	---	---	---	---	---	---	---
21	1490	1330	1670	1660	---	---	---	---	---	---	---	---
22	1450	1330	1670	1650	---	---	---	---	---	---	---	---
23	1490	1440	1660	1640	---	---	---	---	---	---	---	---
24	1500	1180	1650	953	---	---	---	---	---	---	---	---
25	1520	1180	1060	975	---	---	---	---	---	---	---	---
26	1510	1390	1160	1060	---	---	---	---	---	---	---	---
27	1500	1320	1230	1150	---	---	---	---	---	---	---	---
28	1520	1500	1300	1230	---	---	---	---	---	---	---	---
29	1510	1500	1370	1290	---	---	---	---	---	---	---	---
30	1520	1470	1410	1370	---	---	---	---	---	---	---	---
31	1610	1510	---	---	---	---	---	---	---	---	---	---
MONTH	1610	1180	1800	953	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1580	1510	1610	1580	1690	1610	1570	1490	---	---	1460	1340
2	1630	1530	1620	1580	1670	1620	1610	1510	---	---	1370	1340
3	1610	1560	1620	1580	1670	1620	1620	1570	---	---	1500	1330
4	1610	1540	1640	1580	1700	1620	---	---	---	---	1480	1330
5	1600	1540	1640	1570	1670	1620	---	---	---	---	1500	1370
6	1630	1550	1640	1570	1680	1610	---	---	---	---	1600	1480
7	1590	1520	1630	1570	1670	1610	---	---	---	---	1620	1500
8	1580	1510	1660	1580	1670	1590	---	---	---	---	1600	1460
9	1560	1480	1660	1590	1640	1580	---	---	---	---	1530	1460
10	1560	1460	1660	1590	1670	1580	---	---	---	---	1580	1490
11	1540	1470	1670	1600	1750	1520	---	---	---	---	1570	1490
12	1550	1480	1750	1570	1730	1530	---	---	---	---	1580	1500
13	1570	1450	1690	1590	1600	1530	---	---	---	---	1610	1490
14	1530	1450	1700	1590	1580	1510	---	---	---	---	1600	1500
15	1520	1470	1700	1600	1570	1490	---	---	---	---	1600	1510
16	1520	1460	1680	1590	1550	1470	---	---	1910	1700	1620	1350
17	---	---	1690	1580	1540	1470	---	---	2150	1620	1400	1360
18	---	---	1650	1580	1560	1470	---	---	1790	1450	1400	1350
19	---	---	1650	1530	1550	1480	---	---	1460	1320	1400	1360
20	1600	1510	1660	1580	1570	1490	---	---	1360	1250	1460	1390
21	1620	1460	1630	1580	1560	1120	---	---	1300	1240	1520	1460
22	1670	1470	1660	1600	1610	1200	---	---	1340	1240	1530	1470
23	1570	1510	1640	1590	1590	1170	---	---	1500	1340	1510	1450
24	1620	1520	1680	1580	1560	1430	---	---	1660	1500	1470	1400
25	1610	1540	1670	1550	1550	1490	---	---	1710	1610	1400	1340
26	1590	1520	1700	1590	1550	1480	---	---	1700	1580	1380	1350
27	1630	1560	1670	1600	1570	1480	---	---	1660	1540	1390	1360
28	1630	1560	1690	1590	1540	1500	---	---	1690	1500	1390	1350
29	1630	1560	1650	1600	1540	1490	---	---	1620	1390	1370	1330
30	1640	1580	1670	1610	1540	1490	---	---	1550	1360	1340	1320
31	---	---	1680	1620	---	---	---	---	1460	1360	---	---
MONTH	---	---	1750	1530	1750	1120	---	---	---	---	1620	1320

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	26.0	17.0	20.0	16.0	---	---	---	---	---	---	---	---
2	25.0	18.0	19.5	16.5	---	---	---	---	---	---	---	---
3	24.5	17.5	20.0	16.5	---	---	---	---	---	---	---	---
4	22.0	18.0	19.5	17.0	---	---	---	---	---	---	---	---
5	21.5	17.5	20.0	16.5	---	---	---	---	---	---	---	---
6	23.5	17.0	18.5	17.0	---	---	---	---	---	---	---	---
7	24.0	16.5	20.0	16.0	---	---	---	---	---	---	---	---
8	20.0	17.5	19.5	14.5	---	---	---	---	---	---	---	---
9	24.0	17.0	20.0	15.5	---	---	---	---	---	---	---	---
10	24.0	16.0	19.0	16.5	---	---	---	---	---	---	---	---
11	22.5	15.0	21.0	17.5	---	---	---	---	---	---	---	---
12	24.5	16.0	18.5	14.0	---	---	---	---	---	---	---	---
13	24.5	15.5	17.5	13.5	---	---	---	---	---	---	---	---
14	24.5	14.5	19.0	15.0	---	---	---	---	---	---	---	---
15	23.5	15.0	19.0	14.5	---	---	---	---	---	---	---	---
16	24.0	16.5	18.5	16.5	---	---	---	---	---	---	---	---
17	22.5	15.5	19.0	16.5	---	---	---	---	---	---	---	---
18	22.5	14.5	18.0	15.5	---	---	---	---	---	---	---	---
19	21.5	16.5	17.5	14.0	---	---	---	---	---	---	---	---
20	20.5	16.5	18.0	14.5	---	---	---	---	---	---	---	---
21	20.0	16.5	19.0	15.5	---	---	---	---	---	---	---	---
22	21.0	16.0	19.0	16.0	---	---	---	---	---	---	---	---
23	21.5	15.0	17.5	14.5	---	---	---	---	---	---	---	---
24	21.5	14.0	16.5	12.5	---	---	---	---	---	---	---	---
25	21.5	14.5	16.0	11.5	---	---	---	---	---	---	---	---
26	21.5	16.0	16.0	11.0	---	---	---	---	---	---	---	---
27	20.5	14.5	15.5	9.5	---	---	---	---	---	---	---	---
28	21.0	14.0	14.5	9.5	---	---	---	---	---	---	---	---
29	20.0	14.0	16.0	12.0	---	---	---	---	---	---	---	---
30	17.0	15.5	16.0	11.5	---	---	---	---	---	---	---	---
31	21.0	15.5	---	---	---	---	---	---	---	---	---	---
MONTH	26.0	14.0	21.0	9.5	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.5	16.5	21.0	15.5	23.5	17.0	27.0	17.5	---	---	22.0	17.5
2	18.5	15.5	21.5	14.5	25.0	16.5	27.0	18.0	---	---	22.5	17.5
3	18.5	15.5	20.0	16.0	24.0	17.0	25.0	18.0	---	---	22.0	17.5
4	20.5	15.0	22.0	15.5	27.5	17.0	24.0	17.5	---	---	21.0	18.5
5	20.5	13.5	22.0	16.0	27.5	16.5	23.5	17.5	---	---	20.0	17.0
6	22.0	14.5	22.0	16.5	27.5	17.0	24.5	17.5	---	---	---	---
7	21.0	16.0	22.5	16.0	26.0	17.5	24.5	17.0	---	---	20.5	17.5
8	22.0	17.0	24.0	15.0	27.0	17.0	25.5	17.5	---	---	21.0	18.0
9	21.5	18.0	23.5	15.5	26.5	16.5	26.0	16.0	---	---	21.0	16.5
10	22.0	18.5	23.0	15.0	28.5	15.5	25.5	17.5	---	---	21.5	17.0
11	22.0	17.5	23.5	14.0	24.5	16.5	25.0	18.5	---	---	21.5	18.0
12	21.5	18.0	25.0	14.5	28.0	17.0	25.5	18.5	---	---	21.0	18.0
13	23.0	17.5	23.5	16.0	26.0	16.5	25.0	18.5	---	---	21.0	18.0
14	22.5	18.0	23.5	15.0	25.5	17.0	24.0	18.5	---	---	21.5	18.0
15	20.5	17.5	23.5	15.5	26.0	17.0	23.5	18.0	---	---	20.5	18.0
16	21.0	16.5	23.5	16.0	25.5	17.0	22.5	18.0	25.0	19.0	20.0	17.0
17	---	---	24.5	16.0	24.5	17.0	23.5	18.0	21.5	19.0	20.0	17.0
18	---	---	24.5	16.5	25.0	16.5	23.0	18.0	20.5	18.0	20.5	17.0
19	---	---	24.5	15.5	24.0	17.0	23.5	18.0	20.0	18.5	20.5	16.5
20	21.5	15.5	23.5	16.5	22.0	16.5	22.5	17.5	21.0	18.0	19.5	16.5
21	22.0	15.5	24.0	15.5	23.5	16.5	23.0	18.0	21.5	18.5	19.5	17.0
22	22.5	14.0	24.0	15.5	24.0	16.5	24.0	17.0	21.0	18.5	19.5	17.0
23	22.5	15.0	24.5	14.5	25.0	16.5	25.0	16.0	20.0	17.5	20.0	17.0
24	23.5	14.0	25.5	15.5	24.0	16.5	26.0	16.5	19.5	17.0	20.0	17.0
25	24.0	16.0	23.0	17.5	25.0	17.0	22.5	17.5	20.5	17.0	19.5	17.5
26	18.5	16.0	23.5	17.5	25.5	17.0	21.0	17.0	20.5	17.0	19.0	17.0
27	21.5	15.0	25.0	17.0	24.5	17.5	22.0	17.0	21.0	17.0	19.0	17.5
28	23.0	14.5	25.5	17.5	21.5	17.0	22.5	16.0	21.5	17.5	19.0	17.5
29	21.0	13.5	27.5	17.5	26.0	17.5	24.5	14.5	21.0	17.5	19.5	17.0
30	21.0	14.5	27.5	17.5	28.0	17.5	---	---	21.5	18.0	19.0	16.0
31	---	---	27.0	18.5	---	---	---	---	21.5	17.5	---	---
MONTH	---	---	27.5	14.0	28.5	15.5	---	---	---	---	---	---

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 mi².

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 sea level. 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 ft³/s, Jan. 16, 1952, gage height, 17.4 ft (datum then in use), from rating curve extended above 2,900 ft³/s.

Maximum discharge after regulation by Lake Cachuma, 41,600 ft³/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 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e8.0	e14	e16	e8.0	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	e11	e15	e16	e8.2	0.00	0.00	0.00	0.00	0.00	0.12
3	0.00	0.00	e10	e16	e16	e8.2	0.00	0.00	0.00	0.00	0.00	4.2
4	0.00	0.00	e8.0	e16	e16	e8.4	0.00	0.00	0.00	0.00	0.00	7.6
5	0.00	0.00	e5.7	e15	e16	e8.6	0.00	0.00	0.00	0.00	0.00	4.8
6	0.00	0.00	e5.0	e14	e16	e8.8	0.00	0.00	0.00	0.00	0.00	1.1
7	0.00	0.00	e4.4	e13	e16	e9.0	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	e4.4	e12	e15	e9.2	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	e4.7	e12	e14	e8.5	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	e5.0	e11	e13	e7.8	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	e5.4	e11	e12	e7.1	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	e5.8	e11	e11	e6.4	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	e6.4	e11	e10	e5.7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	e6.9	e12	e9.4	e5.0	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	e7.0	e12	e9.2	e4.3	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	e6.6	e12	e9.4	e3.2	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	e6.4	e12	e9.6	e2.3	0.00	0.00	0.00	0.00	0.00	0.04
18	0.00	0.00	e7.0	e11	e9.8	e1.6	0.00	0.00	0.00	0.00	0.00	7.2
19	0.00	0.00	e8.6	e11	e10	e1.2	0.00	0.00	0.00	0.00	0.00	15
20	0.00	0.00	e11	e11	e10	e1.0	0.00	0.00	0.00	0.00	0.00	13
21	0.00	0.00	e18	e11	e11	e0.85	0.00	0.00	0.00	0.00	0.00	9.8
22	0.00	0.00	e15	e11	e11	e0.74	0.00	0.00	0.00	0.00	0.00	7.2
23	0.00	0.00	e13	e12	e11	e0.40	0.00	0.00	0.00	0.00	0.00	7.1
24	0.00	0.00	e12	e13	e11	e0.25	0.00	0.00	0.00	0.00	0.00	7.1
25	0.00	0.00	e12	e14	e10	e0.00	0.00	0.00	0.00	0.00	0.00	8.6
26	0.00	0.00	e11	e14	e9.6	e0.00	0.00	0.00	0.00	0.00	0.00	8.5
27	0.00	0.00	e11	e15	e8.8	e0.00	0.00	0.00	0.00	0.00	0.00	6.0
28	0.00	0.00	e11	e16	e8.3	e0.00	0.00	0.00	0.00	0.00	0.00	5.9
29	0.00	e1.5	e11	e16	---	e0.00	0.00	0.00	0.00	0.00	0.00	5.1
30	0.00	e5.3	e12	e16	---	0.00	0.00	0.00	0.00	0.00	0.00	5.4
31	0.00	---	e13	e16	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	6.80	276.3	406	335.1	124.74	0.00	0.00	0.00	0.00	0.00	123.76
MEAN	0.000	0.227	8.913	13.10	11.97	4.024	0.000	0.000	0.000	0.000	0.000	4.125
MAX	0.00	5.3	18	16	16	9.2	0.00	0.00	0.00	0.00	0.00	15
MIN	0.00	0.00	4.4	11	8.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	13	548	805	665	247	0.00	0.00	0.00	0.00	0.00	245

e Estimated.

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 - 2002, BY WATER YEAR (WY)

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1.268	2.343	24.86	29.71	153.5	304.3	122.9	28.65	4.246	0.036	0.000	0.385																																						
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 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1953 - 2002

ANNUAL TOTAL	106604.20	1272.70	
ANNUAL MEAN	292.1	3.487	55.54
HIGHEST ANNUAL MEAN			293 2001
LOWEST ANNUAL MEAN			0.051 1957
HIGHEST DAILY MEAN	31900 Mar 6	18 Dec 21	31900 Mar 6 2001
LOWEST DAILY MEAN	0.00 Jun 19	0.00 Oct 1	0.00 Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 19	0.00 Oct 1	0.00 Oct 1 1952
MAXIMUM PEAK FLOW			41600 Mar 6 2001
MAXIMUM PEAK STAGE			14.09 Mar 6 2001
INSTANTANEOUS LOW FLOW		0.00 Oct 1	
ANNUAL RUNOFF (AC-FT)	211400	2520	40230
10 PERCENT EXCEEDS	302	12	54
50 PERCENT EXCEEDS	5.3	0.00	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 mi².

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 sea level, 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 ft³/s, Feb. 3, 1998, gage height, 4.61 ft, from theoretical rating curve above 50 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 140 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 24	1045	1,370	3.18

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.60	0.33	1.6	0.60	0.71	1.2	1.1	e0.47	0.43	0.13	0.08	0.13
2	0.60	0.33	2.7	0.73	0.63	1.3	0.94	e0.47	0.43	0.18	0.13	0.11
3	0.60	0.33	1.9	0.65	0.60	1.1	e0.70	e0.47	0.43	0.23	0.13	0.11
4	0.60	0.33	1.9	0.60	0.68	1.2	e0.70	e0.47	0.43	0.15	0.11	0.08
5	0.60	0.33	1.8	0.60	0.70	1.3	e0.70	e0.43	0.43	0.06	0.08	0.08
6	0.60	0.33	1.7	0.60	0.70	1.5	e0.70	e0.43	0.46	0.06	0.08	0.08
7	0.60	0.33	1.7	0.64	0.70	1.3	e0.70	0.43	0.42	0.07	0.08	0.08
8	0.60	0.33	1.5	0.70	0.70	0.97	e0.70	0.78	0.36	0.08	0.07	0.08
9	0.49	0.33	1.4	0.70	0.64	0.75	e0.70	0.56	0.33	0.09	0.06	0.08
10	0.43	0.51	1.4	0.70	0.64	0.96	e0.70	0.60	0.28	0.14	0.08	0.11
11	0.43	1.1	1.3	0.70	0.65	1.1	e0.70	0.51	0.18	0.12	0.08	0.08
12	0.43	8.1	1.1	0.68	0.70	1.1	e0.70	0.43	0.24	0.12	e0.12	0.08
13	0.43	1.4	1.1	0.59	0.70	1.4	e0.70	0.43	0.30	0.13	e0.12	0.08
14	0.43	1.2	1.1	0.60	0.70	1.4	e0.70	0.43	0.28	0.13	e0.12	0.08
15	0.43	1.1	0.87	0.60	0.95	1.3	e0.62	0.43	0.21	0.13	e0.12	0.08
16	0.43	1.1	0.70	0.60	0.83	1.4	e0.62	0.43	0.23	0.13	e0.12	0.08
17	0.43	1.1	0.54	0.60	2.5	1.5	e0.62	0.43	0.23	0.13	e0.12	0.08
18	0.43	0.95	0.33	0.60	1.1	1.4	e0.62	0.43	0.40	0.16	e0.12	0.08
19	0.43	0.70	0.33	0.62	1.1	1.4	e0.62	0.43	0.28	0.16	e0.12	0.08
20	0.43	0.70	0.60	0.60	0.88	1.2	e0.62	0.43	0.23	0.13	e0.12	0.08
21	0.43	0.70	0.60	0.65	0.86	1.2	e0.62	0.44	0.23	0.17	e0.12	0.08
22	0.43	0.70	0.43	0.70	0.81	1.4	e0.62	0.55	0.23	0.13	e0.13	0.08
23	0.43	0.70	0.42	0.70	0.86	1.7	e0.62	0.54	0.23	0.16	e0.13	0.08
24	0.43	23	0.43	0.70	0.70	0.99	e0.62	0.43	0.23	0.11	e0.13	0.08
25	0.43	1.7	0.43	0.70	0.70	0.96	e0.53	0.43	0.23	0.10	e0.13	0.08
26	0.43	1.3	0.43	0.67	0.70	1.1	e0.53	0.43	0.22	0.08	e0.13	0.08
27	0.43	1.1	0.43	1.5	1.0	1.1	e0.53	0.43	0.23	0.08	e0.13	0.08
28	0.38	1.1	0.46	0.94	1.1	1.2	e0.53	0.43	0.23	0.08	e0.13	0.08
29	0.39	5.1	1.2	0.70	---	1.4	e0.53	0.43	0.21	0.10	e0.13	0.08
30	0.35	1.7	0.84	0.70	---	1.4	e0.47	0.43	0.16	0.10	e0.13	0.08
31	0.33	---	0.62	0.70	---	1.2	---	0.43	---	0.10	0.13	---
TOTAL	14.48	58.03	31.86	21.37	23.54	38.43	19.76	14.46	8.78	3.74	3.48	2.54
MEAN	0.467	1.934	1.028	0.689	0.841	1.240	0.659	0.466	0.293	0.121	0.112	0.085
MAX	0.60	23	2.7	1.5	2.5	1.7	1.1	0.78	0.46	0.23	0.13	0.13
MIN	0.33	0.33	0.33	0.59	0.60	0.75	0.47	0.43	0.16	0.06	0.06	0.08
AC-FT	29	115	63	42	47	76	39	29	17	7.4	6.9	5.0

e Estimated.

SANTA YNEZ RIVER BASIN

11134800 MIGUELITO CREEK AT LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.304	0.653	1.582	3.507	7.155	8.574	2.144	1.318	0.909	0.612	0.465	0.358
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1971 - 2002	
ANNUAL TOTAL	886.94		240.47			
ANNUAL MEAN	2.430		0.659		2.282	
HIGHEST ANNUAL MEAN					13.8	1995
LOWEST ANNUAL MEAN					0.15	1972
HIGHEST DAILY MEAN	205	Mar 5	23	Nov 24	1170	Mar 11 1995
LOWEST DAILY MEAN	0.33	Oct 31	0.06	Jul 5	0.00	Jul 21 1971
ANNUAL SEVEN-DAY MINIMUM	0.33	Oct 31	0.08	Aug 5	0.00	Sep 8 1971
MAXIMUM PEAK FLOW			1370	Nov 24	2660	Feb 3 1998
MAXIMUM PEAK STAGE			3.18	Nov 24	4.61	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	1760		477		1650	
10 PERCENT EXCEEDS	2.8		1.2		2.8	
50 PERCENT EXCEEDS	0.70		0.46		0.43	
90 PERCENT EXCEEDS	0.43		0.08		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 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1955 to September 1993, October 1994 to current year.

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 July 5 to Aug. 14 which are poor. No regulation upstream from station. Flow affected by pumping from wells along stream for irrigation 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 ft³/s, Mar. 1, 1983, gage height, 14.32 ft, from rating curve extended above 1,100 ft³/s, on basis of slope-area measurement at gage height 12.93 ft; minimum daily, 0.04 ft³/s, Jan. 22, 2001.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1530	127	2.65

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0.07	1.8	e1.9	1.3	1.2	1.2	0.57	0.61	0.61	0.91	0.51
2	0.74	0.07	2.1	2.0	1.4	1.1	1.2	0.66	0.72	0.74	1.1	0.46
3	0.68	0.21	4.0	e2.5	1.3	1.0	1.3	0.68	0.65	0.76	1.6	0.40
4	0.65	0.09	1.9	2.3	1.3	0.98	1.2	0.64	0.76	0.67	1.0	0.50
5	0.59	0.08	1.7	2.0	1.3	1.0	1.1	0.59	0.87	e0.70	1.4	0.52
6	0.36	0.17	1.6	1.8	1.4	1.3	1.0	0.60	0.81	e0.69	1.5	0.63
7	0.34	0.07	1.6	1.8	1.3	1.6	1.2	0.88	0.82	e0.69	0.65	0.67
8	0.27	0.07	1.6	1.7	1.3	1.2	0.61	0.90	0.82	e0.61	0.64	0.58
9	1.5	2.0	1.5	1.6	1.3	1.1	0.66	0.84	0.71	e0.62	0.64	0.46
10	3.7	8.0	1.3	1.4	1.3	1.1	0.67	0.85	0.61	e0.60	0.69	0.42
11	4.3	9.8	1.3	1.4	1.3	0.97	0.65	0.85	0.63	e0.71	0.67	0.51
12	1.2	23	1.3	1.3	1.4	1.1	0.72	0.92	0.69	e0.71	0.67	0.61
13	0.18	10	1.3	1.3	1.4	1.0	0.73	0.86	0.59	0.71	0.65	0.68
14	0.15	3.0	1.2	1.3	1.3	0.99	0.74	0.91	0.57	0.76	0.66	0.70
15	0.16	2.1	1.1	1.3	1.3	1.0	0.65	0.86	0.57	0.71	0.72	0.87
16	0.16	2.0	1.0	1.3	1.4	1.1	0.79	0.94	0.51	0.73	0.66	0.82
17	0.16	1.9	1.1	1.3	2.8	e0.95	0.71	0.99	0.48	0.69	0.68	0.81
18	0.12	1.7	e1.2	1.2	1.9	e1.1	0.76	0.98	0.52	0.65	0.72	0.97
19	0.12	1.7	1.1	1.2	1.6	0.97	0.65	1.00	0.49	0.74	0.63	0.90
20	0.10	1.7	1.3	1.2	1.5	1.1	0.59	0.99	0.54	0.74	0.62	0.93
21	0.11	1.7	1.7	1.2	1.4	1.3	0.59	1.1	0.60	0.89	0.64	0.96
22	0.10	1.7	1.4	1.2	1.4	1.1	0.54	1.1	0.49	0.85	0.56	0.92
23	0.09	1.5	1.3	1.2	1.3	1.2	0.45	1.1	0.52	0.72	0.57	0.65
24	0.09	6.9	1.3	1.2	1.2	1.3	0.54	1.0	0.48	0.70	0.58	0.55
25	0.08	5.9	1.3	1.2	1.1	1.1	0.52	1.00	0.52	0.79	0.54	0.59
26	0.08	1.7	1.3	1.3	1.1	1.2	0.68	0.95	0.52	0.77	0.59	0.67
27	0.09	4.2	1.3	1.9	1.1	1.0	0.83	0.94	0.53	0.83	0.60	0.62
28	0.09	6.1	1.4	1.9	1.2	1.00	0.63	0.97	0.55	0.80	0.53	0.81
29	0.07	11	1.9	1.8	---	1.0	0.58	0.83	0.55	0.85	e0.51	0.83
30	0.16	3.2	1.8	1.5	---	1.4	0.60	0.78	0.51	0.84	e0.49	0.67
31	0.11	---	e2.0	1.3	---	1.2	---	0.97	---	0.86	e0.47	---
TOTAL	17.55	111.63	47.7	47.5	38.9	34.66	23.09	27.25	18.24	22.74	22.89	20.22
MEAN	0.566	3.721	1.539	1.532	1.389	1.118	0.770	0.879	0.608	0.734	0.738	0.674
MAX	4.3	23	4.0	2.5	2.8	1.6	1.3	1.1	0.87	0.89	1.6	0.97
MIN	0.07	0.07	1.0	1.2	1.1	0.95	0.45	0.57	0.48	0.60	0.47	0.40
AC-FT	35	221	95	94	77	69	46	54	36	45	45	40

e Estimated.

SAN ANTONIO CREEK BASIN

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.052	1.671	2.762	11.20	28.68	21.88	7.154	1.435	0.927	0.687	0.696	0.782
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1956 - 2002	
ANNUAL TOTAL	4058.18		432.37			
ANNUAL MEAN	11.12		1.185		6.455	
HIGHEST ANNUAL MEAN					39.7	1983
LOWEST ANNUAL MEAN					0.47	1990
HIGHEST DAILY MEAN	1510	Mar 5	23	Nov 12	2040	Mar 2 1983
LOWEST DAILY MEAN	0.04	Jan 22	0.07	Oct 29	0.04	Jan 22 2001
ANNUAL SEVEN-DAY MINIMUM	0.08	Oct 23	0.08	Oct 23	0.08	Oct 23 2001
MAXIMUM PEAK FLOW			127	Nov 12	4680	Mar 1 1983
MAXIMUM PEAK STAGE			2.65	Nov 12	14.32	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	8050		858		4680	
10 PERCENT EXCEEDS	7.8		1.7		4.8	
50 PERCENT EXCEEDS	1.2		0.90		1.0	
90 PERCENT EXCEEDS	0.31		0.48		0.38	

SAN ANTONIO CREEK BASIN

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT								
02...	--	--	--	--	--	--	--	1840
NOV								
09...	--	--	--	--	--	--	--	1820
DEC								
03...	--	--	--	--	--	--	--	1760
JAN								
08...	--	--	--	--	--	--	--	2090
FEB								
12...	--	--	--	--	--	--	--	2110
MAR								
06...	--	--	--	--	--	--	--	1990
APR								
02...	431	2	384	.4	35.3	646	2.80	2060
MAY								
07...	--	--	--	--	--	--	--	1900
JUN								
04...	482	3	386	.4	39.0	446	2.45	1800
JUL								
09...	--	--	--	--	--	--	--	1690
AUG								
14...	--	--	--	--	--	--	--	1620
SEP								
05...	--	--	--	--	--	--	--	1580

Date	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS P) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
02...	--	--	--	--	--	--	--	--
NOV								
09...	--	--	--	--	--	--	--	--
DEC								
03...	--	--	--	--	--	--	--	--
JAN								
08...	--	--	--	--	--	--	--	--
FEB								
12...	--	--	--	--	--	--	--	--
MAR								
06...	--	--	--	--	--	--	--	--
APR								
02...	1920	.23	5.40	.249	.64	1720	13	103
MAY								
07...	--	--	--	--	--	--	--	--
JUN								
04...	1690	.05	2.04	.124	1.04	1990	e19	91.5
JUL								
09...	--	--	--	--	--	--	--	--
AUG								
14...	--	--	--	--	--	--	--	--
SEP								
05...	--	--	--	--	--	--	--	--

e Estimated.

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 mi².

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 sea level, 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 ft³/s, Feb. 23, 1998, gage height, 14.76 ft, from rating curve extended above 4,900 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1415	4.5	4.13

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.07	0.17	0.22	0.68	0.15	0.20	0.09	0.00	0.00	0.00	0.00
2	0.09	0.04	0.45	0.39	0.54	0.13	0.20	0.06	0.00	0.00	0.00	0.00
3	0.08	0.04	0.38	0.30	0.49	0.12	0.20	0.04	0.00	0.00	0.00	0.00
4	0.10	0.03	0.26	0.26	0.42	0.12	0.21	0.04	0.00	0.00	0.00	0.00
5	0.14	0.02	0.22	0.24	0.38	0.11	0.19	0.04	0.00	0.00	0.00	0.00
6	0.12	0.00	0.23	0.23	0.34	0.26	0.17	0.03	0.00	0.00	0.00	0.00
7	0.10	0.00	0.21	0.22	0.33	0.30	0.15	0.02	0.00	0.00	0.00	0.00
8	0.10	0.00	0.20	0.23	0.35	0.40	0.14	0.02	0.00	0.00	0.00	0.00
9	0.09	0.00	0.25	0.23	0.30	0.45	0.13	0.02	0.00	0.00	0.00	0.00
10	0.08	0.03	0.22	0.21	0.28	0.34	0.12	0.01	0.00	0.00	0.00	0.00
11	0.08	0.15	0.20	0.20	0.26	0.24	0.09	0.02	0.00	0.00	0.00	0.00
12	0.06	1.2	0.19	0.18	0.26	0.18	0.08	0.00	0.00	0.00	0.00	0.00
13	0.06	0.42	0.18	0.17	0.26	0.16	0.08	0.00	0.00	0.00	0.00	0.00
14	0.05	0.17	0.26	0.19	0.25	0.17	0.08	0.00	0.00	0.00	0.00	0.00
15	0.05	0.12	0.19	0.16	0.25	0.17	0.08	0.00	0.00	0.00	0.00	0.00
16	0.04	0.10	0.17	0.21	0.25	0.16	0.10	0.00	0.00	0.00	0.00	0.00
17	0.05	0.08	0.17	0.21	0.55	0.26	0.14	0.00	0.00	0.00	0.00	0.00
18	0.06	0.07	0.17	0.19	0.69	0.22	0.10	0.00	0.00	0.00	0.00	0.00
19	0.06	0.05	0.17	0.16	0.60	0.17	0.08	0.00	0.00	0.00	0.00	0.00
20	0.04	0.05	0.37	0.17	0.45	0.21	0.08	0.00	0.00	0.00	0.00	0.00
21	0.04	0.04	0.92	0.14	0.30	0.18	0.07	0.00	0.00	0.00	0.00	0.00
22	0.04	0.03	0.20	0.14	0.22	0.20	0.07	0.00	0.00	0.00	0.00	0.00
23	0.04	0.03	0.16	0.13	0.23	0.32	0.09	0.00	0.00	0.00	0.00	0.00
24	0.01	1.6	0.16	0.13	0.20	0.61	0.07	0.00	0.00	0.00	0.00	0.00
25	0.01	0.46	0.15	0.13	0.18	0.51	0.07	0.00	0.00	0.00	0.00	0.00
26	0.02	0.17	0.14	0.14	0.17	0.39	0.25	0.00	0.00	0.00	0.00	0.00
27	0.03	0.14	0.14	0.53	0.16	0.28	0.15	0.00	0.00	0.00	0.00	0.00
28	0.04	0.13	0.18	1.2	0.16	0.23	0.08	0.00	0.00	0.00	0.00	0.00
29	0.03	0.41	0.29	1.6	---	0.22	0.08	0.00	0.00	0.00	0.00	0.00
30	0.36	0.18	0.30	1.2	---	0.22	0.06	0.00	0.00	0.00	0.00	0.00
31	0.13	---	0.26	0.83	---	0.21	---	0.00	---	0.00	0.00	---
TOTAL	2.26	5.83	7.56	10.54	9.55	7.69	3.61	0.39	0.00	0.00	0.00	0.00
MEAN	0.073	0.194	0.244	0.340	0.341	0.248	0.120	0.013	0.000	0.000	0.000	0.000
MAX	0.36	1.6	0.92	1.6	0.69	0.61	0.25	0.09	0.00	0.00	0.00	0.00
MIN	0.01	0.00	0.14	0.13	0.16	0.11	0.06	0.00	0.00	0.00	0.00	0.00
AC-FT	4.5	12	15	21	19	15	7.2	0.8	0.00	0.00	0.00	0.00

SANTA MARIA RIVER BASIN

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.788	2.483	14.64	38.46	114.2	104.5	26.25	8.149	4.295	1.916	1.184	1.651
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 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1960 - 2002
ANNUAL TOTAL	7277.56	47.43	
ANNUAL MEAN	19.94	0.130	26.08
HIGHEST ANNUAL MEAN			168 1998
LOWEST ANNUAL MEAN			0.002 1964
HIGHEST DAILY MEAN	2540 Mar 6	1.6 Nov 24	10000 Feb 24 1998
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Nov 6	0.00 Oct 1 1959
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 May 12	0.00 Oct 1 1959
MAXIMUM PEAK FLOW		4.5 Nov 12	26200 Feb 23 1998
MAXIMUM PEAK STAGE		4.13 Nov 12	14.76 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	14440	94	18890
10 PERCENT EXCEEDS	21	0.30	20
50 PERCENT EXCEEDS	1.0	0.06	0.49
90 PERCENT EXCEEDS	0.06	0.00	0.00

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1978 to current year.

CHEMICAL DATA: Water year 1978 to current year.

SEDIMENT DATA: January 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
NOV									
13...	1350	.21	--	--	--	8.2	1470	22.5	--
DEC									
14...	1100	.31	--	--	--	8.6	1360	10.5	--
JAN									
11...	1535	.14	--	--	--	8.2	1250	18.5	--
FEB									
13...	1315	.24	--	--	--	7.9	1330	17.0	--
MAR									
04...	1500	.08	--	--	--	8.2	1410	23.0	--
APR									
02...	1130	.20	747	12.6	135	8.3	1410	17.5	400

Date	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)
NOV									
13...	--	--	--	--	--	--	--	--	--
DEC									
14...	--	--	--	--	--	--	--	--	--
JAN									
11...	--	--	--	--	--	--	--	--	--
FEB									
13...	--	--	--	--	--	--	--	--	--
MAR									
04...	--	--	--	--	--	--	--	--	--
APR									
02...	590	124	67.9	3.17	2	94.1	26	188	224

Date	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00608)
NOV									
13...	--	--	--	--	--	--	1140	--	--
DEC									
14...	--	--	--	--	--	--	916	--	--
JAN									
11...	--	--	--	--	--	--	952	--	--
FEB									
13...	--	--	--	--	--	--	1020	--	--
MAR									
04...	--	--	--	--	--	--	992	--	--
APR									
02...	3	68.5	.5	11.7	517	1.48	1090	1000	<.04

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

SANTA MARIA RIVER BASIN

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV						
13...	--	--	--	--	--	--
DEC						
14...	--	--	--	--	--	--
JAN						
11...	--	--	--	--	--	--
FEB						
13...	--	--	--	--	--	--
MAR						
04...	--	--	--	--	--	--
APR						
02...	.05	<.008	<.02	290	<10	e1.7

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
NOV					
13...	1350	.21	22.5	24	.01
27...	1335	.14	15.5	14	.01

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

SANTA MARIA RIVER BASIN

11138500 SISQUOC RIVER NEAR SISQUOC, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F) (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L) AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS- PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)
OCT									
04...	--	--	--	--	--	--	860	--	--
NOV									
14...	--	--	--	--	--	--	896	--	--
DEC									
12...	--	--	--	--	--	--	812	--	--
JAN									
23...	--	--	--	--	--	--	872	--	--
FEB									
19...	--	--	--	--	--	--	876	--	--
MAR									
05...	--	--	--	--	--	--	872	--	--
APR									
04...	4	23.3	.4	14.8	420	1.21	889	811	<.04
MAY									
08...	--	--	--	--	--	--	891	--	--
JUN									
13...	--	--	--	--	--	--	467	--	--
JUL									
11...	--	--	--	--	--	--	910	--	--
AUG									
15...	--	--	--	--	--	--	925	--	--
SEP									
03...	--	--	--	--	--	--	942	--	--

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L) AS P) (00671)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)
OCT						
04...	--	--	--	--	--	--
NOV						
14...	--	--	--	--	--	--
DEC						
12...	--	--	--	--	--	--
JAN						
23...	--	--	--	--	--	--
FEB						
19...	--	--	--	--	--	--
MAR						
05...	--	--	--	--	--	--
APR						
04...	<.05	<.008	e.02	140	<10	e3.1
MAY						
08...	--	--	--	--	--	--
JUN						
13...	--	--	--	--	--	--
JUL						
11...	--	--	--	--	--	--
AUG						
15...	--	--	--	--	--	--
SEP						
03...	--	--	--	--	--	--

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

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 mi².

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 sea level, 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 excellent. 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 ft³/s, Mar. 1, 1983, gage height, 11.16 ft, from rating curve extended above 22,000 ft³/s, maximum gage height, 13.50 ft, Dec. 6, 1966; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.—No flow during entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.120	2.568	17.66	96.36	223.7	193.0	88.14	20.51	4.084	0.749	0.142	0.158
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1942 - 2002	
ANNUAL TOTAL	28475.32		0.00			
ANNUAL MEAN	78.01		0.000		52.99	
HIGHEST ANNUAL MEAN					446	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	6680	Mar 5	0.00	Oct 1	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					33600	
MAXIMUM PEAK STAGE					13.50	
ANNUAL RUNOFF (AC-FT)	56480		0.00		38390	
10 PERCENT EXCEEDS	122		0.00		51	
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 mi².

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 sea level, 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 and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,350 ft³/s, Mar. 5, 2001, gage height, 10.33 ft, from rating curve extended above 10 ft³/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 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 12	1430	260	3.82	Dec. 29	1230	44	2.41
Nov. 24	1430	104	2.91	Dec. 30	2045	39	2.36
Nov. 29	0930	49	2.50	Jan. 27	1730	48	2.43
Dec. 2	2130	47	2.48	Feb. 17	0815	29	2.20

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e0.00	e0.40	0.10	0.08	0.07	0.18	0.38	0.00	0.11	0.00
2	0.00	0.00	5.9	e0.30	0.12	0.12	0.02	0.17	0.00	0.01	0.40	0.00
3	0.00	0.00	7.7	e0.20	0.14	0.0	0.02	0.13	0.00	0.00	0.49	0.24
4	0.02	0.00	0.03	e0.15	0.11	0.03	0.10	0.33	0.00	1.4	0.22	1.1
5	0.11	0.00	0.00	e0.15	0.11	0.07	0.03	0.02	0.00	0.17	0.13	0.00
6	0.00	0.00	0.00	e0.15	0.15	0.12	0.11	0.00	0.00	0.00	0.00	0.60
7	0.00	0.00	0.00	e0.15	0.27	1.1	0.16	0.00	0.30	0.00	0.12	1.3
8	0.00	0.00	0.00	e0.15	0.44	0.24	0.02	0.04	0.42	0.03	0.47	0.00
9	0.00	0.24	0.00	e0.15	0.32	0.08	0.00	0.18	0.05	0.21	0.41	0.60
10	0.00	0.04	0.06	e0.15	0.15	0.04	0.07	0.35	0.00	0.00	0.45	0.91
11	0.00	0.29	0.00	0.18	0.19	0.05	0.04	0.12	0.12	0.01	0.00	0.00
12	0.00	46	0.00	0.14	0.17	0.03	0.15	0.03	0.57	0.52	0.00	0.02
13	0.00	17	0.00	0.16	0.15	0.07	0.17	0.00	0.92	0.71	0.35	0.03
14	0.00	1.2	0.03	0.21	0.22	0.13	0.0	0.02	0.96	0.09	0.25	0.37
15	0.00	0.26	0.06	0.20	0.21	0.06	0.00	0.06	0.17	0.40	0.07	0.57
16	0.00	0.88	0.00	0.14	0.10	0.02	0.28	0.00	0.78	0.45	0.13	0.00
17	0.00	0.48	0.00	0.24	7.6	0.11	0.11	0.10	0.00	0.12	0.07	0.77
18	0.00	0.31	0.0	0.21	0.81	0.26	0.03	0.16	0.59	0.00	0.00	1.00
19	0.00	e0.04	0.06	0.13	0.15	0.06	0.18	0.00	0.74	0.00	0.03	0.04
20	0.03	e0.04	0.03	0.13	0.17	0.09	0.13	0.05	0.42	0.30	0.13	0.00
21	0.00	0.00	0.61	0.10	0.25	0.09	0.02	0.30	0.06	0.00	0.28	0.46
22	0.00	0.00	0.19	0.22	0.11	0.06	0.04	0.43	0.03	0.00	0.13	0.59
23	0.00	0.00	0.06	0.10	0.17	0.13	0.12	0.00	0.00	0.00	0.17	0.00
24	0.01	25	0.05	0.07	0.22	0.15	0.05	0.00	0.01	0.02	0.08	0.00
25	0.00	7.9	0.05	0.27	0.05	0.05	0.24	0.01	0.04	0.18	0.36	0.03
26	0.02	0.10	0.06	0.39	0.06	0.14	0.08	0.00	0.00	0.00	0.00	0.00
27	0.00	0.01	0.08	13	0.16	0.07	0.21	0.00	0.08	0.00	0.00	0.00
28	0.00	0.00	0.13	4.1	0.08	0.04	0.10	0.08	0.22	0.00	0.02	0.00
29	0.00	e13	11	1.6	---	0.13	0.00	0.12	0.06	0.00	0.04	0.00
30	0.01	e0.00	6.0	0.33	---	0.08	0.26	0.11	0.00	0.31	0.10	0.00
31	0.06	---	6.3	0.14	---	0.08	---	0.44	---	0.17	0.59	---
TOTAL	0.26	112.79	38.40	24.01	12.78	3.78	2.81	3.43	6.92	5.10	5.60	8.63
MEAN	0.008	3.760	1.239	0.775	0.456	0.122	0.094	0.111	0.231	0.165	0.181	0.288
MAX	0.11	46	11	13	7.6	1.1	0.28	0.44	0.96	1.4	0.59	1.3
MIN	0.00	0.00	0.00	0.07	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.5	224	76	48	25	7.5	5.6	6.8	14	10	11	17

e Estimated.

11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.081	0.501	0.745	3.188	9.578	13.62	1.450	0.371	0.157	0.109	0.091	0.088
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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002	
ANNUAL TOTAL	1369.28		224.51			
ANNUAL MEAN	3.751		0.615		2.467	
HIGHEST ANNUAL MEAN					13.8	1995
LOWEST ANNUAL MEAN					0.090	1990
HIGHEST DAILY MEAN	679	Mar 5	46	Nov 12	1460	Mar 10 1995
LOWEST DAILY MEAN	0.00	Jun 6	0.00	Oct 1	0.00	Oct 1 1982
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 6	0.00	Oct 6	0.00	Oct 1 1982
MAXIMUM PEAK FLOW			260	Nov 12	4350	Mar 5 2001
MAXIMUM PEAK STAGE			3.82	Nov 12	11.07	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	2720		445		1790	
10 PERCENT EXCEEDS	2.9		0.57		1.2	
50 PERCENT EXCEEDS	0.08		0.08		0.08	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT									
04...	--	--	--	--	--	--	1850	--	--
NOV									
09...	--	--	--	--	--	--	2070	--	--
DEC									
03...	--	--	--	--	--	--	512	--	--
JAN									
10...	--	--	--	--	--	--	1820	--	--
FEB									
11...	--	--	--	--	--	--	1450	--	--
MAR									
05...	--	--	--	--	--	--	1670	--	--
APR									
01...	12	448	.4	15.5	357	2.20	1620	1510	<.04
AUG									
14...	--	--	--	--	--	--	724	--	--
SEP									
19...	--	--	--	--	--	--	1800	--	--

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT						
04...	--	--	--	--	--	--
NOV						
09...	--	--	--	--	--	--
DEC						
03...	--	--	--	--	--	--
JAN						
10...	--	--	--	--	--	--
FEB						
11...	--	--	--	--	--	--
MAR						
05...	--	--	--	--	--	--
APR						
01...	<.05	<.008	.32	610	22	16.5
AUG						
14...	--	--	--	--	--	--
SEP						
19...	--	--	--	--	--	--

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

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.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites are given in separate tables.

Crest-Stage Partial-Record Stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 2002

Station nos.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft ³ /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., San Bernardino County , 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, 1976–02		—	0
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., San Bernardino County , Hydrologic Unit 18090208, at culvert on Interstate Highway 15, and 4.3 mi east of Barstow.	.24	1956–66, 1967–73a, 1976–97, 1999–02		—	0
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., Los Angeles County , Hydrologic Unit 18090206, Angeles National Forest, at culvert on State Highway 2, and 8.1 mi southwest of Valyermo.	.48	1961–66a, 1967–69, 1971–73, 1977–02		—	0
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., Los Angeles County , 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, 1988–94a, 1996–02		—	0
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., Los Angeles County , Hydrologic Unit 18090206, at culvert on State Highway 138, and 8.5 mi northwest of Fairmont.	3.60	1959–64, 1965–73a, 1974, 1978–02	1-28-02	b	e0.50
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., Kern County, Hydrologic Unit 18090206, at culvert on Tehachapi-Willow Springs Road, and 10.0 mi southwest of Mojave.	3.83	1959–73 1989–94a, 2000–02		—	0

a Operated as a continuous-record station.

b Peak flow below crest-stage gage pin; flow estimated.

e Estimated.

Station nos.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft ³ /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., Riverside County , 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	1997–02	—	—	0
SANTA YNEZ RIVER BASIN							
11131700	Santa Rita Creek near Lompoc, CA	Lat 34°38'41", long 120°22'09", in Santa Rita Grant, Santa Barbara County , Hydrologic Unit 18060010, on left bank, 2.4 mi upstream from mouth, and 6.5 mi east of Lompoc.	14.1	1976–79 1981–02	unknown	unknown	e<5
11133700	Purisima Creek near Lompoc, CA	Lat 34°41'34", long 120°25'51", in Purisima Grant, Santa Barbara County , 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	1972–75a 1976–02	12-02-01	1.50	12
11135200	Rodeo–San Pasqual Creek near Lompoc, CA	Lat 34°38'42", long 120°30'57", in Lompoc Grant, Santa Barbara County , 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 1980–02	unknown	unknown	e<1

e Estimated.

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

a Operated as a continuous-record station.

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 2002

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water year)	Measurements	
					Date	Discharge (ft ³ /s)
SANTA YNEZ RIVER BASIN						
11126400 Santa Ynez River at Highway 154 near Santa Ynez, CA	Santa Ynez River	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 right upstream side of Highway 154 bridge, 2.1 mi southeast of intersection of Highways 246 and 154, and 3 mi southeast of Santa Ynez.	430	2002	10-12-2001	1.80
					10-19-2001	2.17
					10-26-2001	3.53
					11-02-2001	3.61
					11-09-2001	3.16
					11-16-2001	3.12
					11-23-2001	2.78
					11-30-2001	10.0
					12-07-2001	1.07
11134500 Santa Ynez River at V Street near Lompoc, CA	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	1955-75a 2001b 2002	10-13-2000	6.28
					11-03-2000	3.76
					12-21-2000	2.25
					12-29-2000	4.19
					01-05-2001	3.07
					01-12-2001	346
					01-19-2001	37.2
					01-26-2001	56.4
					02-02-2001	26.6
					02-09-2001	19.9
					02-16-2001	172
					02-23-2001	157
					03-02-2001	132
					03-30-2001	309
					04-06-2001	250
					04-27-2001	146
					05-04-2001	97.2
					05-11-2001	50.6
					05-18-2001	33.7
					05-25-2001	18.8
					06-01-2001	12.6
					06-08-2001	5.81
06-15-2001	2.36					
12-14-2001	3.37					
12-21-2001	15.1					
12-28-2001	9.55					
01-11-2002	9.94					
01-18-2002	9.55					
01-25-2002	9.65					
02-01-2002	14.8					
02-08-2002	13.9					
02-15-2002	8.58					
02-22-2002	10.2					
03-01-2002	6.89					
03-08-2002	8.11					
03-15-2002	2.58					
09-21-2002	2.32					
09-27-2002	1.08					

a Operated as continuous record.

b Not previously published.

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE (DEG C) (00010)	HARD-NESS NONCARB DISSOLV FLD. AS (MG/L) (00904)	HARD-NESS TOTAL AS (MG/L) (00900)
APR 05...	1230	12	770	9.8	103	8.0	2220	18.0	770	1000
SEP 05...	1325	15	767	9.2	103	7.7	2480	20.5	870	1200
Date		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ALKA-LINITY WAT DIS-TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
APR 05...	244	106	5.37	2	145	23	274	330	160	
SEP 05...	274	116	5.07	2	154	22	294	356	174	
Date		FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
APR 05...	.5	27.4	762	2.47	1820	1720	.12	23.3	.124	
SEP 05...	.4	29.3	825	2.73	2010	1890	.07	31.6	.123	
Date		ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	AME-TRYNE TOTAL (UG/L) (82184)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	BROM-ACIL WATER WHLREC (UG/L) (30234)	BUTA-CHLOR WATER WHLREC (UG/L) (30235)
APR 05...	.25	280	<30	141	<.1	<.1	<.1	<.2	<.1	
SEP 05...	.27	300	<30	123	<.1	<.1	<.1	e.0	<.1	

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

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 2001 TO SEPTEMBER 2002

Date	BUTYL- ATE WATER WHLREC (UG/L) (30236)	CARBO- PHENO- THION WATER UNFLTRD (UG/L) (39786)	CARBOX- IN WATER WHOLE RECOV- ERABLE (UG/L) (30245)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	CYAN- AZINE TOTAL (UG/L) (81757)	CYCLO- ATE WATER WHOLE RECOV- ERABLE (UG/L) (30254)	DEETHYL ATRA- ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DEF TOTAL (UG/L) (39040)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)
	APR 05...	<.1	<.02	<.2	.27	<.2	<.1	<.2	<.02
SEP 05...	<.1	<.02	<.2	.12	<.2	<.1	<.2	<.02	<.2
Date	DI- AZINON, TOTAL (UG/L) (39570)	DIPHEN- AMID WATER WHOLE RECOV- ERABLE (UG/L) (30255)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY- FONATE) WATER WHOLE RECOV- ERABLE (UG/L) (82614)	HEXAZI- NONE WATER WHOLE RECOV- ERABLE (UG/L) (30264)	MALA- THION, TOTAL (UG/L) (39530)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METOLA- CHLOR WATER WHOLE TOTAL (UG/L) (82612)
	APR 05...	<.02	<.1	<.10	<.01	<.01	<.2	<.10	<.02
SEP 05...	.34	<.1	<.10	<.01	<.01	<.2	e.05	<.01	<.2
Date	TOT.REC (UG/L) (82611)	PARA- THION, TOTAL (UG/L) (39540)	PHORATE (UG/L) (39023)	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PROPA- CHLOR WATER WHOLE RECOV. (UG/L) (30295)	PRO- PAZINE TOTAL (UG/L) (39024)	SIMA- ZINE TOTAL (UG/L) (39055)	SIME- TRYNE TOTAL (UG/L) (39054)
	APR 05...	<.1	<.01	<.02	<.2	<.1	<.1	<.1	<.1
SEP 05...	e.1	<.01	<.02	<.2	e.1	<.1	<.1	<.1	<.1
Date	TER- BACIL WATER WHOLE RECOV. (UG/L) (30311)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	VER- NOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALDRIN, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39351)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39383)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39393)	HEPTA- CHLOR EPOXIDE TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39423)
	APR 05...	<.2	<.1	<.1	<.2	<3	<.2	<.2	<.2
SEP 05...	<.2	<.1	<.1	<.2	<3	<.2	<.2	<.2	
Date	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39413)	LINDANE TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39343)	METH- OXY- CHLOR, TOT. IN BOT- TOM MA- TIERIAL (UG/KG) (39481)	MIREX, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39758)	P, P' - DDD, RECOVER IN BOT- TOM MA- TIERIAL (UG/KG) (39363)	P, P' - DDE, RECOVER IN BOT- TOM MA- TIERIAL (UG/KG) (39368)	P, P' - DDT, RECOVER IN BOT- TOM MA- TIERIAL (UG/KG) (39373)	PCB, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39519)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TIERIAL (UG/KG) (39403)
	APR 05...	<.2	<.2	<2.5	<.2	<.5	190	140	<5
SEP 05...	<.2	<.2	<2.5	<.2	e46	220	100	<5	<50

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

e Estimated.

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 September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	
JUL										
23...	1722	2.70	0.1	666	8.6	118	8.3	321	24.0	
23...	1725	2.70	1.0	666	8.4	115	8.3	321	24.0	
23...	1726	2.70	2.0	666	8.0	108	8.2	322	23.5	
Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
JUL										
23...	1732	2.70	1.5	666	8.4	115	8.3	321	24.0	70
Date	Time	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	
JUL										
23...	1732	19.4	5.29	113	138	<10	3.1	2.0	6.2	

< 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 September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL AS CACO3 (00900)
JUL										
23...	1524	1.80	0.1	667	9.2	127	8.4	321	24.5	
23...	1525	1.80	1.0	667	8.9	120	8.4	321	23.5	
JUL										
23...	1531	1.80	1.0	667	8.9	120	8.4	321	23.5	70
JUL										
23...	1531	19.2	5.25	114	139	<10	2.5	2.4	5.3	

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

OWENS LAKE BASIN

361128117573501 NORTH HAIWEE RESERVOIR SITE 1 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 Dunmavin.

PERIOD OF RECORD.—July to September 2002.

CHEMICAL DATA.—July to September 2002.

REMARKS.—Composite from samples at depths of 1, 4.5, and 7 meters.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM-PLING DEPTH (M) (00098)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)
JUL									
23...	1700	8.80	0.1	666	8.3	113	8.2	321	23.5
23...	1701	8.80	1.0	666	8.2	111	8.2	321	23.5
23...	1702	8.80	2.0	666	8.2	111	8.2	321	23.5
23...	1703	8.80	3.0	666	8.1	110	8.2	321	23.5
23...	1704	8.80	4.0	666	8.1	109	8.2	321	23.5
23...	1705	8.80	5.0	666	8.0	109	8.2	321	23.5
23...	1706	8.80	6.0	666	8.0	108	8.2	321	23.5
23...	1707	8.80	7.0	666	7.9	106	8.2	322	23.0
23...	1708	8.80	8.0	666	7.8	104	8.1	322	23.0

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL AS CACO3 (00900)
JUL									
23...	1714	8.80	666	8.2	111	8.2	321	23.5	70

Date	Time	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)
JUL									
23...	1714	19.3	5.28	118	144	<10	2.4	1.9	6.5

< 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 September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH	BARO-		OXYGEN,		PH	SPE-		TEMPER-
		TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	(PER- CENT SATUR- ATION) (00301)	DIS- SOLVED WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	WATER SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	ATURE WATER (DEG C) (00010)	
JUL										
23...	1316	2.40	0.1	668	8.8	118	8.0	329	23.0	
23...	1317	2.40	1.0	668	8.3	111	8.0	329	23.0	
23...	1318	2.40	2.0	668	8.1	108	8.0	329	23.0	
Date	Time	DEPTH	BARO-		OXYGEN,		PH	SPE-		HARD-
		TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	(PER- CENT SATUR- ATION) (00301)	DIS- SOLVED WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	WATER SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	NESS TOTAL (MG/L AS CACO3) (00900)
JUL										
23...	1324	2.40	1.5	668	8.3	111	8.0	329	23.0	71
Date	Time	CALCIUM	MAGNE-	ALKA-	BICAR-	RESIDUE		COPPER,		TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
		DIS- SOLVED (MG/L AS CA) (00915)	SIUM, DIS- SOLVED (MG/L AS MG) (00925)	LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)		
JUL										
23...	1324	19.6	5.43	117	143	<10	2.5	1.6	3.8	

< 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 Dunmavin.

PERIOD OF RECORD.—July to September 2002.

CHEMICAL DATA.—July to September 2002.

REMARKS.—Composite from samples at depths of 1, 4.5, and 7 meters.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	
JUL									
23...	1431	8.50	0.1	667	8.7	117	8.1	331	23.0
23...	1432	8.50	1.0	667	8.4	112	8.1	331	23.0
23...	1433	8.50	2.0	667	8.2	110	8.1	331	23.0
23...	1434	8.50	3.0	667	8.2	108	8.1	331	22.5
23...	1435	8.50	4.0	667	8.1	108	8.0	331	22.5
23...	1436	8.50	5.0	667	8.0	106	8.0	331	22.5
23...	1437	8.50	6.0	667	8.0	105	8.0	331	22.5
23...	1438	8.50	7.0	667	7.9	105	8.0	331	22.5
23...	1439	8.50	8.0	667	7.5	99	7.8	336	22.0

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	
JUL									
23...	1449	8.50	667	8.4	112	8.1	331	23.0	71

Date	Time	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
JUL									
23...	1449	19.4	5.41	118	144	<10	2.2	1.3	2.7

< 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 Dunmopin.

PERIOD OF RECORD.—July to September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
JUL									
23...	1259	3.40	0.1	668	9.2	124	8.0	329	23.5
23...	1300	3.40	1.0	668	8.7	116	7.9	329	23.0
23...	1301	3.40	2.0	668	8.5	113	7.9	329	23.0
23...	1302	3.40	3.0	668	8.7	115	7.9	327	22.5

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
JUL									
23...	1305	3.40	1.5	668	8.7	116	7.9	329	23.0

Date	Time	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
JUL									
23...	1305	71	19.4	5.40	108	132	<10	2.2	3.1

< 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 September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
JUL										
23...	1036	2.60	0.1	668	8.2	110	8.0	329	23.0	
23...	1038	2.60	1.0	668	7.9	106	7.9	329	23.0	
23...	1039	2.60	2.0	668	7.8	105	7.9	329	23.0	
JUL										
23...	1045	2.60	1.0	668	7.9	106	7.9	329	23.0	71
JUL										
23...	1045	19.4	5.42	118	144	<10	2.2	1.3	2.5	

< 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 September 2002.

CHEMICAL DATA.—July to September 2002.

REMARKS.—Composite from samples at depths of 1, 4.5, and 8 meters.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	
JUL									
23...	1126	9.40	0.1	668	8.3	110	330	22.5	
23...	1128	9.40	1.0	668	7.8	104	330	22.5	
23...	1129	9.40	2.0	668	7.7	102	330	22.5	
23...	1130	9.40	3.0	668	7.7	102	330	22.5	
23...	1131	9.40	4.0	668	7.7	102	330	22.5	
23...	1132	9.40	5.0	668	7.7	101	330	22.5	
23...	1133	9.40	6.0	668	7.7	101	331	22.5	
23...	1134	9.40	7.0	668	7.7	101	331	22.5	
23...	1135	9.40	8.0	668	7.7	102	332	22.5	

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
JUL								
23...	1142	9.40	668	7.8	104	330	22.5	71

Date	Time	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
JUL									
23...	1142	19.5	5.43	119	145	<10	2.4	1.6	2.4

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

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 September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
JUL										
23...	0922	3.50	0.1	668	7.6	100	8.2	329	22.5	
23...	0923	3.50	1.0	668	7.5	100	8.1	329	22.5	
23...	0924	3.50	2.0	668	7.5	100	8.1	329	22.5	
23...	0925	3.50	3.0	668	7.4	97	8.1	329	22.0	
JUL										
23...	0945	3.50	1.5	668	7.5	100	8.1	329	22.5	71
JUL										
23...	0945	19.5	5.40	122	149	<10	2.3	1.7	2.6	

< 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 Dunmavin.

PERIOD OF RECORD.—July to September 2002.

CHEMICAL DATA.—July to September 2002.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DEPTH TO BOT. FROM SURFACE AT SAMP LOC. METERS (82903)	SAM- PLING DEPTH (M) (00098)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)
JUL 23...	0813	.75	.40	666	7.5	96	7.7	348	20.5	73

Date	Time	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)
JUL 23...	0813	19.9	5.58	98	119	<10	2.5	e1.2	5.6

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

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Tons per day, definition of	23	WEST FORK MOJAVE RIVER BELOW SILVERWOOD LAKE, NEAR HESPERIA	94
Total coliform bacteria, definition of	23	Wet mass, definition of	24
Total discharge, definition of	23	Wet weight, definition of	24
Total in bottom material, definition of	23	WHITEWATER RIVER AT INDIO	80
Total length, definition of	23	WHITEWATER RIVER AT RANCHO MIRAGE	78
Total load, definition of	23	WHITEWATER RIVER AT WHITE WATER	56
Total organism count, definition of	23	WHITEWATER RIVER AT WHITE WATER CUTOFF, AT WHITE WATER	57
Total recoverable, definition of	23	WHITEWATER RIVER AT WINDY POINT, NEAR WHITE WATER	65
Total sediment discharge, definition of	24	WHITEWATER RIVER NEAR MECCA	81
Total sediment load, definition of	24	WSP, definition of	24
Total, definition of	23		
Transect, definition of	24	Z	
Trip blank	11	ZACA CREEK NEAR BUELLTON	445
Turbidity, definition of	24	Zooplankton, definition of	24
U			
Ultraviolet (UV) absorption, definition of	24		
Unconfined aquifer, definition of	24		
Upper Conway Ditch	145		

CALENDAR FOR WATER YEAR 2002

2001

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

2002

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

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
Area		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
Volume		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
Flow		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
Mass		
ton (short)	9.072×10^{-1}	megagram or metric ton