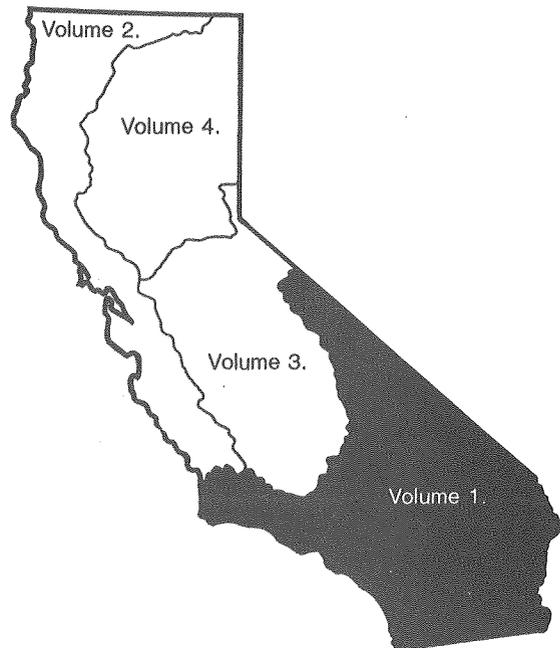




# Water Resources Data California Water Year 1992

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-92-1  
Prepared in cooperation with the California Department of  
Water Resources and with other agencies

CALENDAR FOR WATER YEAR 1992

1991

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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1992

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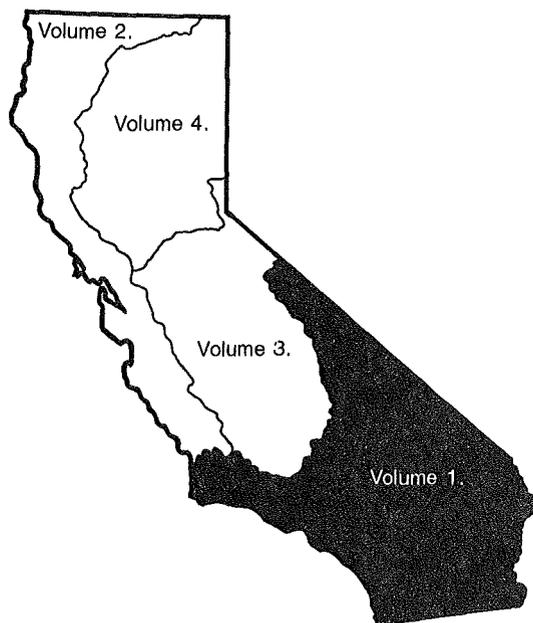
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							30	31												



# Water Resources Data California Water Year 1992

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

by E.B. Hoffman, J.C. Bowers, J.R. Mullen, and P.D. Hayes



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-92-1  
Prepared in cooperation with the California Department of  
Water Resources and with other agencies

**U.S. DEPARTMENT OF THE INTERIOR**

**BRUCE BABBITT**, *Secretary*

**U.S. GEOLOGICAL SURVEY**

**Robert M. Hirsch**, *Acting Director*

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2800 Cottage Way  
Sacramento, CA 95825

## 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 quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in five 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
- Volume 5. Ground-water data

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 John M. Klein, District Chief, California.

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		<b>14.</b>	
<b>15. Supplementary Notes</b> Prepared in cooperation with the California Department of Water Resources and with other agencies			
<b>16. Abstract (Limit: 200 words)</b> Water resources data for the 1992 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 (1) discharge records for 161 streamflow-gaging stations, 15 crest-stage partial-record streamflow stations, and 5 miscellaneous measurement stations; (2) stage and contents records for 26 lakes and reservoirs; (3) water-quality records for 23 streamflow-gaging stations and 3 partial-record stations; and (4) precipitation records for 11 stations. 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.			
<b>17. Document Analysis a. Descriptors</b> *California, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Sampling sites.			
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SURFACE-WATER AND WATER-QUALITY STATIONS,  
IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

IX

[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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Castaic Lagoon Parshall flume near Castaic (d).....	11108135	337
Santa Clara River at Los Angeles-Ventura County line (d).....	11108500	339
Piru Creek below Buck Creek, near Pyramid Lake (d).....	11109375	341
Canada de los Alamos above Pyramid Lake (d).....	11109395	343
Pyramid Lake near Gorman (l).....	11109520	345
Piru Creek below Pyramid Lake, near Gorman (d).....	11109525	346
Piru Creek above Lake Piru (d).....	11109600	348
Lake Piru near Piru (l).....	11109700	350
Piru Creek below Santa Felicia Dam (d).....	11109800	351
Sespe Creek near Wheeler Springs (d).....	11111500	353
Sespe Creek near Fillmore (d).....	11113000	355
Santa Paula Creek near Santa Paula (d).....	11113500	358
Santa Clara River at Montalvo (ds).....	11114000	360
VENTURA RIVER BASIN		
Ventura River near Ventura (ds).....	11118500	364
CARPINTERIA CREEK BASIN		
Carpinteria Creek near Carpinteria (d).....	11119500	369
MISSION CREEK BASIN		
Mission Creek near Mission Street, at Santa Barbara (d).....	11119750	371
ARROYO BURRO BASIN		
Arroyo Burro at Santa Barbara (d).....	11119780	373
ATASCADERO CREEK BASIN		
Atascadero Creek:		
Maria Ygnacio Creek at University Drive, near Goleta (d).....	11119940	375
Atascadero Creek near Goleta (d).....	11120000	377
SAN JOSE CREEK BASIN		
San Jose Creek near Goleta (d).....	11120500	379
San Jose Creek at Goleta (d).....	11120510	381
SANTA YNEZ RIVER BASIN		
Santa Ynez River at Jameson Lake, near Montecito (d).....	11121000	384
Santa Ynez River above Gibraltar Dam, near Santa Barbara (d).....	11122000	385
Santa Ynez River below Gibraltar Dam, near Santa Barbara (d).....	11123000	386
Santa Ynez River below Los Laureles Canyon, near Santa Ynez (dc).....	11123500	388
Santa Cruz Creek near Santa Ynez (dc).....	11124500	391
Lake Cachuma near Santa Ynez (l).....	11125500	394
Santa Ynez River near Santa Ynez (c).....	11126000	395
Alisal Creek:		
Alamo Pintado Creek near Solvang (d).....	11128250	396
Alisal Reservoir near Solvang (l).....	11128300	398
Santa Ynez River at Solvang (d).....	11128500	399
Zaca Creek near Buellton (d).....	11129800	401
Salsipuedes Creek near Lompoc (dc).....	11132500	403
Santa Ynez River at narrows, near Lompoc (d).....	11133000	407
Miguelito Creek at Lompoc (dc).....	11134800	409
SAN ANTONIO CREEK BASIN		
San Antonio Creek at Los Alamos (d).....	11135800	412
San Antonio Creek near Casmalia (dc).....	11136100	414
SANTA MARIA RIVER BASIN		
Cuyama River (head of Santa Maria River) below Buckhorn Canyon, near Santa Maria (dc).....	11136800	419
Sisquoc River near Sisquoc (dc).....	11138500	423
Sisquoc River near Garey (d).....	11140000	427
Bradley ditch near Donovan Road, at Santa Maria (d).....	11140600	429
Orcutt Creek near Orcutt (dc).....	11141050	431

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

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record
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	Horsethief 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
10255820	Yaqui Pass Wash near Borrego	.041	1965-69
10255850	Vallecito Creek near Julian	39.7	1964-83
10256000	Whitewater River at White Water	57.5	1949-79
10256050	Whitewater Municipal West Company diversion at White Water	--	1966-70, 1971-73, 1975-81
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
10257500	Falls Creek near White Water	4.14	1922-27, 1928-31
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 Spring	.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
10260820	West Fork Mojave River below Silverwood Lake	34.0	1981-83
10261900	Mojave River at Wild Crossing, near Helendale	957	1966-70
10264500	Little Rock Creek near Palmdale	78.0	1968
10264590	Cottonwood Creek near Rosamond	35.7	1965-72
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
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
10271210	Bishop Creek below Powerplant No. 6, near Bishop	104	1936-90
10276000	Big Pine Creek near Big Pine	39.0	1921-78
10276002	Giroux Ditch Lower below Big Pine	--	1975-78
10276500	Tinemaha Creek near Big Pine	27.3	1907-11
10277000	Birch Creek near Big Pine	11.7	1907-11
10277400	Owens River below Tinemaha Reservoir, near Big Pine	1,964	1975-84
10277500	Owens River near Big Pine	1,976	1912-74
10278000	Taboose Creek near Aberdeen	11.2	1906-11
10278500	Goodale Creek near Aberdeen	11.2	1906-11
10281500	Oak Creek near Independence	24.1	1906-11
10281800	Independence Creek below Pi Canyon Creek, near Independence	18.1	1923-78
10282000	Independence Creek near Independence	18.8	1907-11
10282480	Mazourka Creek near Independence	15.6	1961-72
10284800	Inyo Creek near Lone Pine	1.54	1968-73
10285500	Tuttle Creek near Lone Pine	14.0	1909-11
10285700	Owens River at Keeler Bridge, near Lone Pine	2,604	1961-79
10286000	Cottonwood Creek near Olancho	40.1	1906-11, 1914-18, 1920-38, 1960-78
10286001	Cottonwood Creek penstock weir, near Lone Pine	--	1906-11, 1914-18, 1919-78

## DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record
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	1960-66, 1986-90
10287400	Rush Creek above Grant Lake, near June Lake	51.3	1937-79
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
11013600	Jamul Creek at Lee Valley, near Jamul	2.26	1984-85, 1987-88
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
11023250	Poway Creek near Poway	7.92	1978-87
11023310	Rattlesnake Creek at Poway	8.13	1978-89
11023320	Pomerado Creek at Poway Road, near Poway	4.14	1971-75
11023325	Beeler Creek at Pomerado Road, near Poway	5.46	1978-89
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
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
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
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
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
11046100	Las Flores Creek near Oceanside	26.6	1952-67, 1970-79
11046200	San Onofre Creek near San Onofre	34.6	1951-67
11046250	San Onofre Creek at San Onofre	42.2	1947-67, 1989
11046300	San Mateo Creek near San Clemente	80.8	1953-67
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	1929-71
11047200	Oso Creek at Crown Valley Parkway, near Mission Viejo	14.0	1970-81
11047300	Arroyo Trabuco at San Juan Capistrano	54.1	1973-77, 1984-89
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
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
11055000	Mill Creek near Mentone	50.5	1939-65
11056000	Santa Ana River near San Bernardino	306	1929-37, 1955-61
11056500	Little San Geronio 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
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

## DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record
11063000	Cajon Creek near Keenbrook	40.6	1920-71, 1978-82
11064000	Lytile 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	Lytile Creek west channel at Colton	--	1929-45
11066440	Santa Ana River at Mission Boulevard, at Riverside	808	1971-82
11066478	Riverside water quality control plant weir No. 1	--	1973-81
11066479	Riverside water quality control plant weir No. 2	--	1973-81
11066480	Riverside water quality control plant at Riverside narrows, near Arlington	--	1966-81
11066500	Santa Ana River at Riverside narrows, near Arlington	853	1929-73
11066550	Sheehan diversion at Riverside narrows, near Arlington	--	1964-65, 1967-68
11066950	Day Creek diversion near Etiwanda	--	1966-69, 1971
11067000	Day Creek near Etiwanda	4.56	1929-72
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	1961-68
11069300	South Fork San Jacinto River tributary near Valle Vista	2.20	1962-67
11069500	San Jacinto River near San Jacinto	141	1920-91
11070000	Bautista Creek near Hemet	39.6	1948-69
11070050	Bautista Creek at Valle Vista	48.5	1970-87
11070240	Sunnymead Channel at Alessandro Boulevard, near Sunnymead	13.3	1970-75, 1990-92
11070256	Perris Valley Storm Drain at Nandino Avenue, near March Air Force Base	50.6	1970-75, 1990-92
11070262	Perris Valley Storm Drain Lateral "B" near March Air Force Base	10.6	1970-75, 1990-92
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
11070465	Salt Creek at Murrieta Road, near Sun City	--	1984
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
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	--	1974-86
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
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 Lanada	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

## DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record
11096500	Little Tujunga Creek near San Fernando	21.1	1929-73
11097500	Los Angeles River at Los Angeles	514	1930-79
11098500	Los Angeles River near Downey	599	1928-78
11099500	Sawpit Creek near Monrovia	5.21	1916-61
11100000	Santa Anita Creek near Sierra Madre (REVISED RECORDS IN WDR CA-92-1)	9.71	1917-70
11100500	Little Santa Anita Creek near Sierra Madre	1.84	1916-62
11101000	Eaton Creek near Pasadena	6.47	1918-66
11101380	Alhambra Wash at Klingerman Street, near Montebello	15.2	1976-79
11101500	Rio Hondo near Montebello	116	1929-78
11102000	Mission Creek near Montebello	4.16	1930-77
11102500	Rio Hondo near Downey	143	1928-79
11103500	Ballona Creek near Culver City	89.5	1928-78
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
11107745	Santa Clara River above railroad station, near Lang	157	1950-68, 1970-77
11107860	Bouquet Creek near Saugus	51.6	1971-73, 1975,
11107922	South Fork Santa Clara River at Saugus	43.4	1976-77
11108000	Santa Clara River near Saugus	411	1930-55
11108145	Castaic Creek near Saugus	184	1947-76
11109000	Santa Clara River near Piru	645	1928-32
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
11112500	Fillmore Irrigation Company canal near Fillmore	--	1940-51, 1972-83
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
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
11119900	Atascadero Creek at Puente Road, near Goleta	3.86	1971-72
11120510	San Jose Creek at Goleta	9.42	1970-92
11120520	San Pedro Creek at Goleta	3.21	1971-72
11120530	Tecolotito Creek near Goleta	4.42	1970-72, 1980-82, 1987-91
11120550	Gaviota Creek near Gaviota	18.8	1967-86
11120600	Jalama Creek near Lompoc	20.5	1966-82
11120700	Canada Honda Creek near Lompoc	3.09	1959-62
11120800	Canada Honda Creek near Point Arguello	8.47	1959-62
11124000	Santa Cruz Creek above Stuke Canyon	64.9	1947-52
11125000	Cachuma Creek near Santa Ynez	23.8	1951-62
11126000	Santa Ynez River near Santa Ynez	422	1929-31, 1933-76
11126500	Santa Agueda Creek near Santa Ynez	55.8	1941-71, 1977-78
11127000	San Lucas Creek near Santa Ynez	3.2	1953-54
11127500	Zanja de Cota Creek near Santa Ynez	13.8	1955-61
11128000	Santa Ynez River at Grand Avenue, near Santa Ynez	513	1955-65
11128400	Alisal Creek near Solvang	12.3	1955, 1957-72
11129000	Nojoqui Creek near Buellton	15.1	1953-54
11129500	Santa Ynez River at Buellton	611	1955-59
11129800	Zaca Creek near Buellton	32.8	1963-81, 1989-92
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
11134000	Santa Ynez River at H Street, near Lompoc	815	1947-62
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
11136000	San Antonio Creek at Harris	93.7	1941-55
11136050	San Antonio Creek above Barka slough, near Orcutt	114	1985-87

## DISCONTINUED GAGING STATIONS--Continued

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record
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
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
11140600	Bradley Ditch near Donovan Road, at Santa Maria	5.47	1970-92
11140800	Blosser Ditch near Donovan Road, at Santa Maria	--	1972-76
11141000	Santa Maria River at Guadalupe	1,741	1940-87
11141050	Orcutt Creek near Orcutt	18.5	1982-92

## DISCONTINUED LAKES AND RESERVOIRS

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

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record
10287000	Mono Lake near Mono Lake	785	1912-90
11013200	Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico	977	1937-90
11117900	Lake Casitas near Casitas Springs	38.6	1986-87

## DISCONTINUED WATER-QUALITY STATIONS

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

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
10254970	New River at international boundary, at Calexico	--	C	1973-81
10256000	Whitewater River at White Water	57.5	S	1972
10261500	Mojave River at lower narrows, near Victorville	511	C	1975-82
10265150	Hot Creek near Casa Diablo Hot Springs	--	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	S	1984
11030500	San Dieguito River near Del Mar	338	S	1984
11042000	San Luis Rey River at Oceanside	557	WQ,S	1969-78, 1984-92
11046000	Santa Margarita River at Ysidora	723	S	1969-71, 1973-74, 1978
11046250	San Onofre Creek at San Onofre	42.2	S	1982-83, 1988-89
11046370	San Mateo Creek at San Onofre	132	S	1984
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	S	1987-88
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	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

## DISCONTINUED WATER-QUALITY STATIONS--Continued

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
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	T,S	1982-89
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	1973-75, 1977-80
11059300	Santa Ana River at E Street, near San Bernardino	541	C,S	1968-72, 1983
11066460	Santa Ana River at MWD crossing, near Arlington	852	C	1969-78
11066480	Riverside water quality control plant at Riverside narrows, near Arlington	--	C	1970-80, 1982
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
11070263	Unnamed creek tributary to Perris Reservoir near Moreno	.46	P	1990-91
11074000	Santa Ana River below Prado Dam	1,490	S	1973-82
11075600	Santa Ana River at Imperial Highway, near Anaheim	1,544	T,S	1973-77, 1979
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	--	C,T	1974-85
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	S	1968-88
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	WQ,S, T,C	1973-92
11103010	Los Angeles River at Willow Street Bridge, at Long Beach	831	C,T	1974-75, 1981
11104000	Topanga Creek at Topanga Beach	18.0	WQ,S	1982-88
11104400	Malibu Creek at Cornell	37.6	WQ,S	1983-88
11105410	Cold Creek at Pluma Road, near Monte Nido	7.73	WQ,S	1982-84, 1986, 1987, 1988
11105500	Malibu Creek at Crater Camp, near Calabasas	105	WQ,S	1982-88
11105850	Arroyo Simi near Simi	70.6	T,S	1970-71, 1974-78
11106550	Calleguas Creek at Camarillo State Hospital	248	T,S	1970-78
11108500	Santa Clara River at Los Angeles-Ventura county line	625	WQ,B,S	1969-88
11109550	Piru Creek above Frenchmans Flat	308	C	1972-80
11109600	Piru Creek above Lake Piru	372	C,T	1971-80
11109800	Piru Creek below Santa Felicia Dam	425	C	1969-70, 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	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	1,594	S	1968-81, 1984-85
11117500	San Antonio Creek at Casitas Springs	51.2	T,S	1977-78
11118500	Ventura River near Ventura	188	S	1969-86
11120000	Atascadero Creek near Goleta	18.9	S	1982
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
11141000	Santa Maria River at Guadalupe	1,741	T,S	1969-70
11141050	Orcutt Creek near Orcutt	18.5	WQ	1983-92

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



WATER RESOURCES DATA--CALIFORNIA, WATER YEAR 1992

VOLUME 1--SOUTHERN GREAT BASIN FROM MEXICAN BORDER TO MONO LAKE BASIN,  
AND PACIFIC SLOPE BASINS FROM TIJUANA RIVER TO SANTA MARIA RIVER

By E.B. Hoffman, J.C. Bowers, J.R. Mullen, and P.D. Hayes

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and Federal agencies, obtains a large amount of data pertaining to the water resources of California each water year. These data, accumulated during many water years, constitute a valuable data base 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 161 streamflow-gaging stations, 15 crest-stage partial-record streamflow stations, and 5 miscellaneous measurement stations; (2) stage and contents records for 26 lakes and reservoirs; (3) water-quality records for 23 streamflow-gaging stations and 3 partial-record stations; and (4) precipitation records for 11 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. Beginning with the 1985 water year, 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 the principal cities of the United States and may be purchased from U.S. Geological Survey, Map Distribution, Box 25286, MS 306, Denver Federal Center, Denver, CO 80225.

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-92-1." 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 in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

Additional information, including current prices, 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 (916) 978-4668. A limited number of CD-ROM discs will be available for purchase from U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, CO 80225.

## COOPERATION

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

California Department of Boating and Water Ways, William H. Ivers, Director.  
 California Department of Water Resources, David N. Kennedy, Director.  
 Carpinteria County Water District, Robert R. Lieberknecht, General Manager/Secretary.  
 Casitas Municipal Water District, John Johnson, General Manager.  
 Coachella Valley Water District, Thomas E. Levy, General Manager-Chief Engineer.  
 Crestline-Lake Arrowhead Water Agency, Roxanne M. Holmes, General Manager.  
 Desert Water Agency, Jack H. Oberle, General Manager.  
 Eastern Municipal Water District, J. Andrew Schlange, General Manager.  
 Imperial Irrigation District, Charles L. Shreves, General Manager.  
 Los Angeles Department of Water and Power, Orville McCollom, Deputy Director.  
 Mojave Water Agency, Larry Rowe, General Manager.  
 Mono County, Energy Management Department, Daniel Lyster, Director.  
 Montecito Water District, C. Charles Evans, General Manager-Chief Engineer.  
 Orange County Water District, William R. Mills, Jr., General Manager.  
 Pechanga Indian Reservation, Jennie Miranda, Spokeswoman.  
 Riverside County Flood Control and Water Conservation District, Kenneth L. Edwards, Chief Engineer.  
 San Bernardino Valley Municipal Water District, G. Louis Fletcher, General Manager.  
 San Bernardino Environmental Public Works Agency-Flood Control District, Ken Miller, Director.  
 San Diego, City of, Milton Mills, Jr., Water Utilities Director.  
 San Diego County Department of Public Works, Granville M. Bowman, Director.  
 Santa Barbara, City of, Department of Public Works, David H. Johnson, Director.  
 Santa Barbara County Flood Control and Water Conservation District, Phillip Demery, Flood Control Engineer-Manager.  
 Santa Barbara County Water Agency, Robert Almy, Manager.  
 Santa Margarita River Watershed, James S. Jenks, Watermaster.  
 Santa Maria Valley Water Conservation District, Maurice F. Twitchell, Secretary.  
 Santa Ynez River Water Conservation District, William Laranjo, President.  
 United Water Conservation District, Frederick J. Gientke, General Manager.  
 Ventura County Public Works Agency, Arthur Goulet, Director.  
 Water Replenishment District of Southern California, John W. Norman, General Manager

Assistance in the form of funds or services was given by the Vandenberg Air Force Base, U.S. Air Force; Corps of Engineers, U.S. Army; Bureau of Reclamation, U.S. Department of the Interior; Camp Pendleton Marine Corps Base, Marine Corps, and China Lake Naval Weapons Center, U.S. Navy.

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

## SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water

As is common in California, streamflow varied greatly in the 1992 water year--month by month and regionally--related to differences in precipitation, temperature, topography, and geology. In the area covered by this volume, the year began with below normal runoff at most sites and ended at 325 percent of the 1961-90 median, based on records for seven streamflow stations. The pattern of runoff shown by these stations generally is representative of hydrologic conditions in their parts of the report area. Runoff ranged from 132 percent of median at City Creek near Highland (adj.) (station 11055801) to 650 percent of median at Sespe Creek near Wheeler (station 11111500). Total runoff, in percent of median, is shown in figure 1. In figure 2, monthly mean discharge in the 1992 water year is compared with the 1961-90 median, maximum, and minimum monthly mean discharge for four representative gaging stations. Also in figure 2, a comparison of monthly precipitation for the 1992 water year and the long-term averages show that precipitation in February and March was far above normal at most locations. In response, many streams exceeded the peak discharge bases, but none had peaks of record. A comparison of peak discharge for the 1992 water year with peaks for the period of record at selected stations is given in table 1 and annual departure from the 1961-90 mean discharge for four selected gaging stations is shown in figure 3.

Table 1. Comparison of peak discharge for 1992 water year with those for period of record for selected stations

Station No.	Station name	1992 water year		Period of record	
		Date	Peak discharge (ft <sup>3</sup> /s)	Water year	Peak discharge (ft <sup>3</sup> /s)
10255810	Borrego Palm Creek near Borrego Springs	Feb. 6	8.2	1979	2,640
10263500	Big Rock Creek near Valyermo	Feb. 12	1,010	1938	8,300
11015000	Sweetwater River near Descanso	Feb. 15	265	1927	11,200
11055800	City Creek near Highland	Feb. 12	856	1969	7,000
11098000	Arroyo Seco near Pasadena	Feb. 11	1,710	1938	8,620
11111500	Sespe Creek near Wheeler Springs	Feb. 12	8,400	1983	11,600
11124500	Santa Ynez Creek near Santa Cruz	Feb. 12	4,820	1969	7,050



Figure 1. Runoff, in percent of median, for the 1992 water year.

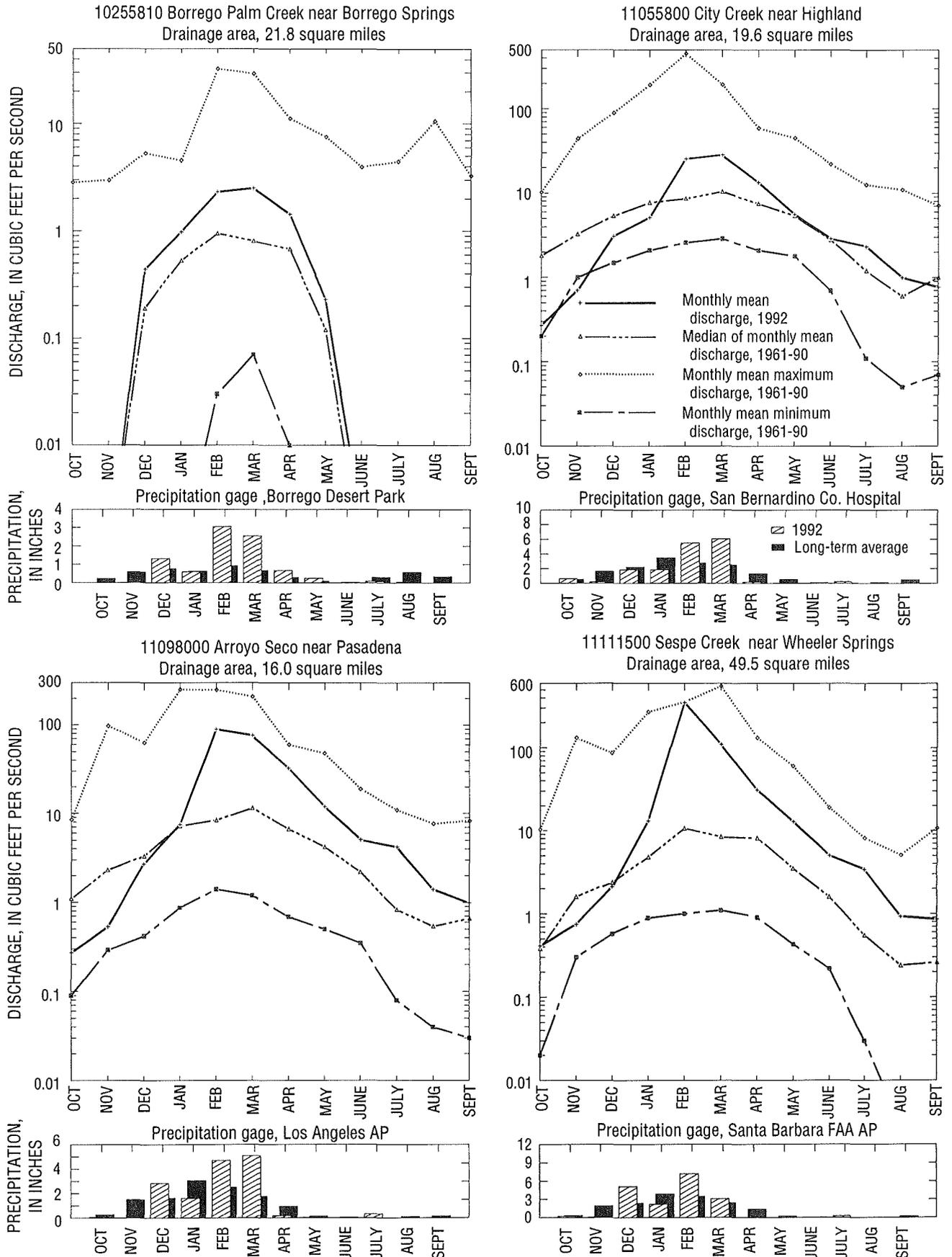


Figure 2. Discharge and precipitation during water year 1992 and long-term average at four representative gaging stations. Precipitation data from National Oceanic and Atmospheric Administration, 1992, Climatological Data, annual summary: v. 96.

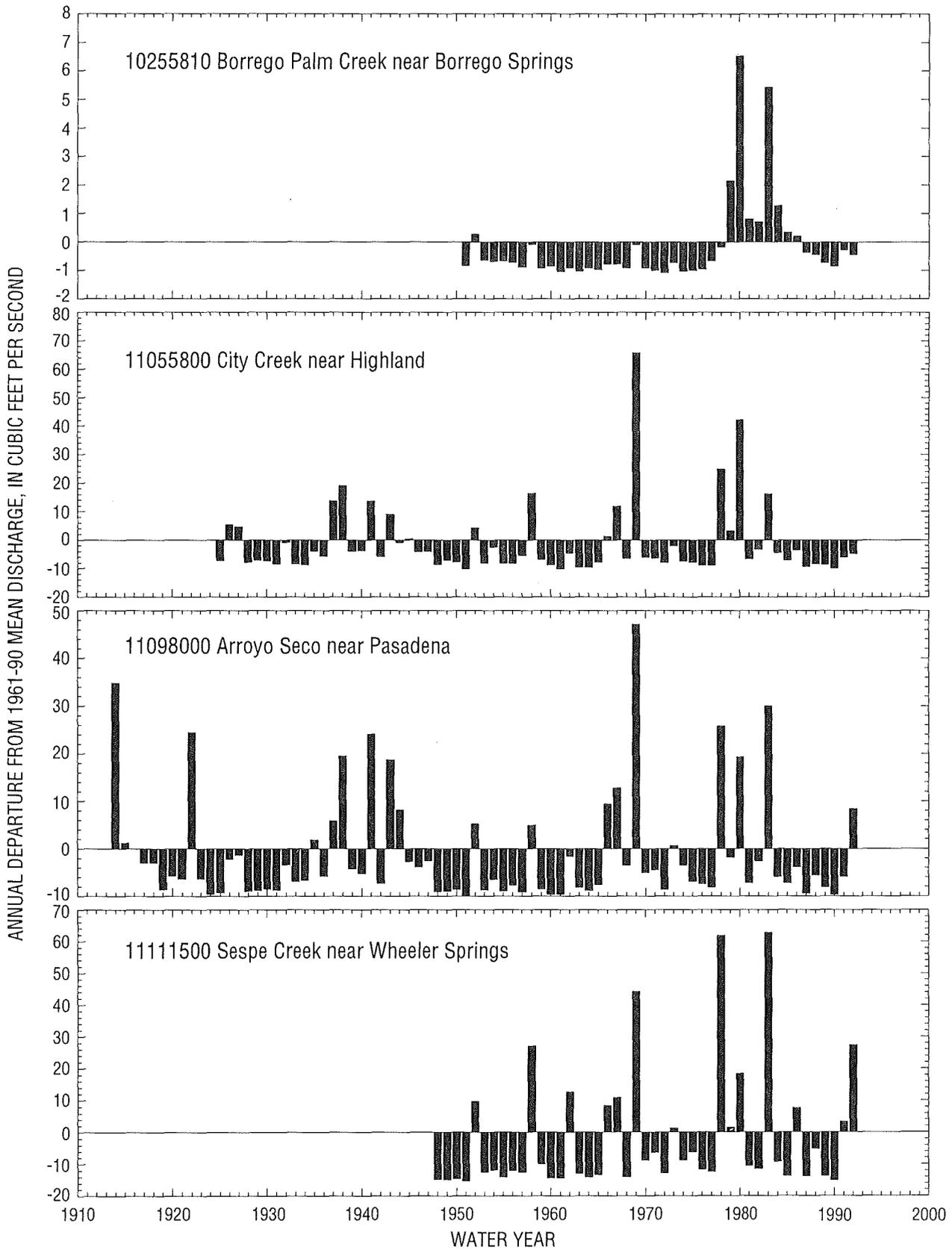


Figure 3. Annual departure from 1961-90 mean discharge for period of record at selected gaging stations.

### Water Quality

Water samples collected at four NASQAN stations reported in this volume were analyzed for water-quality constituents. Specific conductance varied from 1,030 microsiemens at Santa Ana River below Prado Dam (station 11074000) to 5,470 microsiemens at Alamo River at Drop No. 3, near Calipatria (station 10254670). Median dissolved-solids concentrations of the samples increased slightly from the previous year. Figure 4 shows the monthly mean dissolved-solids concentrations during water year 1992 compared with long-term mean dissolved-solids concentrations at two selected stations. The largest densities of fecal-coliform (4,600 colonies per 100 milliliters) and fecal-streptococcus bacteria (13,000 colonies per 100 milliliters) were in water samples collected from Santa Ana River below Prado Dam and Alamo River at Drop No. 3, near Calipatria, respectively.

Chemical-constituent concentrations in excess of U.S. Environmental Protection Agency (EPA) water-quality criteria were detected in water samples collected from several stations and are listed below:

Station No.	Station name	Water-quality constituent exceeding EPA water-quality criteria
10254670	Alamo River at Drop No. 3, near Calipatria	Sulfate, chloride, total dissolved solids, nitrite plus nitrate, manganese
11042000	San Luis Rey River at Oceanside	Sulfate, chloride, total dissolved solids, manganese,
11074000	Santa Ana River below Prado Dam	Total dissolved solids, nitrite plus nitrate, manganese
11103000	Los Angeles River at Long Beach	pH
345727120375401	Green Canyon Creek at Main Street, near Guadalupe	Nitrite plus nitrate

Suspended-sediment discharge and concentrations were monitored periodically at 11 stations in the area included in this volume.

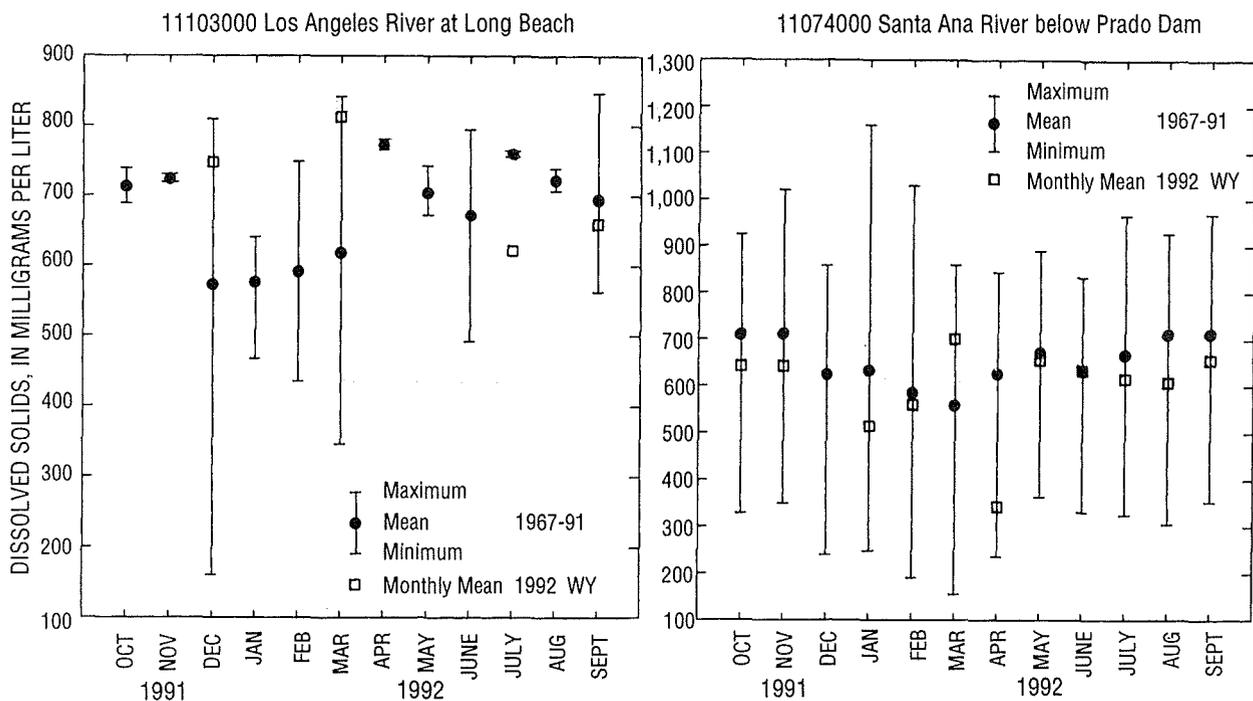


Figure 4. Comparison of monthly mean dissolved-solids concentrations during water year 1992 with long-term dissolved-solids concentrations at two selected stations.

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped drainage basins nationwide. The data provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are located generally at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for; (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) to detect changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

## EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1992 water year that began October 1, 1991, and ended September 30, 1992. 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 main-stream 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.

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 11078000, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "078000." 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 (fig. 5). 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.

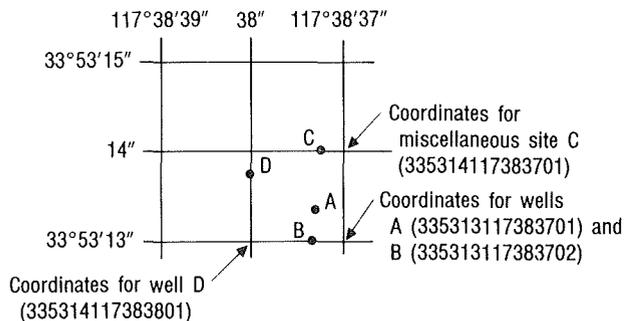


Figure 5. System for numbering miscellaneous sites (latitude and longitude).

#### 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 and crest-stage partial-record stations for which data are given in this report are shown, by county, in figures 6 through 16.

#### 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 relationships 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 relationship 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 analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes 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, Chapter A6.

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.

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 1992 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 to follow 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.

**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 in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms), 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, 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. The minimum for the current water year appears below the table of peak data.

**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, possible, 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 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.

#### 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. 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 to follow clarify information presented under the various line headings of the summary statistics table.

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

**INSTANTANEOUS PEAK FLOW.**--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

**INSTANTANEOUS PEAK STAGE.**--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal 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 (INCHES) indicates the depth to which the drainage area would be covered if all the runoff for a given period were uniformly distributed on it.

**10 PERCENT EXCEEDS.**--The discharge that is exceeded by 10 percent of the flow for the designated period.

**50 PERCENT EXCEEDS.**--The discharge that is exceeded by 50 percent of the flow for the designated period.

**90 PERCENT EXCEEDS.**--The discharge that is exceeded by 90 percent of the flow 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 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.

#### 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 ( $\text{ft}^3/\text{s}$ ) for values less than  $1 \text{ ft}^3/\text{s}$ , to the nearest tenth between  $1.0$  and  $10 \text{ ft}^3/\text{s}$ , to whole numbers between  $10$  and  $1,000 \text{ ft}^3/\text{s}$ , and to three significant figures for more than  $1,000 \text{ ft}^3/\text{s}$ . 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 22092, 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.

#### 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.

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. 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 6 through 16.

#### 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 (1992) 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.

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.

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 the suspended sediment and bed material are included for some stations.

#### Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN 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, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey's National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in Techniques of Water-Resources Investigations, Book 5, Chapter C1; methods used by the laboratories are given in Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

### 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.

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, WATSTORE, 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 WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products ranging from data tables to complex statistical analyses, such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- \* Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- \* Daily Values File - Contains more than 220 million daily values of streamflows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.

- \* Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- \* Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- \* Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey  
National Water Data Exchange  
421 USGS National Center  
Reston, VA 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5 1/4-inch floppy disk and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District Offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for purchase from U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, CO 80225.

#### DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report are defined below. See the table for converting inch-pound units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-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.

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

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

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.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by a well. A flowing artesian well is one in which the water level is above the land surface.

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. For the membrane filter method, these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 0.5°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. For the membrane filter method, they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. For the membrane filter method they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 0.5°C on KF streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Benthic organisms (invertebrates) are the group of animals living in or on 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.

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 micro-organisms, such as bacteria.

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

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. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ) and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, 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.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cell volume determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell numbers 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 ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements on cell dimensions (that is, 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 (that is, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

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

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

Cells per volume (cells/volume) refers to the number of cells of any organism that are 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, usually in milliliters (mL) or liters (L).

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 natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

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.

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.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, 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 ( $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day (cfs.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, approximately 1.9835 acre-feet, or about 646,000 gallons or 2,445 cubic meters.

Discharge is the volume of water (or more broadly, total fluid plus suspended sediment), that passes a given point within a given period of time.

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

Instantaneous discharge is the discharge at a particular instant of time.

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

Dissolved refers to that material in a representative water sample which passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate. It is recognized that certain kinds of samples cannot be filtered; to provide for this, procedures that are considered equivalent to filtering through a 0.45-micrometer membrane filter will be identified and announced at a later date.

Dissolved-solids concentration of water is determined either analytically or 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 of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity 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. Diversity index values range from zero, when all the organisms in the samples are the same; to some positive number, when some or all the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the Earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water, together with all tributary surface streams and bodies of impounded surface water.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to the National Geodetic Vertical Datum of 1929. This elevation is established by a system of levels from known bench marks or by approximation from topographic maps.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ( $\text{CaCO}_3$ ).

Hydrologic Benchmark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

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

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

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

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

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually 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.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This development 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-pupa-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic 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 liter (UG/L,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

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

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called Sea Level Datum of 1929 or mean sea level in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 408 sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting that the data may be used for, (2) to describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) to detect changes in trends with time in the pattern occurrence of water-quality characteristics, and (4) to provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

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.

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

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

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

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

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a five-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

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

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

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024-0.004	Sedimentation
Silt.....	0.004-0.062	Sedimentation
Sand.....	0.062-2.0	Sedimentation or sieve
Gravel.....	2.0-64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material 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.

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, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, the periphyton 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. Insecticides and herbicides, which control insects and plants, respectively, are the two categories reported.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

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

Plankton are suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

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

Blue-green algae are phytoplankton organisms having a blue pigment in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

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.

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often 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.

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.

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 carbon assimilated by plants (carbon method) or the amount of oxygen released (oxygen method).

Milligrams of carbon per area or volume per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$  for periphyton and macrophytes and  $\text{mg C}/(\text{m}^3/\text{time})$  for phytoplankton] are the units for expressing primary productivity. They define 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 in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [ $\text{mg O}_2/(\text{m}^2/\text{time})$  for periphyton and macrophytes and  $\text{mg O}_2/(\text{m}^3/\text{time})$  for phytoplankton] are the units for expressing primary productivity. They define 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.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from 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; thus, the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bedload is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bedload is considered to consist of particles in transit within 0.25 ft (0.076 m) of the streambed.

Bedload discharge (tons per day) is the quantity of sediment, as measured by dry weight, that moves past a section as bedload in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

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 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period.

Suspended-sediment discharge (tons per day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment load (tons per day) is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge or total-sediment load (tons per day) is the sum of suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry mass, that passes a section in a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating dissolved-solids concentration in water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 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.

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

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." 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.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which 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 taken. 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.

Surface area of a lake is the area, in square miles or acres, outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter. In localities not covered by topographic maps, the areas are computed from the best maps available. Areas shown are for the lake stage at the time the map was made.

Surficial bed material is the part (upper 0.1 to 0.2 ft or 0.03 to 0.06 m) of the bed material that is sampled by 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. The water-sediment mixture is associated with (or sorbed on) 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 water-suspended 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; 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 would be 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 analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended 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. A 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 analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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

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

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or a digital mechanism that records water temperature in a digital format on punched paper tape.

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 that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total load (tons) is the total amount of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the milligrams per liter of the constituent, times the factor 0.0027, times the number of days.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment 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; 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, equivalent digestion procedures would be required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Total is the total amount of a given constituent in a representative water-suspended sediment 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 the dissolved and suspended phases of the sample. A knowledge of the expected form 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 determines all the constituent in the sample.)

Turbidity of a sample is the reduction of transparency due to the presence of particulate matter. In this report it is expressed in Nephelometric turbidity units (NTU), obtained from the Nephelometric method for turbidity determination which measures the intensity of light scattered by suspended particles at 90° from the path of incident light source.

Water year in U.S. Geological Survey 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, 1992, is called the "1992 water year."

WDR is used as an abbreviation for "Water-Data Reports" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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.

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

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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, Map Distribution, Box 25286, MS 306, Denver Federal Center, Denver, CO 80225. Prepayment is required. Remittance should be sent by check or money order payable to U.S. Geological Survey, Department of the Interior. 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 "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 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 pages.
- 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 pages.
- 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 pages.
- 2-D2. Application of seismic-refraction techniques to hydrologic studies, by F.P. Haeni: USGS--TWRI Book 2, Chapter D2 1988. 86 pages.
- 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 pages.
- 2-E2. Borehole geophysics applied to ground-water investigations, by W. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. Application of drilling, coring, and sampling techniques to test holes and wells, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 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 pages.
- 3-A2. Measurement of peak discharge by slope-area method, by Tate Dalrymple and M.A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. Measurement of peak discharge at culverts by indirect methods, by G.L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. Measurement of peak discharge at width contractions by indirect methods, by H.F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. General procedure for gaging streams, by R.W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. Stage measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. Discharge measurements at gaging stations, by T.J. Buchanan and W.P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 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 pages.
- 3-A10. Discharge ratings at gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. Measurement of discharge by moving-boat method, by G.F. Smoot and C.E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. Fluorometric procedures for dye tracing, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. Computation of continuous records of streamflow, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. Use of flumes in measuring discharge, by F.A. Kilpatrick and V.R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. Computation of water-surface profiles in open channels, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. Measurement of discharge using tracers, by F.A. Kilpatrick and E.D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. Acoustic velocity meter systems, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

- 3-A18. Determination of stream reaeration coefficients by use of tracers, by F.A. Kilpatrick, R.E. Rathbun, N. Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. Levels of streamflow gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.
- 3-B1. Aquifer-test design, observation, and data analysis, by R.W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 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 pages.
- 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 pages.
- 3-B4. Regression modeling of ground-water flow, by R. L. Cooley and R. L. Naff: USGS--TWRI: Book 3, Chapter B4. 1990. 232 pages.
- 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 pages.
- 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 pages.
- 3-B7. Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow, by Eliezer J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. Fluvial sediment concepts, by H.P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. Field methods for measurement of fluvial sediment, by H.P. Guy and V.W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. Computation of fluvial sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. Some statistical tools in hydrology, by H.C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. Frequency curves, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. Low-flow investigations by H.C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. Storage analyses for water supply, by H.C. Riggs and C.H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. Regional analyses of streamflow characteristics, by H.C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. Computation of rate and volume of stream depletion by wells, by C.T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. Methods for determination of inorganic substances in water and fluvial sediments, edited by M.J. Fishman and L.C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 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 pages.
- 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 pages.
- 5-A4. Methods for collection and analysis of aquatic biological and microbiological samples, edited by L.J. Britton and P.E. Greason: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 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 pages.
- 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 pages.
- 5-C1. Laboratory theory and methods for sediment analysis, by H.P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 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. [variously paged]
- 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 pages.
- 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 pages.
- 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 pages.

- 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 pages.
- 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 pages.
- 8-A2. Installation and service manual for U.S. Geological Survey manometers, by J.D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 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 pages.

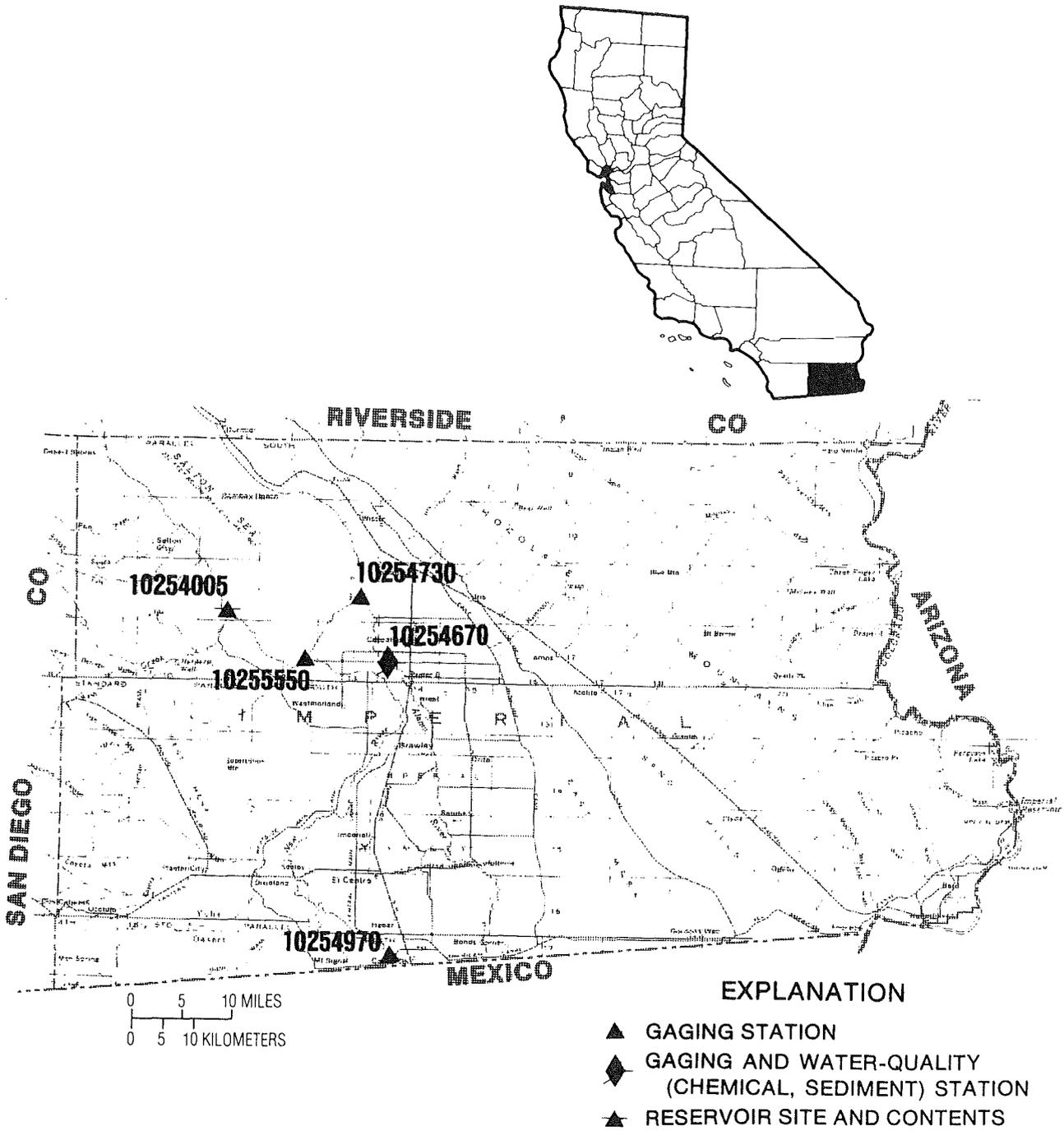


Figure 6. Location of discharge and water-quality stations in Imperial County.

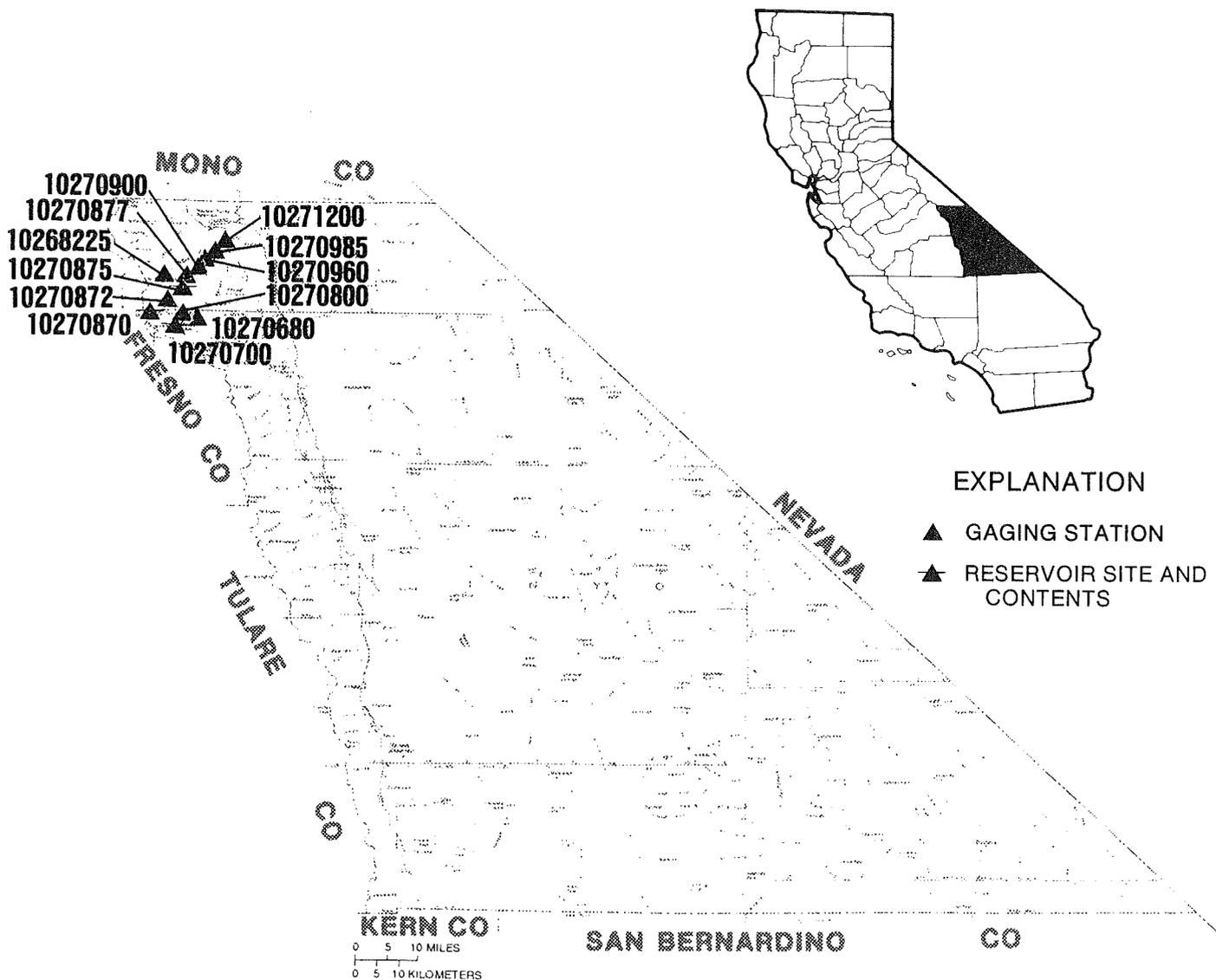


Figure 7. Location of discharge stations in Inyo County.

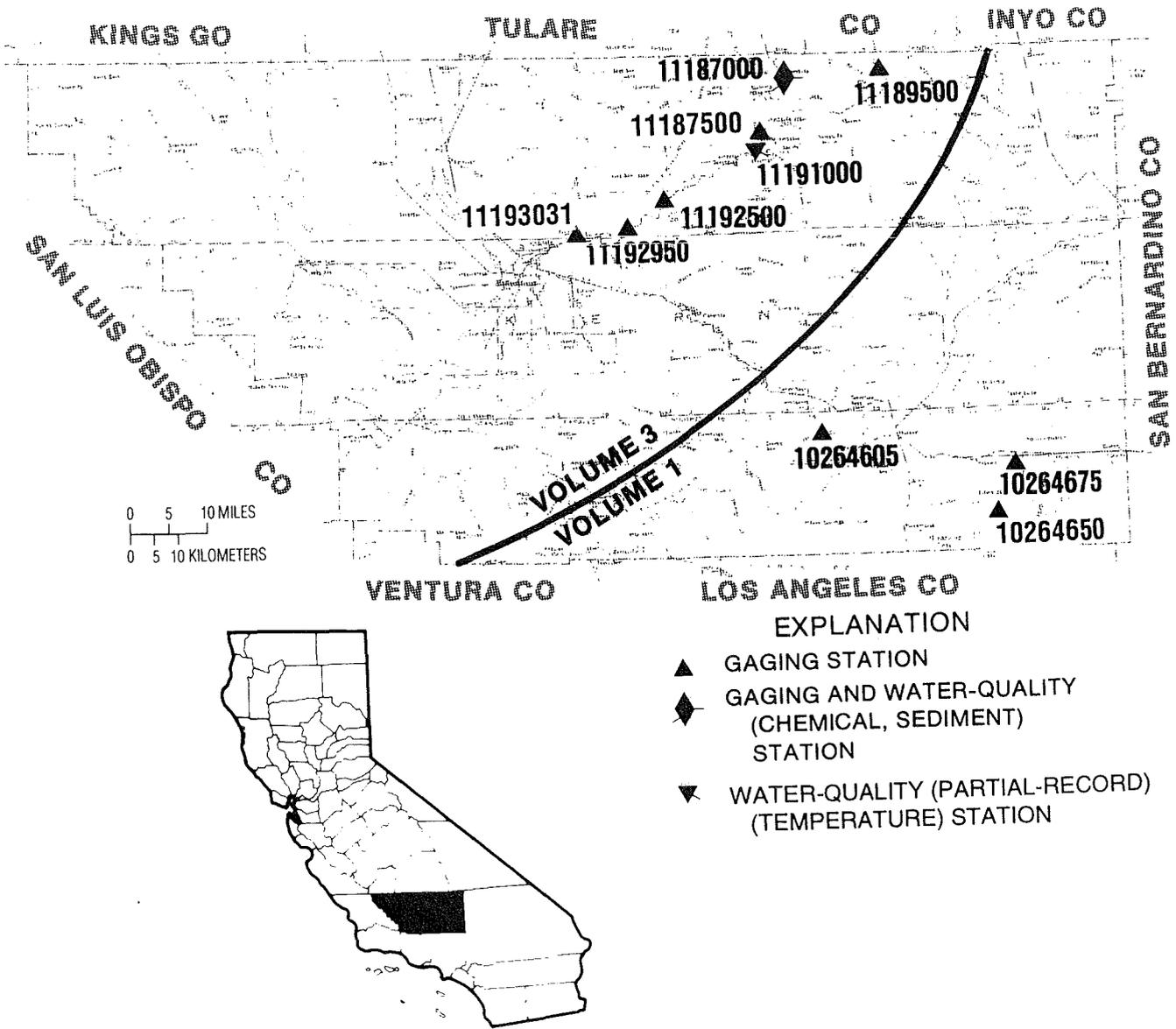


Figure 8. Location of discharge and water-quality stations in Kern County.  
 (NOTE: Records for stations 11187000 through 11193031 published in volume 3.)

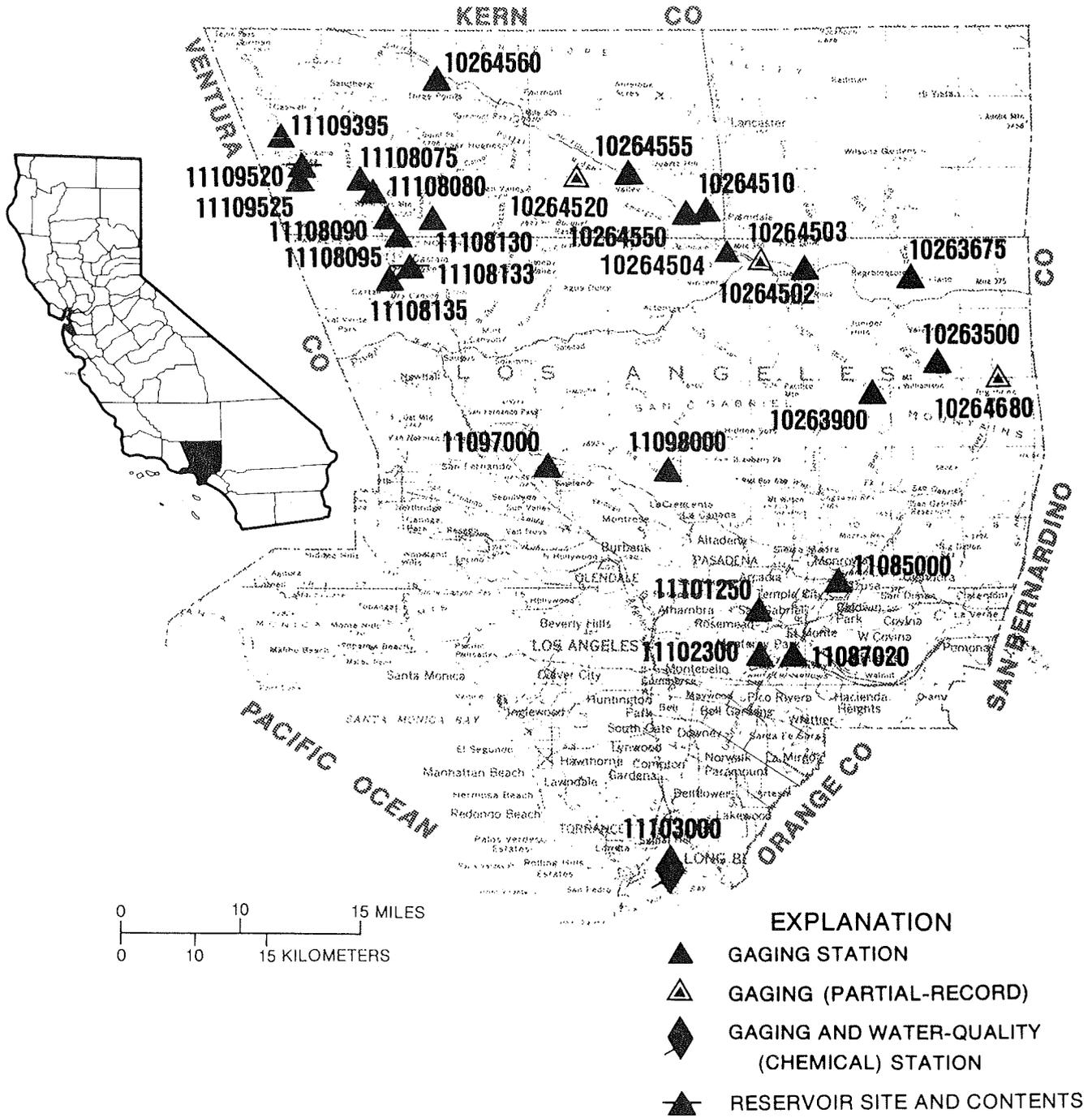


Figure 9. Location of discharge and water-quality stations in Los Angeles County.

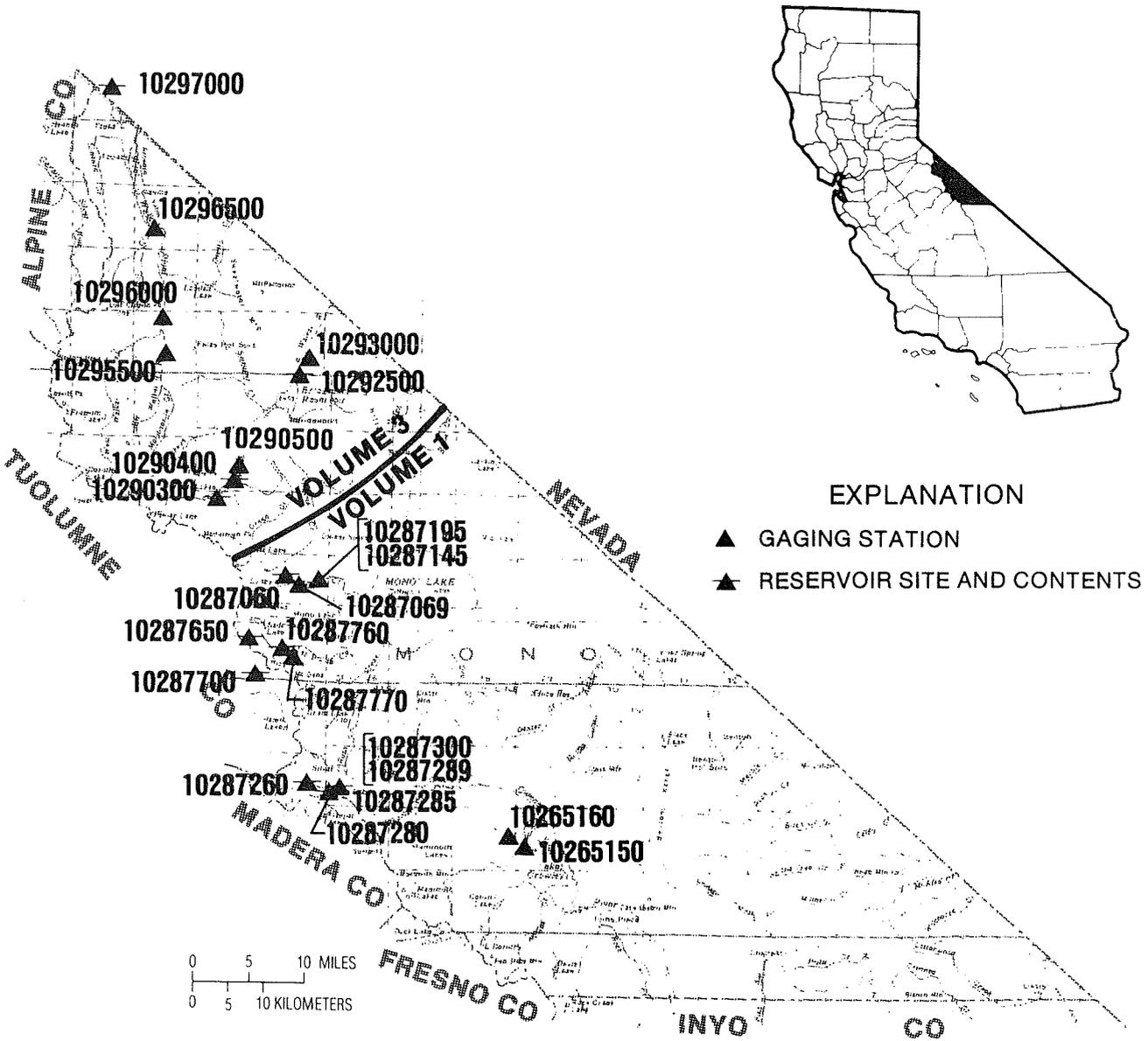


Figure 10. Location of discharge stations in Mono County.  
(NOTE: Records for stations 10290300 through 10297000 published in volume 3.)

EXPLANATION

- ▲ GAGING STATION
- ◆ GAGING AND WATER-QUALITY (SEDIMENT) STATION
- ▼ WATER-QUALITY (SEDIMENT) STATION

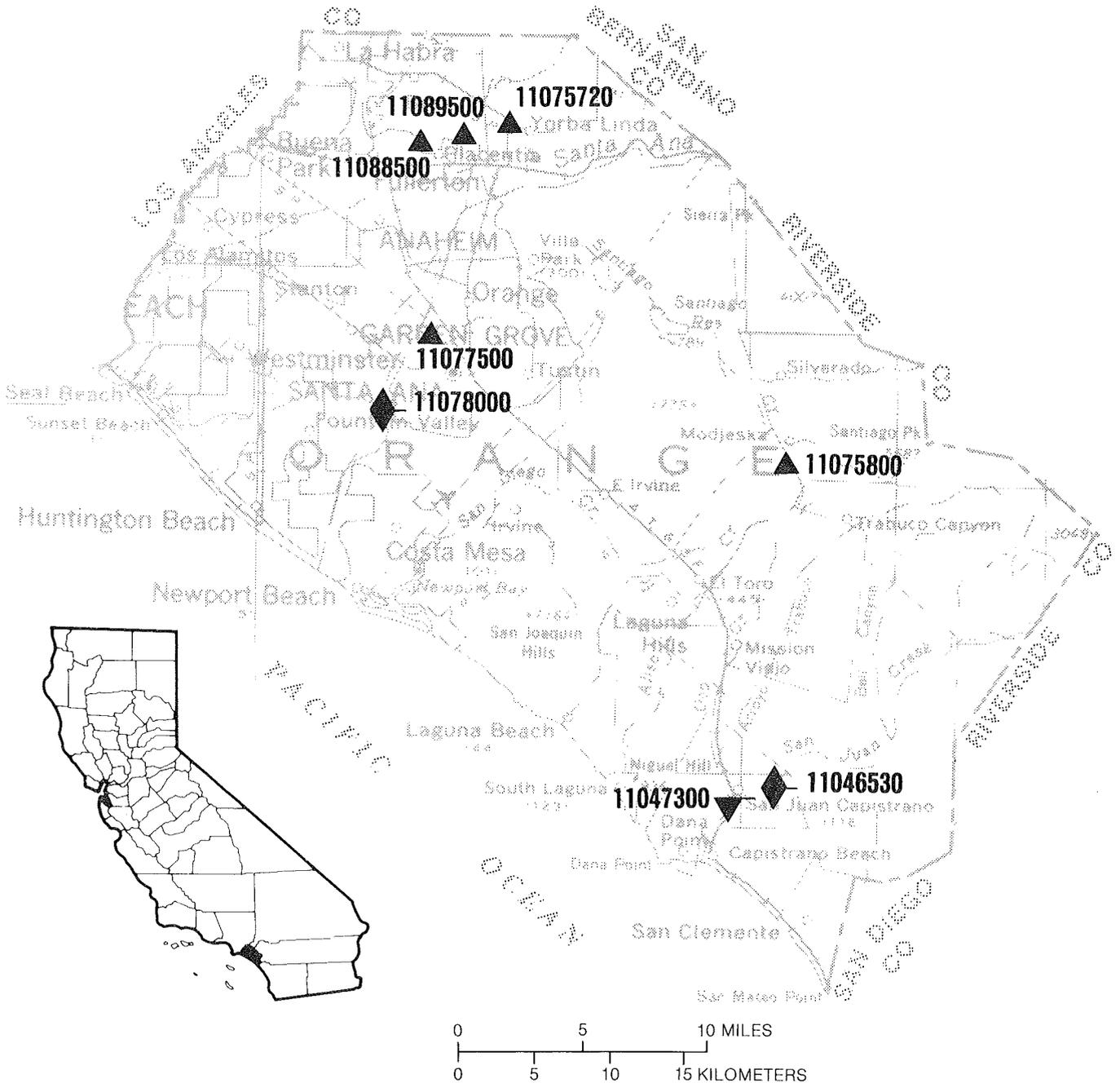


Figure 11. Location of discharge and water-quality stations in Orange County.

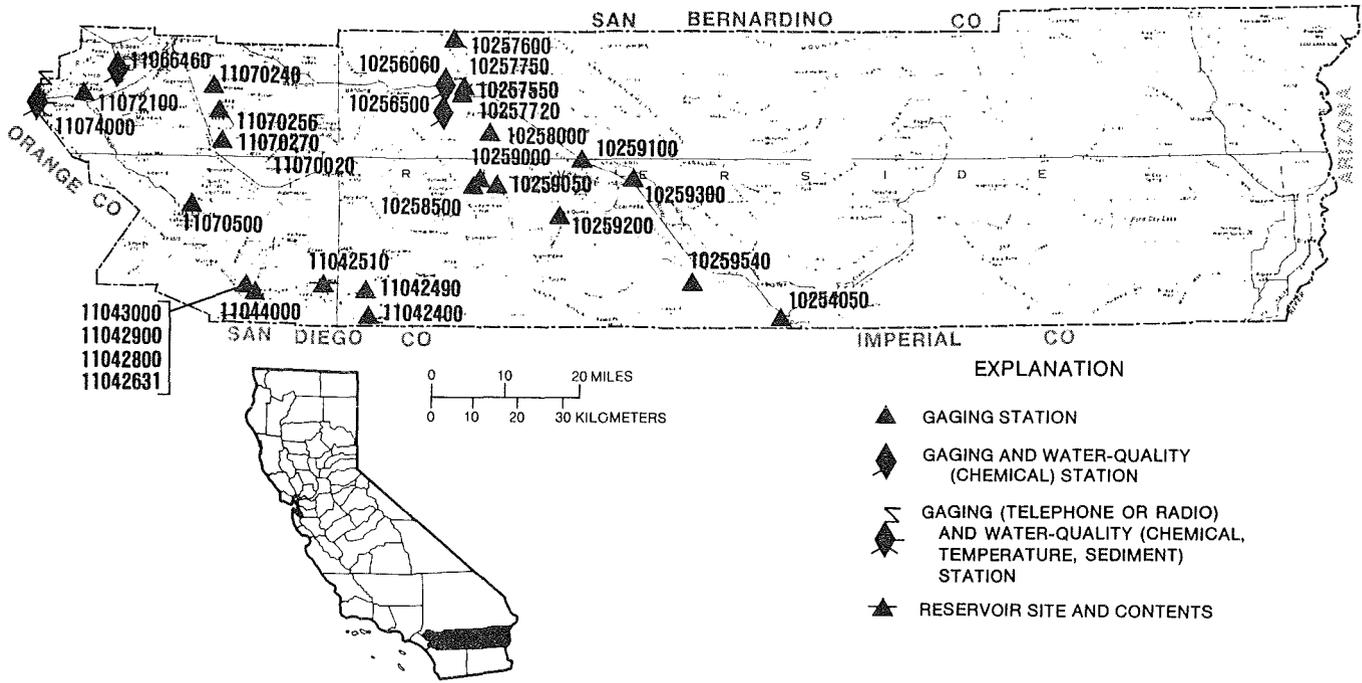


Figure 12. Location of discharge and water-quality stations in Riverside County.

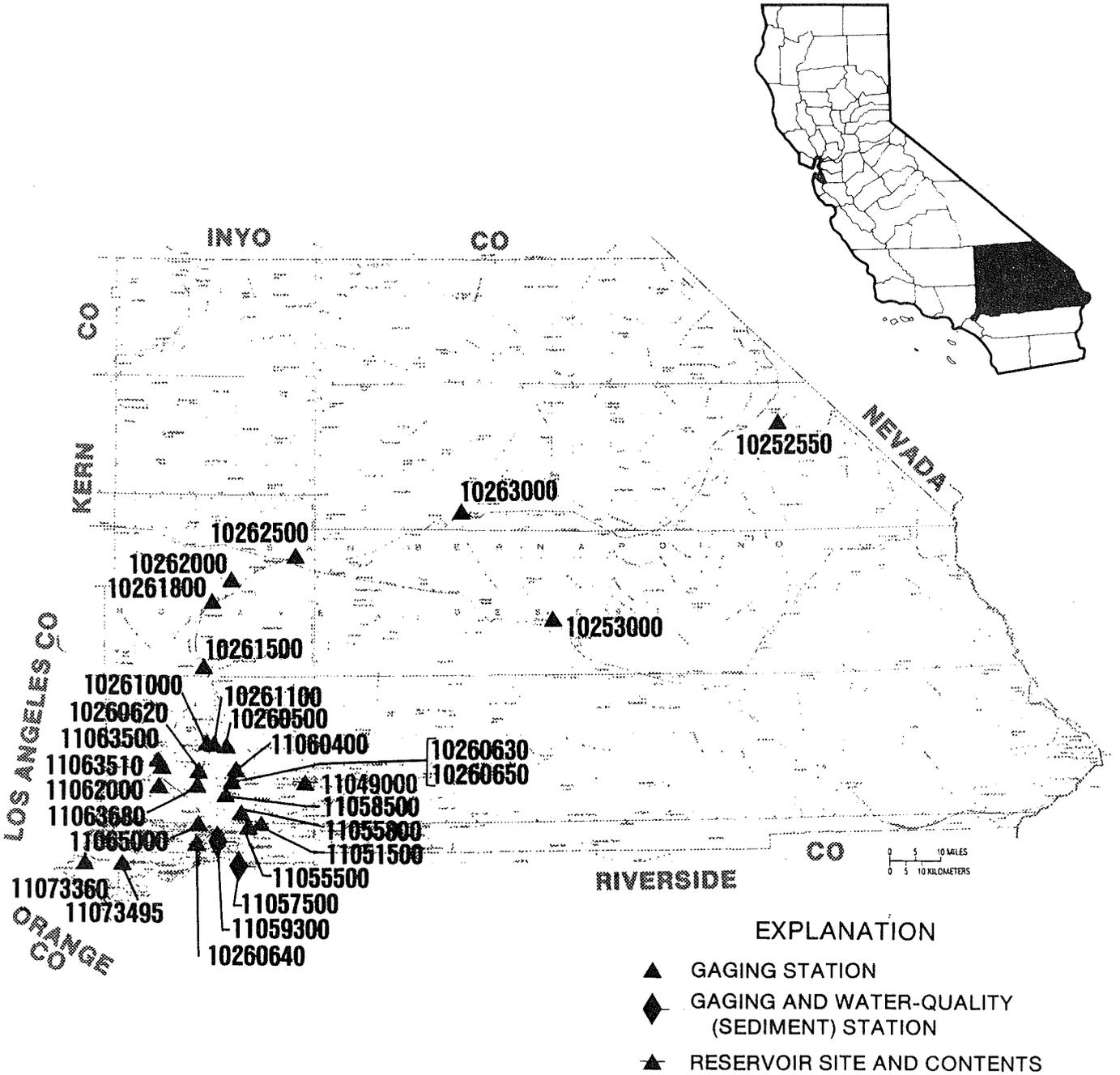


Figure 13. Location of discharge and water-quality stations in San Bernardino County.

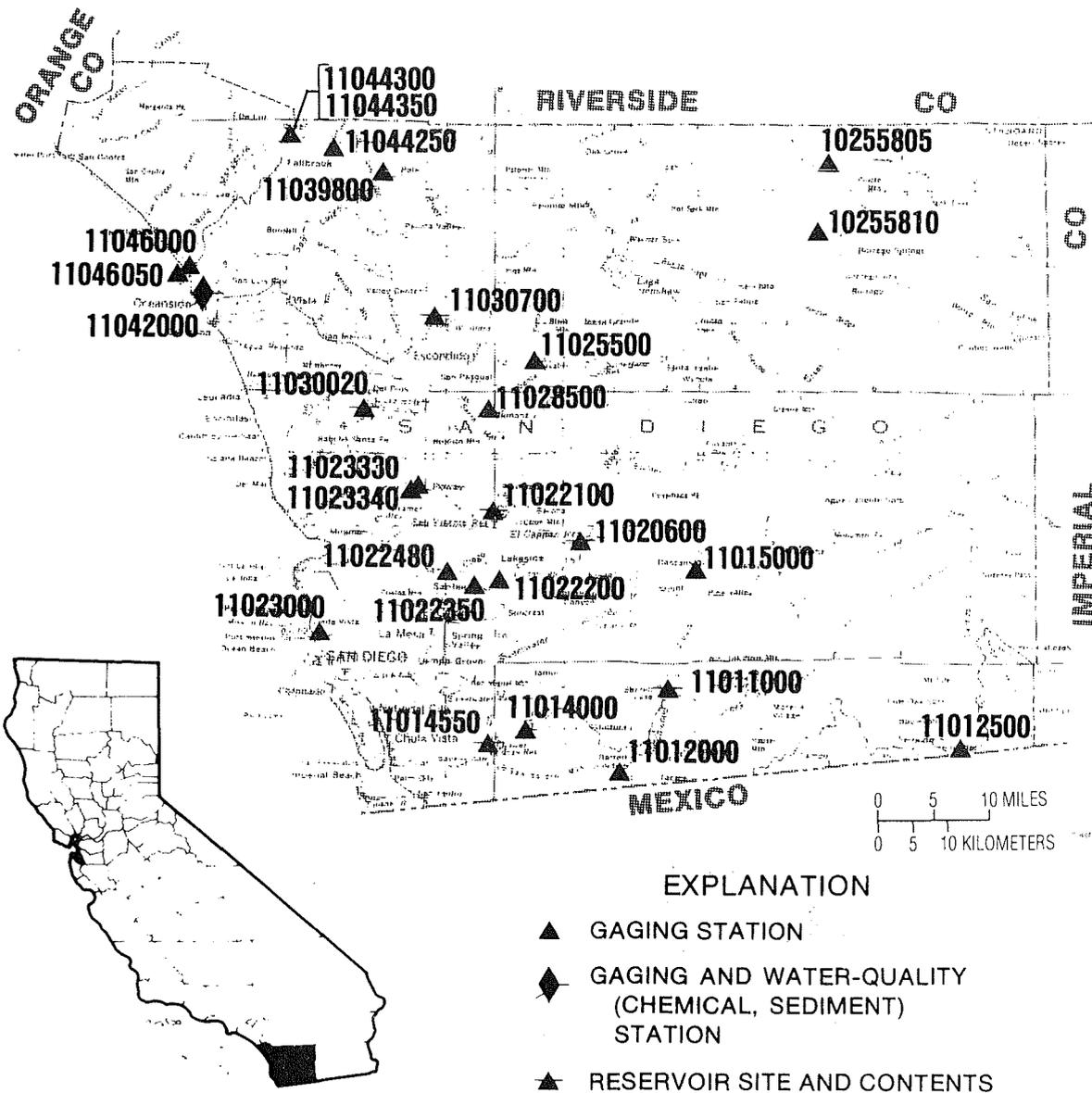


Figure 14. Location of discharge and water-quality stations in San Diego County.

### EXPLANATION

- ▲ GAGING STATION
- ◆ GAGING AND WATER-QUALITY (CHEMICAL) STATION
- ▲ RESERVOIR SITE AND CONTENTS

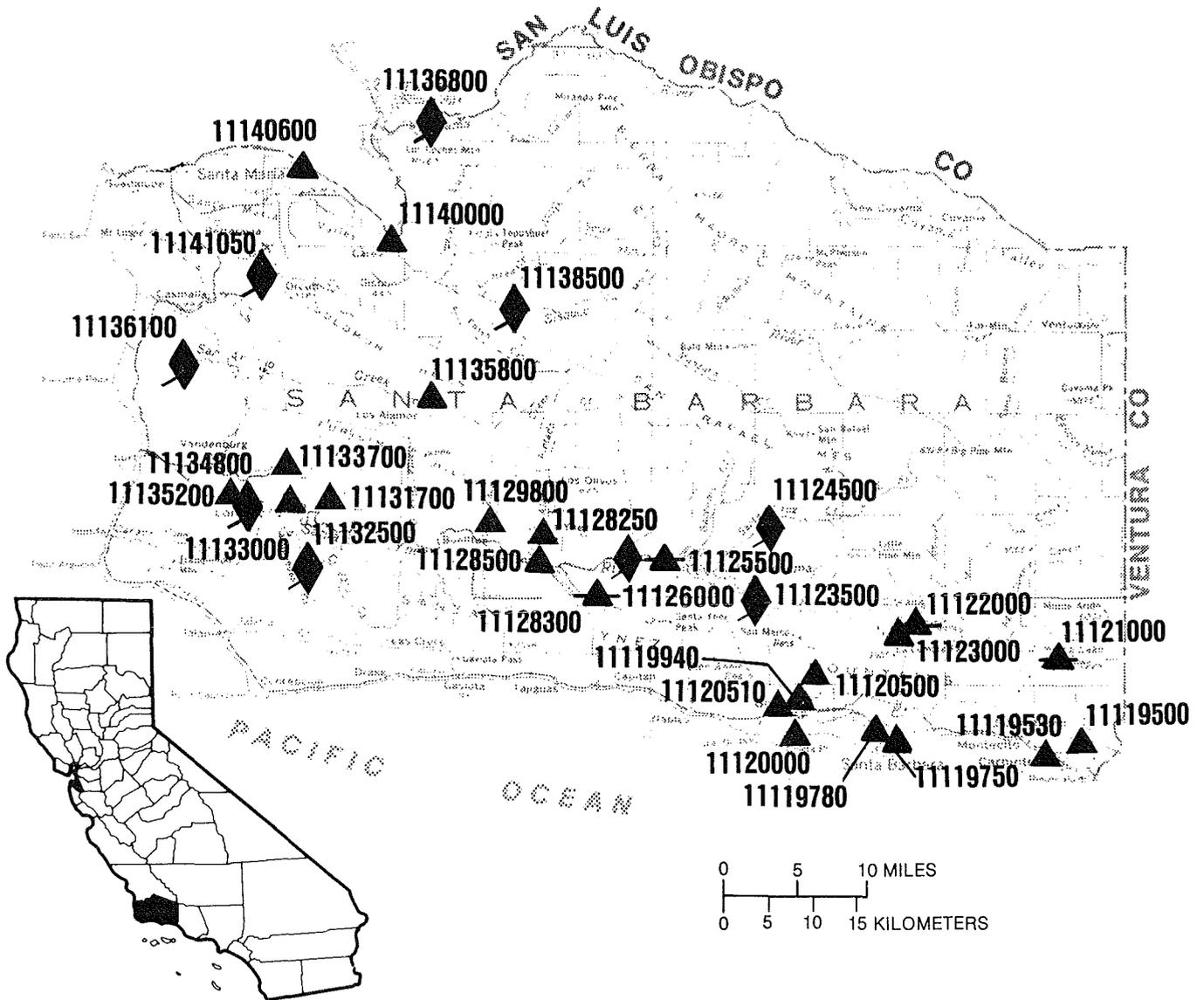


Figure 15. Location of discharge and water-quality stations in Santa Barbara County.

EXPLANATION

- ▲ GAGING STATION
- ◆ GAGING AND WATER-QUALITY (SEDIMENT) STATION
- ▲ RESERVOIR SITE AND CONTENTS

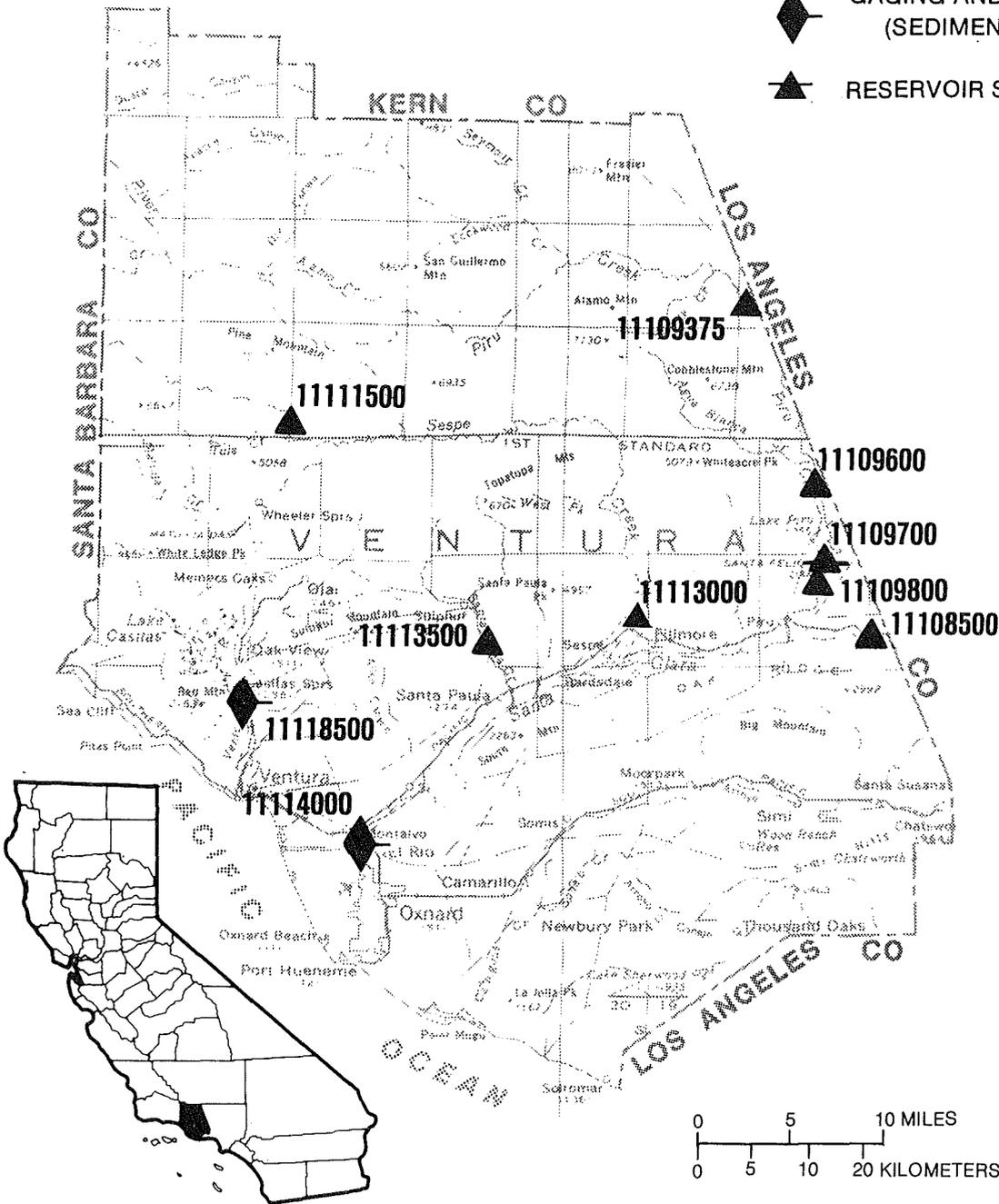
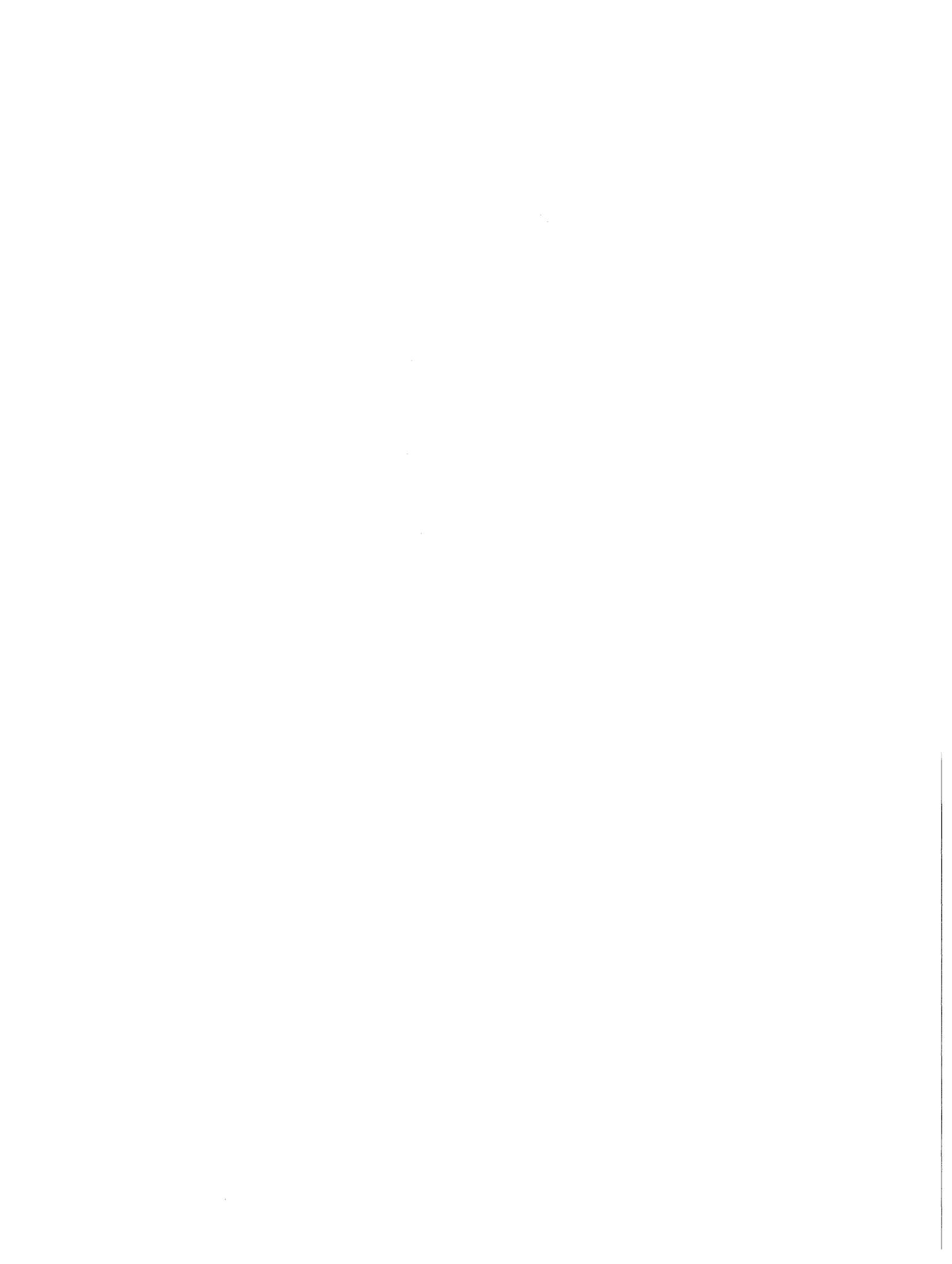


Figure 16. Location of discharge and water-quality stations in Ventura County.

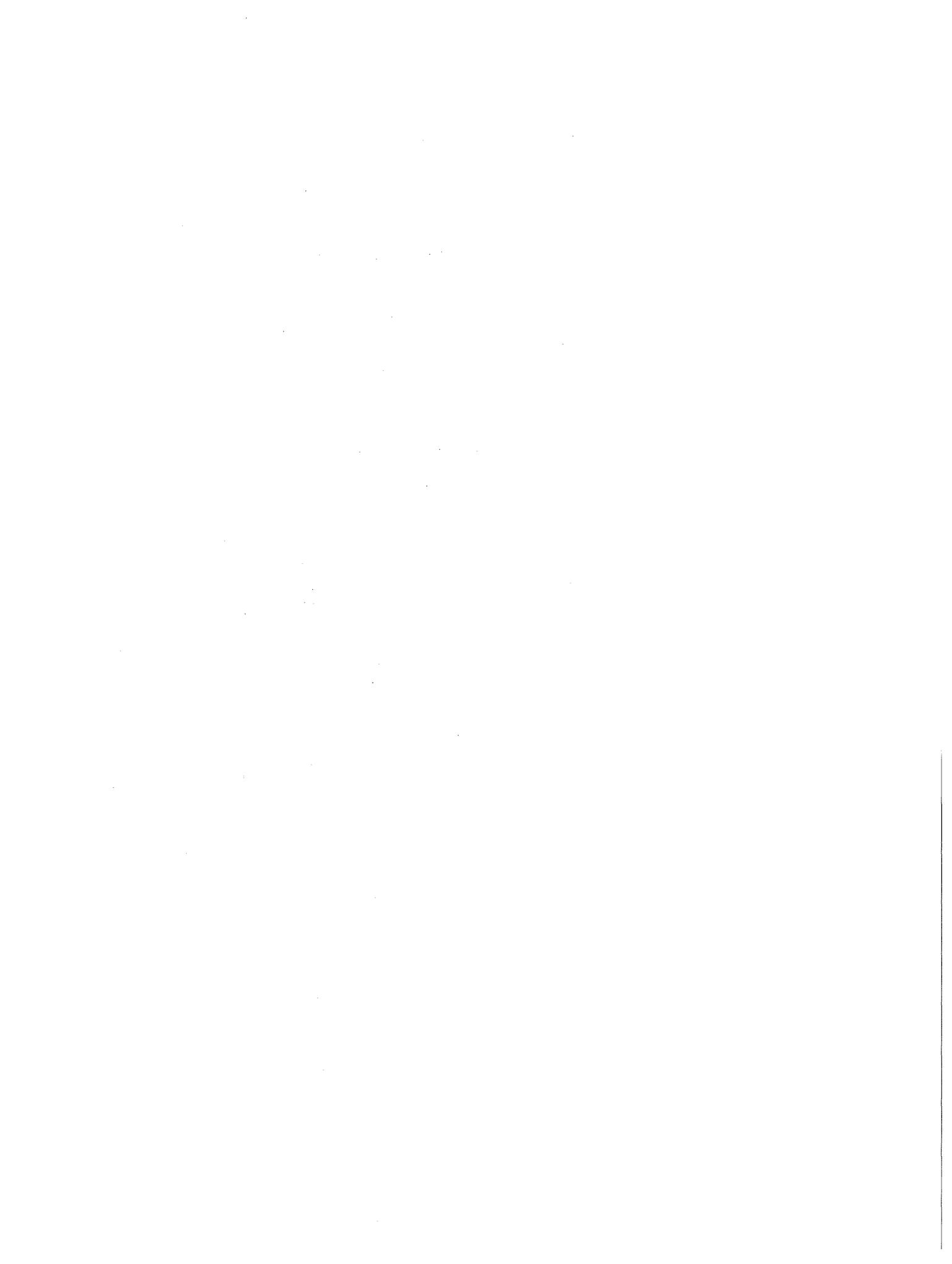


## GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
>	Actual value is greater than value shown
<	Actual value is less than value shown
K	Results based on colony count outside the acceptable 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)
&	Biological organism estimated as dominant
*	Instantaneous streamflow at the time of cross-sectional measurements
1	Laboratory value



BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA

LOCATION.--Lat 35°14'33", long 115°17'58", 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.--1.13 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR CA-82-1: 1979(M).

GAGE.--Water-stage recorder. Elevation of gage is 5,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 7	1300	26	1.92	Mar. 9	1800	15	1.66
Feb. 12	2300	26	1.92	Mar. 27	0400	*33	*2.06
Mar. 2	2000	24	1.88				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.8	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	6.5	.62	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	5.8	.24	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	2.7	.13	.00	.00	.00	.00	.00
5	.00	.00	.00	2.2	.00	1.9	.06	.00	.00	.00	.00	.00
6	.00	.00	.00	1.9	.05	1.2	.01	.00	.00	.00	.00	.00
7	.00	.00	.00	.72	11	1.9	.01	.00	.00	.00	.00	.00
8	.00	.00	.00	.44	1.4	3.4	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.29	.08	7.4	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.24	.47	4.1	.00	.00	.00	.00	.00	.00
11	.00	.00	.13	.24	.72	3.4	.00	.00	.00	.00	.00	.00
12	.00	.00	.04	.20	2.8	2.4	.00	.00	.00	.00	.00	.00
13	.00	.00	.01	.20	7.6	1.8	.00	.00	.00	.00	.00	.00
14	.00	.00	.01	.16	.52	1.1	.00	.00	.00	.00	.00	.00
15	.00	.00	.01	.13	.20	.72	.00	.00	.00	.00	.00	.00
16	.00	.04	.00	.11	.13	.44	.00	.00	.00	.00	.00	.00
17	.00	.01	.00	.11	.08	.29	.00	.00	.00	.00	.00	.00
18	.00	.01	.00	.08	.04	.29	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.06	.00	.34	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.04	.00	.77	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.02	.00	.83	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.02	.00	.95	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.02	.00	.72	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.01	.00	.38	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.01	.00	.34	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.01	.00	.44	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.01	.00	11	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.7	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	3.0	---	.00	---	.00	.00	---
TOTAL	0.00	0.06	0.20	7.22	25.09	69.21	2.87	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.002	.006	.23	.87	2.23	.096	.000	.000	.000	.000	.000
MAX	.00	.04	.13	2.2	11	11	1.8	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.1	.4	14	50	137	5.7	.00	.00	.00	.00	.00

## THE GREAT BASIN

## BRISTOL LAKE BASIN--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.10	.038	.12	.093	.17	.34	.067	.001	.002	.17	.29	.023
MAX	2.81	.67	1.27	.51	1.44	2.23	.95	.010	.054	2.45	2.70	.34
(WY)	1977	1966	1966	1985	1980	1992	1965	1983	1972	1984	1979	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1964	1964	1964	1964	1967	1964	1965	1964	1964	1964	1964

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1964 - 1992

ANNUAL TOTAL	81.74	104.65	
ANNUAL MEAN	.22	.29	.12
HIGHEST ANNUAL MEAN			.34 1979
LOWEST ANNUAL MEAN			.001 1964
HIGHEST DAILY MEAN	5.0 Mar 1	11 Feb 7	80 Aug 12 1979
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 11	.00 Oct 1	.00 Oct 1 1963
INSTANTANEOUS PEAK FLOW		33 Mar 27	814 Aug 12 1979
INSTANTANEOUS PEAK STAGE		2.06 Mar 27	5.75 Aug 12 1979
ANNUAL RUNOFF (AC-FT)	162	208	86
10 PERCENT EXCEEDS	.78	.44	.06
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

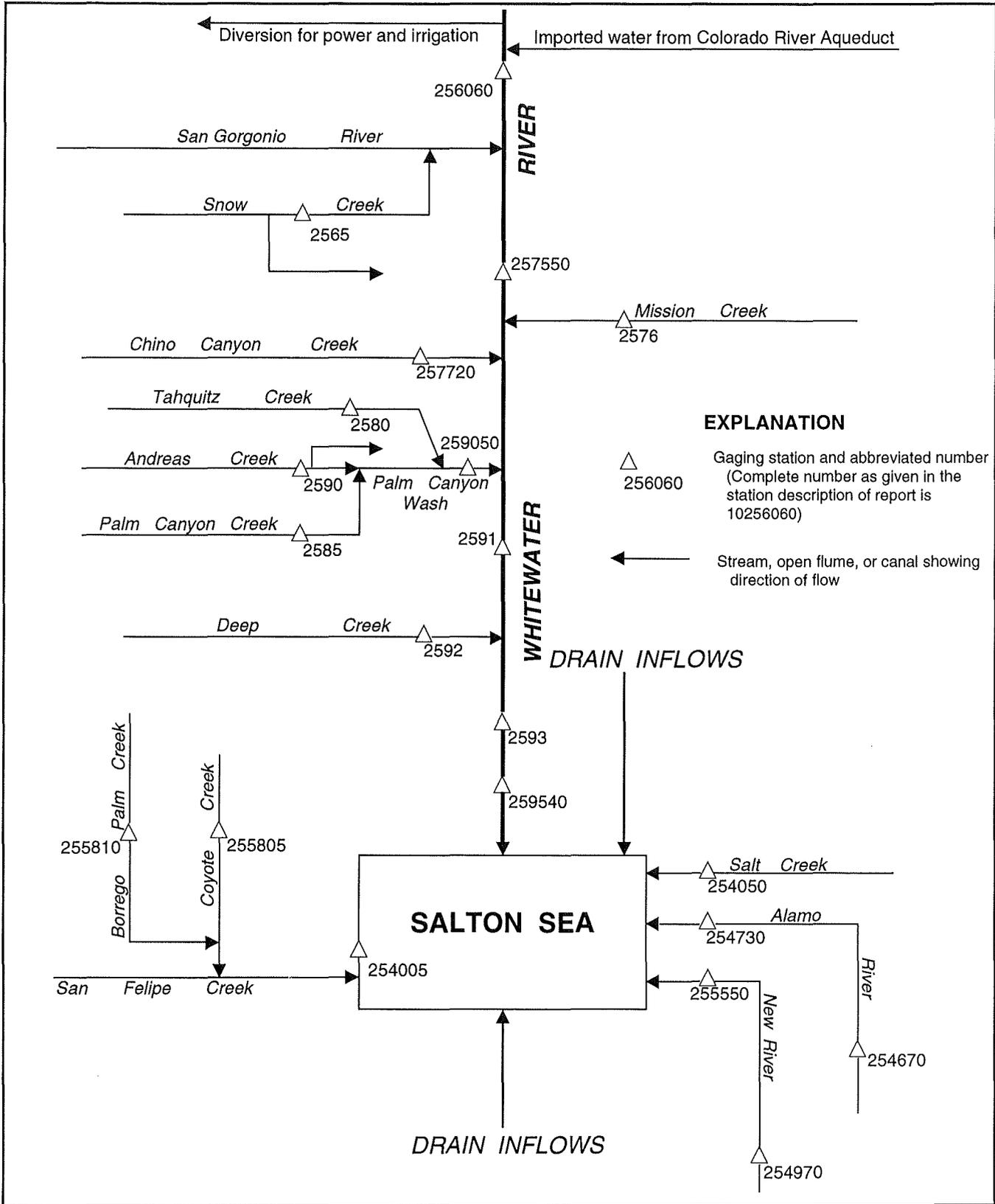


Figure 17. Diversions and storage in Salton Sea basin.



## FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY

The following table lists the monthly and annual flows, in acre-feet, of the Alamo River and New River (station 10254970) at the United States-Mexico international boundary. Data for Alamo River provided by Imperial Irrigation District.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Alamo River	121	130	151	154	178	217	194	164	137	127	118	96
New River	9450	9060	13310	11580	13240	16900	16770	13130	9190	8790	13180	9070
CAL YR 1991:	Alamo River		1,950 acre-ft			WTR YR 1992:		1,790 acre-ft				
CAL YR 1991:	New River		134,100 acre-ft			WTR YR 1992:		143,700 acre-ft				

## SALTON SEA BASIN

10254050 SALT CREEK NEAR MECCA, CA

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

DRAINAGE AREA.--269 mi<sup>2</sup>.

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

GAGE.--Water-stage recorder. Elevation of gage is 230 ft below National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 21, 1984, at same site, at datum 2.50 ft lowgr.

REMARKS.--No estimated daily discharges. Records fair, except those below 1 ft<sup>3</sup>/s which are poor. No regulation or diversion upstream from station. No discharge records computed above 20 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (January 1961 to September 1990), 9,900 ft<sup>3</sup>/s, Sept. 24, 1976, gage height, 16.8 ft, present datum, from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; maximum gage height, 19.4 ft, present datum, Mar. 2, 1983 (backwater from Salton Sea and channel vegetation); minimum daily discharge, 0.06 ft<sup>3</sup>/s, Nov. 1, 4, 5, 9, 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.1	3.2	4.5	4.4	5.1	9.0	1.7	1.0	.54	.62	.74
2	1.5	2.3	3.0	4.6	4.5	---	7.5	1.6	.98	.56	.63	.80
3	1.5	2.5	3.3	4.8	4.5	13	6.1	1.5	.96	.60	.63	.82
4	1.5	2.6	3.5	5.2	4.4	7.4	5.3	1.6	.95	.64	.61	.85
5	1.6	2.6	3.7	---	4.1	6.3	5.0	---	.91	.62	.58	.85
6	1.6	2.7	3.6	---	---	5.8	4.8	2.0	.88	.55	.58	.87
7	1.7	2.8	3.6	7.6	---	5.5	4.7	1.6	.91	.57	.55	.87
8	1.7	2.7	3.6	5.0	10	5.4	4.5	1.6	.96	.64	.52	.89
9	1.7	2.7	4.3	4.8	6.6	5.3	4.4	1.6	1.0	.58	.50	.90
10	1.6	2.8	---	4.4	5.9	5.0	4.3	1.6	1.0	.52	.51	.90
11	1.6	2.9	---	4.2	5.8	4.9	4.2	1.6	1.0	.48	.51	.91
12	1.7	2.9	8.5	4.2	---	4.6	4.1	1.7	.98	.50	.52	.92
13	1.8	2.7	4.9	4.0	---	4.6	4.0	1.7	.94	.54	.57	.93
14	1.8	2.7	4.3	3.7	---	4.6	3.9	1.6	.90	.55	.62	.93
15	1.8	2.8	4.2	3.9	---	4.6	3.9	1.5	.88	.57	.65	.91
16	1.8	2.7	4.1	4.0	---	4.5	3.8	1.4	.89	.56	.63	.91
17	1.8	2.7	4.1	4.0	8.2	4.5	3.8	1.3	.89	.54	.59	.93
18	1.8	2.9	4.2	4.1	7.0	4.5	3.7	1.3	.89	.52	.54	.95
19	1.9	2.9	4.3	4.2	6.5	4.4	3.5	1.3	.87	.48	.54	.97
20	1.8	2.7	4.5	4.2	6.2	5.0	2.8	1.0	.83	.44	.55	.99
21	1.8	2.7	4.3	4.3	5.9	7.6	2.7	1.0	.82	.44	.54	1.0
22	1.9	2.8	3.9	4.3	5.8	6.0	2.7	1.1	.81	.47	.56	1.1
23	2.0	2.9	4.0	4.4	5.7	4.9	2.7	1.5	.87	.50	.56	1.1
24	2.0	2.7	4.2	4.4	5.6	4.7	2.6	1.7	.82	.51	.58	1.1
25	2.0	2.9	4.3	4.4	5.3	4.5	2.5	1.7	.69	.52	.65	1.1
26	2.1	3.1	4.2	4.5	5.2	---	2.3	1.7	.55	.54	.68	1.1
27	2.1	3.1	4.2	4.7	5.1	---	2.1	1.4	.55	.54	.70	1.1
28	2.1	3.1	4.2	4.6	5.0	---	1.9	1.3	.59	.53	.69	1.1
29	2.0	3.1	4.3	4.5	5.1	7.1	1.8	1.1	.59	.52	.67	1.1
30	2.1	3.1	4.5	4.5	---	6.0	1.7	1.1	.54	.55	.68	1.1
31	2.1	---	4.7	4.4	---	5.8	---	1.1	---	.59	.67	---
TOTAL	55.9	83.2	---	---	---	---	116.3	---	25.45	16.71	18.43	28.74
MEAN	1.80	2.77	---	---	---	---	3.88	---	.85	.54	.59	.96
MAX	2.1	3.1	---	---	---	---	9.0	---	1.0	.64	.70	1.1
MIN	1.5	2.1	---	---	---	---	1.7	---	.54	.44	.50	.74
AC-FT	111	165	---	---	---	---	231	---	50	33	37	57

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	1983
LOWEST ANNUAL MEAN	2.57	1989
HIGHEST DAILY MEAN	2830	Mar 2 1983
LOWEST DAILY MEAN	.06	Nov 1 1978
ANNUAL SEVEN-DAY MINIMUM	.07	Oct 30 1978
INSTANTANEOUS PEAK FLOW	9900	Sep 24 1976
INSTANTANEOUS PEAK STAGE	16.80	Sep 24 1976
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  
(National stream-quality accounting network station)

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 (revised) of Calipatria.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year. Records prior to October 1979 in files of the Imperial Irrigation District.

GAGE.--Water-stage recorder and broad-crested weir. Elevation of gage is 185 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Flow is mainly return from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,980 ft<sup>3</sup>/s, Mar. 27, 1992, gage height, 6.56 ft, from rating curve extended above 1,000 ft<sup>3</sup>/s; maximum gage height, 7.06 ft, Oct. 10, 1986 (backwater from debris); minimum daily, 259 ft<sup>3</sup>/s, Jan. 2, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,980 ft<sup>3</sup>/s, Mar. 27, gage height, 6.56 ft; minimum daily, 269 ft<sup>3</sup>/s, Jan. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	898	901	833	364	689	790	491	1250	803	665	727	550
2	847	838	802	338	663	1100	550	1230	829	686	696	568
3	947	856	590	377	616	976	488	1320	840	720	661	573
4	934	780	537	425	591	647	430	1360	859	715	681	570
5	934	777	496	310	620	557	455	1350	852	737	677	606
6	970	762	479	373	663	515	477	1360	790	691	651	571
7	920	789	466	307	811	540	541	1150	789	646	696	560
8	908	737	667	290	622	573	616	1020	743	698	722	532
9	933	798	672	277	523	505	701	932	728	686	703	497
10	1030	787	830	269	468	439	789	882	745	656	655	561
11	941	807	962	288	437	479	943	826	796	628	678	596
12	996	712	513	290	430	496	1050	865	716	645	672	631
13	929	683	421	276	498	555	1120	905	708	700	684	631
14	857	703	407	283	421	650	1020	921	675	692	691	633
15	871	711	375	324	409	743	1050	919	660	742	643	625
16	923	671	345	383	409	878	1070	915	727	716	646	609
17	941	647	351	402	342	867	1080	890	787	748	606	635
18	913	658	373	402	360	851	1150	926	824	702	622	661
19	888	630	359	432	368	909	1130	891	725	724	608	682
20	888	620	326	449	402	874	1140	836	733	674	619	674
21	821	675	331	593	403	954	1130	831	762	657	647	681
22	819	743	330	591	463	969	1140	850	728	634	648	681
23	796	713	323	591	505	855	1260	914	720	628	598	747
24	878	741	336	600	523	820	e1200	866	804	638	581	773
25	871	701	350	582	585	867	e1200	810	732	721	549	712
26	883	718	305	628	609	932	e1200	759	718	742	554	704
27	917	777	333	618	649	e4670	1200	719	688	701	508	677
28	804	779	352	605	734	e2340	1200	770	708	744	504	672
29	829	659	355	611	757	727	1180	791	680	727	516	679
30	836	814	354	646	---	483	1270	810	639	790	539	720
31	830	---	359	699	---	468	---	798	---	791	575	---
TOTAL	27752	22187	14532	13623	15570	28029	28271	29666	22508	21644	19557	19011
MEAN	895	740	469	439	537	904	942	957	750	698	631	634
MAX	1030	901	962	699	811	4670	1270	1360	859	791	727	773
MIN	796	620	305	269	342	439	430	719	639	628	504	497
AC-FT	55050	44010	28820	27020	30880	55600	56080	58840	44640	42930	38790	37710

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	776	660	537	509	607	796	934	824	663	658	695	714
MAX	895	809	666	627	718	904	1051	967	794	743	790	824
(WY)	1992	1991	1991	1983	1991	1992	1980	1991	1991	1991	1979	1980
MIN	655	569	379	394	445	697	812	706	515	556	593	631
(WY)	1982	1982	1986	1985	1980	1987	1986	1982	1982	1982	1982	1986

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992	
ANNUAL TOTAL	272903		262350			
ANNUAL MEAN	748		717		697	
HIGHEST ANNUAL MEAN					769	
LOWEST ANNUAL MEAN					628	
HIGHEST DAILY MEAN	1110	May 5	4670	Mar 27	4670	Mar 27 1992
LOWEST DAILY MEAN	305	Dec 26	269	Jan 10	259	Jan 2 1985
ANNUAL SEVEN-DAY MINIMUM	329	Dec 20	282	Jan 8	277	Dec 31 1984
INSTANTANEOUS PEAK FLOW			5980	Mar 27	5980	Mar 27 1992
INSTANTANEOUS PEAK STAGE			6.56	Mar 27	7.06	Oct 10 1986
ANNUAL RUNOFF (AC-FT)	541300		520400		505100	
10 PERCENT EXCEEDS	991		956		911	
50 PERCENT EXCEEDS	754		696		685	
90 PERCENT EXCEEDS	438		402		498	

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969-70, 1975-1977, 1979 to current year.

CHEMICAL DATA: Water years 1969-70, 1975-77, 1979 to current year.

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 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1981 to September 1984.

WATER TEMPERATURE: March 1981 to September 1984.

INSTRUMENTATION.--Water-quality monitor from March 1981 to September 1984.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
DEC 18...	0845	369	5470	8.1	15.0	39	766	9.6	96	1400	1800
MAR 24...	0930	783	3130	7.9	18.0	130	770	8.6	91	1400	13000
JUN 24...	0800	775	3480	7.9	28.0	88	759	6.4	83	K1500	1100
SEP 09...	0915	496	4080	8.1	26.0	63	764	7.1	88	K1400	2200

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)
DEC 18...	1300	1000	270	150	740	55	9	12	359	0	294
MAR 24...	710	500	150	80	400	55	7	11	254	0	208
JUN 24...	770	530	160	89	450	56	7	11	298	0	244
SEP 09...	1000	770	200	120	550	54	8	11	273	0	224

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
DEC 18...	1200	990	1.1	12	3700	3600	5.03	0.250	0.250	10.0
MAR 24...	720	470	0.30	10	2060	2010	2.80	0.760	0.720	7.80
JUN 24...	740	470	0.70	12	2290	2110	3.11	0.900	0.820	5.80
SEP 09...	940	650	0.60	12	2700	2660	3.67	0.360	0.350	7.20

SALTON SEA BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
DEC 18...	9.80	0.290	0.280	1.1	0.250	0.130	0.130	0.120	10	100
MAR 24...	7.80	1.40	1.40	3.2	1.30	0.750	0.710	0.680	<10	<100
JUN 24...	5.70	0.480	0.510	1.9	0.610	0.300	0.280	0.270	<10	<100
SEP 09...	7.40	0.640	0.630	1.5	0.160	0.110	0.140	0.130	<10	<100

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
DEC 18...	<1	<10	230	60	18	2	10	<1.0	4800	26
MAR 24...	<1	<10	140	20	13	2	7	<1.0	2900	16
JUN 24...	1	10	160	10	12	2	7	<1.0	3100	<1
SEP 09...	1	<10	170	10	17	2	8	<1.0	3500	20

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM HG)	OXYGEN, DIS- SOLVED (PER- CENT OF SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR											
24...*	0830	6.90	11.0	3160	7.9	18.5	770	8.6	92	737	91
24...*	0835	7.40	23.0	3160	7.9	18.5	770	8.6	92	673	88
24...*	0840	10.1	33.0	3130	7.9	18.5	770	8.6	92	823	73
24...*	0850	6.90	43.0	3170	7.9	18.0	770	8.6	91	713	82
24...*	0855	6.00	55.0	3180	7.9	18.5	770	8.5	91	848	91
SEP											
09...*	0815	8.00	14.0	4030	8.0	26.0	764	6.6	82	115	96
09...*	0835	7.50	23.0	4060	8.0	26.0	764	7.0	87	129	96
09...*	0840	7.20	32.0	4060	8.0	26.0	764	7.0	87	181	96
09...*	0850	7.30	42.0	4080	8.0	26.0	764	7.1	101	179	95
09...*	0855	7.40	52.0	4090	8.0	26.0	764	6.9	86	172	88

\* Instantaneous streamflow at the time of cross-sectional measurement: Mar. 24, 783 ft<sup>3</sup>/s, Sept. 09, 496 ft<sup>3</sup>/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
18...	0845	369	15.0	203	202	84
MAR						
24...	0845	783	18.5	759	1600	85
24...	0930	783	18.0	886	1870	63
JUN						
24...	0800	775	28.0	391	818	84
SEP						
09...	0845	496	26.0	155	208	94
09...	0915	496	26.0	171	229	94

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.--Water-stage recorder. Elevation of gage is 220 ft below National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1986, at site 0.4 mi downstream at different datum.

REMARKS.--Records fair. Discharge mainly represents seepage and return flow from irrigated areas.

COOPERATION.--Gage-height record provided by Imperial Irrigation District for the following dates: July 15 to Sept. 30.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,160 ft<sup>3</sup>/s, Mar. 27; minimum daily, 319 ft<sup>3</sup>/s, Jan. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	908	e849	425	779	842	740	1350	850	902	759	534
2	1040	897	846	398	720	1090	796	1290	845	885	730	552
3	1200	879	610	438	668	1300	720	1320	858	777	696	600
4	e1190	858	491	477	594	820	675	1410	881	744	731	587
5	1120	841	440	e368	623	674	686	1440	906	781	724	612
6	1230	856	417	e359	689	629	699	1470	906	729	710	569
7	1060	849	407	362	833	643	723	1360	867	773	710	564
8	984	825	685	358	687	705	793	1100	804	786	731	534
9	1040	841	756	344	551	614	903	933	755	812	710	495
10	1150	833	854	339	473	541	964	903	742	798	676	540
11	1040	888	1150	347	460	578	1060	858	797	822	710	600
12	1140	825	591	e345	e442	581	1180	893	758	861	710	631
13	1040	781	436	319	e484	615	1250	920	778	939	724	644
14	908	e781	422	321	502	701	1220	948	794	e900	730	637
15	883	803	400	351	507	841	1180	937	743	795	703	625
16	967	766	355	392	509	979	1210	913	734	788	696	631
17	981	738	375	403	432	969	1160	866	725	795	631	645
18	977	759	399	403	436	945	1180	868	762	773	644	696
19	942	738	e406	433	436	991	1160	899	707	781	637	731
20	927	690	e368	449	462	1020	1140	912	708	795	644	752
21	821	766	e354	576	472	1130	1150	855	794	703	663	717
22	858	849	353	634	512	1100	1180	877	896	699	696	773
23	869	833	342	635	579	1020	1240	839	823	699	637	803
24	914	825	353	677	576	980	1220	816	874	670	606	872
25	946	803	366	630	621	987	1180	845	853	745	587	803
26	932	777	341	647	661	1010	1250	827	858	803	593	773
27	978	835	361	657	724	2160	1270	822	874	759	552	752
28	833	e795	397	666	781	1970	1290	853	909	773	546	752
29	862	e703	411	679	814	1160	1260	874	948	759	534	766
30	882	e833	415	712	---	810	1310	884	882	788	e563	833
31	808	---	396	780	---	720	---	876	---	795	e563	---
TOTAL	30672	24375	15346	14924	17027	29125	31789	30958	24631	24429	20546	20023
MEAN	989	812	495	481	587	940	1060	999	821	788	663	667
MAX	1230	908	1150	780	833	2160	1310	1470	948	939	759	872
MIN	808	690	341	319	432	541	675	816	707	670	534	495
AC-FT	60840	48350	30440	29600	33770	57770	63050	61410	48860	48450	40750	39720

e Estimated.

10254730 ALAMO RIVER NEAR NILAND, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	954	761	640	640	774	963	1079	953	809	814	839	908
MAX	1159	851	792	834	970	1144	1272	1182	981	1027	1278	1271
(WY)	1964	1991	1973	1972	1964	1963	1980	1975	1963	1963	1977	1962
MIN	742	616	416	396	575	734	797	684	646	636	656	667
(WY)	1986	1966	1986	1978	1986	1987	1965	1964	1964	1985	1986	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	304542		283845			
ANNUAL MEAN	834		776		845	
HIGHEST ANNUAL MEAN					991	
LOWEST ANNUAL MEAN					680	
HIGHEST DAILY MEAN	1320	May 5	2160	Mar 27	4500	Aug 17 1977
LOWEST DAILY MEAN	341	Dec 26	319	Jan 13	288	Jan 2 1966
ANNUAL SEVEN-DAY MINIMUM	353	Dec 21	338	Jan 9	323	Dec 27 1965
ANNUAL RUNOFF (AC-FT)	604100		563000		611900	
10 PERCENT EXCEEDS	1150		1140		1110	
50 PERCENT EXCEEDS	833		773		833	
90 PERCENT EXCEEDS	466		430		603	

## 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 1974-81.

WATER TEMPERATURE: Water years 1974-81.

SEDIMENT DATA: Water years 1975-85.

GAGE.--Water-stage recorder. Elevation of gage is 35 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records excellent. Discharge represents seepage and return flow from irrigated areas.

COOPERATION.--Gage-height record provided by Imperial Irrigation District for the following dates: Feb. 16-25.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 833 ft<sup>3</sup>/s, Dec. 9, 1982, gage height, 14.73 ft; minimum daily, 130 ft<sup>3</sup>/s, Nov. 29, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 655 ft<sup>3</sup>/s, Mar. 26, gage height, 13.30 ft; minimum daily, 133 ft<sup>3</sup>/s, Nov. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	163	144	185	176	158	452	229	153	140	156	188
2	177	157	147	195	181	243	429	228	153	137	164	185
3	169	156	155	256	215	222	420	223	157	134	177	180
4	162	153	150	241	259	264	399	232	165	134	195	171
5	159	159	147	244	282	296	386	240	172	135	205	166
6	159	156	146	235	311	297	376	248	168	135	237	169
7	172	155	152	204	315	280	358	259	156	138	258	168
8	169	157	153	195	323	273	330	253	146	143	258	169
9	161	158	157	202	305	284	292	242	155	142	242	155
10	153	177	273	221	299	301	262	227	151	140	233	144
11	138	159	216	213	303	310	249	216	164	143	228	142
12	139	174	225	195	299	320	248	232	174	142	221	141
13	144	176	276	184	283	300	252	251	174	137	233	140
14	146	164	293	187	243	269	236	252	176	147	228	141
15	146	151	293	181	230	247	233	248	157	147	228	147
16	144	143	288	189	220	246	226	231	144	140	210	148
17	144	140	286	178	217	246	231	214	149	135	197	151
18	148	143	267	174	218	244	231	203	152	134	193	171
19	148	144	280	177	224	244	232	198	154	136	204	159
20	148	142	295	164	224	241	255	193	151	145	197	144
21	147	140	272	156	208	218	257	194	148	159	181	144
22	148	145	261	154	192	200	244	191	148	157	187	141
23	148	147	258	166	175	189	240	183	154	147	210	140
24	147	148	225	159	167	205	236	187	157	142	209	139
25	148	155	220	157	160	204	227	195	151	142	225	136
26	148	153	208	157	158	274	221	199	142	140	241	136
27	155	147	201	159	166	347	225	196	139	146	267	137
28	150	137	183	168	165	334	232	179	142	149	251	139
29	152	133	179	183	159	390	240	170	141	150	221	141
30	152	136	180	181	---	437	237	157	138	157	202	139
31	162	---	181	180	---	436	---	151	---	157	186	---
TOTAL	4762	4568	6711	5840	6677	8519	8456	6621	4631	4430	6644	4571
MEAN	154	152	216	188	230	275	282	214	154	143	214	152
MAX	179	177	295	256	323	437	452	259	176	159	267	188
MIN	138	133	144	154	158	158	221	151	138	134	156	136
AC-FT	9450	9060	13310	11580	13240	16900	16770	13130	9190	8790	13180	9070

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	248	235	270	270	276	288	305	277	234	255	300	269
MAX	370	333	374	366	375	395	452	389	321	394	441	399
(WY)	1984	1985	1987	1987	1987	1986	1986	1984	1984	1984	1984	1983
MIN	154	152	167	187	179	193	190	177	154	143	184	152
(WY)	1992	1992	1980	1980	1991	1991	1991	1990	1992	1992	1991	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1980 - 1992	
ANNUAL TOTAL	67622		72430			
ANNUAL MEAN	185		198		269	
HIGHEST ANNUAL MEAN					362	
LOWEST ANNUAL MEAN					186	
HIGHEST DAILY MEAN	307	Jan 7	452	Apr 1	735	Dec 9 1982
LOWEST DAILY MEAN	133	Nov 29	133	Nov 29	130	Nov 29 1982
ANNUAL SEVEN-DAY MINIMUM	142	Nov 16	136	Jun 30	136	Jun 30 1992
INSTANTANEOUS PEAK FLOW			655	Mar 26	833	Dec 9 1982
INSTANTANEOUS PEAK STAGE			13.30	Mar 26	14.73	Dec 9 1982
ANNUAL RUNOFF (AC-FT)	134100		143700		195000	
10 PERCENT EXCEEDS	220		280		380	
50 PERCENT EXCEEDS	181		177		253	
90 PERCENT EXCEEDS	152		142		169	

## 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 September 1960 (monthly discharge only, published in WSP 1734), October 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 220 ft below National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records excellent. Discharge mainly represents seepage and return flow from irrigated areas.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,090 ft<sup>3</sup>/s, Mar. 27; minimum daily, 410 ft<sup>3</sup>/s, Dec. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	565	561	527	414	520	565	698	769	590	488	568	530
2	559	573	502	414	539	614	738	769	608	491	553	532
3	566	584	454	431	537	679	710	762	590	489	531	541
4	558	514	441	448	554	617	698	811	586	512	543	539
5	576	504	437	465	553	545	686	851	590	544	582	534
6	595	520	429	448	585	549	714	844	583	549	585	555
7	583	485	461	433	644	583	725	851	593	541	601	529
8	551	499	480	419	668	610	751	865	565	527	615	524
9	571	525	469	422	600	602	752	781	580	545	628	518
10	614	528	517	457	549	597	750	760	642	562	618	517
11	564	515	758	464	533	590	732	700	608	530	619	497
12	563	547	685	478	519	611	760	695	586	511	616	505
13	542	520	505	465	538	628	785	690	583	521	618	497
14	551	518	476	455	513	642	787	672	578	514	620	487
15	526	512	481	437	501	662	777	688	589	526	605	491
16	548	498	482	445	474	665	770	695	585	564	614	503
17	527	490	487	441	466	658	737	681	542	546	577	513
18	537	472	516	503	457	672	779	661	527	532	553	514
19	577	481	511	530	437	686	752	662	524	520	542	538
20	560	477	481	515	478	724	775	660	538	531	551	573
21	535	479	480	530	489	744	765	658	535	546	557	579
22	544	477	495	510	502	719	788	652	526	514	586	533
23	562	478	474	515	513	688	820	610	525	533	540	554
24	543	503	458	529	522	695	816	592	521	526	524	568
25	591	506	447	523	512	664	826	598	524	532	567	567
26	599	523	420	518	501	722	798	624	533	554	533	536
27	585	545	431	505	525	1090	786	608	524	544	547	531
28	547	514	433	520	545	902	784	634	535	565	580	538
29	518	465	430	548	547	784	772	624	525	519	590	549
30	520	508	410	546	---	648	768	644	500	526	571	527
31	541	---	412	536	---	645	---	621	---	549	541	---
TOTAL	17318	15321	14989	14864	15321	20800	22799	21732	16835	16451	17875	15919
MEAN	559	511	484	479	528	671	760	701	561	531	577	531
MAX	614	584	758	548	668	1090	826	865	642	565	628	579
MIN	518	465	410	414	437	545	686	592	500	488	524	487
AC-FT	34350	30390	29730	29480	30390	41260	45220	43110	33390	32630	35460	31580

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1992, BY WATER YEAR (WY)

MEAN	645	567	547	561	597	666	714	650	582	589	608	619
MAX	837	760	707	795	789	810	879	853	763	808	913	807
(WY)	1953	1954	1963	1944	1944	1954	1986	1953	1953	1979	1977	1963
MIN	471	408	386	387	458	516	541	485	435	442	460	486
(WY)	1978	1965	1968	1978	1965	1965	1965	1964	1964	1964	1964	1970

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1943 - 1992	
ANNUAL TOTAL	211141		210224			
ANNUAL MEAN	578		574		611	
HIGHEST ANNUAL MEAN					741	
LOWEST ANNUAL MEAN					484	
HIGHEST DAILY MEAN	1070	Aug 2	1090	Mar 27	3000	Aug 17 1977
LOWEST DAILY MEAN	410	Dec 30	410	Dec 30	150	Mar 7 1945
ANNUAL SEVEN-DAY MINIMUM	426	Dec 25	421	Dec 27	284	Mar 4 1945
ANNUAL RUNOFF (AC-FT)	418800		417000		442900	
10 PERCENT EXCEEDS	685		740		755	
50 PERCENT EXCEEDS	564		545		601	
90 PERCENT EXCEEDS	500		474		479	

## 10255805 COYOTE CREEK BELOW BOX CANYON, NEAR BORREGO SPRINGS, CA

LOCATION.--Lat 33°21'54", long 116°24'57", in SW 1/4 NW 1/4 sec.25, T.9 S., R.5 E., San Diego County, Hydrologic Unit 18100200, in Anza-Borrego Desert State Park, on right bank 0.9 mi downstream from Box Canyon, 1.4 mi northwest of Rancho De Anza, and 7.8 mi northwest of Borrego Springs.

DRAINAGE AREA.--154 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to current year. Published as Coyote Creek near Borrego Springs (station 10255800) water years 1984-86. Records for Coyote Creek near Borrego Springs prior to October 1983 not equivalent because of difference in drainage areas.

GAGE.--Water-stage recorder. Elevation of gage is 1,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Stage-discharge relation undefined above 4.0 ft<sup>3</sup>/s. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67 ft<sup>3</sup>/s, Feb. 15, 1986, gage height, 2.39 ft; maximum gage height, 4.48 ft, Aug. 10, 1991; minimum daily, 0.02 ft<sup>3</sup>/s, July 28, 29, 1992.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 14	1245	*3.1	*4.04				

Minimum daily, 0.02 ft<sup>3</sup>/s, July 28, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.80	.75	.86	1.5	2.4	1.3	.34	.10	.22	.04	e.09
2	.13	.81	.76	.86	1.5	2.4	1.2	.32	.12	.13	e.05	e.08
3	.12	.79	.79	.86	1.5	1.9	1.1	.30	.13	.14	e.05	e.08
4	.46	.75	.78	.85	1.6	2.0	1.0	.30	.11	.13	e.05	.08
5	.63	.72	.77	.90	1.5	2.1	1.0	.36	.10	.13	e.05	.08
6	.63	.69	.79	.98	1.9	1.9	1.2	.32	.13	.11	e.05	.07
7	.70	.68	.72	e.97	1.9	1.7	1.3	.22	.12	.18	e.06	.08
8	.71	.72	.70	e.96	1.6	1.7	1.6	.20	.11	.06	e.06	.07
9	.75	.75	.68	e.95	1.6	1.8	1.7	.18	.13	.05	e.06	.07
10	.79	.71	.72	e.94	1.6	1.9	1.6	.17	.12	.04	e.06	.07
11	.78	.67	.70	e.94	1.6	2.0	1.6	.16	.11	e.04	e.06	.07
12	.74	.78	.68	e.93	1.9	2.0	1.5	.12	.28	e.04	e.06	.06
13	.78	.74	.66	e.93	1.4	2.1	1.5	.15	.30	e.04	e.06	.06
14	.78	.68	.67	e.92	1.3	2.3	1.4	.13	.32	e.04	e.07	.06
15	.77	.73	.76	e.92	1.5	2.2	1.2	.15	.32	e.04	e.07	.06
16	.77	.79	.76	1.1	.99	2.4	1.2	.13	.29	e.03	e.07	.05
17	.78	.83	.76	1.2	1.2	2.1	1.0	.16	.28	e.03	e.07	.06
18	.90	.76	.73	1.2	1.4	1.9	.99	.14	.24	e.03	e.07	.05
19	.85	.63	.75	1.3	1.5	1.9	1.4	.17	.21	e.03	e.07	.06
20	.71	.60	.80	1.3	1.6	1.8	1.1	.15	.18	e.03	e.07	.06
21	.92	.73	.79	1.3	1.8	1.8	1.1	.16	.17	e.03	e.08	.06
22	.97	.84	.78	1.3	1.9	1.7	.90	.18	.26	.03	e.08	.06
23	.99	.80	.80	1.3	1.9	1.6	.83	.17	.21	.04	e.08	.05
24	1.0	.78	.78	1.2	1.9	1.6	.74	.16	.17	.04	e.08	.05
25	1.0	.80	.78	1.3	2.0	1.5	.75	.17	.17	.05	e.08	.06
26	.96	.77	.79	1.3	2.0	1.5	.70	.17	.17	.04	e.08	.06
27	.91	.74	.84	1.3	2.1	1.5	.64	.17	.16	.03	e.08	.05
28	.84	.80	.80	1.4	2.1	1.4	.58	.14	.18	.02	e.09	.05
29	.87	.82	.83	1.4	2.3	1.3	.71	.14	.19	.02	e.09	.06
30	.88	.81	.81	1.4	---	1.3	.42	.15	.21	.03	e.09	.05
31	.87	---	.84	1.4	---	1.2	---	.13	---	.04	e.09	---
TOTAL	23.24	22.52	23.57	34.47	48.59	56.9	33.26	5.91	5.59	1.91	2.12	1.91
MEAN	.75	.75	.76	1.11	1.68	1.84	1.11	.19	.19	.062	.068	.064
MAX	1.0	.84	.84	1.4	2.3	2.4	1.7	.36	.32	.22	.09	.09
MIN	.12	.60	.66	.85	.99	1.2	.42	.12	.10	.02	.04	.05
AC-FT	46	45	47	68	96	113	66	12	11	3.8	4.2	3.8

e Estimated.

## 10255805 COYOTE CREEK BELOW BOX CANYON, NEAR BORREGO SPRINGS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.80	3.11	3.41	3.18	3.28	2.95	2.19	1.77	1.51	1.67	1.63	1.93
MAX	5.64	5.91	7.40	5.24	5.81	4.89	5.11	3.76	3.14	4.98	5.11	4.19
(WY)	1985	1985	1986	1986	1985	1985	1985	1985	1985	1984	1984	1985
MIN	.40	.45	.60	.62	.67	.71	.89	.19	.19	.062	.068	.064
(WY)	1990	1990	1990	1990	1990	1990	1991	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1984 - 1992	
ANNUAL TOTAL	299.46		259.99			
ANNUAL MEAN	.82		.71		2.45	
HIGHEST ANNUAL MEAN					4.53	
LOWEST ANNUAL MEAN					.71	
HIGHEST DAILY MEAN	27	Mar 1	2.4	Mar 1	27	Mar 1 1991
LOWEST DAILY MEAN	.06	Jul 29	.02	Jul 28	.02	Jul 28 1992
ANNUAL SEVEN-DAY MINIMUM	.08	Jul 1	.03	Jul 16	.03	Jul 16 1992
INSTANTANEOUS PEAK FLOW			3.1	Mar 14	67	Feb 15 1986
INSTANTANEOUS PEAK STAGE			4.25	Apr 19	4.48	Aug 10 1991
ANNUAL RUNOFF (AC-FT)	594		516		1770	
10 PERCENT EXCEEDS	1.4		1.6		4.9	
50 PERCENT EXCEEDS	.73		.72		2.0	
90 PERCENT EXCEEDS	.13		.06		.42	

SALTON SEA BASIN

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA

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

DRAINAGE AREA.--21.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1950 to 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,640 ft<sup>3</sup>/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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 6	2330	*8.2	*3.02				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.80	.93	1.5	4.1	.37	.02	.00	.00	.00
2	.00	.00	.00	.75	.94	3.6	4.3	.34	.02	.00	.00	.00
3	.00	.00	.00	.80	.88	3.7	3.5	.33	.01	.00	.00	.00
4	.00	.00	.00	.94	.87	3.0	3.0	.32	.01	.00	.00	.00
5	.00	.00	.00	1.1	.86	2.6	2.8	.43	.00	.00	.00	.00
6	.00	.00	.00	2.4	2.3	2.2	2.7	.42	.00	.00	.00	.00
7	.00	.00	.00	1.8	5.1	2.2	2.5	.37	.00	.00	.00	.00
8	.00	.00	.08	1.7	3.0	2.3	2.1	.33	.00	.00	.00	.00
9	.00	.00	.42	1.3	2.3	2.1	1.9	.30	.00	.00	.00	.00
10	.00	.00	.61	1.0	2.1	1.9	1.7	.30	.00	.00	.00	.00
11	.00	.00	.62	.95	1.9	1.9	1.4	.32	.00	.00	.00	.00
12	.00	.00	.47	.87	1.9	1.8	1.1	.29	.00	.00	.00	.00
13	.00	.00	.44	.81	4.3	1.7	1.1	.24	.00	.00	.00	.00
14	.00	.00	.43	.80	4.1	1.7	1.0	.20	.00	.00	.00	.00
15	.00	.00	.43	.77	3.7	1.7	1.0	.19	.00	.00	.00	.00
16	.00	.00	.44	.79	4.4	1.7	.94	.17	.00	.00	.00	.00
17	.00	.00	.47	.81	3.9	1.7	.83	.17	.00	.00	.00	.00
18	.00	.00	.51	.81	3.2	1.7	.76	.16	.00	.00	.00	.00
19	.00	.00	.58	.81	2.7	1.7	.67	.15	.00	.00	.00	.00
20	.00	.00	.58	.83	2.3	2.1	.63	.15	.00	.00	.00	.00
21	.00	.00	.56	.84	2.1	3.1	.59	.17	.00	.00	.00	.00
22	.00	.00	.56	.84	2.0	2.6	.55	.21	.00	.00	.00	.00
23	.00	.00	.58	.84	1.8	2.9	.60	.25	.00	.00	.00	.00
24	.00	.00	.60	.87	1.7	2.7	.62	.21	.00	.00	.00	.00
25	.00	.00	.60	.89	1.7	2.4	.57	.20	.00	.00	.00	.00
26	.00	.00	.60	.91	1.6	2.5	.54	.17	.00	.00	.00	.00
27	.00	.00	.60	.92	1.6	3.8	.48	.16	.00	.00	.00	.00
28	.00	.00	.63	.91	1.5	4.3	.44	.10	.00	.00	.00	.00
29	.00	.00	.80	.91	1.5	3.8	.40	.04	.00	.00	.00	.00
30	.00	.00	1.1	.88	---	3.6	.37	.04	.00	.00	.00	.00
31	.00	---	.92	.88	---	3.3	---	.03	---	.00	.00	---
TOTAL	0.00	0.00	13.63	30.53	67.18	77.8	43.19	7.13	0.06	0.00	0.00	0.00
MEAN	.000	.000	.44	.98	2.32	2.51	1.44	.23	.002	.000	.000	.000
MAX	.00	.00	1.1	2.4	5.1	4.3	4.3	.43	.02	.00	.00	.00
MIN	.00	.00	.00	.75	.86	1.5	.37	.03	.00	.00	.00	.00
AC-FT	.00	.00	27	61	133	154	86	14	.1	.00	.00	.00

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.20	.36	.82	1.14	2.49	2.89	1.56	.67	.22	.22	.54	.17
MAX	2.83	2.97	5.29	4.55	32.5	29.3	11.2	7.55	3.96	4.46	10.6	3.27
(WY)	1984	1984	1984	1980	1980	1983	1980	1980	1980	1979	1979	1983
MIN	.000	.000	.000	.000	.030	.073	.007	.000	.000	.000	.000	.000
(WY)	1951	1951	1963	1972	1972	1972	1972	1961	1954	1952	1951	1951

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1951 - 1992	
ANNUAL TOTAL	302.48		239.52			
ANNUAL MEAN	.83		.65		.93	
HIGHEST ANNUAL MEAN					7.61	
LOWEST ANNUAL MEAN					.01	
HIGHEST DAILY MEAN	61	Mar 1	5.1	Feb 7	277	Aug 16 1979
LOWEST DAILY MEAN	.00	Jun 17	.00	Oct 1	.00	Oct 1 1950
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 17	.00	Oct 1	.00	Oct 1 1950
INSTANTANEOUS PEAK FLOW			8.2	Feb 6	2640	Aug 16 1979
INSTANTANEOUS PEAK STAGE			3.02	Feb 6	9.80	Aug 16 1979
ANNUAL RUNOFF (AC-FT)	600		475		676	
10 PERCENT EXCEEDS	1.6		2.2		2.0	
50 PERCENT EXCEEDS	.13		.00		.09	
90 PERCENT EXCEEDS	.00		.00		.00	

## SALTON SEA BASIN

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

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

DRAINAGE AREA.--59.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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.

GAGE.--Water-stage recorder and concrete rectangular weir. Elevation of gage is 1,360 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Indeterminate stage-discharge relationship. At times, imported water is released to the Whitewater River from the Colorado River Aqueduct at a point 0.75 mi upstream. Water is diverted out of the basin 16.5 mi upstream to powerplants in the San Geronio River basin and then to an area north of Banning for irrigation.

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

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Time	Discharge (ft <sup>3</sup> /s)	Date	Time	Discharge (ft <sup>3</sup> /s)
Oct. 29	0930	9.2	Mar. 18	0930	307
Dec. 3	1115	3.2	Mar. 26	1240	353
Jan. 3	0905	4.8	Apr. 1	0800	459
Jan. 23	1050	2.1	Apr. 1	0855	578
Feb. 6	0825	1.7	Apr. 20	1435	35
Feb. 12	0820	11	Apr. 29	1140	16
Mar. 5	1250	8.8	June 2	1200	6.0
Mar. 17	1035	392	July 8	0940	11
Mar. 17	1145	358	Aug. 20	1215	8.4

10256060 WHITEWATER RIVER AT WHITE WATER CUTOFF, AT WHITE WATER, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

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

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 03...	1215	3.2	415	8.7	17.0	190	--	56	13	16
APR 20...	1500	35	335	8.6	21.0	150	3	42	10	11

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
DEC 03...	15	0.5	4.8	--	--	<sup>1</sup> 189	46	4.6	0.90	16
APR 20...	14	0.4	3.7	164	5	142	30	2.1	1.0	14

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 03...	268	272	0.36	<0.010	0.400	<0.010	0.020	10	8	4
APR 20...	190	201	0.26	0.020	0.300	0.020	0.020	10	<3	3

10256500 SNOW CREEK NEAR WHITE WATER, CA

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

DRAINAGE AREA.--10.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR CA-89-1: Drainage area. WDR CA-90-1: 1980 Combined discharge.

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

REMARKS.--Records poor. No regulation upstream from station. Diversion 10 ft upstream, generally taking most of the base flow. For combined record of creek and diversion (station 10256501), see following page. 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.

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

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion).-- Maximum discharge, 13,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 13.8 ft, from floodmarks, site and datum then in use, from rating curve extended above 55 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft<sup>3</sup>/s, June 23-27, Sept. 5-11, 1961.

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

Date	Time	Creek only Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Combined creek and diversion Discharge (ft <sup>3</sup> /s)
Feb. 12	2145	*142	*3.73	*142

Creek only: Minimum daily, 2.2 ft<sup>3</sup>/s, July 28.

Combined creek and diversion: Minimum daily, 5.6 ft<sup>3</sup>/s, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.2	6.4	7.8	3.5	e11	22	18	7.7	3.5	6.7	6.2
2	2.9	3.1	4.3	7.5	3.5	e20	23	17	8.0	3.5	6.4	6.2
3	2.8	3.0	2.8	7.6	3.5	25	20	17	7.6	3.4	6.4	6.1
4	2.8	3.0	2.8	7.8	3.5	17	17	16	7.4	3.4	6.5	5.5
5	2.8	2.9	2.8	14	4.8	12	17	16	7.1	3.0	5.7	6.1
6	2.8	2.9	2.8	14	8.1	12	16	21	6.6	2.9	6.3	6.0
7	2.7	2.8	2.8	9.7	16	12	16	17	6.3	7.4	6.2	6.0
8	2.7	2.8	4.3	9.0	13	12	16	15	6.0	7.8	6.1	6.0
9	2.7	2.9	7.8	8.5	10	9.4	17	16	5.8	4.9	6.1	6.2
10	2.7	2.9	17	7.8	11	7.6	17	17	5.8	3.0	6.1	6.1
11	2.8	2.8	13	7.8	11	7.2	16	15	5.6	2.9	6.0	5.4
12	2.8	2.8	9.9	7.8	45	6.8	15	14	5.4	2.9	6.2	5.2
13	2.8	2.9	8.8	7.8	77	6.8	15	13	5.3	3.0	6.3	5.4
14	2.7	4.3	8.3	7.6	26	7.2	15	12	5.0	2.8	6.8	6.2
15	2.7	4.3	7.8	7.1	26	9.8	15	11	5.0	2.6	6.6	6.3
16	2.7	2.9	5.3	5.7	20	9.8	14	11	4.8	2.5	6.4	6.2
17	2.7	2.8	4.7	3.7	15	8.0	15	11	4.6	2.6	5.1	6.2
18	2.7	2.8	6.9	3.6	13	5.9	19	11	4.5	2.7	6.0	6.2
19	2.7	2.8	8.1	3.5	12	5.9	18	11	4.3	2.7	6.1	6.2
20	2.6	2.9	7.5	3.5	12	10	15	10	4.3	2.4	6.2	6.2
21	2.7	2.9	7.5	3.5	13	37	14	9.5	4.2	e2.4	6.2	6.2
22	2.9	2.8	7.5	3.5	13	25	15	11	4.1	2.5	6.2	6.4
23	2.9	2.8	7.5	3.5	14	39	17	12	4.1	2.7	6.1	6.5
24	2.8	2.8	7.5	3.5	10	30	17	13	4.2	4.1	6.5	6.4
25	4.0	2.8	7.5	3.5	9.1	23	18	12	4.0	6.6	6.4	6.2
26	6.2	2.8	4.8	3.5	9.8	21	20	11	3.4	6.5	6.3	6.2
27	11	2.7	4.4	3.5	10	27	21	9.2	3.6	e4.8	5.4	6.2
28	6.0	2.7	7.5	3.5	e10	27	20	8.8	3.5	e2.2	6.3	5.0
29	3.8	3.8	7.9	3.5	e10	24	19	8.6	3.6	e2.3	6.1	5.9
30	3.5	6.2	9.5	3.5	---	21	18	8.1	3.6	4.8	6.2	5.8
31	3.3	---	8.3	3.5	---	22	---	7.8	---	6.5	6.2	---
TOTAL	104.1	93.1	214.0	190.3	432.8	511.4	517	400.0	155.4	115.3	192.1	180.7
MEAN	3.36	3.10	6.90	6.14	14.9	16.5	17.2	12.9	5.18	3.72	6.20	6.02
MAX	11	6.2	17	14	77	39	23	21	8.0	7.8	6.8	6.5
MIN	2.6	2.7	2.8	3.5	3.5	5.9	14	7.8	3.4	2.2	5.1	5.0
AC-FT	206	185	424	377	858	1010	1030	793	308	229	381	358

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.39	1.76	3.73	11.2	34.8	15.9	11.1	10.8	6.36	3.84	3.50	2.93
MAX	4.14	3.10	6.90	43.7	173	41.0	21.0	27.0	17.6	10.8	6.20	6.02
(WY)	1980	1992	1992	1980	1980	1980	1980	1980	1980	1980	1992	1992
MIN	1.04	.84	1.24	2.78	3.38	3.79	3.22	1.94	.34	.000	.001	.17
(WY)	1990	1990	1990	1981	1991	1990	1989	1989	1989	1981	1981	1981

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992	
ANNUAL TOTAL	3321.9		3106.2			
ANNUAL MEAN	9.10		8.49		8.86	
HIGHEST ANNUAL MEAN					28.4	
LOWEST ANNUAL MEAN					2.21	
HIGHEST DAILY MEAN	109	Mar 1	77	Feb 13	537	Feb 18 1980
LOWEST DAILY MEAN	2.3	Feb 3	2.2	Jul 28	.00	Oct 5 1979
ANNUAL SEVEN-DAY MINIMUM	2.3	Feb 3	2.5	Jul 16	.00	Oct 5 1979
INSTANTANEOUS PEAK FLOW			142	Feb 12	1330	Jan 29 1980
INSTANTANEOUS PEAK STAGE			3.73	Feb 12	6.24	Jan 29 1980
ANNUAL RUNOFF (AC-FT)	6590		6160		6420	
10 PERCENT EXCEEDS	19		17		17	
50 PERCENT EXCEEDS	6.8		6.2		3.3	
90 PERCENT EXCEEDS	2.7		2.8		.45	

10256500 SNOW CREEK NEAR WHITE WATER, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
DEC 03...	1445	6.4	107	7.8	9.0	34	0	12	0.95	10	37
APR 21...	1545	16	72	7.8	14.5	24	--	8.3	0.71	6.1	34

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER WH IT FIELD MG/L AS CO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DEC 03...	0.7	2.0	--	64	--	0	--	52	1.5	2.3	0.20
APR 21...	0.5	1.6	44	--	0	--	36	--	1.0	1.2	<0.10

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 03...	19	68	83	0.09	0.010	0.670	0.020	0.030	<10	10	<1
APR 21...	17	52	58	0.07	<0.010	<0.050	0.080	0.010	<10	<3	<1

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

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SNOW CREEK  
AND DIVERSION, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	6.6	6.4	7.8	6.7	e11	22	18	11	8.2	6.7	6.2
2	6.4	6.4	6.4	7.5	6.7	e20	23	17	11	8.2	6.4	6.2
3	6.2	6.3	6.4	7.6	6.7	25	22	17	11	8.1	6.4	6.1
4	6.2	6.2	6.4	7.8	6.7	17	21	18	11	8.0	6.5	6.0
5	6.2	6.2	6.4	14	6.7	12	21	19	10	7.5	6.2	6.1
6	6.2	6.2	6.3	14	8.1	12	20	21	10	7.4	6.3	6.0
7	6.1	6.0	6.3	9.7	16	12	20	19	9.7	7.4	6.2	6.0
8	6.1	6.0	6.5	9.0	13	12	20	19	9.4	7.8	6.1	6.0
9	6.1	6.1	7.8	8.5	10	12	21	20	9.2	7.7	6.1	6.2
10	6.1	6.1	17	7.8	11	11	20	21	9.2	7.3	6.1	6.1
11	6.2	6.0	13	7.8	11	11	19	19	9.7	7.2	6.0	6.0
12	6.1	6.0	9.9	7.8	45	10	18	18	10	7.1	6.2	5.7
13	6.1	6.1	8.8	7.8	77	10	18	17	10	7.2	6.3	5.6
14	6.0	6.3	8.3	7.6	26	10	18	16	9.6	7.0	6.8	6.2
15	6.0	6.6	7.8	7.1	26	9.8	18	15	9.6	6.8	6.6	6.3
16	6.0	6.5	7.5	7.0	20	9.8	17	15	9.4	6.7	6.4	6.2
17	6.0	6.4	6.0	7.3	15	9.7	18	14	9.2	6.8	5.8	6.2
18	5.9	6.4	6.9	7.2	13	9.7	22	14	9.2	7.1	6.0	6.2
19	5.9	6.3	8.1	7.1	12	9.6	21	14	9.0	7.2	6.1	6.2
20	5.8	6.4	7.5	6.9	12	12	18	13	8.9	6.8	6.2	6.2
21	5.9	6.4	7.5	6.9	13	37	17	13	8.8	e6.8	6.2	6.2
22	6.1	6.3	7.5	6.9	13	25	18	13	8.7	6.9	6.2	6.4
23	6.1	6.2	7.5	6.9	14	39	17	12	8.7	7.1	6.1	6.5
24	6.0	6.2	7.5	6.9	12	30	17	13	8.8	6.9	6.5	6.4
25	6.1	6.2	7.5	6.9	11	23	18	12	8.6	6.6	6.4	6.2
26	6.2	6.1	7.1	6.9	10	21	20	13	8.0	6.5	6.3	6.2
27	11	6.0	6.6	6.8	10	27	21	13	8.2	e6.4	6.1	6.2
28	8.2	6.0	7.5	6.8	e10	27	20	12	8.1	e6.4	6.3	5.9
29	7.2	6.0	7.9	6.8	e10	24	19	12	8.2	e6.4	6.1	5.9
30	6.9	6.2	9.5	6.8	---	21	19	12	8.2	6.4	6.2	6.0
31	6.7	---	8.3	6.7	---	22	---	11	---	6.5	6.2	---
TOTAL	198.5	186.7	244.1	242.6	451.6	541.6	583	480	280.4	220.4	194.0	183.6
MEAN	6.40	6.22	7.87	7.83	15.6	17.5	19.4	15.5	9.35	7.11	6.26	6.12
MAX	11	6.6	17	14	77	39	23	21	11	8.2	6.8	6.5
MIN	5.8	6.0	6.0	6.7	6.7	9.6	17	11	8.0	6.4	5.8	5.6
AC-FT	394	370	484	481	896	1070	1160	952	556	437	385	364

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1992, BY WATER YEAR

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.77	7.60	11.1	12.5	14.7	12.8	12.6	12.5	8.96	6.13	5.32	5.39
MAX	10.7	82.5	76.7	178	173	61.2	36.7	45.7	37.6	20.2	20.7	32.5
(WY)	1984	1966	1967	1969	1980	1978	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 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1921 - 1992

ANNUAL TOTAL	4152.6	3806.5	
ANNUAL MEAN	11.4	10.4	9.64
HIGHEST ANNUAL MEAN			33.0
LOWEST ANNUAL MEAN			2.96
HIGHEST DAILY MEAN	109	Mar 1	77
LOWEST DAILY MEAN	5.7	Feb 25	5.6
ANNUAL SEVEN-DAY MINIMUM	5.8	Feb 7	5.9
INSTANTANEOUS PEAK FLOW			142
INSTANTANEOUS PEAK STAGE			Feb 12
ANNUAL RUNOFF (AC-FT)	8240	7550	13000
10 PERCENT EXCEEDS	20	19	15
50 PERCENT EXCEEDS	7.8	7.5	5.7
90 PERCENT EXCEEDS	6.1	6.1	3.2

e Estimated.

## SALTON SEA BASIN

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

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

DRAINAGE AREA.--264 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder and concrete control; auxiliary water-stage recorder on overflow channel since January 23, 1992. Elevation of gage is 1,040 ft above National Geodetic Vertical Datum of 1929, 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 powerplants in the San Geronio River basin and then to an area north of Banning for irrigation.

COOPERATION.--Records of diversion out of basin provided by Southern California Edison Co. Records of Colorado River Aqueduct releases provided by Coachella Valley Water District (from Metropolitan Water District's monthly reports).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,480 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 6.90 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of critical depth computation; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 621 ft<sup>3</sup>/s, Apr. 1, gage height, 5.28 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	4.3	401	12	.91	.94	6.4	.00
2	.00	.00	.00	.00	.00	18	473	8.5	.59	2.3	2.6	.00
3	.00	.00	.00	.00	.00	5.6	537	10	.47	1.5	2.5	.00
4	.00	.00	e.00	.00	.00	.00	572	12	.43	1.2	7.2	54
5	.00	.00	e.00	.00	e.00	.04	588	12	.19	.40	6.8	234
6	.00	.00	.00	.00	e6.5	.22	590	24	.01	.41	17	232
7	.00	.00	.00	.00	e1.2	.01	586	22	.24	3.1	11	232
8	.00	.00	.00	.00	e.00	.00	557	11	.00	3.1	8.1	152
9	.00	.00	.00	.00	e.00	.00	558	7.5	.02	.23	6.4	.00
10	.00	.00	.00	.00	e.00	.00	563	6.9	.00	.79	6.6	.00
11	.00	.00	.00	.00	e10	.00	563	6.7	.02	.14	5.6	.00
12	.00	.00	.03	.00	58	.00	559	7.8	.02	.84	5.2	.00
13	.00	.00	.00	.00	95	.26	564	6.4	.67	.43	5.7	.00
14	.00	.00	.00	.00	2.4	2.2	570	5.5	3.3	.47	3.0	.00
15	.00	.00	.00	.00	13	4.9	410	5.1	3.9	.63	1.5	.00
16	.00	.00	.00	.00	.04	3.6	3.8	3.9	3.7	.59	1.8	.00
17	.00	.00	.00	.00	.00	142	11	2.2	1.8	.34	2.2	.00
18	.00	.00	.00	.00	.00	234	23	4.0	1.1	.00	3.0	.00
19	.00	.00	.00	.00	.00	240	29	3.2	2.6	.15	2.8	.00
20	.00	.00	.00	.00	.00	225	28	6.1	1.1	.28	4.0	.00
21	.00	.00	.05	.00	.00	209	59	11	.98	.51	4.2	.00
22	.00	.00	.00	.00	.00	217	44	14	.56	.42	3.3	.00
23	.00	.00	.00	e.00	.00	276	26	22	1.5	2.9	3.8	.00
24	.00	.00	.00	e.00	.00	269	22	6.2	.59	1.9	3.8	.00
25	.00	.00	.07	.00	.00	276	24	6.7	1.0	.71	4.5	.00
26	.00	.00	.00	.00	.15	288	22	7.0	.92	.10	5.6	.00
27	e.44	.00	.00	.00	.28	298	13	4.2	.00	.49	85	.00
28	e.14	.00	.00	.00	.66	270	12	1.1	.16	1.3	186	.00
29	e.19	.00	.00	.00	.42	255	12	1.3	.00	3.9	97	.00
30	e.00	.00	.00	.00	---	275	12	1.2	.09	5.7	.00	.00
31	.00	---	.00	.00	---	281	---	.62	---	3.2	.00	---
TOTAL	0.77	0.00	0.15	0.00	187.65	3794.13	8431.8	252.12	26.87	38.97	552.60	904.00
MEAN	.025	.000	.005	.000	6.47	122	281	8.13	.90	1.26	16.2	30.1
MAX	.44	.00	.07	.00	95	298	590	24	3.9	5.7	186	234
MIN	.00	.00	.00	.00	.00	.00	3.8	.62	.00	.00	.00	.00
AC-FT	1.5	.00	.3	.00	372	7530	16720	500	53	77	997	1790
a	0	0	0	0	0	8164	16755	0	0	0	732	1462
b	93	84	67	46	62	115	184	267	281	220	163	76

e Estimated.

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

b Discharge, in acre-feet, diverted out of basin 18.5 mi upstream.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	164	135	126	155	138	171	140	84.7	104	79.6	76.9	126
MAX	596	499	477	598	595	445	316	314	423	417	378	463
(WY)	1987	1987	1987	1987	1987	1987	1986	1986	1986	1986	1986	1986
MIN	.025	.000	.000	.000	3.16	3.97	.026	.000	.000	.000	.000	.000
(WY)	1992	1992	1990	1992	1991	1989	1991	1987	1987	1989	1987	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1985 - 1992	
ANNUAL TOTAL	1298.95		14139.06			
ANNUAL MEAN	3.56		38.6		142	
HIGHEST ANNUAL MEAN					308	
LOWEST ANNUAL MEAN					11.9	
HIGHEST DAILY MEAN	670	Mar 1	590	Apr 6	923	Aug 30 1986
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Mar 4 1985
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 8	.00	Oct 1	.00	Feb 16 1986
INSTANTANEOUS PEAK FLOW			621	Apr 1	1480	Mar 1 1991
INSTANTANEOUS PEAK STAGE			5.28	Apr 1	6.90	Mar 1 1991
ANNUAL RUNOFF (AC-FT)	2580		28040		103200	
10 PERCENT EXCEEDS	.62		96		413	
50 PERCENT EXCEEDS	.00		.09		1.6	
90 PERCENT EXCEEDS	.00		.00		.00	

## 10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA

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

DRAINAGE AREA.--35.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1967 to current year.

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

REMARKS.--Records poor. Slight regulation of low flow by two small dams with a combined capacity of about 3 acre-ft, 2 mi upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft<sup>3</sup>/s, Aug. 17, 1983, gage height, 3.33 ft on basis of slope-conveyance study of peak flow; maximum gage height, 6.40 ft, Jan. 25, 1969; no flow for many days in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr.15	0400	*50	*3.30				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	.00	.55	.22	.00	.00	4.9	3.1	3.6	2.9	1.8
2	.02	.00	.00	.60	.22	.01	.00	4.7	3.0	3.5	2.7	1.8
3	.02	.00	.00	.60	.21	.00	.00	4.4	2.8	3.6	2.5	1.7
4	.01	.00	.00	.65	.22	.00	.00	4.5	2.3	3.5	4.1	1.8
5	.01	.00	.02	1.3	.23	.00	.00	4.6	2.0	3.5	3.9	1.7
6	.01	.00	.10	.21	.36	.00	.17	4.6	2.5	3.6	3.8	1.6
7	.01	.00	.04	e.02	.36	.00	1.2	4.6	2.7	4.0	3.7	1.6
8	.01	.00	.06	e.00	.00	.00	3.2	4.7	2.8	3.8	3.6	1.6
9	.01	.00	.07	e.04	.00	.00	9.4	4.8	2.8	3.7	3.5	1.5
10	.01	.00	.09	.02	.00	.00	21	4.8	2.8	3.6	3.4	1.5
11	.00	.00	.11	.04	.00	.00	5.7	4.7	2.8	3.7	3.3	1.5
12	.01	.00	.11	.02	2.8	.00	2.6	4.5	2.8	3.7	3.3	1.5
13	.00	.00	.10	.01	.64	.00	11	4.4	2.8	3.7	3.4	1.5
14	.00	.00	.10	.04	.00	.00	24	4.3	3.0	3.6	3.2	1.5
15	.00	.00	.11	.02	.00	.00	24	4.3	3.0	3.6	3.1	1.5
16	.00	.00	.11	.04	.00	.00	5.2	4.1	2.9	3.5	2.9	1.4
17	.00	.00	.11	.02	.00	.00	5.8	4.1	2.8	3.4	2.7	1.4
18	.00	.00	.10	.08	.00	.00	4.1	4.0	2.7	3.3	2.6	1.4
19	.00	.00	.20	.22	.00	.00	4.1	3.9	2.7	3.2	2.6	1.3
20	.00	.00	.21	.84	.00	.00	5.3	4.2	2.6	3.2	2.4	1.4
21	.00	.00	.25	.57	.00	.00	5.9	4.2	2.6	3.3	2.5	1.3
22	.00	.00	.27	.14	.00	.00	6.2	4.4	2.6	3.3	2.4	1.2
23	.00	.00	.27	.17	.00	.00	6.1	4.2	2.6	3.3	2.4	1.1
24	.00	.00	.28	.19	.00	.00	6.3	4.1	2.6	3.4	2.4	.97
25	.00	.00	.28	.19	.00	.00	6.3	3.8	2.7	3.2	2.3	.99
26	.00	.00	.34	.19	.00	.00	6.4	3.7	2.7	3.1	2.1	.96
27	.00	.00	.33	.20	.00	.00	6.4	3.7	2.6	3.0	2.0	.93
28	.00	.00	.37	.22	.00	.00	6.2	3.6	2.6	2.9	1.9	.86
29	.00	.00	.48	.21	.00	.02	5.4	3.6	3.1	2.8	1.8	.83
30	.00	.00	.57	.22	---	.00	5.3	3.5	3.4	3.2	1.8	.77
31	.01	---	.56	.22	---	.00	---	3.4	---	3.0	1.9	---
TOTAL	0.15	0.01	5.64	7.84	5.26	0.03	187.27	131.3	82.4	105.8	87.1	40.91
MEAN	.005	.000	.18	.25	.18	.001	6.24	4.24	2.75	3.41	2.81	1.36
MAX	.02	.01	.57	1.3	2.8	.02	24	4.9	3.4	4.0	4.1	1.8
MIN	.00	.00	.00	.00	.00	.00	.00	3.4	2.0	2.8	1.8	.77
AC-FT	.3	.02	11	16	10	.06	371	260	163	210	173	81

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.80	1.05	1.07	3.07	9.08	6.35	4.93	4.10	2.68	1.87	1.55	.86
MAX	3.83	4.54	4.51	29.2	174	49.6	29.3	23.6	14.7	10.1	5.42	3.65
(WY)	1970	1984	1979	1980	1980	1980	1980	1980	1980	1980	1983	1978
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1968	1969	1969	1968	1968	1989	1968	1968	1968	1972	1968	1968

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1968 - 1992	
ANNUAL TOTAL	104.24		653.71			
ANNUAL MEAN	.29		1.79		3.08	
HIGHEST ANNUAL MEAN					28.3	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	24	Mar 1	24	Apr 14	540	Feb 18 1980
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 11	.00	Oct 1 1967
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 13	.00	Oct 1 1967
INSTANTANEOUS PEAK FLOW			50		1750	Aug 17 1983
INSTANTANEOUS PEAK STAGE			3.30		3.33	Aug 17 1983
ANNUAL RUNOFF (AC-FT)	207		1300		2230	
10 PERCENT EXCEEDS	.60		4.2		5.5	
50 PERCENT EXCEEDS	.03		.60		.30	
90 PERCENT EXCEEDS	.00		.00		.00	

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

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

DRAINAGE AREA.--4.71 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Two small diversions 2 mi upstream, one for city of Palm Springs and one for Palm Springs aerial tramway.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62 ft<sup>3</sup>/s, Aug. 9, 1989, gage height, 9.95 ft, from rating curve extended above 2.0 ft<sup>3</sup>/s on basis of critical depth computation; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2.3 ft<sup>3</sup>/s, Mar. 2, gage height, 8.81 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	.02	.14	.20	.98	1.1	.44	.00	.00	.00	.00
2	.00	.00	.04	.14	.20	1.2	1.1	.41	.00	.00	.00	.00
3	.00	.00	.04	.20	.20	1.1	1.1	.50	.00	.00	.00	.00
4	.00	.00	.02	.20	.24	.98	1.1	.41	.00	.00	.00	.00
5	.00	.00	.01	.83	.17	1.2	1.1	.55	.00	.00	.00	.00
6	.00	.00	.02	.59	1.1	.98	1.1	.57	.00	.00	.00	.00
7	.00	.00	.01	.35	1.5	.98	1.1	.38	.00	.00	.00	.00
8	.00	.00	.05	.51	.75	.98	1.1	.29	.00	.00	.00	.00
9	.00	.00	.06	.26	.43	.98	.98	.30	.00	.00	e.00	.00
10	.00	.00	.23	.25	.56	.98	.98	.34	.00	.00	e.00	.00
11	.00	.00	.07	.20	.34	.98	.98	.38	.00	.00	e.00	.00
12	.00	.00	.08	.20	.76	.98	.98	.29	.00	.00	e.00	.00
13	.00	.00	.07	.20	1.1	.98	.98	.29	.00	.00	e.00	.00
14	.00	.00	.08	.20	.68	.98	.98	.26	.00	.00	e.00	.00
15	.00	.00	.08	.20	.94	.98	.98	.27	.00	.00	e.00	.00
16	.00	.01	.08	.20	1.3	.98	.98	.22	.00	.00	e.00	.00
17	.00	.01	.04	.20	.98	.98	.98	.23	.00	.00	e.00	.00
18	.00	.00	.03	.20	.90	.98	.98	.22	.00	.00	e.00	.00
19	.00	.00	.06	.20	.98	.98	.98	.23	.00	.00	e.00	.00
20	.00	.00	.07	.20	.98	1.1	.98	.16	.00	.00	.00	.00
21	.00	.00	.07	.20	.98	1.1	.98	.00	.00	.00	.00	.00
22	.00	.00	.09	.20	.98	1.1	.86	.00	.00	.00	.00	.00
23	.00	.01	.09	.20	.98	1.1	.73	.00	.00	.00	.00	.00
24	.00	.01	.09	.20	.98	1.1	.73	.00	.00	.00	.00	.00
25	.00	.01	.08	.20	.98	1.1	.73	.00	.00	.00	.00	.00
26	.00	.00	.10	.20	.98	1.1	.62	.00	.00	.00	.00	.00
27	.11	.00	.10	.20	.98	.98	.48	.00	.00	.00	.00	.00
28	.01	.01	.12	.17	.98	.98	.48	.00	.00	.00	.00	.00
29	.05	.04	.23	.20	.98	.98	.49	.00	.00	.00	.00	.00
30	.04	.04	.36	.20	---	.98	.51	.00	.00	.00	.00	.00
31	.06	---	.18	.24	---	.98	---	.00	---	.00	.00	---
TOTAL	0.27	0.17	2.67	7.68	23.13	31.78	27.17	6.74	0.00	0.00	0.00	0.00
MEAN	.009	.006	.086	.25	.80	1.03	.91	.22	.000	.000	.000	.000
MAX	.11	.04	.36	.83	1.5	1.2	1.1	.57	.00	.00	.00	.00
MIN	.00	.00	.01	.14	.17	.98	.48	.00	.00	.00	.00	.00
AC-FT	.5	.3	5.3	15	46	63	54	13	.00	.00	.00	.00

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.32	.48	.43	.58	.74	.91	.65	.29	.12	.059	.077	.051
MAX	1.00	1.32	1.22	1.25	1.64	1.95	1.20	.52	.33	.28	.17	.15
(WY)	1987	1987	1987	1987	1988	1991	1991	1987	1987	1987	1989	1987
MIN	.000	.000	.000	.031	.096	.28	.11	.057	.000	.000	.000	.000
(WY)	1991	1991	1991	1991	1991	1989	1989	1989	1992	1989	1990	1990

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1987 - 1992

ANNUAL TOTAL	126.28	99.61	
ANNUAL MEAN	.35	.27	.39
HIGHEST ANNUAL MEAN			.77 1987
LOWEST ANNUAL MEAN			.19 1989
HIGHEST DAILY MEAN	7.2 Mar 1	1.5 Feb 7	7.2 Mar 1 1991
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jun 15 1989
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 2	.00 Oct 1	.00 Jun 15 1989
INSTANTANEOUS PEAK FLOW		2.3 Mar 2	62 Aug 9 1989
INSTANTANEOUS PEAK STAGE		8.81 Mar 2	9.95 Aug 9 1989
ANNUAL RUNOFF (AC-FT)	250	198	283
10 PERCENT EXCEEDS	1.2	.98	1.1
50 PERCENT EXCEEDS	.03	.01	.20
90 PERCENT EXCEEDS	.00	.00	.00

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

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1987 to current year.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
DEC 06...	0900	0.03	200	8.2	8.0	80	0	28	2.4	11	22
APR 24...	0845	0.73	220	8.4	16.0	84	--	29	2.7	11	21
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3	CAR- BONATE WATER WH IT FIELD MG/L AS CO3	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DEC 06...	0.5	4.3	--	--	--	115	5	102	5.2	4.2	0.20
APR 24...	0.5	4.9	114	10	111	--	--	--	6.6	2.4	0.20
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 06...	18	134	135	0.18	<0.010	<0.050	<0.010	<0.010	<10	7	<1
APR 24...	19	133	142	0.18	<0.010	0.100	0.020	<0.010	10	<3	<1

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.--16.9 mi<sup>2</sup>.

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

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

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

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 85 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	2215	*22	*4.82				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.00	.22	.70	.69	2.5	5.3	16	5.0	1.4	.09	.00
2	.16	.00	.24	.66	.69	4.9	5.5	16	4.7	1.3	.10	.00
3	.16	.00	.25	.64	.68	4.2	5.5	15	4.5	1.2	.11	.00
4	.16	.00	.28	.74	.68	3.6	5.7	15	4.2	1.2	.29	.00
5	.17	.00	.28	1.5	.70	3.4	5.9	16	4.0	.99	.32	.00
6	.15	.00	.26	2.2	1.6	3.3	6.3	18	3.9	.90	.38	.00
7	.15	.00	.22	1.4	4.0	3.3	6.9	16	3.7	.96	.28	.00
8	.14	.12	.26	1.3	2.7	3.1	7.3	16	3.6	1.5	.22	.00
9	.11	.19	.34	1.1	2.0	2.9	8.0	16	3.5	1.4	.18	.00
10	.08	.18	.55	.99	1.9	2.8	8.5	16	3.4	1.2	.15	.00
11	.02	.24	.65	.94	1.7	2.7	8.9	15	3.3	1.0	.13	.00
12	.00	.16	.59	.90	5.2	2.7	9.3	14	3.2	.92	.10	.00
13	.00	.15	.68	.86	14	2.8	9.3	13	3.0	1.0	.08	.00
14	.00	.13	.61	.83	6.3	3.0	9.5	12	2.9	.95	.06	.00
15	.00	.15	.59	.79	6.1	2.9	9.8	11	2.9	.82	.04	.00
16	.00	.16	.57	.78	4.8	2.9	9.9	10	2.8	.67	.03	.00
17	.00	.17	.56	.77	4.0	2.9	10	9.9	2.7	.56	.03	.00
18	.00	.18	.56	.75	3.4	2.9	13	9.4	2.6	.46	.07	.00
19	.00	.19	.64	.73	3.0	2.8	14	9.0	2.4	.36	.07	.00
20	.00	.19	.57	.72	2.9	3.2	14	8.6	2.2	.30	.06	.00
21	.00	.20	.56	.72	3.0	5.4	13	8.2	2.1	.27	.04	.00
22	.00	.20	.56	.72	3.0	4.9	14	8.0	2.0	.22	.02	.00
23	.00	.20	.57	.70	3.1	5.1	14	7.8	1.9	.22	.02	.00
24	.00	.19	.57	.69	2.9	4.9	15	7.4	1.8	.22	.01	.00
25	.00	.18	.56	.69	2.6	5.1	16	7.1	1.7	.23	.00	.00
26	.00	.18	.56	.69	2.6	4.8	17	6.7	1.6	.24	.00	.00
27	.00	.19	.56	.69	2.5	5.7	18	6.3	1.4	.22	.00	.00
28	.00	.19	.59	.69	2.5	5.6	17	6.0	1.3	.19	.00	.00
29	.00	.19	.65	.69	2.5	5.5	17	5.7	1.3	.18	.00	.00
30	.00	.20	.97	.70	---	5.3	16	5.4	1.4	.14	.00	.00
31	.00	---	.78	.71	---	5.1	---	5.2	---	.11	.00	---
TOTAL	1.47	4.13	15.85	26.99	91.74	120.2	329.6	345.7	85.0	21.33	2.88	0.00
MEAN	.047	.14	.51	.87	3.16	3.88	11.0	11.2	2.83	.69	.093	.000
MAX	.17	.24	.97	2.2	14	5.7	18	18	5.0	1.5	.38	.00
MIN	.00	.00	.22	.64	.68	2.5	5.3	5.2	1.3	.11	.00	.00
AC-FT	2.9	8.2	31	54	182	238	654	686	169	42	5.7	.00

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.58	1.88	3.80	4.81	6.95	6.82	10.1	13.4	6.72	2.10	.91	.72
MAX	8.64	43.1	72.5	75.9	117	56.4	57.3	78.3	58.0	24.9	6.36	4.88
(WY)	1984	1966	1967	1969	1980	1980	1969	1969	1980	1980	1980	1976
MIN	.000	.000	.000	.000	.21	.17	.063	.000	.000	.000	.000	.000
(WY)	1948	1948	1948	1948	1964	1961	1961	1961	1961	1956	1948	1948

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1948 - 1992	
ANNUAL TOTAL	1308.92		1044.89			
ANNUAL MEAN	3.59		2.85		4.88	
HIGHEST ANNUAL MEAN					32.9	1980
LOWEST ANNUAL MEAN					.088	1961
HIGHEST DAILY MEAN	102	Mar 1	18	Apr 27	1080	Jan 25 1969
LOWEST DAILY MEAN	.00	Oct 12	.00	Oct 12	.00	Oct 1 1947
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 12	.00	Oct 12	.00	Oct 1 1947
INSTANTANEOUS PEAK FLOW			22	Feb 12	2900	Nov 22 1965
INSTANTANEOUS PEAK STAGE			4.82	Feb 12	15.78	Sep 7 1981
ANNUAL RUNOFF (AC-FT)	2600		2070		3530	
10 PERCENT EXCEEDS	11		9.3		11	
50 PERCENT EXCEEDS	.57		.71		.90	
90 PERCENT EXCEEDS	.07		.00		.00	

10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.--93.1 mi<sup>2</sup>.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Jan. 14, 1942, at datum 0.2 ft higher.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1830	*224	*3.76				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	1.7	10	.04	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	2.4	24	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	2.6	13	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	2.1	9.3	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	1.8	6.9	.00	.00	.00	.00	.00
6	.00	.00	.00	.49	.07	1.7	5.6	.01	.00	.00	.00	.00
7	.00	.00	.00	.36	.64	1.8	4.5	.09	.00	.00	.00	.00
8	.00	.00	.00	.32	.35	1.8	3.9	.00	.00	.00	.00	.00
9	.00	.00	.00	.20	.22	1.7	3.4	.00	.00	.00	.00	.00
10	.00	.00	.00	.03	.23	1.6	3.0	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.21	1.5	2.7	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.60	1.4	2.5	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	28	1.3	2.3	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	7.1	1.3	2.1	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	43	1.1	1.9	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	34	1.1	1.7	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	15	1.0	1.3	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	9.4	.95	.79	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	7.0	.91	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	5.7	1.2	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	4.7	3.1	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	4.1	2.6	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	3.6	3.7	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	3.2	4.9	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	2.8	3.8	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	2.5	3.4	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	2.2	8.4	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	2.0	8.8	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	1.8	8.9	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	6.9	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	4.9	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	1.40	178.42	90.36	98.89	0.14	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.045	6.15	2.91	3.30	.005	.000	.000	.000	.000
MAX	.00	.00	.00	.49	43	8.9	24	.09	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.91	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	2.8	354	179	196	.3	.00	.00	.00	.00

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.39	.91	4.23	5.21	17.9	18.4	7.44	2.10	.64	.82	1.01	.88
MAX	5.95	20.6	39.6	53.0	318	188	80.8	24.1	9.87	15.1	33.0	19.5
(WY)	1984	1966	1983	1978	1980	1983	1958	1983	1980	1979	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1933	1950	1951	1951	1951	1934	1934	1931	1931	1932	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1930 - 1992	
ANNUAL TOTAL	1659.80		369.21			
ANNUAL MEAN	4.55		1.01		4.95	
HIGHEST ANNUAL MEAN					47.4	
LOWEST ANNUAL MEAN					.00	
HIGHEST DAILY MEAN	699	Mar 1	43	Feb 15	2040	Feb 21 1980
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jul 16 1930
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Jul 16 1930
INSTANTANEOUS PEAK FLOW			224	Feb 15	7000	Feb 21 1980
INSTANTANEOUS PEAK STAGE			3.76	Feb 15	7.29	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	3290		732		3590	
10 PERCENT EXCEEDS	4.7		2.5		6.0	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.--8.65 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1948 to current year.

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

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

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. One small diversion for domestic use about 1 mi upstream from station.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 30 ft<sup>3</sup>/s by theoretical computations of flow over weir:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	2000	*28	*3.01				

Minimum daily, 0.73 ft<sup>3</sup>/s, Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.78	1.2	1.3	1.7	1.6	2.4	5.3	2.6	1.6	1.7	1.1	.94
2	.76	1.2	1.3	1.7	1.6	4.2	6.0	2.5	1.6	1.8	1.1	.92
3	.76	1.2	1.3	1.7	1.6	3.3	5.3	2.4	1.5	1.6	1.1	.92
4	.75	1.2	1.3	1.8	1.6	2.9	5.3	2.4	1.4	1.1	1.7	.92
5	.74	1.2	1.3	3.7	1.6	2.8	5.3	2.5	1.4	1.1	1.6	.90
6	.76	1.1	1.3	4.2	2.9	2.8	5.2	2.6	1.5	1.1	1.3	.89
7	.73	1.1	1.3	2.6	3.9	2.8	5.1	2.3	1.5	1.4	1.2	.89
8	.74	1.1	1.4	2.4	2.5	2.7	5.0	2.2	1.5	1.4	1.2	.86
9	.76	1.1	1.9	2.1	2.2	2.6	4.8	2.3	1.5	1.2	1.1	.85
10	.75	1.2	2.2	2.0	2.4	2.5	4.7	2.3	1.5	1.1	1.1	.88
11	.78	1.2	1.9	1.9	2.2	2.4	4.5	2.3	1.5	1.1	1.1	.92
12	.84	1.1	1.6	1.9	6.6	2.4	4.3	2.2	1.5	1.2	1.1	.90
13	.82	1.2	1.6	1.8	14	2.4	4.1	2.1	1.5	1.2	1.2	.88
14	.77	1.2	1.5	1.8	6.7	2.3	4.0	2.0	1.5	1.2	1.2	.88
15	.76	1.3	1.5	1.8	7.1	2.3	4.0	2.0	1.5	1.1	1.1	.93
16	.81	1.3	1.5	1.8	6.0	2.3	3.9	1.9	1.5	1.0	.98	.94
17	.84	1.3	1.5	1.8	4.7	2.3	3.9	1.9	1.4	.99	.90	.90
18	.81	1.3	1.5	1.8	4.1	2.3	4.0	1.9	1.4	.93	.91	.93
19	.78	1.3	1.8	1.7	3.7	2.3	3.8	1.9	1.3	.90	.98	.88
20	.80	1.3	1.6	1.6	3.5	3.0	3.6	1.9	1.3	.89	.99	.95
21	.92	1.3	1.6	1.7	3.5	5.6	3.3	1.9	1.3	.97	1.0	1.0
22	1.0	1.3	1.6	1.6	3.5	4.1	3.3	2.1	1.2	1.0	1.1	1.0
23	1.0	1.3	1.6	1.6	3.4	5.6	3.2	2.0	1.3	1.1	.97	1.0
24	1.0	1.3	1.6	1.6	3.1	4.8	3.1	2.0	1.3	1.1	1.1	.96
25	1.0	1.3	1.6	1.6	2.9	4.5	3.0	1.9	1.6	1.1	1.1	.86
26	1.0	1.3	1.6	1.6	2.7	4.5	3.0	1.9	1.8	1.1	1.0	.87
27	1.5	1.3	1.6	1.6	2.6	5.9	2.9	1.8	1.9	1.0	.93	.85
28	1.1	1.3	1.7	1.6	2.5	5.2	2.7	1.8	1.7	.94	.91	.83
29	1.1	1.3	1.8	1.6	2.4	4.8	2.6	1.8	1.6	.95	.86	.82
30	1.2	1.3	2.6	1.6	---	4.5	2.6	1.7	1.6	1.2	.86	.84
31	1.2	---	1.8	1.6	---	4.3	---	1.7	---	1.2	.93	---
TOTAL	27.56	37.1	49.7	59.5	107.1	106.8	121.8	64.8	44.7	35.67	33.72	27.11
MEAN	.89	1.24	1.60	1.92	3.69	3.45	4.06	2.09	1.49	1.15	1.09	.90
MAX	1.5	1.3	2.6	4.2	14	5.9	6.0	2.6	1.9	1.8	1.7	1.0
MIN	.73	1.1	1.3	1.6	1.6	2.3	2.6	1.7	1.2	.89	.86	.82
AC-FT	55	74	99	118	212	212	242	129	89	71	67	54

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.33	2.22	3.22	3.93	5.34	5.72	4.35	2.96	1.91	1.37	1.38	1.24
MAX	5.60	19.2	30.2	23.8	56.4	33.7	20.0	17.4	12.4	7.51	9.52	6.05
(WY)	1984	1966	1967	1969	1980	1980	1983	1983	1983	1983	1983	1983
MIN	.38	.60	.96	.95	1.02	.99	.68	.51	.23	.087	.14	.24
(WY)	1966	1963	1963	1976	1961	1961	1961	1961	1961	1961	1963	1964

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1949 - 1992	
ANNUAL TOTAL	900.83		715.56			
ANNUAL MEAN	2.47		1.96		2.90	
HIGHEST ANNUAL MEAN					12.4	
LOWEST ANNUAL MEAN					.66	
HIGHEST DAILY MEAN	71	Mar 1	14	Feb 13	395	Dec 6 1966
LOWEST DAILY MEAN	.73	Oct 7	.73	Oct 7	.00	Jun 27 1961
ANNUAL SEVEN-DAY MINIMUM	.75	Oct 4	.75	Oct 4	.00	Jul 13 1963
INSTANTANEOUS PEAK FLOW			28		1960	
INSTANTANEOUS PEAK STAGE			3.01		7.11	
ANNUAL RUNOFF (AC-FT)	1790		1420		2100	
10 PERCENT EXCEEDS	5.0		3.9		5.2	
50 PERCENT EXCEEDS	1.4		1.5		1.6	
90 PERCENT EXCEEDS	.95		.89		.50	

## 10259050 PALM CANYON WASH NEAR CATHEDRAL CITY, CA

LOCATION.--Lat 33°47'49", long 116°28'44", 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 and concrete control. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Two diversions for domestic use upstream from station on Andreas Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 4.38 ft, from rating curve extended above 850 ft<sup>3</sup>/s on basis of critical-depth computation at gage height 3.85 ft; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 184 ft<sup>3</sup>/s, Feb. 15, gage height 2.88 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	8.1	.00	.00	.00	e.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
6	.00	.00	.00	.00	13	.00	.00	.00	.00	e.00	.00	.00
7	.00	.00	.00	.00	2.9	.00	.00	.00	.00	e.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	3.9	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	13	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	36.09	8.13	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	1.24	.26	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	13	8.1	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	72	16	.00	.00	.00	.00	.00	.00

e Estimated.

10259050 PALM CANYON WASH NEAR CATHEDRAL CITY, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.000	.44	3.03	.000	.000	.000	.10	.64	.000
MAX	.000	.000	.000	.000	1.24	14.9	.000	.000	.000	.52	1.77	.000
(WY)	1988	1988	1988	1988	1992	1991	1988	1988	1988	1991	1989	1988
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1988	1988	1989	1988	1988	1988	1988	1988	1990	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1988 - 1992	
ANNUAL TOTAL	502.71		44.22			
ANNUAL MEAN	1.38		.12		.35	
HIGHEST ANNUAL MEAN					1.38	
LOWEST ANNUAL MEAN					.00	
HIGHEST DAILY MEAN	404	Mar 1	13	Feb 6	404	Mar 1 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW			184	Feb 15	1210	Mar 1 1991
INSTANTANEOUS PEAK STAGE			2.88	Feb 15	4.38	Mar 1 1991
ANNUAL RUNOFF (AC-FT)	997		88		256	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA

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

DRAINAGE AREA.--588 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1989 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 428 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 3.92 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 102 ft<sup>3</sup>/s, Feb. 6, gage height, 2.38 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	5.5	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	22	.01	.00	.00	.00	.00	.00
3	.00	.00	.25	.00	.00	.04	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.54	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	19	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.34	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.16	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	1.5	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	6.3	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	8.8	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.68	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	2.6	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.16	.00	.00	.26	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.06
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	2.56	0.54	48.86	27.02	5.51	0.00	0.00	0.00	0.00	0.06
MEAN	.000	.000	.083	.017	1.68	.87	.18	.000	.000	.000	.000	.002
MAX	.00	.00	1.5	.54	19	22	5.5	.00	.00	.00	.00	.06
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	5.1	1.1	97	54	11	.00	.00	.00	.00	.1

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.007	.032	.028	.95	3.10	.050	.000	.000	.006	.19	.070
MAX	.000	.021	.083	.054	1.68	8.44	.18	.000	.000	.026	.78	.28
(WY)	1990	1990	1992	1991	1992	1991	1992	1989	1991	1991	1989	1991
MIN	.000	.000	.006	.012	.016	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1991	1991	1990	1990	1990	1989	1989	1989	1989	1990	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1989 - 1992	
ANNUAL TOTAL	306.89		84.55			
ANNUAL MEAN	.84		.23		.36	
HIGHEST ANNUAL MEAN					.83	
LOWEST ANNUAL MEAN					.00	
HIGHEST DAILY MEAN	218	Mar 1	22	Mar 2	218	Mar 1 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Mar 30 1989
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 5	.00	Oct 1	.00	Mar 30 1989
INSTANTANEOUS PEAK FLOW			102	Feb 6	428	Mar 1 1991
INSTANTANEOUS PEAK STAGE			2.38	Feb 6	3.92	Mar 1 1991
ANNUAL RUNOFF (AC-FT)	609		168		258	
10 PERCENT EXCEEDS	.53		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

10259200 DEEP CREEK NEAR PALM DESERT, CA

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

DRAINAGE AREA.--30.6 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1962 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 40 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.27 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 7	0345	43	3.01	Mar. 21	0900	35	2.85
Feb. 13	1300	60	3.13	Mar. 27	0345	22	2.71
Feb. 15	1915	*149	*3.54	Apr. 1	2200	73	3.11
Mar. 2	1515	72	3.08				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.01	.01	.22	2.2	23	1.6	.19	.03	.01	.00
2	.01	.01	.01	.01	.22	23	35	1.5	.18	.02	.01	.00
3	.01	.01	.01	.02	.22	20	21	1.4	.15	.02	.00	.00
4	.01	.01	.01	.02	.22	10	15	1.3	.12	.02	.00	.00
5	.01	.01	.01	.03	.22	7.2	e12	1.6	.10	.02	.01	.00
6	.01	.01	.01	.34	1.8	5.6	e9.7	1.3	.09	.02	.00	.00
7	.01	.01	.01	.46	22	5.4	e7.2	1.2	.08	.02	.00	.00
8	.01	.01	.02	.54	2.6	4.8	e5.4	1.0	.07	.02	.00	.00
9	.01	.01	.02	.44	1.2	4.0	e4.1	.96	.07	.02	.00	.00
10	.01	.01	.03	.37	.85	3.5	e3.0	.96	.07	.01	.00	.00
11	.01	.01	.02	.33	.63	3.1	e2.2	.94	.05	.01	.00	.00
12	.01	.01	.02	.30	.68	2.8	e1.7	.89	.06	.01	.00	.00
13	.01	.01	.02	.29	38	2.6	e1.7	.77	.05	.01	.00	.00
14	.01	.01	.01	.28	17	2.4	e1.7	.66	.04	.01	.00	.00
15	.01	.01	.01	.27	30	2.3	e1.5	.61	.04	.01	.00	.00
16	.01	.01	.01	.27	22	2.2	e1.5	.57	.04	.01	.00	.00
17	.01	.01	.01	.27	8.8	2.0	e1.5	.56	.04	.01	.00	.00
18	.01	.01	.01	.24	5.0	1.9	e1.6	.50	.03	.01	.00	.00
19	.01	.01	.02	.25	4.2	1.8	e1.6	.46	.03	.01	.00	.00
20	.01	.01	.02	.26	3.1	3.3	e1.6	.49	.03	.01	.00	.00
21	.01	.01	.01	.26	3.3	23	e1.6	.51	.03	.00	.00	.00
22	.01	.01	.01	.23	3.4	14	e1.5	.58	.03	.00	.00	.00
23	.01	.01	.01	.22	3.4	9.8	e1.5	.64	.03	.00	.00	.00
24	.01	.01	.01	.22	3.1	7.5	e1.5	.62	.03	.00	.00	.00
25	.01	.01	.01	.22	2.6	6.3	e1.6	.62	.02	.00	.00	.00
26	.01	.01	.01	.21	2.4	5.8	e1.6	.44	.02	.00	.00	.00
27	.01	.01	.01	.22	2.2	17	e1.5	.38	.02	.00	.00	.00
28	.01	.01	.01	.22	2.1	13	e1.5	.33	.02	.00	.00	.00
29	.01	.01	.02	.22	2.1	11	e1.6	.30	.02	.00	.00	.00
30	.01	.01	.02	.22	---	9.0	e1.6	.25	.02	.01	.00	.00
31	.01	---	.01	.22	---	7.7	---	.23	---	.01	.00	---
TOTAL	0.31	0.30	0.42	7.46	183.56	234.2	167.5	24.17	1.77	0.32	0.03	0.00
MEAN	.010	.010	.014	.24	6.33	7.55	5.58	.78	.059	.010	.001	.000
MAX	.01	.01	.03	.54	38	23	35	1.6	.19	.03	.01	.00
MIN	.01	.01	.01	.01	.22	1.8	1.5	.23	.02	.00	.00	.00
AC-FT	.6	.6	.8	15	364	465	332	48	3.5	.6	.06	.00

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.28	1.06	2.33	2.23	6.82	6.21	2.14	.85	.34	.91	1.22	1.56
MAX	4.62	16.3	23.5	14.2	101	49.3	12.4	7.15	3.97	11.8	15.3	38.1
(WY)	1984	1966	1983	1980	1980	1983	1983	1983	1983	1979	1984	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1963	1963	1963	1963	1963	1963	1963	1962	1962	1962	1962	1962

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992	
ANNUAL TOTAL	1404.20		620.04			
ANNUAL MEAN	3.85		1.69		2.15	
HIGHEST ANNUAL MEAN					13.6	
LOWEST ANNUAL MEAN					.002	
HIGHEST DAILY MEAN	676	Mar 1	38	Feb 13	850	Sep 10 1976
LOWEST DAILY MEAN	.00	Jan 1	.00	Jul 21	.00	May 1 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Jul 21	.00	May 1 1962
INSTANTANEOUS PEAK FLOW			149	Feb 15	7100	Sep 10 1976
INSTANTANEOUS PEAK STAGE			3.54	Feb 15	10.27	Aug 14 1984
ANNUAL RUNOFF (AC-FT)	2790		1230		1560	
10 PERCENT EXCEEDS	2.6		3.6		2.8	
50 PERCENT EXCEEDS	.02		.02		.05	
90 PERCENT EXCEEDS	.00		.00		.00	

10259300 WHITEWATER RIVER AT INDIO, CA

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

DRAINAGE AREA.--1,073 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1966 to current year.

REVISED RECORDS.--WDR CA-72-1; 1971.

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Oct. 1, 1979. Elevation of gage is 0 ft National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1979, water-stage recorder at site 0.5 mi upstream at different datum. Oct. 1, 1979, to Feb. 17, 1983, at datum 1.03 ft lower.

REMARKS.--Records poor. 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.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 450 ft<sup>3</sup>/s on basis of critical-depth study.

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

No flow for most of year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	e.00	e.00	e.00	e.00	e3.0	e.00	e.00	e.00	.00	.00
2	.00	.00	e.00	e.00	e.00	e40	e.50	e.00	e.00	e.00	.00	.00
3	.00	.00	e.00	e.00	e.00	e2.0	e.00	e.00	e.00	e.00	.00	.00
4	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00
5	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00
6	.00	.00	e.00	e.00	e4.0	e.00	e.00	e.00	e.00	e.00	.00	.00
7	.00	.00	e.00	e.00	e25	e.00	e.00	e.00	e.00	e.00	.00	.00
8	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00
9	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00
10	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00
11	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
12	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
13	.00	.00	e.00	e.00	e60	e.00	e.00	e.00	e.00	.00	.00	.00
14	.00	.00	e.00	e.00	e5.0	e.00	e.00	e.00	e.00	.00	.00	.00
15	.00	.00	e.00	e.00	e2.0	e.00	e.00	e.00	e.00	.00	.00	.00
16	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
17	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
18	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
19	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
20	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
21	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
22	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
23	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
24	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
25	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
26	.00	e.00	e.00	e.00	e.00	e1.0	e.00	e.00	e.00	.00	.00	.00
27	.00	e.00	e.00	e.00	e.00	e10	e.00	e.00	e.00	.00	.00	.00
28	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
29	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00
30	.00	e.00	e.00	e.00	---	e.00	e.00	e.00	e.00	.00	.00	.00
31	.00	---	e.00	e.00	---	e.00	---	e.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	96.00	53.00	3.50	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	3.31	1.71	.12	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	60	40	3.0	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	190	105	6.9	.00	.00	.00	.00	.00

e Estimated.

## 10259300 WHITEWATER RIVER AT INDIO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.011	.10	3.02	7.54	14.9	4.13	.024	.014	.011	1.42	1.41	3.30
MAX	.17	.88	61.3	139	278	56.2	.16	.35	.19	32.1	29.4	86.2
(WY)	1979	1979	1967	1969	1980	1978	1984	1972	1968	1979	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1967	1967	1968	1967	1967	1966	1966	1966	1966	1967	1966	1966

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1966 - 1992
ANNUAL TOTAL	941.43	152.50	
ANNUAL MEAN	2.58	.42	2.95
HIGHEST ANNUAL MEAN			25.8
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	804 Mar 1	60 Feb 13	3080 Jan 25 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Mar 1 1966
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Mar 1 1966
INSTANTANEOUS PEAK FLOW			11400 Jan 25 1969
INSTANTANEOUS PEAK STAGE			14.41 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1870	302	2140
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

## SALTON SEA BASIN

85

10259540 WHITEWATER RIVER NEAR MECCA, CA

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

DRAINAGE AREA.--1,495 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 221.00 ft below National Geodetic Vertical Datum of 1929 (levels by Coachella Valley Water District). Oct. 1, 1960, to Mar. 22, 1967, at site 1.3 mi downstream and Mar. 23, 1967, to July 22, 1970, at site 0.7 mi downstream at different datums.

REMARKS.--Records poor. Most flow represents seepage and return flow from irrigated areas.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 184 ft<sup>3</sup>/s, Feb. 16; minimum daily, 64 ft<sup>3</sup>/s, Oct. 29, July 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	69	e70	78	77	77	92	81	80	69	77	e78
2	70	68	e70	79	76	88	93	79	75	e70	79	e78
3	70	73	71	78	70	120	92	79	76	e71	83	77
4	68	83	77	78	71	104	90	83	78	e72	85	76
5	68	75	81	79	69	87	90	84	79	e67	87	74
6	68	71	82	83	71	85	89	84	77	e67	87	75
7	69	71	79	82	128	84	88	83	78	e71	84	76
8	68	68	82	74	156	83	88	83	81	e71	82	77
9	69	70	80	76	91	82	90	83	81	71	81	77
10	74	70	90	73	86	80	92	82	e80	71	81	74
11	73	69	99	73	85	80	91	80	e80	66	80	74
12	75	67	92	72	80	82	94	81	e79	64	79	73
13	73	69	90	71	152	85	93	79	e79	67	78	74
14	71	74	95	72	141	81	91	80	e78	66	79	74
15	73	71	92	71	117	81	94	80	e77	67	82	75
16	71	72	87	75	184	81	91	80	e75	67	81	72
17	71	71	90	76	147	82	93	80	e73	68	83	71
18	69	70	89	78	112	84	94	80	e75	67	e77	72
19	75	71	87	77	101	86	92	81	e75	72	e80	75
20	74	e72	84	75	94	90	90	79	e73	69	e81	75
21	74	e75	80	76	86	87	91	80	e73	e67	83	74
22	70	e75	77	74	84	88	95	78	e73	e65	81	72
23	68	e75	82	74	85	85	93	79	e73	e67	e80	73
24	69	e75	85	73	79	84	92	80	71	67	e77	73
25	71	e75	79	68	79	84	89	81	75	72	e77	74
26	71	e75	75	76	80	88	87	80	77	72	e77	72
27	71	e78	78	72	78	96	83	79	78	71	e75	73
28	66	76	79	72	79	95	81	81	71	71	e78	74
29	64	e71	81	67	80	89	80	79	70	71	e79	72
30	65	70	79	68	---	101	80	81	67	74	e78	69
31	65	---	78	70	---	96	---	82	---	78	e79	---
TOTAL	2170	2169	2560	2310	2838	2715	2698	2501	2277	2148	2490	2223
MEAN	70.0	72.3	82.6	74.5	97.9	87.6	89.9	80.7	75.9	69.3	80.3	74.1
MAX	75	83	99	83	184	120	95	84	81	78	87	78
MIN	64	67	70	67	69	77	80	78	67	64	75	69
AC-FT	4300	4300	5080	4580	5630	5390	5350	4960	4520	4260	4940	4410

e Estimated.

## 10259540 WHITEWATER RIVER NEAR MECCA, CA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	99.9	94.9	95.0	107	125	124	119	118	107	107	120	115
MAX	147	149	141	236	396	222	172	173	145	198	183	220
(WY)	1976	1966	1983	1969	1980	1978	1976	1976	1975	1979	1983	1976
MIN	53.9	44.4	45.4	51.4	56.6	71.8	77.9	80.7	66.9	57.4	80.3	74.1
(WY)	1961	1961	1961	1961	1961	1961	1961	1992	1987	1987	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1961 - 1992	
ANNUAL TOTAL	31273		29099			
ANNUAL MEAN	85.7		79.5		111	
HIGHEST ANNUAL MEAN					156	
LOWEST ANNUAL MEAN					68.4	
HIGHEST DAILY MEAN	1200	Mar 1	184	Feb 16	2500	Jan 25 1969
LOWEST DAILY MEAN	64	Oct 29	64	Oct 29	37	Nov 25 1960
ANNUAL SEVEN-DAY MINIMUM	67	Oct 27	66	Jul 11	37	Nov 24 1960
ANNUAL RUNOFF (AC-FT)	62030		57720		80380	
10 PERCENT EXCEEDS	95		91		140	
50 PERCENT EXCEEDS	80		78		108	
90 PERCENT EXCEEDS	71		69		76	

10260500 DEEP CREEK NEAR HESPERIA, CA

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

DRAINAGE AREA.--134 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1904 to September 1922, October 1929 to current year. Prior to January 1930, monthly discharge 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 National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1314 for history of changes prior to Dec. 10, 1938.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Slight regulation by Lake Arrowhead, capacity, 48,000 acre-ft, used principally for recreation.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	2015	1,150	3.67	Mar. 21	1315	2,870	4.89
Feb. 7	1730	453	2.99	Mar. 23	1400	1,930	4.26
Feb. 12	1715	*10,500	*8.65	Mar. 27	2100	601	3.17

Minimum daily, 0.28 ft<sup>3</sup>/s, Nov. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.54	.28	e4.4	7.5	e8.0	83	249	58	11	4.8	4.4	3.5
2	e.54	.41	e4.2	5.5	e8.2	88	231	54	11	5.2	2.9	3.4
3	e.54	.67	e4.0	4.6	e8.2	166	238	51	10	5.0	4.9	3.5
4	e.56	.88	e4.0	7.9	e8.2	120	235	49	9.7	4.8	4.4	3.6
5	e.58	1.0	e4.0	253	e9.0	104	222	49	9.1	4.4	3.4	3.5
6	e.60	1.2	e4.2	198	e4.0	96	207	59	8.8	3.9	3.2	3.4
7	e.64	e1.3	e4.5	51	220	105	189	68	9.1	4.0	3.5	3.3
8	e.64	e1.5	e4.5	31	117	82	179	53	9.2	6.3	3.3	3.3
9	e.64	e1.6	e4.5	21	52	71	170	47	8.9	9.9	3.0	3.1
10	e.66	e1.6	e4.5	17	119	66	165	42	8.5	8.9	2.8	3.1
11	e.68	e1.7	e4.5	15	714	65	153	36	8.0	7.5	2.8	3.1
12	e.70	e1.8	e4.5	15	3510	69	140	33	7.7	6.7	2.8	3.1
13	e.72	e2.0	e4.5	13	2020	75	131	30	7.5	7.4	3.4	3.1
14	e.76	e2.1	e4.5	12	344	83	131	28	7.4	8.1	4.2	3.1
15	e.76	e2.3	e4.5	12	247	75	123	26	7.7	7.7	6.7	3.1
16	e.78	e2.5	e4.6	11	177	72	120	24	7.7	7.4	6.2	3.1
17	e.76	e2.6	e4.8	11	129	68	124	22	7.5	7.3	5.2	3.0
18	e.78	e2.8	e5.0	10	105	66	131	21	6.6	7.2	4.6	3.2
19	e.78	e3.2	e10	10	91	63	127	20	6.0	6.8	4.7	3.1
20	e.78	e3.4	e8.0	9.9	88	82	101	19	5.7	6.5	4.6	3.2
21	e.80	e3.6	e6.5	9.6	101	1620	94	19	5.6	6.1	4.4	3.4
22	e.82	e3.6	e5.8	9.4	102	551	96	18	5.6	5.8	4.4	3.4
23	e.84	e3.6	e5.4	9.1	130	1510	87	17	5.3	6.0	4.5	3.3
24	e.90	e3.7	e5.2	9.0	100	513	84	17	4.1	5.8	4.5	3.0
25	e1.0	e3.6	e5.0	e9.3	88	310	84	16	3.1	5.7	4.9	3.0
26	e1.1	e3.7	e5.0	e8.9	97	231	83	15	2.9	4.9	5.3	3.3
27	1.1	e4.0	e6.0	e8.4	92	360	81	14	2.8	4.8	5.7	e3.0
28	4.6	e4.2	e8.0	e8.0	90	375	74	14	2.6	4.4	3.3	3.0
29	.94	e4.4	e5.0	e8.0	85	277	67	13	3.3	2.9	4.8	2.9
30	.47	e4.6	e3.0	e8.0	---	263	62	12	4.1	4.6	4.9	3.0
31	.29	---	e13	e8.0	---	258	---	11	---	4.3	3.5	---
TOTAL	26.30	73.84	237.6	811.1	8899.6	7967	4178	955	206.5	185.1	131.2	96.1
MEAN	.85	2.46	7.66	26.2	307	257	139	30.8	6.88	5.97	4.23	3.20
MAX	4.6	4.6	50	253	3510	1620	249	68	11	9.9	6.7	3.6
MIN	.29	.28	4.0	4.6	8.0	63	62	11	2.6	2.9	2.8	2.9
AC-FT	52	146	471	1610	17650	15800	8290	1890	410	367	260	191

e Estimated.

## MOJAVE RIVER BASIN

10260500 DEEP CREEK NEAR HESPERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.22	20.2	58.4	110	185	212	147	62.8	17.0	5.49	3.16	3.57
MAX	42.0	606	843	1830	1686	1539	747	248	67.0	25.9	29.2	54.3
(WY)	1984	1966	1922	1916	1980	1978	1958	1915	1922	1969	1983	1976
MIN	.23	1.14	2.53	4.56	6.07	4.87	3.20	2.37	1.14	.14	.13	.10
(WY)	1934	1957	1905	1951	1951	1956	1951	1934	1956	1961	1933	1933

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1905 - 1992	
ANNUAL TOTAL	16071.23		23767.34			
ANNUAL MEAN	44.0		64.9		67.8	
HIGHEST ANNUAL MEAN					318	
LOWEST ANNUAL MEAN					3.06	
HIGHEST DAILY MEAN	3980	Mar 1	3510	Feb 12	14700	Jan 25 1969
LOWEST DAILY MEAN	.28	Nov 1	.28	Nov 1	.00	Jul 17 1961
ANNUAL SEVEN-DAY MINIMUM	.41	Sep 8	.56	Oct 29	.07	Jul 12 1961
INSTANTANEOUS PEAK FLOW			10500	Feb 12	46600	Mar 2 1938
INSTANTANEOUS PEAK STAGE			8.65	Feb 12	23.81	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	31880		47140		49080	
10 PERCENT EXCEEDS	112		130		137	
50 PERCENT EXCEEDS	4.0		6.7		9.8	
90 PERCENT EXCEEDS	.54		1.3		.90	

10260620 HOUSTON CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'33", long 117°16'48", in NE 1/4 SE 1/4 sec.22, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 0.1 mi east of Wildrose Road, 0.1 mi southeast of intersection of Lake Gregory and Wildrose Roads, and 0.3 mi east of Crestline.

DRAINAGE AREA.--0.35 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1979 to current year.

REVISED RECORDS.--WDR CA-82-1: 1980-81(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 295 ft<sup>3</sup>/s, Feb. 19, 1980, gage height, 7.40 ft, from rating curve extended above 70 ft<sup>3</sup>/s on basis of slope-conveyance study at gage height 7.40 ft; no flow for many days in some years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	2215	51	6.05	Feb. 12	1245	141	6.75
Dec. 19	0215	54	6.07	*Mar. 21	0645	143	*6.76

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.02	.15	.07	.59	.72	.19	.06	.05	.05	.02
2	.00	.01	.01	.13	.05	7.5	.52	.20	.06	.05	.05	.02
3	.00	.01	.01	1.2	.05	2.1	.45	.18	.06	.06	.05	.02
4	.00	.01	.01	.21	.05	.87	.43	.18	.06	.05	.06	.02
5	.00	.01	.01	6.5	.09	.70	.43	.24	.06	.04	.06	.02
6	.00	.02	.01	.78	.60	2.5	.43	.19	.06	.04	.05	.02
7	.00	.00	.01	.57	2.1	.74	.42	.16	.06	.05	.03	.02
8	.00	.00	.02	.48	.20	.61	.43	.13	.05	.04	.04	.03
9	.00	.01	.04	.34	.32	.54	.41	.12	.05	.03	.04	.02
10	.00	.01	.14	.27	11	.49	.39	.11	.04	.04	.05	.02
11	.00	.02	.03	.30	16	.45	.39	.12	.05	.05	.03	.01
12	.00	.03	.01	.23	26	.42	.39	.11	.06	.26	.03	.01
13	.00	.03	.01	.21	8.6	.40	.39	.10	.06	.04	.02	.01
14	.00	.03	.01	.19	3.5	.45	.39	.10	.06	.03	.02	.01
15	.00	.00	.01	.18	7.5	.44	.39	.09	.06	.03	.03	.01
16	.00	.01	.01	.17	2.2	.37	.37	.09	.05	.03	.03	.01
17	.00	.02	.02	.17	1.7	.35	.35	.08	.05	.03	.03	.01
18	.00	.00	.02	.15	1.3	.33	.30	.07	.05	.04	.02	.01
19	.00	.00	4.2	.13	.94	.32	.24	.07	.05	.04	.02	.01
20	.00	.01	.15	.12	.74	8.9	.25	.07	.05	.05	.02	.01
21	.00	.00	.14	.12	.63	26	.22	.07	.05	.05	.02	.01
22	.00	.01	.14	.12	.57	14	.22	.08	.05	.05	.03	.01
23	.00	.01	.14	.12	.57	25	.22	.06	.05	.05	.03	.01
24	.00	.01	.15	.09	.57	3.3	.21	.06	.04	.05	.03	.01
25	.00	.01	.17	.09	.54	1.6	.19	.06	.05	.04	.03	.01
26	6.4	.03	.17	.09	.57	1.1	.16	.06	.06	.03	.03	.01
27	.07	.03	.17	.09	.57	2.6	.15	.06	.06	.03	.03	.01
28	.00	.03	.53	.08	.57	.91	.15	.07	.05	.03	.03	.01
29	.00	.03	2.2	.07	.57	.73	.14	.07	.05	.03	.03	.00
30	.01	.03	1.1	.07	---	.69	.17	.07	.05	.03	.04	.01
31	.01	---	.19	.07	---	.63	---	.07	---	.04	.03	---
TOTAL	6.49	0.43	9.85	13.49	88.17	105.63	9.92	3.33	1.61	1.48	1.06	0.40
MEAN	.21	.014	.32	.44	3.04	3.41	.33	.11	.054	.048	.034	.013
MAX	6.4	.03	4.2	6.5	26	26	.72	.24	.06	.26	.06	.03
MIN	.00	.00	.01	.07	.05	.32	.14	.06	.04	.03	.02	.00
AC-FT	13	.9	20	27	175	210	20	6.6	3.2	2.9	2.1	.8

## 10260620 HOUSTON CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.14	.35	.54	.87	1.98	1.98	.76	.26	.10	.052	.052	.096
MAX	.47	1.35	1.76	4.31	12.3	7.23	2.34	.94	.34	.19	.31	.45
(WY)	1984	1983	1984	1980	1980	1980	1983	1980	1983	1983	1983	1982
MIN	.001	.005	.012	.095	.099	.14	.11	.022	.012	.009	.003	.000
(WY)	1991	1981	1991	1991	1987	1984	1989	1984	1984	1981	1986	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992	
ANNUAL TOTAL	113.64		241.86			
ANNUAL MEAN	.31		.66		.59	
HIGHEST ANNUAL MEAN					2.20	
LOWEST ANNUAL MEAN					.16	
HIGHEST DAILY MEAN	21	Mar 1	26	Feb 12	69	Jan 29 1980
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Sep 14 1980
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 10	.00	Oct 1	.00	Sep 14 1980
INSTANTANEOUS PEAK FLOW			143	Mar 21	295	Feb 19 1980
INSTANTANEOUS PEAK STAGE			6.76	Mar 21	7.40	Feb 19 1980
ANNUAL RUNOFF (AC-FT)	225		480		428	
10 PERCENT EXCEEDS	.46		.69		.91	
50 PERCENT EXCEEDS	.02		.05		.07	
90 PERCENT EXCEEDS	.00		.01		.00	

10260620 HOUSTON CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'33", long 117°16'48", in NE 1/4 SE 1/4 sec.22, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 0.1 mi east of Wildrose Road, 0.1 mi southeast of intersection of Lake Gregory and Wildrose Roads, and 0.3 mi east of Crestline.

DRAINAGE AREA.--0.35 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1979 to current year.

REVISED RECORDS.--WDR CA-82-1: 1980-81(M).

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 295 ft<sup>3</sup>/s, Feb. 19, 1980, gage height, 7.40 ft, from rating curve extended above 70 ft<sup>3</sup>/s on basis of slope-conveyance study at gage height 7.40 ft; no flow for many days in some years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	2215	51	6.05	Feb. 12	1245	141	6.75
Dec. 19	0215	54	6.07	*Mar. 21	0645	143	*6.76

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.02	.15	.07	.59	.72	.19	.06	.05	.05	.02
2	.00	.01	.01	.13	.05	7.5	.52	.20	.06	.05	.05	.02
3	.00	.01	.01	1.2	.05	2.1	.45	.18	.06	.06	.05	.02
4	.00	.01	.01	.21	.05	.87	.43	.18	.06	.05	.06	.02
5	.00	.01	.01	6.5	.09	.70	.43	.24	.06	.04	.06	.02
6	.00	.02	.01	.78	.60	2.5	.43	.19	.06	.04	.05	.02
7	.00	.00	.01	.57	2.1	.74	.42	.16	.06	.05	.03	.02
8	.00	.00	.02	.48	.20	.61	.43	.13	.05	.04	.04	.03
9	.00	.01	.04	.34	.32	.54	.41	.12	.05	.03	.04	.02
10	.00	.01	.14	.27	11	.49	.39	.11	.04	.04	.05	.02
11	.00	.02	.03	.30	16	.45	.39	.12	.05	.05	.03	.01
12	.00	.03	.01	.23	26	.42	.39	.11	.06	.26	.03	.01
13	.00	.03	.01	.21	8.6	.40	.39	.10	.06	.04	.02	.01
14	.00	.03	.01	.19	3.5	.45	.39	.10	.06	.03	.02	.01
15	.00	.00	.01	.18	7.5	.44	.39	.09	.06	.03	.03	.01
16	.00	.01	.01	.17	2.2	.37	.37	.09	.05	.03	.03	.01
17	.00	.02	.02	.17	1.7	.35	.35	.08	.05	.03	.03	.01
18	.00	.00	.02	.15	1.3	.33	.30	.07	.05	.04	.02	.01
19	.00	.00	4.2	.13	.94	.32	.24	.07	.05	.04	.02	.01
20	.00	.01	.15	.12	.74	8.9	.25	.07	.05	.05	.02	.01
21	.00	.00	.14	.12	.63	26	.22	.07	.05	.05	.02	.01
22	.00	.01	.14	.12	.57	14	.22	.08	.05	.05	.03	.01
23	.00	.01	.14	.12	.57	25	.22	.06	.05	.05	.03	.01
24	.00	.01	.15	.09	.57	3.3	.21	.06	.04	.05	.03	.01
25	.00	.01	.17	.09	.54	1.6	.19	.06	.05	.04	.03	.01
26	6.4	.03	.17	.09	.57	1.1	.16	.06	.06	.03	.03	.01
27	.07	.03	.17	.09	.57	2.6	.15	.06	.06	.03	.03	.01
28	.00	.03	.53	.08	.57	.91	.15	.07	.05	.03	.03	.01
29	.00	.03	2.2	.07	.57	.73	.14	.07	.05	.03	.03	.00
30	.01	.03	1.1	.07	---	.69	.17	.07	.05	.03	.04	.01
31	.01	---	.19	.07	---	.63	---	.07	---	.04	.03	---
TOTAL	6.49	0.43	9.85	13.49	88.17	105.63	9.92	3.33	1.61	1.48	1.06	0.40
MEAN	.21	.014	.32	.44	3.04	3.41	.33	.11	.054	.048	.034	.013
MAX	6.4	.03	4.2	6.5	26	26	.72	.24	.06	.26	.06	.03
MIN	.00	.00	.01	.07	.05	.32	.14	.06	.04	.03	.02	.00
AC-FT	13	.9	20	27	175	210	20	6.6	3.2	2.9	2.1	.8

## 10260620 HOUSTON CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.14	.35	.54	.87	1.98	1.98	.76	.26	.10	.052	.052	.096
MAX	.47	1.35	1.76	4.31	12.3	7.23	2.34	.94	.34	.19	.31	.45
(WY)	1984	1983	1984	1980	1980	1980	1983	1980	1983	1983	1983	1982
MIN	.001	.005	.012	.095	.099	.14	.11	.022	.012	.009	.003	.000
(WY)	1991	1981	1991	1991	1987	1984	1989	1984	1984	1981	1986	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992	
ANNUAL TOTAL	113.64		241.86			
ANNUAL MEAN	.31		.66		.59	
HIGHEST ANNUAL MEAN					2.20	
LOWEST ANNUAL MEAN					.16	
HIGHEST DAILY MEAN	21	Mar 1	26	Feb 12	69	Jan 29 1980
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Sep 14 1980
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 10	.00	Oct 1	.00	Sep 14 1980
INSTANTANEOUS PEAK FLOW			143	Mar 21	295	Feb 19 1980
INSTANTANEOUS PEAK STAGE			6.76	Mar 21	7.40	Feb 19 1980
ANNUAL RUNOFF (AC-FT)	225		480		428	
10 PERCENT EXCEEDS	.46		.69		.91	
50 PERCENT EXCEEDS	.02		.05		.07	
90 PERCENT EXCEEDS	.00		.01		.00	

10260630 ABONDIGAS CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'16", long 117°15'51", in SW 1/4 SE 1/4 sec.23, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on right bank 400 ft south of east gate for San Moritz Park and 1.4 mi east of Crestline.

DRAINAGE AREA.--1.15 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,540 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1983, at site 200 ft upstream at datum 5.78 ft higher.

REMARKS.--Records poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 580 ft<sup>3</sup>/s, Feb. 27, 1983, gage height, 6.32 ft, site and datum then in use, from rating curve extended above 94 ft<sup>3</sup>/s on basis of field estimate of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1230	60	7.68	Mar. 21	0815	*128	*9.59

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	.06	.16	e.38	e1.3	e.25	e.11	.10	.00	.00
2	.00	e.00	.08	.04	.15	4.9	e1.0	e.26	e.11	.08	.00	.00
3	.00	.00	.00	.45	.13	3.4	e.80	e.35	e.11	.08	.00	.00
4	.00	.00	.00	.18	.13	1.5	e.70	e.30	e.11	.07	.00	.00
5	.00	.00	.00	e12	.13	1.2	e.60	e.90	e.10	.06	.00	.00
6	.00	.00	.00	e4.2	.26	2.1	e.54	e.50	e.10	.10	.00	.00
7	.00	.00	.00	e.55	2.1	1.7	e.52	e.41	e.10	.06	.00	.00
8	.00	.00	.00	.41	1.3	1.5	e.50	e.29	e.10	.08	.00	.00
9	.00	.00	.00	.35	.76	e1.2	e.49	e.19	e.10	.05	.00	.00
10	.00	.00	.00	.30	9.9	e.90	e.49	e.22	e.10	.04	.00	.00
11	.00	.00	.00	.29	16	e.80	e.48	e.22	e.10	.05	.00	.00
12	.00	.00	.00	.26	e25	e.74	e.48	e.22	e.10	.24	.00	.00
13	.00	.00	.00	.25	e9.0	e.60	e.48	e.19	e.10	.14	.00	.00
14	.00	.00	.00	.26	e4.5	e.58	e.47	e.19	e.10	.12	.00	.00
15	.00	.00	.00	.22	e9.5	e.52	e.47	e.13	e.10	.08	.00	.00
16	.00	.00	.00	.22	e4.0	e.50	e.46	e.13	e.10	.06	.00	.00
17	.00	.00	.00	.19	e2.1	e.48	e.45	e.13	e.10	.05	.00	.00
18	.00	.00	.00	.19	e1.8	e.46	e.43	e.13	.10	.03	.00	.00
19	.00	.00	2.2	.19	e1.4	e.45	e.40	e.13	.10	.02	.00	.00
20	.00	.00	.07	.19	e1.3	8.3	e.37	e.13	e.10	.01	.00	.00
21	.00	.00	.04	.19	e1.2	27	e.35	e.13	e.10	.01	.00	.00
22	.00	.00	.03	.17	e1.0	13	e.34	e.13	e.10	.01	.00	.00
23	.00	.00	.02	.16	e.90	24	e.32	e.12	e.10	.00	.00	.00
24	.00	.00	.02	.16	e.80	9.7	e.31	e.12	e.10	.01	.00	.00
25	.00	.00	.01	.16	e.66	e2.5	e.30	e.12	e.10	.00	.00	.00
26	e4.6	.00	.01	.16	e.60	e1.4	e.29	e.12	e.10	.00	.00	.00
27	e.05	.00	.01	.16	e.54	e3.5	e.27	e.12	e.10	.00	.00	.00
28	e.00	.00	.16	.16	e.45	e1.5	e.23	e.12	e.10	.00	.00	.00
29	e.00	.00	.59	.17	e.40	e1.2	e.24	e.11	.10	.00	.00	.00
30	e.00	.00	.54	.16	---	e1.0	e.24	e.11	.10	.00	.00	.00
31	e.00	---	.10	.16	---	e.80	---	e.11	---	.00	.00	---
TOTAL	4.65	0.00	3.88	22.61	96.17	117.81	14.32	6.58	3.04	1.55	0.00	0.00
MEAN	.15	.000	.13	.73	3.32	3.80	.48	.21	.10	.050	.000	.000
MAX	4.6	.00	2.2	12	25	27	1.3	.90	.11	.24	.00	.00
MIN	.00	.00	.00	.04	.13	.38	.23	.11	.10	.00	.00	.00
AC-FT	9.2	.00	7.7	45	191	234	28	13	6.0	3.1	.00	.00

e Estimated.

## 10260630 ABONDIGAS CREEK ABOVE LAKE GREGORY, AT CRESTLINE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.19	.38	.68	1.32	3.07	3.49	1.88	.74	.21	.088	.068	.091
MAX	.87	1.81	3.11	7.94	19.1	16.0	7.04	3.18	1.16	.48	.73	.63
(WY)	1984	1983	1984	1980	1980	1983	1983	1983	1980	1983	1983	1983
MIN	.000	.000	.000	.24	.12	.27	.32	.068	.001	.000	.000	.000
(WY)	1985	1992	1991	1991	1987	1984	1984	1987	1989	1984	1981	1981

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1979 - 1992	
ANNUAL TOTAL	161.18		270.61			
ANNUAL MEAN	.44		.74		.98	
HIGHEST ANNUAL MEAN					3.89	
LOWEST ANNUAL MEAN					.18	
HIGHEST DAILY MEAN	24	Mar 1	27	Mar 21	103	Jan 29 1980
LOWEST DAILY MEAN	.00	Jan 2	.00	Oct 1	.00	Sep 11 1979
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 6	.00	Oct 1	.00	Sep 11 1979
INSTANTANEOUS PEAK FLOW			128	Mar 21	580	Feb 27 1983
INSTANTANEOUS PEAK STAGE			9.59	Mar 21	6.32	Feb 27 1983
ANNUAL RUNOFF (AC-FT)	320		537		713	
10 PERCENT EXCEEDS	1.2		1.2		2.1	
50 PERCENT EXCEEDS	.00		.10		.12	
90 PERCENT EXCEEDS	.00		.00		.00	

10260640 LAKE GREGORY AT CRESTLINE, CA

LOCATION.--Lat 34°14'35", long 117°16'22", in NW 1/4 SW 1/4 sec.23, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, in boathouse on north side of Lake Gregory, 0.8 mi east of Lake Gregory Drive, and 0.9 mi east of Crestline.

DRAINAGE AREA.--2.66 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1978 to current year. Records for September 1966 through November 1971 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is 0.00 ft, based on map from land survey of 1892; approximately 7 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earth-type dam. Dam was completed to a height of 90 ft in 1938. Capacity is 2,070 acre-ft below spillway elevation, 4,517.0 ft. Water is released from lake to Houston Creek for water supply and recreational use in Silverwood Lake, 4.5 mi downstream. Spillway elevation is raised by addition of flashboards to accommodate summer recreational use.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents recorded, 2,360 acre-ft, Jan. 29, 1980, elevation, 4,520.33 ft; minimum, 1,900 acre-ft, several days during 1991, elevation, 4,515.02 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents recorded, 2,260 acre-ft, May 6 to June 2, elevation, 4,519.23 ft; minimum, 2,030 acre-ft, Oct. 24-26, elevation, 4,516.54 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on surveys by California Department of Water Resources in 1892 and 1936)

4,505	1,200	4,520	2,330
4,510	1,520	4,525	2,850
4,515	1,900		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2070	2080	2060	2100	2090	2090	2110	2240	2250	2230	2200	2150
2	2060	2080	2060	2090	2090	2140	2130	2240	2250	2230	2200	2150
3	2060	2080	2060	2100	2090	2110	2140	2240	2250	2230	2200	2150
4	2060	2080	2050	2100	2090	2100	2140	2240	2250	2220	2200	2150
5	2060	2070	2050	2130	2090	2100	2150	2250	2250	2220	2200	2150
6	2060	2070	2050	2110	2100	2110	2160	2260	2250	2220	2200	2150
7	2060	2070	2050	2110	2110	2100	2170	2260	2250	2220	2190	2140
8	2060	2070	2050	2100	2100	2100	2170	2260	2250	2220	2190	2140
9	2050	2070	2050	2100	2090	2100	2180	2260	2250	2220	2190	2140
10	2050	2070	2060	2090	2140	2090	2180	2260	2250	2220	2190	2120
11	2050	2070	2060	2090	2150	2090	2190	2260	2250	2220	2190	2100
12	2050	2070	2060	2090	2170	2090	2190	2260	2250	2230	2190	2090
13	2050	2070	2060	2090	2140	2090	2200	2260	2250	2230	2190	2090
14	2050	2070	2060	2090	2110	2090	2200	2260	2240	2230	2190	2080
15	2050	2070	2060	2090	2130	2090	2200	2260	2240	2230	2180	2080
16	2050	2070	2060	2090	2120	2090	2210	2260	2240	2230	2180	2080
17	2040	2070	2060	2090	2110	2090	2210	2260	2240	2220	2180	2080
18	2040	2070	2060	2090	2100	2090	2210	2260	2240	2220	2180	2080
19	2040	2070	2090	2090	2100	2090	2220	2260	2240	2220	2180	2080
20	2040	2070	2090	2090	2100	2160	2220	2260	2240	2220	2180	2080
21	2040	2070	2090	2090	2100	2160	2220	2260	2240	2220	2170	2070
22	2040	2070	2090	2090	2100	2170	2220	2260	2240	2220	2170	2070
23	2040	2060	2090	2090	2090	2160	2230	2260	2240	2220	2170	2070
24	2040	2060	2090	2090	2090	2130	2230	2260	2240	2220	2170	2070
25	2030	2060	2090	2090	2090	2120	2230	2260	2230	2210	2170	2070
26	2090	2060	2090	2090	2090	2110	2230	2260	2230	2210	2170	2070
27	2090	2060	2090	2090	2090	2120	2230	2260	2230	2210	2170	2070
28	2090	2060	2100	2090	2090	2110	2240	2260	2230	2210	2160	2070
29	2080	2060	2130	2090	2090	2110	2240	2260	2230	2210	2160	2060
30	2080	2060	2110	2090	---	2110	2240	2260	2230	2210	2160	2060
31	2080	---	2100	2090	---	2100	---	2260	---	2200	2160	---
MAX	2090	2080	2130	2130	2170	2170	2240	2260	2250	2230	2200	2150
MIN	2030	2060	2050	2090	2090	2090	2110	2240	2230	2200	2160	2060
a	4517.09	4516.85	4517.35	4517.19	4517.21	4517.36	4518.97	4519.17	4518.86	4518.55	4517.97	4516.91
b	+10	-20	+40	-10	0	+10	+140	+20	-30	-30	-40	-100

CAL YR 1991 MAX 2290 MIN 1900 b +200  
WTR YR 1992 MAX 2260 MIN 2030 b -10

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

## 10260650 HOUSTON CREEK BELOW LAKE GREGORY, AT CRESTLINE, CA

LOCATION.--Lat 34°14'54", long 117°16'05", in NE 1/4 NW 1/4 sec.23, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank of channel on Camp Switzerland campgrounds, 0.2 mi downstream from Lake Gregory spillway, 0.5 mi east of the intersection of Lake Gregory Road and Lake Gregory Drive, and 1.2 mi northeast of Crestline.

DRAINAGE AREA.--2.68 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1979 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control since November 1991. Elevation of gage is 4,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Flow regulated by Lake Gregory (station 10260640) 0.2 mi upstream, usable capacity, 2,070 acre-ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 570 ft<sup>3</sup>/s, Jan. 29, 1980, gage height, 7.31 ft, from rating curve extended above 180 ft<sup>3</sup>/s on basis of velocity-area study of peak flow; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 262 ft<sup>3</sup>/s, Feb. 12, gage height, 7.44 ft; minimum daily, 0.01 ft<sup>3</sup>/s, Oct. 4-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.08	.07	1.2	.17	2.0	2.7	.13	e.10	.13	.07	.11
2	.03	.07	.06	.73	.21	10	.17	.13	e.09	.13	.07	.10
3	.02	.07	.06	1.4	.23	22	.15	.13	e.09	.11	.08	.10
4	.01	.06	.06	1.9	.20	6.7	.14	.13	e.09	.10	.09	.10
5	.01	.05	.06	24	.16	5.5	.13	.14	e.08	.11	.07	.11
6	.01	.05	.06	26	.68	5.7	.13	.13	e.08	.11	.06	.21
7	.03	.05	.07	8.3	12	6.3	.13	e.13	.08	.12	.06	.46
8	.05	.06	.07	6.1	6.6	5.5	.13	e.13	.11	.13	.06	.44
9	.04	.04	.07	5.3	5.7	4.9	.13	e.13	.09	.13	.08	.46
10	.04	.04	.09	4.7	40	4.1	.13	e.13	.11	.12	.09	9.6
11	.05	.04	.07	3.6	96	3.3	.14	e.14	.11	.13	.08	6.7
12	.05	.05	.06	1.9	123	2.9	.15	e.14	.09	.16	.08	2.8
13	.04	.04	.06	1.6	68	2.7	.15	e.14	.07	.13	.07	.81
14	.05	.06	.06	1.3	22	2.4	.15	e.14	.07	.13	.07	.41
15	.05	.11	.06	1.0	26	2.1	.15	e.14	.09	.12	.07	.20
16	.05	.11	.06	.92	20	1.8	.15	e.14	.08	.12	.06	.14
17	.06	.12	.06	.84	8.8	1.8	.15	e.14	.09	.12	.06	.08
18	.07	.13	.06	.75	6.4	1.7	.14	e.14	.09	.12	.05	.07
19	.07	.12	.39	.67	6.1	1.6	.14	e.13	.09	.13	.05	.06
20	.06	.11	.23	.64	5.8	13	.14	e.13	.10	.13	.05	.06
21	.05	.11	.18	.53	5.4	117	.15	e.13	.12	.10	.05	.05
22	.07	.10	.15	.47	5.1	46	.15	e.13	.15	.11	.17	.08
23	.14	.09	.11	.44	4.8	108	.15	e.13	.16	.12	.10	.06
24	.15	.10	.11	.44	3.9	31	.15	e.12	.16	.11	.12	.08
25	.15	.09	.10	.46	3.4	11	.14	e.12	.16	.12	.14	.12
26	.43	.08	.09	.42	2.8	6.7	.14	e.12	.17	.15	.13	.11
27	1.1	.07	.10	.36	2.5	10	.14	e.11	.17	.13	.13	.20
28	.48	.08	.20	.33	2.4	7.7	.14	e.11	.13	.11	.13	.21
29	.38	.08	.66	.32	2.3	6.3	.14	e.11	.13	.09	.29	.24
30	.10	.08	5.9	.29	---	6.1	.14	e.10	.12	.08	.33	.27
31	.09	---	3.2	.28	---	6.1	---	e.10	---	.08	.11	---
TOTAL	3.96	2.34	12.58	97.19	480.65	461.9	6.84	3.97	3.27	3.68	3.07	24.44
MEAN	.13	.078	.41	3.14	16.6	14.9	.23	.13	.11	.12	.099	.81
MAX	1.1	.13	5.9	26	123	117	2.7	.14	.17	.16	.33	9.6
MIN	.01	.04	.06	.28	.16	1.6	.13	.10	.07	.08	.05	.05
AC-FT	7.9	4.6	25	193	953	916	14	7.9	6.5	7.3	6.1	48

e Estimated.

10260650 HOUSTON CREEK BELOW LAKE GREGORY, AT CRESTLINE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.57	1.33	2.45	4.09	9.11	8.52	2.55	1.45	.28	.11	.18	.68
MAX	3.55	7.18	8.53	21.9	52.2	29.3	12.7	6.87	1.46	.48	1.52	3.11
(WY)	1984	1983	1985	1980	1980	1980	1983	1983	1983	1983	1983	1983
MIN	.028	.045	.035	.085	.23	.31	.063	.056	.025	.013	.011	.008
(WY)	1989	1991	1991	1991	1991	1985	1989	1989	1984	1988	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1979 - 1992
ANNUAL TOTAL	393.11	1103.89	
ANNUAL MEAN	1.08	3.02	2.56
HIGHEST ANNUAL MEAN			9.96
LOWEST ANNUAL MEAN			.57
HIGHEST DAILY MEAN	45 Mar 1	123 Feb 12	285 Jan 29 1980
LOWEST DAILY MEAN	.01 Oct 4	.01 Oct 4	.00 Aug 31 1980
ANNUAL SEVEN-DAY MINIMUM	.02 Sep 30	.02 Oct 1	.00 Aug 26 1984
INSTANTANEOUS PEAK FLOW		262 Feb 12	570 Jan 29 1980
INSTANTANEOUS PEAK STAGE		7.44 Feb 12	7.31 Jan 29 1980
ANNUAL RUNOFF (AC-FT)	780	2190	1850
10 PERCENT EXCEEDS	2.8	5.7	5.5
50 PERCENT EXCEEDS	.07	.13	.12
90 PERCENT EXCEEDS	.04	.06	.03

## 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 county road (formerly U.S. Highway 66), 0.6 mi downstream from Atchison, Topeka, & Santa Fe Railway bridge, 3 mi northwest of Victorville, 17.8 mi downstream from Mojave River Forks Reservoir, 24 mi downstream from Silverwood Lake on the West Fork Mojave River, and 30 mi downstream from Lake Arrowhead on Deep Creek (East Fork Mojave River).

DRAINAGE AREA.--513 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1899 to September 1906, October 1930 to current year. Monthly discharge only for January to September 1906, October, November 1930, published in WSP 1314. Prior to October 1936, published as "at Victorville" and as "near Victorville" in 1937.

CHEMICAL DATA.--Temperature 1962-80. Specific conductance 1975-81.

REVISED RECORDS.--WSP 1927: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 2,643.01 ft above National Geodetic Vertical Datum of 1929. See WSP 1314 for history of gage changes prior to Mar. 28, 1938. Mar. 28, 1938, to Apr. 14, 1966, at site 350 ft upstream at datum 5.00 ft higher; Apr. 15, 1966, to July 17, 1969, at site 350 ft upstream at datum 3.00 ft higher.

REMARKS.--Records poor. Regulation by Lake Arrowhead, capacity, 48,000 acre-ft used principally for recreation, since 1922; Silverwood Lake, capacity, 78,000 acre-ft used for storage and distribution of imported water and recreation, since 1971; and Mojave River Forks Reservoir, capacity, 89,700 acre-ft, since 1971. Diversions and pumping for irrigation and for Mojave State Fish Hatchery upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,600 ft<sup>3</sup>/s, Mar. 2, 1938, gage height, 23.7 ft, present datum, from rating curve extended above 10,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 1.6 ft<sup>3</sup>/s, July 25 to Aug. 5, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft<sup>3</sup>/s, Feb. 13, gage height, 6.98 ft; minimum daily, 2.0 ft<sup>3</sup>/s, Aug. 15 to Sept. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	e11	13	20	24	21	198	e17	e13	e5.9	e2.4	e2.0
2	4.3	11	14	21	24	22	199	e17	e13	e5.6	e2.4	e2.0
3	4.5	11	14	29	25	21	174	e17	e12	e5.4	e2.4	e2.0
4	4.2	11	14	27	24	21	138	e17	e12	e5.1	e2.4	e2.0
5	3.8	11	14	97	25	21	107	e17	e12	e4.9	e2.4	e2.0
6	3.0	11	14	60	25	21	89	e16	e12	e4.7	e2.4	e2.0
7	2.8	11	14	36	26	21	59	e16	e12	e4.5	e2.3	e2.0
8	2.9	11	13	42	24	21	29	e16	e12	e4.3	e2.3	e2.0
9	2.8	11	13	28	25	21	24	e16	e12	e4.1	e2.2	e2.0
10	2.8	12	13	25	24	20	23	e16	e11	e3.9	e2.2	e2.0
11	3.0	13	22	24	42	20	23	e16	e11	e3.7	e2.1	e2.1
12	3.1	12	17	23	233	20	23	e15	e11	e3.5	e2.1	e2.1
13	3.6	13	17	23	1070	20	e23	e15	e11	e3.4	e2.1	e2.1
14	3.9	13	18	23	638	20	e23	e15	e11	e3.3	e2.1	e2.1
15	3.8	14	19	23	160	21	e22	e15	e11	e3.2	e2.0	e2.1
16	3.6	14	19	23	76	21	e22	e15	e10	e3.0	e2.0	e2.2
17	3.6	15	19	24	51	21	e22	e14	e10	e2.9	e2.0	e2.2
18	3.2	14	19	23	38	21	e21	e14	e9.6	e2.9	e2.0	e2.2
19	3.4	14	19	23	35	20	e21	e14	e9.3	e2.8	e2.0	e2.2
20	3.5	14	19	24	32	23	e21	e14	e9.0	e2.8	e2.0	e2.2
21	3.0	14	18	25	29	105	e19	e14	e8.7	e2.7	e2.0	e2.3
22	3.2	13	18	23	27	232	e19	e14	e8.4	e2.7	e2.0	e2.3
23	3.7	14	17	23	27	480	e19	e14	e8.0	e2.7	e2.0	e2.4
24	4.2	14	17	23	26	657	e19	e14	e7.7	e2.6	e2.0	e2.4
25	4.9	14	17	24	26	597	e18	e13	e7.4	e2.6	e2.0	e2.5
26	5.4	14	18	24	23	578	e18	e13	e7.2	e2.5	e2.0	e2.5
27	11	14	17	24	22	603	e18	e13	e7.0	e2.5	e2.0	e2.6
28	9.2	14	23	24	22	495	e18	e13	e6.8	e2.5	e2.0	e2.8
29	e9.6	14	19	24	23	382	e18	e13	e6.5	e2.5	e2.0	e2.9
30	e10	14	38	24	---	343	e18	e13	e6.2	e2.5	e2.0	e3.0
31	e10	---	22	24	---	246	---	e13	---	e2.5	e2.0	---
TOTAL	144.3	386	548	880	2846	5135	1445	459	297.8	108.2	65.8	67.2
MEAN	4.65	12.9	17.7	28.4	98.1	166	48.2	14.8	9.93	3.49	2.12	2.24
MAX	11	15	38	97	1070	657	199	17	13	5.9	2.4	3.0
MIN	2.8	11	13	20	22	20	18	13	6.2	2.5	2.0	2.0
AC-FT	286	766	1090	1750	5650	10190	2870	910	591	215	131	133

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1971, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.1	42.4	60.9	90.3	161	205	145	47.1	21.9	17.6	17.5	19.4
MAX	39.0	222	376	1216	2002	2229	1015	193	32.6	32.5	29.3	29.7
(WY)	1940	1966	1967	1969	1969	1938	1958	1967	1969	1969	1969	1941
MIN	13.7	22.1	26.5	33.2	30.1	28.8	25.1	18.2	14.0	10.5	8.45	10.1
(WY)	1965	1967	1965	1962	1964	1966	1966	1963	1961	1966	1966	1966

SUMMARY STATISTICS

WATER YEARS 1931 - 1971

ANNUAL MEAN	70.8
HIGHEST ANNUAL MEAN	402 1969
LOWEST ANNUAL MEAN	23.2 1965
HIGHEST DAILY MEAN	21000 Feb 25 1969
LOWEST DAILY MEAN	6.0 Aug 19 1951
ANNUAL SEVEN-DAY MINIMUM	6.8 Aug 25 1966
INSTANTANEOUS PEAK FLOW	70600 Mar 2 1938
INSTANTANEOUS PEAK STAGE	23.7 Mar 2 1938
ANNUAL RUNOFF (AC-FT)	51280
10 PERCENT EXCEEDS	53
50 PERCENT EXCEEDS	30
90 PERCENT EXCEEDS	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.7	29.6	42.7	59.3	218	245	103	49.6	24.1	12.9	14.0	16.5
MAX	58.2	45.6	141	302	2110	1585	422	261	157	22.5	23.8	41.7
(WY)	1977	1977	1972	1980	1980	1983	1978	1978	1978	1980	1979	1976
MIN	4.65	12.9	15.1	19.3	18.2	12.6	11.6	9.06	5.69	2.34	2.12	2.24
(WY)	1992	1992	1991	1990	1991	1990	1990	1990	1989	1990	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1972 - 1992

ANNUAL TOTAL	5477.0	12382.3	
ANNUAL MEAN	15.0	33.8	69.0
HIGHEST ANNUAL MEAN			316 1980
LOWEST ANNUAL MEAN			12.3 1990
HIGHEST DAILY MEAN	221 Mar 2	1070 Feb 13	10000 Feb 16 1980
LOWEST DAILY MEAN	1.9 Aug 31	2.0 Aug 15	1.6 Jul 25 1990
ANNUAL SEVEN-DAY MINIMUM	2.0 Aug 30	2.0 Aug 15	1.6 Jul 25 1990
INSTANTANEOUS PEAK FLOW		1850 Feb 13	15000 Feb 16 1980
INSTANTANEOUS PEAK STAGE		7.40 Feb 13	8.06 Feb 16 1980
INSTANTANEOUS LOW FLOW		1.9 Aug 31	1.6 Jul 25 1990
ANNUAL RUNOFF (AC-FT)	10860	24560	50020
10 PERCENT EXCEEDS	25	28	55
50 PERCENT EXCEEDS	13	14	25
90 PERCENT EXCEEDS	2.8	2.2	9.3

## 10262000 MOJAVE RIVER NEAR HODGE, CA

LOCATION.--Lat 34°50'09", long 117°11'27", in SE 1/4 SE 1/4 sec.28, T.9 N., R.3 W., San Bernardino County, Hydrologic Unit 18090208, at county bridge 1.5 mi north of Hodge, 10.9 mi southwest of Barstow, 42 mi downstream from Mojave River Forks Reservoir, 48 mi downstream from Silverwood Lake on West Fork Mojave River, and 54 mi downstream from Lake Arrowhead on Deep Creek (East Fork Mojave River).

DRAINAGE AREA.--1,091 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1930 to September 1932, October 1970 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 2,260 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1970, at different datum.

REMARKS.--No estimated daily discharges. Records poor. Regulation by Lake Arrowhead, capacity 48,000 acre-ft, used principally for recreation; Silverwood Lake, capacity, 78,000 acre-ft, used for storage and distribution of imported water and recreation; and Mojave River Forks Reservoir, capacity 89,700 acre-ft. Diversion and pumping for irrigation of about 12,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 8.80 ft, on basis of slope-area measurement of peak flow; no flow for all or many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 355 ft<sup>3</sup>/s, Mar. 28, gage height 6.37; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.00	.00	.00	.00	64	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	40	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	37	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	29	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	7.1	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	19	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	73	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	7.5	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	166	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	251	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	156	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	109	.00	.00	.00	.00	.00
31	.00	---	.00	.00	.00	.00	117	---	.00	.00	.00	---
TOTAL	0.02	0.00	0.00	0.00	99.50	799.20	177.10	0.00	0.00	0.00	0.00	0.00
MEAN	.001	.000	.000	.000	3.43	25.8	5.90	.000	.000	.000	.000	.000
MAX	.02	.00	.00	.00	73	251	64	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.04	.00	.00	.00	197	1590	351	.00	.00	.00	.00	.00

10262000 MOJAVE RIVER NEAR HODGE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	1.08	7.55	143	174	58.2	20.0	4.71	.000	.012	.000
MAX	.001	.000	10.8	98.5	1769	1457	372	225	113	.000	.22	.000
(WY)	1992	1931	1972	1980	1980	1983	1978	1978	1978	1931	1983	1931
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1971	1971	1971	1971	1971	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1931 - 1992
ANNUAL TOTAL	0.02	1075.82	
ANNUAL MEAN	.000	2.94	33.4
HIGHEST ANNUAL MEAN			237
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	.02 Oct 1	251 Mar 28	9430 Feb 17 1980
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 2	.00 Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 2	.00 Oct 1 1930
INSTANTANEOUS PEAK FLOW		355 Mar 28	12700 Feb 10 1978
INSTANTANEOUS PEAK STAGE		6.37 Mar 28	8.80 Feb 10 1978
ANNUAL RUNOFF (AC-FT)	.04	2130	24190
10 PERCENT EXCEEDS	.00	.00	.24
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

## MOJAVE RIVER BASIN

## 10262500 MOJAVE RIVER AT BARSTOW, CA

LOCATION.--Lat 34°54'25", Long 117°01'19", in SW 1/4 SW 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 U.S. Highway 91 at Barstow, 54 mi downstream from Mojave River Forks Reservoir, 60 mi downstream from Silverwood Lake on West Fork Mojave River, and 66 mi downstream from Lake Arrowhead on Deep Creek (East Fork Mojave River).

DRAINAGE AREA.--1,291 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1930 to current year.

REVISED RECORDS.--WSP 1564: 1932.

GAGE.--Water-stage recorder. Datum of gage is 2,089.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Regulation by Lake Arrowhead, capacity, 48,000 acre-ft, used principally for recreation; Silverwood Lake, capacity, 78,000 acre-ft, used for storage and distribution of imported water and recreation; and Mojave River Forks Reservoir, capacity, 89,700 acre-ft. Diversions and pumping for irrigation of about 15,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,300 ft<sup>3</sup>/s, Mar. 3, 1938, gage height, 8.60 ft on basis of slope-area measurement of peak flow; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14 ft<sup>3</sup>/s (estimated), Mar. 25, gage height, .77 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	e1.0	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	e4.8	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	e8.6	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	1.00	13.40	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.034	.43	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	1.0	8.6	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	2.0	27	.00	.00	.00	.00	.00	.00

e Estimated.

10262500 MOJAVE RIVER AT BARSTOW, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.001	.40	3.79	20.2	78.3	122	45.8	5.85	.001	.004	.024	.018
MAX	.061	20.2	116	747	1589	1962	547	93.5	.080	.090	1.31	.71
(WY)	1959	1966	1967	1969	1980	1938	1941	1941	1972	1965	1979	1984
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1931 - 1992
ANNUAL TOTAL		14.40	
ANNUAL MEAN		.039	22.8
HIGHEST ANNUAL MEAN			202
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN		8.6 Mar 25	18100 Mar 3 1938
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1930
INSTANTANEOUS PEAK FLOW		14 Mar 25	64300 Mar 3 1938
INSTANTANEOUS PEAK STAGE		.77 Mar 25	8.60 Mar 3 1938
ANNUAL RUNOFF (AC-FT)		29	16500
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

## MOJAVE RIVER BASIN

10263000 MOJAVE RIVER AT AFTON, CA

LOCATION.--Lat 35°02'14", long 116°23'00", in NW 1/4 SE 1/4 sec.18, T.11 N., R.6 E., San Bernardino County, Hydrologic Unit 18090208, on right bank side of right pier of Union Pacific Railroad bridge, 0.3 mi west of Afton, and 63 mi east of Barstow.

DRAINAGE AREA.--2,121 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1929 to September 1932, October 1952 to current year. Records for water year 1930 incomplete; yearly estimate published in WSP 1314. Records for water years 1979 and 1980 incomplete; discharge measurements only were published at that time.

REVISED RECORDS.--WSP 1564: 1931.

GAGE.--Water-stage recorder. Datum of gage is 1,398.15 ft above National Geodetic Vertical Datum of 1929. Dec. 21, 1929, to Sept. 30, 1932, at site 1.7 mi downstream at different datum; October 1952 to May 1978, at datum 2 ft higher.

REMARKS.--Records 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).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft<sup>3</sup>/s, Jan. 26, 1969, gage height, 12.40 ft (present datum), from rating curve extended above 3,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times during many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 76 ft<sup>3</sup>/s, Mar. 29; gage height, 3.23 ft; no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.24	.55	.75	.91	.67	e10	.25	.09	.07	.04	.09
2	.26	.25	.57	.76	.96	.73	e9.0	.26	.06	.08	.03	.09
3	.26	.25	.57	.81	.96	.67	e8.0	.27	.05	.07	.00	.09
4	.25	.27	.59	.84	.91	.68	e7.0	.29	.04	.05	.03	.07
5	.24	.27	.59	.94	.96	.71	e6.0	.32	.03	.03	.07	.06
6	.23	.22	.58	.91	1.1	.68	e4.5	.34	.04	.03	.06	.06
7	.23	.23	.53	.89	1.7	.87	e3.5	.31	.06	.05	.04	.06
8	.20	.24	.56	.89	1.2	.89	e2.5	.30	.05	.26	.03	.06
9	.20	.24	.56	.87	1.1	.70	e2.0	.31	.04	.31	.03	.07
10	.26	.25	.63	.91	1.1	.64	e1.7	.27	.04	.11	.03	.07
11	.32	.25	.70	.97	1.3	.72	e1.5	.27	.04	.06	.01	.07
12	.33	.26	.59	.93	11	.78	e1.3	.33	.04	.06	.00	.07
13	.34	.28	.59	.83	8.3	.87	e1.1	.27	.04	.07	.01	.07
14	.32	.28	.60	.86	.77	.88	e1.0	.24	.06	.07	.04	.07
15	.34	.32	.61	.87	.91	.95	e.98	.22	.09	.06	.04	.08
16	.33	.34	.64	.88	.74	.91	e.85	.29	.09	.05	.02	.08
17	.29	.36	.64	.94	.66	.85	e.75	.31	.12	.04	.01	.08
18	.25	.36	.65	.96	.66	.87	e.68	.25	.09	.02	.00	.08
19	.25	.38	.64	.96	.66	.93	e.60	.33	.08	.00	.00	.08
20	.25	.35	.66	.88	.69	.99	e.54	.28	.07	.00	.00	.09
21	.27	.36	.70	.87	.68	1.6	e.50	.25	.07	.00	.00	.09
22	.26	.37	.74	.87	.67	1.3	e.48	.28	.06	.00	.00	.09
23	.22	.38	.74	.87	.65	1.4	e.45	.32	.06	.00	.01	.09
24	.24	.39	.75	.89	.62	1.2	e.42	.33	.07	.00	.05	.09
25	.24	.39	.71	.85	.62	1.1	e.40	.18	.05	.00	.07	.08
26	.24	.40	.67	.84	.65	1.4	e.38	.13	.04	.01	.08	.10
27	.25	.47	.69	.86	.63	3.3	e.36	.10	.06	.02	.08	.11
28	.24	.51	.73	.84	.67	3.2	e.35	.11	.06	.00	.07	.13
29	.24	.54	.74	.86	.70	63	e.34	.10	.07	.00	.07	.13
30	.23	.55	.74	.87	---	20	e.30	.10	.05	.01	.07	.13
31	.24	---	.74	.88	---	13	---	.10	---	.05	.08	---
TOTAL	8.10	10.00	20.00	27.15	42.48	126.49	67.48	7.71	1.81	1.58	1.07	2.53
MEAN	.26	.33	.65	.88	1.46	4.08	2.25	.25	.060	.051	.035	.084
MAX	.34	.55	.75	.97	11	63	10	.34	.12	.31	.08	.13
MIN	.20	.22	.53	.75	.62	.64	.30	.10	.03	.00	.00	.06
AC-FT	16	20	40	54	84	251	134	15	3.6	3.1	2.1	5.0

e Estimated.

10263000 MOJAVE RIVER AT AFTON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1992, BY WATER YEAR (WY)

MEAN	.72	.99	3.06	9.85	30.2	19.8	3.25	.73	.45	.54	1.57	.80
MAX	2.86	2.29	63.9	347	705	415	56.4	1.80	1.58	3.13	18.0	4.30
(WY)	1982	1981	1966	1969	1969	1978	1969	1931	1981	1967	1984	1988
MIN	.000	.000	.21	.34	.59	.22	.20	.099	.000	.000	.000	.000
(WY)	1967	1969	1978	1976	1975	1975	1977	1977	1976	1966	1966	1966

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1930 - 1992	
ANNUAL TOTAL	362.77		316.40			
ANNUAL MEAN	.99		.86		5.86	
HIGHEST ANNUAL MEAN					100	1969
LOWEST ANNUAL MEAN					.22	1975
HIGHEST DAILY MEAN	63	Jul 7	63	Mar 29	9500	Feb 25 1969
LOWEST DAILY MEAN	.10	Aug 20	.00	Jul 19	.00	Jun 28 1961
ANNUAL SEVEN-DAY MINIMUM	.11	Aug 16	.00	Jul 19	.00	Jul 14 1961
INSTANTANEOUS PEAK FLOW			76	Mar 29	18000	Jan 26 1969
INSTANTANEOUS PEAK STAGE			3.23	Mar 29	12.40	Jan 26 1969
ANNUAL RUNOFF (AC-FT)	720		628		4250	
10 PERCENT EXCEEDS	1.2		.96		1.7	
50 PERCENT EXCEEDS	.64		.31		.80	
90 PERCENT EXCEEDS	.20		.04		.07	

## 10263500 BIG ROCK CREEK NEAR VALYERMO, CA

LOCATION.--Lat 34°25'15", long 117°50'19", in SE 1/4 NE 1/4 sec.20, T.4 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, on left bank 0.1 mi upstream from Punchbowl Canyon and 1.9 mi southeast of Valyermo.

DRAINAGE AREA.--22.9 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1923 to current year. Monthly discharge only for June 1938 to January 1939, published in WSP 1314. Prior to October 1954, published as Rock Creek near Valyermo.

REVISED RECORDS.--WSP 1314: 1938-39. WSP 1564: 1932, 1937, 1939(M). WSP 1927: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,050 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mi downstream (below Punchbowl Canyon) at different datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,300 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; minimum daily, 0.70 ft<sup>3</sup>/s, Nov. 5, 1951.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1330	107	2.75	Mar. 22	2400	98	2.95
Feb. 12	1300	*1,010	*4.34	May 6	0015	80	3.15

Minimum daily, 3.3 ft<sup>3</sup>/s, Oct. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.0	4.4	4.8	7.0	30	43	49	39	24	6.4	4.8
2	4.0	4.0	4.2	4.5	7.1	41	44	45	39	23	7.0	4.8
3	4.0	4.1	4.2	4.9	7.2	50	48	50	39	24	6.0	4.5
4	4.0	4.3	4.2	4.8	7.2	42	48	57	37	25	6.3	4.5
5	4.2	4.1	4.2	38	7.4	37	49	65	36	24	5.7	4.6
6	4.3	4.0	4.2	20	12	36	46	73	36	22	5.8	4.8
7	3.9	3.8	4.4	13	46	33	45	63	34	21	6.0	5.5
8	4.0	3.8	4.5	10	32	28	43	67	33	19	5.6	7.6
9	4.3	4.1	4.5	8.9	22	24	43	71	33	17	6.2	7.8
10	4.2	4.5	4.5	7.9	42	21	44	59	31	15	6.3	7.5
11	4.2	4.8	4.5	7.4	190	20	44	56	28	14	6.3	7.6
12	4.2	5.0	4.5	7.4	456	20	42	55	27	14	8.8	7.8
13	4.1	5.1	4.5	7.2	291	21	40	50	26	14	10	6.8
14	3.9	4.6	4.5	6.9	172	24	45	48	24	13	10	5.2
15	3.7	4.8	4.5	6.9	132	22	42	47	23	13	6.9	5.6
16	3.6	4.8	4.5	6.9	95	21	42	45	23	12	5.4	5.6
17	3.6	4.8	4.5	6.9	66	20	47	43	22	10	5.2	5.3
18	3.6	4.8	4.5	6.9	43	20	59	45	21	11	5.2	5.5
19	3.6	4.9	4.5	6.9	36	19	52	46	24	9.8	5.1	5.6
20	3.8	4.6	4.6	6.9	35	27	44	45	27	9.0	4.5	5.6
21	4.0	4.5	4.8	6.9	41	49	44	44	28	8.7	4.5	5.6
22	e4.2	4.5	4.7	6.9	47	54	46	43	28	8.4	4.5	5.4
23	e4.2	4.5	4.5	6.9	54	90	40	43	27	7.9	4.4	5.8
24	e4.2	4.5	4.5	6.9	45	69	41	44	28	8.4	4.2	6.0
25	3.3	4.5	4.5	6.9	39	56	48	43	27	7.9	4.4	5.6
26	3.5	4.4	4.5	6.9	38	46	60	43	23	7.3	5.2	5.2
27	4.2	4.4	4.6	6.9	37	60	61	44	22	6.9	4.8	5.9
28	4.2	4.6	5.1	6.9	34	58	51	45	24	6.9	4.9	5.9
29	4.1	4.6	6.9	6.9	32	52	49	45	24	6.6	5.5	5.9
30	4.0	4.8	5.8	6.9	---	49	49	44	24	6.6	5.1	6.4
31	3.9	---	4.9	6.9	---	45	---	41	---	6.4	5.2	---
TOTAL	123.0	134.2	143.2	263.0	2072.9	1184	1399	1558	857	415.8	181.4	174.7
MEAN	3.97	4.47	4.62	8.48	71.5	38.2	46.6	50.3	28.6	13.4	5.85	5.82
MAX	4.3	5.1	6.9	38	456	90	61	73	39	25	10	7.8
MIN	3.3	3.8	4.2	4.5	7.0	19	40	41	21	6.4	4.2	4.5
AC-FT	244	266	284	522	4110	2350	2770	3090	1700	825	360	347

e Estimated.

10263500 BIG ROCK CREEK NEAR VALYERMO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.14	7.63	10.7	16.4	28.0	36.8	30.6	27.2	18.6	10.8	7.72	6.30
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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1923 - 1992	
ANNUAL TOTAL	3666.1		8506.2			
ANNUAL MEAN	10.0		23.2		17.2	
HIGHEST ANNUAL MEAN					90.9	
LOWEST ANNUAL MEAN					1.91	
HIGHEST DAILY MEAN	129	Mar 1	456	Feb 12	3300	Mar 2 1938
LOWEST DAILY MEAN	1.9	Jan 1	3.3	Oct 25	.70	Nov 5 1951
ANNUAL SEVEN-DAY MINIMUM	2.0	Jan 1	3.7	Oct 14	.87	Nov 3 1951
INSTANTANEOUS PEAK FLOW			1010	Feb 12	8300	Mar 2 1938
INSTANTANEOUS PEAK STAGE			4.34	Feb 12		
ANNUAL RUNOFF (AC-FT)	7270		16870		12430	
10 PERCENT EXCEEDS	23		49		35	
50 PERCENT EXCEEDS	4.8		7.6		7.4	
90 PERCENT EXCEEDS	2.4		4.2		2.7	

10263675 BIG ROCK CREEK WASH AT HIGHWAY 138, NEAR LLANO, CA

LOCATION.--Lat 34°30'21", long 117°50'45", in NE 1/4 SW 1/4 sec.20, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, between two major channels of Big Rock Creek, at State Highway 138 crossing, and 1.6 mi west of Llano.

DRAINAGE AREA.--53.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year. Discharge measurements only, October 1991 to September 1992.

GAGE.--Two water-stage recorders (one on each of two main channels), five crest-stage gages, and box culvert control (each channel). Elevation of gage is 3,160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Indeterminate stage-discharge relation during 1992 water year. Low flows affected by diversion 3 mi upstream for municipal supply. Storm runoff unaffected.

EXTREMES FOR PERIOD OF RECORD (water years 1988-91).--Maximum discharge, 266 ft<sup>3</sup>/s, Mar. 1, 1991, from rating curve extended above 128 ft<sup>3</sup>/s on basis of culvert computations (east channel), and rating curve extended above 106 ft<sup>3</sup>/s on basis of culvert computations (west channel); no flow at times in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge was not determined; no flow for many days.

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Time	Discharge (ft <sup>3</sup> /s)	Date	Time	Discharge (ft <sup>3</sup> /s)
Oct. 7	1535	0	Mar. 12	1135	16.4
Nov. 12	1120	0	Apr. 30	0820	58.8
Dec. 5	1335	0	May 12	1520	40.3
Dec. 31	0945	0	May 15	1045	42.4
Feb. 11	0925	353	June 11	0900	1.6
Feb. 13	1005	174	June 17	1235	0.60
Feb. 18	1700	3.1	July 6	0930	0

10263675 BIG ROCK CREEK WASH AT HIGHWAY 138, NEAR LLANO, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 27, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded daily rainfall, 1.18 in, Feb. 10, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily rainfall, 1.18 in, Feb. 10; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	---	---	---	.00	---	.00	.00
2	.00	.00	.00	.00	.00	---	---	---	.00	---	.02	.00
3	.00	.00	.00	.51	.00	---	---	---	.00	---	.00	.00
4	.00	.00	.00	.00	.00	---	---	---	.00	---	.00	.00
5	.00	.00	.00	.32	.06	---	---	---	.00	---	.00	.00
6	.00	.00	.00	.00	.08	---	---	---	.00	---	.00	.00
7	.00	.00	.03	.53	.02	---	---	---	.00	---	.00	.00
8	.00	.00	.29	.52	.00	---	---	---	.00	---	.00	.00
9	.00	.02	.00	.00	.23	---	---	---	.00	---	.00	.00
10	.00	.00	.28	.00	1.18	---	---	---	.00	---	.07	.00
11	.00	.00	.01	.00	.65	---	---	---	.00	---	.02	.00
12	.00	.00	.00	.00	1.12	---	---	.00	.00	---	.00	.00
13	.00	.00	.00	.00	.17	---	---	.00	.00	---	.00	.00
14	.00	.00	.00	.00	.00	---	---	.00	.00	---	.00	.00
15	.00	.00	.00	.00	.25	---	---	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.00	---	---	.00	.00	---	.00	.00
17	.00	.00	.00	.00	.00	---	---	.00	---	---	.00	.00
18	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
19	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
20	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
21	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
22	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
23	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
24	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
25	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.00
26	.42	.00	.00	.00	---	---	---	.00	---	---	.00	.00
27	.00	.00	.20	.00	---	---	---	.00	---	---	.00	.00
28	.00	.00	.22	.00	---	---	---	.00	---	---	.00	.00
29	.00	.00	.62	.00	---	---	---	.00	---	---	.00	.24
30	.00	.00	.00	.00	---	---	---	.00	---	---	.00	.36
31	.00	---	.00	.00	---	---	---	.00	---	.00	.00	---
TOTAL	0.42	0.02	1.65	1.88	---	---	---	---	---	---	0.11	0.60

CAL YR 1991 TOTAL 7.29

10264502 PEACH TREE CREEK NEAR LITTLEROCK, CA

LOCATION.--Lat 34°31'34", long 117°59'58", in NW 1/4 NE 1/4 sec.14, T.5 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, 150 ft northeast of junction of Zinney Road and Avenue U-3 and 1.1 mi northwest of Littlerock.

DRAINAGE AREA.--0.04 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and broad-crested weir. Elevation of gage is 2,850 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 1.00 ft, from rating curve extended above 5.5 ft<sup>3</sup>/s on basis of critical-depth computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1.5 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	2030	3.8	0.81	Feb. 12	1205	*10	*1.00
Dec. 29	1950	1.6	0.67	Feb. 15	1000	1.8	0.69
Jan. 5	1315	3.4	0.79	Apr. 1	unknown	unknown	unknown
Feb. 10	1705	3.2	0.78				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e.30	.00	.00	.00	.01	.00
2	.00	.00	.00	.00	.00	.07	e.01	.00	.00	.00	.01	.00
3	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.01	.01
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
5	.00	.00	.00	.30	.01	.00	.00	.10	.00	.00	.01	.00
6	.00	.00	.00	.00	.03	.00	.00	.00	.00	.01	.00	.00
7	.00	.00	.00	.20	.00	.00	.00	.00	.00	.01	.00	.00
8	.00	.00	.05	.13	.00	.00	.00	.00	.00	.01	.00	.01
9	.00	.00	.00	.00	.04	.00	.00	.00	.00	.01	.00	.00
10	.00	.00	.02	.02	.53	.00	.00	.00	.00	.01	.00	.00
11	.00	.00	.00	.00	e.17	.00	.00	.00	.00	.01	.00	.00
12	.00	.00	.00	.00	e.97	.00	.00	.00	.00	.01	.00	.00
13	.00	.00	.00	.00	e.08	.00	.00	.00	.00	.01	.01	.01
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00
15	.01	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.01
16	.01	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00
20	.00	.00	.00	.00	.00	.08	.00	.00	.00	.01	.00	.00
21	.00	.00	.00	.00	.00	.02	.00	.00	.00	.01	.00	.00
22	.00	.00	.00	.00	.00	e.05	.00	.00	.00	.00	.01	.00
23	.00	.00	.00	.00	.00	e.07	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
26	.11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01
27	.00	.00	.03	.00	.00	e.09	.00	.00	.00	.01	.00	.01
28	.00	.00	.07	.00	.00	.00	.01	.00	.00	.00	.00	.01
29	.00	.00	.16	.00	.00	.00	.00	.00	.01	.01	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	e.01	---	.00	---	.00	.00	---
TOTAL	0.13	0.00	0.33	0.74	1.92	0.39	0.32	0.10	0.01	0.18	0.12	0.09
MEAN	.004	.000	.011	.024	.066	.013	.011	.003	.000	.006	.004	.003
MAX	.11	.00	.16	.30	.97	.09	.30	.10	.01	.01	.01	.01
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.3	.00	.7	1.5	3.8	.8	.6	.2	.02	.4	.2	.2

e Estimated.

10264502 PEACH TREE CREEK NEAR LITTLEROCK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.003	.001	.005	.009	.022	.014	.003	.002	.002	.002	.003	.004
MAX	.008	.002	.011	.024	.066	.044	.011	.003	.007	.006	.005	.007
(WY)	1991	1991	1992	1992	1992	1991	1992	1992	1989	1992	1989	1990
MIN	.000	.000	.000	.004	.005	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1989	1990	1989	1990	1990	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1989 - 1992
ANNUAL TOTAL	2.21	4.33	
ANNUAL MEAN	.006	.012	.006
HIGHEST ANNUAL MEAN			.012 1992
LOWEST ANNUAL MEAN			.002 1990
HIGHEST DAILY MEAN	.57 Mar 19	.97 Feb 12	.97 Feb 12 1992
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 10	.00 Oct 1	.00 Oct 1 1988
INSTANTANEOUS PEAK FLOW		10 Feb 12	10 Feb 12 1992
INSTANTANEOUS PEAK STAGE		1.00 Feb 12	1.00 Feb 12 1992
ANNUAL RUNOFF (AC-FT)	4.4	8.6	4.2
10 PERCENT EXCEEDS	.00	.01	.01
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10264502 PEACH TREE CREEK NEAR LITTLEROCK, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 14, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.21 in, Feb. 10, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.21 in, Feb. 10; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	---	.00	.00	---	.00	.00
2	.00	.00	.00	.00	.00	.17	---	.00	.00	---	.00	.00
3	.00	.00	.00	.48	.00	.00	---	.00	.00	---	.00	.00
4	.00	.00	.00	.05	.00	.00	---	.00	.00	---	.00	.00
5	.00	.00	.00	.67	.08	.00	---	.01	.00	---	.00	.00
6	.00	.00	.00	.01	.16	.02	---	.00	.00	---	.00	.00
7	.00	.00	.02	.43	.06	.00	---	.00	.00	---	.00	.00
8	.00	.00	.35	.63	.00	.00	---	.00	.00	---	.00	.00
9	.00	.00	.00	.01	.29	.00	---	.00	.00	---	.00	.00
10	.00	.00	.18	.00	1.21	.00	---	.00	.00	---	.00	.00
11	.00	.00	.00	.00	.34	.00	---	.00	.00	---	.00	.00
12	.00	.00	.00	.00	.96	.00	.00	.00	.00	---	.04	.00
13	.00	.00	.00	.00	.19	.00	.00	.00	.00	---	.01	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
15	.00	.00	.00	.00	.33	.00	.00	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
19	.00	.00	.02	.00	.00	.00	.00	.00	.00	---	.00	.00
20	.00	.00	.00	.00	.00	.18	.00	.00	.00	---	.00	.00
21	.00	.00	.00	.00	.00	.08	.00	.00	.00	---	.00	.00
22	.00	.00	.00	.00	.00	.14	.00	.00	.00	---	.00	.00
23	.00	.00	.00	.00	.00	.14	.00	.00	.00	---	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
26	.44	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
27	.00	.00	.19	.00	.00	.31	.00	.00	.00	---	.00	.00
28	.00	.00	.24	.00	.00	.00	.00	.00	.00	---	.00	.00
29	.00	.00	.58	.00	.00	.00	.00	.00	.00	---	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
31	.00	---	.00	.00	.00	e.09	---	.00	.00	---	.00	---
TOTAL	0.44	0.00	1.58	2.28	3.62	1.13	---	0.01	---	---	0.05	0.00

CAL YR 1991 TOTAL 7.92

e Estimated.

10264510 INN CREEK AT PALMDALE, CA

LOCATION.--Lat 34°34'51", long 118°08'05", in SW 1/4 NE 1/4 sec.27, T.6 N., R.12 W., Los Angeles County, Hydrologic Unit 18090206, on left bank 100 ft north of Camino Real Avenue, 0.1 mi south of Elizabeth Lake Road, and 1 mi west of Palmdale.

DRAINAGE AREA.--0.03 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 8.32 ft, from rating curve extended above 1.4 ft<sup>3</sup>/s on basis of culvert computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3.5 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	1935	7.4	6.73	Feb. 12	1140	*18	*8.32
Dec. 29	1845	4.2	6.30	Feb. 15	0940	6.0	6.53
Jan. 5	1300	7.7	6.77	Mar. 20	1630	5.2	6.43
Feb. 11	0120	8.5	6.89	Mar. 27	0915	6.7	6.64

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.04	.00	.00	.00	.00	e.10	.01	.00	e.00	e.00	.00
2	.02	.02	.02	.00	.00	.08	e.01	.01	.00	e.00	.00	.00
3	.02	.02	.01	.07	.00	.00	e.00	.00	.00	e.00	.00	.00
4	.01	.04	.00	.00	.00	.00	e.00	.00	.00	e.00	.00	.00
5	.02	.01	.01	.70	.00	.00	e.00	.00	.00	e.00	.00	.00
6	.02	.03	.00	.01	.01	.09	e.00	.00	.00	e.00	.00	.00
7	.02	.01	.03	.24	.00	.00	e.00	.00	.00	e.00	.00	.00
8	.02	.03	.14	.22	.00	.00	e.00	.00	.00	e.00	.00	.00
9	.02	.01	.00	.01	.10	.00	e.00	.00	.00	e.00	.00	.00
10	.02	.01	.02	.00	1.9	.00	e.00	.00	.00	e.00	.00	.00
11	.03	.03	.00	.00	.75	.00	e.00	.01	.00	e.00	.00	.00
12	.02	.05	.00	.00	1.5	.00	.00	.00	.00	e.00	.00	.00
13	.02	.03	.00	.00	.29	.00	.01	.00	.00	e.00	.00	.00
14	.03	.01	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00
15	.02	.03	.00	.00	.35	.00	.00	.00	.00	e.00	.00	.00
16	.02	.02	.00	.00	.01	.00	.00	.00	.00	e.00	.00	.00
17	.02	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
18	.03	.03	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
19	.02	.03	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
20	.00	.03	.00	.00	.00	.18	.00	.01	e.00	e.00	.00	.00
21	.02	.01	.00	.00	.01	.07	.00	.00	e.00	e.00	.00	.00
22	.00	.03	.00	.00	.00	.12	.00	.00	e.00	e.00	.00	.00
23	.02	.01	.00	.00	.00	.15	.00	.00	e.00	e.00	.00	.00
24	.01	.01	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
25	.03	.02	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
26	.18	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
27	.01	.02	.11	.00	.00	.26	.00	.00	e.00	e.00	.00	.00
28	.03	.00	.06	.00	.00	.02	.01	.00	e.00	e.00	.00	.00
29	.00	.02	.37	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
30	.03	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	.00	.00
31	.01	---	.00	.00	---	.03	---	.00	---	e.00	.00	---
TOTAL	0.73	0.60	0.77	1.25	4.92	1.00	0.13	0.04	0.00	0.00	0.00	0.00
MEAN	.024	.020	.025	.040	.17	.032	.004	.001	.000	.000	.000	.000
MAX	.18	.05	.37	.70	1.9	.26	.10	.01	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.4	1.2	1.5	2.5	9.8	2.0	.3	.08	.00	.00	.00	.00

e Estimated.

## ANTELOPE VALLEY

10264510 INN CREEK AT PALMDALE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.027	.041	.016	.028	.059	.045	.002	.015	.019	.019	.022	.027
MAX	.052	.080	.025	.040	.17	.14	.004	.031	.042	.036	.066	.060
(WY)	1990	1990	1992	1992	1992	1991	1991	1989	1989	1989	1990	1990
MIN	.006	.020	.004	.015	.005	.005	.000	.001	.000	.000	.000	.000
(WY)	1991	1992	1991	1991	1989	1989	1989	1992	1992	1992	1992	1992

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1989 - 1992

ANNUAL TOTAL	9.39	9.44	.027	
ANNUAL MEAN	.026	.026	.034	1990
HIGHEST ANNUAL MEAN			.023	1991
LOWEST ANNUAL MEAN			1.9	Feb 10 1992
HIGHEST DAILY MEAN	1.3 Mar 26	1.9 Feb 10	.00	Dec 2 1988
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 20	.00	Dec 2 1988
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 3	.00 Dec 11	.00	Dec 2 1988
INSTANTANEOUS PEAK FLOW		18 Feb 12	18	Feb 12 1992
INSTANTANEOUS PEAK STAGE		8.32 Feb 12	8.32	Feb 12 1992
ANNUAL RUNOFF (AC-FT)	19	19	20	
10 PERCENT EXCEEDS	.03	.03	.06	
50 PERCENT EXCEEDS	.01	.00	.01	
90 PERCENT EXCEEDS	.00	.00	.00	

10264510 INN CREEK AT PALMDALE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 28, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.93 in., Feb. 10, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.93 in., Feb. 10; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	---	.00	.00	---	---	.00
2	.00	.00	.00	.00	.00	.18	---	.00	.00	---	.00	.00
3	.00	.00	.00	.25	.00	.00	---	.00	.00	---	.00	.00
4	.00	.00	.00	.00	.00	.00	---	.00	.00	---	.00	.00
5	.00	.00	.00	.85	.02	.00	---	.00	.00	---	.00	.00
6	.00	.00	.00	.05	.11	.14	---	.00	.00	---	.00	.00
7	.00	.00	.16	.44	.08	.00	---	.00	.00	---	.00	.00
8	.00	.00	.38	.32	.00	.00	---	.00	.00	---	.00	.00
9	.00	.00	.00	.00	.32	.00	---	.00	.00	---	.00	.00
10	.00	.00	.09	.00	1.93	.00	---	.00	.00	---	.00	.00
11	.00	.00	.00	.00	.36	.00	---	.00	.00	---	.00	.00
12	.00	.00	.00	.00	1.27	.00	.00	.00	.00	---	.00	.00
13	.00	.00	.00	.00	.31	.00	.00	.00	.00	---	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
15	.00	.00	.00	.00	.50	.00	.00	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
17	.00	.00	.00	.00	.01	.00	.00	.00	.00	---	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
20	.00	.00	.00	.00	.00	.22	.00	.00	.00	---	.00	.00
21	.00	.00	.00	.00	.00	.15	.00	.00	.00	---	.00	.00
22	.00	.00	.00	.00	.00	.11	.00	.00	.00	---	.00	.00
23	.00	.00	.00	.00	.00	.17	.00	.00	.00	---	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
26	.35	.00	.00	.00	.00	.02	.00	.00	.00	---	.00	.00
27	.01	.00	.33	.00	.00	.38	.00	.00	.00	---	.00	.00
28	.00	.00	.16	.00	.00	.00	.00	.00	.00	---	.00	.00
29	.00	.00	.64	.00	.00	.00	.00	.00	.00	---	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	---	.00	.00
31	.00	---	.00	.00	---	e.09	---	.00	.00	---	.00	---
TOTAL	0.36	0.00	1.76	1.91	4.91	1.46	---	0.00	---	---	---	0.00

e Estimated.

10264550 CITY RANCH CREEK NEAR PALMDALE, CA

LOCATION.--Lat 34°35'00", long 118°10'36", in SE 1/4 NW 1/4 sec.29, T.6 N., R.12 W., Los Angeles County, Hydrologic Unit 18090206, on right bank at culvert on Elizabeth Lake Road and 3 mi west of Palmdale.

DRAINAGE AREA.--0.39 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,760 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 4.37 ft, from rating curve based on culvert computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1310	7.7	3.77	Feb. 12	1135	*16	*4.37
Jan. 5	1310	12	4.13	Feb. 15	1015	7.1	3.72

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.87	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.85	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.10	.00	.00	.01	.00	.00	.00	.00	.00	.00
28	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.61	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.06	0.00	0.93	0.95	3.45	0.54	0.01	0.00	0.00	0.00	0.00	0.00
MEAN	.002	.000	.030	.031	.12	.017	.000	.000	.000	.000	.000	.000
MAX	.06	.00	.61	.87	1.0	.20	.01	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.1	.00	1.8	1.9	6.8	1.1	.02	.00	.00	.00	.00	.00

10264550 CITY RANCH CREEK NEAR PALMDALE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.008	.008	.032	.028	.000	.000	.000	.000	.000	.000
MAX	.002	.000	.030	.031	.12	.094	.000	.000	.000	.000	.000	.001
(WY)	1992	1989	1992	1992	1992	1991	1992	1989	1989	1989	1989	1991
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1990	1990	1989	1989	1989	1989	1989	1989	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1989 - 1992	
ANNUAL TOTAL	4.05		5.94			
ANNUAL MEAN	.011		.016		.006	
HIGHEST ANNUAL MEAN					.016	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	1.6	Mar 26	1.0	Feb 10	1.6	Mar 26 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 5	.00	Oct 1	.00	Oct 1 1988
INSTANTANEOUS PEAK FLOW			16		16	
INSTANTANEOUS PEAK STAGE			4.37		4.37	
ANNUAL RUNOFF (AC-FT)	8.0		12		4.5	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

10264550 CITY RANCH CREEK NEAR PALMDALE, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 23, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.09 in., Feb. 10, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.09 in., Feb. 10; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	---	.00	.00	---	---	.00
2	.00	.00	.00	.00	.00	.19	---	.00	.00	---	.00	.00
3	.00	.00	.00	.23	.00	.01	---	.00	.00	---	.00	.00
4	.00	.00	.00	.01	.00	.00	---	.00	.00	---	.00	.00
5	.00	.00	.00	1.08	.04	.00	---	.00	.00	---	.00	.00
6	.00	.00	.00	.04	.24	.15	---	.00	.00	---	.00	.00
7	.00	.00	.11	.42	.11	.00	---	.00	.00	---	.00	.00
8	.00	.00	.41	.40	.00	.00	---	.00	.00	---	.00	.00
9	.00	.00	.00	.00	.29	.00	---	.00	.00	---	.00	.00
10	.00	.00	.10	.00	2.09	.00	---	.00	.00	---	.00	.00
11	.00	.00	.00	.00	.61	.00	---	.00	.00	---	.00	.00
12	.00	.00	.00	.00	1.02	.00	.00	.00	.00	---	.00	.00
13	.00	.00	.00	.00	.32	.00	.00	.00	.00	---	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
15	.00	.00	.00	.00	.62	.00	.00	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.01	.00	.00	.00	.00	---	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
20	.00	.00	.00	.00	.00	.24	.00	.00	.00	---	.00	.00
21	.00	.00	.00	.00	.00	.15	.00	.00	.00	---	.00	.00
22	.00	.00	.00	.00	.00	.16	.00	.02	.00	---	.00	.00
23	.00	.00	.00	.00	.00	.18	.00	.00	.00	---	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
26	.56	.00	.00	.00	.00	.02	.00	.00	.00	---	.00	.00
27	.00	.00	.43	.00	.00	.36	.00	.00	.00	---	.00	.00
28	.00	.00	.19	.00	.00	.00	.00	.00	.00	---	.00	.00
29	.00	.00	.88	.00	.00	.00	.00	.00	.00	---	.00	.00
30	.00	.00	.01	.00	.00	.00	.00	.00	.00	---	.00	.00
31	.00	---	.01	.00	.00	.12	---	.00	.00	---	.00	---
TOTAL	0.56	0.00	2.14	2.18	5.35	1.58	---	0.02	---	---	---	0.00

CAL YR 1991 TOTAL 12.79

10264555 ESTATES CREEK NEAR QUARTZ HILL, CA

LOCATION.--Lat 34°38'19", long 118°14'52", in SE 1/4 NW 1/4 sec.3, T.6 N., R.13 W., Los Angeles County, Hydrologic Unit 18090206, on right bank 30 ft north of Avenue M-8, 0.7 mi west of 60th Street West, and 2 mi southwest of Quartz Hill.

DRAINAGE AREA.--0.11 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1989 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and weir control. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 4.75 ft, from rating curve extended above 0.95 ft<sup>3</sup>/s on basis of weir computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2.0 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 8.6 ft<sup>3</sup>/s on basis of critical depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	1935	2.1	4.37	Mar. 6	0140	2.0	4.36
Jan. 6	1110	2.4	4.39	Mar. 20	1640	5.4	4.56
Feb. 12	1045	*12	*4.81	Mar. 22	2135	5.0	4.54
Feb. 15	0945	8.2	4.68	Mar. 27	1600	4.6	4.52

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.01	.00	.01	.00	.00	.07	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	e.07	.00	.01	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.01	.00	e.50	.02	.01	.00	.00	.00	.00	.00	.00
6	.00	.01	.00	.23	.11	.13	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	e.45	.14	.00	.00	.00	.00	.00	.00	.00
8	.00	.01	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.01	.05	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.01	.00	3.5	.00	.00	.00	.00	.00	.01	.01
11	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.02	.00
12	.00	.00	.00	.00	2.1	.00	.00	.00	.00	.00	.02	.00
13	.00	.00	.00	.00	.80	.00	.00	.00	.00	.00	.03	.00
14	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.02	.00
15	.00	.00	.00	.00	.61	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.07	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.06	.00
20	.00	.00	.00	.00	.00	.46	.00	.00	.00	.00	.06	.00
21	.00	.00	.00	.00	.00	.23	.00	.00	.00	.00	.01	.00
22	.00	.00	.00	.01	.00	.31	.00	.00	.00	.00	.00	.00
23	.00	.03	.00	.00	.00	.32	.00	.00	.01	.00	.01	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	.02
26	.18	.00	.00	.00	.00	.01	.00	.00	.01	.00	.01	.04
27	.01	.00	e.03	.00	.00	.42	.00	.00	.00	.00	.00	.04
28	.00	.00	e.10	.00	.00	.01	.00	.00	.00	.00	.00	.02
29	.00	.00	e.15	.00	.02	.00	.00	.00	.00	.00	.00	.03
30	.00	.00	.01	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.03	---	.00	---	.00	.00	---
TOTAL	0.20	0.06	0.31	1.47	8.86	2.01	0.00	0.00	0.06	0.00	0.46	0.16
MEAN	.006	.002	.010	.047	.31	.065	.000	.000	.002	.000	.015	.005
MAX	.18	.03	.15	.50	3.5	.46	.00	.00	.01	.00	.07	.04
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.4	.1	.6	2.9	18	4.0	.00	.00	.1	.00	.9	.3

e Estimated.

## 10264555 ESTATES CREEK NEAR QUARTZ HILL, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.009	.005	.004	.031	.13	.085	.002	.008	.013	.011	.014	.010
MAX	.016	.010	.010	.047	.31	.19	.005	.021	.033	.029	.020	.024
(WY)	1990	1990	1992	1992	1992	1991	1990	1989	1989	1989	1990	1989
MIN	.004	.002	.000	.023	.021	.001	.000	.000	.001	.000	.002	.003
(WY)	1991	1992	1991	1990	1990	1990	1992	1992	1991	1992	1991	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1989 - 1992
ANNUAL TOTAL	9.52	13.59	
ANNUAL MEAN	.026	.037	.025
HIGHEST ANNUAL MEAN			.037 1992
LOWEST ANNUAL MEAN			.012 1990
HIGHEST DAILY MEAN	1.9 Mar 26	3.5 Feb 10	3.5 Feb 10 1992
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 May 1 1989
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 10	.00 Oct 3	.00 Nov 21 1989
INSTANTANEOUS PEAK FLOW		12 Feb 12	14 Mar 1 1991
INSTANTANEOUS PEAK STAGE		4.81 Feb 12	4.81 Feb 12 1992
ANNUAL RUNOFF (AC-FT)	19	27	18
10 PERCENT EXCEEDS	.01	.02	.03
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10264555 ESTATES CREEK NEAR QUARTZ HILL, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--May 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since May 1, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.32 in., Feb. 10, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 2.32 in., Feb. 10; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	---	.00	.00	---	---	.00
2	.00	.00	.00	.00	.00	.25	---	.00	.00	---	.00	.00
3	.00	.00	.00	.22	.00	.01	---	.00	.00	---	.00	.00
4	.00	.00	.00	.00	.00	.00	---	.00	.00	---	.00	.00
5	.00	.00	.00	1.19	.07	.05	---	.00	.00	---	.00	.00
6	.00	.00	.00	.01	.31	.12	---	.00	.00	---	.00	.00
7	.00	.00	.12	.45	.27	.00	---	.00	.00	---	.00	.00
8	.00	.01	.38	.56	.00	.00	---	.00	.00	---	.00	.00
9	.00	.00	.00	.00	.23	.00	---	.00	.00	---	.00	.01
10	.00	.00	.10	.00	2.32	.00	---	.00	.00	---	.00	.00
11	.01	.00	.00	.00	.59	.00	---	.00	.00	---	.00	.00
12	.00	.00	.00	.00	1.23	.00	.00	.00	.00	---	.00	.00
13	.00	.00	.00	.00	.47	.00	.00	.00	.00	---	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
15	.01	.00	.00	.00	.58	.00	.00	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
20	.00	.00	.00	.00	.00	.27	.00	.00	---	---	.00	.00
21	.05	.00	.00	.00	.00	.19	.00	.00	---	---	.00	.00
22	.00	.00	.00	.00	.00	.17	.00	.05	---	---	.00	.00
23	.00	.00	.00	.00	.00	.13	.00	.00	---	---	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
26	.31	.00	.00	.00	.00	.02	.00	.00	---	---	.00	.00
27	.00	.00	.39	.00	.00	.33	.00	.00	---	---	.00	.00
28	.00	.00	.16	.00	.00	.00	.00	.00	---	---	.00	.00
29	.01	.00	.79	.00	.00	.00	.00	.00	---	---	.00	.00
30	.00	.00	.02	.00	---	.00	.00	.00	---	---	.00	.00
31	.00	---	.00	.00	---	.12	---	.00	---	---	.00	---
TOTAL	0.39	0.01	1.96	2.43	6.07	1.66	---	0.05	---	---	---	0.01

CAL YR 1991 TOTAL 12.30

ANTELOPE VALLEY

10264605 JOSHUA CREEK NEAR MOJAVE, CA

LOCATION.--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, on right bank at culvert on Tehachapi-Willow Springs Road 10 mi southwest of Mojave.

DRAINAGE AREA.--3.83 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year. October 1958 to September 1973 (annual maximum only).

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 3,820 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1958 to September 1973, nonrecording gage at same site at different datum.

REMARKS.--Records poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28 ft<sup>3</sup>/s, Mar. 20, 1992, gage height, 3.09 ft, from rating curve extended above no flow on basis of three estimates of flow. No flow most of all years or all of most years

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 2,540 ft<sup>3</sup>/s, Aug. 16, 1965, gage height unknown, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft<sup>3</sup>/s and maximum (\*) from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1130	e25	3.05	Mar. 20	1715	*e28	*3.09
Feb. 15	1215	e12	2.82	Apr. 1	0900	e5.3	2.81

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e.42	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	e.02	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	e2.1	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	e1.6	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	e1.2	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	e1.4	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.02	4.96	1.44	0.42	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.001	.17	.046	.014	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.02	2.1	1.4	.42	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.04	9.8	2.9	.8	.00	.00	.00	.00	.00

e Estimated.

10264605 JOSHUA CREEK NEAR MOJAVE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.000	.044	.012	.004	.000	.000	.000	.000	.000
MAX	.000	.000	.000	.001	.17	.046	.014	.000	.000	.000	.000	.000
(WY)	1989	1989	1989	1992	1992	1992	1992	1989	1989	1989	1989	1989
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1989 - 1992
ANNUAL TOTAL	0.01	6.84	
ANNUAL MEAN	.000	.019	.005
HIGHEST ANNUAL MEAN			.019 1992
LOWEST ANNUAL MEAN			.000 1989
HIGHEST DAILY MEAN	.01 Mar 1	2.1 Feb 12	2.1 Feb 12 1992
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1988
INSTANTANEOUS PEAK FLOW		28 Mar 20	28 Mar 20 1992
INSTANTANEOUS PEAK STAGE		3.09 Mar 20	3.09 Mar 20 1992
ANNUAL RUNOFF (AC-FT)	.02	14	3.4
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10264605 JOSHUA CREEK NEAR MOJAVE, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--February 1989 to current year.

INSTRUMENTATION.--Tipping-bucket rain gage since Feb. 22, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.81 in, Feb. 12, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.81 in, Feb. 12; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e.17	.00	.00	---	.00	.00
2	.00	.00	.00	.00	.00	.25	---	.00	.00	---	.00	.00
3	.00	.00	.00	.01	.00	.00	---	.00	.00	---	.00	.00
4	.00	.00	.00	.01	.00	.00	---	.00	.00	---	.00	.00
5	.00	.00	.00	1.04	.14	.02	---	.01	.00	---	.00	.00
6	.00	.00	.00	.07	1.02	.07	---	.00	.00	---	.00	.00
7	.00	.00	.12	.09	.36	.01	---	.00	.00	---	.00	.00
8	.00	.00	.14	.34	.00	.00	---	.00	.00	---	.00	.00
9	.00	.00	.00	.00	.12	.00	---	.00	.00	---	.00	.00
10	.00	.00	.00	.00	.99	.00	---	.00	.00	---	.00	.00
11	.00	.00	.00	.00	.22	.00	.00	.00	.00	---	.00	.00
12	.00	.00	.00	.00	1.81	.00	.00	.00	.00	---	.00	.00
13	.00	.00	.00	.00	.87	.00	.00	.00	.00	---	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
15	.00	.00	.00	.00	.88	.00	.00	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
17	.00	.01	.00	.00	.00	.00	.00	.00	---	---	.00	.00
18	.00	.22	.00	.00	.00	.00	.00	.00	---	---	.00	.00
19	.00	.00	.12	.00	.00	.00	.00	.00	---	---	.00	.00
20	.00	.00	.00	.00	.00	.41	.00	.00	---	---	.00	.00
21	.00	.00	.00	.00	.00	.10	.00	.00	---	---	.00	.00
22	.00	.00	.00	.00	.00	.16	.00	.00	---	---	.00	.00
23	.00	.00	.00	.00	.00	.09	.00	.00	---	---	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
26	.24	.00	.00	.00	.00	.02	.00	.00	---	---	.00	.00
27	.02	.00	.36	.00	.00	.23	.00	.00	---	---	.00	.00
28	.00	.00	.24	.00	.00	.01	.00	.00	---	---	.00	.00
29	.00	.00	1.19	.00	.00	.00	.00	.00	---	---	.00	.00
30	.00	.00	.12	.00	---	.00	.00	.00	---	---	.00	.00
31	.00	---	.00	.00	---	.10	---	.00	---	.00	.00	---
TOTAL	0.26	0.23	2.29	1.56	6.41	1.47	---	0.01	---	---	0.00	0.00

CAL YR 1991 TOTAL 10.66

e Estimated.

10264675 ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE, CA

LOCATION.--Lat 34°58'06", long 117°53'29", in NE 1/4 NW 1/4 sec.13, T.10 N., R.10 W., Kern County, Hydrologic Unit 18090206, on right bank at culvert on U.S. Government Railroad, 330 ft east of Rosamond Boulevard, and 0.75 mi west of Rogers Lake.

DRAINAGE AREA.--1.73 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,340 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. Inflow can occur from artificial ditch 10 ft upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11 ft<sup>3</sup>/s, Apr. 14, 1989, and Feb. 12, 1992, gage height, 4.82 ft, from rating curve on basis of culvert computations; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5.0 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1250	*11	*4.82	Feb. 15	1040	9.7	4.73

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.41	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.56	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.34	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.06	0.15	2.08	0.54	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.002	.005	.072	.017	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.06	.13	1.0	.34	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.1	.3	4.1	1.1	.00	.00	.00	.00	.00	.00

## 10264675 ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.001	.018	.012	.005	.001	.000	.000	.000	.000
MAX	.000	.000	.002	.005	.072	.029	.018	.004	.001	.000	.000	.000
(WY)	1989	1989	1992	1992	1992	1991	1989	1991	1991	1989	1989	1989
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1989	1989	1989	1990	1990	1989	1989	1989	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1989 - 1992
ANNUAL TOTAL	1.13	2.83	
ANNUAL MEAN	.003	.008	.003
HIGHEST ANNUAL MEAN			.008 1992
LOWEST ANNUAL MEAN			.000 1990
HIGHEST DAILY MEAN	.55 Mar 26	1.0 Feb 12	1.0 Feb 12 1992
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1988
INSTANTANEOUS PEAK FLOW		11 Feb 12	11 Apr 14 1989
INSTANTANEOUS PEAK STAGE		4.82 Feb 12	4.82 Apr 14 1989
ANNUAL RUNOFF (AC-FT)	2.2	5.6	2.2
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10264675 ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE, CA--Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.--January 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 21, 1989. Supplemental weight-driven recording rain gage since Jan. 13, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded daily rainfall, 1.03 in, Feb. 12, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily rainfall, 1.03 in, Feb. 12; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.09	.00	.00	---	.00	.00
2	.00	.00	.00	.00	.00	.03	.00	.00	.00	---	.00	.00
3	.00	.00	.00	.08	.00	.00	.00	.00	.00	---	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
5	.00	.00	.00	.62	.12	.00	.00	.00	.00	---	.00	.00
6	.00	.00	.00	.00	.43	.01	.00	.00	.00	---	.00	.00
7	.00	.00	.07	.28	.09	.00	.00	.00	.00	---	.00	.00
8	.00	.00	.16	.01	.00	.00	.00	.00	.00	---	.00	.00
9	.00	.00	.00	.00	.00	.01	.00	.00	.00	---	.00	.00
10	.00	.00	.12	.00	.79	.00	.00	.00	.00	---	.00	.00
11	.00	.00	.00	.00	.25	.00	.00	.00	.00	---	.00	.00
12	.00	.00	.01	.00	1.03	.00	.00	.00	.00	---	.00	.00
13	.00	.00	.00	.00	.31	.00	.00	.00	.00	---	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	---	.00	.00
15	.00	.00	.00	.00	.55	.00	.00	.00	.00	---	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
20	.00	.00	.00	.00	.00	.13	.00	.00	---	---	.00	.00
21	.00	.00	.00	.00	.00	.16	.00	.00	---	---	.00	.00
22	.00	.00	.00	.00	.00	.13	.00	.00	---	---	.00	.00
23	.00	.00	.00	.00	.00	.07	.00	.00	---	---	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
26	.06	.00	.00	.00	.00	.00	.00	.00	---	---	.00	.00
27	.00	.00	.02	.00	.00	.41	.00	.00	---	---	.00	.00
28	.00	.00	.17	.00	.00	.00	.00	.00	---	---	.00	.00
29	.00	.00	.43	.00	.00	.00	.00	.00	---	---	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	---	---	.00	.00
31	.00	---	.00	.00	---	.18	---	.00	---	.00	.00	---
TOTAL	0.06	0.00	0.98	0.99	3.57	1.13	0.09	0.00	---	---	0.00	0.00

CAL YR 1991 TOTAL 5.41

## 10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA

LOCATION.--Lat 37°40'08", long 118°49'00", in SW 1/4 SE 1/4 sec.19, T.3 S., R.29 E., Mono County, Hydrologic Unit 18090102, on right bank 2.6 mi north of Whitmore Hot Springs and 8.4 mi east of Mammoth.

DRAINAGE AREA.--68.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year. Daily discharges for 1986 published in Water-Resources Investigations Report 89-4033 as "Hot Creek Flume."

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 6,950 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Minor diversions for domestic and agricultural use upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 109 ft<sup>3</sup>/s, June 14, 1991, gage height, 1.92 ft; minimum daily, 30 ft<sup>3</sup>/s, Dec. 27, 28, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 15	1100	*60	*1.31				

Minimum daily, 32 ft<sup>3</sup>/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	41	33	34	32	37	35	39	50	44	37	36
2	40	40	34	34	32	37	35	40	50	45	37	36
3	40	40	35	35	32	37	35	40	49	44	36	35
4	40	39	34	34	32	37	35	40	49	42	36	35
5	39	39	34	35	33	36	35	41	48	40	35	35
6	38	39	34	34	33	36	34	41	47	40	35	35
7	37	39	35	35	33	36	34	44	46	40	36	34
8	36	40	35	35	34	36	35	47	46	40	36	34
9	36	40	34	34	33	35	33	49	45	42	36	34
10	36	40	34	35	34	36	33	50	44	42	36	34
11	37	39	34	35	34	36	33	51	40	42	35	34
12	37	37	33	34	34	35	33	53	41	45	36	34
13	37	37	34	34	34	35	34	53	43	44	37	33
14	37	37	34	34	34	34	35	55	43	43	37	34
15	37	39	34	34	35	34	33	58	43	43	38	34
16	36	36	34	34	34	34	33	57	44	40	37	34
17	36	40	34	34	34	34	35	56	44	40	37	34
18	36	36	35	34	34	34	37	51	44	39	37	35
19	36	36	34	33	35	34	37	49	43	39	36	34
20	36	38	34	33	36	34	36	50	43	39	35	34
21	35	38	34	34	37	34	37	49	44	38	35	34
22	36	37	34	34	38	34	37	46	43	36	35	34
23	36	36	34	34	37	34	35	45	43	37	35	33
24	36	36	34	34	37	34	38	44	43	38	35	33
25	36	36	34	34	37	34	37	44	44	39	35	32
26	40	36	34	34	37	34	37	44	43	38	35	33
27	40	36	34	34	37	34	37	46	42	38	35	32
28	41	35	34	33	37	34	38	49	43	38	35	32
29	40	33	34	33	37	34	38	50	44	37	35	32
30	39	33	34	32	---	35	38	49	44	38	35	32
31	42	---	34	32	---	36	---	48	---	37	36	---
TOTAL	1168	1128	1056	1052	1006	1084	1062	1478	1335	1247	1111	1015
MEAN	37.7	37.6	34.1	33.9	34.7	35.0	35.4	47.7	44.5	40.2	35.8	33.8
MAX	42	41	35	35	38	37	38	58	50	45	38	36
MIN	35	33	33	32	32	34	33	39	40	36	35	32
AC-FT	2320	2240	2090	2090	2000	2150	2110	2930	2650	2470	2200	2010

## 10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.4	36.9	34.3	34.5	35.4	36.9	37.4	41.9	53.0	43.0	39.6	36.9
MAX	38.7	39.4	37.2	37.5	38.1	39.3	40.1	47.7	69.9	50.4	44.4	42.3
(WY)	1990	1990	1990	1990	1990	1990	1991	1992	1991	1991	1991	1991
MIN	32.8	33.7	31.6	32.0	33.5	35.0	35.4	38.4	44.5	38.4	35.8	33.8
(WY)	1991	1991	1991	1991	1991	1992	1992	1991	1992	1990	1992	1992

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1990 - 1992

ANNUAL TOTAL	15106	13742		
ANNUAL MEAN	41.4	37.5	38.8	
HIGHEST ANNUAL MEAN			40.4	1991
LOWEST ANNUAL MEAN			37.5	1992
HIGHEST DAILY MEAN	103	Jun 14	58	May 15
LOWEST DAILY MEAN	31	Jan 1	32	Jan 30
ANNUAL SEVEN-DAY MINIMUM	31	Jan 4	32	Jan 29
INSTANTANEOUS PEAK FLOW			60	May 15
INSTANTANEOUS PEAK STAGE			1.31	May 15
ANNUAL RUNOFF (AC-FT)	29960	27260	28140	
10 PERCENT EXCEEDS	56	44	45	
50 PERCENT EXCEEDS	38	36	37	
90 PERCENT EXCEEDS	33	34	33	

## 10265160 LITTLE HOT CREEK BELOW HOT SPRINGS, NEAR MAMMOTH LAKES, CA

LOCATION.--Lat 37°41'25", long 118°50'29", in SW 1/4 NW 1/4 sec.13, T.3 S., R.28 E., Mono County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 3.6 mi upstream from Owens River, 4.5 mi north of Whitmore Hot Springs, and 7.3 mi northeast of Mammoth Lakes.

DRAINAGE AREA.--6.37 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1990 to current year.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 6,990 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No storage or diversion upstream from station. Most of the water originates from hot springs 300 ft upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 0.82 ft<sup>3</sup>/s, July 30, 1991, gage height, 0.61 ft; minimum daily, 0.33 ft<sup>3</sup>/s, Aug. 1-3, 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	1345	*0.67	*0.53				

Minimum daily, 0.33 ft<sup>3</sup>/s, Aug. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.47	.46	.42	.42	.42	.42	.40	.39	.37	.33	.36
2	.46	.47	.46	.42	.42	.42	.42	.41	.38	.37	.33	.36
3	.46	.47	.46	.43	.40	.41	.42	.41	.37	.37	.33	.36
4	.46	.47	.46	.42	.40	.40	.42	.42	.36	.37	.34	.37
5	.46	.46	.47	.44	.40	.41	.42	.42	.37	.37	.34	.38
6	.46	.44	.47	.42	.40	.42	.42	.42	.37	.37	.34	.38
7	.46	.44	.47	.42	.40	.41	.42	.42	.37	.37	.34	.36
8	.46	.44	.47	.42	.40	.41	.42	.42	.37	.37	.34	.36
9	.46	.44	.46	.41	.40	.40	.43	.42	.37	.37	.34	.36
10	.46	.44	.47	.40	.40	.40	.44	.40	.37	.37	.35	.36
11	.46	.44	.47	.40	.42	.41	.43	.40	.37	.37	.35	.37
12	.46	.44	.47	.40	.43	.41	.43	.40	.37	.39	.36	.37
13	.46	.44	.47	.40	.40	.43	.44	.40	.38	.36	.35	.37
14	.46	.46	.47	.40	.40	.44	.44	.40	.38	.35	.35	.37
15	.47	.45	.47	.40	.41	.44	.43	.39	.38	.36	.35	.37
16	.46	.44	.46	.40	.40	.44	.43	.40	.38	.36	.35	.37
17	.46	.46	.44	.40	.40	.43	.44	.39	.38	.35	.35	.37
18	.47	.45	.44	.40	.40	.43	.44	.39	.38	.35	.35	.36
19	.47	.44	.44	.40	.40	.43	.44	.39	.38	.35	.35	.36
20	.47	.44	.44	.40	.40	.44	.44	.40	.38	.36	.35	.36
21	.47	.45	.44	.40	.40	.45	.43	.38	.38	.36	.36	.36
22	.47	.45	.44	.40	.40	.44	.42	.38	.38	.35	.36	.36
23	.47	.45	.44	.40	.40	.43	.42	.38	.39	.34	.36	.36
24	.47	.45	.44	.40	.40	.42	.42	.38	.38	.34	.36	.36
25	.47	.45	.44	.40	.40	.43	.42	.38	.36	.34	.36	.36
26	.52	.46	.44	.40	.40	.43	.42	.38	.36	.34	.36	.36
27	.47	.46	.44	.40	.40	.44	.42	.38	.36	.34	.36	.36
28	.47	.46	.43	.40	.40	.44	.42	.38	.37	.34	.36	.37
29	.47	.47	.44	.40	.40	.44	.43	.38	.37	.35	.36	.37
30	.46	.46	.43	.41	---	.45	.42	.38	.37	.35	.36	.37
31	.47	---	.42	.42	---	.43	---	.38	---	.35	.36	---
TOTAL	14.45	13.56	14.02	12.63	11.70	13.20	12.81	12.28	11.22	11.10	10.85	10.95
MEAN	.47	.45	.45	.41	.40	.43	.43	.40	.37	.36	.35	.36
MAX	.52	.47	.47	.44	.43	.45	.44	.42	.39	.39	.36	.38
MIN	.46	.44	.42	.40	.40	.40	.42	.38	.36	.34	.33	.36
AC-FT	29	27	28	25	23	26	25	24	22	22	22	22

10265160 LITTLE HOT CREEK BELOW HOT SPRINGS, NEAR MAMMOTH LAKES, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.44	.44	.44	.41	.40	.44	.44	.38	.38	.38	.39	.40
MAX	.47	.45	.45	.41	.40	.45	.45	.40	.39	.41	.44	.44
(WY)	1992	1992	1992	1991	1991	1991	1991	1992	1991	1991	1991	1991
MIN	.41	.42	.43	.41	.40	.43	.43	.37	.37	.36	.35	.37
(WY)	1991	1991	1991	1992	1992	1992	1992	1991	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1991 - 1992
ANNUAL TOTAL	156.43	148.77	
ANNUAL MEAN	.43	.41	.41
HIGHEST ANNUAL MEAN			.42 1991
LOWEST ANNUAL MEAN			.41 1992
HIGHEST DAILY MEAN	.54 Mar 4	.52 Oct 26	.54 Mar 4 1991
LOWEST DAILY MEAN	.34 May 15	.33 Aug 1	.33 Aug 1 1992
ANNUAL SEVEN-DAY MINIMUM	.35 May 13	.34 Aug 1	.34 Aug 1 1992
INSTANTANEOUS PEAK FLOW		.67 Oct 26	.82 Jul 30 1991
INSTANTANEOUS PEAK STAGE		.53 Oct 26	.61 Jul 30 1991
ANNUAL RUNOFF (AC-FT)	310	295	299
10 PERCENT EXCEEDS	.47	.46	.46
50 PERCENT EXCEEDS	.43	.40	.42
90 PERCENT EXCEEDS	.39	.36	.36

10268225 MCGEE CREEK DIVERSION NEAR BISHOP, CA

LOCATION.--Lat 37°16'32", long 118°37'09", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 5 ft downstream from outlet of diversion pipe, 80 ft upstream from tributary to Birch Creek, and 13.5 mi southwest of Bishop.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Cipolletti weir. Elevation of gage is 8,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--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).

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 11 ft<sup>3</sup>/s, Sept. 30, 1992; minimum daily, 0.46 ft<sup>3</sup>/s, Mar. 2, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	1.4	1.2	.98	.70	.74	.95	3.0	3.8	5.1	5.0	e3.3
2	6.4	1.4	1.3	.99	.64	.74	.98	3.0	3.7	4.9	5.0	e3.0
3	6.2	1.5	1.3	.95	e.75	.74	1.2	3.1	3.6	5.3	4.9	2.7
4	5.9	1.5	1.3	.95	e.80	.76	1.1	3.0	3.6	5.6	4.8	2.5
5	5.7	1.5	1.3	.95	.79	.84	1.2	3.0	3.6	5.7	4.8	2.5
6	e5.2	1.5	1.3	.92	.74	.85	1.2	3.0	3.6	6.0	4.7	2.4
7	5.0	1.5	1.3	.97	.74	.92	1.3	3.0	3.6	6.1	4.7	2.4
8	4.6	1.7	1.4	.92	.71	.84	1.3	3.0	3.6	6.3	4.7	2.6
9	4.3	1.7	1.3	.87	.67	.84	1.4	3.0	3.6	6.0	4.7	2.7
10	3.5	1.6	1.3	.88	.64	.74	1.6	3.0	3.6	6.3	4.6	2.6
11	2.6	1.5	1.3	.82	.73	.83	1.7	2.9	5.7	5.9	4.7	2.6
12	2.3	1.6	1.3	.75	.82	.90	1.7	2.8	7.1	5.8	4.8	2.5
13	e2.1	1.6	1.3	.80	.84	.90	1.7	2.8	6.5	5.8	5.4	2.4
14	1.9	1.5	1.2	.76	.70	.87	1.7	2.8	6.0	5.4	5.8	2.4
15	1.9	1.5	1.2	e.82	e.75	.85	1.7	2.8	5.4	5.4	5.8	2.3
16	1.7	1.6	1.2	.82	.80	.89	1.8	2.8	4.9	5.3	5.6	2.0
17	1.7	1.6	1.1	.84	.81	.90	1.8	2.8	4.7	5.3	5.5	2.3
18	1.7	1.7	1.1	.79	e.76	1.0	1.8	4.4	4.6	5.7	5.6	2.4
19	1.8	1.7	1.1	.73	e.74	.95	1.8	6.0	4.4	5.6	5.3	2.2
20	1.7	1.5	1.0	.73	.74	.85	2.0	5.9	4.2	5.5	5.1	2.0
21	1.7	1.4	.95	.76	.78	.92	2.1	5.7	4.4	5.4	4.8	1.9
22	1.6	1.4	1.0	.75	.78	.92	2.1	4.6	5.0	5.5	4.4	1.9
23	1.5	1.4	1.1	.76	.74	.84	2.0	3.4	5.0	5.3	4.1	1.9
24	1.5	1.4	1.1	.71	.74	.83	2.1	3.4	5.0	5.3	3.8	1.9
25	1.5	1.4	1.1	.66	.74	.84	2.2	3.3	5.1	5.3	3.8	1.8
26	1.5	1.3	1.1	.64	.78	.84	2.1	3.3	4.7	5.3	3.7	1.8
27	1.7	1.2	1.1	.69	.74	.84	2.3	3.4	4.9	5.4	3.6	1.7
28	1.7	1.3	1.2	.67	.74	.84	2.7	3.6	5.9	5.4	3.7	1.7
29	1.5	1.2	1.2	.71	.74	.84	2.8	3.6	6.1	5.4	3.5	6.0
30	1.4	1.3	1.2	.71	---	.83	2.9	3.7	5.4	5.5	3.3	11
31	1.5	---	1.1	.68	---	.88	---	3.8	---	5.3	e3.3	---
TOTAL	90.0	44.4	36.95	24.98	21.65	26.37	53.23	107.9	141.3	172.1	143.5	81.4
MEAN	2.90	1.48	1.19	.81	.75	.85	1.77	3.48	4.71	5.55	4.63	2.71
MAX	6.7	1.7	1.4	.99	.84	1.0	2.9	6.0	7.1	6.3	5.8	11
MIN	1.4	1.2	.95	.64	.64	.74	.95	2.8	3.6	4.9	3.3	1.7
AC-FT	179	88	73	50	43	52	106	214	280	341	285	161

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1992	1991	1991	1991	1991	1991	1991	1991	1991	1991
MEAN	2.26	1.26	.98	.73	.65	.84	1.34	3.04	6.25	6.34	4.92	3.84
MAX	2.90	1.48	1.19	.81	.75	.85	1.77	3.48	7.79	7.12	5.21	4.97
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991
MIN	1.62	1.04	.76	.66	.55	.82	.91	2.60	4.71	5.55	4.63	2.71
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1992	1992

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1991 - 1992

ANNUAL TOTAL	1105.59	943.78	
ANNUAL MEAN	3.03	2.58	2.71
HIGHEST ANNUAL MEAN			2.85 1991
LOWEST ANNUAL MEAN			2.58 1992
HIGHEST DAILY MEAN	9.7 Jun 15	11 Sep 30	11 Sep 30 1992
LOWEST DAILY MEAN	.46 Mar 2	.64 Jan 26	.46 Mar 2 1991
ANNUAL SEVEN-DAY MINIMUM	.50 Feb 19	.68 Jan 25	.50 Feb 19 1991
ANNUAL RUNOFF (AC-FT)	2190	1870	1970
10 PERCENT EXCEEDS	7.6	5.4	6.1
50 PERCENT EXCEEDS	1.5	1.7	1.6
90 PERCENT EXCEEDS	.62	.76	.69

## 10270680 GREEN CREEK CONDUIT OUTLET NEAR BISHOP, CA

LOCATION.--Lat 37°10'07", long 118°33'53", 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow limited by size of diversion pipe from Green Creek. Water is used for power development downstream from South lake.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3.7 ft<sup>3</sup>/s, June 15, 1991, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.24	1.5	.62	.18	.17
2	.00	.00	.00	.00	.00	.00	.00	.25	1.9	.50	.16	.13
3	.00	.00	.00	.00	.00	.00	.00	.25	2.4	.42	.17	.11
4	.00	.00	.00	.00	.00	.00	.00	.30	3.1	.33	.16	.13
5	.00	.00	.00	.00	.00	.00	.00	.34	3.4	.30	.17	.10
6	.00	.00	.00	.00	.00	.00	.00	.46	3.2	.28	.18	.08
7	.00	.00	.00	.00	.00	.00	.00	.51	2.5	.33	.21	.08
8	.00	.00	.00	.00	.00	.00	.00	.64	1.6	.37	.18	.07
9	.00	.00	.00	.00	.00	.00	.00	.74	1.3	.37	.18	.05
10	.00	.00	.00	.00	.00	.00	.00	.90	1.4	.36	.16	.05
11	.00	.00	.00	.00	.00	.00	.00	1.2	1.7	.47	.12	.04
12	.00	.00	.00	.00	.00	.00	.00	1.3	1.3	.63	.16	.05
13	.00	.00	.00	.00	.00	.00	.00	1.4	1.1	1.1	.27	.05
14	.00	.00	.00	.00	.00	.00	.00	1.5	.80	1.2	.67	.05
15	.00	.00	.00	.00	.00	.00	.00	1.4	.62	1.0	.75	.03
16	.00	.00	.00	.00	.00	.00	.00	1.4	.54	.82	.58	.01
17	.00	.00	.00	.00	.00	.00	.00	1.4	.49	.60	.41	.01
18	.00	.00	.00	.00	.00	.00	.00	1.4	.39	.48	.32	.06
19	.00	.00	.00	.00	.00	.00	.00	1.3	.32	.41	.26	.05
20	.00	.00	.00	.00	.00	.00	.00	1.2	.27	.35	.22	.03
21	.00	.00	.00	.00	.00	.00	.00	.99	.29	.33	.18	.02
22	.00	.00	.00	.00	.00	.00	.00	.79	.30	.30	.15	.00
23	.00	.00	.00	.00	.00	.00	.00	.77	.34	.32	.17	.00
24	.00	.00	.00	.00	.00	.00	.00	.71	.40	.29	.15	.00
25	.00	.00	.00	.00	.00	.00	.00	.71	.48	.26	.14	.00
26	.00	.00	.00	.00	.00	.00	.00	.65	.43	.26	.13	.00
27	.00	.00	.00	.00	.00	.00	.00	.86	.39	.24	.13	.00
28	.00	.00	.00	.00	.00	.00	.00	1.2	.45	.24	.13	.00
29	.00	.00	.00	.00	.00	.00	.22	1.2	.71	.24	.13	.00
30	.00	.00	.00	.00	---	.00	.22	1.1	.70	.21	.14	.00
31	.00	---	.00	.00	---	.00	---	1.3	---	.18	.18	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.44	28.41	34.32	13.81	7.14	1.37
MEAN	.000	.000	.000	.000	.000	.000	.015	.92	1.14	.45	.23	.046
MAX	.00	.00	.00	.00	.00	.00	.22	1.5	3.4	1.2	.75	.17
MIN	.00	.00	.00	.00	.00	.00	.00	.24	.27	.18	.12	.00
AC-FT	.00	.00	.00	.00	.00	.00	.9	56	68	27	14	2.7

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1992
MEAN	.000	.000	.000	.000	.000	.000	.007	.46	1.05	.67	.21	.076
MAX	.000	.000	.000	.000	.000	.000	.015	.92	1.14	.90	.23	.11
(WY)	1991	1991	1991	1991	1991	1991	1992	1992	1992	1991	1992	1991
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.96	.45	.18	.046
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1992	1991	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1991 - 1992
ANNUAL TOTAL	65.32	85.49	
ANNUAL MEAN	.18	.23	.21
HIGHEST ANNUAL MEAN			.23 1992
LOWEST ANNUAL MEAN			.18 1991
HIGHEST DAILY MEAN	3.7 Jun 15	3.4 Jun 5	3.7 Jun 15 1991
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1990
ANNUAL RUNOFF (AC-FT)	130	170	149
10 PERCENT EXCEEDS	.45	.78	.66
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10270700 SOUTH LAKE NEAR BISHOP, CA

LOCATION.--Lat 37°10'21", long 118°33'52", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, near spillway at right abutment of Hillside Dam on South Fork Bishop Creek and 16.0 mi southwest of Bishop.  
DRAINAGE AREA.--12.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 12,883 acre-ft between elevations 9,621.20 ft, invert of outlet tunnel, and 9,751.31 ft, crest of spillway. Water is received from Green Creek via Green Creek Conduit (station 10270680). Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 11,159 acre-ft, Aug. 19, 1991, elevation, 9,741.09 ft; minimum, 2,929 acre-ft, May 22, 1991, elevation, 9,671.39 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 9,669 acre-ft, Oct. 1, elevation, 9,731.79 ft; minimum, 4,312 acre-ft, Apr. 2, elevation, 9,687.69 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	9,690	4,533
9,630	417	9,710	6,654
9,650	1,493	9,730	9,392
9,670	2,820	9,756	13,704

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9595	7364	6369	5211	4541	4448	4313	4900	7270	8942	9306	8638
2	9531	7323	e6333	5185	4535	4441	4312	4962	7404	8963	9295	8612
3	9458	7283	e6292	5157	4526	4435	4314	5025	7550	8983	9262	8573
4	9383	7228	e6250	5126	4512	4427	4314	5091	7707	8994	9239	8545
5	9290	7238	6212	5091	4511	4422	4315	5133	7872	8995	9216	8518
6	9215	7221	6171	5060	4503	4417	4318	5173	7996	8998	9190	8490
7	9134	7187	6126	e5032	4495	4408	4324	5221	8098	8998	9175	8461
8	9082	7164	6080	e5022	4485	4408	4330	5277	8185	9006	9152	8430
9	9027	7150	6039	5015	4477	4408	4335	5337	8271	9013	9132	8398
10	8953	7122	6013	4984	4474	4404	4341	5410	8359	9019	9099	8340
11	8876	7099	5972	4944	4477	4398	4347	5487	8464	9042	9077	8279
12	8789	7074	5939	4921	4478	4395	4353	5605	8523	9086	9054	8224
13	8720	7041	5905	4888	4476	4389	4358	5672	8582	9138	9030	8157
14	8638	6988	5870	4850	4472	4382	4364	5765	8607	9172	9022	8068
15	8575	6960	5833	4818	4475	4375	4368	5859	8631	9198	9019	7990
16	8492	6938	5804	4777	4477	4369	4381	5956	8664	9224	9013	7908
17	8412	6913	5764	4738	4478	4358	4397	6051	8678	9256	9003	7843
18	8336	6883	5726	4694	4483	4355	4410	6137	8693	9307	8994	7785
19	8258	6861	5680	4656	4485	4351	4430	6210	8695	9336	8972	7714
20	8180	6841	5658	4632	4484	4350	4451	6272	8713	9355	8962	7648
21	8105	6798	5616	4626	4485	4347	4463	6329	8728	9360	8924	7575
22	8023	6757	5580	4621	4479	4343	4476	6378	8737	9361	8898	7499
23	7940	6718	5542	4618	4473	4340	4504	6435	8750	9361	8870	7426
24	7872	6678	5503	4616	4473	4336	4529	6487	8760	9360	8849	7355
25	7797	6640	5466	4604	4470	4331	4564	6545	8786	9358	8823	7242
26	7721	6595	5436	4589	4467	4327	4596	6654	8813	9355	8804	7206
27	e7651	6542	5395	4585	4465	4325	4655	6711	8837	9350	8772	7140
28	e7589	6496	5355	4574	4464	4320	4716	6806	8861	9349	8734	7070
29	7524	6441	5319	4564	4454	4317	4784	6909	8889	9339	8713	7015
30	7470	6401	5278	4553	---	4314	4845	7015	8916	9330	8678	6959
31	7413	---	5242	4548	---	4314	---	7139	---	9321	8661	---
MAX	9595	7364	6369	5211	4541	4448	4845	7139	8916	9361	9306	8638
MIN	7413	6401	5242	4548	4454	4314	4312	4900	7270	8942	8661	6959
a	9716.29	9707.77	9697.04	9690.16	9689.18	9687.71	9693.16	9714.11	9726.89	9729.54	9725.18	9712.62
b	-2256	-1012	-1159	-694	-94	-140	+531	+2294	+1777	+405	-660	-1702

CAL YR 1991 MAX 11152 MIN 2931 b +1364  
WTR YR 1992 MAX 9595 MIN 4312 b -2710

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA

LOCATION.--Lat 37°10'38", long 118°33'44", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank near weir on Weir Lake, 0.3 mi downstream from South Lake, and 15.7 mi southwest of Bishop.

DRAINAGE AREA.--13.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 9,580 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. 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.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46 ft<sup>3</sup>/s, Sept. 13, 1992, gage height, 0.68 ft; minimum daily, 6.8 ft<sup>3</sup>/s, Apr. 9, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46 ft<sup>3</sup>/s, Sept. 13, gage height, 0.68 ft; minimum daily, 6.9 ft<sup>3</sup>/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	30	26	22	8.4	8.7	8.1	7.5	12	17	24	23
2	43	27	27	21	8.7	8.7	8.1	7.5	13	18	24	24
3	43	25	27	21	8.7	8.7	8.1	8.7	13	22	28	24
4	43	25	27	21	9.1	8.7	8.1	8.7	12	21	28	24
5	43	21	27	21	9.2	8.7	8.1	18	12	22	28	24
6	42	19	27	21	8.7	8.7	8.0	23	11	22	28	25
7	42	19	27	21	8.8	8.7	7.4	22	11	22	28	25
8	42	19	27	21	8.7	8.7	7.5	24	12	22	29	25
9	42	19	26	20	8.9	8.7	7.5	23	12	22	29	26
10	42	19	22	20	9.0	8.3	7.5	22	13	22	29	35
11	42	19	24	20	9.2	8.1	7.5	22	14	22	29	35
12	42	20	23	20	9.3	8.1	7.5	21	14	21	29	34
13	42	19	23	22	9.4	8.1	7.5	19	13	21	28	41
14	42	22	23	23	8.7	8.1	7.5	19	13	21	26	45
15	42	22	23	23	9.4	7.7	8.0	19	14	21	25	44
16	42	22	23	23	9.1	7.5	8.1	19	16	21	25	44
17	41	21	23	23	8.7	8.8	8.1	19	17	21	25	44
18	41	21	23	23	8.7	6.9	8.1	19	18	21	24	44
19	40	21	24	23	8.7	6.9	8.1	20	15	21	24	44
20	41	21	23	17	8.7	6.9	8.1	20	17	22	24	44
21	41	24	27	9.4	8.7	6.9	8.1	19	20	22	24	44
22	41	27	25	9.0	8.7	6.9	8.1	17	19	22	24	44
23	41	26	24	8.7	8.7	7.5	7.5	17	19	22	24	44
24	41	26	24	8.7	8.7	7.5	7.2	16	20	22	24	44
25	41	25	23	8.6	8.7	7.5	6.9	16	20	22	24	44
26	38	25	23	8.1	8.7	7.5	7.5	16	21	22	25	42
27	36	25	24	8.1	8.4	7.5	7.5	17	19	22	24	43
28	37	26	24	8.1	8.1	7.5	7.5	17	18	22	24	42
29	38	26	26	8.1	8.7	7.5	7.5	13	18	23	24	37
30	38	27	27	8.7	---	7.5	7.5	12	17	23	24	33
31	38	---	26	8.3	---	8.0	---	12	---	24	23	---
TOTAL	1270	688	768	519.8	255.5	245.5	232.2	533.4	463	668	798	1091
MEAN	41.0	22.9	24.8	16.8	8.81	7.92	7.74	17.2	15.4	21.5	25.7	36.4
MAX	43	30	27	23	9.4	8.8	8.1	24	21	24	29	45
MIN	36	19	22	8.1	8.1	6.9	6.9	7.5	11	17	23	23
AC-FT	2520	1360	1520	1030	507	487	461	1060	918	1320	1580	2160

## 10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.9	16.8	17.4	12.2	8.14	7.83	8.94	18.9	11.6	15.5	23.1	31.4
MAX	41.0	22.9	24.8	16.8	8.81	7.92	10.1	20.5	15.4	21.5	25.7	36.4
(WY)	1992	1992	1992	1992	1992	1992	1991	1991	1992	1992	1992	1992
MIN	10.8	10.6	9.98	7.59	7.45	7.75	7.74	17.2	7.70	9.45	20.5	26.4
(WY)	1991	1991	1991	1991	1991	1991	1992	1992	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	6300.8		7532.4			
ANNUAL MEAN	17.3		20.6		16.5	
HIGHEST ANNUAL MEAN					20.6	
LOWEST ANNUAL MEAN					12.4	
HIGHEST DAILY MEAN	44	Sep 30	45	Sep 14	45	Sep 14 1992
LOWEST DAILY MEAN	6.8	Apr 9	6.9	Mar 18	6.8	Apr 9 1991
ANNUAL SEVEN-DAY MINIMUM	6.9	Apr 9	7.1	Mar 18	6.9	Apr 9 1991
INSTANTANEOUS PEAK FLOW			46		46	
INSTANTANEOUS PEAK STAGE			.68		.68	
ANNUAL RUNOFF (AC-FT)	12500		14940		11960	
10 PERCENT EXCEEDS	37		41		29	
50 PERCENT EXCEEDS	12		21		11	
90 PERCENT EXCEEDS	7.5		8.1		7.5	

## 10270870 LAKE SABRINA NEAR BISHOP, CA

LOCATION.--Lat 38°12'44", long 118°36'42", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in valve house at base of dam on Middle Fork Bishop Creek and 15.8 mi southwest of Bishop.

DRAINAGE AREA.--16.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1908. Usable capacity, 7,350 acre-ft between elevations 9,068.42 ft, invert of outlet, and 9,131.62 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,254 acre-ft, July 15, 1991, elevation, 9,131.13 ft; minimum, 598 acre-ft, May 6, 1991, elevation, 9,090.33 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,118 acre-ft, July 20, elevation, 9,125.14; minimum, 2,176 acre-ft, Apr. 25, elevation, 9,101.66 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	9,100	1,926
9,070	1	9,110	3,501
9,080	15	9,120	5,196
9,090	558	9,135	7,817

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5949	5294	4840	4380	3727	e3677	2791	2374	4727	5944	5893	5182
2	5944	5284	4820	4351	3719	e3671	2749	2388	4847	5944	5873	5135
3	5936	5268	4813	4310	3710	3681	2714	2402	4982	5934	5844	5086
4	5922	5257	4804	4282	3699	3677	2684	2429	5130	5918	5827	5038
5	5909	5236	4792	4256	3689	3677	2656	2471	5287	5894	5813	4980
6	5900	5215	4782	4222	3682	3681	2626	2537	5439	5878	5800	4923
7	5880	5191	4773	4194	3677	3681	2599	2608	5556	5867	5805	4866
8	5863	5171	4769	4164	3671	3682	2574	2696	5636	5860	5771	4807
9	5845	5157	4759	4126	3664	3681	2539	2774	5706	5853	5746	4751
10	5831	5145	4751	4099	3666	3664	2496	2863	5775	5851	5728	4708
11	5813	5128	4740	4072	3671	3639	2462	2962	5844	5865	5705	4670
12	5793	5107	4720	4029	3684	3614	2428	3075	5894	5893	5692	4637
13	5771	5088	4704	3996	3681	3595	2396	3193	5934	5947	5683	4601
14	5750	5065	4694	3977	3679	3576	2366	3312	5947	5984	5683	4577
15	5723	5039	4686	3950	3689	3553	2335	3428	5953	6011	5705	4559
16	5694	5017	4667	3923	3691	3514	2309	3539	5951	6035	5717	4533
17	5669	5001	4651	3900	3692	3455	2290	3653	5936	6063	5717	4520
18	5647	4987	4634	3875	3696	3400	2274	3762	5920	6094	5705	4503
19	5626	4968	4617	3849	3697	3358	2272	3855	5900	6110	5688	4484
20	5599	4945	4603	3825	3697	3317	2258	3928	5880	6118	5669	4468
21	5565	4928	4588	3819	3697	3270	2236	3975	5860	6114	5645	4451
22	5538	4920	4571	3810	3696	3226	2212	4007	5853	6101	5611	4434
23	5504	4920	4557	3802	3694	3176	2192	4032	5851	6081	5572	4412
24	5469	4914	4540	3793	3692	3126	2179	4059	5858	6070	5529	4380
25	5441	4901	4521	3787	3691	3079	2176	4089	5882	6055	5488	4336
26	5435	4895	4501	3778	3689	3036	2186	4136	5889	6024	5444	4321
27	5409	4882	4480	3772	3686	2986	2216	4221	5896	5995	5395	4288
28	5384	4873	4460	3763	3682	2941	2260	4334	5920	5973	5349	4258
29	5358	4858	4453	3755	3681	2893	2321	4438	5933	5947	5307	4227
30	5333	4837	4432	3748	---	2858	2365	4528	5942	5920	5268	4192
31	5308	---	4412	3739	---	2830	---	4622	---	5905	5227	---
MAX	5949	5294	4840	4380	3727	3682	2791	4622	5953	6118	5893	5182
MIN	5308	4837	4412	3739	3664	2830	2176	2374	4727	5851	5227	4192
a	9120.64	9117.93	9115.45	9111.44	9111.09	9105.86	9102.89	9116.68	9124.18	9123.98	9120.18	9114.15
b	-647	-471	-425	-673	-58	-851	-465	+2257	+1320	-37	-678	-1035

CAL YR 1991 MAX 7252 MIN 598 b +2694  
WTR YR 1992 MAX 6118 MIN 2176 b -1763

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA

LOCATION.--Lat 37°12'50", long 118°36'34", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank 800 ft downstream from Lake Sabrina Dam and 15.6 mi southwest of Bishop.

DRAINAGE AREA.--16.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 9,050 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated by Lake Sabrina (station 10270870). 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 a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75 ft<sup>3</sup>/s, July 15, 16, 1991, gage height, 0.92 ft; minimum daily, 6.5 ft<sup>3</sup>/s, Mar. 19-27, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43 ft<sup>3</sup>/s, July 26, 27, Sept. 7-9, gage height, 0.63 ft; minimum daily, 7.6 ft<sup>3</sup>/s, Feb. 9, Mar 8, 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	11	23	11	8.2	27	31	21	32	32	40
2	11	13	11	24	11	8.2	29	33	17	31	34	40
3	14	14	11	24	9.7	8.2	27	36	16	34	36	40
4	16	18	11	24	12	8.2	26	33	16	35	34	40
5	15	18	12	24	11	8.2	23	26	13	36	30	41
6	15	20	13	23	9.1	8.2	24	16	11	35	30	42
7	18	20	13	23	8.2	8.0	24	14	13	34	29	42
8	17	21	13	22	7.8	7.6	24	14	16	36	30	43
9	17	20	13	23	7.6	7.6	31	14	18	36	34	42
10	16	17	12	19	8.7	15	34	14	23	34	33	36
11	17	18	12	19	8.8	19	31	14	25	34	32	30
12	18	18	16	26	8.2	19	31	13	25	34	32	29
13	18	18	15	21	8.2	16	30	12	25	31	31	28
14	20	18	13	14	8.2	16	30	12	29	32	30	20
15	21	20	14	18	8.2	18	30	12	29	32	26	20
16	20	19	15	18	8.8	26	30	13	31	32	27	20
17	20	16	15	17	8.8	35	29	13	33	32	34	21
18	18	17	15	17	8.8	34	29	13	34	32	35	20
19	17	18	15	17	8.8	29	23	13	33	33	34	20
20	19	19	15	16	8.8	29	29	15	35	34	34	20
21	22	14	15	8.5	8.7	31	31	21	33	35	33	19
22	19	10	15	8.8	8.2	31	30	29	33	39	35	19
23	19	11	15	8.8	7.9	31	31	31	33	37	40	20
24	21	11	15	8.8	8.0	31	31	32	33	33	39	23
25	20	12	16	8.8	8.2	30	30	32	28	33	37	24
26	15	11	17	8.8	8.2	30	28	31	33	40	39	24
27	19	11	16	8.3	8.2	30	22	24	31	40	39	25
28	20	12	18	8.3	8.2	30	21	16	30	37	38	25
29	20	13	18	8.8	8.2	30	18	16	35	39	37	23
30	20	16	18	8.9	---	28	17	20	34	38	37	25
31	20	---	17	9.5	---	27	---	21	---	33	38	---
TOTAL	553	479	445	508.3	255.5	657.4	820	634	786	1073	1049	861
MEAN	17.8	16.0	14.4	16.4	8.81	21.2	27.3	20.5	26.2	34.6	33.8	28.7
MAX	22	21	18	26	12	35	34	36	35	40	40	43
MIN	11	10	11	8.3	7.6	7.6	17	12	11	31	26	19
AC-FT	1100	950	883	1010	507	1300	1630	1260	1560	2130	2080	1710

## 10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.8	12.9	12.8	12.0	7.98	14.1	25.7	19.6	18.9	41.3	34.9	27.8
MAX	17.8	16.0	14.4	16.4	8.81	21.2	27.3	20.5	26.2	48.0	36.0	28.7
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1992	1991	1991	1992
MIN	11.8	9.74	11.3	7.63	7.11	6.91	24.1	18.7	11.6	34.6	33.8	26.9
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	7188.3		8121.2			
ANNUAL MEAN	19.7		22.2		20.3	
HIGHEST ANNUAL MEAN					22.2	
LOWEST ANNUAL MEAN					18.4	
HIGHEST DAILY MEAN	74	Jul 17	43	Sep 8	74	Jul 17 1991
LOWEST DAILY MEAN	6.5	Mar 19	7.6	Feb 9	6.5	Mar 19 1991
ANNUAL SEVEN-DAY MINIMUM	6.5	Mar 19	8.0	Mar 3	6.5	Mar 19 1991
INSTANTANEOUS PEAK FLOW			43	Jul 26	75	Jul 15 1991
INSTANTANEOUS PEAK STAGE			.63	Jul 26	.92	Jul 15 1991
ANNUAL RUNOFF (AC-FT)	14260		16110		14710	
10 PERCENT EXCEEDS	38		35		36	
50 PERCENT EXCEEDS	16		20		17	
90 PERCENT EXCEEDS	7.1		8.8		7.6	

10270875 INTAKE NO. 2 RESERVOIR NEAR BISHOP, CA

LOCATION.--Lat 38°14'53", long 118°34'53", in SE 1/4 SW 1/4 sec.16, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in outlet structure 50 ft upstream from Bishop Creek dam on Middle Fork Bishop Creek and 13.0 mi southwest of Bishop.  
 DRAINAGE AREA.--31.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed by rock-fill dam completed in 1908. Capacity, 78 acre-ft between elevations 8,077 ft, invert of outlet, and 8,098.81 ft, crest of spillway, all of which is 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.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 92 acre-ft, June 13, 1991, elevation, 8,099.98 ft; minimum, 59 acre-ft, Dec. 15, 1990, elevation, 8,097.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 78 acre-ft, Jan. 13, elevation, 8,098.87 ft; minimum, 61 acre-ft, Aug. 17, elevation, 8,097.35 ft.

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	8,094	32
8,082	1	8,098	68
8,086	5	8,102	120
8,090	12		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
 DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	71	72	70	70	69	69	76	72	71	67	70
2	68	73	72	69	74	71	72	70	74	63	66	71
3	67	69	72	69	69	71	73	72	72	65	71	70
4	71	74	69	68	72	70	74	69	74	67	75	68
5	69	71	67	69	73	70	71	72	77	70	71	67
6	67	69	70	69	73	71	70	75	73	72	70	69
7	71	67	74	68	71	72	73	71	68	68	70	69
8	74	67	75	68	69	72	72	70	70	68	66	67
9	72	77	77	75	67	70	68	72	64	70	68	66
10	70	74	69	70	67	68	72	71	65	70	68	73
11	68	71	66	68	71	70	72	72	71	68	68	71
12	68	72	71	76	73	74	71	72	72	70	70	64
13	68	69	75	77	73	71	72	69	68	71	76	70
14	70	67	72	71	73	69	73	68	70	72	76	73
15	75	72	69	71	73	71	72	67	68	71	70	67
16	73	76	70	74	73	66	70	69	65	69	63	68
17	74	74	73	72	72	70	72	70	67	69	66	71
18	72	70	71	69	71	75	73	72	67	67	71	73
19	67	68	73	65	71	68	64	71	64	68	70	74
20	68	70	69	73	72	64	66	66	65	67	70	73
21	74	72	71	75	74	66	70	65	70	66	69	71
22	72	68	71	75	74	67	70	67	69	71	66	69
23	70	68	71	75	71	68	68	69	67	73	70	64
24	73	69	70	73	71	68	70	70	73	72	71	69
25	73	70	70	73	71	68	73	72	71	65	67	73
26	71	70	73	73	73	69	75	72	72	70	68	71
27	68	70	72	71	72	70	70	74	71	72	70	69
28	67	69	68	72	68	72	73	75	67	68	72	67
29	66	70	70	71	69	73	73	69	70	69	69	65
30	68	75	74	70	---	72	70	69	72	75	69	70
31	70	---	71	68	---	73	---	69	---	71	69	---
MAX	75	77	77	77	74	75	75	76	77	75	76	74
MIN	66	67	66	65	67	64	64	65	64	63	63	64
a	8098.18	8098.66	8098.29	8097.99	8098.08	8098.44	8098.21	8098.09	8098.40	8098.27	8098.06	8098.20
b	0	+5	-4	-3	+1	+4	-3	-1	+3	-1	-2	+1

CAL YR 1991 MAX 91 MIN 66 b -2  
 WTR YR 1992 MAX 77 MIN 63 b 0

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

## 10270877 MIDDLE FORK BISHOP CREEK BELOW INTAKE NO. 2 RESERVOIR, NEAR BISHOP, CA

LOCATION.--Lat 37°15'16", long 118°34'39", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 0.1 mi upstream from bridge on South Lake road, 0.7 mi downstream from Bishop Creek Dam, 0.9 mi upstream from confluence with South Fork Bishop Creek, and 12.6 mi southwest of Bishop.

DRAINAGE AREA.--31.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year (low-flow records only). Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,830 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No records computed above 30 ft<sup>3</sup>/s. Flow regulated by Intake No. 2 Reservoir (station 10270875), where most of the water is diverted to Bishop Creek powerplant No. 2. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	2.4	2.3	2.3	2.3	2.4	2.3	2.1	2.7	2.7	2.5	2.6
2	3.3	2.3	2.4	2.4	2.5	2.4	2.3	2.0	2.7	2.6	2.4	2.6
3	3.3	2.4	2.4	2.3	2.5	2.3	2.3	2.0	2.7	2.6	2.4	2.6
4	3.4	2.3	2.4	2.3	e2.5	2.4	2.3	2.6	2.8	2.6	2.5	2.6
5	3.4	2.3	2.4	2.4	2.4	2.5	2.3	3.3	2.8	2.6	2.5	2.5
6	3.4	2.3	2.4	2.4	2.4	2.5	2.3	2.9	2.8	e2.6	2.5	2.6
7	3.3	2.3	2.4	2.4	2.4	2.5	2.4	2.7	2.8	e2.6	2.5	2.6
8	3.3	2.4	2.4	2.4	2.4	2.5	2.4	2.5	2.8	e2.6	2.5	2.6
9	3.3	2.5	2.4	2.3	2.4	2.4	2.3	2.5	2.7	2.6	2.4	2.6
10	3.3	2.5	2.4	2.4	2.5	2.4	2.4	2.5	2.6	2.6	2.5	2.6
11	3.3	2.6	2.3	2.3	2.4	2.3	2.4	2.5	2.6	2.6	2.5	2.6
12	3.3	2.6	2.3	2.4	2.5	2.2	2.4	2.4	2.7	2.7	2.5	2.5
13	3.3	2.4	2.3	2.6	2.5	2.3	2.4	2.4	2.7	2.6	2.7	2.5
14	3.2	2.4	2.3	2.5	2.5	2.2	2.4	2.3	2.7	2.6	2.7	2.5
15	3.2	2.5	2.3	2.3	2.5	2.3	2.4	2.3	2.7	2.6	2.7	2.5
16	---	2.5	2.4	2.4	2.5	2.3	2.4	2.2	2.8	2.5	2.7	2.4
17	2.6	2.6	2.4	2.5	2.5	2.3	2.4	2.2	2.7	2.5	2.6	2.5
18	2.5	2.5	2.4	2.4	2.6	2.3	2.4	2.4	2.6	2.5	2.6	2.6
19	2.5	2.5	2.4	2.3	2.5	2.3	2.4	2.6	2.6	2.5	2.6	2.6
20	2.5	2.4	2.4	2.4	2.5	2.3	2.4	2.5	2.6	2.5	2.6	2.6
21	2.6	2.5	2.4	2.4	2.5	2.3	2.4	2.5	2.6	2.6	2.6	2.6
22	2.6	2.5	2.4	2.4	2.4	2.2	2.4	2.6	2.6	2.6	2.5	2.6
23	2.5	2.5	2.4	2.5	2.3	2.2	2.2	2.6	2.6	2.6	2.5	2.6
24	2.5	2.5	2.4	2.3	2.3	2.2	2.2	2.5	2.7	2.6	2.5	2.6
25	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.6	2.8	2.5	2.5	2.5
26	2.6	2.5	2.3	2.3	2.3	2.2	2.3	2.7	2.7	2.6	2.5	2.3
27	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.7	2.7	2.6	2.5	2.3
28	2.4	2.5	2.3	2.5	2.3	2.3	2.3	2.7	2.7	2.6	2.5	2.3
29	2.4	2.4	2.3	2.4	2.3	2.3	2.3	2.8	2.6	2.6	2.6	2.3
30	2.4	2.3	2.4	2.3	---	2.3	2.3	2.8	2.6	2.6	2.6	2.3
31	2.4	---	2.3	2.4	---	2.2	---	2.6	---	2.6	2.6	---
TOTAL	---	73.3	73.4	73.9	70.3	71.8	70.2	78.0	80.7	80.2	78.8	75.6
MEAN	---	2.44	2.37	2.38	2.42	2.32	2.34	2.52	2.69	2.59	2.54	2.52
MAX	---	2.6	2.4	2.6	2.6	2.5	2.4	3.3	2.8	2.7	2.7	2.6
MIN	---	2.3	2.3	2.3	2.3	2.2	2.2	2.0	2.6	2.5	2.4	2.3
AC-FT	---	145	146	147	139	142	139	155	160	159	156	150

e Estimated.

## 10270900 BIRCH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2 NEAR BISHOP, CA

LOCATION.--Lat 37°16'26", long 118°34'45", 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Conduit diverts water from Birch Creek and discharges into penstock to Bishop Creek powerplant No. 2. Birch Creek receives water from McGee Creek via McGee Creek Diversion (station 10268225).

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20 ft<sup>3</sup>/s, July 5, 6, 11, 1991; minimum daily, 2.0 ft<sup>3</sup>/s, Dec. 22, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	4.9	4.0	4.1	3.7	3.9	e5.1	5.7	e9.1	9.8	e8.5	e7.3
2	8.7	e4.9	4.3	4.2	3.9	4.0	e5.2	5.8	e9.9	e9.8	e8.5	e6.9
3	8.8	e4.9	4.1	4.3	3.9	4.0	e5.3	5.8	11	e9.8	8.9	e6.5
4	8.6	e4.9	4.0	4.1	3.9	3.9	e5.4	e5.6	12	e9.8	8.7	e6.3
5	8.2	4.8	4.0	4.1	3.9	3.9	e5.5	e5.5	13	e10	8.4	e6.2
6	8.0	4.7	4.0	4.0	3.9	4.0	e5.6	e5.7	13	e10	8.3	e6.0
7	7.8	4.6	4.3	4.2	3.8	4.0	e5.5	e5.8	13	e10	8.4	e5.9
8	7.5	4.8	4.3	4.1	3.8	3.9	5.5	e6.0	14	e10	8.4	e5.7
9	7.2	5.4	4.2	4.2	3.9	3.8	5.3	e6.2	14	e10	8.2	e5.7
10	6.0	4.9	4.3	4.2	3.8	3.9	5.6	e6.3	14	e10	8.1	e5.6
11	5.2	4.6	4.1	4.1	3.9	4.0	5.3	e6.5	16	e10	8.4	e5.5
12	5.3	4.7	4.2	4.0	4.1	4.1	5.5	6.4	14	e10	8.5	e5.3
13	5.2	4.6	4.3	4.0	4.1	4.1	5.3	6.5	13	e10	e8.8	e5.2
14	5.1	4.5	4.3	4.0	3.9	4.0	4.9	6.5	12	10	e8.8	e5.0
15	5.1	4.6	4.2	4.0	3.9	4.1	4.7	6.2	11	10	e8.8	e4.8
16	4.9	4.8	4.1	4.0	4.0	4.0	5.0	6.3	10	10	e8.8	e4.9
17	4.8	5.0	4.1	3.8	3.8	4.0	5.1	6.2	10	11	e8.8	e4.7
18	4.9	4.8	4.2	3.7	3.8	4.0	5.1	7.3	10	11	e8.8	e4.6
19	5.0	4.7	4.2	3.7	3.9	4.1	5.0	8.4	10	10	e8.8	e4.6
20	5.0	4.7	4.1	4.1	3.8	4.1	4.9	e7.9	9.9	10	e8.8	e4.6
21	5.1	4.6	4.1	3.8	4.0	4.1	4.8	e7.3	9.9	9.7	e8.8	e4.6
22	4.9	4.5	4.0	4.0	4.1	4.0	4.5	e6.7	9.8	9.8	e8.4	e4.6
23	4.6	4.3	4.0	4.1	4.0	4.2	4.6	e6.2	9.7	9.6	e8.3	e4.5
24	4.9	4.4	4.1	4.0	3.8	4.2	4.6	6.5	9.8	9.6	e8.2	e4.5
25	4.4	4.4	4.0	4.2	4.0	4.1	4.5	e6.5	9.8	9.5	e8.0	e4.5
26	5.3	4.3	4.1	4.1	4.0	4.2	4.5	e6.8	9.8	9.3	e7.8	e4.5
27	4.7	4.3	4.2	4.0	4.0	4.4	4.9	e7.2	9.8	9.4	e7.7	e4.6
28	4.6	4.0	4.1	4.0	4.1	4.6	5.1	e7.5	9.8	9.3	e7.6	e4.6
29	5.0	3.6	4.1	3.9	3.9	4.6	5.2	e7.9	9.8	e9.1	e7.5	e8.0
30	4.7	4.0	4.1	3.9	---	e4.8	e5.2	e8.3	9.8	e8.9	e7.5	e13
31	4.9	---	4.2	3.8	---	e5.0	---	e8.7	---	e8.8	e7.3	---
TOTAL	183.1	138.2	128.3	124.7	113.6	128.0	152.7	206.2	336.9	304.2	258.8	168.7
MEAN	5.91	4.61	4.14	4.02	3.92	4.13	5.09	6.65	11.2	9.81	8.35	5.62
MAX	8.8	5.4	4.3	4.3	4.1	5.0	5.6	8.7	16	11	8.9	13
MIN	4.4	3.6	4.0	3.7	3.7	3.8	4.5	5.5	9.1	8.8	7.3	4.5
AC-FT	363	274	254	247	225	254	303	409	668	603	513	335

e Estimated.

## 10270900 BIRCH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2 NEAR BISHOP, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.28	4.40	3.92	3.81	3.70	3.84	4.66	6.01	11.5	12.6	9.19	7.17
MAX	5.91	4.61	4.14	4.02	3.92	4.13	5.09	6.65	11.9	15.5	10.0	8.72
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991
MIN	4.65	4.19	3.70	3.61	3.48	3.55	4.23	5.36	11.2	9.81	8.35	5.62
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	2468.9		2243.4			
ANNUAL MEAN	6.76		6.13		6.36	
HIGHEST ANNUAL MEAN					6.59	
LOWEST ANNUAL MEAN					6.13	
HIGHEST DAILY MEAN	20	Jul 5	16	Jun 11	20	Jul 5 1991
LOWEST DAILY MEAN	2.9	May 8	3.6	Nov 29	2.0	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	3.2	Mar 21	3.9	Jan 29	3.1	Dec 22 1990
ANNUAL RUNOFF (AC-FT)	4900		4450		4610	
10 PERCENT EXCEEDS	13		9.9		11	
50 PERCENT EXCEEDS	4.8		4.9		4.8	
90 PERCENT EXCEEDS	3.5		4.0		3.6	

## 10270960 COYOTE CREEK NEAR BISHOP, CA

LOCATION.--Lat 37°18'54", long 118°30'33", SW 1/4 NW 1/4 sec.30, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank 30 ft upstream from mouth and 7.2 mi southwest of Bishop.

DRAINAGE AREA.--25.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 5,470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No storage or diversion upstream from station. 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 a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12 ft<sup>3</sup>/s, May 6, 1991, gage height, 1.04 ft; minimum daily, 1.8 ft<sup>3</sup>/s, several days in 1992.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9.9 ft<sup>3</sup>/s, Apr. 10, 17, gage height, 0.91 ft; minimum daily, 1.8 ft<sup>3</sup>/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.2	3.0	3.1	3.1	3.4	3.6	3.4	2.7	2.2	1.8	2.1
2	2.5	3.3	3.2	3.1	3.2	3.4	3.8	3.4	2.7	2.1	1.8	2.0
3	2.5	3.3	3.0	3.1	3.1	3.5	4.0	3.3	2.6	2.1	1.8	2.0
4	2.5	3.4	3.0	3.1	3.1	3.5	4.2	3.3	2.5	2.0	1.8	2.0
5	2.5	3.4	3.0	3.1	3.2	3.4	4.3	3.5	2.5	2.0	1.9	2.1
6	2.5	3.4	3.1	3.3	3.4	3.5	4.9	4.1	2.6	2.0	2.1	2.0
7	2.5	3.3	3.1	3.1	3.4	3.5	5.5	3.9	2.9	2.0	2.1	2.0
8	2.5	3.3	3.2	3.1	3.3	3.5	5.7	3.7	2.8	2.0	1.9	1.9
9	2.6	3.7	3.1	3.1	3.2	3.4	5.6	3.5	2.7	2.0	1.9	1.9
10	2.5	3.6	3.2	3.2	3.2	3.4	6.2	3.3	2.7	2.1	1.8	1.9
11	2.5	3.3	3.2	3.2	3.4	3.4	6.5	e3.4	2.6	2.1	1.8	2.0
12	2.6	3.2	3.1	3.0	3.4	3.4	6.4	e3.4	2.5	2.2	1.9	2.0
13	2.6	3.1	3.1	3.0	3.4	3.4	6.3	e3.4	2.6	2.5	1.9	2.0
14	2.6	3.1	3.1	3.1	3.2	3.5	6.3	e3.3	2.6	2.2	2.0	2.0
15	2.6	3.0	3.1	3.1	3.4	3.4	5.4	e3.3	2.6	2.1	2.2	2.0
16	2.6	3.0	3.0	3.1	3.4	3.2	5.6	e3.3	2.7	2.1	2.1	2.0
17	2.6	3.2	3.1	3.2	3.3	3.3	6.2	e3.2	2.8	2.0	2.0	2.0
18	2.7	3.2	3.1	3.1	3.3	3.3	5.7	e3.1	2.7	1.9	1.9	2.3
19	2.7	3.2	3.0	3.0	3.4	3.2	4.9	3.1	2.6	1.9	1.8	2.2
20	2.8	3.5	2.9	3.0	3.5	3.3	4.9	3.1	2.5	1.8	1.8	2.1
21	2.9	3.4	3.1	3.0	3.6	3.5	4.8	3.2	2.5	1.8	1.8	2.1
22	2.9	3.1	3.0	3.1	3.6	3.6	4.2	3.1	2.4	1.9	1.8	2.1
23	2.8	3.1	3.0	3.1	3.4	3.5	4.2	3.0	2.3	1.9	1.9	2.1
24	2.8	3.2	3.0	3.1	3.3	3.4	4.4	3.0	2.3	2.0	1.9	2.1
25	2.9	3.1	3.0	3.1	3.3	3.5	4.8	3.0	2.3	1.9	1.9	2.1
26	3.3	3.1	3.1	3.1	3.4	3.4	4.6	3.0	2.2	2.0	1.9	2.2
27	2.9	3.0	3.1	3.1	3.4	3.5	4.3	3.0	2.1	2.0	1.9	2.2
28	3.1	2.7	3.0	3.1	3.4	3.6	4.2	3.3	2.1	1.9	1.9	2.2
29	3.1	2.8	3.2	3.1	3.4	3.7	4.0	3.2	2.1	1.9	2.0	2.2
30	3.1	2.4	3.1	3.1	---	3.9	3.5	3.0	2.1	1.9	2.1	2.2
31	3.1	---	3.1	3.1	---	3.9	---	2.8	---	1.9	2.2	---
TOTAL	84.3	95.6	95.3	96.1	96.7	107.4	149.0	101.6	75.3	62.4	59.6	62.0
MEAN	2.72	3.19	3.07	3.10	3.33	3.46	4.97	3.28	2.51	2.01	1.92	2.07
MAX	3.3	3.7	3.2	3.3	3.6	3.9	6.5	4.1	2.9	2.5	2.2	2.3
MIN	2.5	2.4	2.9	3.0	3.1	3.2	3.5	2.8	2.1	1.8	1.8	1.9
AC-FT	167	190	189	191	192	213	296	202	149	124	118	123

e Estimated.

10270960 COYOTE CREEK NEAR BISHOP, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.90	3.24	3.11	3.18	3.47	3.57	4.66	3.99	2.83	2.16	2.03	2.19
MAX	3.09	3.30	3.15	3.25	3.61	3.67	4.97	4.71	3.15	2.31	2.14	2.32
(WY)	1991	1991	1991	1991	1991	1991	1992	1991	1991	1991	1991	1991
MIN	2.72	3.19	3.07	3.10	3.33	3.46	4.35	3.28	2.51	2.01	1.92	2.07
(WY)	1992	1992	1992	1992	1992	1992	1991	1992	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	1169.4	1085.3	
ANNUAL MEAN	3.20	2.97	3.11
HIGHEST ANNUAL MEAN			3.25
LOWEST ANNUAL MEAN			2.97
HIGHEST DAILY MEAN	7.6	May 7	7.6
LOWEST DAILY MEAN	2.0	Jul 27	1.8
ANNUAL SEVEN-DAY MINIMUM	2.0	Aug 21	1.8
INSTANTANEOUS PEAK FLOW			9.9
INSTANTANEOUS PEAK STAGE			.91
ANNUAL RUNOFF (AC-FT)	2320	2150	2250
10 PERCENT EXCEEDS	4.1	3.6	4.0
50 PERCENT EXCEEDS	3.2	3.1	3.1
90 PERCENT EXCEEDS	2.2	2.0	2.1

## 10270985 ABELOUR DITCH NEAR BISHOP, CA

LOCATION.--Lat 37°20'30", long 118°28'41", 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Ditch diverts water from Bishop Creek powerplant No. 6 penstock for irrigation and domestic use.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2.4 ft<sup>3</sup>/s, July 22, 1991; minimum daily, 1.3 ft<sup>3</sup>/s, Dec. 23, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.0	1.8	1.7	1.9	2.0	1.9	2.0	1.9	2.0	1.9	1.9
2	1.9	2.0	1.8	1.7	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9
3	1.9	2.0	1.8	1.7	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9
4	1.9	2.0	1.8	1.7	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9
5	1.9	2.0	1.8	1.8	1.9	2.0	1.9	1.9	1.8	2.0	1.8	2.0
6	1.9	2.0	1.8	1.7	2.0	2.1	1.9	2.0	1.9	1.9	1.9	2.0
7	1.9	2.0	1.8	1.7	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.0
8	1.9	2.0	1.8	1.7	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0
9	1.9	2.0	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0
10	1.9	2.0	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0
11	1.9	2.0	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0
12	1.9	2.0	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.8	2.0
13	1.9	1.9	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9
14	1.9	1.8	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0
15	1.9	1.8	1.8	1.6	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0
16	1.9	1.8	1.8	1.6	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
17	1.9	1.8	1.8	1.6	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
18	1.9	1.8	1.8	1.6	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
19	1.9	1.8	1.8	1.5	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.9
20	1.9	1.8	1.8	1.8	2.0	1.9	1.9	1.8	1.9	1.9	1.9	1.9
21	1.9	1.8	1.8	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	2.0
22	1.9	1.8	1.8	2.0	2.0	2.0	1.8	1.9	1.9	1.9	1.8	2.0
23	1.9	1.8	1.8	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0
24	1.9	1.8	1.8	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0
25	1.9	1.8	1.8	1.9	2.0	1.9	1.9	1.8	1.9	1.9	1.8	2.0
26	1.9	1.8	1.8	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0
27	1.9	1.8	1.8	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2.0
28	1.9	1.8	1.8	1.9	2.2	1.9	1.9	1.9	1.9	1.9	1.9	2.0
29	1.9	1.8	1.8	1.9	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.0
30	1.9	1.8	1.8	1.9	---	1.9	2.0	1.9	1.9	1.9	1.9	2.0
31	1.9	---	1.8	1.9	---	1.9	---	1.9	---	1.9	1.9	---
TOTAL	58.9	56.5	55.8	54.4	58.1	60.7	57.3	59.0	56.9	59.2	58.3	59.0
MEAN	1.90	1.88	1.80	1.75	2.00	1.96	1.91	1.90	1.90	1.91	1.88	1.97
MAX	1.9	2.0	1.8	2.0	2.2	2.1	2.0	2.0	1.9	2.0	1.9	2.0
MIN	1.9	1.8	1.8	1.5	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.9
AC-FT	117	112	111	108	115	120	114	117	113	117	116	117

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
MEAN	1.89	1.84	1.81	1.79	1.86	1.83	1.88	1.89	1.99	1.93	1.87	1.93
MAX	1.90	1.88	1.82	1.83	2.00	1.96	1.91	1.90	2.08	1.95	1.88	1.97
(WY)	1992	1992	1991	1991	1992	1992	1992	1992	1991	1991	1992	1992
MIN	1.87	1.80	1.80	1.75	1.70	1.70	1.86	1.88	1.90	1.91	1.85	1.89
(WY)	1991	1991	1992	1992	1991	1991	1991	1991	1992	1992	1991	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	679.6		694.1			
ANNUAL MEAN	1.86		1.90		1.88	
HIGHEST ANNUAL MEAN					1.90	
LOWEST ANNUAL MEAN					1.85	
HIGHEST DAILY MEAN	2.4	Jul 22	2.2	Feb 27	2.4	Jul 22 1991
LOWEST DAILY MEAN	1.6	Jan 16	1.5	Jan 19	1.3	Dec 23 1990
ANNUAL SEVEN-DAY MINIMUM	1.6	Mar 10	1.6	Jan 13	1.6	Jan 13 1992
ANNUAL RUNOFF (AC-FT)	1350		1380		1360	
10 PERCENT EXCEEDS	2.0		2.0		2.0	
50 PERCENT EXCEEDS	1.8		1.9		1.9	
90 PERCENT EXCEEDS	1.7		1.8		1.7	

## 10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA

LOCATION.--Lat 37°21'00", long 118°27'42", in SE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank adjacent to Powerplant No. 6 tailrace and 3.8 mi west of Bishop.

DRAINAGE AREA.--104 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. If records for Bishop Creek powerplant No. 6 Conduit (station 10271060) are combined with this record, a record equivalent to that published since October 1936 as Bishop Creek below powerplant No. 6, near Bishop, discontinued September 1990, can be obtained. Monthly and yearly mean discharge prior to October 1969, published in WSP 2127.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 4,510 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. 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 bypasses this station and is published as a line item below.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft<sup>3</sup>/s, Feb. 27, 1992, gage height, 0.81 ft; no flow on many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41 ft<sup>3</sup>/s, Feb. 27, gage height, 0.81 ft; no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.19	.36	.33	.19	.26	.22	.17	.02	.06	.00	.18
2	.33	.19	.31	.34	.21	.19	.25	.24	.02	.04	.00	.15
3	.33	.19	.19	.41	.33	.19	.23	.20	.01	.04	.00	.10
4	.25	.19	.19	.33	.33	.19	.21	.19	.01	.03	.00	.09
5	.19	.19	.23	.33	.42	.19	.25	.21	.02	.02	.00	.11
6	.18	.19	.27	.51	.41	.19	.21	.23	.03	.03	.00	.12
7	.10	.19	.26	.56	.33	.19	.18	.21	.03	.03	.00	.10
8	.10	.19	.33	.47	.33	.19	.19	.19	.02	.02	.00	.09
9	.10	.19	.33	.22	.33	.19	.27	.14	.03	.01	.00	.09
10	.13	.19	.51	.36	.33	.31	.21	.12	.04	.01	.00	.09
11	.10	.19	.33	.40	.33	.23	.19	.13	.05	.01	.00	.07
12	.10	.19	.50	.38	.33	.19	.17	.13	.09	.03	.00	.08
13	.10	.19	.33	.40	.33	.19	.17	.10	.31	.08	.00	.07
14	.13	.59	.33	.33	.33	.19	.17	.08	.10	.04	.00	.07
15	.14	.29	.33	.34	.33	.19	.17	.09	.10	.05	.00	.07
16	.12	.31	.35	.42	.33	.19	.18	.07	.09	.06	.00	.04
17	.19	.32	.52	.61	.33	.14	.18	.06	.07	.09	.00	.06
18	.19	.33	.38	.53	.33	.10	.16	.06	.07	.10	.00	.09
19	.15	.33	.33	.40	.33	.16	.15	.07	.05	.07	.00	.05
20	.16	.33	.29	.37	.31	.15	.15	.09	.04	.06	.00	.04
21	.13	.39	.35	.50	.19	.18	.16	.09	.04	.05	.01	.06
22	.18	.42	.34	.41	.20	.17	.14	.16	.12	.06	.13	.08
23	.13	.33	.33	.43	.19	.17	.15	.18	.04	.04	.12	.07
24	.13	.33	.33	.52	.19	.15	.15	.12	.03	.03	.11	.07
25	.17	.33	.33	.52	.19	.15	.14	.10	.09	.02	.12	.07
26	.26	.33	.33	.35	.19	.14	.15	.09	.07	.01	.14	.09
27	.24	.33	.33	.33	31	.15	.16	.08	.13	.00	.13	.07
28	.19	.33	.33	.27	29	.15	.13	.08	.07	.00	.13	.07
29	.17	.35	.33	.19	.57	.15	.11	.07	.06	.00	.18	.07
30	.19	.43	.33	.19	---	.27	.10	.05	.07	.00	.24	.06
31	.10	---	.33	.19	---	.32	---	.04	---	.00	.19	---
TOTAL	5.31	8.54	10.33	11.94	68.21	5.82	5.30	3.84	1.92	1.09	1.50	2.47
MEAN	.17	.28	.33	.39	2.35	.19	.18	.12	.064	.035	.048	.082
MAX	.33	.59	.52	.61	31	.32	.27	.24	.31	.10	.24	.18
MIN	.10	.19	.19	.19	.19	.10	.10	.04	.01	.00	.00	.04
AC-FT	11	17	20	24	135	12	11	7.6	3.8	2.2	3.0	4.9
a	5090	3750	3720	3480	2190	3210	4040	5260	5120	5330	5340	5230

a Diversion, in acre-feet to Bishop Creek powerplant No. 6, 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.18	.24	.26	.30	1.32	2.82	.19	.14	.28	.64	.20	.23
MAX	.19	.28	.33	.39	2.35	5.46	.21	.15	.50	1.25	.35	.37
(WY)	1991	1992	1992	1992	1992	1991	1991	1991	1991	1991	1991	1991
MIN	.17	.19	.20	.21	.24	.19	.18	.12	.064	.035	.048	.082
(WY)	1992	1991	1991	1991	1991	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	293.89		126.27			
ANNUAL TOTAL, DIVERSION <sup>a</sup>	50970		51760			
ANNUAL MEAN	.81		.34		.57	
HIGHEST ANNUAL MEAN					.79	
LOWEST ANNUAL MEAN					.34	
HIGHEST DAILY MEAN	35	Mar 27	31	Feb 27	35	Mar 27 1991
LOWEST DAILY MEAN	.08	Jun 5	.00	Jul 27	.00	Jul 27 1992
ANNUAL SEVEN-DAY MINIMUM	.10	May 19	.00	Jul 27	.00	Jul 27 1992
INSTANTANEOUS PEAK FLOW			41	Feb 27	41	Feb 27 1992
INSTANTANEOUS PEAK STAGE			.81	Feb 27	.81	Feb 27 1992
ANNUAL RUNOFF (AC-FT)	583		250		410	
10 PERCENT EXCEEDS	.59		.34		.48	
50 PERCENT EXCEEDS	.32		.17		.19	
90 PERCENT EXCEEDS	.13		.02		.06	

<sup>a</sup> Diversion, in acre-feet to Bishop Creek powerplant No. 6, provided by Southern California Edison Co.

10287060 LUNDY LAKE NEAR LEE VINING, CA

LOCATION.--Lat 38°01'56", long 119°13'11", in NW 1/4 SE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, near right abutment of spillway of Lundy Lake Dam on Mill Creek and 7.6 mi northwest of Lee Vining.

DRAINAGE AREA.--16.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 4,113 acre-ft between elevations 7,766.43 ft, invert of outlet, and 7,807.81 ft, crest of spillway. Figures given represent usable contents. Water is used for power development and irrigation downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,082 acre-ft, July 9, 1991, elevation, 7,790.76 ft; minimum, 455 acre-ft, Apr. 8, 1992, elevation, 7,773.27 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,269 acre-ft, Dec. 18, elevation, 7,782.64 ft; minimum, 455 acre-ft, Apr. 8, elevation, 7,773.27 ft.

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	7,790	2,001
7,770	213	7,800	3,126
7,780	1,027	7,810	4,406

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1055	1076	1215	1252	1045	853	542	648	807	599	594	524
2	1054	1082	1219	1249	1038	849	528	662	860	592	592	523
3	1053	1084	1220	1247	1028	845	513	676	875	589	589	520
4	1052	1087	1224	1243	1021	830	500	695	878	548	582	520
5	1052	1091	1228	1245	1012	838	486	722	877	530	579	518
6	1051	1096	1233	1243	1006	835	473	737	869	527	579	513
7	1047	1102	1239	1241	999	833	456	755	846	530	577	510
8	1045	1107	1241	1237	989	827	455	813	813	534	570	507
9	1045	1116	1245	1227	980	822	463	869	773	536	564	505
10	1044	1123	1250	1218	971	816	464	901	734	533	560	507
11	1043	1129	1254	1213	971	812	463	924	693	539	556	510
12	1043	1132	1256	1205	968	809	465	934	663	551	557	512
13	1039	1140	1259	1199	960	804	467	929	649	569	556	514
14	1037	1144	1261	1191	950	804	473	932	637	599	556	517
15	1036	1145	1264	1183	949	798	475	931	612	628	551	519
16	1035	1150	1266	1175	942	789	469	933	585	645	539	520
17	1035	1161	1268	1168	934	772	512	930	558	645	536	525
18	1035	1167	1269	1161	926	754	527	922	522	642	533	529
19	1030	1170	1268	1154	920	737	e544	910	502	630	523	529
20	1029	1168	1268	1145	913	722	e552	883	493	616	520	529
21	1030	1171	1268	1138	905	708	565	844	480	604	523	530
22	1027	1178	1266	1128	897	693	570	799	473	587	510	533
23	1031	1181	1266	1122	891	674	588	755	479	581	507	533
24	1030	1183	1266	1115	885	660	587	715	502	588	507	531
25	1030	1189	1264	1103	877	642	572	683	519	590	506	533
26	1059	1198	1262	1097	872	627	565	671	538	591	507	533
27	1061	1199	1260	1087	869	613	565	683	557	594	507	532
28	1064	1203	1259	1081	862	599	574	705	572	595	508	532
29	1066	1208	1259	1073	856	583	611	744	585	596	510	532
30	1070	1210	1258	1063	---	570	627	771	594	594	517	532
31	1073	---	1255	1054	---	556	---	801	---	596	525	---
MAX	1073	1210	1269	1252	1045	853	627	934	878	645	594	533
MIN	1027	1076	1215	1054	856	556	455	648	473	527	506	505
a	7780.51	7782.00	7782.49	7780.29	7778.07	7774.52	7775.38	7777.43	7774.97	7775.00	7774.14	7774.22
b	+17	+137	+45	-201	-198	-300	+71	+174	-207	+2	-71	+7

CAL YR 1991 MAX 2072 MIN 549 b +678  
WTR YR 1992 MAX 1269 MIN 455 b -524

e Estimated.  
a Elevation, in feet, at end of month.  
b Change in contents, in acre-feet.

## 10287069 MILL CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING, CA

LOCATION.--Lat 38°01'59", long 119°12'56", in SE 1/4 NE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 20 ft upstream from Deer Creek, 70 ft downstream from road culvert, 1,400 ft downstream from Lundy Lake Dam, and 7.5 mi northwest of Lee Vining.

DRAINAGE AREA.--18.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. 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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--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 a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12 ft<sup>3</sup>/s, July 19, 1991, gage height, 0.56 ft; maximum gage height, 1.21 ft, July 4, Aug. 18, 1992; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10 ft<sup>3</sup>/s, July 4, Aug. 18, gage height, 1.21 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.00	.00	.00	.00	.00	.00	e.00	e.00	1.7	1.9	2.2
2	.93	.00	.00	.00	.00	.00	.00	e.04	e.00	1.6	1.8	2.2
3	.93	.00	.00	.00	.00	.00	.00	e.00	1.7	1.0	1.9	2.2
4	.93	.00	.00	.00	.00	.00	.00	e.00	2.7	1.4	2.0	2.2
5	.93	.00	.00	.00	.00	.00	.00	e.00	1.5	2.5	2.0	2.2
6	.93	.00	.00	.00	.00	.00	.00	e.00	1.4	2.4	2.0	2.2
7	.93	.00	.00	.00	.00	.00	.00	e.00	1.3	2.5	2.0	2.2
8	.93	.00	.00	.00	.00	.00	.00	e.00	1.4	2.5	2.0	2.2
9	.93	.00	.00	.00	.00	.00	.00	e.00	1.7	2.5	2.0	2.2
10	.93	.00	.00	.00	.00	.00	.00	e.00	2.2	2.5	2.0	2.2
11	.43	.00	.00	.00	.00	.00	.00	e.00	2.4	2.5	1.9	2.2
12	.00	.00	.00	.00	.00	.00	.00	e.05	2.1	2.5	1.9	2.2
13	.00	.00	.00	.00	.00	.00	.00	e.00	2.0	2.5	1.9	2.2
14	.00	.00	.00	.00	.00	.00	.00	e.00	2.1	2.4	1.9	2.2
15	.00	.00	.00	.00	.00	.00	e.02	e.00	2.1	2.2	1.9	2.2
16	.00	.00	.00	.00	.00	.00	e.00	e.00	2.0	2.1	1.9	2.2
17	.00	.00	.00	.00	.00	.00	e.00	e.00	2.0	1.4	1.9	2.2
18	.00	.00	.00	.00	.00	.00	e.00	e.00	2.0	1.4	2.2	2.2
19	.00	.00	.00	.00	.00	.00	e.00	e.00	1.7	2.3	2.3	2.2
20	.00	.00	.00	.00	.00	.00	e.00	e.00	2.1	2.3	2.2	2.2
21	.00	.00	.00	.00	.00	.00	e.00	e.00	2.2	1.9	1.6	2.2
22	.00	.00	.00	.00	.00	.00	e.00	e.00	1.9	2.0	1.3	2.2
23	.00	.00	.00	.00	.00	.00	e.00	e.00	2.1	1.8	1.8	2.2
24	.00	.00	.00	.00	.00	.00	e.00	e.00	1.8	1.7	2.2	2.2
25	.00	.00	.00	.00	.00	.00	e.00	e.00	1.7	1.7	2.2	2.1
26	.00	.00	.00	.00	.00	.00	e.00	e.00	1.7	e1.7	2.2	2.1
27	.00	.00	.00	.00	.00	.00	e.00	e.00	1.6	e1.7	2.2	2.1
28	.00	.00	.00	.00	.00	.00	e.00	e.00	1.9	e1.7	2.2	2.1
29	.00	.00	.00	.00	.00	.00	e.00	e.00	1.9	e1.8	2.2	2.1
30	.00	.00	.00	.00	---	.00	e.00	e.00	1.8	2.0	2.2	2.1
31	.00	---	.00	.00	---	.00	---	e.00	---	1.9	2.2	---
TOTAL	10.20	0.00	0.00	0.00	0.00	0.00	0.02	0.09	53.00	62.1	61.9	65.4
MEAN	.33	.000	.000	.000	.000	.000	.001	.003	1.77	2.00	2.00	2.18
MAX	1.4	.00	.00	.00	.00	.00	.02	.05	2.7	2.5	2.3	2.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.0	1.3	2.1
AC-FT	20	.00	.00	.00	.00	.00	.04	.2	105	123	123	130

e Estimated.

10287069 MILL CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.16	.000	.000	.000	.000	.000	.000	.001	1.65	2.47	2.12	1.96
MAX	.33	.000	.000	.000	.000	.000	.001	.003	1.77	2.94	2.24	2.18
(WY)	1992	1991	1991	1991	1991	1991	1992	1992	1992	1991	1991	1992
MIN	.000	.000	.000	.000	.000	.000	.000	.000	1.53	2.00	2.00	1.74
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	268.70		252.71			
ANNUAL MEAN	.74		.69		.70	
HIGHEST ANNUAL MEAN					.71 1991	
LOWEST ANNUAL MEAN					.69 1992	
HIGHEST DAILY MEAN	3.5	Jul 14	2.7	Jun 4	3.5	Jul 14 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 12	.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 12	.00	Oct 1 1990
INSTANTANEOUS PEAK FLOW			10	Jul 4	12	Jul 19 1991
INSTANTANEOUS PEAK STAGE			1.21	Jul 4	1.21	Jul 4 1992
ANNUAL RUNOFF (AC-FT)	533		501		507	
10 PERCENT EXCEEDS	2.6		2.2		2.4	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

10287145 UPPER CONWAY DITCH NEAR LEE VINING, CA

LOCATION.--Lat 38°02'32", long 119°10'18", in SE 1/4 SW 1/4 sec.12, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 200 ft downstream from ditch inlet and Lundy powerplant, and 6.6 mi northwest of Lee Vining.

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 7,020 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated at Lundy powerplant during irrigation season.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 14 ft<sup>3</sup>/s, July 19, 1991; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	1.9	8.5	8.0	3.1
2	.00	.00	.00	.00	.00	.00	.00	.00	2.0	9.2	7.9	3.0
3	.00	.00	.00	.00	.00	.00	.00	.00	2.2	9.7	8.1	3.4
4	.00	.00	.00	.00	.00	.00	.00	.00	2.2	9.0	8.2	3.7
5	.00	.00	.00	.00	.00	.00	.00	.00	2.3	8.7	8.2	3.7
6	.00	.00	.00	.00	.00	.00	.00	.00	2.3	6.9	8.2	3.8
7	.00	.00	.00	.00	.00	.00	.00	.00	2.3	7.3	8.2	4.1
8	.00	.00	.00	.00	.00	.00	.00	.00	2.3	7.3	8.3	3.6
9	.00	.00	.00	.00	.00	.00	.00	.00	2.3	7.3	8.3	3.0
10	.00	.00	.00	.00	.00	.00	.00	.00	2.4	7.3	8.3	.99
11	.00	.00	.00	.00	.00	.00	.00	.00	2.4	7.2	8.3	.00
12	.00	.00	.00	.00	.00	.00	.00	1.4	6.2	7.1	8.3	.00
13	.00	.00	.00	.00	.00	.00	.00	2.9	12	7.1	8.4	.00
14	.00	.00	.00	.00	.00	.00	.00	2.9	12	7.2	8.5	.00
15	.00	.00	.00	.00	.00	.00	.00	3.0	12	7.3	8.6	.00
16	.00	.00	.00	.00	.00	.00	.00	1.1	11	7.8	8.6	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	11	8.3	8.7	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	11	8.2	8.7	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	11	8.3	8.7	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	11	8.3	6.2	.00
21	.00	.03	.00	.00	.00	.00	.00	.00	11	8.3	4.7	.00
22	.00	.00	.00	.00	.00	.00	.00	2.4	11	8.3	5.0	.00
23	.00	.00	.00	.00	.00	.00	.00	3.8	7.3	8.6	7.0	.00
24	.00	.00	.00	.00	.00	.00	.00	3.7	6.7	8.4	5.3	.00
25	.00	.00	.00	.00	.00	.00	.00	3.7	6.7	8.0	3.7	.00
26	.00	.00	.00	.00	.00	.00	.00	2.4	6.7	8.0	3.7	.00
27	.00	.00	.00	.00	.00	.00	.00	1.4	6.8	7.9	3.1	.00
28	.00	.00	.00	.00	.00	.00	.00	1.7	6.9	7.9	3.1	.00
29	.00	.00	.00	.00	.00	.00	.00	2.1	6.9	7.9	3.1	.00
30	.00	.00	.00	.00	---	.00	.00	2.1	7.9	7.9	3.0	.00
31	.00	---	.00	.00	---	.00	---	2.1	---	7.9	3.0	---
TOTAL	0.00	0.03	0.00	0.00	0.00	0.00	0.00	36.70	199.7	247.1	209.4	32.39
MEAN	.000	.001	.000	.000	.000	.000	.000	1.18	6.66	7.97	6.75	1.08
MAX	.00	.03	.00	.00	.00	.00	.00	3.8	12	9.7	8.7	4.1
MIN	.00	.00	.00	.00	.00	.00	.00	.00	1.9	6.9	3.0	.00
AC-FT	.00	.06	.00	.00	.00	.00	.00	73	396	490	415	64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
MEAN	.000	.000	.000	.000	.000	.000	.000	.59	8.21	9.95	9.38	2.66
MAX	.000	.001	.000	.000	.000	.000	.000	1.18	9.77	11.9	12.0	4.23
(WY)	1991	1992	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991
MIN	.000	.000	.000	.000	.000	.000	.000	.000	6.66	7.97	6.75	1.08
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	1162.13	725.32		
ANNUAL MEAN	3.18	1.98	2.58	
HIGHEST ANNUAL MEAN			3.18	1991
LOWEST ANNUAL MEAN			1.98	1992
HIGHEST DAILY MEAN	14	Jul 19	14	Jul 19 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1 1990
ANNUAL RUNOFF (AC-FT)	2310	1440	1870	
10 PERCENT EXCEEDS	12	8.2	12	
50 PERCENT EXCEEDS	.00	.00	.00	
90 PERCENT EXCEEDS	.00	.00	.00	

10287195 LUNDY POWERPLANT TAILRACE NEAR LEE VINING, CA

LOCATION.--Lat 38°02'34", long 119°10'18", in SE 1/4 SW 1/4 sec.12, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on right bank 200 ft downstream from Lundy powerplant and 6.6 mi northwest of Lee Vining.  
 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 culvert control. Elevation of gage is 7,020 ft above National Geodetic Vertical Datum of 1929, from topographic map.  
 REMARKS.--Water is diverted from Lundy Lake (station 10287060) to Lundy powerplant. Diversion upstream during irrigation season to Upper Conway Ditch (station 10287145).  
 COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.  
 EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 60 ft<sup>3</sup>/s, May 17, 19-21, 1992; minimum daily, 4.4 ft<sup>3</sup>/s, Aug. 29 to Sept. 1, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.0	6.6	8.1	10	10	15	25	52	12	4.9	4.4
2	6.0	5.0	6.5	8.1	11	10	16	25	56	16	4.9	4.5
3	6.0	5.0	6.4	8.1	10	10	16	25	57	19	5.0	4.6
4	6.0	4.9	6.5	8.1	11	10	16	25	57	19	5.0	4.7
5	6.0	4.9	6.6	8.1	10	10	16	25	57	19	5.0	4.7
6	5.8	4.9	6.7	8.1	11	10	16	33	57	12	5.0	4.7
7	5.8	4.9	6.6	8.1	11	11	16	38	57	7.3	5.0	4.7
8	5.8	4.9	6.8	9.4	11	11	13	38	57	7.6	5.0	4.7
9	5.8	4.9	6.8	10	10	10	11	38	57	7.4	5.0	4.7
10	5.8	4.9	6.8	11	11	10	11	38	57	7.5	5.0	5.2
11	6.5	4.9	6.7	11	11	10	11	38	57	7.6	5.0	5.3
12	6.3	5.0	6.6	11	11	10	11	46	44	7.6	5.0	5.3
13	6.3	5.0	6.7	11	11	10	11	56	29	7.7	5.0	5.4
14	6.3	6.0	6.8	11	10	10	11	56	28	7.8	5.0	5.5
15	6.3	6.5	6.8	11	10	11	12	56	28	7.6	5.0	5.5
16	6.3	6.5	6.9	11	10	14	12	59	28	13	5.0	5.5
17	6.3	6.5	7.5	10	10	16	11	60	28	17	5.0	5.5
18	6.3	6.5	8.1	10	10	16	9.6	59	28	17	5.0	5.5
19	6.3	6.4	8.1	10	10	16	9.8	60	21	17	5.0	5.5
20	6.3	6.9	8.1	10	10	16	9.8	60	15	17	5.1	5.5
21	6.3	6.4	7.9	10	10	16	9.8	60	15	17	5.3	5.5
22	6.1	6.4	7.8	10	10	16	9.9	57	14	17	4.5	5.5
23	6.5	6.4	7.8	10	10	16	9.8	56	11	10	4.9	5.4
24	5.2	6.4	7.8	11	10	16	20	56	8.7	5.2	4.8	5.3
25	5.2	6.4	7.9	11	11	16	26	56	8.5	5.3	4.7	5.3
26	5.2	6.4	8.1	10	11	16	25	47	8.5	5.2	4.6	5.3
27	5.2	6.4	8.8	10	11	16	25	45	8.5	5.2	4.6	5.3
28	5.2	6.3	8.8	10	11	16	25	45	8.3	5.2	4.6	5.3
29	5.1	6.4	8.3	10	10	16	25	45	12	5.2	4.4	5.3
30	5.0	6.5	8.1	11	---	16	25	45	13	5.1	4.4	5.3
31	5.0	---	8.2	10	---	16	---	45	---	5.0	4.4	---
TOTAL	182.2	173.5	228.1	306.1	303	407	454.7	1417	977.5	331.5	151.1	154.9
MEAN	5.88	5.78	7.36	9.87	10.4	13.1	15.2	45.7	32.6	10.7	4.87	5.16
MAX	6.5	6.9	8.8	11	11	16	26	60	57	19	5.3	5.5
MIN	5.0	4.9	6.4	8.1	10	10	9.6	25	8.3	5.0	4.4	4.4
AC-FT	361	344	452	607	601	807	902	2810	1940	658	300	307

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
MEAN	5.67	5.56	6.36	7.69	7.94	9.06	11.1	33.1	37.4	15.4	5.44	6.71
MAX	5.88	5.78	7.36	9.87	10.4	13.1	15.2	45.7	42.2	20.1	6.00	8.26
(WY)	1992	1992	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991
MIN	5.45	5.33	5.36	5.50	5.33	5.00	7.12	20.5	32.6	10.7	4.87	5.16
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1992	1992	1992	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	4229.3	5086.6		
ANNUAL MEAN	11.6	13.9		
HIGHEST ANNUAL MEAN			12.6	
LOWEST ANNUAL MEAN			13.9	1992
HIGHEST DAILY MEAN	57	Jun 5	11.3	1991
LOWEST DAILY MEAN	4.9	Mar 15	60	May 17 1992
ANNUAL SEVEN-DAY MINIMUM	4.9	Mar 19	4.4	Aug 29 1992
ANNUAL RUNOFF (AC-FT)	8390		4.5	Aug 27 1992
10 PERCENT EXCEEDS	31		10090	9140
50 PERCENT EXCEEDS	6.3		38	33
90 PERCENT EXCEEDS	5.0		9.5	6.5
			5.0	5.0

10287260 WAUGH LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'04", long 119°10'52", unsurveyed, T.2 S., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near outlet at base of Rush Creek Meadows Dam on Rush Creek and 6.0 mi southwest of town of June Lake.

DRAINAGE AREA.--15.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--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 is available for release. Figures given represent total 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 a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,499 acre-ft, May 30, 1992, elevation, 9,416.80 ft; minimum, no storage in each year.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,499 acre-ft, May 30, elevation, 9,416.80 ft; minimum, no storage Oct. 17 to Apr. 3.

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	9,400	2,670
9,380	148	9,405	3,447
9,385	681	9,410	4,277
9,390	1,283	9,418	5,727
9,395	1,948		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1888	.00	.00	.00	.00	.00	e.00	303	5461	5286	5293	5155
2	1745	.00	.00	.00	.00	.00	e.00	535	5448	5286	5291	5142
3	1604	.00	.00	.00	.00	.00	e.00	798	5445	5286	5288	5074
4	1464	.00	.00	.00	.00	.00	e1.0	1080	5433	5280	5286	4968
5	1362	.00	.00	.00	.00	.00	e1.0	1344	5394	5269	5284	4862
6	1197	.00	.00	.00	.00	.00	e1.0	1625	5371	5271	5282	4753
7	1069	.00	.00	.00	.00	.00	e1.0	1994	5371	5265	5278	4649
8	944	.00	.00	.00	.00	.00	e1.0	2426	5364	5278	5275	4465
9	824	.00	.00	.00	.00	.00	e1.0	2766	5355	5303	5275	4222
10	708	.00	.00	.00	.00	.00	e1.0	3085	5345	5316	5271	3981
11	594	.00	.00	.00	.00	.00	e1.0	3444	5332	5325	5269	3745
12	482	.00	.00	.00	.00	.00	e1.0	3760	5321	5422	5269	3510
13	374	.00	.00	.00	.00	.00	e1.0	4060	5303	5426	5284	3279
14	270	.00	.00	.00	.00	.00	e1.0	4308	5278	5446	5303	3054
15	165	.00	.00	.00	.00	.00	e1.0	4548	5260	5360	5330	2835
16	52	.00	.00	.00	.00	.00	e1.0	4787	5232	5325	5316	2488
17	.00	.00	.00	.00	.00	.00	e1.3	5023	5212	5295	5303	2044
18	.00	.00	.00	.00	.00	.00	e1.7	5223	5210	5256	5295	1628
19	.00	.00	.00	.00	.00	.00	e2.1	5356	5238	5208	5288	1244
20	.00	.00	.00	.00	.00	.00	e2.5	5362	5278	5192	5282	891
21	.00	.00	.00	.00	.00	.00	e3.3	5362	5316	5227	5264	568
22	.00	.00	.00	.00	.00	.00	e5.8	5368	5329	5251	5245	272
23	.00	.00	.00	.00	.00	.00	e8.3	5392	5329	5271	5240	3.0
24	.00	.00	.00	.00	.00	.00	e12	5415	5343	5282	5230	.00
25	.00	.00	.00	.00	.00	.00	e21	5413	5340	5293	5219	.00
26	.00	.00	.00	.00	.00	.00	e37	5445	5334	5297	5208	.00
27	.00	.00	.00	.00	.00	.00	e54	5480	5343	5301	5197	.00
28	.00	.00	.00	.00	.00	.00	e77	5463	5347	5291	5188	.00
29	.00	.00	.00	.00	.00	.00	e128	5452	5349	5293	5173	.00
30	.00	.00	.00	.00	---	.00	e177	5499	5349	5291	5173	.00
31	.00	---	.00	.00	---	.00	---	5467	---	5291	5164	---
MAX	1888	.00	.00	.00	.00	.00	177	5499	5461	5446	5330	5155
MIN	.00	.00	.00	.00	.00	.00	.00	303	5210	5192	5164	.00
a	9370.00	9370.00	9370.00	9370.00	9370.00	9370.00	9380.30	9416.63	9416.00	9415.69	9415.00	9370.16
b	-2025	0	0	0	0	0	+177	+5290	-118	-58	-127	-5164

CAL YR 1991 MAX 5420 MIN .00 b 0  
WTR YR 1992 MAX 5499 MIN .00 b -2025

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287280 GEM LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'07", long 119°08'25", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house 100 ft downstream from left abutment of dam on Rush Creek and 4.0 mi southwest of town of June Lake.

DRAINAGE AREA.--22.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 17,798 acre-ft between elevations 8,964.33 ft, invert of outlet, and 9,053.64 ft, crest of upper spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 13,475 acre-ft, Oct. 17, 1991, elevation, 9,037.95 ft; minimum, 1,086 acre-ft, Mar. 22, 1991, elevation, 8,983.46 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,475 acre-ft, Oct. 17, elevation, 9,037.95 ft; minimum, 1,106 acre-ft, Apr. 13, elevation, 8,983.70 ft.

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	9,010	6,547
8,985	1,348	9,025	10,121
8,990	2,300	9,040	14,023
9,000	4,345	9,055	18,187

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12401	12835	11054	9054	6999	5296	2796	4085	e7983	9572	10488	e9817
2	12472	12772	10959	8984	6930	5244	2635	4106	e8279	9569	10465	e9765
3	12532	12708	10942	8916	6859	5185	2463	4174	8583	9560	10452	9753
4	12595	12637	10883	8848	6795	5121	2311	4216	8814	9535	10445	9777
5	12653	12585	10807	8814	6722	5075	2145	4261	9010	9508	10420	9820
6	12722	12530	10751	8747	6665	5024	2009	4310	9146	9471	10397	9845
7	12766	12469	10685	8696	6594	4972	1875	4396	9248	9437	10372	9870
8	12809	12425	10624	8646	6529	4918	1763	4497	9351	9407	10342	9971
9	12851	12385	10556	8564	6456	4860	1664	4572	9451	9387	10322	10121
10	12880	12333	10500	8509	6406	4800	1537	4639	9545	9400	10296	10286
11	12960	12275	10425	8444	6363	4754	1419	4706	9611	9424	10274	10437
12	13063	12220	10372	8373	6329	4687	1217	4776	9649	9572	10246	10571
13	13155	12152	10296	8310	6268	4622	1294	4862	9671	9755	10241	10720
14	13248	12087	10224	8251	6208	4568	1370	4948	9681	9954	10266	10853
15	13339	12016	10156	8184	6174	4512	1423	5020	9579	10224	10286	10985
16	13421	11956	10074	8115	6114	4459	1451	5101	9574	10375	10327	11230
17	13475	11899	10011	8056	6049	4396	1581	5178	9582	10485	10337	11586
18	13456	11839	9946	7985	5986	4332	1770	5237	9555	10568	10337	11907
19	13456	11777	9874	7922	5929	4270	1893	5320	9513	10647	10322	12196
20	13453	11720	9815	7858	5880	4214	2026	5474	9468	10700	10294	12459
21	13453	11673	9740	7797	5827	4152	2158	5563	9437	10672	10284	12693
22	13443	11640	9668	7726	5776	4095	2240	5690	9429	10637	10259	12888
23	13389	11565	9616	7649	5720	3970	2317	5831	9434	10619	10226	13057
24	13312	11508	9532	7588	5659	3831	2448	6010	9434	10599	10204	13005
25	13251	11449	9468	7516	5601	3697	2645	6219	9461	10586	10174	12933
26	13211	11390	9397	7448	5505	3567	2865	e6429	9461	10563	10131	12872
27	13147	11313	9329	7381	5487	3433	3112	e6613	9481	10551	10079	12790
28	13092	11256	9280	7311	5406	3308	3395	e6896	9515	10538	10029	12724
29	13026	11187	9248	7239	5353	3170	3695	e7163	9537	10515	9976	12661
30	12965	11115	9178	7139	---	3050	3970	e7432	9565	10515	9927	12587
31	12904	---	9126	7068	---	2918	---	e7778	---	10495	e9872	---
MAX	13475	12835	11054	9054	6999	5296	3970	7778	9681	10700	10488	13057
MIN	12401	11115	9126	7068	5353	2918	1217	4085	7983	9387	9872	9753
a	9035.80	9028.93	9020.97	9012.28	9004.66	8993.13	8998.23	9015.33	9022.76	9026.49	9024.00	9034.60
b	+576	-1789	-1989	-2058	-1715	-2435	+1052	+3808	+1787	+930	-623	+2715

CAL YR 1991 MAX 13475 MIN 1086 b +5109  
WTR YR 1992 MAX 13475 MIN 1217 b +259

e Estimated.  
a Elevation, in feet, at end of month.  
b Change in contents, in acre-feet.

10287285 AGNEW LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'30", long 119°07'52", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in boat house at left abutment of dam on Rush Creek and 3.3 mi southwest of town of June Lake.

DRAINAGE AREA.--23.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 810 acre-ft between elevations 8,470.00 ft, invert of outlet, and 8,495.88 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 817 acre-ft, July 2, 1991, elevation, 8,496.06 ft; minimum, 22 acre-ft, Feb. 28, 1991, elevation, 8,470.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 811 acre-ft, Aug. 14, 15, elevation, 8,495.89 ft; minimum, 27 acre-ft, for many days, elevation, 8,471.18 ft.

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	8,485	415
8,475	122	8,490	587
8,480	260	8,498	896

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	808	28	28	28	28	28	27	193	e590	773	807	803
2	808	28	28	28	28	28	27	202	e596	775	808	803
3	808	27	28	28	28	28	27	214	e600	774	807	801
4	808	28	28	28	28	28	27	225	607	774	806	802
5	808	28	28	28	28	28	27	236	614	775	806	803
6	807	28	28	28	28	28	27	247	620	776	806	802
7	805	28	28	28	28	28	34	262	626	777	805	802
8	781	28	28	28	28	28	35	279	631	779	804	802
9	726	28	28	28	28	28	36	294	636	780	804	803
10	670	28	28	28	28	28	40	310	639	782	805	803
11	618	28	28	27	28	28	45	326	642	783	805	803
12	566	28	28	28	28	28	48	342	644	787	806	803
13	515	28	28	28	28	28	52	361	648	789	808	803
14	464	28	28	28	28	28	57	377	650	793	811	803
15	411	28	28	28	28	28	62	392	752	795	811	801
16	361	28	28	27	28	28	67	408	754	799	810	801
17	312	28	28	28	28	28	74	425	757	801	810	801
18	270	28	28	28	28	28	81	437	759	802	809	801
19	238	28	28	27	28	28	87	451	759	802	807	802
20	214	28	28	28	28	28	94	462	762	802	807	803
21	157	28	28	27	28	28	101	471	765	803	797	804
22	117	28	28	28	28	28	106	480	767	802	797	804
23	111	28	28	27	28	28	111	488	770	803	798	803
24	112	28	28	27	28	28	116	498	773	803	798	799
25	95	28	28	28	28	28	125	508	773	804	798	800
26	e56	28	28	28	28	28	134	e518	770	805	798	800
27	27	28	28	28	28	28	144	e528	768	805	799	801
28	27	27	28	28	28	28	155	e541	e769	806	800	801
29	28	27	28	28	28	28	168	e554	e770	807	800	802
30	27	28	28	28	---	27	182	e566	e772	807	801	801
31	28	---	28	28	---	27	---	e580	---	807	802	---
MAX	808	28	28	28	28	28	182	580	773	807	811	804
MIN	27	27	28	27	28	27	27	193	590	773	797	799
a	8471.20	8471.20	8471.22	8471.20	8471.20	8471.19	8477.26	8489.80	8494.93	8495.81	8495.67	8495.65
b	-780	0	0	0	0	-1	+155	+398	+192	+35	-5	-1

CAL YR 1991 MAX 810 MIN 22 b +5  
WTR YR 1992 MAX 811 MIN 27 b -7

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'33", long 119°07'47", in NE 1/4 SW 1/4 sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 600 ft downstream from Agnew Lake Dam, and 3.4 mi southwest of town of June Lake.

DRAINAGE AREA.--23.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. If records for Rush Creek powerplant tailrace (station 10287300) are combined with this record, a record equivalent to that published since October 1951 as Rush Creek below Agnew Lake (station 10287290) can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.--Water-stage recorder and Parshall flume. A 4-ft Cipolletti weir is set in the Parshall flume at times. Elevation of gage is 8,440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated for power development by Waugh, Gem, and Agnew Lakes (stations 10287260, 10287280, and 10287285). 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 a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25 ft<sup>3</sup>/s, Oct. 31, Nov. 1, 1990, Oct. 26, 1991, gage height, 1.52 ft; maximum gage height, 2.99 ft, Oct. 26, 1991; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 25 ft<sup>3</sup>/s, Oct. 26, gage height, 2.99 ft; no flow Apr. 30, July 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.30	.66	.40	.67	.37	.59	1.1	.05	.05	e.05	.25	.10
2	e.30	.70	.48	.71	.42	.62	1.0	.07	.06	.02	.60	.06
3	e.30	.73	.49	.65	.46	.62	.68	.07	.03	.00	.57	.56
4	e.30	.66	.49	.53	.51	.75	.24	.06	.04	.22	.28	.02
5	e.30	.69	.49	.79	.50	.59	.12	.06	e.05	.47	.07	.02
6	e.50	.69	.47	.80	.48	.73	.11	.10	e.05	.47	.12	.12
7	e.40	.74	.49	.99	.55	.84	.12	.10	e.05	.02	.57	.02
8	e.36	.67	.62	e1.0	.49	.80	.13	.07	e.05	.04	.54	.02
9	e.36	.72	.60	e.90	.50	.72	.11	.05	e.05	.05	.06	.01
10	e.36	.89	.65	.57	.49	.63	.12	.04	e.05	.04	.06	.06
11	e.36	.84	.64	e.65	1.2	.63	.08	.03	e.05	.06	.06	.24
12	e.36	.75	.65	e.65	1.2	.61	.32	.04	e.05	.20	.06	.08
13	e.36	.71	.65	e.65	1.2	.56	.13	.04	e.05	.12	.18	.02
14	e.36	.54	.60	e.65	.80	.55	.15	.05	e.05	.11	.52	.38
15	e.36	.61	.57	e.60	1.2	.55	.11	.09	e.05	.10	.99	.57
16	e.36	.68	.57	.50	1.2	.55	.08	.11	e.05	.08	.86	.10
17	e.36	.89	.51	.49	.95	.70	.16	.06	e.05	.19	.59	.15
18	e.36	.81	.49	.47	.81	.76	.10	.08	e.05	.34	.72	.03
19	e.36	.81	1.9	e.50	.58	.65	.08	.06	e.05	.42	.78	.02
20	e.36	.80	.59	e.50	.59	.66	.08	.09	e.05	.34	.21	.01
21	e.36	.72	.53	e.50	.62	.74	.04	.06	e.05	.20	4.2	.01
22	e.36	.70	.49	e.50	.68	.69	.02	.09	e.05	.94	.39	.33
23	e.36	.69	.49	.53	e.75	.70	.07	.11	e.05	.09	.09	.71
24	e.36	.69	.49	.44	e.79	.65	.08	.06	e.05	.08	.03	1.9
25	11	.59	.49	e.47	e.80	.73	.08	.07	e.05	.07	.03	.07
26	25	.48	.49	e.45	e.80	.81	.06	.07	e.05	.10	.26	.01
27	19	.53	.49	e.45	.69	.85	.07	.06	e.05	.10	.21	.08
28	4.6	.81	.55	.41	.55	.86	.08	.09	e.05	.22	.12	.05
29	1.9	1.1	.97	.48	.55	.91	.02	.07	e.05	.10	.17	.03
30	.97	.95	1.0	.52	---	1.0	.00	.05	e.05	.43	.13	.62
31	.80	---	.74	.41	---	1.2	---	.03	---	.29	.05	---
TOTAL	71.79	21.85	19.08	18.43	20.73	22.25	5.54	2.08	1.48	5.96	13.77	6.40
MEAN	2.32	.73	.62	.59	.71	.72	.18	.067	.049	.19	.44	.21
MAX	25	1.1	1.9	1.0	1.2	1.2	1.1	.11	.06	.94	4.2	1.9
MIN	.30	.48	.40	.41	.37	.55	.00	.03	.03	.00	.03	.01
AC-FT	142	43	38	37	41	44	11	4.1	2.9	12	27	13

e Estimated.

## 10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.52	1.17	.42	.43	.46	.52	.12	.14	.090	1.07	.49	.27
MAX	2.32	1.60	.62	.59	.71	.72	.18	.22	.13	1.95	.55	.33
(WY)	1992	1991	1992	1992	1992	1992	1992	1991	1991	1991	1991	1991
MIN	.73	.73	.23	.27	.19	.33	.053	.067	.049	.19	.44	.21
(WY)	1991	1992	1991	1991	1991	1991	1991	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	235.96		209.36			
ANNUAL MEAN	.65		.57		.56	
HIGHEST ANNUAL MEAN					.57	
LOWEST ANNUAL MEAN					.55	
HIGHEST DAILY MEAN	25	Oct 26	25	Oct 26	25	Nov 1 1990
LOWEST DAILY MEAN	.00	Mar 9	.00	Apr 30	.00	Oct 27 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 12	.04	Jun 27	.00	Mar 12 1991
INSTANTANEOUS PEAK FLOW			25	Oct 26	25	Oct 31 1990
INSTANTANEOUS PEAK STAGE			2.99	Oct 26	2.99	Oct 26 1991
ANNUAL RUNOFF (AC-FT)	468		415		407	
10 PERCENT EXCEEDS	1.4		.82		.91	
50 PERCENT EXCEEDS	.30		.40		.30	
90 PERCENT EXCEEDS	.01		.05		.04	

10287300 RUSH CREEK POWERPLANT TAILRACE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'59", long 119°07'17", in NE 1/4 NE 1/4 sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, on left bank 200 ft downstream from Rush Creek powerplant, 0.1 mi upstream from Reversed Creek, and 2.8 mi southwest of town of June Lake.

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. Elevation of gage is 7,230 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow is water diverted at either Gem or Agnew Lakes (stations 10287280 and 10287285) to Rush Creek powerplant.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 100 ft<sup>3</sup>/s, Apr. 7, 8, 10-12, 1992; minimum daily, 5.2 ft<sup>3</sup>/s, Apr. 30, May 1, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	35	35	36	36	35	73	36	35	36	23	36
2	35	35	35	36	36	35	81	36	36	36	22	36
3	34	35	35	36	36	35	96	36	35	36	22	36
4	34	35	35	36	36	35	99	36	25	36	22	36
5	34	35	35	36	36	35	98	36	36	36	22	36
6	35	35	35	36	36	35	99	36	36	36	22	36
7	35	35	35	36	36	35	100	36	36	36	22	36
8	48	35	36	36	36	35	100	36	36	36	22	36
9	65	35	35	36	36	35	97	36	36	32	22	36
10	65	35	35	36	36	35	100	36	36	22	22	36
11	44	35	35	36	36	35	100	36	36	22	22	36
12	28	35	35	36	36	35	100	36	36	23	21	36
13	28	36	35	36	36	35	73	36	36	23	21	36
14	27	36	36	36	36	35	36	36	36	23	15	36
15	28	36	36	36	36	35	36	36	36	22	22	36
16	27	36	36	36	36	36	36	36	36	22	22	36
17	27	36	36	35	36	36	36	36	36	22	22	36
18	23	36	35	35	36	36	36	36	35	22	22	36
19	19	36	35	35	36	36	36	36	36	22	22	36
20	23	36	35	35	36	36	35	36	36	22	22	36
21	24	36	35	35	36	36	36	36	36	22	22	36
22	22	36	35	35	35	36	36	36	36	23	22	36
23	25	35	35	35	35	56	35	36	36	23	22	36
24	35	35	35	35	35	73	36	36	36	23	22	36
25	35	35	35	35	35	73	36	36	36	23	22	36
26	35	36	36	35	35	73	36	35	36	23	30	36
27	35	35	36	35	35	73	36	35	36	23	36	36
28	35	35	36	35	35	73	36	28	36	23	36	36
29	35	35	36	35	35	73	36	36	36	30	36	36
30	35	35	36	36	---	73	36	36	36	23	36	36
31	35	---	36	36	---	73	---	36	---	23	36	---
TOTAL	1045	1061	1096	1103	1036	1417	1826	1106	1066	824	752	1080
MEAN	33.7	35.4	35.4	35.6	35.7	45.7	60.9	35.7	35.5	26.6	24.3	36.0
MAX	65	36	36	36	36	73	100	36	36	36	36	36
MIN	19	35	35	35	35	35	35	28	25	22	15	36
AC-FT	2070	2100	2170	2190	2050	2810	3620	2190	2110	1630	1490	2140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1992, BY WATER YEAR (WY)

	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992
MEAN	35.0	29.4	29.6	26.8	26.4	32.8	33.9	36.9	37.1	30.9	29.6	35.7
MAX	36.4	35.4	35.4	35.6	35.7	45.7	60.9	38.1	38.7	35.1	35.0	36.0
(WY)	1991	1992	1992	1992	1992	1992	1992	1991	1991	1991	1991	1992
MIN	33.7	23.5	23.9	18.1	16.8	19.9	6.87	35.7	35.5	26.6	24.3	35.3
(WY)	1992	1991	1991	1991	1991	1991	1991	1992	1992	1992	1992	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	10632.0		13412			
ANNUAL MEAN	29.1		36.6			
HIGHEST ANNUAL MEAN					32.0	
LOWEST ANNUAL MEAN					36.6	1992
HIGHEST DAILY MEAN	65	Oct 9	100	Apr 7	27.4	1991
LOWEST DAILY MEAN	5.2	Apr 30	15	Aug 14	100	Apr 7 1992
ANNUAL SEVEN-DAY MINIMUM	6.4	Apr 25	21	Aug 8	5.2	Apr 30 1991
ANNUAL RUNOFF (AC-FT)	21090		26600		6.4	Apr 25 1991
10 PERCENT EXCEEDS	44		36		23210	
50 PERCENT EXCEEDS	35		36			
90 PERCENT EXCEEDS	7.2		23			

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.--16.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1921. Usable capacity, 9,789 acre-ft between elevations 10,048.80 ft, invert of outlet, and 10,090.40 ft, crest of spillway. At times, a cofferdam 600 ft upstream affects the storage below about 800 acre-ft, due to the constriction of flow past the cofferdam. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,473 acre-ft, Sept. 10, 1991, elevation, 10,070.34 ft; minimum, 692 acre-ft, Apr. 23-30, May 3-5, 1991, elevation, 10,052.55 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,440 acre-ft, Oct. 1, elevation, 10,070.20 ft; minimum, 1,503 acre-ft, Apr. 6-8, 10, elevation, 10,056.72 ft.

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	10,070	4,392
10,055	1,163	10,080	6,890
10,060	2,172	10,091	9,970

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4432	4399	4233	3804	3084	2429	1541	2039	3410	3981	4123	3985
2	4430	4392	4211	3790	3053	2388	1529	2077	3448	3985	4123	3971
3	4425	4394	4200	3772	3027	2338	1523	2126	3488	3988	4116	3962
4	4423	4397	4183	3745	3005	2287	1521	2155	3527	3990	4113	3951
5	4423	4397	4167	3740	2983	2252	1517	2203	3563	3988	4113	3932
6	4418	4401	4146	3717	2957	2210	1503	2245	3608	3995	4111	3920
7	4416	4401	4153	3699	2936	2172	1503	2313	3633	3995	4111	3907
8	4409	4397	4134	3669	2912	2135	1503	2393	3667	4002	4111	3895
9	4404	4392	4120	3644	2890	2099	1505	2456	3701	4009	4106	3879
10	4397	4399	4109	3615	2881	2085	1503	2513	3729	4009	4099	3868
11	4397	4385	4090	3604	2881	2062	1505	2566	3751	4018	4095	3859
12	4394	4378	4071	3570	2875	2012	1507	2622	3783	4057	4099	3850
13	4394	4371	4057	3547	2853	1949	1515	2676	3799	4074	4113	3838
14	4399	4373	4041	3517	2831	1887	1525	2734	3813	4095	4113	3829
15	4404	4361	4023	3493	2838	1824	1535	2784	3824	4109	4116	3824
16	4406	4338	4011	3463	2831	1759	1549	2844	3827	4123	4116	3822
17	4413	4373	3997	3445	2803	1698	1577	2894	3829	4130	4113	3818
18	4416	4369	3995	3421	2779	1638	1603	2933	3827	4139	4109	3815
19	4418	4352	3992	3397	2760	1613	1621	2973	3829	4139	4099	3806
20	4416	4347	3962	3374	2741	1609	1650	2999	3836	4139	4095	3802
21	4428	4336	3948	3348	2721	1599	1678	3020	3836	4141	4090	3792
22	4428	4324	3939	3323	2700	1593	1702	3036	3840	4134	4078	3786
23	4425	4310	3920	3297	2680	1587	1716	3049	3856	4134	4069	3786
24	4423	4298	3902	3270	2654	1579	1731	3075	3884	4132	4062	3776
25	4425	4289	3891	3241	2631	1575	1767	3115	3891	4127	4048	3772
26	4428	4275	3872	3221	2609	1565	1808	3137	3900	4130	4034	3765
27	4425	4289	3854	3190	2573	1555	1842	3175	3911	4125	4025	3761
28	4416	4263	3854	3177	2526	1553	1889	3237	3937	4120	4020	3754
29	4425	4268	3850	3148	2477	1543	1949	3283	3960	4120	4009	3742
30	4413	4251	3836	3122	---	1541	2002	3319	3971	4123	4009	3740
31	4401	---	3820	3102	---	1547	---	3356	---	4123	3999	---
MAX	4432	4401	4233	3804	3084	2429	2002	3356	3971	4141	4123	3985
MIN	4394	4251	3820	3102	2477	1541	1503	2039	3410	3981	3999	3740
a	10070.04	10069.40	10067.54	10064.34	10061.45	10056.94	10059.18	10065.49	10068.20	10068.85	10068.32	10067.19
b	-31	-150	-431	-718	-625	-930	+455	+1354	+615	+152	-124	-259

CAL YR 1991 MAX 4468 MIN 692 b +1906  
WTR YR 1992 MAX 4432 MIN 1503 b -692

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

10287700 TIOGA LAKE NEAR LEE VINING, CA

LOCATION.--Lat 37°55'41", long 119°15'01", in SE 1/4 SE 1/4 sec.19, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, at left abutment of dam on Glacier Creek and 7.4 mi west of Lee Vining.

DRAINAGE AREA.--3.67 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (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 a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,278 acre-ft, June 13, 1991, elevation, 9,650.60 ft; minimum, 88 acre-ft, several days, elevation, 9,628.95 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,270 acre-ft, July 12, elevation, 9,650.50 ft; minimum, 88 acre-ft, several days, elevation, 9,628.95 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	9,640	609
9,630	131	9,646	962
9,635	356	9,652	1,383

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1073	618	129	93	88	92	99	463	1256	1265	1257	1259
2	1060	602	128	92	88	95	98	489	1268	1264	1257	1259
3	1044	588	e125	92	90	94	100	516	1270	1263	1257	1256
4	1030	564	119	89	89	92	105	548	1269	1262	1257	1245
5	1015	537	113	100	89	97	105	583	1268	1260	1256	1232
6	1002	512	110	97	90	97	105	621	1268	1259	1257	1221
7	987	487	111	97	90	98	107	675	1268	1258	1258	1210
8	972	463	108	94	90	97	109	734	1269	1259	1257	1198
9	958	440	106	92	90	95	111	773	1267	1259	1257	1168
10	944	417	102	91	97	93	111	807	1267	1259	1257	1178
11	930	394	99	91	107	92	112	840	1265	1262	1257	1171
12	915	368	97	90	108	91	113	873	1268	1270	1261	1164
13	902	340	96	89	107	90	118	903	1268	1267	1261	1156
14	888	316	95	89	105	91	124	930	1269	1268	1262	1149
15	874	290	94	88	109	91	129	957	1270	1266	1262	1141
16	861	265	93	88	110	93	134	987	1267	1267	1261	1134
17	845	249	93	89	108	92	158	1011	1267	1265	1260	1130
18	830	229	106	89	106	91	176	1028	1267	1263	1259	1124
19	813	206	105	89	106	91	188	1046	1266	1262	1259	1118
20	797	189	101	89	106	92	204	1057	1265	1261	1259	1110
21	777	170	97	88	106	92	223	1066	1264	1260	1258	1102
22	764	154	94	89	105	92	234	1074	1262	1260	1257	1096
23	745	140	93	88	102	91	243	1084	1265	1260	1258	1085
24	729	133	92	88	99	91	257	1096	1266	1259	1258	1073
25	712	130	91	88	96	92	277	1110	1265	1259	1258	1060
26	710	127	90	88	94	92	303	1125	1264	1259	1258	1047
27	697	129	91	88	93	91	331	1152	1263	1259	1257	1035
28	681	128	96	88	92	92	366	1178	1264	1257	1259	1025
29	666	130	99	88	93	92	404	1196	1267	1258	1259	1013
30	650	129	96	88	---	96	436	1215	1265	1257	1261	1000
31	635	---	94	89	---	99	---	1235	---	1257	1260	---
MAX	1073	618	129	100	110	99	436	1235	1270	1270	1262	1259
MIN	635	127	90	88	88	90	98	463	1256	1257	1256	1000
a	9640.48	9629.96	9629.09	9628.97	9629.07	9629.22	9636.65	9650.02	9650.43	9650.32	9650.36	9646.59
b	-449	-506	-35	-5	+4	+6	+337	+799	+30	-8	+3	-260

CAL YR 1991 MAX 1273 MIN 90 b -32  
WTR YR 1992 MAX 1270 MIN 88 b -84

e Estimated.  
a Elevation, in feet, at end of month.  
b Change in contents, in acre-feet.

## 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 Lee Vining.

DRAINAGE AREA.--16.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1927. Usable capacity, 493 acre-ft between elevations 9,478.53 ft, invert of outlet, and 9,492.53 ft, crest of spillway. Radial gates are occasionally closed, increasing 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 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 a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 637 acre-ft, May 15, 1992, elevation, 9,494.81 ft; minimum, 365 acre-ft, Oct. 26, 1990, elevation, 9,490.35 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 637 acre-ft, May 15, elevation, 9,494.81 ft; minimum, 386 acre-ft, May 21, elevation, 9,490.71 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	9,493	522
9,489	290	9,497	780

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	461	442	416	449	454	468	450	412	435	440	457	409
2	459	444	422	448	455	462	451	427	435	428	456	408
3	459	446	427	451	455	455	459	442	440	419	455	e407
4	459	453	428	455	455	460	453	449	441	415	453	e416
5	456	457	437	462	455	456	440	432	431	407	452	e424
6	455	453	442	460	458	447	438	403	415	405	452	e430
7	455	448	448	458	460	437	447	418	393	404	451	e437
8	454	440	447	452	459	425	453	476	415	412	448	e444
9	453	435	442	449	459	411	456	445	446	419	445	e451
10	453	437	438	449	463	409	463	404	451	421	443	455
11	452	441	438	450	463	414	465	415	445	433	441	458
12	451	445	438	451	468	428	458	460	428	470	446	459
13	447	449	440	452	473	441	458	536	413	450	454	461
14	445	451	441	453	465	450	465	607	414	446	455	462
15	444	450	442	455	461	451	469	637	412	428	441	456
16	444	449	442	455	454	451	463	589	408	424	422	453
17	443	449	444	455	452	451	484	502	406	439	413	451
18	442	442	444	455	449	447	449	447	412	453	409	448
19	445	442	444	454	444	437	424	425	424	460	411	446
20	448	442	445	454	443	442	444	389	437	449	419	442
21	449	442	447	455	448	443	455	391	452	437	427	439
22	448	446	448	456	449	446	440	422	460	435	430	434
23	444	437	449	456	448	448	440	452	464	431	428	428
24	443	406	448	458	451	449	463	470	465	428	418	427
25	444	397	447	456	452	451	477	478	433	434	427	427
26	445	404	447	455	453	452	484	480	408	441	435	e425
27	432	405	445	455	462	453	467	488	410	446	415	e425
28	434	406	448	455	473	456	456	486	428	451	411	426
29	438	410	450	453	477	452	473	440	436	455	410	430
30	438	413	449	453	---	451	433	420	441	458	409	434
31	440	---	449	454	---	451	---	429	---	458	409	---
MAX	461	457	450	462	477	468	484	637	465	470	457	462
MIN	432	397	416	448	443	409	424	389	393	404	409	407
a	9491.63	9491.18	9491.79	9491.88	9492.26	9491.82	9491.51	9491.45	9491.65	9491.94	9491.12	9491.54
b	-22	-27	+36	+5	+23	-26	-18	-4	+12	+17	-49	+25

CAL YR 1991 MAX 537 MIN 393 b -6  
WTR YR 1992 MAX 637 MIN 389 b -28

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287770 LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING, CA

LOCATION.--Lat 37°56'10", long 119°13'48", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 100 ft downstream from Rhinedollar Dam spillway and 6.3 mi west of Lee Vining.

DRAINAGE AREA.--16.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 9,450 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Flow regulated for power development by Saddlebag, Tioga, and Ellery Lakes (stations 10287650, 10287700, and 10287760). Most of the water is diverted at Ellery Lake to Poole Powerplant via Poole Powerplant conduit intake. Estimated discharges are on days when flow released directly from conduit bypasses the gage.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44 ft<sup>3</sup>/s, June 12, 1991, gage height, 1.07 ft; no flow for many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10 ft<sup>3</sup>/s on several days; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e5.0	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	e10	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	e6.2	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	1.9	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.85	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.76	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.69	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.61	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.51	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.37	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.27	.00	.00	e4.1	.00
25	.00	.00	.00	.00	.00	.00	.00	.19	.00	.00	e8.0	.00
26	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e8.1
30	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e10
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	e10
TOTAL	0.00	0.00	0.00	0.00	0.00	81.20	0.00	10.48	0.00	0.00	12.10	28.10
MEAN	.000	.000	.000	.000	.000	2.62	.000	.34	.000	.000	.39	.94
MAX	.00	.00	.00	.00	.00	10	.00	1.9	.00	.00	8.0	10
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	161	.00	21	.00	.00	24	56
a	845	1140	861	1060	1070	1080	1950	3550	1940	1390	874	764

e Estimated.

a Diversion, in acre-feet, to Poole Powerplant, 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.39	.000	.000	.000	.19	1.31	.000	.19	2.62	.000	.20	.47
MAX	2.78	.000	.000	.000	.40	2.62	.000	.34	5.24	.000	.39	.94
(WY)	1991	1991	1991	1991	1991	1992	1991	1992	1991	1991	1992	1992
MIN	.000	.000	.000	.000	.000	.000	.000	.046	.000	.000	.000	.000
(WY)	1992	1991	1991	1991	1992	1991	1991	1991	1992	1991	1991	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1991 - 1992	
ANNUAL TOTAL	169.59		131.88			
ANNUAL MEAN	.46		.36		.53	
HIGHEST ANNUAL MEAN					.70	
LOWEST ANNUAL MEAN					.36	
HIGHEST DAILY MEAN	35	Jun 12	10	Mar 5	35	Jun 12 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1990
INSTANTANEOUS PEAK FLOW			10	Mar 5	.44	Jun 12 1991
INSTANTANEOUS PEAK STAGE					1.07	Jun 12 1991
ANNUAL RUNOFF (AC-FT)	336		262		384	
ANNUAL DIVERSION (AC-FT) a	16640		16530			
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

a Diversion, in acre-feet, to Poole Powerplant, provided by Southern California Edison Co.

TIJUANA RIVER BASIN

11011000 BARRETT LAKE NEAR DULZURA, CA

LOCATION.--Lat 32°30'46", long 116°40'11", in NW 1/4 NW 1/4 sec.22, T.17 S., R.3 E., San Diego County, Hydrologic Unit 18070305, on Barrett Dam outlet tower, 7.2 mi downstream from Morena Reservoir, and 7.0 mi northeast of Dulzura.

DRAINAGE AREA.--245 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1960 to September 1966 (monthend contents only, published in WSP 1928), published as Cottonwood Creek at Barrett Dam. October 1986 to current year (October 1986 to June 1988, monthend contents only).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of San Diego). Prior to July 6, 1988, nonrecording gage. Prior to September 1966, at datum 1,446.12 ft higher.

REMARKS.--Reservoir is formed by gravity-concrete and masonry dam built in 1922. Total capacity at top of flash gates on spillway, 44,760 acre-ft, elevation, 1,615.00 ft. Capacity at permanent spillway level, 37,950 acre-ft, elevation, 1,607.00 ft. Dead storage below lowest outlet, 719 acre-ft, elevation, 1,505.00 ft. Water from Barrett Lake is diverted out of basin to Lower Otay Lake (station 11014550) by Dulzura conduit for municipal use.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 22,110 acre-ft, Oct. 1, 1986, elevation, 1,584.38 ft; minimum, 4,690 acre-ft, Nov. 4-20, 1990, elevation, 1,538.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 19,000 acre-ft, Apr. 13-26, elevation, 1,578.90 ft; minimum, 15,500 acre-ft, Nov. 30, Dec. 1, 2, 5-7, elevation, 1,571.97 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table dated Mar. 27, 1956)

1,530	3,140	1,560	10,600	1,590	25,600
1,540	4,960	1,570	14,600	1,600	32,500
1,550	7,420	1,580	19,600	1,615	44,800

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15800	15700	15500	15700	15900	17100	18400	18900	18700	18500	18200	18000
2	15800	15700	15500	15700	15900	17100	18500	18900	18700	18500	18200	18000
3	15800	15700	15600	15700	15900	17100	18600	18900	18700	18500	18200	18000
4	15800	15700	15600	15700	15900	17200	18700	18800	18700	18500	18200	18000
5	15800	15700	15500	15700	16000	17200	18700	18800	18700	18400	18200	18000
6	15800	15700	15500	15800	16000	17200	18800	18800	18700	18400	18100	17900
7	15800	15700	15500	15900	16000	17200	18800	18900	18700	18400	18100	17900
8	15800	15700	15600	15900	16000	17300	18800	18900	18700	18400	18100	17900
9	15800	15600	15600	15900	16000	17300	18900	18800	18700	18400	18100	17900
10	15800	15600	15600	15900	16100	17300	18900	18800	18600	18400	18100	17900
11	15800	15600	15600	15900	16100	17400	18900	18900	18600	18400	18100	17800
12	15700	15600	15600	15900	16100	17400	18900	18800	18600	18400	18100	17800
13	15700	15600	15600	15900	16500	17400	19000	18800	18600	18400	18100	17800
14	15700	15600	15600	15900	16500	17400	19000	18800	18600	18400	18100	17800
15	15700	15600	15600	15900	16700	17400	19000	18800	18600	18400	18100	17800
16	15700	15600	15600	15900	16800	17400	19000	18800	18600	18300	18100	17800
17	15700	15600	15600	15900	16900	17400	19000	18800	18600	18300	18100	17800
18	15700	15600	15600	15900	16900	17500	19000	18800	18600	18300	18100	17800
19	15700	15600	15600	15900	17000	17500	19000	18800	18600	18300	18100	17800
20	15700	15600	15600	15900	17000	17500	19000	18700	18600	18300	18100	17800
21	15700	15600	15600	15900	17000	17600	19000	18700	18600	18300	18100	17700
22	15700	15600	15600	15900	17000	17700	19000	18700	18600	18300	18100	17700
23	15700	15600	15600	15900	17000	17700	19000	18800	18600	18300	18100	17700
24	15700	15600	15600	15900	17000	17800	19000	18800	18500	18300	18100	17700
25	15700	15600	15600	15900	17100	17800	19000	18800	18500	18200	18100	17700
26	15700	15600	15600	15900	17000	17900	19000	18800	18500	18200	18000	17700
27	15700	15600	15600	15900	17100	18000	18900	18700	18500	18200	18000	17700
28	15700	15600	15600	15900	17100	18100	18900	18700	18500	18200	18000	17700
29	15700	15600	15600	15900	17100	18200	18900	18700	18500	18200	18000	17700
30	15600	15500	15600	15900	---	18200	18900	18700	18500	18200	18000	17700
31	15600	---	15700	15900	---	18300	---	18700	---	18200	18000	---
MAX	15800	15700	15700	15900	17100	18300	19000	18900	18700	18500	18200	18000
MIN	15600	15500	15500	15700	15900	17100	18400	18700	18500	18200	18000	17700
a	1572.20	1571.97	1572.21	1572.82	1575.14	1577.58	1578.62	1578.40	1577.89	1577.35	1576.96	1576.33
b	-200	-100	+200	+200	+1200	+1200	+600	-200	-200	-300	-200	-300

CAL YR 1991 MAX 16500 MIN 4750 b +10900  
WTR YR 1992 MAX 19000 MIN 15500 b +1900

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

## 11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA

LOCATION.--Lat 32°34'30", long 116°45'11", in NW 1/4 SW 1/4 sec.26, T.18 S., R.2 E., San Diego County, Hydrologic Unit 18070305, on right bank 0.8 mi upstream from confluence with Tecate Creek, 5.1 mi south of Dulzura, and 11.3 mi downstream from Barrett Lake.

DRAINAGE AREA.--310 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1936 to current year.

REVISED RECORDS.--WSP 1245: 1937-1938. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 569.40 ft above National Geodetic Vertical Datum of 1929 (levels by International Boundary and Water Commission).

REMARKS.--Records fair. Flow regulated by Morena Reservoir, capacity, 50,210 acre-ft, and Barrett Lake (station 11011000), capacity, 44,760 acre-ft. Water diverted from Barrett Lake through San Diego and Dulzura conduits to Lower Otay Lake (station 11014550).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 11.15 ft, from rating curve extended above 8,700 ft<sup>3</sup>/s; no flow for part of each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 142 ft<sup>3</sup>/s, Feb. 15, gage height, 4.38 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.08	1.2	16	.54	.00	e.00	e.00	.00
2	.00	.00	.00	.00	.08	1.8	16	.46	.00	e.00	e.00	.00
3	.00	.00	.00	.00	.08	3.9	13	.40	.00	e.00	e.00	.00
4	.00	.00	.00	.00	.06	2.3	13	.40	.00	e.00	e.00	.00
5	.00	.00	.00	.00	.06	1.6	12	.49	.00	e.00	e.00	.00
6	.00	.00	.00	.00	.65	1.5	11	.65	.00	e.00	e.00	.00
7	.00	.00	.00	.44	1.2	4.3	9.4	.45	.00	e.00	e.00	.00
8	.00	.00	.00	.24	.29	19	8.5	.38	.00	e.00	.00	.00
9	.00	.00	.00	.13	.20	15	7.6	.37	.00	e.00	.00	.00
10	.00	.00	.00	.10	.50	13	6.8	.40	e.00	e.00	.00	.00
11	.00	.00	.00	.08	.32	11	6.0	.42	e.00	e.00	.00	.00
12	.00	.00	.00	.07	.90	9.0	5.4	.36	e.00	e.00	.00	.00
13	.00	.00	.00	.06	42	7.6	4.8	.30	e.00	e.00	.00	.00
14	.00	.00	.00	.06	18	6.6	4.4	.27	e.00	e.00	.00	.00
15	.00	.00	.00	.06	29	5.8	4.2	.25	e.00	e.00	.00	.00
16	.00	.00	.00	.05	44	5.2	4.2	.22	e.00	e.00	.00	.00
17	.00	.00	.00	.06	17	4.8	3.9	.20	e.00	e.00	.00	.00
18	.00	.00	.00	.06	12	4.5	3.6	.19	e.00	e.00	.00	.00
19	.00	.00	.00	.04	9.3	4.1	2.9	.18	e.00	e.00	.00	.00
20	.00	.00	.00	.05	7.3	4.5	2.3	.17	e.00	e.00	.00	.00
21	.00	.00	.00	.05	5.9	11	1.9	.18	e.00	e.00	.00	.00
22	.00	.00	.00	.06	4.9	9.3	1.7	.24	e.00	e.00	.00	.00
23	.00	.00	.00	.05	4.1	11	1.5	.32	e.00	e.00	.00	.00
24	.00	.00	.00	.05	3.3	11	1.4	.24	e.00	e.00	.00	.00
25	.00	.00	.00	.06	2.5	9.5	1.2	.22	e.00	e.00	.00	.00
26	.00	.00	.00	.06	2.1	11	1.1	.17	e.00	e.00	.00	.00
27	.00	.00	.00	.06	1.7	23	.88	.11	e.00	e.00	.00	.00
28	.00	.00	.00	.07	1.5	19	.82	.04	e.00	e.00	.00	.00
29	.00	.00	.00	.07	1.4	15	.77	.01	e.00	e.00	.00	.00
30	.00	.00	.00	.06	---	14	.64	.00	e.00	e.00	.00	.00
31	.00	---	.00	.07	---	14	---	.00	---	e.00	.00	---
TOTAL	0.00	0.00	0.00	2.16	210.42	274.5	166.91	8.63	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.070	7.26	8.85	5.56	.28	.000	.000	.000	.000
MAX	.00	.00	.00	.44	44	23	16	.65	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.06	1.2	.64	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	4.3	417	544	331	17	.00	.00	.00	.00

e Estimated.

## 11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	.68	2.63	7.55	39.5	59.1	36.1	12.5	4.27	1.11	.87	.23
MAX	3.16	18.8	40.5	194	1200	1443	676	296	99.5	47.5	24.4	10.8
(WY)	1981	1984	1984	1980	1980	1983	1941	1983	1980	1980	1980	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1937	1937	1950	1951	1951	1951	1955	1947	1940	1939	1938	1937

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1937 - 1992	
ANNUAL TOTAL	2455.74		662.62			
ANNUAL MEAN	6.73		1.81		13.6	
HIGHEST ANNUAL MEAN					243 1983	
LOWEST ANNUAL MEAN					.000 1956	
HIGHEST DAILY MEAN	604	Mar 27	44	Feb 16	8430	Feb 21 1980
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1936
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1936
INSTANTANEOUS PEAK FLOW			142	Feb 15	11700	Feb 21 1980
INSTANTANEOUS PEAK STAGE			4.38	Feb 15	11.15	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	4870		1310		9820	
10 PERCENT EXCEEDS	4.7		6.2		6.7	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11012500 CAMPO CREEK NEAR CAMPO, CA

LOCATION.--Lat 32°35'28", long 116°31'29", in NE 1/4 SE 1/4 sec.24, T.18 S., R.4 E., San Diego County, Hydrologic Unit 18070305, on left bank just upstream from bridge on State Highway 94 and 3.5 mi southwest of Campo.

DRAINAGE AREA.--85.0 mi<sup>2</sup>, of which 3 mi<sup>2</sup> are in Mexico.

PERIOD OF RECORD.--October 1936 to current year.

REVISED RECORDS.--WSP 1635: 1937-38(M), 1940(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

REMARKS.--No estimated daily discharges. Records poor. 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, 895 ft<sup>3</sup>/s, Mar. 24, 1983, gage height, 5.39 ft, from rating curve extended above 340 ft<sup>3</sup>/s; no flow for part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft<sup>3</sup>/s, Aug. 3, gage height, 2.01 ft; minimum daily .14 ft<sup>3</sup>/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.21	.29	.35	.44	.85	5.2	1.2	.60	.53	.35	.28
2	.16	.21	.29	.35	.45	1.7	4.7	1.1	.57	.53	.33	.24
3	.16	.20	.28	.51	.44	2.0	3.7	1.1	.55	.51	2.1	.22
4	.16	.19	.28	.41	.44	1.5	3.3	1.1	.55	.48	.50	.22
5	.17	.19	.27	1.3	.45	1.2	3.0	1.2	.59	.45	.37	.20
6	.17	.20	.27	2.3	1.5	1.2	2.7	1.2	.60	.44	.31	.20
7	.16	.19	.28	1.6	3.3	2.7	2.6	1.2	.60	.51	.29	.20
8	.15	.21	.28	1.3	.96	10	2.4	1.1	.58	.48	.27	.20
9	.15	.23	.33	.56	.68	5.5	2.4	1.1	.56	.46	.25	.20
10	.14	.25	.84	.49	.69	4.3	2.3	1.1	.57	.45	.25	.20
11	.17	.23	.42	.48	.65	3.6	2.3	1.0	.57	.45	.23	.20
12	.18	.22	.35	.46	.84	2.8	2.2	.99	.56	.48	.25	.19
13	.20	.21	.34	.45	4.9	2.3	2.1	.93	.57	.44	.92	.19
14	.19	.26	.31	.45	4.2	2.1	2.1	.90	.58	.38	1.1	.19
15	.18	.30	.31	.42	4.3	2.0	2.1	.90	.56	.35	.44	.20
16	.18	.26	.32	.42	6.7	1.9	2.1	.88	.55	.32	.34	.19
17	.18	.27	.37	.43	4.1	1.9	2.0	.84	.54	.30	.27	.18
18	.18	.27	.43	.41	3.2	1.8	2.0	.79	.54	.27	.24	.20
19	.15	.23	.57	.39	2.3	1.7	1.7	.78	.54	.26	.22	.19
20	.15	.22	.39	.41	1.8	2.2	1.7	.80	.52	.25	.22	.19
21	.18	.23	.35	.41	1.5	4.6	1.7	.80	.52	.27	.21	.22
22	.26	.21	.35	.41	1.2	4.1	1.7	.82	.53	.30	.23	.21
23	.27	.20	.35	.41	1.1	4.2	1.6	.82	.57	.31	.24	.20
24	.29	.20	.35	.42	.94	4.0	1.5	.80	.53	.33	.26	.19
25	.29	.21	.35	.42	.90	3.3	1.4	.75	.50	.33	.24	.18
26	.30	.22	.35	.44	.81	3.6	1.3	.71	.51	.31	.22	.17
27	.40	.23	.35	.44	.77	8.5	1.2	.69	.49	.28	.21	.17
28	.26	.27	.39	.44	.80	6.9	1.1	.70	.47	.26	.21	.17
29	.26	.33	.44	.44	.83	4.7	1.1	.69	.48	.30	.20	.16
30	.25	.33	.47	.43	---	3.8	1.2	.64	.52	.30	.24	.15
31	.22	---	.38	.44	---	3.5	---	.61	---	.32	.27	---
TOTAL	6.35	6.98	11.35	18.19	51.19	104.45	66.4	28.24	16.42	11.65	11.78	5.90
MEAN	.20	.23	.37	.59	1.77	3.37	2.21	.91	.55	.38	.38	.20
MAX	.40	.33	.84	2.3	6.7	10	5.2	1.2	.60	.53	2.1	.28
MIN	.14	.19	.27	.35	.44	.85	1.1	.61	.47	.25	.20	.15
AC-FT	13	14	23	36	102	207	132	56	33	23	23	12

## TIJUANA RIVER BASIN

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11012500 CAMPO CREEK NEAR CAMPO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.76	1.33	2.31	2.87	6.35	10.0	6.74	3.08	1.52	.86	.88	.66
MAX	14.3	20.7	25.7	17.7	74.5	153	121	52.2	30.4	20.1	26.5	16.5
(WY)	1984	1984	1984	1984	1980	1983	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1937	1949	1949	1957	1957	1956	1957	1957	1950	1947	1946	1947

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1937 - 1992	
ANNUAL TOTAL	1068.06		338.90			
ANNUAL MEAN	2.93		.93		3.10	
HIGHEST ANNUAL MEAN					39.6	
LOWEST ANNUAL MEAN					.00	
HIGHEST DAILY MEAN	326	Mar 27	10	Mar 8	454	Mar 24 1983
LOWEST DAILY MEAN	.10	Jan 1	.14	Oct 10	.00	Oct 1 1936
ANNUAL SEVEN-DAY MINIMUM	.11	Jan 12	.16	Oct 4	.00	Oct 1 1936
INSTANTANEOUS PEAK FLOW			24	Aug 3	895	Mar 24 1983
INSTANTANEOUS PEAK STAGE			2.01	Aug 3	5.39	Mar 24 1983
ANNUAL RUNOFF (AC-FT)	2120		672		2240	
10 PERCENT EXCEEDS	1.9		2.3		8.0	
50 PERCENT EXCEEDS	.30		.44		.10	
90 PERCENT EXCEEDS	.16		.19		.00	

OTAY RIVER BASIN

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.--70.2 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1940 to September 1978, October 1985 to current year.

REVISED RECORDS.--WSP 1565: 1952, 1954. WSP 1715: 1944, 1946. WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder and broad-crested weir control with low-water venturi-type flume. Datum of gage is 511.64 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair. 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, 4,000 ft<sup>3</sup>/s, Dec. 1, 1947, gage height, 6.42 ft, present datum, from rating curve extended above 1,200 ft<sup>3</sup>/s; no flow for many days most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 13	0645	109	3.05	Feb. 15	1700	*201	*3.38

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	2.2	37	4.7	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	4.9	32	1.4	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	9.5	24	.08	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	2.6	20	.02	.00	.00	.00	.00
5	.00	.00	.00	3.0	.00	2.3	17	.01	.00	.00	.00	.00
6	.00	.00	.00	4.1	4.4	2.1	15	.00	.00	.00	.00	.00
7	.00	.00	.00	1.3	5.4	5.1	13	.00	.00	.00	.00	.00
8	.00	.00	.00	.30	.58	8.6	11	.00	.00	.00	.00	.00
9	.00	.00	.00	.15	.39	11	10	.00	.00	.00	.00	.00
10	.00	.00	.00	.15	.70	10	9.5	.00	.00	.00	.00	.00
11	.00	.00	.00	.15	.39	8.5	9.6	.00	.00	.00	.00	.00
12	.00	.00	.00	.10	2.2	6.8	8.1	.00	.00	.00	.00	.00
13	.00	.00	.00	.10	59	5.8	7.1	.83	.00	.00	.00	.00
14	.00	.00	.00	.10	9.3	5.2	7.8	6.0	.00	.00	.00	.00
15	.00	.00	.00	.08	41	4.6	9.0	2.5	.00	.00	.00	.00
16	.00	.00	.00	.06	43	4.4	9.3	.17	.00	.00	.00	.00
17	.00	.00	.00	.06	14	4.2	8.8	.01	.00	.00	.00	.00
18	.00	.00	.00	.06	7.7	3.9	8.6	.00	.00	.00	.00	.00
19	.00	.00	.00	.06	5.4	3.7	7.7	.00	.00	.00	.00	.00
20	.00	.00	.00	.04	4.5	11	7.0	.00	.00	.00	.00	.00
21	.00	.00	.00	.04	4.1	23	6.8	.00	.00	.00	.00	.00
22	.00	.00	.00	.04	3.8	19	6.6	.00	.00	.00	.00	.00
23	.00	.00	.00	.03	3.5	21	6.2	.00	.00	.00	.00	.00
24	.00	.00	.00	.02	3.1	19	13	.00	.00	.00	.00	.00
25	.00	.00	.00	.02	3.4	17	15	.00	.00	.00	.00	.00
26	.00	.00	.00	.02	4.5	21	16	.00	.00	.00	.00	.00
27	.00	.00	.00	.02	3.5	54	15	.00	.00	.00	.00	.00
28	.00	.00	.00	.01	3.4	50	15	.00	.00	.00	.00	.00
29	.00	.00	.00	.01	3.0	32	15	.00	.00	.00	.00	.00
30	.00	.00	.00	.01	---	25	15	.00	.00	.00	.00	.00
31	.00	---	.00	.01	---	26	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	10.04	230.26	423.4	395.1	15.72	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.32	7.94	13.7	13.2	.51	.000	.000	.000	.000
MAX	.00	.00	.00	4.1	59	54	37	6.0	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	2.1	6.2	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	20	457	840	784	31	.00	.00	.00	.00

11014000 JAMUL CREEK NEAR JAMUL, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.29	7.99	9.48	8.25	12.4	24.5	16.2	13.6	14.1	11.4	9.76	8.20
MAX	40.2	45.6	62.5	42.3	84.3	234	101	49.1	49.6	42.7	44.3	37.4
(WY)	1948	1946	1946	1952	1944	1978	1958	1954	1952	1952	1952	1947
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1950	1951	1951	1958	1961	1959	1955	1956	1953	1950	1949	1949

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1940 - 1992	
ANNUAL TOTAL	3997.95		1074.52		11.6	
ANNUAL MEAN	11.0		2.94		40.9	
HIGHEST ANNUAL MEAN					1952	
LOWEST ANNUAL MEAN					1961	
HIGHEST DAILY MEAN	1040	Mar 27	59	Feb 13	1570	Mar 1 1978
LOWEST DAILY MEAN	.00	Jun 23	.00	Oct 1	.00	Jul 17 1949
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 23	.00	Oct 1	.00	Jul 17 1949
INSTANTANEOUS PEAK FLOW			201	Feb 15	4000	Dec 1 1947
INSTANTANEOUS PEAK STAGE			3.38	Feb 15	6.42	Dec 1 1947
ANNUAL RUNOFF (AC-FT)	7930		2130		8420	
10 PERCENT EXCEEDS	13		9.5		36	
50 PERCENT EXCEEDS	.00		.00		.20	
90 PERCENT EXCEEDS	.00		.00		.00	

OTAY RIVER BASIN

11014550 LOWER OTAY LAKE NEAR CHULA VISTA, CA

LOCATION.--Lat 32°36'33", long 116°55'38", in NE 1/4 NE 1/4 sec.13, T.18 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on right bank, 30 ft west of right end of Savage Dam on Otay River, and 9.0 mi east of Chula Vista.

DRAINAGE AREA.--99.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1945 to September 1959 (published with Otay River at Savage Dam, station 11014500), October 1972 to current year. Prior to October 1987 monthend contents only. Monthend gage heights October 1936 to September 1945, in files of San Diego County Department of Sanitation and Flood Control.

REVISED RECORD.--WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county of San Diego). October 1972 to current year, supplementary water-stage recorder for flood warning only, on right bank 30 ft upstream from dam at datum 397.20 ft higher.

REMARKS.--Reservoir is formed by gravity section concrete and masonry dam, built in 1919. Maximum capacity at top of spillway gates, 56,520 acre-ft, elevation, 490.70 ft. Capacity at permanent spillway level, 49,510 acre-ft, elevation, 484.70 ft. Dead storage below lowest outlet, 1,150 acre-ft, elevation, 395.05 ft. Dulzura conduit carries water from Barrett Lake (station 11011000) to Dulzura Creek, where water is carried to the reservoir by Jamul Creek (station 11014000). Reservoir storage includes supplemental Colorado River water. Small diversions for local use near reservoir. Water used for municipal supply by city of San Diego.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 51,860 acre-ft, spilling, Mar. 3, 1983, elevation, 486.78 ft; minimum observed, 3,160 acre-ft, Dec. 31, 1951, elevation, 407.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,990 acre-ft, Oct. 1, elevation, 476.47 ft; minimum, 30,810 acre-ft, Sept. 30, elevation, 464.86 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey dated Apr. 3, 1956)

430	10,090	445	17,340	470	35,100
435	12,250	450	20,280	480	44,500
440	14,660	460	27,060	489	54,460

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40950	39760	38690	37840	36790	37220	38970	38390	37150	36770	34950	33350
2	40880	39710	38640	37820	36750	37270	39040	38350	37090	36700	34880	33320
3	40830	39670	38600	37790	36710	37300	39100	38310	37040	36630	34860	33250
4	40780	39650	38570	37760	36680	37290	39140	38250	36990	36590	34800	33160
5	40740	39620	38540	37780	36640	37270	39160	38200	36950	36520	34750	33060
6	40700	39600	38480	37810	36740	37270	39180	38160	36920	36450	34660	32990
7	40640	39550	38460	37810	36740	37300	39200	38120	36910	36410	34620	32900
8	40600	39540	38450	37770	36700	37390	39220	38080	36880	36370	34560	32790
9	40570	39520	38420	37750	36660	37450	39250	38070	36870	36300	34520	32680
10	40510	39480	38400	37710	36660	37490	39270	38050	36850	36240	34460	32620
11	40470	39450	38370	37680	36640	37540	39270	38040	36850	36170	34420	e32520
12	40430	39390	38340	37630	36680	37560	39280	38000	36840	36130	34350	e32440
13	40410	39360	38320	37600	37010	37570	39270	37980	36830	36080	34300	---
14	40350	39330	38290	37570	37050	37580	39260	37960	36820	36010	34270	32270
15	40320	39290	38260	37520	37260	37590	39240	37940	36810	35960	34210	32180
16	40290	39240	38220	37480	37410	37590	39230	37920	36810	35910	34160	32070
17	40260	39230	38200	37430	37460	37580	39190	37880	36800	35830	34110	31980
18	40240	39180	38200	37390	37470	37590	39150	37870	36790	35780	34030	31890
19	40190	39170	38170	37350	37500	37600	39130	37810	36790	35720	33980	31780
20	40160	39140	38140	37290	37500	37670	39070	37760	36790	35640	33940	31700
21	40120	39100	38120	37250	37500	37800	39000	37710	36790	35620	33910	31620
22	40090	39070	38080	37210	37490	37880	38900	37670	36780	35540	33860	31530
23	40040	39020	38060	37180	37470	38010	38850	37650	36800	35460	33830	31440
24	40020	38990	38030	37130	37450	38100	38790	37610	36800	35400	33790	31360
25	39980	38930	38000	37080	37410	38170	38740	37540	36790	35340	33730	31280
26	39950	38890	37970	37050	37370	38270	38680	37480	36800	35270	33670	31180
27	39940	38850	37950	37000	37330	38470	38610	37440	36820	35190	33630	31090
28	39900	38810	37940	36960	37270	38620	38560	37380	36840	35140	33560	31000
29	39860	38780	37940	36920	37260	38710	38490	37330	36870	35090	33510	30900
30	39820	38730	37920	36880	---	38780	38440	37270	36840	35040	33470	30810
31	39810	---	37880	36840	---	38860	---	37220	---	34990	33410	---
MAX	40950	39760	38690	37840	37500	38860	39280	38390	37150	36770	34950	---
MIN	39810	38730	37880	36840	36640	37220	38440	37220	36780	34990	33410	---
a	475.21	474.07	473.15	471.99	472.46	474.21	473.75	472.42	471.99	469.87	468.05	464.86
b	-1180	-1080	-850	-1040	+420	+1600	-420	-1220	-380	-1850	-1580	-2600

CAL YR 1991 MAX 48610 MIN 37160 b +490  
WTR YR 1992 MAX 40950 MIN 30810 b -10,180

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

e Estimated.

SWEETWATER RIVER BASIN

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11015000 SWEETWATER RIVER NEAR DESCANSO, CA

LOCATION.--Lat 32°50'05", long 116°37'20", in NW 1/4 SE 1/4 sec.25, T.15 S., R.3 E., San Diego County, Hydrologic Unit 18070304, near right bank at Los Terrenitos Road bridge, 0.7 mi downstream from unnamed tributary, and 1.3 mi south of Descanso.

DRAINAGE AREA.--45.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1905 to September 1927 (monthly discharge only for some months, published in WSP 1315-B), October 1956 to current year. Prior to October 1927, records unadjusted for diversion. October 1956 to September 1977, both unadjusted records and combined records of river plus diversion (station 11015001) were published. No diversion since November 1976.

REVISED RECORD.--WSP 1315-B: 1922(M). WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,269.24 ft above National Geodetic Vertical Datum of 1929. Prior to June 25, 1927, nonrecording gages at several sites and datums, upstream about 0.1 mi. Diversion gage at site 0.3 mi upstream, October 1956 to September 1984, at different datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 13.2 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; no flow many days in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1800	*265	*7.06	Aug. 13	1415	144	6.64
Aug. 4	0315	209	6.89				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.05	.06	.66	.37	4.0	38	3.7	1.4	.20	.54	.04
2	.00	.05	.06	.60	.41	6.0	39	3.7	1.3	.18	.20	.04
3	.00	.04	.06	.92	.35	6.0	29	3.5	1.2	.17	.08	.04
4	.00	.04	.06	1.0	.33	4.1	26	3.5	1.1	.15	14	.03
5	.00	.04	.06	5.4	.34	3.3	24	3.5	1.1	.11	1.2	.02
6	.00	.04	.06	15	1.5	2.8	22	4.2	1.2	.07	.88	.01
7	.00	.04	.06	9.3	2.8	5.7	20	3.9	1.4	.12	.70	.01
8	.00	.04	.06	6.5	1.9	9.4	18	3.8	1.3	.10	.59	.00
9	.00	.04	1.2	4.3	1.6	8.0	17	3.5	1.1	.08	.48	.00
10	.00	.04	1.4	2.8	2.3	6.7	15	3.4	1.1	.08	.48	.00
11	.00	.04	.85	2.2	1.9	6.0	14	3.3	1.1	.11	.41	.00
12	.00	.04	.42	1.7	2.4	6.0	12	3.2	.86	.17	.54	.00
13	.00	.04	.38	1.4	49	5.2	11	3.1	.79	.14	6.6	.00
14	.00	.04	.36	1.3	26	4.7	11	3.0	.95	.12	1.9	.00
15	.00	.04	.33	1.1	58	4.2	10	2.8	1.1	.09	.37	.00
16	.00	.04	.33	.94	49	4.0	9.9	2.6	1.2	.06	.13	.00
17	.00	.04	.40	.91	24	3.7	8.9	2.4	1.0	.04	.08	.00
18	.00	.04	.49	.75	16	3.4	8.2	2.2	.81	.03	.05	.00
19	.00	.04	1.0	.64	12	2.9	7.4	2.1	.70	.01	.04	.00
20	.00	.04	.58	.57	8.7	8.1	6.7	2.2	.62	.00	.03	.00
21	.00	.04	.49	.55	6.3	28	6.5	2.3	.52	.00	.03	.00
22	.00	.04	.46	.51	5.1	24	6.2	2.3	.53	.00	.03	.00
23	.00	.05	.42	.48	4.5	32	6.0	2.4	.49	.01	.02	.00
24	.00	.05	.42	.46	4.0	29	5.8	2.2	.38	.01	.03	.00
25	.00	.05	.40	.46	3.6	24	5.5	2.1	.29	.02	.03	.00
26	.00	.05	.38	.47	3.6	24	5.0	1.9	.27	.01	.03	.00
27	.47	.05	.38	.42	3.7	33	4.7	1.9	.22	.00	.01	.00
28	.09	.05	.47	.44	3.7	31	4.6	1.8	.18	.00	.01	.00
29	.08	.05	.68	.39	3.9	26	4.4	1.8	.19	.00	.02	.00
30	.07	.05	1.1	.33	---	23	3.8	1.6	.22	.00	.02	.00
31	.06	---	.87	.33	---	23	---	1.5	---	.00	.04	---
TOTAL	0.77	1.30	14.29	62.83	297.30	401.2	399.6	85.4	24.62	2.08	29.57	0.19
MEAN	.025	.043	.46	2.03	10.3	12.9	13.3	2.75	.82	.067	.95	.006
MAX	.47	.05	1.4	15	58	33	39	4.2	1.4	.20	14	.04
MIN	.00	.04	.06	.33	.33	2.8	3.8	1.5	.18	.00	.01	.00
AC-FT	1.5	2.6	28	125	590	796	793	169	49	4.1	59	.4

## SWEETWATER RIVER BASIN

11015000 SWEETWATER RIVER NEAR DESCANSO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.21	1.68	5.41	5.86	23.1	34.4	18.0	6.82	2.36	.67	.45	.34
MAX	3.53	24.0	83.5	63.7	336	382	138	68.5	25.5	8.68	8.45	6.16
(WY)	1984	1966	1967	1980	1980	1983	1983	1983	1983	1980	1983	1978
MIN	.000	.000	.000	.000	.000	.042	.010	.000	.000	.000	.000	.000
(WY)	1957	1957	1957	1961	1961	1961	1961	1961	1959	1957	1957	1957

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1957 - 1992
ANNUAL TOTAL	2678.96	1319.15	
ANNUAL MEAN	7.34	3.60	8.18
HIGHEST ANNUAL MEAN			71.2 1983
LOWEST ANNUAL MEAN			.004 1961
HIGHEST DAILY MEAN	633 Mar 1	58 Feb 15	2500 Feb 20 1980
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1956
INSTANTANEOUS PEAK FLOW		265 Feb 15	6750 Feb 20 1980
INSTANTANEOUS PEAK STAGE		7.06 Feb 15	12.31 Feb 20 1980
ANNUAL RUNOFF (AC-FT)	5310	2620	5930
10 PERCENT EXCEEDS	9.4	9.5	10
50 PERCENT EXCEEDS	.05	.48	.23
90 PERCENT EXCEEDS	.00	.00	.00

## 11020600 EL CAPITAN LAKE NEAR LAKESIDE, CA

LOCATION.--Lat 32°52'56", long 116°48'30", in SE 1/4 NE 1/4 sec.7, T.15 S., R.2 E., San Diego County, Hydrologic Unit 18070304, on left bank 100 ft upstream from El Capitan Dam on San Diego River and 7.0 mi east of Lakeside.

DRAINAGE AREA.--188 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1936 to September 1966 (published with San Diego River at El Capitan Dam, station 11020500), October 1972 to current year. Monthend contents only October 1972 to September 1987. October 1936 to September 1945, published in WSP 1315-B, not equivalent owing to exclusion of greater part of flow released from Cuyamaca Reservoir.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of San Diego). Prior to October 1987, nonrecording gage at same site.

REMARKS.--Reservoir is formed by hydraulic fill-rock embankment, completed in 1935. Capacity of reservoir at spillway level, 112,810 acre-ft, elevation, 750.00 ft. Dead storage below lowest outlet, 59 acre-ft, elevation, 574.00 ft. Reservoir storage includes supplemental Colorado River water. No significant diversion upstream from reservoir. Inflow partly regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft. Water is released as required for municipal use and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 114,500 acre-ft, spilling, Mar. 7, 1980, elevation, 751.09 ft; minimum observed, 2,252 acre-ft, May 1, 1957, elevation, 606.28 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 61,910 acre-ft, Oct. 1, elevation, 711.18 ft; minimum, 47,210 acre-ft, Sep. 30, elevation, 696.20 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on table dated May 25, 1956)

600	1,450	640	11,310	700	50,730
610	2,820	650	15,530	720	71,790
620	4,940	660	20,650	740	97,790
630	7,820	680	33,780	753	117,550

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61890	61460	60930	59190	58910	58580	59970	60470	59280	57920	55580	51090
2	61860	61450	60920	59170	58910	58610	60240	60350	59250	57780	55440	50960
3	61840	61450	60900	59160	58900	58680	60370	60250	59240	57600	55290	50820
4	61810	61430	60900	59120	58800	58700	60430	60170	59210	57470	55160	50690
5	61790	61420	60890	59250	58650	58720	60460	60070	59170	57350	55010	50550
6	61780	61410	60770	59320	58600	58740	60500	60010	59130	57230	54860	50410
7	61770	61400	60600	59340	58470	58820	60520	59940	59110	57190	54720	50280
8	61750	61380	60400	59350	58340	58930	60510	59860	59070	57130	54580	50120
9	61750	61360	60240	59310	58210	59020	60520	59740	59060	57070	54450	49970
10	61730	61350	60100	59290	58120	59100	60500	59670	59020	57000	54310	49820
11	61700	61350	59930	59240	58010	59140	60470	59600	58990	56930	54170	49680
12	61690	61290	59840	59220	57940	59170	60440	59490	58950	56870	54040	49550
13	61670	61170	59790	59180	58040	59160	60440	59360	58920	56810	53920	49420
14	61650	61140	59740	59130	58090	59170	60410	59240	58870	56760	53810	49280
15	61640	61140	59700	59070	58250	59170	60430	59170	58860	56700	53680	49160
16	61610	61110	59660	59050	58460	59150	60500	59190	58830	56670	53550	49040
17	61600	61110	59610	59020	58620	59140	60610	59260	58810	56640	53380	48930
18	61590	61100	59610	59060	58680	59100	60710	59280	58780	56590	53250	48780
19	61580	61090	59610	59070	58720	59050	60810	59340	58730	56540	53100	48650
20	61530	61070	59560	59040	58760	59070	60860	59350	58660	56470	52930	48510
21	61520	61060	59520	59000	58740	59150	60880	59400	58640	56410	52760	48390
22	61500	61050	59480	59010	58730	59170	60890	59430	58590	56360	52590	48280
23	61490	61040	59430	59000	58700	59230	60910	59500	58510	56310	52470	48140
24	61490	61010	59390	59010	58690	59300	60930	59490	58430	56280	52280	48000
25	61490	61010	59360	58990	58680	59300	60940	59480	58360	56250	52140	47840
26	61510	61000	59320	58960	58650	59330	60940	59440	58310	56250	52000	47720
27	61560	60960	59250	58960	58640	59450	60940	59410	58280	56250	51870	47600
28	61550	60950	59260	58950	58620	59530	60900	59370	58260	56140	51730	47470
29	61510	60940	59260	58950	58580	59570	60740	59330	58190	56000	51550	47340
30	61490	60940	59280	58930	---	59570	60620	59320	58090	55850	51370	47210
31	61480	---	59250	58920	---	59630	---	59290	---	55720	51230	---
MAX	61890	61460	60930	59350	58910	59630	60940	60470	59280	57920	55580	51090
MIN	61480	60940	59250	58920	57940	58580	59970	59170	58090	55720	51230	47210
a	710.78	710.27	708.64	708.32	707.98	709.01	709.96	708.68	707.51	707.17	700.55	696.20
b	-420	-540	-1690	-330	-340	+1050	+990	-1330	-1200	-2370	-4490	-4020

CAL YR 1991 MAX 62890 MIN 41320 b +17940  
WTR YR 1992 MAX 61890 MIN 47210 b -14690

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

## SAN DIEGO RIVER BASIN

11022100 SAN VICENTE RESERVOIR NEAR LAKESIDE, CA

LOCATION.--Lat 32°54'45", long 116°55'25", in SW 1/4 NW 1/4 sec.31, T.14 S., R.1 E., San Diego County, Hydrologic Unit 18070304, at outlet tower near center of upstream face of San Vicente Dam on San Vicente Creek and 3.6 mi north of Lakeside.

DRAINAGE AREA.--74.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1946 to September 1961 (published with San Vicente Creek at San Vicente Dam, at Foster, station 11022000), October 1972 to current year. Monthend contents only October 1972 to September 1987.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county of San Diego). October 1972 to current year, supplementary water-stage recorder used for flood warning only, at same site at datum 560 ft higher. Prior to October 1987, nonrecording gage at same site.

REMARKS.--Reservoir is formed by concrete-gravity dam, constructed in 1941-43 by city of San Diego; storage began during construction period. Capacity of reservoir at spillway level, 90,230 acre-ft, elevation, 650 ft. Dead storage below lowest outlet, 350 acre-ft, elevation, 493.0 ft. Reservoir storage includes supplemental water from the San Diego River, Santa Ysabel Creek, and Colorado River basins. No diversion upstream from reservoir. Water is released as required for municipal use.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 94,200 acre-ft, spilling, Feb. 21, 1980, elevation, 653.54 ft; minimum observed, 12,390 acre-ft, Nov. 1, 1947, elevation, 549.22 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 74,740 acre-ft, June 30, July 1, elevation, 634.96 ft; minimum, 60,730 acre-ft, Mar. 2, elevation, 620.14 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table provided by city of San Diego, dated Feb. 18, 1944)

610	51,870	640	79,800
620	60,610	650	90,230
630	69,920	654	94,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71750	67930	62770	62420	62100	60780	66320	69470	71920	74690	71040	69210
2	71630	67740	62590	62470	61960	60870	66670	69430	72040	74630	71040	69090
3	71590	67550	62440	62540	61820	60940	66980	69410	72160	74540	71040	69010
4	71530	67390	62280	62590	61730	61010	67300	69420	72240	74470	71010	69000
5	71470	67220	62110	62740	61680	61060	67600	69500	72310	74410	70980	69060
6	71430	67050	62050	62870	61780	61150	67910	69620	72400	74270	70950	69090
7	71390	66880	62050	63010	61820	61230	68190	69710	72500	74100	70950	69070
8	71310	66720	62070	63050	61870	61320	68480	69800	72600	73950	70910	68980
9	71180	66550	62110	63080	61890	61400	68790	69890	72710	73760	70910	68870
10	70980	66370	62120	63070	61930	61460	69080	69980	72830	73580	70900	68770
11	70800	66200	62150	63070	61930	61530	69390	70060	72960	73400	70860	68670
12	70640	66030	62090	63070	61980	61590	69650	70090	73110	73240	70800	68600
13	70480	65920	62010	63130	62140	61640	69910	70060	73230	73060	70830	68520
14	70300	65740	61890	63130	62110	61680	70110	70030	73340	72860	70830	68430
15	70150	65560	61780	63110	62170	61720	70280	70060	73470	72660	70830	68310
16	70070	65380	61680	63130	62130	61770	70420	70140	73580	72520	70820	68230
17	70000	65220	61580	63150	61990	61810	70420	70190	73670	72400	70770	68140
18	69900	65040	61590	63170	61870	61870	70370	70260	73750	72250	70710	68030
19	69800	64850	61660	63180	61770	62030	70320	70420	73810	72090	70670	67960
20	69750	64690	61700	63190	61630	62360	70240	70560	73890	71920	70630	67880
21	69670	64500	61770	63180	61490	62700	70160	70650	73970	71740	70550	67800
22	69600	64310	61830	63150	61360	62990	70110	70740	74080	71650	70480	67690
23	69540	64120	61900	63090	61200	63350	70040	70810	74190	71530	70390	67580
24	69380	63940	61960	63070	61070	63640	69980	70960	74280	71390	70280	67490
25	69190	63760	62000	63050	60990	63940	69910	71130	74320	71280	70150	67360
26	69040	63600	62050	62930	60950	64300	69840	71270	74390	71180	70020	67290
27	68880	63420	62080	62780	60900	64670	69750	71380	74470	71060	69880	67200
28	68690	63260	62170	62640	60870	64980	69680	71470	74560	71000	69750	67100
29	68500	63110	62260	62530	60820	65280	69600	71580	74660	70980	69620	66990
30	68310	62940	62310	62380	---	65570	69520	71690	74740	71000	69480	66880
31	68120	---	62370	62250	---	65900	---	71800	---	71010	69340	---
MAX	71750	67930	62770	63190	62170	65900	70420	71800	74740	74690	71040	69210
MIN	68120	62940	61580	62250	60820	60780	66320	69410	71920	70980	69340	66880
a	628.13	622.58	621.96	621.82	620.24	625.76	629.59	631.79	634.96	631.15	629.40	628.82
b	-3700	-5180	-570	-120	-1430	+5080	+3620	+2280	+2940	-3730	-1670	-2460
CAL YR 1991	MAX 85640	MIN 61580	b	-15070								
WTR YR 1992	MAX 74740	MIN 60780	b	-4940								

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 11022200 LOS COCHES CREEK NEAR LAKESIDE, CA

LOCATION.--Lat 32°50'10", long 116°53'58", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on upstream right bank side of bridge on Old Highway 8, 2.7 mi upstream from mouth, and 1.9 mi southeast of Lakeside.

DRAINAGE AREA.--12.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to current year.

REVISED RECORDS.--WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 474 ft<sup>3</sup>/s, Mar. 27, 1991, gage height, 7.47 ft; minimum daily, 0.07 ft<sup>3</sup>/s, July 12, 13, 1984.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 27	0015	66	4.19	Mar. 2	1630	44	3.75
Dec. 30	0100	46	3.82	Mar. 20	1700	93	4.57
Jan. 5	1730	101	4.70	Mar. 23	0545	53	3.94
Feb. 6	2230	116	4.86	Mar. 26	2000	42	3.70
Feb. 12	2345	*136	*5.09	Mar. 31	1615	75	4.32
Feb. 15	1545	105	4.72				

Minimum daily, 0.10 ft<sup>3</sup>/s, Sept. 24, 27, 28, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.35	.38	.74	.70	1.1	12	.99	.63	.33	.21	.17
2	.17	.34	.38	.66	.70	14	3.4	.96	.61	.33	.21	.17
3	.17	.33	.39	.92	.72	6.7	2.9	.98	.59	.33	.21	.17
4	.19	.31	.43	.69	.69	1.6	2.6	1.1	.58	.32	.21	.16
5	.20	.38	.37	27	.68	1.5	2.5	1.1	.60	.31	.20	.17
6	.21	.38	.39	23	23	2.6	2.3	.97	.62	.31	.20	.17
7	.20	.34	.41	8.1	7.4	7.5	2.2	1.0	.61	.33	.20	.17
8	.21	.30	.48	3.8	1.5	2.6	2.1	1.0	.58	.31	.19	.16
9	.21	.32	.46	1.6	1.2	1.8	2.0	1.0	.57	.29	.19	.16
10	.19	.33	.81	1.4	9.9	1.5	1.9	1.0	.63	.30	.18	.15
11	.19	.30	.76	1.2	1.4	1.4	1.9	1.0	.61	.30	.18	.14
12	.19	.35	.48	1.2	9.9	1.3	1.9	.92	.54	.31	.18	.14
13	.19	.34	.46	1.1	23	1.3	1.8	.94	.53	.29	.35	.14
14	.19	.41	.45	1.0	2.8	1.2	1.7	.88	.55	.28	.23	.14
15	.20	.39	.44	.98	16	1.3	1.7	.85	.53	.27	.19	.14
16	.20	.29	.45	.98	6.1	1.2	1.7	.81	.53	.26	.19	.13
17	.20	.30	2.6	.98	2.6	1.2	1.6	.78	.52	.25	.17	.13
18	.24	.41	1.5	.92	2.1	1.2	1.6	.78	.51	.24	.16	.11
19	.20	.38	3.9	.88	1.8	1.2	1.5	.78	.51	.24	.15	.11
20	.22	.37	.85	.82	1.7	14	1.4	.78	.49	.23	.15	.12
21	.22	.29	.58	.81	1.7	15	1.4	.79	.47	.24	.16	.11
22	.25	.34	.56	.83	1.6	2.1	1.4	1.5	.46	.24	.16	.11
23	.43	.27	.64	.78	1.5	15	1.4	1.0	.40	.23	.15	.11
24	.95	.27	.63	.74	1.4	2.9	1.3	.89	.35	.24	.16	.10
25	.30	.34	.71	.73	1.3	2.3	1.3	.83	.39	.24	.16	.12
26	1.6	.27	1.0	.75	1.3	10	1.2	.78	.39	.24	.16	.11
27	9.8	.30	.63	.75	1.3	12	1.1	.76	.37	.25	.14	.10
28	.55	.29	2.3	.75	1.2	3.7	1.1	.73	.37	.24	.14	.10
29	.45	1.4	7.3	.74	1.2	3.1	1.0	.74	.33	.26	.15	.11
30	.40	.61	8.7	.75	---	2.7	1.0	.68	.34	.24	.16	.10
31	.35	---	.97	.72	---	9.0	---	.64	---	.22	.16	---
TOTAL	19.26	11.30	40.41	86.32	126.39	144.0	62.9	27.96	15.21	8.47	5.65	4.02
MEAN	.62	.38	1.30	2.78	4.36	4.65	2.10	.90	.51	.27	.18	.13
MAX	9.8	1.4	8.7	27	23	15	12	1.5	.63	.33	.35	.17
MIN	.17	.27	.37	.66	.68	1.1	1.0	.64	.33	.22	.14	.10
AC-FT	38	22	80	171	251	286	125	55	30	17	11	8.0

## 11022200 LOS COCHES CREEK NEAR LAKESIDE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.57	1.55	2.19	1.79	2.37	4.10	1.47	.73	.46	.30	.23	.27
MAX	1.37	4.58	6.09	2.93	5.71	19.1	3.08	1.37	.71	.61	.29	.49
(WY)	1988	1984	1985	1988	1986	1991	1991	1986	1986	1991	1986	1986
MIN	.19	.27	.32	.66	1.09	.78	.45	.25	.17	.12	.16	.13
(WY)	1991	1990	1990	1989	1989	1989	1989	1984	1984	1984	1989	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1984 - 1992
ANNUAL TOTAL	926.56	551.89	
ANNUAL MEAN	2.54	1.51	1.33
HIGHEST ANNUAL MEAN			2.43
LOWEST ANNUAL MEAN			.50
HIGHEST DAILY MEAN	146 Mar 1	27 Jan 5	146 Mar 1 1991
LOWEST DAILY MEAN	.14 Aug 30	.10 Sep 24	.07 Jul 12 1984
ANNUAL SEVEN-DAY MINIMUM	.15 Aug 28	.11 Sep 24	.08 Jul 7 1984
INSTANTANEOUS PEAK FLOW		136 Feb 12	474 Mar 27 1991
INSTANTANEOUS PEAK STAGE		5.09 Feb 12	7.47 Mar 27 1991
ANNUAL RUNOFF (AC-FT)	1840	1090	965
10 PERCENT EXCEEDS	3.2	2.6	1.9
50 PERCENT EXCEEDS	.48	.58	.50
90 PERCENT EXCEEDS	.22	.16	.20

11022350 FORESTER CREEK AT EL CAJON, CA

LOCATION.--Lat 32°49'16", long 116°58'32", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on right bank at downstream side of bridge on Billy Mitchell Drive, 0.8 mi upstream from unnamed tributary, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--21.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to current year.

REVISED RECORDS.--WDR CA-89-1: 1984-86, 1988(M).

GAGE.--Water-stage recorder. Elevation of gage is 370 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft<sup>3</sup>/s, Mar. 27, 1991, gage height, 10.66 ft, from rating curve extended above 900 ft<sup>3</sup>/s on basis of step-backwater computation; minimum daily, 0.19 ft<sup>3</sup>/s, Oct. 9, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 900 ft<sup>3</sup>/s on basis of step-backwater computation:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	2345	1,230	7.67	Feb. 15	1515	1,930	8.66
Jan. 5	1445	1,040	7.33	Mar. 2	1600	1,570	8.19
Feb. 6	1945	*2,260	*9.04	Mar. 20	1630	1,610	8.25
Feb. 12	2330	958	7.18				

Minimum daily, 0.20 ft<sup>3</sup>/s, July 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.63	.67	.78	.80	1.0	41	1.0	1.8	.51	.27	.26
2	.59	.60	.64	.76	.82	188	2.8	.96	2.0	.43	.31	.24
3	.65	.56	.63	3.0	.83	35	2.4	1.0	2.0	.35	.39	.26
4	.63	.62	.71	.90	.65	3.5	2.2	1.1	1.7	.30	.33	.33
5	.58	.63	.74	188	.67	1.7	2.0	1.2	1.9	.28	.28	.31
6	.58	.63	.73	98	316	18	1.8	1.3	1.8	.34	.29	.34
7	.67	.67	.66	36	12	31	1.8	1.3	1.5	.52	.29	.27
8	.64	.67	20	3.6	1.0	12	1.9	1.4	1.5	.33	.26	.24
9	.64	.63	2.4	1.4	1.7	13	2.0	1.4	1.4	.31	.24	.32
10	.64	.65	9.7	.99	58	2.3	2.0	1.4	1.5	.36	.29	.27
11	.67	.66	2.1	.90	1.1	2.2	1.8	1.2	1.4	.34	.26	.29
12	.85	.71	.71	.88	76	1.9	1.7	1.2	1.2	.37	.30	.27
13	.97	.63	.64	.77	71	1.8	1.7	1.1	1.2	.41	6.2	.28
14	1.1	.69	.63	.79	9.7	1.7	1.7	1.2	1.1	.41	1.1	.33
15	1.1	1.1	.56	.78	105	1.6	1.5	1.1	1.1	.29	.75	.44
16	1.2	.73	.59	.76	6.4	1.7	1.6	1.2	1.3	.32	.62	.41
17	1.2	.63	39	.80	2.9	1.6	1.6	.96	.91	.30	.69	.35
18	1.2	.63	14	.85	1.4	1.5	1.6	.97	1.0	.24	.65	.36
19	1.3	.63	25	.81	1.3	1.5	1.5	1.1	1.0	.23	1.0	.32
20	1.2	.48	.83	.82	1.2	100	1.6	1.1	.90	.28	.47	.28
21	1.3	.57	.76	.79	1.2	54	1.4	1.1	.87	.23	.48	.38
22	1.2	.70	.67	.83	1.1	5.5	1.4	26	.85	.23	.44	.44
23	5.0	.44	.64	.82	.97	85	1.3	2.0	.88	.26	.27	.45
24	9.5	.42	.64	.83	1.2	3.3	1.3	1.4	.83	.25	.38	.34
25	.71	.54	.63	.80	1.0	2.3	1.2	1.4	.77	.20	.33	.37
26	50	.57	.62	.78	1.0	66	1.1	1.5	.73	.21	.96	.31
27	60	.54	.64	.78	.98	17	1.2	1.5	.51	.23	.32	.39
28	.81	.57	27	.84	1.0	4.0	1.0	1.4	.51	.22	.34	.40
29	.68	10	70	.87	1.1	2.5	1.0	1.6	.49	.26	.26	.53
30	.70	1.2	45	.83	---	2.5	1.1	1.6	.48	.26	.21	.54
31	.58	---	.95	.83	---	3.8	---	1.6	---	.30	.24	---
TOTAL	147.47	28.73	268.49	350.59	678.02	666.9	88.2	64.29	35.13	9.57	19.22	10.32
MEAN	4.76	.96	8.66	11.3	23.4	21.5	2.94	2.07	1.17	.31	.62	.34
MAX	60	10	70	188	316	188	41	26	2.0	.52	6.2	.54
MIN	.58	.42	.56	.76	.65	1.0	1.0	.96	.48	.20	.21	.24
AC-FT	293	57	533	695	1340	1320	175	128	70	19	38	20

## 11022350 FORESTER CREEK AT EL CAJON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.13	9.45	10.2	7.42	11.5	14.5	4.15	1.75	1.78	1.41	1.10	1.86
MAX	13.3	48.6	29.2	14.6	30.0	59.0	15.9	2.56	4.51	3.06	1.81	5.06
(WY)	1988	1986	1985	1990	1986	1991	1988	1986	1990	1991	1986	1986
MIN	.58	.83	1.41	2.14	1.26	1.16	1.40	1.04	.79	.31	.62	.34
(WY)	1991	1990	1990	1989	1984	1984	1989	1991	1991	1992	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1984 - 1992	
ANNUAL TOTAL	3158.75		2366.93			
ANNUAL MEAN	8.65		6.47		5.75	
HIGHEST ANNUAL MEAN					11.7	
LOWEST ANNUAL MEAN					2.47	
HIGHEST DAILY MEAN	584	Mar 1	316	Feb 6	645	Feb 15 1986
LOWEST DAILY MEAN	.26	Jul 28	.20	Jul 25	.19	Oct 9 1990
ANNUAL SEVEN-DAY MINIMUM	.30	Jul 23	.23	Jul 22	.23	Jul 22 1992
INSTANTANEOUS PEAK FLOW			2260	Feb 6	3900	Mar 27 1991
INSTANTANEOUS PEAK STAGE			9.04	Feb 6	10.66	Mar 27 1991
ANNUAL RUNOFF (AC-FT)	6270		4690		4160	
10 PERCENT EXCEEDS	4.8		6.3		3.4	
50 PERCENT EXCEEDS	.71		.85		1.3	
90 PERCENT EXCEEDS	.54		.29		.61	

## 11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA

LOCATION.--Lat 32°49'29", long 117°03'17", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, near left bank at Mast Road bridge, 0.7 mi upstream from Old Mission Dam site, 2.8 mi west of Santee, and 14.2 mi downstream from El Capitan Lake.

DRAINAGE AREA.--368 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1912 to December 1915, April 1916 to current year. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP-1315-B. Prior to September 1981 published as "near Santee".

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 10, 1920, nonrecording gage at site 0.7 mi downstream at different datum. Nov. 10, 1920, to Jan. 19, 1982, at site 2.6 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records fair below 10 ft<sup>3</sup>/s, poor above. Flow regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft, El Capitan Lake (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,400 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 18.1 ft, site and datum then in use, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 70,200 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 25.1 ft, site and datum in use prior to Nov. 10, 1920, from floodmarks, based on slope-conveyance computation of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,540 ft<sup>3</sup>/s, Feb. 6, gage height, 10.52 ft, from rating curve extended above 1,420 ft<sup>3</sup>/s; minimum daily, 1.2 ft<sup>3</sup>/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	6.2	3.3	12	7.4	13	114	5.8	3.9	2.0	1.4	1.3
2	1.3	5.7	3.1	12	7.5	272	39	6.0	3.1	2.1	1.4	1.3
3	1.3	5.2	2.9	16	7.6	157	32	6.4	3.0	2.0	1.4	1.3
4	1.2	4.5	2.8	12	7.5	56	28	10	2.8	1.9	1.5	1.3
5	1.3	4.2	2.7	284	7.2	43	25	7.0	2.7	1.7	1.5	1.3
6	1.3	3.9	2.7	284	466	64	21	6.4	2.6	1.7	1.5	1.3
7	1.2	3.8	2.6	142	236	116	18	5.5	2.6	1.9	1.5	1.3
8	1.2	3.7	17	84	50	80	15	5.0	2.5	1.9	1.5	1.4
9	1.2	3.5	16	47	35	64	15	4.9	2.5	1.8	1.4	1.4
10	1.2	3.3	15	33	130	31	14	5.2	2.5	1.8	1.4	1.5
11	1.2	3.2	7.8	26	32	25	13	6.1	2.8	1.7	1.3	1.5
12	1.2	3.2	6.1	21	38	21	13	5.9	2.5	1.7	1.3	1.5
13	1.2	3.2	5.4	18	263	19	13	5.3	2.4	1.7	3.6	1.5
14	1.2	3.3	4.2	16	99	17	12	5.0	2.5	1.8	4.1	1.5
15	1.2	3.6	3.8	14	297	16	11	5.1	2.4	1.7	1.9	1.6
16	1.2	3.4	3.7	14	218	16	10	5.6	2.2	1.7	1.5	1.6
17	1.2	3.2	22	13	129	15	9.9	5.5	2.7	1.6	1.4	1.5
18	1.2	3.3	62	12	77	14	9.3	4.5	2.6	1.6	1.4	1.5
19	1.2	3.3	44	12	52	13	9.4	4.3	2.7	1.6	1.5	1.5
20	1.2	3.3	8.8	11	40	144	9.7	4.2	2.6	1.8	1.5	1.4
21	1.2	3.3	7.5	11	33	180	8.8	4.2	2.2	1.8	1.4	1.4
22	1.3	3.2	6.9	10	28	72	8.2	28	2.1	1.8	1.5	1.4
23	1.5	2.9	7.1	9.5	24	201	7.7	9.2	2.0	1.8	1.4	1.3
24	13	2.7	7.7	8.8	21	77	7.6	5.6	1.8	1.8	1.4	1.3
25	2.3	2.7	6.8	8.5	19	55	7.6	5.7	1.8	1.7	1.3	1.3
26	4.1	2.7	6.3	8.5	17	130	7.8	5.4	1.8	1.6	1.4	1.3
27	102	2.7	6.2	8.7	15	114	7.6	5.1	1.8	1.6	1.5	1.3
28	9.7	2.8	42	8.5	13	59	7.2	4.8	1.8	1.6	1.2	1.3
29	8.2	5.5	97	8.3	12	46	5.9	4.7	1.9	1.4	1.2	1.3
30	7.5	11	96	7.9	---	37	5.5	4.4	2.0	1.4	1.3	1.4
31	6.8	---	14	7.8	---	37	---	4.2	---	1.4	1.3	---
TOTAL	182.2	116.5	533.4	1180.5	2381.2	2204	505.2	195.0	72.8	53.6	48.9	41.8
MEAN	5.88	3.88	17.2	38.1	82.1	71.1	16.8	6.29	2.43	1.73	1.58	1.39
MAX	102	11	97	284	466	272	114	28	3.9	2.1	4.1	1.6
MIN	1.2	2.7	2.6	7.8	7.2	13	5.5	4.2	1.8	1.4	1.2	1.3
AC-FT	361	231	1060	2340	4720	4370	1000	387	144	106	97	83

## 11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.02	5.50	21.5	26.6	91.4	81.5	50.0	18.5	4.67	3.00	2.78	1.80
MAX	20.8	78.8	728	370	1871	683	1324	379	181	156	139	38.3
(WY)	1988	1986	1922	1922	1927	1941	1941	1915	1980	1980	1980	1980
MIN	.000	.000	.000	.000	.000	.019	.000	.000	.000	.000	.000	.000
(WY)	1913	1913	1913	1951	1951	1951	1951	1913	1913	1912	1913	1913

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1912 - 1992	
ANNUAL TOTAL	9479.6		7515.1		25.3	
ANNUAL MEAN	26.0		20.5		219	
HIGHEST ANNUAL MEAN					1922	
LOWEST ANNUAL MEAN					.002	
HIGHEST DAILY MEAN	1610	Mar 1	466	Feb 6	27300	Feb .16 1927
LOWEST DAILY MEAN	1.2	Oct 4	1.2	Oct 4	.00	Jun 19 1912
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 7	1.2	Oct 7	.00	Jun 19 1912
INSTANTANEOUS PEAK FLOW			2540	Feb 6	45400	Feb 16 1927
INSTANTANEOUS PEAK STAGE			10.52	Feb 6	18.10	Feb 16 1927
ANNUAL RUNOFF (AC-FT)	18800		14910		18360	
10 PERCENT EXCEEDS	34		48		26	
50 PERCENT EXCEEDS	3.7		4.2		1.1	
90 PERCENT EXCEEDS	1.6		1.3		.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 Lake.

DRAINAGE AREA.--429 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1912 to January 1916 published as San Diego River at San Diego (monthly discharge only, published in WSP 1315-B), January 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1315-B for history of changes for period October 1912 to January 1916.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft; El Capitan Lake (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,000 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 19.3 ft, site and datum then in use, estimated on basis of upstream station, San Diego River near Santee; no flow at times during most years. Maximum discharge recorded since storage began in El Capitan Lake and San Vicente Reservoir, 8,280 ft<sup>3</sup>/s, Mar. 2, 1983, gage height, 13.11 ft, from rating curve extended above 5,800 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,250 ft<sup>3</sup>/s, Feb. 6, gage height, 11.19 ft; minimum daily, 0.16 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	8.5	4.1	33	12	17	149	8.3	5.4	1.5	.65	.58
2	.93	7.4	4.1	22	12	501	138	7.9	5.1	1.4	.88	.52
3	.67	6.9	4.4	31	12	623	60	7.5	4.7	1.3	.79	.47
4	.65	6.3	4.7	25	11	148	51	7.5	4.6	1.4	.65	.51
5	1.2	5.7	4.8	260	11	76	48	7.3	3.3	1.5	.50	.72
6	1.5	5.4	4.4	695	446	58	42	9.1	2.8	1.4	.48	.92
7	1.3	5.1	4.0	334	1050	146	36	10	3.4	1.3	.25	1.0
8	1.1	5.2	6.8	285	156	180	33	9.5	3.2	1.4	.29	.98
9	.89	5.2	31	87	79	114	30	9.3	2.6	1.4	.47	.74
10	.66	5.0	16	53	301	69	28	9.2	2.5	1.9	.51	.64
11	.61	5.2	16	41	130	46	28	7.9	2.5	2.3	.33	.64
12	.88	4.6	13	32	68	38	27	7.3	2.4	1.6	.33	.70
13	.97	4.2	11	26	519	33	25	6.9	2.5	1.3	.42	.89
14	.92	4.0	8.9	21	250	31	24	7.0	2.5	.61	1.2	.87
15	.79	3.7	7.6	19	415	29	24	6.2	2.4	.21	2.5	.59
16	.64	3.5	6.5	16	521	27	21	5.7	2.1	.31	2.9	.45
17	.68	3.6	16	12	220	24	21	5.8	2.1	.19	2.3	.35
18	.89	4.1	107	16	132	23	21	5.7	2.3	.24	1.5	.34
19	.85	3.9	62	16	85	21	20	5.8	3.7	.59	1.3	.35
20	.93	3.6	43	14	62	106	18	5.7	3.5	.74	1.2	.49
21	.94	3.5	24	11	50	454	17	5.6	3.0	.66	1.2	.51
22	.93	3.5	14	19	42	159	17	5.5	1.3	.29	.99	.35
23	1.2	3.5	11	14	36	314	15	12	1.3	.38	.99	.37
24	7.4	3.6	9.7	13	31	198	14	15	1.5	.50	1.1	.33
25	6.2	3.3	9.5	13	27	89	14	11	1.5	.43	.83	.28
26	10	3.3	9.1	13	24	121	13	8.4	1.4	.75	.82	.26
27	181	3.3	9.1	13	24	340	11	7.6	1.6	.83	.92	.20
28	70	3.2	68	12	22	135	10	7.0	1.8	.66	.91	.26
29	19	3.2	135	12	19	80	11	6.3	1.8	.63	.98	.20
30	12	3.6	300	12	---	63	9.9	5.9	1.7	.47	1.0	.16
31	10	---	106	12	---	77	---	5.8	---	.46	.87	---
TOTAL	337.03	135.1	1070.7	2182	4767	4340	975.9	239.7	80.5	28.65	30.06	15.67
MEAN	10.9	4.50	34.5	70.4	164	140	32.5	7.73	2.68	.92	.97	.52
MAX	181	8.5	300	695	1050	623	149	15	5.4	2.3	2.9	1.0
MIN	.61	3.2	4.0	11	11	17	9.9	5.5	1.3	.19	.25	.16
AC-FT	668	268	2120	4330	9460	8610	1940	475	160	57	60	31

## 11023000 SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.55	33.8	51.5	52.9	67.9	169	49.2	19.2	6.29	2.84	2.78	3.95
MAX	31.2	144	143	145	164	777	242	135	21.3	8.93	9.47	20.0
(WY)	1987	1986	1985	1984	1992	1983	1983	1983	1983	1983	1983	1986
MIN	.000	.000	.000	14.5	20.5	8.38	7.69	3.55	1.30	.25	.54	.033
(WY)	1982	1982	1982	1989	1989	1984	1989	1984	1985	1985	1985	1984

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1982 - 1992	
ANNUAL TOTAL	18859.15		14202.31			
ANNUAL MEAN	51.7		38.8		38.8	
HIGHEST ANNUAL MEAN					125	
LOWEST ANNUAL MEAN					11.5	
HIGHEST DAILY MEAN	3480	Mar 1	1050	Feb 7	4760	Mar 3 1983
LOWEST DAILY MEAN	.18	Sep 4	.16	Sep 30	.00	Oct 1 1981
ANNUAL SEVEN-DAY MINIMUM	.73	Sep 13	.24	Sep 24	.00	Oct 1 1981
INSTANTANEOUS PEAK FLOW			3250	Feb 6	8280	Mar 2 1983
INSTANTANEOUS PEAK STAGE			11.19	Feb 6	13.11	Mar 2 1983
ANNUAL RUNOFF (AC-FT)	37410		28170		28130	
10 PERCENT EXCEEDS	66		94		74	
50 PERCENT EXCEEDS	4.6		5.7		6.9	
90 PERCENT EXCEEDS	1.1		.52		.45	

11023330 LOS PENASQUITOS CREEK BELOW POWAY CREEK, NEAR POWAY, CA

LOCATION.--Lat 32°56'58", long 117°04'08", in NE 1/4 NE 1/4 sec.22, T.14 S., R.2 W., San Diego County, Hydrologic Unit 18070304, on right bank 10 ft upstream from concrete ford on Cobblestone Creek Road, 0.2 mi downstream from confluence of Poway and Pomerado Creeks, and 2.0 mi southwest of Poway.

DRAINAGE AREA.--31.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 415 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow partly regulated by small conservation reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,990 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 11.11 ft, from rating curve extended above 300 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 9.58 and 11.11 ft; no flow at times during some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s (revised) and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1730	423	5.93	Feb. 12	2200	990	7.11
Jan. 5	1715	1,210	7.43	Feb. 15	1545	*2,630	*8.94
Feb. 6	2230	964	7.07	Mar. 2	1545	848	6.87

Minimum daily, 0.44 ft<sup>3</sup>/s, Oct. 2, 13, 19, 23, Aug. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	.53	.68	.82	1.8	2.3	33	1.2	.96	.64	.85	.67
2	.44	.51	.65	.91	1.8	209	12	1.3	.96	.66	.79	.73
3	.46	.46	.68	19	1.9	59	5.6	1.3	.93	.82	.89	.67
4	.51	.50	.68	7.8	2.0	5.2	5.1	1.5	1.0	.77	.87	.62
5	.54	.51	.66	337	1.9	3.1	4.9	1.5	1.1	.65	.79	.58
6	.52	.51	.63	207	207	3.3	4.3	1.7	1.0	.65	.85	.63
7	.52	.56	.62	106	61	10	3.6	1.6	1.1	.72	.88	.47
8	.52	.55	2.6	51	1.6	6.7	3.6	1.7	1.1	.79	.91	.50
9	.48	.62	.99	5.4	3.3	4.2	3.5	1.8	1.2	.71	.93	.59
10	.50	.72	1.7	3.0	29	2.7	3.4	1.8	1.3	.66	.98	.65
11	.49	.59	1.4	2.1	2.1	2.6	3.5	1.9	1.3	.75	.97	.66
12	.51	.53	.63	2.2	173	2.6	3.5	1.8	1.2	.77	.97	.63
13	.44	.57	.59	1.9	201	2.6	3.5	2.0	1.2	.78	1.1	.66
14	.46	.59	.51	1.5	26	2.6	3.5	2.1	1.2	.73	.92	.62
15	.50	.60	.58	1.4	350	2.6	3.4	2.2	1.3	.74	.70	.60
16	.50	.56	.55	1.3	86	2.6	3.7	2.2	1.1	.69	.62	.70
17	.48	.57	15	1.4	25	2.8	3.6	2.4	1.2	.68	.64	.71
18	.50	.62	18	2.1	11	2.6	3.4	2.4	.99	.60	.63	.66
19	.44	.56	11	1.9	5.9	2.7	2.6	2.2	.93	.56	.71	.76
20	.49	.53	1.1	1.6	3.7	54	2.3	2.1	.90	.53	.60	.80
21	.49	.55	.79	1.8	3.8	94	2.0	2.1	.89	.58	.45	.85
22	.51	.58	.77	1.6	3.4	12	2.1	9.3	.86	.57	.49	.80
23	.44	.55	.82	1.5	3.2	74	2.0	3.4	.82	.57	.50	.80
24	1.0	.54	.69	1.3	3.2	14	2.1	1.3	.66	.60	.52	.69
25	.47	.55	.78	1.5	3.2	7.2	2.2	1.3	.66	.67	.53	.69
26	2.0	.57	.82	1.9	2.7	42	2.3	1.2	.70	.58	.48	.68
27	41	.58	.68	2.0	2.3	24	2.2	1.1	.68	.66	.51	.58
28	.73	.64	28	2.3	2.2	7.9	1.9	1.1	.61	.80	.44	.58
29	.68	7.9	84	2.0	2.3	5.4	1.7	1.1	.69	.75	.45	.58
30	.71	1.8	40	1.7	---	4.8	1.4	1.0	.65	.90	.56	.58
31	.59	---	1.4	1.7	---	44	---	.98	---	.89	.60	---
TOTAL	58.41	25.45	218.00	774.63	1221.3	712.5	131.9	60.58	29.19	21.47	22.13	19.74
MEAN	1.88	.85	7.03	25.0	42.1	23.0	4.40	1.95	.97	.69	.71	.66
MAX	41	7.9	84	337	350	209	33	9.3	1.3	.90	1.1	.85
MIN	.44	.46	.51	.82	1.6	2.3	1.4	.98	.61	.53	.44	.47
AC-FT	116	50	432	1540	2420	1410	262	120	58	43	44	39

## LOS PENASQUITOS CREEK BASIN

11023330 LOS PENASQUITOS CREEK BELOW POWAY CREEK, NEAR POWAY, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.67	2.86	4.11	10.5	18.5	26.3	5.34	1.42	.53	.36	.32	.48
MAX	3.02	14.3	19.2	57.5	160	169	21.8	7.84	2.57	2.09	.95	1.90
(WY)	1988	1986	1985	1980	1980	1983	1975	1983	1990	1991	1977	1986
MIN	.008	.010	.024	.090	.13	.074	.014	.045	.020	.000	.000	.000
(WY)	1971	1978	1970	1970	1972	1972	1972	1970	1971	1972	1972	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1970 - 1992	
ANNUAL TOTAL	3062.78		3295.30			
ANNUAL MEAN	8.39		9.00		6.07	
HIGHEST ANNUAL MEAN					23.4	
LOWEST ANNUAL MEAN					.35	
HIGHEST DAILY MEAN	573	Mar 27	350	Feb 15	1050	Jan 29 1980
LOWEST DAILY MEAN	.21	Feb 25	.44	Oct 2	.00	Oct 27 1970
ANNUAL SEVEN-DAY MINIMUM	.22	Feb 20	.47	Oct 13	.00	Oct 27 1970
INSTANTANEOUS PEAK FLOW			2630	Feb 15	4990	Feb 21 1980
INSTANTANEOUS PEAK STAGE			8.94	Feb 15	11.11	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	6080		6540		4390	
10 PERCENT EXCEEDS	3.9		8.3		5.5	
50 PERCENT EXCEEDS	.62		.98		.47	
90 PERCENT EXCEEDS	.35		.52		.02	

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA

LOCATION.--Lat 32°56'35", long 117°07'15", in Los Penasquitos Grant, San Diego County, Hydrologic Unit 18070304, on left bank 1.0 mi downstream from Cypress Creek and 5.5 mi southwest of Poway.

DRAINAGE AREA.--42.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good. Flow partly regulated by several conservation reservoirs upstream from station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,750 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 10.26 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s; no flow at times in 1968, 1972, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1900	1,030	5.99	Feb. 15	1700	*2,920	*8.44
Feb. 6	2345	985	5.89	Mar. 2	1715	717	5.28
Feb. 12	2315	1,100	6.11				

Minimum daily, 0.45 ft<sup>3</sup>/s, Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	1.9	2.5	1.9	5.1	54	2.6	1.9	1.5	1.3	1.2
2	.78	1.2	1.4	2.4	1.8	217	30	2.6	2.0	1.4	1.2	1.3
3	.69	1.2	1.3	12	1.8	95	15	2.4	1.9	1.5	1.1	1.4
4	.74	1.1	1.3	11	1.8	21	12	2.4	2.0	1.7	1.1	1.3
5	.88	1.1	1.3	294	1.9	14	12	e2.4	2.0	1.6	1.1	1.4
6	.80	1.0	1.3	232	170	12	11	e2.3	2.0	1.5	1.1	1.4
7	.90	.96	1.3	95	157	18	9.8	2.1	2.0	1.6	1.2	1.4
8	1.1	1.1	2.3	91	8.6	20	11	2.0	1.8	1.8	1.2	1.4
9	1.0	1.6	7.4	12	4.8	13	9.4	2.0	1.8	1.7	1.2	1.4
10	.92	2.2	6.5	7.0	44	9.0	6.7	1.8	1.8	1.6	1.1	1.4
11	.71	1.9	4.1	4.6	6.6	6.7	11	1.7	2.1	1.6	1.2	1.5
12	.45	1.6	2.3	3.9	187	6.0	6.6	1.6	1.9	1.7	1.2	1.4
13	.85	1.2	1.4	3.4	305	5.5	5.9	1.4	1.7	1.7	1.3	1.4
14	.86	1.2	1.3	3.0	47	5.1	5.9	1.4	1.7	1.6	2.2	1.4
15	1.0	1.6	1.3	2.7	461	4.8	5.3	1.3	1.7	1.5	1.4	1.3
16	1.1	1.3	1.4	2.6	137	4.7	5.3	1.3	1.7	1.5	1.2	1.2
17	1.3	1.1	5.9	2.3	46	4.8	4.9	1.1	1.7	1.5	.93	1.2
18	1.2	1.3	37	2.4	28	4.4	4.9	1.4	1.7	1.3	.91	2.3
19	1.0	1.3	18	2.4	20	5.4	4.6	1.2	1.6	1.3	.99	1.3
20	.97	1.1	4.2	2.9	16	58	4.2	1.2	1.6	1.3	1.0	1.2
21	1.2	1.0	2.0	3.5	13	147	4.0	1.1	1.6	1.4	1.1	1.3
22	1.2	1.1	1.7	2.6	13	23	4.2	3.7	1.6	1.6	1.1	1.3
23	1.2	1.0	1.7	2.4	8.4	99	4.1	12	1.7	1.3	1.1	1.2
24	3.8	.96	1.5	2.0	7.3	28	3.9	2.5	1.5	1.3	1.1	1.1
25	2.0	1.1	1.3	1.9	5.9	21	3.8	2.2	1.4	1.3	1.2	1.1
26	1.6	1.1	1.7	2.0	5.2	58	3.4	2.0	1.4	1.2	1.2	1.2
27	53	1.0	1.5	2.8	4.7	56	3.1	2.0	1.5	1.2	1.1	1.2
28	3.5	1.1	34	2.7	4.3	27	3.0	1.9	1.5	1.3	1.1	1.1
29	2.1	1.6	71	2.3	5.1	17	3.0	2.0	1.5	1.4	1.1	1.1
30	2.1	12	72	1.9	---	15	2.9	2.1	1.5	1.3	1.3	1.1
31	1.6	---	6.3	1.8	---	49	---	2.0	---	1.4	1.2	---
TOTAL	91.65	48.42	297.6	815.0	1714.1	1069.5	264.9	69.7	51.8	45.6	36.53	39.5
MEAN	2.96	1.61	9.60	26.3	59.1	34.5	8.83	2.25	1.73	1.47	1.18	1.32
MAX	53	12	72	294	461	217	54	12	2.1	1.8	2.2	2.3
MIN	.45	.96	1.3	1.8	1.8	4.4	2.9	1.1	1.4	1.2	.91	1.1
AC-FT	182	96	590	1620	3400	2120	525	138	103	90	72	78

e Estimated.

LOS PENASQUITOS CREEK BASIN

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.20	5.16	9.03	14.5	23.6	31.9	7.15	2.28	1.03	.76	.73	.98
MAX	4.97	28.7	51.6	99.1	215	213	26.4	12.5	3.54	2.81	1.85	4.10
(WY)	1988	1986	1966	1978	1980	1983	1975	1983	1990	1991	1971	1986
MIN	.030	.10	.23	.23	.41	.75	.26	.14	.056	.009	.020	.028
(WY)	1976	1978	1974	1976	1965	1965	1977	1974	1974	1977	1975	1975

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1965 - 1992	
ANNUAL TOTAL	4466.80		4544.30			
ANNUAL MEAN	12.2		12.4		8.13	
HIGHEST ANNUAL MEAN					33.3	
LOWEST ANNUAL MEAN					.80	
HIGHEST DAILY MEAN	788	Mar 27	461	Feb 15	1400	Mar 1 1978
LOWEST DAILY MEAN	.45	Oct 12	.45	Oct 12	.00	May 16 1968
ANNUAL SEVEN-DAY MINIMUM	.60	Aug 20	.83	Oct 9	.00	Jul 18 1977
INSTANTANEOUS PEAK FLOW			2920	Feb 15	4750	Feb 21 1980
INSTANTANEOUS PEAK STAGE			8.44	Feb 15	10.26	Feb 21 1980
ANNUAL RUNOFF (AC-FI)	8860		9010		5890	
10 PERCENT EXCEEDS	10		19		8.2	
50 PERCENT EXCEEDS	1.6		1.7		1.2	
90 PERCENT EXCEEDS	.78		1.1		.21	

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 Lake Sutherland.

DRAINAGE AREA.--112 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1912 to February 1923 (monthly discharge only for November and December 1919), October 1943 to current year.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 847.88 ft above National Geodetic Vertical Datum of 1929 (levels by city of San Diego Water Department). See WSP 1315-B for history of changes prior to Feb. 3, 1923.

REMARKS.--Records fair. Flow regulated by Lake Sutherland, capacity, 29,680 acre-ft, since July 1954. Some small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,400 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 14.0 ft, datum then in use, from rating curve extended above 1,500 ft<sup>3</sup>/s on basis of slope-conveyance study of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 78 ft<sup>3</sup>/s, Mar. 21, gage height, 2.99 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	.02	.11	.26	1.4	15	1.5	.42	.02	.05	.01
2	.02	.01	.02	.11	.30	2.8	19	1.5	.31	.03	.03	.01
3	.00	.01	.02	.21	.30	6.1	12	1.4	.24	.05	.01	.01
4	.01	.01	.02	.23	.30	5.2	10	1.4	.21	.03	e.01	.01
5	.01	.01	.02	.90	.35	3.6	9.4	1.5	.18	.01	e.01	.01
6	.01	.00	.02	1.8	.94	3.2	8.8	1.6	.17	.01	e.01	.01
7	.01	.01	.02	1.4	1.4	4.2	8.1	1.6	.16	.02	e.01	.01
8	.01	.01	.02	.87	1.2	8.1	7.4	1.7	.15	.03	e.01	.01
9	.00	.01	.02	.60	.88	9.1	6.7	1.8	.15	.03	e.01	.02
10	.00	.01	.03	.46	.95	5.9	6.4	1.8	.17	.03	e.01	.03
11	.01	.01	.02	.35	.96	4.4	6.0	1.8	.14	.03	e.01	.03
12	.01	.01	.02	.30	1.3	3.6	5.7	1.7	.11	.03	e.00	.03
13	.00	.01	.02	.25	7.3	3.2	5.3	1.5	.11	.02	e.00	.02
14	.01	.02	.02	.20	11	2.8	5.0	1.3	.11	.01	e.00	.02
15	.01	.02	.02	.20	9.2	2.6	5.0	1.2	.10	.01	e.00	.02
16	.01	.02	.03	.20	24	2.5	4.9	1.0	.10	.02	e.00	.02
17	.01	.02	.04	.20	8.4	2.5	4.7	.92	.09	.01	e.00	.02
18	.01	.02	.04	.19	5.1	2.4	4.5	.85	.07	.03	e.00	.02
19	.00	.02	.04	.19	3.8	2.2	4.0	.79	.07	.01	e.00	.01
20	.00	.02	.04	.25	3.1	2.7	3.4	.72	.07	.01	e.00	.01
21	.00	.02	.05	.30	2.7	35	3.1	.64	.06	.01	.00	.02
22	.01	.02	.05	.30	2.4	20	2.9	.72	.06	.02	.00	.02
23	.01	.01	.05	.30	2.1	30	2.8	.97	.06	.02	.00	.02
24	.01	.01	.07	.30	1.9	24	2.5	1.3	.03	.03	.00	.02
25	.01	.00	.07	.30	1.8	14	2.1	1.3	.03	.02	.01	.02
26	.01	.01	.05	.33	1.7	13	1.9	1.0	.04	.03	.00	.02
27	.01	.01	.07	.30	1.5	22	1.8	.85	.04	.03	.00	.02
28	.01	.01	.11	.30	1.4	21	1.6	.74	.04	.03	.00	.01
29	.01	.02	.22	.27	1.4	14	1.5	.66	.03	.03	.00	.01
30	.01	.02	.17	.20	---	11	1.5	.62	.03	.03	.00	.02
31	.01	---	.12	.22	---	14	---	.50	---	.04	.00	---
TOTAL	0.26	0.39	1.53	12.14	97.94	296.5	173.0	36.88	3.55	0.73	0.18	0.51
MEAN	.008	.013	.049	.39	3.38	9.56	5.77	1.19	.12	.024	.006	.017
MAX	.02	.02	.22	1.8	24	35	19	1.8	.42	.05	.05	.03
MIN	.00	.00	.02	.11	.26	1.4	1.5	.50	.03	.01	.00	.01
AC-FT	.5	.8	3.0	24	194	588	343	73	7.0	1.4	.4	1.0

e Estimated.

## 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
INSTANTANEOUS PEAK FLOW	28400 Jan 27 1916
INSTANTANEOUS 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 1956 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.48	2.33	6.08	10.5	37.5	40.4	18.8	7.36	2.98	.91	.71	.40
MAX	6.38	43.5	124	124	795	425	207	110	42.2	13.8	11.9	7.07
(WY)	1981	1966	1967	1980	1980	1980	1983	1983	1983	1980	1983	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1956	1956	1956	1959	1961	1961	1961	1959	1956	1956	1956	1956

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1956 - 1992

ANNUAL TOTAL	1758.72	623.61	
ANNUAL MEAN	4.82	1.70	10.6
HIGHEST ANNUAL MEAN			131 1980
LOWEST ANNUAL MEAN			.000 1961
HIGHEST DAILY MEAN	420 Mar 1	35 Mar 21	6190 Feb 21 1980
LOWEST DAILY MEAN	.00 Jan 17	.00 Oct 3	.00 Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 11	.00 Aug 12	.00 Oct 1 1955
INSTANTANEOUS PEAK FLOW		78 Mar 21	10700 Feb 21 1980
INSTANTANEOUS PEAK STAGE		2.99 Mar 21	14.25 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	3490	1240	7650
10 PERCENT EXCEEDS	3.1	5.0	10
50 PERCENT EXCEEDS	.02	.05	.07
90 PERCENT EXCEEDS	.00	.01	.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, 3.1 mi northwest of Jensen's, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--57.6 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1912 to September 1920, October 1946 to current year.

REVISED RECORDS.--WSP 1285: 1952. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1946, at same site, at datum 1.78 ft lower.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. Land application of treated sewage effluent upstream from the gage beginning December 1972 contributes to low flows.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 14.39 ft, from rating curve extended above 130 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 4.56 ft and slope-conveyance study at gage height 14.39 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1945	*638	*3.56	Mar. 21	0830	296	2.84

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.10	.44	1.3	1.6	23	.24	.76	.63	.00	.00
2	.00	.00	.08	.46	1.4	25	18	.22	.87	.63	.00	.00
3	.00	.11	.08	1.1	1.2	25	9.7	.22	.84	.42	.00	.08
4	.00	.04	.07	1.0	1.1	7.4	7.9	.26	.27	.05	.00	.19
5	.00	.01	.03	4.5	.49	4.3	7.2	.55	.43	.05	.00	.22
6	.00	.01	.04	20	3.4	4.7	6.4	.39	.30	.17	.00	.15
7	.00	.01	.05	4.0	18	16	4.7	.29	.20	.09	.00	.22
8	.00	.06	.04	8.0	1.2	15	4.7	.51	.18	.10	.00	.29
9	.00	.06	.03	1.9	.54	9.5	4.3	.78	.97	.07	.00	.41
10	.00	.21	.06	1.5	2.2	6.4	3.8	.89	1.1	.14	.00	.36
11	.00	.05	.11	1.1	1.2	4.8	3.4	.96	.83	.14	.00	.27
12	.00	.02	.07	1.1	5.1	3.7	3.1	.81	.51	.06	.00	.15
13	.00	.06	.11	1.1	130	3.0	3.1	.31	.23	.10	.00	.25
14	.00	.14	.08	.80	14	3.3	3.1	.69	.46	.03	.00	.41
15	.00	.05	.08	.87	175	3.2	2.8	.78	.54	.01	.00	.51
16	.00	.10	.14	.76	64	2.7	2.5	.33	.30	.01	.06	.35
17	.00	.10	.25	.65	10	1.9	1.7	.58	.19	.00	.13	.35
18	.00	.03	.28	.46	6.2	2.0	2.3	.72	.15	.00	.02	.09
19	.00	.03	.26	.37	4.5	2.0	1.2	.81	.15	.00	.01	.12
20	.00	.03	.17	.32	3.8	7.8	.85	.87	.18	.00	.00	.13
21	.00	.05	.26	.32	3.5	109	.64	.88	.17	.00	.00	.11
22	.00	.16	.51	.32	3.2	16	.61	.44	.16	.00	.00	.13
23	.00	.13	.17	.32	2.7	51	.57	.99	.22	.00	.00	.13
24	.00	.11	.15	.30	2.1	15	.50	1.1	.26	.00	.00	.12
25	.00	.06	.16	.35	1.1	10	.55	.87	.11	.00	.00	.18
26	.03	.05	.16	.36	1.2	16	.71	.38	.33	.00	.00	.24
27	.12	.09	.17	.36	1.2	77	.39	.56	.59	.00	.00	.32
28	.02	.11	.31	.36	1.5	36	.29	.51	.72	.00	.00	.39
29	.01	.14	.53	.36	1.3	12	.27	.42	.76	.00	.00	.36
30	.00	.13	.36	.75	---	9.3	.27	.60	.77	.00	.00	.10
31	.00	---	.26	.88	---	15	---	.70	---	.00	.00	---
TOTAL	0.18	2.15	5.17	55.11	462.43	515.6	118.55	18.66	13.55	2.70	0.22	6.63
MEAN	.006	.072	.17	1.78	15.9	16.6	3.95	.60	.45	.087	.007	.22
MAX	.12	.21	.53	20	175	109	23	1.1	1.1	.63	.13	.51
MIN	.00	.00	.03	.30	.49	1.6	.27	.22	.11	.00	.00	.00
AC-FT	.4	4.3	10	109	917	1020	235	37	27	5.4	.4	13

## SAN DIEGUITO RIVER BASIN

11028500 SANTA MARIA CREEK NEAR RAMONA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.045	.46	1.48	16.5	18.9	23.2	5.17	1.81	.40	.061	.10	.031
MAX	.45	10.9	26.5	54.5	44.3	288	54.4	31.0	7.66	1.28	4.03	.22
(WY)	1987	1966	1967	1916	1980	1983	1983	1915	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1914	1916	1920	1920	1951	1951	1950	1949	1920	1913	1913	1913

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1913 - 1992	
ANNUAL TOTAL	2177.22		1200.95			
ANNUAL MEAN	5.96		3.28		5.74	
HIGHEST ANNUAL MEAN					60.3	
LOWEST ANNUAL MEAN					.00	
HIGHEST DAILY MEAN	609	Mar 27	175	Feb 15	4960	Jan 27 1916
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Dec 17 1912
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 17	.00	Oct 1	.00	Dec 17 1912
INSTANTANEOUS PEAK FLOW			638	Feb 15	15200	Feb 21 1980
INSTANTANEOUS PEAK STAGE			3.56	Feb 15	14.39	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	4320		2380		4160	
10 PERCENT EXCEEDS	1.1		4.7		2.0	
50 PERCENT EXCEEDS	.08		.27		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11030020 LAKE HODGES NEAR ESCONDIDO, CA

LOCATION.--Lat 33°02'46", long 117°07'39", in SE 1/4 NW 1/4 sec.18, T.13 S., R.2 W., San Diego County, Hydrologic Unit 18070304, 300 ft upstream from right upstream end of Hodges Dam on San Dieguito River, 6.4 mi southwest of Escondido, and 20 mi southwest of Sutherland Reservoir.

DRAINAGE AREA.--303 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1945 to September 1968 (published with San Dieguito River at Lake Hodges, station 11030000), October 1972 to current year. Monthend contents only October 1972 to September 1987. Monthend gage heights, February 1919 to September 1945, in files of San Diego County Department of Sanitation and Flood Control.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by county of San Diego). Prior to Oct. 1, 1972, nonrecording gage at site 800 ft upstream on right bank at same datum. October 1972 to current year, supplementary water-stage recorder used for flood warning only, on left upstream face of dam at datum 200 ft higher.

REMARKS.--Reservoir is formed by multiple-arch reinforced concrete dam, constructed in 1917-19. Storage began in February 1919. Capacity of reservoir at spillway level, 33,550 acre-ft, elevation, 315.0 ft. Dead storage below lowest outlet, 1,160 acre-ft, elevation 254.0 ft, included in these records. Reservoir can be drawn down below lowest outlet by pumping. Water drawn from Lake Hodges passes through a conduit to San Dieguito re-regulating reservoir, from which it is released as required for municipal use. Diversions for irrigation upstream from Lake Hodges.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 41,620 acre-ft, spilling, Feb. 21, 1980, elevation, 321.50 ft; minimum observed, 114 acre-ft, Oct. 31, 1965, elevation, 235.80 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 29,400 acre-ft, Apr. 19, elevation, 311.48 ft; minimum, 20,590 acre-ft, Dec. 8, elevation 302.52 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table provided by city of San Diego, dated July 1, 1953)

280	7,340	300	18,530
285	9,440	305	22,780
290	11,950	310	27,780
295	14,950	315	33,550

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21640	21120	20670	21030	22520	26070	28880	29180	28510	27580	26430	25350
2	21600	21110	20660	21050	22540	26400	28970	29130	28470	27510	26400	25280
3	21610	21100	20640	21120	22550	26480	29050	29100	28450	27490	26360	25260
4	21570	21090	20630	21150	22560	26550	29090	29030	28420	27440	26310	25190
5	21520	21090	20620	21700	22560	26600	29120	29020	28390	27400	26290	25150
6	21510	21080	20610	22050	22990	26640	29160	28990	28330	27370	26260	25120
7	21530	21060	20610	22280	23160	26700	29200	28970	28310	27340	26220	25120
8	21500	21050	20610	22380	23200	26750	29220	28950	28280	27330	26180	25080
9	21530	21040	20620	22400	23250	26800	29250	28930	28240	27310	26120	25030
10	21530	21030	20630	22420	23300	26840	29270	28950	28200	27250	26090	24940
11	21490	21030	20630	22440	23330	26890	29290	28950	28180	27200	26020	24920
12	21500	21030	20630	22460	23740	26910	29300	28950	28150	27160	25990	24880
13	21500	21020	20630	22460	24070	26930	29300	28900	28110	27140	25970	24840
14	21460	21000	20630	22480	24230	26940	29320	28880	28060	27090	25940	24800
15	21420	20970	20620	22520	25070	26950	29320	28830	28030	27050	25920	24760
16	21400	20960	20620	22510	25490	26960	29360	28800	27990	27000	25880	24730
17	21380	20950	20660	22510	25660	26980	29370	28780	27960	26970	25830	24660
18	21410	20950	20690	22520	25750	26980	29390	28740	27920	26920	25800	24640
19	21320	20920	20720	22520	25820	27000	29400	28710	27890	26880	25750	24610
20	21300	20900	20730	22530	25880	27100	29390	28680	27840	26820	25750	24540
21	21270	20890	20720	22550	25930	27260	29380	28660	27810	26770	25670	24500
22	21230	20870	20720	22550	25970	27460	29380	28660	27770	26810	25660	24520
23	21250	20850	20720	22570	26010	27690	29360	28650	27760	26760	25670	24430
24	21240	20830	20720	22580	26050	27830	29330	28640	27730	26710	25620	24390
25	21220	20800	20720	22590	26070	27910	29310	28630	27700	26650	25550	24340
26	21170	20780	20720	22590	26090	28080	29280	28610	27680	26600	25580	24270
27	21290	20760	20750	22610	26090	28200	29250	28590	27660	26550	25520	24260
28	21170	20740	20780	22620	26090	28350	29230	28570	27660	26620	25510	24200
29	21180	20720	20960	22620	26080	28460	29230	28540	27640	26480	25470	24240
30	21160	20690	21030	22630	---	28520	29220	28540	27610	26470	25410	24240
31	21140	---	21030	22520	---	28710	---	28520	---	26440	25380	---
MAX	21640	21120	21030	22630	26090	28710	29400	29180	28510	27580	26430	25350
MIN	21140	20690	20610	21030	22520	26070	28880	28520	27610	26440	25380	24200
a	303.16	302.64	303.04	304.72	308.38	310.86	311.32	310.68	309.84	308.73	307.69	306.54
b	-500	-450	+340	+1490	+3560	+2630	+510	-700	-910	-1170	-1060	-1140

CAL YR 1991 MAX 25360 MIN 12210 b +8820  
WTR YR 1992 MAX 29400 MIN 20610 b +2600

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

ESCONDIDO CREEK BASIN

11030700 LAKE WOHLFORD NEAR ESCONDIDO, CA

LOCATION.--Lat 33°09'59", long 117°00'14", in NW 1/4 NE 1/4 sec.5, T.12 S., R.1 W., San Diego County, Hydrologic Unit 18070303, near left abutment of Lake Wohlford Dam, 4.7 mi southeast of Valley Center Post Office, and 5.7 mi northeast of Escondido.

DRAINAGE AREA.--7.96 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1972 to current year. October 1933 to September 1972 in files of San Diego County Department of Sanitation and Flood Control.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by city of Escondido Engineering Department). Since October 1972, supplementary water-stage recorder for flood warning only, at same site at different datum.

REMARKS.--Reservoir is formed by earthfill dam riprapped upstream and downstream, with concrete spillway anchored to natural rock. Dam was completed in 1932. Capacity at spillway level, 6,940 acre-ft, elevation, 1,480.0 ft. Dead storage below lowest outlet, 131 acre-ft, elevation, 1,420 ft. Reservoir storage includes supplemental water diverted from the San Luis Rey River via Escondido Mutual Water Co.'s canal to Lake Wohlford Reservoir. Stored water is released for municipal use by Vista Irrigation District and city of Escondido.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 7,140 acre-ft, Feb. 21, 1980, elevation, 1,480.9 ft; minimum, 1,050 acre-ft, Dec. 23-25, 1978, elevation, 1,440.6 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 6,400 acre-ft, June 28, 29, elevation, 1,477.52 ft; minimum, 3,640 acre-ft, Dec. 9, elevation, 1,462.75 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table provided by city of Escondido, dated March 1955)

1,440	1,000	1,455	2,510	1,470	4,910
1,445	1,410	1,460	3,220	1,475	5,880
1,450	1,910	1,465	4,020	1,481	7,160

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5770	4800	3830	3710	3700	4150	5020	5260	6280	6330	5860	5340
2	5760	4770	3800	3700	3700	4170	5060	5300	6280	6270	5860	5330
3	5760	4730	3770	3690	3700	4210	5100	5340	6280	6210	5860	5330
4	5800	4700	3740	3660	3700	4220	5110	5370	6290	6150	5860	5320
5	5810	4680	3720	3670	3700	4240	5120	5410	6290	6100	5860	5320
6	5830	4650	3700	3700	3720	4240	5120	5450	6290	6030	5860	5320
7	5830	4610	3680	3710	3740	4270	5140	5490	6290	5980	5850	5310
8	5830	4570	3650	3710	3750	4330	5140	5520	6300	5900	5840	5310
9	5820	4540	3640	3690	3750	4360	5160	5550	6300	5860	5830	5300
10	5830	4510	3650	3690	3770	4360	5180	5590	6300	5860	5760	5300
11	5880	4470	3650	3690	3770	4360	5190	5630	6310	5870	5660	5300
12	5830	4440	3650	3690	3800	4370	5210	5660	6310	5880	5600	5300
13	5760	4400	3650	3690	3890	4360	5220	5680	6320	5890	5600	5300
14	5680	4380	3650	3690	3930	4360	5230	5710	6330	5890	5610	5300
15	5590	4330	3650	3690	4000	4340	5240	5740	6340	5880	5580	5290
16	5510	4300	3650	3690	4060	4330	5250	5770	6340	5880	5540	5290
17	5430	4270	3650	3690	4090	4330	5270	5800	6350	5880	5480	5260
18	5350	4240	3650	3690	4110	4330	5280	5820	6350	5870	5420	5250
19	5270	4200	3660	3690	4130	4340	5280	5830	6360	5870	5410	5250
20	5180	4170	3650	3690	4140	4340	5280	5850	6360	5870	5400	5250
21	5120	4140	3650	3690	4150	4420	5270	5870	6380	5860	5390	5250
22	5090	4100	3650	3690	4150	4480	5260	5910	6390	5870	5390	5240
23	5060	4060	3650	3690	4150	4560	5260	5950	6390	5880	5390	5240
24	5030	4030	3650	3700	4150	4630	5260	5970	6390	5870	5380	5230
25	5020	4000	3650	3700	4150	4660	5270	5980	6390	5880	5380	5220
26	5000	3960	3650	3700	4150	4710	5270	6000	6390	5880	5380	5230
27	4970	3930	3670	3700	4140	4780	5260	6040	6390	5880	5370	5240
28	4940	3910	3680	3700	4150	4850	5250	6070	6400	5870	5360	5240
29	4910	3900	3700	3700	4150	4890	5230	6120	6400	5870	5350	5240
30	4870	3860	3700	3700	---	4930	5220	6180	6380	5860	5340	5250
31	4840	---	3710	3700	---	4980	---	6240	---	5860	5340	---
MAX	5880	4800	3830	3710	4150	4980	5280	6240	6400	6330	5860	5340
MIN	4840	3860	3640	3660	3700	4150	5020	5260	6280	5860	5340	5220
a	1469.62	1464.08	1463.15	1463.09	1465.77	1470.38	1471.68	1476.75	1477.45	1474.89	1472.31	1471.80
b	-930	-980	-150	-10	+450	+830	+240	+1020	+140	-520	-520	-100

CAL YR 1991 MAX 6430 MIN 3640 b -290  
WTR YR 1992 MAX 6400 MIN 3640 b -530

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

11039800 SAN LUIS REY RIVER AT COUSER CANYON BRIDGE, NEAR PALA, CA

LOCATION.--Lat 33°20'26", long 117°07'50", in NW 1/4 NE 1/4 sec.6, T.10 S., R.2 W., in San Diego County, Hydrologic Unit 18070303, on left bank 10 ft upstream from bridge on Couser Canyon Road, 6.5 mi northeast of Bonsall, and 27 mi downstream from Lake Henshaw.

DRAINAGE AREA.--364 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 280 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair above 10 ft<sup>3</sup>/s, poor below. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft. Several small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft<sup>3</sup>/s, Mar. 27, 1991, gage height, 5.56 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26 ft<sup>3</sup>/s, Feb. 16, gage height 1.46 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	1.5	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.67	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.39	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.25	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.50	.15	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	1.9	.11	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.01	.11	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	6.2	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	2.5	.00	.01	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	1.2	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.23	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	4.7	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	6.6	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	5.1	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	6.8	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	5.4	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	3.4	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.4	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.0	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	24.13	52.81	7.68	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.83	1.70	.26	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	14	14	1.7	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	48	105	15	.00	.00	.00	.00	.00

## 11039800 SAN LUIS REY RIVER AT COUSER CANYON BRIDGE, NEAR PALA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.018	.53	.93	2.06	1.66	10.4	1.87	.25	.039	.006	.000	.000
MAX	.11	2.75	3.99	9.20	6.11	51.5	4.71	.81	.24	.034	.000	.000
(WY)	1987	1988	1988	1988	1988	1991	1991	1987	1987	1987	1987	1987
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1989	1989	1990	1990	1990	1990	1989	1988	1988	1987	1987

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1987 - 1992	
ANNUAL TOTAL	1738.53		84.62			
ANNUAL MEAN	4.76		.23		1.49	
HIGHEST ANNUAL MEAN					4.76	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	547	Mar 27	14	Feb 16	547	Mar 27 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1986
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1986
INSTANTANEOUS PEAK FLOW			26	Feb 16	1700	Mar 27 1991
INSTANTANEOUS PEAK STAGE			1.46	Feb 16	5.56	Mar 27 1991
ANNUAL RUNOFF (AC-FT)	3450		168		1080	
10 PERCENT EXCEEDS	1.0		.00		3.0	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA  
(National stream-quality accounting network station)

LOCATION.--Lat 33°13'05", long 117°22'34", in SE 1/4 SW 1/4 sec.13, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070303, on right bank 1.9 mi upstream from bridge on Interstate Highway 5, 2.4 mi upstream from mouth, and 1.9 mi northeast of Oceanside.

DRAINAGE AREA.--557 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. April 1912 to September 1914, nonrecording gage at site 0.4 mi downstream at different datum. January 1916, nonrecording gage 1.4 mi downstream at different datum. October 1929 to Nov. 9, 1981, at site 0.8 mi downstream at different datums.

REMARKS.--Records fair prior to June and poor thereafter. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft since 1923. Several diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft<sup>3</sup>/s, Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years. Since regulation by Lake Henshaw, maximum discharge, 25,000 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 14.00 ft., site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 453 ft<sup>3</sup>/s, Feb.16, gage height, 15.15 ft; minimum daily, 3.1 ft<sup>3</sup>/s, Oct. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.3	9.3	22	20	48	82	31	22	e11	e9.0	e7.5
2	4.1	3.6	9.1	20	21	66	84	29	23	e11	9.1	e7.5
3	3.9	3.6	9.8	20	21	156	82	28	21	e11	9.0	e7.5
4	3.9	3.6	9.5	21	21	135	73	28	21	e11	8.9	e7.5
5	3.9	3.8	11	30	21	98	68	27	23	e11	8.9	e7.5
6	3.8	4.0	12	158	32	79	65	28	23	e11	8.7	e7.5
7	3.9	4.1	11	132	71	72	62	26	21	e11	8.8	e7.5
8	3.9	4.8	9.7	159	78	91	58	25	18	e11	9.1	e7.5
9	3.9	5.1	8.3	92	59	120	55	26	15	e10	e9.0	e7.5
10	3.6	4.8	9.2	67	55	94	55	26	14	e10	e9.0	e7.5
11	3.6	5.1	11	54	56	72	51	27	15	e10	e9.0	e7.5
12	3.6	4.0	11	45	59	45	49	28	14	e10	e9.0	e7.5
13	3.5	3.9	8.8	41	212	36	49	27	15	e10	e9.0	e7.5
14	3.4	4.7	5.6	40	137	35	48	27	17	e10	e9.0	e7.5
15	3.3	6.4	4.3	36	116	33	61	28	17	e10	e9.0	e7.5
16	3.3	6.8	4.0	35	351	31	69	27	20	e9.0	e9.0	e7.5
17	3.2	6.9	6.2	34	164	30	70	27	18	e9.0	e9.0	e7.5
18	3.1	7.0	7.9	33	91	30	69	25	16	e9.0	e9.0	e7.5
19	3.3	7.0	8.7	31	72	55	67	25	16	e9.0	e9.0	e7.5
20	3.5	7.1	6.5	30	63	69	61	24	12	e9.0	e9.0	e7.5
21	3.5	7.6	7.6	27	57	191	55	23	11	e9.0	e9.0	e7.5
22	3.3	9.6	8.2	27	53	200	59	23	e12	e9.0	e9.0	e7.5
23	3.3	12	8.2	29	52	185	56	24	e12	e9.0	e9.0	e7.5
24	3.3	12	8.1	29	51	217	49	23	e11	e9.0	e8.5	e7.5
25	3.2	12	7.9	26	51	139	44	23	e12	e9.0	e8.5	e7.5
26	3.4	12	7.9	26	52	109	44	23	e12	e9.0	e8.5	e7.5
27	5.0	13	7.9	25	51	196	41	22	e12	e9.0	e8.5	e7.5
28	4.0	11	11	27	51	171	38	21	e12	e9.0	e8.0	e7.5
29	3.6	11	13	26	49	115	35	21	e12	e9.0	e8.0	e7.5
30	3.4	11	49	16	---	96	33	23	e12	e9.0	e8.0	e7.5
31	3.3	---	25	19	---	87	---	22	---	e9.0	e8.0	---
TOTAL	112.1	210.8	326.7	1377	2187	3101	1732	787	479	302.0	272.5	225.0
MEAN	3.62	7.03	10.5	44.4	75.4	100	57.7	25.4	16.0	9.74	8.79	7.50
MAX	5.0	13	49	159	351	217	84	31	23	11	9.1	7.5
MIN	3.1	3.3	4.0	16	20	30	33	21	11	9.0	8.0	7.5
AC-FT	222	418	648	2730	4340	6150	3440	1560	950	599	541	446

e Estimated.

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.70	8.70	20.5	40.0	102	125	53.2	26.4	13.8	7.32	5.79	3.37
MAX	54.6	144	196	451	1858	1096	432	346	283	207	213	85.9
(WY)	1984	1984	1979	1980	1980	1980	1980	1980	1980	1980	1980	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1930	1930	1930	1930	1931	1931	1930	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1930 - 1992	
ANNUAL TOTAL	16037.0		11112.1			
ANNUAL MEAN	43.9		30.4		33.7	
HIGHEST ANNUAL MEAN					415	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	2100	Mar 27	351	Feb 16	11300	Mar 3 1938
LOWEST DAILY MEAN	3.1	Oct 18	3.1	Oct 18	.00	Oct 1 1929
ANNUAL SEVEN-DAY MINIMUM	3.3	Oct 13	3.3	Oct 13	.00	Oct 1 1929
INSTANTANEOUS PEAK FLOW			453	Feb 16	25000	Feb 21 1980
INSTANTANEOUS PEAK STAGE			15.15	Feb 16	14.00	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	31810		22040		24410	
10 PERCENT EXCEEDS	69		71		54	
50 PERCENT EXCEEDS	10		12		.10	
90 PERCENT EXCEEDS	4.0		4.0		.00	

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.  
 CHEMICAL DATA: Water years 1978 to May 1992 (discontinued).  
 BIOLOGICAL DATA: Water years 1978-81.  
 SPECIFIC CONDUCTANCE: Water years 1978-81.  
 WATER TEMPERATURE: Water years 1971-81.  
 SEDIMENT DATA: Water years 1969 to current year.

PERIOD OF DAILY RECORD.--  
 SUSPENDED-SEDIMENT DISCHARGE: October 1968 to September 1978, December 1983 to September 1984.

REMARKS:--Channel construction began Nov. 22 about 1 mi upstream from gage site and construction activities increased throughout the water year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
NOV 25...	1115	11	2470	7.9	11.0	1.6	760	9.8	90	36	K49
MAR 25...	1215	136	1750	8.1	16.5	17	760	8.3	86	170	180
MAY 12...	1245	29	2360	7.9	21.5	9.6	760	6.9	79	51	96

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)
NOV 25...	760	490	170	81	240	40	4	10	334	0	274
MAR 25...	530	330	110	62	150	38	3	6.4	246	0	202
MAY 12...	800	540	180	85	220	37	3	8.3	317	0	260

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 25...	480	420	0.50	20	1600	1600	2.18	0.030	0.030	1.80
MAR 25...	320	240	0.30	22	1080	1040	1.47	0.040	0.020	2.40
MAY 12...	440	360	0.30	20	1570	1480	2.14	0.030	0.030	1.20

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	BARIUM, DIS-SOLVED (UG/L AS BA)
NOV 25...	1.80	0.050	0.040	0.40	0.180	0.170	0.160	0.150	<10	<100
MAR 25...	2.40	0.070	0.030	0.70	0.280	0.210	0.210	0.200	<10	75
MAY 12...	1.20	0.300	0.290	0.60	0.210	0.050	0.100	0.050	<10	200

SAN LUIS REY RIVER BASIN

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
NOV 25...	<1	<10	10	60	13	<1	1	<1.0	1000	17
MAR 25...	<3	11	13	73	<10	1	<1	<1.0	540	8
MAY 12...	1	20	10	--	12	<1	<1	<1.0	760	13

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
May											
12...*	1100	0.36	3.00	2500	7.9	20.0	760	6.4	71	96	54
12...*	1105	0.32	41.0	2500	7.6	20.5	760	6.3	71	85	90
12...*	1110	0.70	77.0	2500	7.4	22.0	760	6.4	74	113	52
12...*	1120	1.65	159	2300	7.9	21.0	760	6.9	78	--	--
12...*	1125	0.45	207	2260	8.0	20.5	760	7.6	85	50	65

\* Instantaneous streamflow at time of cross-sectional measurement: May 12, 29 ft<sup>3</sup>/s.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
OCT 30... <sup>a</sup>	1230	3.5	19.0	9	0.08	64	--	--	--
NOV 25...	1115	11	11.0	15	0.45	58	--	--	--
DEC 26... <sup>a</sup>	1600	7.9	15.0	41	0.87	72	--	--	--
JAN 31... <sup>a</sup>	1530	20	16.0	64	3.5	64	--	--	--
FEB 07... <sup>a</sup>	1525	76	15.5	176	36	57	62	77	99
07... <sup>a</sup>	1530	76	15.5	282	58	64	--	--	--
13... <sup>a</sup>	1440	262	15.5	679	480	72	81	91	99
13... <sup>a</sup>	1500	258	15.5	836	582	78	--	--	--
28... <sup>a</sup>	1630	51	17.5	76	10	75	--	--	--
MAR 03... <sup>a</sup>	1430	179	17.0	270	130	38	44	60	95
25... <sup>a</sup>	1215	136	16.5	60	22	91	--	--	--
27... <sup>a</sup>	1650	262	19.0	487	345	34	40	62	95
MAY 12...	1115	29	20.0	86	6.7	65	--	--	--
12...	1245	29	21.5	46	3.6	90	--	--	--
JUN 11... <sup>a</sup>	1230	16	24.5	67	2.9	52	--	--	--
JUL 22... <sup>a</sup>	1500	8.8	29.0	87	2.1	34	--	--	--
SEP 01...	1600	7.5	25.0	95	1.9	55	--	--	--

<sup>a</sup> Samples were collected at different location, approximately 1.2 mi upstream from gage site.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	TEMPER- ATURE WATER (DEG C)	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM. % FINER THAN .062 MM	BED MAT. SIEVE DIAM. % FINER THAN .125 MM	BED MAT. SIEVE DIAM. % FINER THAN .250 MM
JUL							
22... <sup>a</sup>	1510	29.0	1	10	2	8	36
22... <sup>a</sup>	1515	29.0	1	10	3	9	29
22... <sup>a</sup>	1525	29.0	1	9.9	1	8	48
22... <sup>a</sup>	1530	29.0	1	9.9	1	3	21

DATE	BED MAT. SIEVE DIAM. % FINER THAN .500 MM	BED MAT. SIEVE DIAM. % FINER THAN 1.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 2.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 4.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 8.00 MM	BED MAT. SIEVE DIAM. % FINER THAN 16.0 MM
JUL						
22...	68	87	94	97	98	100
22...	59	84	93	100	--	--
22...	94	98	99	100	--	--
22...	68	96	100	--	--	--

<sup>a</sup> Samples were collected at different location, approximately 1.2 mi upstream from gage site.

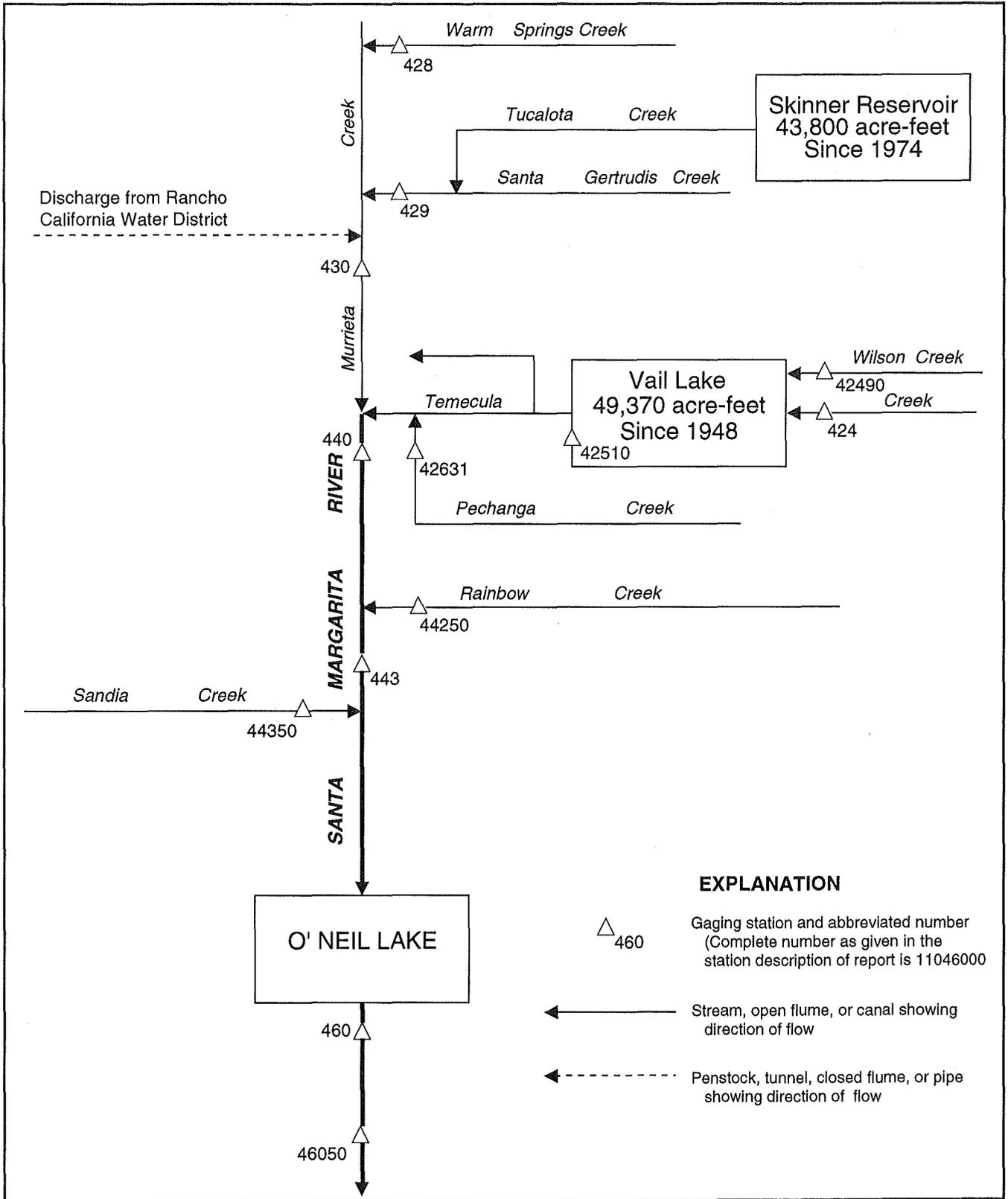


Figure 18. Diversions and storage in Santa Margarita River basin.

SANTA MARGARITA RIVER BASIN

201

11042400 TEMECULA CREEK NEAR AGUANGA, CA

LOCATION.--Lat 33°27'33", long 116°55'22", in SW 1/4 SW 1/4 sec.19, T.8 S., R.1 E., Riverside County, Hydrologic Unit 18070302, on right bank 1.6 mi downstream from Long Canyon and 3.5 mi northwest of Aguanga.

DRAINAGE AREA.--131 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1957 to current year.

REVISED RECORDS.--WDR CA-89-1: 1958(P), 1966(M), 1979(M), 1980(M), 1986(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,590 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Pumping upstream from station for irrigation of less than 1,000 acres.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,200 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 12.0 ft, from floodmarks, from rating curve extended above 1,200 ft<sup>3</sup>/s; no flow for several days in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 6	unknown	592	a4.96	Mar. 2	1800	194	4.01
Feb. 12	1900	1,030	5.75	Mar. 21	0530	106	3.68
Feb. 15	1545	*1,380	*6.29	Mar. 23	0600	110	3.70

Minimum daily, 0.18 ft<sup>3</sup>/s, Sept. 24.

a From flood mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	.62	.57	e2.0	e1.0	1.6	e9.1	3.6	1.4	.69	.28	e.25
2	.23	.63	.73	e2.0	e1.0	28	e8.4	3.5	1.4	.81	.28	e.25
3	.21	.71	.94	e8.0	e1.0	30	e5.0	3.6	1.2	.79	.27	.24
4	.20	.67	.94	e4.0	e1.0	14	e5.0	3.3	1.3	.75	.29	.22
5	.20	.60	.80	e6.0	e1.0	9.0	e5.0	4.5	1.3	.61	.29	.21
6	.25	.55	.68	e4.0	e2.0	6.5	e5.0	6.8	1.6	.49	.28	.21
7	.24	.64	.85	e1.0	e4.0	7.8	e9.0	2.2	1.8	.64	.25	.20
8	.20	.70	1.2	e1.0	e5.0	12	e9.0	2.0	1.6	.94	.24	.20
9	.21	.73	1.2	e6.0	e2.0	11	8.8	2.2	1.5	.74	.24	.21
10	.20	.74	e1.6	e2.0	e3.0	6.5	8.9	2.3	1.4	.69	.24	.20
11	.20	.74	e1.2	e1.0	e6.0	3.6	9.2	2.4	1.5	.67	.23	.20
12	.25	.69	e1.0	e1.0	69	2.9	9.2	2.3	1.4	.83	.22	.20
13	.28	.75	e1.0	e1.0	128	2.5	9.6	1.9	1.3	1.0	41	.20
14	.27	.84	e1.0	e1.0	29	2.4	13	1.9	1.2	.76	9.7	.20
15	.22	.76	e1.0	e1.0	155	2.2	5.4	1.9	1.3	.59	e.40	.20
16	.22	.61	e1.0	e1.0	63	2.1	6.0	1.8	1.2	.47	e.30	.20
17	.22	.58	e1.0	e1.0	27	1.9	5.7	1.7	1.1	.40	e.30	.19
18	.22	.71	e1.0	e1.0	14	1.7	5.6	1.4	.97	.38	e.30	.20
19	.25	.67	e1.0	e1.0	11	1.5	5.0	1.3	.92	.36	e.30	.20
20	.30	.77	e1.0	e1.0	8.1	7.5	4.9	1.5	.87	.35	e.30	.19
21	.33	.73	e1.0	e1.0	6.1	35	4.7	1.6	.84	.36	e.25	.20
22	.31	.78	e1.0	e1.0	4.6	18	4.6	5.5	.81	.36	e.25	.20
23	.37	.73	e1.0	e1.0	3.2	44	4.5	5.6	.79	.34	e.25	.19
24	.37	.62	e1.0	e1.0	2.3	28	4.3	2.6	.80	.33	e.25	.18
25	.43	.63	e1.0	e1.0	2.1	16	4.1	2.3	.68	.36	e.25	.20
26	.69	.69	e1.0	e1.0	1.7	16	3.8	2.0	.64	.37	e.25	.21
27	.94	.50	e1.0	e1.0	1.8	e22	3.5	1.9	.63	.34	e.25	.21
28	.68	.63	e2.0	e1.0	1.5	e14	3.5	2.0	.57	.32	e.25	.23
29	.52	.77	e1.0	e1.0	1.3	e6.0	3.5	1.9	.55	.31	e.25	.21
30	.52	.73	e2.5	e1.0	---	e5.0	3.8	1.6	.60	.33	e.25	.21
31	.50	---	e5.0	e1.0	---	e8.0	---	1.4	---	.29	e.25	---
TOTAL	10.27	20.52	68.71	165.0	636.7	366.7	187.1	80.5	33.17	16.67	58.46	6.21
MEAN	.33	.68	2.22	5.32	22.0	11.8	6.24	2.60	1.11	.54	1.89	.21
MAX	.94	.84	25	60	155	44	13	6.8	1.8	1.0	41	.25
MIN	.20	.50	.57	1.0	1.0	1.5	3.5	1.3	.55	.29	.22	.18
AC-FT	20	41	136	327	1260	727	371	160	66	33	116	12

e Estimated.

## SANTA MARGARITA RIVER BASIN

11042400 TEMECULA CREEK NEAR AGUANGA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.21	3.32	5.82	8.14	22.7	20.5	11.0	4.11	1.97	1.15	1.05	.89
MAX	7.94	47.9	66.0	49.7	266	105	87.3	21.6	13.1	8.19	9.40	6.93
(WY)	1984	1966	1967	1969	1980	1991	1958	1980	1980	1980	1983	1980
MIN	.000	.000	.000	.094	.70	.41	.34	.16	.067	.000	.000	.000
(WY)	1958	1963	1963	1963	1965	1965	1961	1961	1966	1964	1957	1957

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1957 - 1992	
ANNUAL TOTAL	4628.23		1650.01			
ANNUAL MEAN	12.7		4.51		6.74	
HIGHEST ANNUAL MEAN					40.7	
LOWEST ANNUAL MEAN					.28	
HIGHEST DAILY MEAN	1630	Mar 1	155	Feb 15	2200	Feb 25 1969
LOWEST DAILY MEAN	.18	Sep 3	.18	Sep 24	.00	Aug 1 1957
ANNUAL SEVEN-DAY MINIMUM	.21	Oct 4	.19	Sep 18	.00	Aug 1 1957
INSTANTANEOUS PEAK FLOW			1380	Feb 15	4200	Feb 21 1980
INSTANTANEOUS PEAK STAGE			6.29	Feb 15	12.00	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	9180		3270		4880	
10 PERCENT EXCEEDS	12		9.1		9.9	
50 PERCENT EXCEEDS	1.0		1.0		1.2	
90 PERCENT EXCEEDS	.25		.22		.00	

11042490 WILSON CREEK ABOVE VAIL LAKE, NEAR RADEC, CA

LOCATION.--Lat 33°29'12", long 116°54'37", in SE 1/4 SE 1/4 sec.7, T.8 S., R.1 E., Riverside County, Hydrologic Unit 18070302, on right bank 1.7 mi north of Radec and 3.9 mi northwest of Aguanga.

DRAINAGE AREA.--122 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Pumping and diversion upstream from station for local irrigation.

EXTREME FOR PERIOD OF RECORD.--Maximum discharge, 185 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 5.12 ft, from rating curve extended above 20 ft<sup>3</sup>/s; no flow for most of each year.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1545	*41	*4.18				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	e.35	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	e.30	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.72	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.49	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.65	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.021	.10	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.35	1.7	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1.3	5.8	.00	.00	.00	.00	.00	.00	.00

e Estimated.

## SANTA MARGARITA RIVER BASIN

11042490 WILSON CREEK ABOVE VAIL LAKE, NEAR RADEC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.007	.066	.36	.000	.000	.000	.000	.000	.000
MAX	.000	.000	.000	.021	.10	1.08	.000	.000	.000	.000	.000	.000
(WY)	1990	1990	1990	1992	1992	1991	1990	1990	1990	1990	1990	1990
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1990 - 1992
ANNUAL TOTAL	36.11	3.56	
ANNUAL MEAN	.099	.010	.036
HIGHEST ANNUAL MEAN			.099 1991
LOWEST ANNUAL MEAN			.000 1990
HIGHEST DAILY MEAN	32 Mar 1	1.7 Feb 15	32 Mar 1 1991
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1989
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1989
INSTANTANEOUS PEAK FLOW		15 Feb 12	185 Mar 1 1991
INSTANTANEOUS PEAK STAGE		4.18 Feb 12	5.12 Mar 1 1991
ANNUAL RUNOFF (AC-FT)	72	7.1	26
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.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 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (levels by the U.S. Bureau of Reclamation). June 4, 1969 to September 1985, nonrecording gage.

REMARKS.--Reservoir is formed by concrete arch-type dam, completed in June 1949. Total capacity, 49,370 acre-ft between elevations 1,352.5 ft, bottom of lowest outlet, and 1,470 ft, crest of spillway, all of which is available for release. There had been no spill from Nov. 13, 1948, date of closure, to Feb. 20, 1980, when a peak spill of about 8,000 ft<sup>3</sup>/s occurred (from theoretical discharge curve). Water is released down Temecula Creek for diversion about 1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 52,670 acre-ft, Feb. 21, 1980, elevation, 1,473.0 ft, from highwater mark; minimum 1,038 acre-ft, Oct. 31, 1960, elevation, 1,379.44 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 24,050 acre-ft, Apr. 24, elevation, 1,441.78 ft; minimum, 19,800 acre-ft, Dec. 9, elevation, 1,435.59 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	1,450	30,420
1,400	4,530	1,430	16,390	1,460	39,280
1,410	7,560	1,440	22,780	1,475	54,940

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21800	21040	20030	19950	20050	22020	23640	24000	23930	23610	e23270	22940
2	21780	21010	19990	19960	20050	22120	23690	24000	23920	23590	e23270	22930
3	21770	20990	19970	19960	20060	22230	23740	24000	23910	23580	e23270	22910
4	21760	20950	19940	19930	20060	22260	23770	24000	23900	23580	e23270	22910
5	21760	20920	19900	20130	20060	22300	23800	23980	23890	23570	23240	22890
6	21750	20900	19870	20160	20100	22320	23830	24000	23870	23550	23220	22880
7	21740	20860	19840	20160	20140	22350	23870	24000	23870	23550	23210	22870
8	21740	20840	19810	20130	20150	22390	23890	23990	23850	23560	23190	22860
9	21720	20800	19800	20110	20160	22430	23900	23990	23840	23550	23190	22840
10	21670	20780	19810	20090	20180	22460	23920	24000	23840	23540	23170	22840
11	21630	20750	19820	20060	20180	22510	23950	24000	23830	23530	23150	22830
12	21600	20710	19840	20030	20510	22510	23950	23990	23820	23520	23150	22810
13	21560	20680	19840	20030	20900	22530	23970	23980	23790	23510	23170	22800
14	21530	20640	19850	20030	21010	22540	23970	23970	23790	23510	23190	22790
15	21490	20600	19840	20020	21420	22550	23980	23970	23790	23490	23190	22790
16	21460	20570	19840	20020	21610	22580	24000	23970	23780	23490	23180	22770
17	21410	20530	19840	20030	21690	22580	24010	23970	23770	23480	23170	22750
18	21390	20490	19840	20030	21760	22600	24020	23960	23750	23460	23150	22720
19	21360	20460	19850	20030	21810	22610	24020	23950	23740	23440	23140	22700
20	21330	20440	19850	20030	21840	22670	24020	23940	23730	23420	23120	22670
21	21320	20390	19850	20030	21870	22790	24020	23930	23720	23400	23100	22650
22	21300	20350	19850	20020	21910	22880	24030	23950	23720	23390	23070	22610
23	21280	20340	19860	20020	21920	23040	24030	23970	23710	23370	23070	22570
24	21250	20270	19860	20030	21940	23120	24050	23970	23690	23360	23050	22510
25	21230	20230	19860	20030	21960	23190	24040	23970	23690	23350	23040	22460
26	21210	20220	19860	20040	21970	23270	24040	23970	23670	23340	23030	22410
27	21180	20170	19860	20050	21980	23340	24030	23970	23660	23340	23010	22350
28	21160	20140	19880	20050	22000	23410	24030	23950	23660	e23340	23000	22300
29	21140	20100	19950	20050	22000	23440	24020	23950	23640	e23270	22980	22250
30	21120	20080	19950	20050	---	23480	24010	23940	23620	e23270	22960	22190
31	21080	---	19970	20050	---	23540	---	23940	---	e23270	22950	---
MAX	21800	21040	20030	20160	22000	23540	24050	24000	23930	23610	23270	22940
MIN	21080	20080	19800	19930	20050	22020	23640	23930	23620	23270	22950	22190
a	1437.53	1436.02	1435.85	1435.79	1438.79	1440.83	1441.73	1441.63	1441.19	1439.79	1440.24	1439.16
b	-730	-1000	-110	+80	+1950	+1540	+470	-70	-320	-350	-320	-760
CAL YR 1991	MAX 27600	MIN 17140	b	+2840								
WTR YR 1992	MAX 24050	MIN 19800	b	+380								

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## SANTA MARGARITA RIVER BASIN

11042631 PECHANGA CREEK NEAR TEMECULA, CA

LOCATION.--Lat 33°28'06", long 117°07'40", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank on upstream side of Highway S-16 bridge, 0.4 mi upstream from Temecula Creek, and 2.1 mi southeast of Temecula.

DRAINAGE AREA.--13.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,010 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Indeterminate stage-discharge relationship. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 225 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 4.66 ft; no flow for most of each year.

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Time	Discharge (ft <sup>3</sup> /s)	Date	Time	Discharge (ft <sup>3</sup> /s)
Oct. 9	1445	0	Feb. 15	1710	4.66
Oct. 28	1000	0	Mar. 4	0745	0
Nov. 4	1600	0	Apr. 9	0730	0
Dec. 9	1445	0	May 7	0745	0
Jan. 10	0745	0	June 2	1515	0
Feb. 15	1508	57	June 30	1415	0
Feb. 15	1546	26.8	Aug. 5	0815	0
Feb. 15	1616	14.5	Sept. 3	0745	0
Feb. 15	1647	8.63			

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA

LOCATION.--Lat 33°31'56", long 117°10'34", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upstream end of Jefferson Road bridge, 0.6 mi upstream from mouth, and 2.8 mi southeast of Murrieta.

DRAINAGE AREA.--55.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year. Discharge measurements only, November 5, 1991 to June 10, 1992.

GAGE.--Water-stage recorder. Elevation of gage is 1,040 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Gage out of operation for channel work (lining) 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,670 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 8.71 ft, from floodmarks, no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	---	---	---	.00	.00	.00
2	.00	.00	---	---	---	---	---	---	---	.00	.00	.00
3	.00	.00	---	---	---	---	---	---	---	.00	.00	.00
4	.00	.00	---	---	---	---	---	---	---	.00	.00	.00
5	.00	---	---	---	---	---	---	---	---	.00	.00	.00
6	.00	---	---	---	---	---	---	---	---	.00	.00	.00
7	.00	---	---	---	---	---	---	---	---	.00	.00	.00
8	.00	---	---	---	---	---	---	---	---	.00	.00	.00
9	.00	---	---	---	---	---	---	---	---	.00	.00	.00
10	.00	---	---	---	---	---	---	---	---	.00	.00	.00
11	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
12	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
13	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
14	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
15	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
16	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
17	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
18	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
19	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
20	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
21	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
22	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
23	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
24	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
25	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
26	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
27	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
28	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
29	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
30	.00	---	---	---	---	---	---	---	.00	.00	.00	.00
31	.00	---	---	---	---	---	---	---	---	.00	.00	---
TOTAL	0.00	---	---	---	---	---	---	---	---	0.00	0.00	0.00
MEAN	.000	---	---	---	---	---	---	---	---	.000	.000	.000
MAX	.00	---	---	---	---	---	---	---	---	.00	.00	.00
MIN	.00	---	---	---	---	---	---	---	---	.00	.00	.00
AC-FT	.00	---	---	---	---	---	---	---	---	.00	.00	.00

## 11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA --Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.073	.095	.33	.39	1.25	18.5	.19	.017	.000	.013	.000	.000
MAX	.30	.31	.67	.79	4.04	74.0	.56	.068	.000	.063	.000	.000
(WY)	1991	1988	1988	1988	1991	1991	1988	1990	1988	1988	1988	1988
MIN	.000	.000	.000	.091	.004	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1990	1989	1989	1988	1989	1989	1988	1989	1988	1988

## SUMMARY STATISTICS

## WATER YEARS 1988 - 1992

ANNUAL MEAN	1.76	
HIGHEST ANNUAL MEAN	6.64	1991
LOWEST ANNUAL MEAN	.063	1989
HIGHEST DAILY MEAN	1070	Mar 1 1991
LOWEST DAILY MEAN	.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW	3670	Mar 1 1991
INSTANTANEOUS PEAK STAGE	8.71	Mar 1 1991
ANNUAL RUNOFF (AC-FT)	1280	
10 PERCENT EXCEEDS	.00	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

## DISCHARGE MEASUREMENTS, NOVEMBER 1991 TO JUNE 1992

Date	Time	Discharge (ft <sup>3</sup> /s)	Date	Time	Discharge (ft <sup>3</sup> /s)
Nov. 5	0715	0	Feb. 16	1752	294
Dec. 9	1600	0	Apr. 8	1200	0
Jan. 9	0730	0	May 6	1545	0
Feb. 7	1406	e 0.60	June 3	1300	0
Feb. 14	0922	16.0	June 10	1030	0

e Estimated.

## 11042900 SANTA GERTRUDIS CREEK NEAR TEMECULA, CA

LOCATION.--Lat 33°31'32", long 117°09'36", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank 1.0 mi upstream from Murrieta Creek, 1.5 mi downstream from Tualota Creek, and 2.2 mi northeast of Temecula.

DRAINAGE AREA.--92.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 1,045 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Indeterminate stage-discharge relationship. No regulation upstream from station. Flow less than 1 ft<sup>3</sup>/s from local landscape irrigation runoff at times bypasses station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 972 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 7.10 ft; no flow for most of each year.

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1991 SEPTEMBER 1992

Date	Time	Discharge (ft <sup>3</sup> /s)	Date	Time	Discharge (ft <sup>3</sup> /s)
Nov. 5	1415	0	Feb. 15	1515	184
Dec. 9	1545	0	Mar. 4	0745	3.05
Jan. 9	1630	0	Apr. 8	1300	0
Feb. 7	1515	2.74	May 6	1515	0
Feb. 11	1455	.17	Jul. 2	1000	e<.05
Feb. 14	1030	2.62	Sept. 2	1400	0

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1991, BY WATER YEAR (WY)

	1988	1988	1989	1988	1988	1988	1988	1988	1988	1988	1988	1988
MEAN	.002	.000	.043	.26	.47	5.99	.34	.000	.000	.000	.000	.004
MAX	.010	.000	.11	.53	1.05	23.4	1.35	.000	.000	.000	.000	.017
(WY)	1990	1988	1989	1988	1989	1991	1991	1988	1988	1988	1988	1989
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1990	1991	1988	1988	1989	1988	1988	1988	1988	1988

## SUMMARY STATISTICS

## WATER YEARS 1988 - 1991

ANNUAL MEAN	.60
HIGHEST ANNUAL MEAN	2.17 1991
LOWEST ANNUAL MEAN	.006 1990
HIGHEST DAILY MEAN	310 Mar 1 1991
LOWEST DAILY MEAN	.00 Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1987
INSTANTANEOUS PEAK FLOW	972 Mar 1 1991
INSTANTANEOUS PEAK STAGE	7.10 Mar 1 1991
ANNUAL RUNOFF (AC-FT)	434
10 PERCENT EXCEEDS	.00
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to current year. Prior to September 1930 monthly discharges only, published in WSP 1315-B.

REVISED RECORDS.--WSP 1345: 1952. WSP 1635: 1932, 1937. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Aug. 30, 1981. Elevation of gage is 970 ft above National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.--No estimated daily discharges. Records poor. Flow partly regulated since 1974 by Skinner Reservoir, capacity, 43,800 acre-ft. Pumping upstream from station for irrigation. Rancho California Water District can discharge into creek, approximately 0.1 mi upstream, to supplement low flow. Varying amounts of backwater caused by beaver dams during low flow periods.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 13.70 ft, on basis of slope-area measurement of peak flow; no flow for many days 1989-92.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	2015	254	3.01	Mar. 2	2045	382	3.11
Jan. 5	2000	879	4.78	Mar. 21	0330	1,310	5.13
Feb. 7	0130	276	3.10	Mar. 23	0445	3,050	7.61
Feb. 12	1845	*6,650	*10.02	Mar. 27	1630	219	2.58
Feb. 15	1615	3,500	8.05	May 22	2130	370	3.45

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	.44	.08	.03	.00	.00	7.7	2.1	.00	.00	2.8	2.2
2	3.7	.48	.08	.00	.00	92	3.9	1.9	.00	.00	2.4	2.1
3	3.7	.22	.07	11	.00	59	2.7	2.0	.03	1.9	2.2	2.4
4	3.8	.11	.07	4.8	.00	.05	.80	2.0	.31	2.0	2.1	2.4
5	4.0	.04	.06	289	.00	.00	.04	2.0	.93	2.0	2.2	2.2
6	4.0	.04	.07	152	38	.00	.00	1.4	1.3	2.0	2.3	2.2
7	4.0	.03	.07	17	91	.00	1.7	.00	2.1	1.5	2.2	2.2
8	4.0	.07	.06	17	3.9	.00	1.2	.00	1.8	1.6	2.1	2.1
9	3.5	.08	.05	2.9	.36	.00	.16	.00	2.4	2.0	2.0	1.8
10	3.1	.08	.25	.26	69	.00	.12	.02	2.1	2.0	2.0	2.0
11	2.7	.07	.14	.00	9.9	.00	.10	.00	1.7	1.9	2.0	2.2
12	2.6	.06	.12	.00	1000	.00	.10	.00	2.1	1.9	1.9	2.4
13	2.7	.07	.11	.00	800	.00	.09	.00	1.7	2.3	2.4	2.5
14	2.5	.07	.09	.00	49	.00	.11	.00	1.2	2.2	2.4	2.7
15	2.3	.07	.09	.00	771	.00	.10	.69	1.9	1.8	2.5	2.5
16	2.1	.06	.08	.00	204	.00	.10	2.4	1.7	1.7	2.5	2.5
17	2.0	.05	.08	.00	26	.00	.08	2.5	1.6	2.5	2.5	2.5
18	2.0	.05	.09	.00	2.2	.00	.05	2.5	.78	2.3	2.4	2.6
19	2.0	.04	.29	.00	.00	.00	.14	2.2	1.0	2.2	2.3	2.6
20	2.0	.04	.14	.00	.00	42	.14	2.2	2.2	1.9	2.2	2.1
21	1.9	.04	.09	.00	.00	498	.13	2.1	2.3	.87	2.1	2.2
22	1.8	.04	.13	.00	.00	26	.10	54	2.1	.28	2.1	2.2
23	1.7	.03	.12	.00	.00	911	.08	61	2.0	.06	2.0	2.1
24	1.5	.03	.10	.00	.00	101	.07	19	1.6	.08	2.1	2.2
25	1.3	.04	.08	.00	.00	23	.08	5.2	2.9	1.6	2.2	2.3
26	1.3	.04	.09	.00	.00	22	.09	.07	2.4	2.1	2.2	2.5
27	1.0	.06	.11	.00	.00	67	.03	.00	1.6	2.0	2.2	2.6
28	.49	.06	.85	.00	.00	8.8	.13	.00	2.4	2.3	2.2	3.2
29	1.4	.08	43	.00	.00	.02	.20	.00	2.0	2.1	2.3	3.0
30	2.0	.08	65	.00	---	.54	.96	.00	.00	2.2	2.0	2.5
31	1.1	---	1.9	.00	---	8.6	---	.00	---	2.5	2.4	---
TOTAL	75.89	2.67	113.56	493.99	3064.36	1859.01	21.20	165.28	46.15	51.79	69.2	71.0
MEAN	2.45	.089	3.66	15.9	106	60.0	.71	5.33	1.54	1.67	2.23	2.37
MAX	4.0	.48	65	289	1000	911	7.7	61	2.9	2.5	2.8	3.2
MIN	.49	.03	.05	.00	.00	.00	.00	.00	.00	.00	1.9	1.8
AC-FT	151	5.3	225	980	6080	3690	42	328	92	103	137	141

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 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
INSTANTANEOUS PEAK FLOW	17500 Jan 23 1943
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.28	1.38	2.84	33.9	70.3	73.5	8.86	4.25	1.38	1.16	1.14	1.95
MAX	3.28	6.48	11.7	261	838	420	85.4	44.2	4.96	2.48	3.05	10.6
(WY)	1988	1983	1985	1978	1980	1978	1980	1980	1978	1985	1985	1976
MIN	.26	.000	.000	.39	.55	.093	.073	.19	.41	.28	.32	.17
(WY)	1975	1990	1990	1975	1977	1990	1989	1988	1975	1977	1975	1977

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1974 - 1992

ANNUAL TOTAL	10018.71	6034.10	
ANNUAL MEAN	27.4	16.5	16.6
HIGHEST ANNUAL MEAN			102 1980
LOWEST ANNUAL MEAN			1.02 1977
HIGHEST DAILY MEAN	3650 Mar 1	1000 Feb 12	6170 Feb 21 1980
LOWEST DAILY MEAN	.00 Jan 6	.00 Jan 2	.00 Dec 11 1976
ANNUAL SEVEN-DAY MINIMUM	.01 Apr 15	.00 Jan 11	.00 Nov 28 1988
INSTANTANEOUS PEAK FLOW		6650 Feb 12	21800 Feb 21 1980
INSTANTANEOUS PEAK STAGE		10.02 Feb 12	13.70 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	19870	11970	12010
10 PERCENT EXCEEDS	8.9	4.0	4.6
50 PERCENT EXCEEDS	.43	1.5	.81
90 PERCENT EXCEEDS	.03	.00	.12

## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA

LOCATION.--Lat 33°28'26", Long 117°08'29", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upper end of Temecula Canyon, 0.1 mi downstream from confluence of Murrieta and Temecula Creeks, 1.4 mi south of Temecula, 10 mi downstream from Vail Dam, and about 12 mi downstream from Skinner Reservoir.

DRAINAGE AREA.--588 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow partly regulated since November 1948 by Vail Lake (station 11042510) on Temecula Creek, and since 1974 by Skinner Reservoir. Rancho California Water District can discharge into Murrieta Creek, approximately 0.1 mi upstream, to supplement low flow.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 14.6 ft, at site then in use, from rating curve extended above 10,000 ft<sup>3</sup>/s; minimum daily, 0.16 ft<sup>3</sup>/s, Mar. 31, Apr. 1, 11, 1988. Since partial regulation by Vail Lake and Skinner Reservoir, maximum discharge 22,000 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 16.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,650 ft<sup>3</sup>/s, Feb. 12, gage height, 9.16 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s; minimum daily, 0.73 ft<sup>3</sup>/s, May 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.0	1.9	6.0	1.1	8.3	19	7.1	e1.0	1.4	3.0	3.0
2	2.4	1.1	1.7	5.4	1.6	206	14	8.6	e1.0	1.5	2.9	3.0
3	2.7	1.0	1.8	16	1.8	91	9.9	10	2.7	3.4	3.0	3.0
4	4.1	1.0	1.7	11	1.4	6.4	9.1	8.3	7.1	3.4	2.9	3.0
5	5.9	1.0	1.4	403	1.3	3.4	7.9	7.4	7.2	3.3	2.8	3.0
6	6.2	1.0	1.3	250	71	2.9	7.3	8.1	7.5	3.4	2.9	3.0
7	6.4	1.2	1.4	34	146	3.0	7.9	4.4	7.9	3.2	2.9	3.0
8	7.1	1.2	1.2	33	6.8	5.5	8.7	3.2	7.2	3.2	2.9	3.1
9	7.7	1.3	1.2	11	2.6	2.5	7.8	4.5	7.4	3.0	2.9	2.8
10	5.9	1.1	1.5	7.8	108	3.0	7.5	5.7	7.0	2.9	2.8	2.9
11	3.8	1.1	1.4	7.5	15	2.1	7.1	4.7	6.7	2.9	2.9	3.0
12	3.7	1.1	1.2	7.2	1190	2.5	6.7	e2.0	5.1	3.1	2.9	3.0
13	3.9	1.1	1.2	6.0	835	2.2	6.3	e1.0	4.3	3.3	2.9	3.0
14	4.0	1.2	1.1	6.4	72	2.0	6.9	.73	4.5	2.7	3.0	3.1
15	3.9	1.0	1.1	6.7	1170	3.2	6.9	1.1	4.1	2.5	2.9	3.1
16	4.0	1.0	1.1	5.9	289	2.8	6.9	2.5	4.1	2.5	2.8	3.1
17	4.0	1.1	1.1	5.7	51	e2.8	7.1	2.1	3.6	2.4	2.8	3.1
18	3.9	1.2	1.1	5.3	27	2.8	7.3	2.5	3.4	2.5	2.8	3.2
19	3.8	1.1	1.5	5.2	17	2.6	7.3	1.6	3.5	2.6	2.8	3.2
20	4.0	1.0	1.1	5.2	12	59	7.0	1.2	3.7	2.6	3.1	2.8
21	3.9	1.0	1.1	5.2	10	677	6.7	1.0	3.8	2.6	3.0	2.8
22	4.0	1.1	1.1	3.7	10	61	7.1	e75	3.7	2.9	2.9	2.8
23	3.9	1.1	1.9	1.5	9.4	1110	7.1	e90	3.4	2.9	2.8	2.8
24	4.0	.97	6.8	1.3	8.6	119	7.1	e25	3.4	3.0	2.9	3.0
25	4.0	1.2	7.6	1.3	8.7	36	7.3	e10	3.4	2.8	3.0	2.8
26	4.6	1.2	7.3	1.2	8.5	37	7.5	e2.0	3.4	3.1	3.0	2.9
27	5.3	1.2	7.6	1.0	7.8	84	4.3	e1.0	3.2	3.1	3.0	3.0
28	3.1	1.2	10	1.0	7.7	26	1.4	e1.0	3.1	3.0	3.0	2.9
29	3.0	1.3	47	1.0	8.2	15	3.4	e1.0	e2.0	3.0	3.0	2.9
30	2.9	1.4	71	1.0	---	12	5.6	e1.0	e1.0	3.0	3.0	2.8
31	2.1	---	8.7	1.0	---	17	---	e1.0	---	2.9	3.0	---
TOTAL	130.4	33.47	197.1	857.5	4098.5	2608.0	226.1	294.73	129.4	88.1	90.5	89.1
MEAN	4.21	1.12	6.36	27.7	141	84.1	7.54	9.51	4.31	2.84	2.92	2.97
MAX	7.7	1.4	71	403	1190	1110	19	90	7.9	3.4	3.1	3.2
MIN	2.1	.97	1.1	1.0	1.1	2.0	1.4	.73	1.0	1.4	2.8	2.8
AC-FT	259	66	391	1700	8130	5170	448	585	257	175	180	177

e Estimated.

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.04	10.4	21.4	32.6	114	90.3	26.7	10.2	7.01	5.41	5.01	5.93
MAX	11.8	39.3	99.9	369	1205	1007	226	40.2	15.1	9.90	9.65	19.4
(WY)	1942	1945	1941	1943	1927	1938	1941	1941	1941	1941	1941	1939
MIN	3.77	3.11	4.97	8.03	7.59	5.90	4.19	3.62	3.12	1.55	1.90	2.31
(WY)	1925	1930	1930	1936	1925	1931	1928	1929	1929	1929	1926	1926

SUMMARY STATISTICS

WATER YEARS 1923 - 1948

ANNUAL MEAN	28.2
HIGHEST ANNUAL MEAN	101 1927
LOWEST ANNUAL MEAN	6.22 1925
HIGHEST DAILY MEAN	19900 Feb 16 1927
LOWEST DAILY MEAN	.90 Aug 9 1929
ANNUAL SEVEN-DAY MINIMUM	.99 Aug 8 1929
INSTANTANEOUS PEAK FLOW	25000 Feb 16 1927
INSTANTANEOUS 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)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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
INSTANTANEOUS PEAK FLOW	14600 Feb 25 1969
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.53	4.33	5.42	40.5	93.0	94.3	12.0	6.09	2.66	2.18	2.08	2.94
MAX	5.01	32.8	21.9	274	1105	438	85.6	46.6	6.87	4.55	3.59	13.9
(WY)	1988	1986	1985	1978	1980	1978	1980	1980	1978	1980	1985	1976
MIN	1.25	.27	.51	2.35	1.84	.36	.32	.58	.72	.58	.91	1.33
(WY)	1982	1989	1990	1976	1989	1988	1989	1988	1984	1984	1984	1987

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1974 - 1992

ANNUAL TOTAL	13843.44	8842.90	
ANNUAL MEAN	37.9	24.2	22.0
HIGHEST ANNUAL MEAN			141 1980
LOWEST ANNUAL MEAN			2.17 1987
HIGHEST DAILY MEAN	4520 Mar 1	1190 Feb 12	7500 Feb 21 1980
LOWEST DAILY MEAN	.48 Feb 26	.73 May 14	.16 Mar 31 1988
ANNUAL SEVEN-DAY MINIMUM	.56 Feb 20	1.0 May 27	.18 Mar 31 1988
INSTANTANEOUS PEAK FLOW		7650 Feb 12	22000 Feb 21 1980
INSTANTANEOUS PEAK STAGE		9.16 Feb 12	16.50 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	27460	17540	15930
10 PERCENT EXCEEDS	12	14	8.5
50 PERCENT EXCEEDS	2.6	3.1	2.3
90 PERCENT EXCEEDS	1.0	1.1	.96

## 11044250 RAINBOW CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°24'27", long 117°12'00", 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 of the confluence with Santa Margarita River and 3.4 mi northeast of Fallbrook.

DRAINAGE AREA.--10.3 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1989 to current year.

REVISED RECORDS.--WDR CA-91-1: 1990(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. Undetermined amount of water upstream from station used for irrigation by a local nursery. Water is imported for domestic use and irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 400 ft<sup>3</sup>/s, Mar. 27, 1991, gage height, 5.48 ft, from rating curve extended above 90 ft<sup>3</sup>/s on basis of step-backwater computations; minimum daily, 0.04 ft<sup>3</sup>/s, Oct. 8, 12-15, 1991.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1800	142	4.22	Mar. 20	2400	142	4.22
Feb. 15	1400	*256	*4.86	Mar. 23	0430	134	4.17

Minimum daily, 0.11 ft<sup>3</sup>/s, Oct. 13-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.17	.25	.38	.53	1.2	5.4	1.3	.60	.37	.59	.47
2	.14	.19	.23	.42	.63	1.9	4.7	1.1	.68	.32	.46	.54
3	.22	.30	.33	1.8	.42	5.4	4.1	1.0	.53	.54	.31	.54
4	.24	.18	.47	.65	.28	2.4	4.2	1.2	.48	.60	.28	.41
5	.26	.15	.41	2.2	.28	1.8	3.8	.83	.61	.58	.26	.47
6	.31	.14	.50	9.6	11	1.9	3.4	.95	.74	.18	.26	.39
7	.31	.22	.41	5.1	9.6	2.2	3.2	.89	.76	.55	.20	.46
8	.12	.26	.38	2.6	1.8	5.0	3.1	.95	.45	.61	.25	.44
9	.32	.39	.46	.65	1.4	3.1	2.9	1.2	.47	.36	.27	.59
10	.35	.49	.19	1.0	8.9	2.6	3.4	1.2	.69	.38	.29	.64
11	.17	.33	1.0	.77	1.7	2.0	2.8	1.1	.40	.46	.32	.41
12	.12	.31	.40	.88	2.5	1.6	1.8	.60	.46	.66	.31	.58
13	.11	.27	.56	.68	2.2	1.6	2.4	.72	.54	.49	.60	.44
14	.11	.18	.48	.63	4.6	1.2	2.2	.89	.52	.38	1.3	.54
15	.11	.40	.37	.52	4.1	1.6	2.3	.72	.89	.35	.47	.41
16	.12	.57	.33	.89	1.3	1.6	2.2	.83	.98	.26	.35	.43
17	.24	.39	.23	.69	5.2	1.4	2.0	.83	.95	.60	.29	.49
18	.25	.46	.27	.82	3.5	1.5	1.9	.68	.70	.38	.40	.47
19	.21	.27	.41	.53	2.7	.99	1.6	.77	.91	.37	.28	.39
20	.38	.16	.23	.48	2.0	1.0	1.6	.68	.59	.34	.59	.50
21	.41	.17	.23	.60	1.6	3.9	1.7	.64	.41	.28	.74	.43
22	.17	.17	.22	.54	1.9	1.6	1.5	1.9	.41	.40	1.1	.38
23	.26	.15	.20	.42	1.5	5.3	1.4	1.9	.44	.29	.41	.43
24	.27	.15	.37	.37	1.5	1.9	1.2	1.2	.47	.37	.88	.25
25	.27	.16	.26	.42	1.7	1.1	1.1	1.0	.51	.49	.83	.41
26	.24	.62	.96	.57	1.4	1.5	.95	.89	.60	.45	.80	.30
27	3.9	.59	.36	.48	1.3	1.6	.95	.57	.58	.36	.26	.31
28	.43	.39	2.6	.48	1.2	7.4	.99	.54	.38	.42	.43	.35
29	.32	.56	8.0	.41	1.1	6.0	1.0	.54	.46	.49	.53	.37
30	.23	.69	8.4	.31	---	4.6	1.1	.68	.45	.45	.50	.28
31	.24	---	.70	.27	---	5.9	---	.60	---	.48	.39	---
TOTAL	11.00	9.48	30.21	55.96	168.74	260.99	70.89	28.90	17.66	13.26	14.95	13.12
MEAN	.35	.32	.97	1.81	5.82	8.42	2.36	.93	.59	.43	.48	.44
MAX	3.9	.69	8.4	2.2	4.1	5.3	5.4	1.9	.98	.66	1.3	.64
MIN	.11	.14	.19	.27	.28	.99	.95	.54	.38	.18	.20	.25
AC-FT	22	19	60	111	335	518	141	57	35	26	30	26

SANTA MARGARITA RIVER BASIN

11044250 RAINBOW CREEK NEAR FALLBROOK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.39	.51	.78	1.67	3.53	8.65	2.28	1.05	.89	.64	.52	.45
MAX	.43	.69	.97	2.57	5.82	16.2	3.02	1.40	1.53	.90	.68	.52
(WY)	1991	1990	1992	1990	1992	1991	1991	1990	1990	1990	1991	1990
MIN	.35	.32	.46	.65	2.16	1.35	1.47	.83	.56	.43	.40	.38
(WY)	1992	1992	1991	1991	1990	1990	1990	1991	1991	1992	1990	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1990 - 1992	
ANNUAL TOTAL	828.03		695.16			
ANNUAL MEAN	2.27		1.90		2.07	
HIGHEST ANNUAL MEAN					2.25	
LOWEST ANNUAL MEAN					1.90	
HIGHEST DAILY MEAN	129	Mar 27	53	Mar 23	129	Mar 27 1991
LOWEST DAILY MEAN	.11	Oct 13	.11	Oct 13	.11	Oct 13 1991
ANNUAL SEVEN-DAY MINIMUM	.14	Oct 11	.14	Oct 11	.14	Oct 11 1991
INSTANTANEOUS PEAK FLOW			256	Feb 15	400	Mar 27 1991
INSTANTANEOUS PEAK STAGE			4.86	Feb 15	5.48	Mar 27 1991
ANNUAL RUNOFF (AC-FT)	1640		1380		1500	
10 PERCENT EXCEEDS	2.7		3.4		2.4	
50 PERCENT EXCEEDS	.57		.54		.66	
90 PERCENT EXCEEDS	.23		.24		.31	

## SANTA MARGARITA RIVER BASIN

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 of confluence with Sandia Creek and 2.9 mi north of Fallbrook.

DRAINAGE AREA.--620 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. Flow partly regulated since November 1948 by Vail Lake (station 11042510) and since 1974 by Skinner Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s, estimated, based on critical-depth survey at downstream road crossing adjusted for inflow from Sandia Creek (station 11044350), Mar. 27, 1991, gage height, 12.57 ft (affected by backwater from debris on bridge at gage); no flow Aug. 1-4, 12-14, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,700 ft<sup>3</sup>/s, Feb. 12, gage height 10.44 ft, from rating curve extended above 700 ft<sup>3</sup>/s based on critical-depth survey as explained above. Minimum daily, 0.14 ft<sup>3</sup>/s, Jan. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	5.7	1.2	8.2	.88	8.3	30	5.2	5.5	3.2	4.4	e6.5
2	2.1	3.7	1.3	6.1	.56	86	28	7.8	4.9	3.7	4.3	6.9
3	2.0	1.6	2.2	9.9	.22	115	21	8.1	5.1	4.1	4.4	9.4
4	2.0	1.1	2.5	36	.23	14	21	13	5.1	4.1	4.8	6.4
5	3.3	.86	2.0	351	.32	8.0	18	9.7	6.3	3.8	4.8	9.4
6	3.0	1.2	1.8	362	13	7.5	17	13	5.4	4.1	4.5	7.2
7	3.6	1.0	1.8	34	209	7.7	17	9.7	6.6	4.1	4.7	8.2
8	3.1	.83	3.5	41	17	12	19	13	5.9	4.1	e5.0	8.3
9	3.4	1.2	1.8	9.7	6.4	8.6	17	11	5.5	3.5	e5.0	7.2
10	4.0	2.3	1.5	8.0	116	7.0	19	8.4	6.9	3.7	e5.0	6.5
11	2.3	2.9	3.8	8.7	30	6.8	15	12	7.7	3.5	e5.0	9.5
12	1.5	1.4	4.8	7.6	1410	5.3	15	8.5	6.3	3.5	e5.0	9.4
13	1.7	1.0	2.4	8.1	1580	5.4	13	11	6.7	3.4	e5.0	9.9
14	2.9	1.2	2.0	6.1	74	5.7	15	9.6	6.7	4.1	e5.0	9.6
15	4.3	.98	1.8	6.4	827	4.9	14	9.0	8.4	4.1	e5.0	8.6
16	3.6	.98	1.8	5.5	248	7.9	14	9.7	6.8	4.1	e5.5	7.6
17	4.1	1.0	1.6	5.6	49	4.8	13	9.3	6.6	4.1	e5.5	6.6
18	5.5	1.2	1.5	4.2	17	4.8	14	12	e7.2	4.4	e5.5	6.4
19	7.7	1.2	1.8	3.9	12	5.2	12	9.0	5.8	4.9	e5.5	6.4
20	9.2	1.2	2.1	3.6	10	11	11	11	e6.0	4.8	e5.5	7.5
21	10	1.2	2.1	1.7	9.4	542	13	11	e6.0	4.8	e5.5	6.6
22	11	1.2	2.1	1.9	10	55	6.6	12	4.4	5.0	e5.5	6.0
23	6.2	1.2	2.4	1.2	9.1	942	7.6	130	e5.5	4.7	e5.5	5.8
24	8.0	.98	2.0	.35	8.3	199	9.9	34	e5.0	4.6	e5.5	5.2
25	7.4	.98	9.0	.14	7.6	68	10	12	e5.0	4.7	e5.5	4.1
26	8.6	1.1	10	.49	7.7	47	11	7.4	e5.0	3.8	e6.0	3.6
27	39	1.4	13	.79	6.0	104	8.7	4.5	4.4	4.0	e6.0	3.9
28	12	1.3	20	1.4	6.8	50	8.3	2.4	4.7	4.4	e6.0	3.7
29	6.9	1.3	60	1.2	9.3	27	3.8	3.8	4.1	4.3	e6.0	4.1
30	4.5	1.3	337	.92	---	22	2.5	4.5	e3.9	4.1	e6.0	4.1
31	5.0	---	31	.35	---	23	---	5.9	---	4.1	e6.0	---
TOTAL	190.9	44.51	531.8	936.04	4694.81	2414.9	424.4	427.5	173.4	127.8	162.9	204.6
MEAN	6.16	1.48	17.2	30.2	162	77.9	14.1	13.8	5.78	4.12	5.25	6.82
MAX	39	5.7	337	362	1580	942	30	130	8.4	5.0	6.0	9.9
MIN	1.5	.83	1.2	.14	.22	4.8	2.5	2.4	3.9	3.2	4.3	3.6
AC-FT	379	88	1050	1860	9310	4790	842	848	344	253	323	406

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.72	2.31	7.21	17.0	79.2	190	11.8	8.89	5.80	3.48	3.87	4.34
MAX	6.71	2.96	17.2	30.2	162	490	16.8	13.8	5.82	4.22	5.37	6.82
(WY)	1990	1991	1992	1992	1992	1991	1991	1992	1991	1991	1991	1992
MIN	4.31	1.48	1.66	4.65	22.8	2.50	4.51	6.28	5.78	2.11	1.00	1.22
(WY)	1991	1992	1990	1991	1990	1990	1990	1990	1992	1990	1990	1990

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1990 - 1992

ANNUAL TOTAL	18839.31	10333.56	
ANNUAL MEAN	51.6	28.2	28.2
HIGHEST ANNUAL MEAN			50.4 1991
LOWEST ANNUAL MEAN			5.99 1990
HIGHEST DAILY MEAN	6000 Mar 1	1580 Feb 13	6000 Mar 1 1991
LOWEST DAILY MEAN	.83 Nov 8	.14 Jan 25	.00 Aug 1 1990
ANNUAL SEVEN-DAY MINIMUM	1.1 Nov 13	.50 Jan 30	.05 Jul 31 1990
INSTANTANEOUS PEAK FLOW		10700 Feb 12	15000 Mar 27 1991
INSTANTANEOUS PEAK STAGE		10.44 Feb 12	12.57 Mar 27 1991
ANNUAL RUNOFF (AC-FT)	37370	20500	20430
10 PERCENT EXCEEDS	20	21	14
50 PERCENT EXCEEDS	5.0	5.5	4.5
90 PERCENT EXCEEDS	1.8	1.3	1.3

## SANTA MARGARITA RIVER BASIN

11044350 SANDIA CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°25'03", long 117°14'47", SE 1/4 SE 1/4 sec.1, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 0.4 mi north of intersection of Sandia and Rock Mountain Roads, 0.2 mi upstream from mouth, and 3.3 mi north of Fallbrook.

DRAINAGE AREA.--21.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year.

REVISED RECORDS.--WRD CA-91-1: 1990(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 8.74 ft; minimum daily, 0.15 ft<sup>3</sup>/s, Sept. 13, 1990.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	2230	94	3.30	Mar. 21	0230	152	3.60
Feb. 12	2045	544	5.64	Mar. 23	0430	*611	*5.63
Feb. 15	1545	370	5.01	May 22	2000	66	2.97
Mar. 2	2045	99	3.26				

Minimum daily, 0.81 ft<sup>3</sup>/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	1.3	1.7	3.0	1.7	5.0	17	7.3	4.7	4.5	2.3	1.5
2	.93	1.2	2.1	2.6	1.7	26	18	7.6	4.9	4.8	2.2	1.4
3	.98	1.2	1.8	2.9	1.7	23	19	7.8	4.1	4.7	2.1	1.7
4	1.0	1.0	1.8	3.0	1.7	14	19	7.5	4.2	4.9	2.2	1.7
5	1.0	1.1	1.7	34	1.6	11	18	7.7	4.1	4.2	2.1	1.5
6	1.2	1.3	1.7	29	6.5	10	17	8.1	5.0	3.6	1.9	1.6
7	1.1	1.2	1.7	9.9	17	10	15	7.9	4.7	4.0	1.9	1.6
8	1.3	1.2	1.8	11	5.6	12	14	7.9	4.5	4.3	1.9	1.5
9	1.4	1.3	1.9	6.3	3.6	11	12	7.9	4.0	3.3	2.6	1.6
10	.81	1.2	1.9	5.1	14	9.6	11	9.1	4.8	2.9	3.3	1.8
11	.84	1.2	2.8	4.5	5.8	8.4	11	8.8	5.2	3.2	4.4	2.6
12	.95	1.2	2.6	3.9	83	8.1	11	8.2	4.1	3.4	3.6	1.2
13	.98	1.1	2.5	3.5	95	7.1	10	7.7	3.8	3.3	2.8	.82
14	.92	1.2	2.1	3.4	28	6.4	10	7.9	3.8	2.8	3.9	.96
15	.95	1.5	1.8	3.4	86	6.5	9.8	7.6	3.9	2.5	3.3	1.3
16	.90	1.5	2.0	3.3	46	6.3	9.6	7.1	3.6	2.0	3.2	1.3
17	.97	1.7	2.5	3.3	25	6.0	9.3	6.6	4.0	2.4	2.8	1.2
18	.95	1.8	1.8	2.9	19	5.9	9.2	6.4	3.9	2.0	2.8	1.2
19	.90	1.3	2.5	2.7	15	5.7	8.7	5.9	4.4	1.7	2.3	1.1
20	.86	1.2	2.2	2.6	12	18	8.5	5.8	5.6	1.9	2.5	.96
21	.98	1.4	2.2	2.4	10	58	8.0	5.5	4.4	1.9	2.2	1.1
22	1.3	1.2	2.5	2.4	9.7	28	8.6	10	3.7	2.0	2.2	1.1
23	1.6	.90	2.6	2.4	9.2	156	8.7	15	3.2	2.6	2.3	1.1
24	1.5	1.0	2.5	2.3	7.5	43	7.4	14	3.1	2.5	2.2	1.0
25	1.5	1.4	2.2	2.0	6.6	27	6.6	12	3.0	2.5	2.3	1.0
26	1.5	1.4	2.7	2.2	6.5	27	6.1	9.3	3.1	2.6	2.1	1.0
27	2.1	1.7	2.7	2.1	6.2	24	5.6	6.5	3.3	2.2	1.6	.92
28	1.8	1.9	3.9	2.0	6.2	20	6.0	5.8	3.1	2.2	1.4	1.0
29	1.7	1.8	11	1.9	6.4	18	6.5	5.6	3.1	2.3	1.4	1.1
30	1.7	1.7	14	2.0	---	18	6.9	5.4	3.6	2.5	1.3	1.0
31	1.6	---	4.1	1.9	---	17	---	4.6	---	2.7	1.5	---
TOTAL	37.13	40.10	91.3	163.9	538.2	646.0	327.5	244.5	120.9	92.4	74.6	38.86
MEAN	1.20	1.34	2.95	5.29	18.6	20.8	10.9	7.89	4.03	2.98	2.41	1.30
MAX	2.1	1.9	14	34	95	156	19	15	5.6	4.9	4.4	2.6
MIN	.81	.90	1.7	1.9	1.6	5.0	5.6	4.6	3.0	1.7	1.3	.82
AC-FT	74	80	181	325	1070	1280	650	485	240	183	148	77

SANTA MARGARITA RIVER BASIN

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11044350 SANDIA CREEK NEAR FALLBROOK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.13	1.50	2.32	4.01	10.8	30.0	10.1	5.94	3.74	1.70	1.49	1.00
MAX	1.20	1.69	2.95	5.29	18.6	64.8	14.6	7.89	5.11	2.98	2.41	1.30
(WY)	1992	1991	1992	1992	1992	1991	1991	1992	1991	1992	1992	1992
MIN	1.09	1.34	1.88	2.77	5.34	4.28	4.93	2.89	2.08	.54	.51	.44
(WY)	1990	1992	1990	1991	1991	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1990 - 1992
ANNUAL TOTAL	3357.31	2415.39	
ANNUAL MEAN	9.20	6.60	6.13
HIGHEST ANNUAL MEAN			9.15 1991
LOWEST ANNUAL MEAN			2.65 1990
HIGHEST DAILY MEAN	605 Mar 1	156 Mar 23	605 Mar 1 1991
LOWEST DAILY MEAN	.81 Oct 10	.81 Oct 10	.15 Sep 13 1990
ANNUAL SEVEN-DAY MINIMUM	.91 Oct 10	.91 Oct 10	.23 Sep 8 1990
INSTANTANEOUS PEAK FLOW		611 Mar 23	2100 Mar 1 1991
INSTANTANEOUS PEAK STAGE		5.63 Mar 23	8.74 Mar 1 1991
ANNUAL RUNOFF (AC-FT)	6660	4790	4440
10 PERCENT EXCEEDS	13	14	10
50 PERCENT EXCEEDS	2.2	2.9	2.3
90 PERCENT EXCEEDS	1.2	1.1	.82

## 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 Pendleton Marine Corps Base, on right bank upstream side of Basilone Road Bridge, 7.9 mi upstream from mouth, and 5.2 mi upstream from Ysidora.

DRAINAGE AREA.--723 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1923 to current year. Low-flow records not equivalent prior to Dec. 10, 1980, due to installation of conservation ponds above downstream site.

REVISED RECORDS.--WDR CA-87-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map. February 1923 to Feb. 16, 1927 at site 4.4 mi downstream at different datum (destroyed by flood). Feb. 17, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Feb. 24, 1970 at site 5.4 mi downstream at different datum; Feb. 25, 1970, to Dec. 10, 1980 at site 6.2 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records poor. Flow partly regulated by Vail Lake (station 11042510) since November 1948 and by Skinner Reservoir since 1974.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,600 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 18.00 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow for all or part of most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,450 ft<sup>3</sup>/s, Feb. 13, gage height, 8.51 ft; no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.6	.00	20	11	38	112	29	12	8.4	4.5	1.9
2	2.3	3.7	.00	19	11	39	108	29	12	8.1	4.4	1.8
3	1.5	4.0	.00	17	10	279	103	29	12	8.0	4.4	1.8
4	1.4	4.3	.00	16	10	94	108	29	12	7.5	4.3	1.8
5	.88	3.8	.00	19	10	63	96	29	13	7.7	4.4	1.8
6	.55	3.6	.00	650	11	54	83	28	14	7.2	4.3	1.8
7	2.0	3.6	.00	166	105	51	79	28	15	7.1	4.3	1.8
8	2.8	3.5	.00	114	48	53	75	27	14	7.0	4.2	1.8
9	.75	3.2	.33	90	22	53	76	28	14	7.0	4.1	1.8
10	.00	3.3	10	74	29	50	80	28	14	6.4	4.1	1.8
11	.00	3.1	18	65	63	49	76	27	15	6.0	3.9	1.8
12	.00	2.9	23	52	88	47	73	27	14	6.1	3.9	1.8
13	.02	2.6	24	40	2350	45	68	26	13	6.8	3.8	1.8
14	.36	2.4	22	36	369	44	64	25	13	7.1	3.6	1.8
15	1.1	2.2	21	30	735	42	60	24	12	6.4	3.3	1.8
16	1.6	1.9	19	27	1050	41	57	23	12	6.0	3.0	1.6
17	2.0	1.7	17	24	192	40	56	23	13	5.4	2.7	1.5
18	1.3	1.7	16	23	102	38	52	22	12	4.9	2.6	1.5
19	1.7	2.0	15	22	79	38	49	19	12	4.9	2.5	1.5
20	1.8	1.3	13	21	68	38	47	18	12	4.9	2.4	1.5
21	1.8	1.0	12	19	60	683	45	17	12	4.7	2.4	1.5
22	1.3	.86	11	18	52	224	43	16	12	4.7	2.2	1.3
23	1.5	.34	9.4	16	47	1630	43	38	11	4.7	2.2	1.3
24	1.6	.00	9.0	16	46	599	40	30	10	4.8	2.2	1.2
25	1.8	.00	8.5	14	41	267	38	21	9.8	4.2	2.2	1.2
26	2.5	.00	8.1	14	38	218	37	16	9.3	4.0	2.1	1.2
27	3.2	.00	7.9	13	39	260	35	14	9.1	4.0	1.9	1.1
28	3.4	.00	7.9	13	38	192	34	13	9.1	4.5	1.9	.92
29	3.0	.00	8.4	12	38	141	31	13	9.1	4.2	1.9	.82
30	3.3	.00	54	11	---	123	30	13	9.0	4.2	1.9	.62
31	3.3	---	38	11	---	113	---	12	---	4.2	1.9	---
TOTAL	50.86	60.60	372.53	1682	5762	5646	1898	721	360.4	181.1	97.5	45.86
MEAN	1.64	2.02	12.0	54.3	199	182	63.3	23.3	12.0	5.84	3.15	1.53
MAX	3.4	4.3	54	650	2350	1630	112	38	15	8.4	4.5	1.9
MIN	.00	.00	.00	11	10	38	30	12	9.0	4.0	1.9	.62
AC-FT	101	120	739	3340	11430	11200	3760	1430	715	359	193	91

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
INSTANTANEOUS PEAK FLOW	33600 Feb 16 1927
INSTANTANEOUS 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)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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
INSTANTANEOUS PEAK FLOW	24000 Feb 18 1980
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.55	18.8	32.7	34.5	61.6	166	40.1	16.5	7.12	2.28	3.07	1.13
MAX	39.3	62.0	124	100	216	797	202	89.1	29.8	9.69	31.6	5.00
(WY)	1984	1984	1984	1983	1983	1983	1983	1983	1983	1983	1983	1986
MIN	.000	.000	.013	4.74	8.27	3.85	4.16	1.58	.000	.000	.000	.000
(WY)	1982	1985	1990	1991	1989	1987	1984	1984	1984	1981	1981	1981

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1981 - 1992

ANNUAL TOTAL	18665.86	16877.85	
ANNUAL MEAN	51.1	46.1	32.4
HIGHEST ANNUAL MEAN			133 1983
LOWEST ANNUAL MEAN			4.59 1989
HIGHEST DAILY MEAN	4760 Mar 1	2350 Feb 13	4760 Mar 1 1991
LOWEST DAILY MEAN	.00 Oct 10	.00 Oct 10	.00 Jun 19 1981
ANNUAL SEVEN-DAY MINIMUM	.00 Nov 24	.00 Nov 24	.00 Jun 19 1981
INSTANTANEOUS PEAK FLOW		5450 Feb 13	14500 Mar. 2 1983
INSTANTANEOUS PEAK STAGE		8.51 Feb 13	11.20 Mar 1 1991
ANNUAL RUNOFF (AC-FT)	37020	33480	23450
10 PERCENT EXCEEDS	31	75	46
50 PERCENT EXCEEDS	4.5	11	5.7
90 PERCENT EXCEEDS	1.3	1.3	.00



11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA

LOCATION.--Lat 33°30'09", long 117°38'50", in NW 1/4 SE 1/4 sec.6, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on right bank 20 ft downstream from La Novia Street bridge, 1.3 mi upstream from Arroyo Trabuco Creek, and 0.8 mi east of San Juan Capistrano.

DRAINAGE AREA.--109 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1985 to current year. October 1985 to September 1986, published as San Juan Creek at San Juan Capistrano.

GAGE.--Water-stage recorder. Elevation of gage is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. No regulation upstream from station. Capistrano Water Co. diverts water 2.0 mi upstream. Various amounts of diverted water reach station as irrigation return flow. October 1928 to September 1969 and October 1969 to September 1985, data published as San Juan Creek near San Juan Capistrano (Station 11046500) and San Juan Creek at San Juan Capistrano (Station 11046550), which are located approximately 1.9 mi upstream and 1.0 mi downstream, respectively. Data for these sites are roughly equivalent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,580 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 15.67 ft; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, reached a discharge of 22,400 ft<sup>3</sup>/s, at site 1.9 mi upstream.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1845	*1,470	*15.12	Mar. 3	0515	455	14.14
Feb. 15	1900	1,040	14.76	Mar. 23	1645	711	14.41

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.2	3.9	1.6	6.5	45	2.9	1.7	1.3	.09	.00
2	.00	.00	.79	3.6	1.6	29	33	3.0	1.5	1.1	.00	.00
3	.00	.00	1.4	4.1	1.6	218	25	3.4	1.5	.96	.00	.00
4	.00	.00	1.5	3.9	1.6	50	21	3.0	1.3	.93	.00	.00
5	.00	.00	1.5	19	1.6	24	18	2.8	1.3	1.0	.00	.00
6	.00	.00	1.5	39	3.9	21	17	2.7	1.2	1.0	.00	.00
7	.00	.00	1.6	20	4.3	19	16	2.3	1.2	1.1	.00	.00
8	.00	.00	1.8	32	3.8	20	14	2.2	1.0	1.4	.00	.00
9	.00	.00	2.1	9.9	3.2	15	12	2.4	1.0	1.4	.08	.00
10	.00	.00	2.1	6.7	8.0	13	11	2.2	1.2	1.3	.00	.00
11	.00	.00	2.4	5.0	23	12	9.5	2.0	1.2	1.4	.00	.00
12	.00	.00	2.2	4.0	232	11	9.1	2.1	1.2	1.6	.04	.00
13	.00	.00	2.1	3.1	307	11	8.6	2.5	1.2	1.3	.00	.00
14	.00	.00	2.2	3.0	82	10	8.0	2.6	1.2	1.1	.03	.00
15	.00	.00	2.5	2.8	378	8.8	7.6	2.6	1.2	.99	.00	.00
16	.00	.00	3.2	2.7	195	8.7	7.1	2.3	1.1	1.1	.00	.00
17	.00	.00	3.2	2.6	58	8.1	6.7	2.4	1.1	.52	.00	.00
18	.00	.00	3.3	2.4	31	7.8	6.2	2.5	1.1	.18	.00	.00
19	.00	.00	4.3	2.2	22	8.3	5.6	2.5	1.1	.01	.00	.00
20	.00	.00	5.7	2.0	18	15	5.2	2.6	1.1	.00	.00	.00
21	.00	.00	5.0	2.0	16	169	5.0	2.4	1.2	.00	.00	.00
22	.00	.00	3.0	2.0	13	127	4.9	2.4	1.2	.00	.00	.00
23	.00	.00	1.4	2.0	11	459	4.5	2.3	1.2	.00	.00	.00
24	.00	.00	1.3	2.0	9.7	272	4.2	2.4	1.1	.01	.00	.00
25	.00	.00	1.1	1.9	8.6	154	4.0	2.4	.96	.00	.00	.00
26	.00	.00	.98	1.9	7.4	e98	3.8	2.3	.96	.00	.00	.00
27	.00	.01	1.1	1.9	6.5	e78	3.8	2.2	1.0	.00	.00	.00
28	.00	.51	2.5	1.9	6.2	62	4.0	2.1	1.2	.00	.00	.00
29	.00	1.1	8.3	1.9	5.9	47	3.6	2.0	1.2	.00	.00	.00
30	.00	1.6	15	1.8	---	39	3.3	2.1	1.2	.00	.00	.00
31	.00	---	4.9	1.7	---	37	---	1.8	---	.31	.00	---
TOTAL	0.00	3.22	91.17	192.9	1461.5	2058.2	326.7	75.4	35.62	20.01	0.24	0.00
MEAN	.000	.11	2.94	6.22	50.4	66.4	10.9	2.43	1.19	.65	.008	.000
MAX	.00	1.6	15	39	378	459	45	3.4	1.7	1.6	.09	.00
MIN	.00	.00	.79	1.7	1.6	6.5	3.3	1.8	.96	.00	.00	.00
AC-FT	.00	6.4	181	383	2900	4080	648	150	71	40	.5	.00

e Estimated.

## 11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.046	.72	2.21	3.23	14.0	26.7	4.77	.91	.38	.093	.001	.000
MAX	.20	3.93	4.35	6.22	50.4	77.4	10.9	2.47	1.19	.65	.008	.000
(WY)	1986	1986	1989	1992	1992	1991	1992	1991	1992	1992	1992	1986
MIN	.000	.000	.000	.51	1.17	.55	.037	.000	.000	.000	.000	.000
(WY)	1987	1987	1990	1990	1989	1990	1989	1987	1986	1986	1986	1986

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1986 - 1992	
ANNUAL TOTAL	3104.57		4264.96			
ANNUAL MEAN	8.51		11.7		4.39	
HIGHEST ANNUAL MEAN					11.7	
LOWEST ANNUAL MEAN					.61	
HIGHEST DAILY MEAN	737	Mar 1	459	Mar 23	737	Mar 1 1991
LOWEST DAILY MEAN	.00	Jul 2	.00	Oct 1	.00	May 20 1986
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 2	.00	Oct 1	.00	May 20 1986
INSTANTANEOUS PEAK FLOW			1470	Feb 12	2580	Mar 1 1991
INSTANTANEOUS PEAK STAGE			15.12	Feb 12	15.67	Mar 1 1991
ANNUAL RUNOFF (AC-FT)	6160		8460		3180	
10 PERCENT EXCEEDS	5.9		18		4.1	
50 PERCENT EXCEEDS	1.1		1.4		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986 to current year (prior to 1986 published as 11046550 San Juan Creek at San Juan Capistrano).  
 WATER TEMPERATURE: Water years 1986-88.  
 SEDIMENT DATA: Water years 1986 to current year.

PERIOD OF DAILY RECORD.--  
 WATER TEMPERATURE: October 1985 to September 1988.  
 SUSPENDED-SEDIMENT DISCHARGE: October 1985 to September 1988.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	SEDI-MENT, SUS-PENDE (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
DEC								
26...	1050	0.96	10.5	3	0.01	--	--	--
30...	1030	22	12.0	228	14	--	--	--
JAN								
31...	1130	1.8	12.5	13	0.06	--	--	--
FEB								
07...	0840	4.5	13.5	10	0.12	--	--	--
12...	1730	361	14.5	4110	4010	66	78	81
12...	1740	368	14.5	4690	4660	--	--	--
15...	1600	756	13.0	6230	12700	64	71	79
15...	1615	702	13.0	5670	10700	--	--	--
28...	1130	6.5	16.0	7	0.12	--	--	--
MAR								
16...	1130	8.8	16.5	9	0.21	--	--	--
21...	1035	221	16.5	793	473	57	66	76
27...	1300	79	17.0	67	14	--	--	--
MAY								
07...	1000	2.5	20.0	17	0.11	--	--	--
JUN								
11...	1445	1.2	26.0	6	0.02	--	--	--

DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM	SED. SUSP. FALL DIAM. % FINER THAN .031 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM
DEC							
26...	--	--	90	--	--	--	--
30...	--	--	100	--	--	--	--
JAN							
31...	--	--	70	--	--	--	--
FEB							
07...	--	--	84	--	--	--	--
12...	91	94	94	95	96	98	100
12...	--	--	95	--	--	--	--
15...	89	94	97	97	98	99	100
15...	--	--	94	--	--	--	--
28...	--	--	--	--	--	--	--
MAR							
16...	--	--	95	--	--	--	--
21...	88	94	97	98	99	100	--
27...	--	--	99	99	100	--	--
MAY							
07...	--	--	67	--	--	--	--
JUN							
11...	--	--	94	--	--	--	--

## SAN JUAN CREEK BASIN

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	NUMBER OF SAM- PLING POINTS (COUNT)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	BED	BED	BED	BED	BED
				MAT. SIEVE DIAM.	MAT. SIEVE DIAM.	MAT. SIEVE DIAM.	MAT. SIEVE DIAM.	MAT. SIEVE DIAM.
				% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM	% FINER THAN 1.00 MM
MAY								
07...	1150	1	2.2	1	1	3	10	22
07...	1155	1	2.2	--	1	2	8	15
07...	1205	1	2.2	1	2	8	30	67
07...	1210	1	2.2	--	1	2	4	8
07...	1215	1	2.2	46	57	66	80	94

DATE	BED						
	MAT. SIEVE DIAM.						
% FINER THAN							
2.00 MM 4.00 MM 8.00 MM 16.0 MM 32.0 MM 64.0 MM 128 MM							
MAY							
07...	30	40	55	71	80	100	--
07...	20	25	35	44	62	100	--
07...	86	91	95	100	--	--	--
07...	10	12	16	21	47	47	100
07...	100	--	--	--	--	--	--

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	TETHER LINE USED IN SAMPLNG (YES=1) (CODE)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS)	TIME ON BED FOR BED LOAD SAMPLE (SEC)	HORI-ZONTAL WIDTH OF VER-TICAL (FEET)	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMNT (NUM)
DEC										
30...	1100	1000	1120	0.250	0	1055	1105	15	1.0	2
30...	1115	1000	1120	0.250	0	1110	1120	15	1.0	2
FEB										
15...	1650	1000	1100	0.250	0	1640	1700	10	8.0	2
15...	1710	1000	1100	0.250	0	1700	1720	10	8.0	2
MAR										
21...	1105	1000	1120	0.250	0	1100	1110	10	3.0	2
21...	1120	1000	1120	0.250	0	1115	1125	10	3.0	2

DATE	VER-TICALS IN COM-POSITE SAMPLE (NUM)	NUMBER OF SAM-PLING POINTS (COUNT)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	DISCH, AV UNIT FOR COM-SAMPLE (T/D/FT)	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
DEC									
30...	22	22	0.50	22	12.0	0.06	0.90	--	1
30...	22	22	0.50	21	12.0	0.02	0.90	2	3
FEB									
15...	20	20	4.00	632	13.0	4.10	808	--	--
15...	20	20	4.00	649	13.0	6.00	808	--	--
MAR									
21...	22	22	1.50	221	16.5	1.50	168	--	--
21...	22	22	1.50	221	16.5	3.60	168	--	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
DEC									
30...	2	15	52	78	93	100	--	--	--
30...	5	31	74	93	95	100	--	--	--
FEB									
15...	1	12	31	42	50	60	74	91	100
15...	2	18	45	68	79	87	94	100	--
MAR									
21...	1	11	49	78	88	94	99	100	--
21...	1	10	46	74	86	94	99	100	--

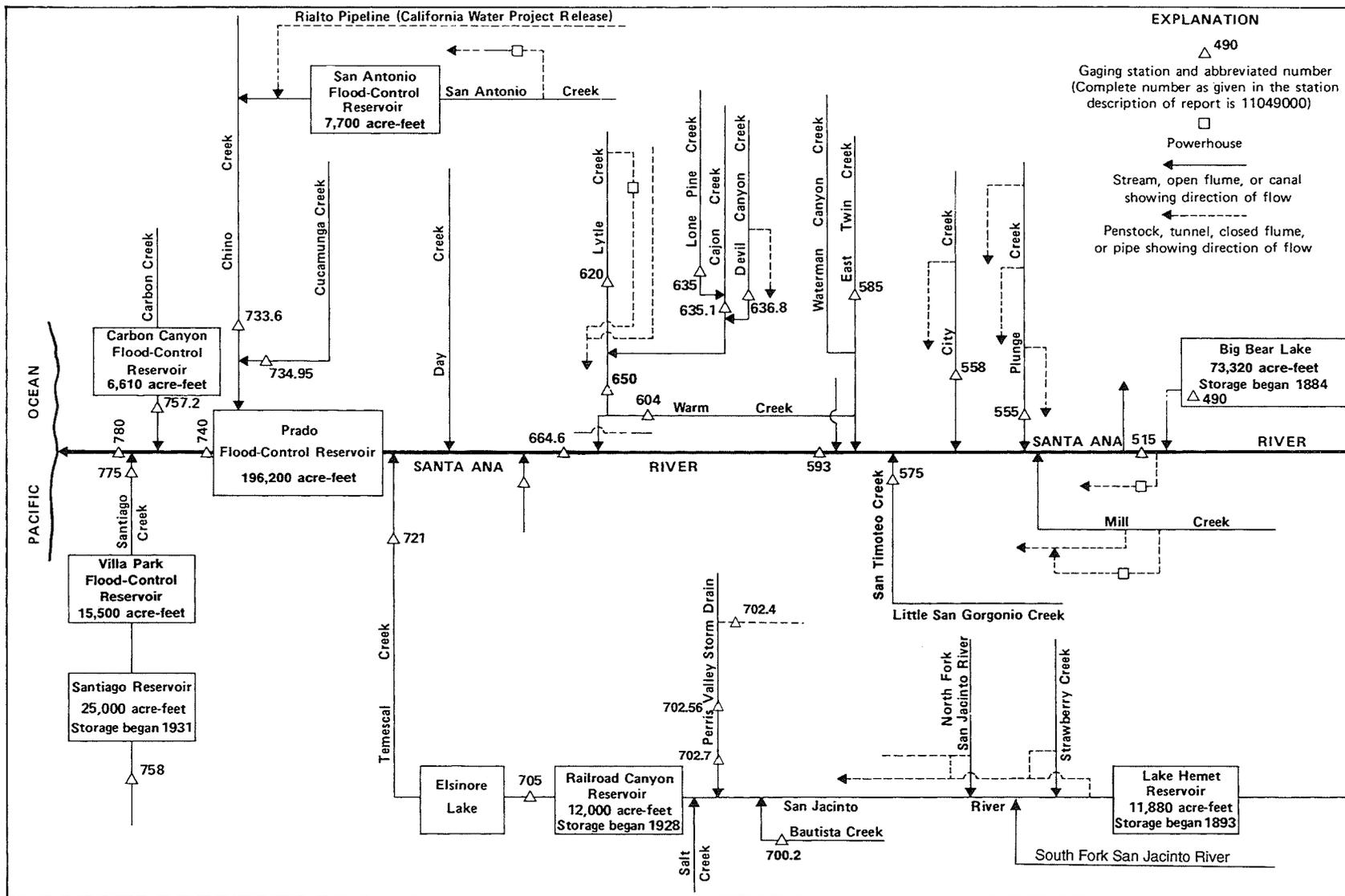


Figure 19. Diversions and storage in Santa Ana River basin.

11049000 BIG BEAR LAKE NEAR BIG BEAR LAKE, CA

LOCATION.--Lat 34°14'33", long 116°58'33", in SW 1/4 sec.22, T.2 N., R.1 W., San Bernardino County, Hydrologic Unit 18070203, at Big Bear Lake Dam on Bear Creek, 4 mi west of town of Big Bear Lake, and 7.5 mi upstream from mouth.

DRAINAGE AREA.--38.9 mi<sup>2</sup>, excludes Baldwin Lake drainage included in reports prior to 1983.

PERIOD OF RECORD.--October 1950 to current year. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Nonrecording gage. Datum of gage is 6,670.8 ft above National Geodetic Vertical Datum of 1929 (levels by Bear Valley Mutual Water Co.). Prior to 1912 at old dam 200 ft upstream at same datum, spillway at elevation 6723.3 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 6,743.3 ft, top of dam. No dead storage. There were no releases for irrigation. See schematic diagram of Santa Ana River basin.

COOPERATION.--Record of contents provided by Big Bear Municipal Water District.

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, 45,590 acre-ft, May 11; minimum contents observed, 37,550 acre-ft, Dec. 11.

## MONTHEND CONTENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Contents (acre-feet)	Change in Contents (acre-feet)
Sept. 30.....	39,460	--
Oct. 31.....	38,780	-680
Nov. 30.....	37,990	-790
Dec. 31.....	37,550	-440
CAL YR 1991.....	--	1,750
Jan. 31.....	-- (frozen)	--
Feb. 29.....	40,030	--
Mar. 31.....	42,590	2,560
Apr. 30.....	45,330	2,740
May 31.....	45,330	0
June 30.....	43,420	-1,910
July 31.....	42,940	-480
Aug. 31.....	42,000	-940
Sept. 30.....	40,830	-1,170
WTR YR 1992.....	--	1,370

## 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, 1.6 mi upstream from Mill Creek, 3.2 mi northeast of Mentone, and 16 mi downstream from Big Bear Lake.

DRAINAGE AREA.--210 mi<sup>2</sup>, including area tributary to Baldwin Lake at head of Bear Valley.

PERIOD OF RECORD.--July 1896 to current year. Prior to October 1914, records for river only not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January and February 1916 published in WSP 1315-B.

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, canal gage on powerhouse diversion, and since 1970, supplementary gage on left bank of river. Elevation of the main and supplementary gages is 1,950 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 mi upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mi upstream at different datum. Canal gage at different datum.

REMARKS.-- Records fair. Flow partly regulated by Big Bear Lake (station 11049000). For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below powerplant No. 2, which diverts upstream from station, see following page. 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.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 52,300 ft<sup>3</sup>/s, Mar. 2, 1938, gage height, 14.3 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined river and canal: Maximum discharge, 52,300 ft<sup>3</sup>/s, Mar. 2, 1938; minimum daily, 5.3 ft<sup>3</sup>/s, July 22, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Combined river and canal: Flood of Feb. 23, 1891, 53,700 ft<sup>3</sup>/s, from notes provided by F.C. Finkle, consulting engineer, Los Angeles.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 1,040 ft<sup>3</sup>/s, Feb. 12, gage height, 8.83 ft; no flow for many days.

Combined river and canal: Maximum discharge, 1,040 ft<sup>3</sup>/s, Feb. 12; minimum daily, 15.0 ft<sup>3</sup>/s, Oct. 11, 14-20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	2.2	.14	1.7	.00	5.7	46	21	.98	47	1.2	.79
2	.08	1.5	.14	.59	.00	7.5	41	9.9	.88	42	1.1	.64
3	.05	1.1	.14	6.3	e.00	13	36	6.7	.93	12	1.3	1.1
4	.04	.81	.20	24	e.00	7.3	26	5.7	.97	9.2	2.2	1.0
5	.04	.68	.17	63	.01	5.8	25	4.8	1.1	8.1	1.8	.48
6	.02	.52	.08	71	.06	5.3	22	13	1.2	7.2	2.2	.26
7	.03	.40	.01	54	.59	5.7	22	37	1.1	11	2.3	.24
8	.03	.36	.00	28	.33	5.0	21	18	.97	11	1.7	.25
9	.03	.31	.00	7.7	.06	6.6	22	5.9	.84	8.8	.76	.33
10	.02	.26	.00	1.7	3.2	4.2	22	4.0	.86	6.8	1.6	.48
11	.01	.22	.00	.82	34	5.0	22	3.9	.88	6.3	1.5	1.0
12	.02	.19	.00	1.0	305	3.2	20	6.9	.90	7.4	1.6	.64
13	.02	.21	.00	.70	304	4.8	21	9.1	.87	6.4	1.6	.36
14	.01	.18	.00	.30	142	3.7	23	3.8	1.0	4.2	1.4	.91
15	.00	.16	.00	.20	e173	2.8	18	2.8	.88	5.4	1.2	1.3
16	.00	.22	.00	.14	163	2.6	16	2.6	.81	5.5	.27	1.3
17	.00	.28	.00	.12	e132	2.2	20	2.4	.75	5.1	.71	1.2
18	.00	.31	.00	.09	e113	2.1	18	2.2	.68	4.8	.85	1.1
19	.00	.19	e17	.07	e93	2.0	19	2.2	.66	4.6	.48	1.3
20	.00	.11	e18	.05	e56	4.2	14	2.1	.66	4.8	.37	1.2
21	.00	.09	e6.0	.04	e21	104	12	2.0	.61	4.4	.37	2.0
22	.00	.06	e3.0	.03	e15	105	13	2.0	.53	4.4	.28	2.3
23	.02	.04	1.4	.01	e40	210	11	2.1	.50	3.5	.25	2.2
24	.02	.03	.43	.00	e35	147	10	1.9	.50	3.7	.32	1.3
25	.04	.01	.22	.00	9.2	124	10	1.8	.55	3.0	.77	1.5
26	.62	.00	.10	.00	8.4	93	20	1.6	.64	2.7	.38	.93
27	23	.00	.03	.00	6.3	84	19	1.5	.73	2.0	.37	.36
28	41	.00	1.6	.00	5.5	72	17	1.5	11	1.5	.33	.50
29	19	.05	1.9	.00	4.2	e54	17	1.4	38	1.5	.27	1.1
30	6.0	.12	24	.00	---	e51	28	1.3	43	1.5	.17	1.0
31	2.9	---	14	.00	---	e48	---	1.2	---	1.3	.27	---
TOTAL	93.09	10.61	88.56	261.56	1663.85	1190.7	631	182.3	113.98	247.1	29.92	29.07
MEAN	3.00	.35	2.86	8.44	57.4	38.4	21.0	5.88	3.80	7.97	.97	.97
MAX	41	2.2	24	71	305	210	46	37	43	47	2.3	2.3
MIN	.00	.00	.00	.00	.00	2.0	10	1.2	.50	1.3	.17	.24
AC-FT	185	21	176	519	3300	2360	1250	362	226	490	59	58

e Estimated.

11051500 SANTA ANA RIVER NEAR MENTONE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.77	8.44	26.1	33.0	76.1	88.6	62.2	43.8	20.1	10.6	6.12	6.24
MAX	77.8	206	536	593	1052	1405	413	411	277	174	124	134
(WY)	1970	1966	1967	1969	1980	1938	1969	1969	1969	1969	1969	1969
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1934	1934	1949	1936	1961	1951	1959	1959	1959	1934	1934	1933

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1915 - 1992	
ANNUAL TOTAL	2850.63		4541.74			
ANNUAL MEAN	7.81		12.4		30.7	
HIGHEST ANNUAL MEAN					283	
LOWEST ANNUAL MEAN					.012	
HIGHEST DAILY MEAN	464	Mar 1	305	Feb 12	15500	Mar 2 1938
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 15	.00	Nov 21 1932
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 12	.00	Oct 15	.00	Nov 21 1932
INSTANTANEOUS PEAK FLOW					52300	Mar 2 1938
INSTANTANEOUS PEAK STAGE					14.30	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	5650		9010		22210	
10 PERCENT EXCEEDS	23		28		68	
50 PERCENT EXCEEDS	.23		1.3		1.6	
90 PERCENT EXCEEDS	.00		.01		.00	

## 11051501 SANTA ANA RIVER NEAR MENTONE, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF SANTA ANA RIVER AND SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR MENTONE, CA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	24	21	23	24	55	140	84	50	e47	45	35
2	16	23	23	22	24	60	127	85	50	e42	44	35
3	16	22	24	21	e23	67	122	82	50	e45	43	33
4	16	22	24	37	e23	66	120	81	49	e44	46	31
5	16	24	24	80	24	62	119	82	50	e43	45	32
6	16	25	24	71	27	62	116	75	51	e41	43	32
7	16	23	24	60	35	62	117	80	51	e46	42	32
8	16	23	24	52	30	60	116	72	50	e51	41	31
9	16	23	24	39	28	60	119	78	49	e49	39	31
10	16	22	24	34	41	55	119	76	49	e48	40	31
11	15	22	26	32	67	54	117	71	49	e48	38	32
12	16	21	24	29	307	51	117	67	48	e50	41	32
13	16	22	24	28	304	54	111	68	47	e51	48	31
14	15	21	24	28	142	54	113	67	48	e49	46	32
15	15	23	23	28	e173	52	114	67	47	e50	42	32
16	15	26	23	27	163	52	110	65	46	49	39	32
17	15	25	23	27	e132	50	106	62	44	48	38	31
18	15	25	23	27	e113	50	115	61	43	47	37	31
19	15	24	e27	26	e101	48	116	59	40	47	36	30
20	15	24	e29	26	e98	55	108	60	39	46	36	29
21	16	24	e26	26	e80	116	105	58	38	46	35	29
22	17	23	e25	26	e75	106	108	60	38	46	36	29
23	18	23	25	25	e86	211	103	59	36	45	35	30
24	19	23	25	25	e83	148	101	58	36	46	36	29
25	20	23	24	25	64	124	102	57	36	44	37	29
26	25	22	24	25	62	119	91	56	36	44	35	26
27	25	23	24	25	60	143	97	54	35	43	34	27
28	41	22	28	25	58	138	92	54	25	41	34	27
29	27	23	29	25	55	e130	86	53	46	42	33	28
30	27	23	27	25	---	e137	86	52	e43	42	34	28
31	25	---	26	24	---	e137	---	51	---	43	35	---
TOTAL	573	693	765	993	2502	2638	3313	2054	1319	1423	1213	917
MEAN	18.5	23.1	24.7	32.0	86.3	85.1	110	66.3	44.0	45.9	39.1	30.6
MAX	41	26	29	80	307	211	140	85	51	51	48	35
MIN	15	21	21	21	23	48	86	51	25	41	33	26
AC-FT	1140	1370	1520	1970	4960	5230	6570	4070	2620	2820	2410	1820

e Estimated.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.5	45.5	59.3	84.3	118	129	115	97.5	72.6	62.5	57.2	54.9
MAX	122	219	538	1439	1052	1402	413	450	277	175	124	137
(WY)	1984	1966	1967	1916	1980	1938	1969	1983	1969	1922	1969	1969
MIN	10.4	12.5	14.4	19.0	18.3	21.6	20.6	19.2	15.1	9.36	9.91	9.75
(WY)	1991	1991	1991	1991	1991	1965	1961	1961	1989	1990	1990	1990

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1912 - 1992

ANNUAL TOTAL	13333.7	18403	
ANNUAL MEAN	36.5	50.3	
HIGHEST ANNUAL MEAN			78.5
LOWEST ANNUAL MEAN			366
HIGHEST DAILY MEAN	464	Mar 1	1916
LOWEST DAILY MEAN	7.0	Jan 4	18.6
ANNUAL SEVEN-DAY MINIMUM	9.2	Jan 30	16000
ANNUAL RUNOFF (AC-FT)	26450		5.3
10 PERCENT EXCEEDS	73		8.1
50 PERCENT EXCEEDS	23		
90 PERCENT EXCEEDS	15		

## REVISION OF RECORDS FOR A DISCONTINUED STATION

11054000 MILL CREEK NEAR YUCAIPA, CA

LOCATION.--Lat 34°05'27", long 117°02'12", in NE 1/4 NE 1/4 sec.13, T.1 S., R.2 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 50 ft downstream from bridge on State Highway 38, 3.9 mi north of Yucaipa, and 5.3 mi upstream from mouth.

DRAINAGE AREA.--42.4 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1919 to September 1938, October 1947 to September 1986 (discontinued). Monthly figures only for April and May 1923, published in WSP 1315-B. Prior to October 1954, published as "near Craftonville."

GAGE.--Water-stage recorder on creek; water-stage recorder and sharp-crested weir on power canal No. 1; water-stage recorder and Parshall flume on power canals Nos. 2 and 3. Elevation of creek gage is 2,916.36 ft, Southern California Edison Co. datum. Canals are all at different datums. See WSP 1735 for history of changes prior to Mar. 2, 1938.

REMARKS.--No regulation above station. Mill Creek power canals Nos. 1, 2, and 3 divert from points 100 ft, 3 mi, and 6 mi above station, respectively.

AVERAGE DISCHARGE.--Creek only: 58 years (water years 1920-38, 1948-86), 16.0 ft<sup>3</sup>/s, 11,590 acre-ft/yr.  
Combined creek and canals: 58 years, 38.3 ft<sup>3</sup>/s, 27,750 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 20,000 ft<sup>3</sup>/s, estimated, (revised) Jan. 25, 1969, gage height, 16.8 ft, from floodmark; no flow at times in some years.  
Combined creek and canals: Maximum discharge, 20,000 ft<sup>3</sup>/s, Jan. 25, 1969; minimum daily, 2.7 ft<sup>3</sup>/s, Feb. 23, 1949.

REVISIONS.--The maximum discharge for the period of record has been revised to 20,000 ft<sup>3</sup>/s (estimated), Jan. 25, 1969, gage height, 16.8 ft, from floodmark. These figures supersede those published in the reports for 1970-86.

## 11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA

LOCATION.--Lat 34°07'06", long 117°08'27", in NE 1/4 NE 1/4 sec.1, T.1 S., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on left bank at mouth of canyon at crossing of North Fork ditch siphon, and 1.8 mi northeast of East Highlands.

DRAINAGE AREA.--16.9 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

REVISED RECORDS.--WSP 1635: 1924, 1926, 1935-36(M), 1943, 1944(M), 1945, 1946(M), 1947, 1950(M).

WSP 1715: 1956-58(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek. Since March 1951 water-stage recorder and weir on upper diversion, discontinued Sept. 30, 1991; 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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft higher. Diversions all at different datums.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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, 1.0, and 2.5 mi upstream from station. Water has been diverted upstream from station for irrigation during entire period of record. Combined discharge of Plunge Creek and middle diversion is given on following page. No flow in upper diversion during 1992 water year, no flow in lower diversion since May 29, 1966. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 5,340 ft<sup>3</sup>/s, Mar. 2, 1938, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined creek and diversions: Maximum discharge, 4,770 ft<sup>3</sup>/s, Dec. 6, 1966; no flow Nov. 12, 1964, Sept. 29, 1965, Aug. 4, 1987, several days in November 1988, September 1991, many days in 1992.

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

Date	Time	Creek only		Combined creek and diversions
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Feb. 12	1615	*1,420	*5.12	*1,420

Creek only: No flow for many days.

Combined creek and diversions: No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.04	.23	1.5	1.9	8.8	22	2.0	.21	.00	.04	.09
2	.00	.00	.66	1.4	1.7	12	19	1.9	.15	.00	.00	.08
3	.00	.00	.27	1.8	1.7	21	17	1.8	.11	.00	.00	.06
4	.00	.00	.07	1.6	1.8	21	15	2.0	.12	.01	.05	.05
5	.00	.00	.04	19	1.8	16	15	2.1	.01	.00	.04	.03
6	.00	.00	.03	15	2.2	16	14	2.4	.00	.00	.00	.00
7	.00	.00	.04	e10	7.1	16	13	3.6	.01	.00	.00	.00
8	.00	.00	.05	e7.0	4.4	14	12	2.3	.00	.02	.00	.00
9	.00	.00	.03	4.7	2.7	12	11	2.1	.00	.02	.00	.00
10	.00	.00	.04	3.5	10	11	10	2.3	.00	.00	.00	.00
11	.00	.00	.08	2.9	44	11	9.7	1.9	.08	.00	.02	.00
12	.00	.00	.13	2.4	213	9.9	8.8	1.5	.13	.14	.02	.00
13	.00	.00	.12	2.2	78	8.8	8.4	1.3	.14	.11	.04	.00
14	.00	.01	.09	2.2	31	8.6	8.1	1.2	.48	.05	.05	.00
15	.00	.00	.06	2.1	59	8.2	7.6	1.2	.62	.00	.03	.00
16	.00	.00	.06	2.1	50	7.9	7.7	1.1	.62	.00	.00	.00
17	.00	.00	.07	2.1	30	7.7	6.9	1.0	.47	.00	.00	.00
18	.00	.02	.07	1.9	24	7.4	6.1	.92	.35	.00	.02	.00
19	.00	.02	4.6	1.9	22	7.2	5.4	.78	.19	.00	.02	.00
20	.00	.00	1.3	1.9	20	10	4.9	.72	.02	.00	.02	.00
21	.00	.00	1.0	1.9	19	61	4.3	.74	.00	.00	.02	.00
22	.00	.00	.97	2.0	19	37	3.5	.73	.00	.00	.02	.00
23	.00	.00	.95	1.9	18	119	3.0	.67	.00	.00	.00	.00
24	.00	.00	.62	2.0	15	47	2.5	.59	.00	.00	.00	.00
25	.00	.00	.31	2.0	13	34	2.1	.56	.00	.00	.05	.01
26	.00	.00	.24	2.0	12	27	2.0	.60	.00	.00	.04	.01
27	.98	.00	.30	1.9	11	59	2.7	.59	.00	.00	.02	.00
28	.02	.00	2.1	1.9	9.8	43	2.1	.53	.00	.03	.02	.00
29	.00	.00	2.4	1.9	9.2	33	2.1	.54	.00	.04	.02	.00
30	.00	.00	6.6	1.9	---	27	2.0	.49	.00	.05	.05	.00
31	.02	---	1.9	1.9	---	27	---	.40	---	.05	.07	---
TOTAL	1.02	0.09	25.43	108.5	732.3	748.5	247.9	40.56	3.71	0.52	0.66	0.33
MEAN	.033	.003	.82	3.50	25.3	24.1	8.26	1.31	.12	.017	.021	.011
MAX	.98	.04	6.6	19	213	119	22	3.6	.62	.14	.07	.09
MIN	.00	.00	.03	1.4	1.7	7.2	2.0	.40	.00	.00	.00	.00
AC-FT	2.0	.2	50	215	1450	1480	492	80	7.4	1.0	1.3	.7

e Estimated.

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.26	1.97	6.76	9.85	20.6	21.8	12.6	3.60	.80	.21	.14	.34
MAX	3.47	44.7	106	131	224	176	74.2	30.2	9.96	3.87	4.87	10.9
(WY)	1984	1966	1967	1969	1969	1938	1958	1983	1983	1983	1983	1978
MIN	.000	.000	.000	.003	.000	.029	.000	.000	.000	.000	.000	.000
(WY)	1920	1921	1930	1963	1961	1961	1961	1919	1919	1919	1919	1919

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1919 - 1992
ANNUAL TOTAL	1592.31	1909.52	
ANNUAL MEAN	4.36	5.22	6.54
HIGHEST ANNUAL MEAN			42.5
LOWEST ANNUAL MEAN			.05
HIGHEST DAILY MEAN	182 Mar 1	213 Feb 12	1840 Jan 25 1969
LOWEST DAILY MEAN	.00 Jun 13	.00 Oct 1	.00 May 1 1919
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 13	.00 Oct 1	.00 May 1 1919
INSTANTANEOUS PEAK FLOW		1420 Feb 12	5340 Mar 2 1938
INSTANTANEOUS PEAK STAGE		5.12 Feb 12	
ANNUAL RUNOFF (AC-FT)	3160	3790	4740
10 PERCENT EXCEEDS	12	15	13
50 PERCENT EXCEEDS	.04	.11	.10
90 PERCENT EXCEEDS	.00	.00	.00

## 11055501 PLUNGE CREEK NEAR EAST HIGHLANDS, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF PLUNGE CREEK AND  
 DIVERSIONS NEAR EAST HIGHLAND, CA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.04	.23	1.5	1.9	8.8	22	2.9	.65	.25	.07	.09
2	.00	.00	.66	1.4	1.7	12	19	2.7	.65	.28	.03	.08
3	.00	.00	.27	1.8	1.7	21	17	2.6	.59	.22	.02	.06
4	.00	.00	.07	1.6	1.8	21	15	2.8	.67	.23	.07	.05
5	.00	.00	.04	19	1.8	16	15	3.0	.73	.16	.06	.03
6	.00	.00	.03	15	2.2	16	14	3.4	1.1	.12	.02	.00
7	.00	.00	.04	10	7.1	16	13	4.6	1.4	.32	.02	.00
8	.00	.00	.05	7.0	4.4	14	12	2.9	1.5	.61	.02	.00
9	.00	.00	.03	4.7	2.7	12	11	2.7	1.4	.48	.01	.00
10	.00	.00	.04	3.5	10	11	10	2.6	1.3	.35	.01	.00
11	.00	.00	.08	2.9	44	11	9.7	2.6	1.9	.36	.03	.00
12	.00	.00	.13	2.4	213	9.9	8.8	2.4	2.0	.94	.02	.00
13	.00	.00	.12	2.2	78	8.8	8.4	2.1	1.3	.85	.04	.00
14	.00	.01	.09	2.2	31	8.6	8.1	2.0	.48	.56	.06	.00
15	.00	.00	.06	2.1	59	8.2	7.6	2.0	.62	.37	.03	.00
16	.00	.00	.06	2.1	50	7.9	7.7	1.8	.62	.27	.00	.00
17	.00	.00	.07	2.1	30	7.7	6.9	1.7	.47	.20	.00	.00
18	.00	.02	.07	1.9	24	7.4	6.1	1.5	.35	.14	.02	.00
19	.00	.02	4.6	1.9	22	7.2	5.4	1.5	.38	.09	.02	.00
20	.00	.00	1.3	1.9	20	10	4.9	1.5	.38	.07	.02	.00
21	.00	.00	1.0	1.9	19	61	4.3	1.6	.48	.08	.02	.00
22	.00	.00	.97	2.0	19	37	3.5	1.5	.52	.13	.02	.00
23	.00	.00	.95	1.9	18	119	3.0	1.4	.16	.17	.00	.00
24	.00	.00	.62	2.0	15	47	2.5	1.2	.10	.17	.00	.00
25	.00	.00	.31	2.0	13	34	2.1	1.1	.06	.17	.05	.01
26	.00	.00	.24	2.0	12	27	2.0	1.2	.04	.12	.04	.01
27	.98	.00	.30	1.9	11	59	3.1	1.1	.03	.07	.02	.00
28	.02	.00	2.1	1.9	9.8	43	3.0	1.1	.03	.08	.02	.00
29	.00	.00	2.4	1.9	9.2	33	3.0	1.1	.06	.08	.02	.00
30	.00	.00	6.6	1.9	---	27	2.9	.99	.15	.09	.05	.00
31	.02	---	1.9	1.9	---	27	---	.74	---	.09	.07	---
TOTAL	1.02	0.09	25.43	108.5	732.3	748.5	251.0	62.33	20.12	8.12	0.88	0.33
MEAN	.033	.003	.82	3.50	25.3	24.1	8.37	2.01	.67	.26	.028	.011
MAX	.98	.04	6.6	19	213	119	22	4.6	2.0	.94	.07	.09
MIN	.00	.00	.03	1.4	1.7	7.2	2.0	.74	.03	.07	.00	.00
AC-FT	2.0	.2	50	215	1450	1480	498	124	40	16	1.7	.7

CAL YR 1991 TOTAL 1740.17 MEAN 4.77 MAX 183 MIN .00 AC-FT 3450  
 WTR YR 1992 TOTAL 1958.62 MEAN 5.35 MAX 213 MIN .00 AC-FT 3880

11055800 CITY CREEK NEAR HIGHLAND, CA

LOCATION.--Lat 34°08'38", long 117°11'16", in SW 1/4 NW 1/4 sec.27, T.1 N., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 0.6 mi upstream from Highland Avenue and 1.5 mi northeast of Highland.

DRAINAGE AREA.--19.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1919 to current year; combined records of creek and City Creek Water Co.'s canal, June 1924 to September 1986, October 1988 to current year.

REVISED RECORDS.--WSP 1635: 1920(M), 1923(M), 1937(M), 1939(M), 1946. WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek; water-stage recorder on canal. Elevation of creek gage is 1,580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi downstream at different datum. Canal gage at different datum.

REMARKS.--Records fair. No regulation upstream from station. City Creek Water Co.'s canal 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. See schematic diagram of Santa Ana River basin. Combined discharge of City Creek and canal is given on following page.

EXTREMES FOR PERIOD OF RECORD.--Creek only; Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 25, 1969; gage height, 9.39 ft, from rating curve extended above 580 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.82 ft; no flow for many days in some years.

Combined creek and canal: Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 25, 1969; no flow at times in some years.

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

Date	Time	Creek only		Combined creek and canal
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Feb. 12	1545	*853	*6.49	*856
Feb. 15	1815	151	4.82	154
Mar. 23	Unknown	253	5.24	253

Creek only: Minimum daily, 0.11 ft<sup>3</sup>/s, Oct. 1, 2, 8-10.

Combined creek and canal: Minimum daily, 0.11 ft<sup>3</sup>/s, Oct. 1, 2, 8-10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.41	1.3	3.7	2.1	9.0	33	5.6	3.7	2.0	1.2	1.1
2	.11	.39	1.4	3.3	2.0	14	28	5.4	3.6	2.0	1.3	.95
3	.13	.36	1.4	4.6	2.0	24	25	5.5	3.5	1.9	1.2	.84
4	.14	.34	1.4	5.2	2.0	21	23	5.5	3.4	2.0	1.2	.80
5	.14	.32	1.3	27	2.0	e18	21	5.5	3.6	1.9	1.3	.75
6	.14	.29	1.2	25	2.6	e18	20	5.9	4.2	1.8	1.2	.64
7	.12	.30	1.3	12	5.4	e17	19	5.8	4.7	2.0	1.1	.61
8	.11	.32	1.4	9.3	3.8	e16	17	5.2	4.1	2.2	1.1	.53
9	.11	.40	1.4	6.5	3.0	e14	16	5.4	3.6	2.1	1.0	.51
10	.11	.53	1.4	5.1	11	e12	15	5.4	3.0	2.1	.87	.56
11	.12	.47	1.8	4.5	37	e12	e15	5.3	2.8	2.2	.81	.56
12	.13	.46	1.7	4.0	152	e10	e14	5.1	2.7	2.8	.73	.52
13	.15	.52	1.7	3.6	92	e9.8	e14	4.8	2.7	2.4	.78	.48
14	.14	.71	1.7	3.3	47	e9.5	e13	4.9	2.7	2.2	.90	.45
15	.14	1.1	1.7	3.0	72	e8.0	e12	4.9	2.8	2.1	.80	.45
16	.13	1.0	1.7	3.0	63	e8.0	e11	4.8	2.5	2.0	.73	.45
17	.14	.93	1.7	2.8	40	e7.9	e10	4.6	2.2	1.9	.58	.41
18	.14	1.0	1.9	2.7	31	e7.8	e9.6	4.5	2.1	1.8	.52	.39
19	.13	.90	13	2.6	25	e7.5	e9.6	4.7	2.1	1.7	.46	.39
20	.13	.82	4.1	2.6	22	e12	e9.2	5.6	2.1	1.6	.42	.37
21	.18	.83	3.0	2.5	19	e70	8.0	5.7	1.9	1.7	.39	.38
22	.23	.77	2.7	2.5	17	e40	7.9	5.6	1.8	1.8	.46	.36
23	.22	.69	2.6	2.4	15	e120	7.5	5.5	1.7	1.9	.54	.35
24	.22	.73	2.5	2.4	14	e60	7.1	5.2	1.7	1.9	.56	.31
25	.23	.73	2.5	2.4	12	60	6.8	5.0	1.6	1.9	.83	.30
26	.41	.68	2.5	2.3	11	45	5.0	4.9	1.6	1.7	.78	.30
27	2.0	.70	2.4	2.3	11	62	3.9	4.8	1.6	1.5	.67	.28
28	.85	.81	5.7	2.3	9.9	51	3.9	5.0	1.7	1.4	.53	.26
29	.55	1.1	7.5	2.2	9.4	43	3.8	5.0	1.9	1.3	.51	.24
30	.47	1.2	13	2.1	---	38	e5.0	4.5	1.9	1.4	.68	.23
31	.41	---	4.8	2.1	---	35	---	4.0	---	1.4	1.0	---
TOTAL	8.34	19.81	93.7	159.3	735.2	879.5	393.3	159.6	79.5	58.6	25.15	14.77
MEAN	.27	.66	3.02	5.14	25.4	28.4	13.1	5.15	2.65	1.89	.81	.49
MAX	2.0	1.2	13	27	152	120	33	5.9	4.7	2.8	1.3	1.1
MIN	.11	.29	1.2	2.1	2.0	7.5	3.8	4.0	1.6	1.3	.39	.23
AC-FT	17	39	186	316	1460	1740	780	317	158	116	50	29

e Estimated.

## 11055800 CITY CREEK NEAR HIGHLAND, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.97	3.36	8.80	13.6	29.2	28.3	17.8	6.88	2.36	.82	.47	.54
MAX	8.48	43.4	89.5	192	451	219	148	44.6	21.7	11.7	9.56	5.70
(WY)	1984	1966	1967	1969	1969	1938	1926	1983	1983	1980	1983	1976
MIN	.000	.000	.000	.13	.35	.18	.033	.000	.000	.000	.000	.000
(WY)	1927	1922	1930	1936	1924	1926	1934	1934	1924	1924	1920	1920

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1920 - 1992	
ANNUAL TOTAL	2069.50		2626.77			
ANNUAL MEAN	5.67		7.18		9.32	
HIGHEST ANNUAL MEAN					75.3	
LOWEST ANNUAL MEAN					.46	
HIGHEST DAILY MEAN	209	Mar 1	152	Feb 12	3360	Feb 25 1969
LOWEST DAILY MEAN	.06	Sep 2	.11	Oct 1	.00	Jul 18 1920
ANNUAL SEVEN-DAY MINIMUM	.08	Sep 2	.12	Oct 6	.00	Jul 18 1920
INSTANTANEOUS PEAK FLOW			853		7000	
INSTANTANEOUS PEAK STAGE			6.49		9.39	
ANNUAL RUNOFF (AC-FT)	4100		5210		6750	
10 PERCENT EXCEEDS	13		17		18	
50 PERCENT EXCEEDS	.70		2.1		1.0	
90 PERCENT EXCEEDS	.12		.33		.00	

11055801 CITY CREEK NEAR HIGHLAND, CA--Continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF CITY CREEK AND CITY CREEK WATER CO.'S CANAL NEAR HIGHLAND, CA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.41	1.4	3.7	2.1	9.0	33	6.4	3.7	2.7	1.3	1.5
2	.11	.39	1.5	3.3	2.0	14	28	6.2	3.6	2.7	1.4	1.3
3	.13	.36	1.6	4.6	2.0	24	25	6.3	3.5	2.3	1.3	1.2
4	.14	.34	1.5	5.2	2.0	21	23	6.3	3.4	2.4	1.3	1.2
5	.14	.32	1.5	27	2.0	18	21	6.3	3.6	2.2	1.5	1.1
6	.14	.29	1.5	25	2.6	18	20	6.7	4.2	2.0	1.4	1.0
7	.12	.30	1.5	12	5.4	17	19	6.6	4.7	2.4	1.3	.98
8	.11	.32	1.6	9.3	3.8	16	17	6.0	4.1	3.2	1.3	.89
9	.11	.40	1.6	6.5	3.0	14	16	6.2	3.6	2.8	1.2	.88
10	.11	.53	1.6	5.1	11	12	15	6.2	3.2	2.6	1.0	.90
11	.12	.47	1.8	4.5	37	12	15	6.1	3.5	2.8	.99	.87
12	.13	.46	1.7	4.0	153	10	14	5.9	3.3	3.4	.91	.82
13	.15	.52	1.7	3.6	94	9.8	14	5.6	3.2	3.0	.97	.78
14	.14	.71	1.7	3.3	47	9.5	13	5.6	3.2	2.8	1.1	.73
15	.14	1.1	1.7	3.0	73	8.0	12	5.6	3.4	2.7	1.0	.73
16	.13	1.0	1.7	3.0	64	8.0	11	5.4	3.0	2.6	.94	.71
17	.14	.98	1.7	2.8	40	7.9	10	5.1	2.5	2.5	.79	.65
18	.14	1.1	1.9	2.7	31	7.8	9.6	4.9	2.3	2.3	.75	.62
19	.13	.96	1.3	2.6	25	7.5	9.6	5.0	2.3	2.1	.70	.62
20	.13	.88	4.1	2.6	22	12	9.2	5.6	2.3	2.0	.67	.59
21	.18	.88	3.0	2.5	19	70	8.0	5.7	2.1	2.1	.64	.59
22	.23	.83	2.7	2.5	17	40	7.9	5.6	2.0	2.3	.72	.57
23	.22	.74	2.6	2.4	15	120	7.5	5.5	1.8	2.4	.80	.56
24	.22	.79	2.5	2.4	14	60	7.1	5.2	1.8	2.3	.85	.52
25	.23	.79	2.5	2.4	12	60	7.1	5.0	1.7	2.3	1.1	.51
26	.41	.77	2.5	2.3	11	45	6.7	4.9	1.7	2.0	1.1	.51
27	2.0	.81	2.4	2.3	11	62	6.4	4.8	1.7	1.7	.98	.48
28	.85	.92	5.7	2.3	9.9	51	5.9	5.0	1.8	1.5	.83	.46
29	.55	1.2	7.5	2.2	9.4	43	5.6	5.0	2.2	1.4	.83	.43
30	.47	1.4	1.3	2.1	---	38	6.5	4.5	2.4	1.5	1.0	.41
31	.41	---	4.8	2.1	---	35	---	4.0	---	1.5	1.4	---
TOTAL	8.34	20.97	95.5	159.3	740.2	879.5	403.1	173.2	85.8	72.5	32.07	23.11
MEAN	.27	.70	3.08	5.14	25.5	28.4	13.4	5.59	2.86	2.34	1.03	.77
MAX	2.0	1.4	1.3	2.7	153	120	33	6.7	4.7	3.4	1.5	1.5
MIN	.11	.29	1.4	2.1	2.0	7.5	5.6	4.0	1.7	1.4	.64	.41
AC-FT	17	42	189	316	1470	1740	800	344	170	144	64	46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1992, BY WATER YEAR (WY)

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	2.16	4.75	9.27	14.4	30.3	29.6	19.5	9.65	5.13	2.46	1.58	1.55																																																									
MAX	10.2	44.1	89.9	192	451	221	148	44.6	21.7	12.6	11.0	7.05																																																									
(WY)	1984	1966	1967	1969	1969	1938	1926	1983	1983	1980	1983	1983																																																									
MIN	.13	.36	.69	2.07	2.55	2.89	2.14	.72	.72	.11	.051	.066																																																									
(WY)	1991	1991	1991	1936	1964	1961	1961	1934	1989	1990	1989	1990																																																									

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1924 - 1992	
ANNUAL TOTAL	2224.23		2693.59			
ANNUAL MEAN	6.09		7.36		10.8	
HIGHEST ANNUAL MEAN					77.8	
LOWEST ANNUAL MEAN					2.04	
HIGHEST DAILY MEAN	209	Mar 1	153	Feb 12	3360	Feb 25 1969
LOWEST DAILY MEAN	.06	Sep 2	.11	Oct 1	.00	Nov 8 1924
ANNUAL SEVEN-DAY MINIMUM	.08	Sep 2	.12	Oct 6	.00	Aug 12 1951
INSTANTANEOUS PEAK FLOW			856	Feb 12	7000	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	4410		5340		7800	
10 PERCENT EXCEEDS	13		17		18	
50 PERCENT EXCEEDS	1.7		2.4		3.6	
90 PERCENT EXCEEDS	.12		.41		.40	

## REVISION OF RECORDS FOR A DISCONTINUED STATION

11056500 LITTLE SAN GORGONIO RIVER NEAR BEAUMONT, CA

LOCATION.--Lat 34°01'45", long 116°56'43", in SW 1/4 NW 1/4 sec.1, T.2 S., R.1 W., San Bernardino County, Hydrologic Unit 18070203, on right bank at upstream side of bridge on Oak Glen Road, 3.0 mi upstream from Wallace Creek, and 7 mi north of Beaumont.

DRAINAGE AREA.--1.74 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1948 to September 1985 (discontinued).

REVISED RECORDS.--WDR CA-79-1: 1969(M). (Also, see revisions below).

GAGE.--Water-stage recorder and V-notched concrete control. Elevation of gage is 4,320 ft above National Geodetic Vertical Datum of 1929, from topographic map. July 30, 1970, to Sept. 15, 1982, concrete control 20 ft downstream at same datum. Prior to July 30, 1970, at site 62 ft downstream on left bank at same datum.

REMARKS.--No regulation above station. Several small diversions above station for irrigation.

AVERAGE DISCHARGE.--37 years, 0.65 ft<sup>3</sup>/s, 471 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, unknown (revised), Feb. 25, 1969, gage height 8.50 ft, from floodmarks; no flow for several months in most years.

REVISIONS.--The maximum discharge for the period of record has been revised to unknown. These figures supersede those published in the reports for 1969-85.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA

LOCATION.--Lat 34°03'46", long 117°16'16", in NE 1/4 NW 1/4 sec.26, T.1 S., R.4 W., San Bernardino County, Hydrologic Unit 1807203, on left bank 200 ft upstream from Redlands Boulevard bridge and 0.6 mi northwest of Loma Linda.

DRAINAGE AREA.--125 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1954 to September 1965, February 1968 to September 1975, April 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,030 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to April 1979, water-stage recorder at site 0.2 mi downstream at different datum.

REMARKS.--Records poor. No regulation upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 8.2 ft, from floodmark, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of slope-conveyance study of peak flow, at site and datum then in use; no flow for many days each year.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	2230	200	3.50	Mar. 7	2015	225	3.56
Dec. 29	2300	159	3.39	Mar. 21	0345	704	4.36
Jan. 5	1600	1,500	5.15	Mar. 23	0615	467	4.02
Feb. 12	1700	*2,250	*5.69	May 6	2145	372	3.86
Feb. 15	1530	1,090	4.79				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.39	.60	.82	.00	.00	1.5	.00	1.1	.97	4.8	2.4
2	.00	.03	.44	.97	.00	e10	1.1	.00	.67	.94	2.6	2.3
3	.00	.00	.32	2.8	.00	e6.0	.49	.00	.54	.87	1.8	1.5
4	.00	.00	.17	.66	.00	e2.6	.23	.00	.92	.50	1.9	1.3
5	.00	.00	.24	231	.00	e2.0	.11	.00	.82	.54	.75	.72
6	.01	.00	.44	49	3.3	e1.8	.10	23	1.4	1.2	.06	.09
7	.15	.00	.06	12	3.6	e38	.09	4.6	1.0	3.4	.00	.24
8	.00	.00	.46	1.8	.29	8.9	.00	.39	.79	4.0	.00	.69
9	.00	.00	.39	.39	.85	.79	.00	.88	.43	.35	.13	.88
10	.00	.00	.07	.00	5.0	1.5	.00	1.1	.42	.14	.34	.63
11	.00	.00	.15	.00	13	2.1	.00	2.0	.29	.04	.24	.74
12	.00	.00	1.4	.00	433	1.8	.00	1.9	.42	1.3	.51	1.7
13	.00	.06	1.6	.00	175	2.1	.00	1.4	.66	2.7	.64	2.0
14	.16	.07	.93	.31	1.5	1.9	.00	.60	.76	.58	.44	.93
15	.00	.00	.06	.31	254	1.3	.13	.16	.79	.00	.03	.50
16	.00	.00	.00	.06	14	1.7	.02	.17	1.1	.01	.02	.64
17	.00	.00	.00	.40	.24	2.6	.26	.31	1.5	.00	.00	.29
18	.00	.76	.00	.00	.19	2.2	.04	.05	2.5	.00	.00	.12
19	.00	.00	.00	.00	.07	2.0	.08	.05	2.4	.00	.00	.12
20	.00	.00	.01	.00	.00	26	.10	.05	1.3	.04	.00	.71
21	.00	.00	.00	.00	.00	168	.00	.34	1.2	.06	.00	.91
22	.00	.00	.00	.00	.00	4.9	.00	1.2	1.1	.03	.00	.14
23	.30	.00	.00	.00	.00	121	.00	2.3	1.3	.59	.00	.76
24	.24	.00	.00	.02	.00	1.3	.00	.51	.96	.21	.15	.50
25	.00	.02	.05	.00	.00	.00	.06	.74	1.3	.31	.14	.70
26	6.2	.14	.63	.00	.00	4.1	.10	.71	1.5	1.1	.15	.42
27	5.8	.72	1.1	.00	.00	13	.05	.49	1.9	1.1	.10	1.7
28	.59	.35	13	.00	.00	3.9	.00	1.5	1.7	.34	1.3	2.3
29	.62	.00	23	.00	.00	.06	.00	2.5	.74	.55	2.0	1.2
30	.45	.69	20	.00	---	.13	.00	1.7	1.4	2.2	1.7	.61
31	.62	---	1.9	.00	---	9.9	---	1.4	---	2.4	2.1	---
TOTAL	15.14	3.23	67.02	300.54	904.04	441.58	4.46	50.05	32.91	26.47	21.90	27.74
MEAN	.49	.11	2.16	9.69	31.2	14.2	.15	1.61	1.10	.85	.71	.92
MAX	6.2	.76	23	231	433	168	1.5	23	2.5	4.0	4.8	2.4
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.29	.00	.00	.09
AC-FT	30	6.4	133	596	1790	876	8.8	99	65	53	43	55

e Estimated.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.92	1.61	2.03	5.74	11.1	6.26	1.60	.95	.81	.71	.72	.87
MAX	2.27	11.6	11.6	79.0	186	53.7	16.8	3.65	2.20	3.65	1.76	3.03
(WY)	1988	1983	1985	1969	1969	1991	1958	1969	1989	1968	1965	1965
MIN	.11	.11	.19	.079	.17	.14	.000	.071	.079	.081	.047	.062
(WY)	1989	1992	1986	1972	1968	1987	1979	1980	1980	1980	1990	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1955 - 1992	
ANNUAL TOTAL	2636.79		1895.08			
ANNUAL MEAN	7.22		5.18		2.76	
HIGHEST ANNUAL MEAN					21.7	
LOWEST ANNUAL MEAN					.74	
HIGHEST DAILY MEAN	787	Mar 1	433	Feb 12	3500	Feb 25 1969
LOWEST DAILY MEAN	.00	Jan 12	.00	Oct 1	.00	Feb 4 1968
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 12	.00	Oct 15	.00	Apr 15 1969
INSTANTANEOUS PEAK FLOW			2250	Feb 12	15000	Feb 25 1969
INSTANTANEOUS PEAK STAGE			5.69	Feb 12	8.20	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	5230		3760		2000	
10 PERCENT EXCEEDS	2.3		2.6		1.9	
50 PERCENT EXCEEDS	.15		.31		.66	
90 PERCENT EXCEEDS	.00		.00		.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 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929, 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 ft<sup>3</sup>/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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 40 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 120 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.35 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 19	0445	98	3.06	Feb. 12	1445	*843	*5.18
Jan. 5	1800	61	2.77	Mar. 21	0830	108	4.68

Minimum daily, 0.17 ft<sup>3</sup>/s, Sept. 17, 18, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.50	3.3	e.50	1.4	.90	1.2	4.4	4.7	1.4	1.2	.66	.48
2	e.50	3.2	e.50	1.1	.98	1.2	4.3	4.6	1.5	1.2	.74	.48
3	e.50	3.0	e.50	2.2	.98	1.6	4.1	4.5	1.5	1.1	.68	.39
4	e.50	2.8	e.50	1.9	.92	1.2	4.1	4.4	1.6	1.2	.70	.32
5	e.49	2.5	e.50	18	1.1	.85	4.1	4.5	1.8	1.1	.74	.48
6	e.49	2.3	e.50	14	1.5	.73	4.0	4.4	2.2	.93	.73	.31
7	e.49	1.2	e.50	6.2	3.6	.70	4.0	4.4	2.2	1.1	.64	.30
8	e.49	.23	e.50	4.8	1.9	.65	4.0	4.4	1.9	1.5	.53	.41
9	e.48	.28	e.50	3.3	1.6	.66	4.0	4.4	1.6	1.3	.55	.35
10	e.48	.31	e.50	2.6	9.0	.73	3.9	4.4	1.7	1.1	.52	.41
11	e.48	.25	.32	2.2	28	.73	3.8	4.5	1.9	1.2	.46	.36
12	e.48	.21	.40	1.8	179	.73	3.8	4.4	1.9	2.2	.45	.33
13	e.47	.20	.30	1.6	143	.72	3.8	4.2	1.7	1.7	.40	.31
14	e.47	.26	.31	1.5	25	.65	3.7	4.2	1.9	1.5	.38	.23
15	e.47	.25	.49	1.3	13	.65	3.7	4.2	1.9	1.3	.33	.19
16	e.47	.26	.32	1.3	8.0	.65	3.7	4.1	1.9	1.2	.33	.18
17	e.46	.26	.32	1.2	3.6	.63	4.0	4.1	1.8	1.1	.32	.17
18	e.46	.27	.39	1.2	2.3	.58	3.9	4.0	1.8	1.1	.34	.17
19	e.46	.25	14	1.1	1.7	.50	4.6	e3.0	1.7	1.1	.33	.21
20	e.46	.26	1.4	1.1	1.5	6.1	6.1	e2.0	1.6	1.1	.34	.21
21	e.45	.26	.97	1.1	1.4	29	6.0	1.6	1.6	1.0	.29	.22
22	e.45	.25	.91	1.1	1.3	16	6.0	1.5	1.4	1.1	.34	.19
23	e.45	.24	.78	1.0	1.3	17	5.8	1.5	1.3	1.1	.34	.19
24	e.45	.24	.65	1.0	1.3	9.1	5.6	1.5	1.1	1.1	.34	.22
25	e.50	.28	.74	1.0	1.3	6.3	5.5	1.6	.92	1.1	.27	.17
26	e.58	e.50	.65	1.0	1.3	5.6	5.3	1.5	.97	1.1	.25	.21
27	6.5	e.50	.66	.97	1.2	7.7	5.1	1.5	.86	.95	.29	.23
28	6.6	e.50	1.4	1.0	1.2	6.3	5.0	1.6	1.0	.90	.25	.18
29	5.9	e.50	3.0	.97	1.2	5.3	4.9	1.6	.97	.72	.25	.19
30	4.3	e.50	5.0	1.1	---	4.8	4.8	1.5	1.1	.75	.30	.19
31	3.5	---	1.8	1.0	---	4.6	---	1.5	---	.74	.42	---
TOTAL	39.28	25.36	39.81	81.04	439.08	133.16	136.0	100.3	46.72	35.79	13.51	8.28
MEAN	1.27	.85	1.28	2.61	15.1	4.30	4.53	3.24	1.56	1.15	.44	.28
MAX	6.6	3.3	14	18	179	29	6.1	4.7	2.2	2.2	.74	.48
MIN	.45	.20	.30	.97	.90	.50	3.7	1.5	.86	.72	.25	.17
AC-FT	78	50	79	161	871	264	270	199	93	71	27	16

e Estimated.

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.47	2.52	4.93	6.29	11.0	13.0	8.01	4.63	2.72	1.56	1.21	1.12
MAX	11.4	20.3	43.6	46.2	97.5	101	38.3	19.3	11.6	9.40	11.9	4.94
(WY)	1984	1966	1967	1969	1969	1991	1978	1983	1983	1983	1983	1983
MIN	.20	.47	.51	.91	1.14	1.27	.56	.66	.56	.18	.20	.20
(WY)	1965	1965	1990	1963	1964	1972	1977	1934	1961	1964	1964	1964

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1921 - 1992
ANNUAL TOTAL	3874.20	1098.33	
ANNUAL MEAN	10.6	3.00	4.84
HIGHEST ANNUAL MEAN			21.8
LOWEST ANNUAL MEAN			.85
HIGHEST DAILY MEAN	479 Mar 2	179 Feb 12	795 Feb 25 1969
LOWEST DAILY MEAN	.20 Nov 13	.17 Sep 17	.10 Aug 23 1929
ANNUAL SEVEN-DAY MINIMUM	.24 Nov 11	.19 Sep 15	.11 Jul 11 1964
INSTANTANEOUS PEAK FLOW		843 Feb 12	3710 Jan 29 1980
INSTANTANEOUS PEAK STAGE		5.18 Feb 12	8.35 Jan 29 1980
ANNUAL RUNOFF (AC-FT)	7680	2180	3510
10 PERCENT EXCEEDS	21	4.8	8.5
50 PERCENT EXCEEDS	.91	1.1	1.9
90 PERCENT EXCEEDS	.43	.28	.50

## 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, 2.8 mi south of San Bernardino, and 26 mi downstream from Big Bear Lake. DRAINAGE AREA.--541 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1939 to September 1954, October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 940 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Nov. 10, 1950, water-stage recorder on right bank 0.4 mi upstream at datum 964.50 ft above NGVD. Nov. 11, 1950, to Sept. 30, 1954, water-stage recorder on both banks 0.4 mi upstream at datum 964.50 ft above NGVD. Oct. 1, 1966, to Sept. 30, 1976, water-stage recorder on right bank 0.4 mi upstream at datum 954.50 ft above NGVD. Oct. 1, 1976, to Sept. 30, 1977, gage was removed for channel construction. Oct. 1, 1977, to Jan. 28, 1981, water-stage recorder on right bank 0.5 mi upstream at elevation 950 ft above NGVD, from topographic map.

REMARKS.--Records fair except for discharges above 200 ft<sup>3</sup>/s, which are poor. Flow partly regulated by Big Bear Lake (station 11049000). 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 has caused sustained flow past gage since 1967. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 11.9 ft, site and datum then in use; no flow for many days many years prior to 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 30	0115	1,210	4.69	Mar. 7	1745	1,410	4.79
Jan. 5	2130	2,510	5.19	Mar. 21	0200	3,890	5.53
Feb. 12	1715	*8,140	*6.18	Mar. 23	0300	2,060	5.05
Feb. 15	1445	3,270	5.39	Mar. 26	2115	3,610	5.47

Minimum daily, 30 ft<sup>3</sup>/s, Jan. 19 and Feb. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	37	34	e60	31	34	66	37	42	38	38	36
2	34	37	36	e60	32	127	50	37	41	40	37	36
3	35	34	34	e80	32	89	47	36	40	39	38	36
4	35	36	34	e75	32	38	45	37	40	36	38	36
5	35	37	e34	e400	31	38	46	37	40	36	38	35
6	34	36	e34	e326	60	42	50	52	40	38	36	33
7	35	35	36	e130	77	269	51	63	41	38	35	36
8	34	36	38	e83	36	51	48	40	43	42	35	35
9	34	33	35	e47	33	37	47	44	41	41	34	36
10	34	33	36	e42	85	40	46	41	41	38	36	40
11	33	35	34	e39	401	37	44	38	40	36	36	36
12	33	36	34	e38	2010	38	43	40	41	38	35	35
13	33	36	34	e37	1260	41	44	40	41	40	34	36
14	35	36	35	36	224	37	44	40	40	42	40	36
15	35	39	33	31	809	38	43	39	42	37	40	35
16	34	37	34	31	360	38	43	39	43	38	37	34
17	34	37	33	32	95	37	42	39	41	37	36	34
18	34	37	33	31	53	38	39	41	41	36	36	34
19	35	35	33	30	44	38	41	40	41	36	35	34
20	34	36	33	32	38	287	44	39	39	37	35	35
21	35	35	39	32	31	1100	39	39	39	38	35	35
22	35	35	32	31	32	346	38	40	40	36	34	34
23	34	35	32	31	31	1190	38	41	39	37	33	35
24	35	34	34	31	30	599	40	38	39	38	33	34
25	34	34	31	31	30	335	38	41	38	35	33	34
26	34	34	32	31	32	392	42	41	40	35	40	34
27	53	34	34	32	31	661	41	42	38	38	37	35
28	37	34	107	31	33	165	38	41	38	37	36	36
29	38	31	165	31	34	65	38	42	40	36	35	35
30	35	33	e250	31	---	55	39	41	40	38	33	35
31	35	---	e80	31	---	156	---	41	---	39	36	---
TOTAL	1090	1057	1523	1983	6027	6458	1314	1266	1209	1170	1114	1055
MEAN	35.2	35.2	49.1	64.0	208	208	43.8	40.8	40.3	37.7	35.9	35.2
MAX	53	39	250	400	2010	1190	66	63	43	42	40	40
MIN	33	31	31	30	30	34	38	36	38	35	33	33
AC-FT	2160	2100	3020	3930	11950	12810	2610	2510	2400	2320	2210	2090

e Estimated.

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	3.47	20.9	23.7	20.6	37.4	27.2	11.3	2.39	.93	.87	.63
MAX	3.35	21.3	117	109	72.2	183	237	145	31.2	9.87	8.37	6.32
(WY)	1942	1945	1946	1943	1945	1943	1941	1941	1941	1940	1940	1939
MIN	.000	.007	.000	1.90	2.41	1.70	1.14	.14	.000	.000	.000	.000
(WY)	1951	1952	1951	1948	1942	1951	1951	1942	1950	1950	1942	1948

SUMMARY STATISTICS

WATER YEARS 1939 - 1954

ANNUAL MEAN	12.7
HIGHEST ANNUAL MEAN	56.6 1941
LOWEST ANNUAL MEAN	.78 1951
HIGHEST DAILY MEAN	2350 Jan 23 1943
LOWEST DAILY MEAN	.00 Jun 19 1940
ANNUAL SEVEN-DAY MINIMUM	.00 Sep 10 1940
ANNUAL RUNOFF (AC-FT)	9190
10 PERCENT EXCEEDS	16
50 PERCENT EXCEEDS	1.0
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.3	43.8	78.0	109	217	217	124	97.3	61.1	40.8	36.5	34.2
MAX	117	191	469	668	2096	1279	742	707	339	162	160	75.0
(WY)	1984	1984	1967	1969	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

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1967 - 1992

ANNUAL TOTAL	24861	25266	
ANNUAL MEAN	68.1	69.0	90.2
HIGHEST ANNUAL MEAN			441 1980
LOWEST ANNUAL MEAN			17.2 1968
HIGHEST DAILY MEAN	3800 Mar 1	2010 Feb 12	14800 Feb 25 1969
LOWEST DAILY MEAN	30 Jan 1	30 Jan 19	6.4 Jul 13 1967
ANNUAL SEVEN-DAY MINIMUM	32 May 4	31 Feb 21	8.1 Sep 16 1967
INSTANTANEOUS PEAK FLOW		8140 Feb 12	28000 Feb 25 1969
INSTANTANEOUS PEAK STAGE		6.18 Feb 12	11.90 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	49310	50120	65380
10 PERCENT EXCEEDS	57	60	130
50 PERCENT EXCEEDS	35	37	34
90 PERCENT EXCEEDS	33	33	14

## SANTA ANA RIVER BASIN

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.--

WATER TEMPERATURE: November 1982 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: October 1982 to September 1983.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT						
07...	1230	47	29.0	5	0.63	--
NOV						
07...	1310	42	27.0	30	3.4	--
21...	1420	44	24.5	30	3.6	--
DEC						
06...	1510	44	22.5	10	1.2	--
JAN						
06...	1430	91	16.0	531	130	--
FEB						
12...	1125	74	17.0	323	65	--
MAR						
27...	1515	451	16.0	3570	4350	--
APR						
06...	1510	64	23.5	451	78	--
MAY						
07...	1350	58	28.0	2620	410	78
JUN						
12...	1200	61	27.5	52	8.6	--
JUL						
14...	1140	49	30.0	99	13	--
AUG						
06...	1235	50	30.5	7	0.95	--
27...	1310	48	30.0	19	2.5	--
SEP						
09...	1315	46	29.5	18	2.2	--

11060400 WARM CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°04'42", long 117°17'58", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.2 mi downstream from Interstate Highway 215 bridge and 2.0 mi southwest of San Bernardino.

DRAINAGE AREA.--11.0 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1974, at site 0.1 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records fair. Natural channel prior to October 1972; concrete-lined channel since October 1974. Possible diversion during high flows into Warm Creek from Lytle Creek flood detention basin 3.4 mi upstream. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 4.88 ft, from rating curve extended above 420 ft<sup>3</sup>/s on basis of step-backwater analysis; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,670 ft<sup>3</sup>/s, Feb. 12, gage height, 2.78 ft, from rating curve extended above 420 ft<sup>3</sup>/s on basis of step-backwater analysis; no flow for several days.

REVISIONS.--The maximum discharges for some water years have been revised, as shown in the following table. They supersede figures published in the reports for 1978, 1980-81, and 1983-86.

Water year	Date	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
1978	Mar. 4, 1978	8,500	4.88
1980	Feb. 16, 1980	1,890	2.88
1981	Jan. 29, 1981	1,150	2.50
1983	Aug. 17, 1983	4,770	3.91
1984	Oct. 1, 1983	1,060	2.45
1985	Dec. 18, 1985	902	2.35
1986	Apr. 6, 1986	918	2.36

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	.95	.00	2.3	1.2	5.0	15	3.5	1.8	3.0	4.8	.28
2	.44	.88	.00	2.7	1.0	31	7.5	3.8	1.7	5.8	4.8	.34
3	.41	.90	.00	10	1.1	9.1	6.9	4.1	1.8	5.5	2.5	.27
4	.51	.91	.11	3.0	1.2	4.8	6.7	5.4	1.7	2.9	.57	.21
5	.41	.98	.19	95	1.2	4.8	6.6	4.6	1.6	1.2	.60	.22
6	.00	.56	.58	26	13	10	6.3	11	1.6	1.2	2.9	.14
7	.38	.02	.13	46	24	59	5.9	3.6	1.6	3.9	4.8	.16
8	.82	.05	.15	2.8	4.2	5.4	6.0	2.9	1.6	5.3	5.0	.20
9	.55	.08	.13	1.7	4.2	4.9	5.8	2.7	4.2	3.8	5.3	.27
10	.00	.05	.80	1.6	27	5.2	5.8	2.7	6.5	1.2	5.1	.20
11	.04	.08	.53	2.1	101	5.7	5.8	2.7	6.2	1.2	4.9	.22
12	.01	.14	.57	1.6	234	5.8	6.0	2.8	4.0	1.4	5.2	.15
13	.00	.29	.57	1.6	91	5.9	6.0	2.9	1.7	3.2	3.8	.05
14	.17	.14	.15	1.6	3.9	6.2	6.3	3.6	1.7	4.8	.42	.06
15	.36	.09	.19	1.6	136	6.9	6.3	3.6	1.7	5.1	.41	.35
16	.63	.13	.26	1.6	4.8	7.1	5.8	3.3	1.7	5.5	.34	.30
17	.97	.15	.39	1.6	4.4	7.7	5.5	3.0	1.8	4.0	.34	.21
18	1.1	1.8	.40	1.6	3.9	7.8	5.1	2.9	1.7	1.1	.61	.23
19	1.3	.03	.52	1.6	4.1	8.2	4.8	3.1	1.6	1.0	.40	.22
20	1.4	.09	.46	1.4	4.2	202	4.8	3.0	1.6	.97	.32	.21
21	1.4	.26	.46	1.4	4.1	130	4.4	2.1	1.6	.97	.32	.45
22	1.4	.21	.58	1.4	4.2	38	5.5	2.1	1.6	1.1	.27	.35
23	1.4	.00	.67	1.4	4.2	136	6.8	2.0	1.7	.92	.30	.70
24	1.4	.10	.78	1.2	5.3	7.1	7.1	2.4	1.6	.85	.64	.58
25	1.4	.00	.78	1.3	4.9	6.9	7.4	2.4	1.6	.88	1.7	.36
26	41	.00	.78	1.4	4.6	66	7.3	2.4	1.6	2.9	1.5	.47
27	4.1	.09	.78	1.5	4.6	59	7.2	3.0	1.7	4.8	1.4	.40
28	1.0	.01	28	1.2	4.8	8.1	7.3	1.9	1.7	4.8	1.5	.48
29	1.0	.00	51	1.3	4.8	6.9	4.8	1.8	1.8	4.8	1.4	.55
30	.85	.00	9.0	1.2	---	7.4	3.0	1.8	1.6	4.8	1.7	.49
31	.96	---	2.6	1.2	---	7.5	---	1.8	---	4.8	1.8	---
TOTAL	65.74	8.99	101.56	221.9	706.9	875.4	189.7	98.9	64.3	93.69	65.64	9.12
MEAN	2.12	.30	3.28	7.16	24.4	28.2	6.32	3.19	2.14	3.02	2.12	.30
MAX	41	1.8	51	95	234	202	15	11	6.5	5.8	5.3	.70
MIN	.00	.00	.00	1.2	1.0	4.8	3.0	1.8	1.6	.85	.27	.05
AC-FT	130	18	201	440	1400	1740	376	196	128	186	130	18

## 11060400 WARM CREEK NEAR SAN BERNARDINO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1972, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	2.77	4.73	4.68	4.19	1.15	1.82	.033	.000	.000	.003	.006
MAX	.49	13.1	14.0	32.7	29.6	4.35	11.5	.24	.000	.003	.026	.050
(WY)	1970	1966	1972	1969	1969	1970	1965	1969	1965	1968	1967	1965
MIN	.000	.000	.41	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1969	1969	1972	1967	1972	1966	1965	1965	1965	1965	1966

## SUMMARY STATISTICS

## WATER YEARS 1965 - 1972

ANNUAL MEAN	1.61
HIGHEST ANNUAL MEAN	5.16 1969
LOWEST ANNUAL MEAN	.33 1968
HIGHEST DAILY MEAN	488 Jan 25 1969
LOWEST DAILY MEAN	.00 Oct 1 1964
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1964
INSTANTANEOUS PEAK FLOW	2200 Jan 25 1969
INSTANTANEOUS PEAK STAGE	5.55 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1170
10 PERCENT EXCEEDS	.00
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975-1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.1	12.4	14.2	18.5	45.4	42.9	16.1	14.9	11.7	11.1	10.9	10.1
MAX	32.4	33.1	41.6	37.4	418	376	44.2	86.7	43.6	34.5	50.6	30.3
(WY)	1984	1986	1985	1983	1978	1978	1986	1980	1980	1980	1983	1983
MIN	.12	.13	.40	.11	.85	2.51	.17	.37	.067	.11	.061	.023
(WY)	1978	1980	1980	1976	1977	1977	1977	1978	1978	1979	1979	1979

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1975 - 1992

ANNUAL TOTAL	2697.27	2501.84	18.1
ANNUAL MEAN	7.39	6.84	70.5
HIGHEST ANNUAL MEAN			1978
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	275 Feb 28	234 Feb 12	1.91 1977
LOWEST DAILY MEAN	.00 Oct 6	.00 Oct 6	3400 Mar 1 1978
ANNUAL SEVEN-DAY MINIMUM	.01 Nov 25	.01 Nov 25	.00 Nov 29 1974
INSTANTANEOUS PEAK FLOW		1670 Feb 12	.00 Dec 7 1974
INSTANTANEOUS PEAK STAGE		2.78 Feb 12	8500 Mar 4 1978
ANNUAL RUNOFF (AC-FT)	5350	4960	4.88 Mar 4 1978
10 PERCENT EXCEEDS	10	7.3	13080
50 PERCENT EXCEEDS	2.7	1.6	28
90 PERCENT EXCEEDS	.20	.15	9.8
			.09

11062000 LYTLE CREEK NEAR FONTANA, CA

LOCATION.--Lat 34°12'44", long 117°27'26", in NW 1/4 SE 1/4 sec.36, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 75 ft upstream from highway culvert crossing, 0.7 mi upstream from right tributary, 2.3 mi downstream from Lytle Creek conduit, and 8 mi north of Fontana.

DRAINAGE AREA.--46.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898-99, as "near San Bernardino" 1904-18, and as Lytle Creek and Fontana pipeline near Fontana 1919-31). Monthly discharge only for some periods published in WSP 1315-B.

REVISED RECORDS.--WSP 1011; 1943. WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder on creek. Elevation of gage is 2,380 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1918 to Mar. 21, 1938, at site 1 mi downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft downstream at datum 4.58 ft lower. Water-stage recorders and sharp-crested weirs on conduit since June 3, 1949, and infiltration line since Oct. 1, 1971.

REMARKS.--Records poor. No regulation upstream from station. Southern California Edison Co.'s Lytle Creek conduit diverts 2.3 mi upstream for power development and Fontana Union Water Co. collects water from an infiltration line upstream for irrigation and domestic use. See schematic diagram of Santa Ana River basin. For records of combined discharge of Lytle Creek and diversions, see following page.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 35,900 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 15.0 ft, from floodmark, from rating curve extended above 570 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 10.78 and 15.0 ft; no flow at times most years.

Combined creek and diversions: Maximum discharge, 35,900 ft<sup>3</sup>/s, Jan. 25, 1969; minimum daily, 0.12 ft<sup>3</sup>/s, June 21, 22, 1976.

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

Date	Time	Creek only		Combined creek and diversions	
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	
Feb. 12	1315	*2,210	*7.55	2,210	
Mar. 23	0130	531	4.07	531	

Creek only: No flow for many days.

Combined creek and diversions: Minimum daily, 12 ft<sup>3</sup>/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.37	.00	.07	.00	53	e76	53	e35	e22	e23	e24
2	.00	.00	.00	.00	.00	105	e75	48	e36	e22	e24	e23
3	.00	.00	.00	26	.00	154	e75	43	e36	e21	e25	e23
4	.00	.00	.00	e15	.00	109	e75	43	e36	e21	e25	e22
5	.00	.00	.00	e70	.00	99	e74	43	e35	e20	e25	e22
6	.00	.00	.00	e50	14	98	e74	44	e36	e20	e26	e22
7	.00	.00	.00	36	87	79	e74	45	e34	e19	e26	e21
8	.00	.00	.00	12	31	61	e73	47	e34	e20	e27	e21
9	.00	.00	.00	.54	11	53	e73	49	e32	e20	e27	e21
10	.00	.00	.00	1.6	100	48	73	47	e32	e19	e27	e21
11	.00	.00	.00	2.0	297	44	73	46	e30	e20	e27	e20
12	.00	.00	.00	1.6	673	41	72	46	e29	e22	e26	e20
13	.00	.00	.00	.95	400	41	69	46	e29	e21	e26	e20
14	.00	.00	.00	.49	285	41	68	46	e30	e21	e26	e19
15	.00	.00	.00	.17	275	41	68	44	e29	e21	e25	e19
16	.00	.00	.00	.04	201	38	65	e43	e26	e20	e25	e19
17	.00	.00	.00	.00	163	57	62	e42	e26	e20	e25	e19
18	.00	.00	.00	.00	134	71	62	e42	e26	e20	e25	e19
19	.00	.00	.00	.00	112	60	60	e42	e26	e21	e25	e19
20	.00	.00	.00	.00	89	e96	57	e41	e26	e21	e25	e18
21	.00	.00	.00	.00	75	e319	56	e41	e28	e21	e23	e18
22	.00	.00	.00	.00	69	e223	55	e40	e28	e22	e23	e17
23	.00	.00	.00	.00	68	e325	54	e40	e36	e23	e23	e17
24	.00	.00	.00	.00	65	e200	56	e40	e48	e23	e23	e17
25	.00	.00	.00	.00	60	e130	55	e40	e46	e22	e23	e17
26	1.1	.00	.00	.00	55	e115	52	e39	e30	e22	e22	e16
27	14	.00	.00	.00	46	e105	53	e39	e25	e22	e22	e16
28	2.4	.00	3.2	.00	46	e100	53	e38	e24	e22	e22	e16
29	1.4	.00	30	.00	48	e94	53	e38	e24	e22	e24	e16
30	1.3	.00	24	.00	---	e86	53	e36	e24	e22	e24	e15
31	1.3	---	.77	.00	---	e76	---	e35	---	e22	e24	---
TOTAL	21.50	0.37	57.97	216.46	3404.00	3162	1938	1326	936	654	763	577
MEAN	.69	.012	1.87	6.98	117	102	64.6	42.8	31.2	21.1	24.6	19.2
MAX	14	.37	30	70	673	325	76	53	48	23	27	24
MIN	.00	.00	.00	.00	.00	38	52	35	24	19	22	15
AC-FT	43	.7	115	429	6750	6270	3840	2630	1860	1300	1510	1140

CAL YR 1991 TOTAL 2549.55 MEAN 6.99 MAX 375 MIN .00 AC-FT 5060  
WTR YR 1992 TOTAL 13056.30 MEAN 35.7 MAX 673 MIN .00 AC-FT 25900

e Estimated

11062000 LITTLE CREEK NEAR FONTANA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1992, BY WATER YEAR (WY)

MEAN	3.39	7.35	9.60	20.0	36.6	49.8	26.5	17.4	12.3	8.83	6.19	5.11
MAX	48.2	275	151	552	633	752	254	185	157	131	80.5	65.7
(WY)	1984	1966	1967	1969	1980	1938	1978	1978	1983	1983	1969	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1919 - 1992	
ANNUAL TOTAL	2549.55		13056.30			
ANNUAL MEAN	8.99		35.7		17.1	
HIGHEST ANNUAL MEAN					177	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	375	Mar 1	673	Feb 12	8950	Mar 2 1938
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1918
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1918
INSTANTANEOUS PEAK FLOW			2210	Feb 12	35900	Jan 25 1969
INSTANTANEOUS PEAK STAGE			7.55	Feb 12	15.00	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	5060		25900		12360	
10 PERCENT EXCEEDS	27		74		36	
50 PERCENT EXCEEDS	.00		22		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11062001 LYTLE CREEK NEAR FONTANA, CA--Continued

LYTLE CREEK, SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CREEK CONDUIT, AND  
FONTANA UNION WATER CO.'S INFILTRATION LINE DEVERSIONS  
COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	20	25	24	85	e108	84	e63	e42	e40	e44
2	12	17	20	25	24	134	e107	78	e64	e42	e41	e43
3	12	16	20	45	23	168	e107	73	e64	e41	e42	e43
4	12	15	20	e32	22	123	e107	73	e64	e41	e42	e42
5	13	16	20	e89	22	113	e106	73	e63	e40	e42	e42
6	14	15	21	e60	34	112	e106	74	e64	e40	e43	e42
7	12	15	21	48	96	102	e106	75	e62	e39	e43	e41
8	13	15	21	29	50	93	e105	77	e62	e40	e44	e41
9	13	16	20	32	38	85	e105	79	e60	e40	e44	e41
10	12	16	21	32	111	80	105	77	e60	e39	e44	e41
11	12	17	21	31	310	76	105	76	e58	e40	e44	e40
12	14	16	21	32	688	73	104	76	e57	e42	e43	e40
13	13	16	20	29	415	73	101	76	e57	e41	e43	e40
14	13	17	20	27	300	73	100	76	e58	e41	e46	e39
15	13	16	21	28	290	73	100	74	e57	e41	e45	e39
16	14	18	21	28	217	70	97	e72	e54	e40	e45	e39
17	12	18	19	28	179	79	94	e71	e54	e40	e45	e39
18	14	18	20	29	149	85	94	e71	e54	e40	e45	e39
19	14	17	20	28	127	74	92	e71	e53	e41	e45	e39
20	14	18	20	26	111	e110	89	e70	e52	e41	e45	e38
21	14	18	20	26	107	e333	87	e70	e51	e41	e43	e38
22	14	18	21	27	101	e237	86	e69	e50	e42	e43	e37
23	13	18	20	24	100	e339	85	e69	e49	e43	e43	e37
24	15	19	21	24	97	e214	87	e69	e48	e43	e43	e37
25	14	18	21	26	92	e144	86	e69	e47	e42	e43	e37
26	17	18	21	25	87	e129	82	e67	e46	e42	e42	e36
27	27	18	21	24	78	e119	82	e67	e45	e42	e42	e36
28	20	19	21	24	78	e114	84	e66	e44	e42	e42	e36
29	16	20	49	22	80	e108	84	e66	e44	e42	e44	e36
30	17	20	39	23	---	e100	84	e64	e44	e42	e44	e35
31	17	---	25	22	---	e99	---	e63	---	e42	e44	---
TOTAL	442	514	686	970	4050	3817	2885	2235	1648	1274	1344	1177
MEAN	14.3	17.1	22.1	31.3	140	123	96.2	72.1	54.9	41.1	43.4	39.2
MAX	27	20	49	89	688	339	108	84	64	43	46	44
MIN	12	15	19	22	22	70	82	63	44	39	40	35
AC-FT	877	1020	1360	1920	8030	7570	5720	4430	3270	2530	2670	2330

e Estimated.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1992, BY WATER YEAR (WY)

MEAN	26.3	28.5	30.9	52.3	64.6	77.2	54.9	45.4	37.8	31.9	29.5	27.4
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	9.41	7.05	6.98	6.43
(WY)	1962	1991	1951	1951	1899	1965	1899	1961	1990	1899	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1899 - 1992	
ANNUAL TOTAL	8474.9		21042			
ANNUAL MEAN	23.2		57.5		42.4	
HIGHEST ANNUAL MEAN					194	
LOWEST ANNUAL MEAN					10.7	
HIGHEST DAILY MEAN	382	Mar 1	688	Feb 12	8960	Mar 2 1938
LOWEST DAILY MEAN	9.1	Sep 4	12	Oct 1	2.6	Nov 28 1989
ANNUAL SEVEN-DAY MINIMUM	10	Sep 3	12	Oct 1	4.0	Nov 28 1989
INSTANTANEOUS PEAK FLOW			2210		35900	
ANNUAL RUNOFF (AC-FT)	16810		41740		30730	
10 PERCENT EXCEEDS	46		105		73	
50 PERCENT EXCEEDS	16		42		26	
90 PERCENT EXCEEDS	11		16		12	

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 Atchison, Topeka, & Santa Fe Railway Co. bridge, 150 ft upstream from confluence with Cajon Creek, and 1.1 mi north of Keenbrook.

DRAINAGE AREA.--15.1 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1919 to September 1938, June 1949 to current year.

REVISED RECORDS.--WSP 1635: 1920-22(M), 1924-25(M), 1926-27, 1928(M), 1930, 1931(M), 1932-33, 1934-36(M).  
WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood), and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,180 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; no flow Aug. 6-8, Sept. 29, 30, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1315	118	2.92	Feb. 12	1300	*560	*5.45
Mar. 21	0500	86	2.62				

Minimum daily, 0.10 ft<sup>3</sup>/s, Oct. 7, 8, 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.14	.20	2.3	.28	.58	e1.2	.92	.57	.76	.64	.82
2	.15	.14	.20	2.1	.21	2.5	1.0	.92	.54	.61	.65	.85
3	.13	.14	.19	2.1	.25	3.0	.92	.92	.56	.44	.62	.83
4	.13	.14	.19	1.7	.21	1.3	.92	.68	.64	.56	.63	.81
5	.12	.14	.20	2.0	.30	1.1	.93	.80	.76	.68	.75	.84
6	.12	.14	.18	2.8	1.4	1.0	.93	.92	.86	.67	.80	.89
7	.10	.13	.14	2.2	2.6	1.0	.93	.92	.86	.77	.84	.91
8	.10	.14	.14	1.5	1.5	1.0	.97	.92	.92	.80	.80	.90
9	.19	.13	.14	.55	1.5	.92	1.0	.92	.92	.80	.80	.92
10	.14	.13	.14	.35	1.6	.88	1.0	.80	.92	.84	.80	.92
11	.12	.14	.14	.24	.56	.80	1.0	.80	.91	.87	.90	.92
12	.12	.15	.14	.18	1.25	.82	.98	.80	.88	.89	1.1	.92
13	.12	.17	.14	.13	e1.6	.89	.93	.80	.81	1.2	1.2	.92
14	.12	.20	.14	.15	e7.8	.87	1.0	.80	.82	.73	1.2	.92
15	.10	.20	.14	.14	e4.7	.87	1.3	.80	.80	.73	1.4	.92
16	.10	.20	.13	.11	e3.3	.81	1.3	.80	.82	.63	1.0	.92
17	.11	.16	.14	.14	e2.0	.85	1.3	.80	.80	.78	.99	.92
18	.11	.15	.14	.24	e1.5	.92	1.3	.80	.74	.91	1.0	.92
19	.10	.14	.15	.19	e1.3	.92	1.2	.87	.78	.87	.98	.92
20	.11	.14	.20	.20	e1.2	5.7	1.0	.80	.80	.85	.92	.92
21	.12	.19	.20	.20	e1.0	1.4	1.0	.80	.80	.69	.93	.92
22	.14	.17	.20	.20	e.80	5.6	.90	.80	.80	.68	.94	.92
23	.14	.17	.20	.20	e.80	e9.0	.90	.75	.80	.76	.89	.92
24	.14	.14	.20	.28	e.70	e3.0	.90	.63	.84	.68	.78	.93
25	.14	.14	.18	.28	e.65	e2.6	1.2	.68	.84	.67	.71	1.0
26	.19	.14	.14	.33	e.62	e2.2	1.0	.65	.83	.62	.72	.97
27	.17	.14	.16	.32	.58	e2.0	1.0	.58	.80	.58	.77	.92
28	.14	.18	.21	.28	.58	e1.9	.92	.58	.77	.60	.76	.95
29	.14	.20	5.3	.28	.58	e1.7	.92	.58	.67	.61	.78	1.0
30	.14	.20	3.6	.27	---	e1.6	1.0	.58	.69	.66	.79	.99
31	.14	---	2.5	.28	---	e1.5	---	.58	---	.67	.80	---
TOTAL	4.03	4.69	16.07	40.24	249.36	71.83	30.85	24.00	23.55	22.61	26.89	27.41
MEAN	.13	.16	.52	1.30	8.60	2.32	1.03	.77	.78	.73	.87	.91
MAX	.19	.20	5.3	2.0	12.5	1.4	1.3	.92	.92	1.2	1.4	1.0
MIN	.10	.13	.13	.11	.21	.58	.90	.58	.54	.44	.62	.81
AC-FT	8.0	9.3	32	80	495	142	61	48	47	45	53	54

e Estimated.

## 11063500 LONE PINE CREEK NEAR KEENBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	1.11	1.82	1.97	3.70	4.49	1.86	1.46	1.19	.99	.96	.93
MAX	5.35	6.51	15.0	24.1	40.6	98.1	11.0	8.91	7.41	5.21	5.16	5.81
(WY)	1984	1966	1923	1969	1969	1938	1980	1980	1980	1969	1969	1978
MIN	.079	.091	.095	.094	.10	.10	.10	.10	.10	.10	.090	.093
(WY)	1991	1991	1991	1991	1964	1964	1961	1928	1928	1928	1965	1965

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1920 - 1992	
ANNUAL TOTAL	401.42		541.53			
ANNUAL MEAN	1.10		1.48		1.79	
HIGHEST ANNUAL MEAN					11.4	
LOWEST ANNUAL MEAN					.11	
HIGHEST DAILY MEAN	41	Mar 1	125	Feb 12	1480	Mar 2 1938
LOWEST DAILY MEAN	.07	Jan 7	.10	Oct 7	.00	Aug 6 1965
ANNUAL SEVEN-DAY MINIMUM	.07	Jan 7	.11	Oct 14	.06	Aug 2 1965
INSTANTANEOUS PEAK FLOW			560		6180	
INSTANTANEOUS PEAK STAGE			5.45		Mar 2 1938	
ANNUAL RUNOFF (AC-FT)	796		1070		1300	
10 PERCENT EXCEEDS	2.5		1.5		3.7	
50 PERCENT EXCEEDS	.20		.80		.50	
90 PERCENT EXCEEDS	.10		.14		.10	

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA

LOCATION.--Lat 34°16'04", long 117°27'58", in NW 1/4 NW 1/4 sec.13, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 0.25 mi downstream from Lone Pine Creek and 0.95 mi north of Keenbrook.

DRAINAGE AREA.--56.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1971 to September 1977, October 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,600 ft above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1971, to Sept. 30, 1977, at site 0.25 mi upstream at abandoned diversion dam at different datum.

REMARKS.--Records fair. 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, 2,500 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 8.22 ft, from rating curve extended above 180 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 6.02 ft; minimum daily, 1.7 ft<sup>3</sup>/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 180 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 6.02 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1845	788	6.25	Mar. 21	0600	392	5.47
Feb. 12	1400	*2,500	*8.22				

Minimum daily, 1.7 ft<sup>3</sup>/s, Nov. 11-13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.2	2.8	2.3	3.1	14	e24	13	5.0	5.8	5.1	5.0
2	2.3	2.1	2.8	2.3	3.0	33	e23	13	4.5	5.9	5.1	4.9
3	2.3	1.9	2.7	16	3.1	38	e23	12	4.1	5.9	4.9	4.8
4	2.4	1.9	2.7	4.3	3.2	19	e22	11	4.1	6.3	5.1	4.7
5	2.3	1.9	2.7	93	3.5	14	e22	9.8	e5.0	6.9	5.2	4.5
6	2.3	1.9	2.7	27	7.6	14	e21	9.9	e5.1	6.9	5.3	4.3
7	2.3	1.9	2.8	15	15	12	e20	9.6	e5.2	7.1	5.3	4.3
8	2.3	1.9	2.8	12	5.6	9.7	e20	9.5	e5.2	7.4	5.1	4.4
9	2.4	1.8	2.7	7.6	2.3	11	19	9.6	e5.2	7.6	5.1	4.5
10	2.3	1.8	2.9	6.4	11	13	19	10	e5.2	7.1	4.9	4.6
11	2.4	1.7	2.9	7.0	e219	15	19	9.9	e5.3	7.2	5.1	4.6
12	2.4	1.7	2.8	6.2	e427	17	18	9.6	e5.3	7.0	5.1	4.4
13	2.3	1.7	2.7	5.5	e167	23	17	9.1	e5.3	6.2	5.1	4.4
14	2.2	1.9	2.6	5.3	e101	23	16	9.0	e5.4	5.0	5.0	4.4
15	2.1	1.8	2.6	4.7	e118	23	16	9.1	e5.4	4.9	4.9	4.4
16	2.2	1.9	2.3	3.5	e73	24	15	9.3	e5.4	5.0	4.9	4.3
17	2.3	1.9	2.5	2.8	e60	23	16	11	e5.4	5.3	4.5	4.4
18	2.3	1.9	2.5	2.8	e43	21	16	10	e5.5	5.2	4.4	4.3
19	2.2	1.9	2.8	2.4	e31	23	16	10	e5.5	5.1	4.6	4.3
20	2.1	1.9	2.8	2.4	e26	61	16	9.6	e5.5	5.1	4.8	4.2
21	2.2	1.9	2.8	3.0	e22	143	17	11	e5.5	5.1	4.6	4.7
22	2.4	1.9	2.8	2.8	e19	71	16	9.0	e5.6	5.3	4.6	4.5
23	2.5	1.9	2.8	2.8	16	147	16	9.0	e5.6	5.2	4.4	4.1
24	2.5	1.9	2.8	3.1	15	50	16	8.1	e5.7	5.4	4.3	4.2
25	2.5	1.9	2.8	2.7	16	e44	17	6.8	e5.7	5.9	4.3	4.2
26	2.8	1.9	2.8	2.8	17	e38	16	6.7	5.7	5.1	4.2	4.2
27	3.0	2.1	2.8	2.4	14	e34	15	5.4	5.9	4.9	3.9	4.1
28	2.4	2.5	3.3	2.7	13	e30	14	5.1	6.0	5.1	3.9	3.7
29	2.3	2.7	27	3.3	13	e28	14	4.9	6.1	5.0	4.2	3.8
30	2.3	2.8	9.1	3.1	---	e26	14	4.9	6.0	4.9	5.0	3.7
31	2.2	---	2.8	3.1	---	e25	---	5.8	---	5.1	4.9	---
TOTAL	72.8	59.1	115.9	260.3	1467.4	1066.7	533	280.7	160.4	179.9	147.8	130.9
MEAN	2.35	1.97	3.74	8.40	50.6	34.4	17.8	9.05	5.35	5.80	4.77	4.36
MAX	3.0	2.8	27	93	427	147	24	13	6.1	7.6	5.3	5.0
MIN	2.1	1.7	2.3	2.3	2.3	9.7	14	4.9	4.1	4.9	3.9	3.7
AC-FT	144	117	230	516	2910	2120	1060	557	318	357	293	260

e Estimated.

## 11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.95	5.32	8.97	10.6	14.9	14.2	8.32	6.77	4.89	4.10	3.86	5.25
MAX	14.8	13.2	26.5	32.3	50.6	34.4	17.8	14.4	8.32	6.86	7.37	24.5
(WY)	1984	1984	1972	1974	1992	1992	1992	1977	1984	1984	1984	1976
MIN	2.00	1.97	2.05	2.33	5.06	4.31	2.93	3.39	1.98	2.05	2.12	1.99
(WY)	1991	1992	1991	1991	1977	1990	1977	1976	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1972 - 1992	
ANNUAL TOTAL	2118.2		4474.9			
ANNUAL MEAN	5.80		12.2		7.65	
HIGHEST ANNUAL MEAN					12.2	
LOWEST ANNUAL MEAN					3.80	
HIGHEST DAILY MEAN	198	Mar 1	427	Feb 12	467	Feb 11 1973
LOWEST DAILY MEAN	1.7	Nov 11	1.7	Nov 11	1.7	Sep 5 1989
ANNUAL SEVEN-DAY MINIMUM	1.8	Nov 9	1.8	Nov 9	1.8	Sep 2 1989
INSTANTANEOUS PEAK FLOW			2500		2500	
INSTANTANEOUS PEAK STAGE			8.22		8.22	
ANNUAL RUNOFF (AC-FT)	4200		8880		5540	
10 PERCENT EXCEEDS	8.8		22		12	
50 PERCENT EXCEEDS	2.6		5.1		4.9	
90 PERCENT EXCEEDS	2.1		2.3		2.5	

## 11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°12'30", long 117°19'50", in Muscupiabe Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.6 mi downstream from confluence of East and West Forks and 7.5 mi northwest of San Bernardino.

DRAINAGE AREA.--5.49 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek; flowmeter on diversion. Elevation of gage is 2,080 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi downstream at different datum. December 1919 to July 1969, at site 0.4 mi downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi downstream at different datum.

REMARKS.--Records fair. No regulation upstream from station. City of San Bernardino diverts upstream from station for municipal supply. See schematic diagram of Santa Ana River basin. Records given below are for creek only unless otherwise indicated.

COOPERATION.--Records of diversion were provided by city of San Bernardino.

EXTREMES FOR PERIOD OF RECORD (1913-14 AND SINCE 1919).--Maximum discharge, 3,720 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 5.40 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1415	54	5.65	Mar. 22	1900	101	5.86
Feb. 12	1445	*211	*6.19				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.10	.15	e2.0	.00	1.7	10	e.00	e.50	.02	.00	.00
2	.00	.06	.09	e1.6	.00	6.7	8.0	e.00	e.20	.03	.00	.00
3	.00	.00	.00	e.35	.00	4.4	6.4	e.00	e.00	.01	.00	.00
4	.00	.00	.00	e.10	.00	1.9	6.2	e.00	e.00	.01	.00	.00
5	.00	.00	.00	16	.07	.81	7.9	e1.0	e.00	.01	.00	.00
6	.00	.00	.00	2.9	.39	3.3	5.8	1.6	e.00	.00	.00	.00
7	.00	.00	.00	2.8	1.9	2.6	4.7	1.2	e.00	.00	.00	.00
8	.00	.00	.08	e2.7	.66	2.2	4.1	.53	e.00	.01	.00	.00
9	.00	.00	.09	e2.1	.24	1.8	3.8	1.1	e.00	.01	.00	.00
10	.00	.00	.11	1.8	1.5	.34	3.5	1.1	e.00	.01	.00	.00
11	.00	.00	.13	1.5	7.2	.34	3.6	.64	e.00	.04	.00	.00
12	.00	.00	.00	1.4	34	.06	3.3	.52	e.00	1.6	.00	.00
13	.00	.00	.00	1.2	e12	.06	3.8	.44	e.00	.53	.00	.00
14	.00	.01	.00	1.1	e9.8	.06	4.0	.51	e.00	.04	.00	.00
15	.00	.04	.00	.94	e11	.06	2.4	.55	e.00	.02	.00	.00
16	.00	.00	.00	.32	7.2	.06	2.2	e.20	e.00	.01	.00	.00
17	.00	.00	.00	.00	5.8	.06	1.9	e.10	e.00	.00	.00	.00
18	.00	.00	.09	.00	4.8	.06	1.8	e.00	e.00	.00	.00	.00
19	.00	.00	3.8	.00	3.3	.06	1.5	e.00	.00	.00	.00	.00
20	.00	.00	.33	.00	e2.0	7.8	1.4	e.60	.01	.03	.00	.00
21	.00	.00	.29	.00	e1.3	20	1.4	e.20	.00	.08	.00	.00
22	.03	.00	.14	.00	e1.2	23	.94	e.10	.00	.07	.00	.00
23	.13	.10	.00	.00	e1.0	47	.64	e.00	.00	.00	.00	.00
24	.09	.07	.00	.00	e1.0	33	e.50	e.00	.04	.05	.00	.00
25	.00	.00	.00	.00	e.90	25	e.42	e.00	.00	.00	.00	.00
26	1.2	.00	.00	.00	e.90	20	e.36	e.00	.00	.00	.00	.00
27	.49	.00	.02	.00	.66	24	e.20	e.00	.00	.00	.00	.00
28	.15	.00	1.6	.00	.26	19	e.10	e.00	.00	.00	.00	.00
29	.07	.05	3.0	.00	.23	12	e.00	e.00	.00	.00	.00	.00
30	.07	.15	5.5	.00	---	9.2	e.00	e.00	.01	.00	.00	.00
31	.12	---	3.5	.00	---	10	---	e.00	---	.02	.00	---
TOTAL	2.35	0.58	18.92	38.81	109.31	276.57	90.86	10.39	0.76	2.60	0.00	0.00
MEAN	.076	.019	.61	1.25	3.77	8.92	3.03	.34	.025	.084	.000	.000
MAX	1.2	.15	5.5	16	34	47	10	1.6	.50	1.6	.00	.00
MIN	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00
AC-FT	4.7	1.2	38	77	217	549	180	21	1.5	5.2	.00	.00
a	50	55	59	149	280	614	323	188	150	142	104	83

e Estimated.

a Combined discharge, in acre-feet, of Devil Canyon Creek and city of San Bernardino diversion.

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.28	.92	1.67	2.72	5.99	6.98	4.09	1.93	.77	.39	.26	.26
MAX	3.36	12.9	14.0	38.5	108	72.9	28.3	15.2	5.31	3.14	2.57	3.33
(WY)	1984	1966	1967	1969	1980	1938	1978	1983	1983	1922	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1926	1926	1926	1926	1948	1951	1951	1951	1947	1926	1925	1924

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1920 - 1992	
ANNUAL TOTAL	364.47		551.15			
ANNUAL MEAN	1.00		1.51		2.14	
HIGHEST ANNUAL MEAN					16.1	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	39	Mar 1	47	Mar 23	556	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Sep 23 1921
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 10	.00	Oct 1	.00	Sep 23 1921
INSTANTANEOUS PEAK FLOW			211	Feb 12	3720	Jan 25 1969
INSTANTANEOUS PEAK STAGE			6.19	Feb 12	5.40	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	723		1090		1550	
10 PERCENT EXCEEDS	2.4		3.7		4.6	
50 PERCENT EXCEEDS	.00		.00		.10	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11065000 LYTLE CREEK AT COLTON, CA

LOCATION.--Lat 34°04'44", long 117°18'17", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on right bank 400 ft downstream from Colton Avenue, 1,930 ft upstream from outlet end of channel, and 1.3 mi northeast of Colton.

DRAINAGE AREA.--186 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to September 1983, October 1984 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 974.67 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 mi upstream. Diversions upstream from station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 14.8 ft, from rating curve extended above 4,200 ft<sup>3</sup>/s on basis of discharge for design flood at gage height 21.4 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,850 ft<sup>3</sup>/s, Feb. 12, gage height, 5.73 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e.00	e2.0	e.00	e.00	e.00	e.00	e.00
2	.00	.00	.00	.00	.00	e38	e1.6	e.00	e.00	e.00	e.00	e.00
3	.00	.00	.00	5.9	.00	e7.2	e1.2	e.00	e.00	e.00	e.00	e.00
4	.00	.00	.00	.00	.00	e1.0	e.97	e.00	e.00	e.00	e.00	e.00
5	.00	.00	.00	162	.46	e.00	e.80	e.00	e.00	e.00	e.00	e.00
6	.00	1.4	.00	42	7.8	e1.0	e.00	e.00	e.00	e.00	e.00	e.00
7	.00	.14	.00	74	9.1	e50	e.00	e.00	e.00	e.00	e.00	e.00
8	.00	.00	.00	7.1	.00	e8.0	e.00	e.00	e.00	e.00	e.00	e.00
9	.00	.00	.00	4.2	.00	e2.5	e.00	e.00	e.00	e.00	e.00	e.00
10	.00	.00	.00	2.9	36	e1.2	e.00	e.00	e.00	e.00	e.00	e.00
11	.00	.00	.00	2.1	e325	e.00	e.00	e.00	e.00	e.00	e.00	e.00
12	.00	.00	.00	1.5	860	e.00	e.00	e.00	e.00	e.00	e.00	e.00
13	.00	.00	.00	1.1	e320	e.00	e.00	e.00	e.00	e.00	e.00	e.00
14	.00	.00	.00	.80	e125	e.00	e.00	e.00	e.00	e.00	e.00	e.00
15	.00	.00	.00	.50	e520	e.00	e.00	e.00	e.00	e.00	e.00	e.00
16	.00	.00	.00	.09	e75	e.00	e.00	e.00	e.00	e.00	e.00	e.00
17	.00	.11	.00	.00	e12	e.00	e.00	e.00	e.00	e.00	e.00	e.00
18	.00	4.3	.00	.00	e6.5	e.00	e.00	e.00	e.00	e.00	e.00	e.00
19	.00	.00	.00	.00	e4.3	e.00	e.00	e.00	e.00	e.00	e.00	e.00
20	.00	.00	.00	.00	e2.9	e350	e.00	e.00	e.00	e.00	e.00	e.00
21	.00	.00	.00	.00	e1.0	e150	e.00	e.00	e.00	e.00	e.00	e.00
22	.00	.00	.00	.00	e.54	e45	e.00	e.00	e.00	e.00	e.00	e.00
23	.00	.00	.00	.00	e.12	e160	e.00	e.00	e.00	e.00	e.00	e.00
24	.00	.00	.00	.00	e.00	e50	e.00	e.00	e.00	e.00	e.00	e.00
25	.00	.00	.00	.00	e.00	e25	e.00	e.00	e.00	e.00	e.00	e.00
26	23	.00	.00	.00	e.00	e4.0	e.00	e.00	e.00	e.00	e.00	e.00
27	1.4	.00	.00	.00	e.00	e80	e.00	e.00	e.00	e.00	e.00	e.00
28	.00	.00	32	.00	e.00	e60	e.00	e.00	e.00	e.00	e.00	e.00
29	.00	.00	70	.00	e.00	e10	e.00	e.00	e.00	e.00	e.00	e.00
30	.00	.00	6.1	.00	---	e4.0	e.00	e.00	e.00	e.00	e.00	e.00
31	.00	---	.00	.00	---	e2.8	---	e.00	---	e.00	e.00	---
TOTAL	24.40	5.95	108.10	304.19	2305.72	1049.70	6.57	0.00	0.00	0.00	0.00	0.00
MEAN	.79	.20	3.49	9.81	79.5	33.9	.22	.000	.000	.000	.000	.000
MAX	23	4.3	70	162	860	350	2.0	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	48	12	214	603	4570	2080	13	.00	.00	.00	.00	.00

e Estimated.

11065000 LYTLE CREEK AT COLTON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.76	5.38	8.41	16.2	29.4	22.2	5.01	4.94	2.60	1.37	.89	.92
MAX	15.8	79.1	104	318	363	326	57.3	87.6	61.3	35.4	17.1	9.58
(WY)	1981	1966	1966	1969	1980	1978	1969	1969	1978	1978	1969	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1958	1958	1959	1963	1961	1959	1961	1959	1958	1958	1958	1958

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1958 - 1992	
ANNUAL TOTAL	2097.09		3804.63			
ANNUAL MEAN	5.75		10.4		8.09	
HIGHEST ANNUAL MEAN					65.4	
LOWEST ANNUAL MEAN					.008	
HIGHEST DAILY MEAN	458	Feb 28	860	Feb 12	5040	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 11	.00	Oct 1	.00	Oct 1 1957
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 11	.00	Oct 1	.00	Oct 1 1957
INSTANTANEOUS PEAK FLOW			3850		17500	
INSTANTANEOUS PEAK STAGE			5.73		14.80	
ANNUAL RUNOFF (AC-FT)	4160		7550		5860	
10 PERCENT EXCEEDS	3.5		4.1		3.6	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 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 right bank at MWD pipeline crossing, 0.8 mi downstream from Union Pacific Railroad bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.  
DRAINAGE AREA.--852 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1970 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 685 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Oct. 1, 1984, water-stage recorder at site 300 ft upstream on left bank at different datum.

REMARKS.--Records poor. Flow partly regulated by Big Bear Lake (station 11049000). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flows from irrigated areas. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft<sup>3</sup>/s, Mar. 2, 1983, gage height, 15.38 ft, site and datum then in use, from rating curve extended above 5,100 ft<sup>3</sup>/s on basis of area-velocity study; maximum gage height, 20.23 ft, Mar. 4, 1978; minimum daily, 15 ft<sup>3</sup>/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1927, 100,000 ft<sup>3</sup>/s, Mar. 2, 1938, on basis of slope-area measurement at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft<sup>3</sup>/s, on basis of slope-conveyance study at site 8.2 mi upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	2215	2,940	9.81	Mar. 21	0300	3,770	9.92
Feb. 12	1930	*14,500	*15.29				

Minimum daily, 32 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	52	51	89	56	50	165	55	56	52	49	45
2	38	52	57	82	59	88	105	52	51	55	47	43
3	37	50	59	125	50	117	e83	51	50	57	40	45
4	36	51	60	109	53	74	e79	51	51	53	39	41
5	38	55	59	589	49	78	e75	56	48	48	37	41
6	39	61	58	503	82	98	76	61	51	44	41	38
7	40	56	57	201	176	215	75	90	48	48	47	39
8	39	57	58	137	91	e120	72	65	48	65	44	41
9	41	57	59	81	78	e90	68	66	52	59	42	41
10	39	58	59	75	192	77	67	61	54	54	44	41
11	39	58	63	66	640	73	66	68	58	51	43	42
12	38	59	62	62	3620	74	62	73	55	54	43	40
13	38	60	62	59	2230	73	65	60	52	54	44	39
14	40	58	60	60	546	72	68	63	46	60	47	44
15	42	52	59	53	1220	77	67	67	52	51	49	43
16	41	47	60	55	445	78	66	65	52	53	43	43
17	41	51	63	54	238	75	64	58	49	52	43	46
18	40	62	63	55	190	72	63	59	46	45	40	44
19	39	55	64	51	132	77	63	65	52	42	39	39
20	38	51	61	53	e105	522	63	60	48	41	39	38
21	39	51	59	57	e87	1420	59	57	51	44	37	39
22	54	49	60	54	77	470	56	56	48	49	38	40
23	49	47	61	63	63	1280	63	57	44	53	37	38
24	45	47	62	57	54	256	61	52	47	51	36	40
25	45	49	61	56	54	149	62	52	47	44	39	40
26	49	49	58	58	53	320	62	55	50	44	39	38
27	130	50	62	55	51	594	64	56	49	50	36	39
28	70	50	201	54	50	199	62	56	49	47	39	40
29	60	50	180	55	51	177	59	59	49	50	39	37
30	54	48	290	53	---	122	54	57	50	47	38	32
31	52	---	103	56	---	153	---	53	---	47	41	---
TOTAL	1429	1592	2391	3177	10792	7340	2114	1856	1503	1564	1279	1216
MEAN	46.1	53.1	77.1	102	372	237	70.5	59.9	50.1	50.5	41.3	40.5
MAX	130	62	290	589	3620	1420	165	90	58	65	49	46
MIN	36	47	51	51	49	50	54	51	44	41	36	32
AC-FT	2830	3160	4740	6300	21410	14560	4190	3680	2980	3100	2540	2410

e Estimated.

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.8	72.2	92.6	141	229	281	135	99.6	69.0	47.8	47.8	48.8
MAX	194	259	292	569	1411	1381	604	666	351	145	233	129
(WY)	1988	1984	1984	1980	1980	1983	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1970 - 1992	
ANNUAL TOTAL	37345		36253			
ANNUAL MEAN	102		99.1		112	
HIGHEST ANNUAL MEAN					416	
LOWEST ANNUAL MEAN					29.0	
HIGHEST DAILY MEAN	3990	Mar 1	3620	Feb 12	11500	Mar 2 1983
LOWEST DAILY MEAN	34	Sep 26	32	Sep 30	15	Sep 7 1980
ANNUAL SEVEN-DAY MINIMUM	36	Sep 20	37	Aug 21	16	Jul 1 1981
INSTANTANEOUS PEAK FLOW			14500	Feb 12	26200	Mar 2 1983
INSTANTANEOUS PEAK STAGE			15.29	Feb 12	20.23	Feb 4 1978
ANNUAL RUNOFF (AC-FT)	74070		71910		80780	
10 PERCENT EXCEEDS	108		111		150	
50 PERCENT EXCEEDS	57		54		51	
90 PERCENT EXCEEDS	39		39		21	

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1970 to current year.

SPECIFIC CONDUCTANCE: Water years 1970-78.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
OCT					
01...	1015	45	950	21.0	603
16...	1000	47	940	18.5	613
NOV					
04...	1015	54	950	17.0	589
21...	1015	54	935	15.5	589
JAN					
10...	1015	68	940	13.0	583
27...	1030	47	970	15.0	602
FEB					
04...	1000	51	970	14.0	612
21...	1330	83	854	21.5	514
MAR					
09...	1030	70	891	16.5	526
APR					
06...	1115	64	905	19.0	551
MAY					
21...	1000	48	927	21.5	546
JUN					
24...	0915	49	908	21.5	570
JUL					
08...	0930	64	895	23.0	548
22...	1045	45	940	22.0	572
AUG					
10...	1515	32	970	31.0	582
26...	0855	48	886	20.5	538
SEP					
01...	1200	37	945	23.0	594
16...	0930	48	950	19.5	584

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 the head of the concrete lined flood channel, 3.7 mi upstream from the mouth, and 3.0 mi southeast of Valle Vista.

DRAINAGE AREA.--47.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder, concrete control and crest-stage gage. Elevation of gage is 2,080 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1988 at datum 10.00 ft lower.

REMARKS.--No estimated daily discharges. Records poor. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 494 ft<sup>3</sup>/s, Mar. 1, 1991, gage height, 2.37 ft, from rating curve developed on basis of critical-depth computations at concrete control; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*), from rating curve developed on basis of critical-depth computations at concrete control:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 15	1645	*138	*1.58				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.78	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	21	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.77	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	22.55	0.00	0.00	0.01	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.78	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	21	.00	.00	.01	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	45	.00	.00	.02	.00	.00	.00	.00

## 11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.024	.062	.21	2.43	.065	.000	.000	.000	.036	.000
MAX	.000	.000	.12	.31	.78	12.1	.33	.000	.000	.000	.18	.000
(WY)	1988	1988	1988	1988	1992	1991	1988	1992	1988	1988	1988	1988
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1989	1989	1989	1989	1989	1988	1988	1988	1989	1988

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1988 - 1992	
ANNUAL TOTAL	376.65		22.56			
ANNUAL MEAN	1.03		.062		.24	
HIGHEST ANNUAL MEAN					1.03 1991	
LOWEST ANNUAL MEAN					.000 1989	
HIGHEST DAILY MEAN	219	Mar 1	21	Feb 15	219	Mar 1 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW			138	Feb 15	494	Mar 1 1991
INSTANTANEOUS PEAK STAGE			1.58	Feb 15	2.37	Mar 1 1991
ANNUAL RUNOFF (AC-FT)	747		45		173	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11070240 SUNNYMEAD CHANNEL AT ALESSANDRO BOULEVARD, NEAR SUNNYMEAD, CA

LOCATION.--Lat 33°55'02", long 117°14'34", in SW 1/4 SW 1/4 sec.7, T.3 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on left bank 1.6 mi south of Sunnymead.

DRAINAGE AREA.--13.3 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge records for the period January 1970 to June 1975 available in U.S. Geological Survey Open-File Report 79-1256. October 1989 to September 1992 (Discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 1,570 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 8.87 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 680 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 26	2245	224	6.24	Feb. 12	1345	1,300*	8.87*
Jan. 5	1100	238	6.31	Mar. 7	1830	353	6.54

No flow for many days.

EXTREMES FOR CURRENT PERIOD (not previously published).--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 680 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

Water Year	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Water Year	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
1990	Feb. 17	1800	561*	7.47*	1990	May 28	1415	157	5.91
1991	Jan. 3	1400	183	6.06	1991	Mar. 20	0730	183	5.75
1991	Feb. 27	2245	334	6.55	1991	Mar. 27	0115	437*	6.98*

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.01	e.01	e.05	.14	e.00	e.90	.00	.00	e.00	e.00	.00	.00
2	e.01	e.01	e.05	.19	e.00	e15	.00	.00	e.00	e.00	.00	.00
3	e.01	e.01	e.05	4.1	e.00	e1.0	.00	.00	e.00	e.00	.00	.00
4	e.01	e.01	e.05	.30	e.00	.00	.00	.00	e.00	e.00	.00	.00
5	e.01	e.01	e.05	56	e.50	.00	.00	.02	e.00	e.00	.00	.00
6	e.01	e.01	e.05	17	13	.79	.00	.00	e.00	e.00	.00	.00
7	e.01	e.01	e.05	29	8.1	17	.00	.00	e.00	e1.0	.00	.00
8	e.01	.01	e.05	6.2	1.4	.52	.00	.00	e.00	e.50	.00	.00
9	e.01	.01	e.05	.55	2.6	.00	.00	.00	e.00	e.00	.00	.00
10	e.01	.01	e.05	.25	6.1	.00	.00	.00	e.00	e.00	.00	.00
11	e.01	.01	e.05	e.02	24	.00	.00	.00	e.00	e.00	.00	.00
12	e.01	.00	e.05	e.00	154	.00	.00	.00	e.00	e.00	.00	.00
13	e.01	.01	e.05	.00	e100	.00	.00	.00	e.00	e.00	.00	.00
14	e.01	.00	e.05	e.00	e5.0	.00	.00	.00	e.00	e.00	.00	.00
15	e.01	.00	e.04	e.00	44	.00	.00	.00	e.00	e.00	.00	.00
16	e.01	.01	e.03	e.00	e5.0	.00	.00	.00	e.00	e.00	.00	.00
17	e.01	.02	e.01	e.00	e.50	.00	.00	.00	e.00	e.00	.00	.00
18	e.00	.15	e.00	e.00	e.20	.00	.00	.00	e.00	e.00	.00	.00
19	e.01	.00	e.20	e.00	e.10	.01	.00	.00	e.00	e.00	.00	.00
20	e.01	.00	e.02	e.00	e.10	10	.00	.00	e.00	e.00	.00	.00
21	e.01	.01	e.00	e.00	e.10	10	.00	.00	e.00	e.00	.00	.00
22	e.01	.00	e.00	e.00	e.10	4.1	.00	.00	e.00	e.00	.00	.00
23	e.01	.00	e.00	e.00	e.10	12	.00	.00	e.00	e.00	.00	.00
24	e.01	.00	e.00	e.00	e.10	.00	.00	.00	e.00	e.00	.00	.00
25	e.01	.02	e.00	e.00	e.10	.00	.00	.00	e.00	.00	.00	.00
26	e6.0	.04	e.00	e.00	e.10	.85	.00	.00	e.00	.00	.00	.00
27	e2.9	e.04	e.00	e.00	e.10	.04	.00	.00	e.00	.00	.00	.00
28	e.01	e.04	10	e.00	e.10	.00	.00	.00	e.00	.00	.00	.00
29	e.01	e.04	23	e.00	e.10	.00	.00	.00	e.00	.00	.00	.00
30	e.01	e.05	6.8	e.00	---	.00	.00	.00	e.00	.00	.00	.00
31	e.01	---	.10	e.00	---	.02	---	e.00	---	.00	.00	---
TOTAL	9.18	0.54	40.90	113.75	365.50	72.23	0.00	0.02	0.00	1.50	0.00	0.00
MEAN	.30	.018	1.32	3.67	12.6	2.33	.000	.001	.000	.048	.000	.000
MAX	6.0	.15	23	56	154	17	.00	.02	.00	1.0	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	18	1.1	81	226	725	143	.00	.04	.00	3.0	.00	.00

e Estimated.

11070240 SUNNYMEAD CHANNEL AT ALESSANDRO BOULEVARD, NEAR SUNNYMEAD, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.057	.23	.54	1.64	3.63	3.03	.090	.037	.010	.027	.005	.007
MAX	.30	1.25	1.32	3.67	12.6	17.2	.37	.32	.044	.11	.019	.026
(WY)	1992	1973	1992	1992	1992	1991	1990	1990	1990	1991	1991	1990
MIN	.000	.005	.000	.000	.003	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1975	1974	1972	1971	1971	1971	1970	1970	1970	1970	1970

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1970 - 1992	
ANNUAL TOTAL	858.57		603.62			
ANNUAL MEAN	2.35		1.65		1.48	
HIGHEST ANNUAL MEAN					2.23	
LOWEST ANNUAL MEAN					.57	
HIGHEST DAILY MEAN	143	Mar 1	154	Feb 12	154	Feb 12 1992
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 18	.00	Feb 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 2	.00	Dec 21	.00	Feb 1 1970
INSTANTANEOUS PEAK FLOW			1300	Feb 12	1300	Feb 12 1992
INSTANTANEOUS PEAK STAGE			8.87	Feb 12	8.87	Feb 12 1992
ANNUAL RUNOFF (AC-FT)	1700		1200		1070	
10 PERCENT EXCEEDS	1.2		.50		.06	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11070240 SUNNYMEAD CHANNEL AT ALESSANDRO BOULEVARD, NEAR SUNNYMEAD, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--March 1990 to September 1992 (Discontinued). Precipitation records for the period January 1970 to June 1975 available in U.S. Geological Survey Open File Report 79-1256.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Mar. 5, 1990.

EXTREMES FOR PERIOD OF RECORD.--Maximum recorded daily rainfall, 1.79 in, Feb. 27, 1991; no rainfall for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum recorded daily rainfall, 1.07 in, Jan. 5, partial day of 1.40 inches was recorded on Feb. 12; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
2	.00	.00	.00	.01	.00	---	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.12	.00	---	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	1.07	.04	.00	.00	.09	.00	.00	.00	.00
6	.00	.00	.00	.15	.52	---	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.67	.17	---	.00	.00	.00	.20	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07	.00	.00
9	.00	.00	.00	.00	.15	.00	.00	.01	.00	.00	.00	.00
10	.00	.00	.05	.00	.16	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.06	.00	.42	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	---	.00	.00	.00	.00	.04	.00	.00
13	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.83	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
22	.01	.00	.00	.00	.00	.43	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.21	.00	.00	.00	.00	.23	.00	.00	.00	.00	.00	.00
27	.00	.00	.03	.00	.00	.11	.00	.00	.00	.00	.00	.00
28	.00	.00	.29	.00	.00	.05	.00	.00	.00	.00	.00	.00
29	.00	.00	.63	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.01	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.01	---	.00	---	.00	.00	---
TOTAL	0.22	0.03	1.09	2.02	---	---	0.03	0.10	0.00	0.31	0.00	0.00

11070256 PERRIS VALLEY STORM DRAIN AT NANDINO AVENUE, NEAR MARCH AIR FORCE BASE, CA

LOCATION.--Lat 33°52'01", long 117°12'43", in SE 1/4 NE 1/4 sec.32, T.3 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 3.5 mi southeast of March Air Force Base.  
DRAINAGE AREA.--50.6 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Records for January 1970 to September 1975, available in files of the Geological Survey. October 1989 to September 1992 (Discontinued).

GAGE.--Water-stage recorder, crest-stage gage, and broad-crested weir. Elevation of gage is 1,445 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,880 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 8.24 ft; on basis of critical-depth computation; no flow for several days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum(\*);

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1645	402	3.30	Feb. 15	1245	1,450	4.87
Jan. 5	1100	1,160	4.52	Mar. 2	1200	207	2.83
Feb. 6	1845	321	3.11	Mar. 7	1915	916	4.18
Feb. 12	1445	4,880*	8.24*	Mar. 21	0200	681	3.82

EXTREMES FOR CURRENT PERIOD (not previously published).--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 680 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

Water Year	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Water Year	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
1990	Feb. 17	1830	639*	3.90*					
1991	Jan. 4	1730	1,040	4.31	1991	Mar. 13	1815	261	2.96
1991	Jan. 9	1430	250	2.94	1991	Mar. 20	0730	681	3.79
1991	Feb. 27	1915	1,300	4.64	1991	Mar. 27	0200	2,090*	5.45*

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.00	.00	.00	.00	.31	.00	.00	.15	.08	.20
2	.01	.00	.00	.00	.00	56	.08	.08	.01	.35	.11	.17
3	.00	.00	.00	7.2	.00	18	.00	.00	.07	.17	.00	.23
4	.02	.01	.00	.10	.86	.18	.00	.00	.16	.20	.00	.14
5	.00	.13	.00	283	.28	.00	.00	.97	.46	.07	.09	.16
6	.00	.13	.00	65	64	3.0	.00	2.0	.30	.10	.39	.03
7	.01	.07	.28	159	38	81	.00	.08	.93	8.6	.12	.11
8	.07	.13	.26	31	1.2	15	.00	.00	1.6	7.7	.13	.15
9	.15	.05	.00	.45	.05	.37	.00	.00	1.6	1.2	.25	.29
10	.11	.00	.40	.91	38	.03	.00	.00	1.7	1.7	.10	.36
11	.19	.00	2.4	.25	70	.00	.00	.00	1.6	.58	.23	.22
12	.00	.00	.14	.50	727	.00	.00	.00	1.4	2.4	.12	.07
13	.00	.00	.00	.18	267	.00	.00	.00	.34	1.6	.24	.00
14	.00	.00	.00	.00	5.4	.00	.03	.00	.29	1.9	.40	.00
15	.00	.00	.00	.85	269	.00	.02	.00	.27	.60	.29	.00
16	.03	.00	.00	.90	16	.00	.56	.00	.08	.30	.12	.00
17	.00	.00	.00	.16	.56	.00	.15	.00	.00	.21	.25	.00
18	.00	.20	.00	.12	.14	.00	.00	.00	.00	.28	.16	.06
19	.02	.01	.28	1.1	.01	.01	.00	.01	.00	.29	.13	.00
20	.03	.00	.04	.17	.00	21	.00	.00	.00	.13	.26	.00
21	.05	.00	.51	.27	.00	144	.00	.00	.00	.16	.23	.00
22	.16	.00	.14	.20	.00	23	.00	.43	.16	.01	.10	.06
23	.17	.00	.31	.00	.00	159	.00	.47	.20	.00	.03	.01
24	.00	.00	.04	.00	.00	4.2	.00	.19	.13	.45	.12	.00
25	.00	.00	.00	.00	.00	.21	.00	.22	.00	.31	.23	.00
26	1.7	.00	.00	.00	.00	6.5	.00	.21	.00	.01	.20	.00
27	9.1	.00	.00	.00	.00	46	.00	.00	.15	1.5	.06	.00
28	.09	.40	30	.00	.00	7.6	.00	.13	.25	1.8	.00	.00
29	.00	.00	71	.00	.00	.19	.00	.06	.00	.33	.01	.00
30	.00	.00	34	.00	---	1.9	.00	.05	.00	.19	.00	.00
31	.00	---	.09	.00	---	3.9	---	.00	---	.29	.17	---
TOTAL	11.93	1.13	139.89	551.36	1497.50	591.09	1.15	4.90	11.70	33.58	4.62	2.26
MEAN	.38	.038	4.51	17.8	51.6	19.1	.038	.16	.39	1.08	.15	.075
MAX	9.1	.40	71	283	727	159	.56	2.0	1.7	8.6	.40	.36
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	24	2.2	277	1090	2970	1170	2.3	9.7	23	67	9.2	4.5

11070256 PERRIS VALLEY STORM DRAIN AT NANDINO AVENUE, NEAR MARCH AIR FORCE BASE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.21	1.39	2.97	11.7	13.2	11.0	.43	.37	.32	.59	.40	.17
MAX	.46	5.31	7.11	19.5	51.6	48.5	1.56	1.29	1.36	1.08	.72	.57
(WY)	1990	1973	1971	1974	1992	1991	1975	1990	1974	1992	1990	1990
MIN	.000	.000	.000	3.99	.11	.036	.023	.000	.000	.12	.094	.000
(WY)	1974	1975	1974	1990	1972	1971	1991	1975	1971	1973	1991	1973

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1970 - 1992	
ANNUAL TOTAL	2614.41		2851.11			
ANNUAL MEAN	7.16		7.79		4.72	
HIGHEST ANNUAL MEAN					7.79	
LOWEST ANNUAL MEAN					1.60	
HIGHEST DAILY MEAN	501	Mar 27	727	Feb 12	727	Feb 12 1992
LOWEST DAILY MEAN	.00	Jan 26	.00	Oct 3	.00	Jan 27 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 7	.00	Nov 10	.00	Jan 27 1970
INSTANTANEOUS PEAK FLOW			4880	Feb 12	4880	Feb 12 1992
INSTANTANEOUS PEAK STAGE			8.24	Feb 12	8.24	Feb 12 1992
ANNUAL RUNOFF (AC-FT)	5190		5660		3420	
10 PERCENT EXCEEDS	.87		2.1		1.0	
50 PERCENT EXCEEDS	.03		.05		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11070256 PERRIS VALLEY STORM DRAIN AT NANDINO AVENUE, NEAR MARCH AIR FORCE BASE, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--October 1989 to September 1992 (Discontinued).

INSTRUMENTATION.--Recording tipping-bucket rain gage since Oct. 12, 1989.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.98 in, Feb. 27, 1991; no rainfall for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.66 in, Feb. 12; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
2	.00	.00	.00	.02	.00	.80	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.16	.00	.05	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	1.08	.04	.00	.00	.12	.00	.00	.00	.00
6	.00	.00	.00	.05	.80	.07	.00	.00	.00	.04	.00	.00
7	.00	.00	.00	.58	.14	.24	.00	.00	.00	.22	.00	.00
8	.00	.01	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
9	.00	.00	.00	.00	.19	.00	.01	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.17	.01	.00	.00	.00	.00	.00	.00
11	.00	.00	.02	.00	.25	.00	.00	.01	.00	.00	.00	.00
12	.00	.00	.02	.00	1.66	.01	.00	.00	.00	.03	.00	.00
13	.00	.00	.00	.00	.44	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.02	.01	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.81	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.04	.00	.02	.00	.01	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.75	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.32	.00	.08	.00	.00	.00	.00
23	.00	.00	.00	.02	.00	.41	.00	.02	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.30	.00	.00	.00	.00	.00	.00
27	.00	.00	.06	.01	.00	.15	.00	.00	.00	.00	.00	.00
28	.00	.00	.29	.00	.00	.01	.00	.00	.00	.00	.00	.00
29	.00	.00	.65	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.29	.00	.00	.00	.00	.00	.00
31	.00	---	.01	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.04	0.02	1.07	1.92	4.54	3.63	0.02	0.23	0.00	0.32	0.00	0.00

WTR YR 1992 TOTAL 11.79

11070262 PERRIS VALLEY STORM DRAIN LATERAL "B" NEAR MARCH AIR FORCE BASE, CA

LOCATION.--Lat 33°51'32", long 117°13'32", in NE 1/4 NE 1/4 sec.6, T.4 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 0.5 mi southeast of March Air Force Base.

DRAINAGE AREA.--10.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to September 1992 (Discontinued). October 1969 to July 1975, published as "near March Field" in U.S. Geological Survey Open-File Report 79-1256.

GAGE.--Water-stage recorder. Elevation of gage is 1,470 ft above National Geodetic Vertical Datum of 1929, from topographic map. November 1969 to July 1975, at same site at different datum.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 307 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 5.09 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	2015	13	2.40	Feb. 12	1615	*307	*5.09
Jan. 7	2115	63	2.33				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	1.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	2.8	.00	19	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	1.2	.00	7.4	.38	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	13	.08	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	3.7	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	2.3	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	46	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	16	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.24	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	2.2	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	2.9	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.81	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	5.80	3.71	43.10	81.01	3.55	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.19	.12	1.39	2.79	.11	.000	.000	.000	.000	.000	.000
MAX	.00	2.8	2.9	19	46	2.2	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	12	7.4	85	161	7.0	.00	.00	.00	.00	.00	.00

## 11070262 PERRIS VALLEY STORM DRAIN LATERAL "B" NEAR MARCH AIR FORCE BASE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.005	.067	.079	.60	1.48	.87	.000	.001	.001	.010	.002	.001
MAX	.015	.19	.12	1.39	2.79	2.50	.000	.002	.002	.031	.006	.002
(WY)	1991	1992	1992	1992	1992	1991	1990	1990	1990	1990	1991	1990
MIN	.000	.002	.004	.003	.065	.002	.000	.000	.000	.000	.000	.000
(WY)	1990	1990	1991	1990	1990	1990	1990	1991	1991	1991	1992	1991

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1990 - 1992	
ANNUAL TOTAL	142.57		137.17			
ANNUAL MEAN	.39		.37		.25	
HIGHEST ANNUAL MEAN					.37	
LOWEST ANNUAL MEAN					.018	
HIGHEST DAILY MEAN	33	Mar 1	46	Feb 12	46	Feb 12 1992
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1989
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 11	.00	Oct 1	.00	Oct 1 1989
INSTANTANEOUS PEAK FLOW			307		307	
INSTANTANEOUS PEAK STAGE			5.09		5.09	
ANNUAL RUNOFF (AC-FT)	283		272		184	
10 PERCENT EXCEEDS	.06		.00		.02	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA

LOCATION.--Lat 33°48'04", long 117°12'19", in SW 1/4 SW 1/4 sec.21, T.4 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 1.9 mi northeast of Perris and 2.0 mi upstream from San Jacinto River.

DRAINAGE AREA.--93.3 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to September 1975, October 1989 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,410 ft above National Geodetic Vertical Datum of 1929, from topographic map. October 1969 to September 1975, at same site at different datum.

REMARKS.--No estimated daily discharges. Records fair. Some regulation by percolation basins upstream from station. Some pumping for irrigation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 7.81 ft, from rating curve extended above 330 ft<sup>3</sup>/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 ft<sup>3</sup>/s, and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1730	*4,400	*7.81	Feb. 15	1515	1,390	4.86

No flow for many days.

REVISIONS.--The maximum discharge for water year 1991 has been revised to 2,530 ft<sup>3</sup>/s, Mar. 27, gage height, 6.17 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.23	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	57	.06	.00	.00	.00	.00	.00
3	.00	.00	.00	3.9	.00	26	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.42	.00	.77	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	222	.00	.06	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	96	50	.29	.00	.06	.00	.00	.00	.00
7	.00	.00	.00	125	53	64	.00	.07	.00	.75	.00	.00
8	.00	.00	.00	58	2.0	32	.00	.00	.00	1.5	.00	.00
9	.00	.00	.00	.97	.00	.47	.00	.00	.00	.12	.00	.00
10	.00	.00	.00	.00	37	.03	.00	.00	.00	.08	.00	.00
11	.00	.00	.15	.00	64	.00	.00	.00	.00	.06	.00	.00
12	.00	.00	.00	.00	934	.00	.00	.00	.00	.12	.00	.00
13	.00	.00	.00	.00	289	.00	.00	.00	.00	.13	.00	.00
14	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	304	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	38	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.64	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	5.7	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	187	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	192	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	8.9	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	4.4	.00	.00	.00	.00	.00	.00
27	.17	.00	.00	.00	.00	56	.00	.00	.00	.00	.00	.00
28	.00	.00	19	.00	.00	7.5	.00	.00	.00	.00	.00	.00
29	.00	.00	47	.00	.00	.87	.00	.00	.00	.00	.00	.00
30	.00	.00	54	.00	.00	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.29	.00	---	2.0	---	.00	---	.00	.00	---
TOTAL	0.17	0.00	120.44	506.29	1783.73	657.15	0.29	0.13	0.00	2.76	0.00	0.00
MEAN	.005	.000	3.89	16.3	61.5	21.2	.010	.004	.000	.089	.000	.000
MAX	.17	.00	54	222	934	192	.23	.07	.00	1.5	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.3	.00	239	1000	3540	1300	.6	.3	.00	5.5	.00	.00

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.043	.77	1.71	5.92	13.6	12.3	.21	.12	.010	.010	.000	.000
MAX	.37	3.78	6.54	17.1	61.5	70.7	1.32	1.06	.076	.089	.000	.000
(WY)	1973	1973	1972	1974	1992	1991	1975	1990	1990	1992	1970	1970
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1970	1972	1970	1975	1971	1972	1970	1970	1970	1970	1970	1970

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1970 - 1992	
ANNUAL TOTAL	3441.45		3070.96			
ANNUAL MEAN	9.43		8.39		2.84	
HIGHEST ANNUAL MEAN					9.13	
LOWEST ANNUAL MEAN					.35	
HIGHEST DAILY MEAN	777	Mar 27	934	Feb 12	934	Feb 12 1992
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1969
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 23	.00	Oct 1	.00	Oct 1 1969
INSTANTANEOUS PEAK FLOW			4400	Feb 12	4400	Feb 12 1992
INSTANTANEOUS PEAK STAGE			7.81	Feb 12	7.81	Feb 12 1992
ANNUAL RUNOFF (AC-FT)	6830		6090		2060	
10 PERCENT EXCEEDS	.16		.67		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--October 1989 to current year.

INSTRUMENTATION.--Recording tipping-bucket rain gage since Oct. 17, 1989.

REMARKS.--Period of missing record due to instrument failure.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 1.83 in, Feb. 27, 1991; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 1.45 in, Feb. 12; no rainfall for many days.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00
2	.00	.00	.00	.04	.00	.96	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.19	.00	.14	.01	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	1.18	.04	.00	.00	.06	.00	.00	.00	.00
6	.00	.00	.00	.05	.84	.04	.00	.00	.00	.02	.00	.00
7	.00	.00	.00	.40	.35	.02	.00	.00	.00	.22	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00
9	.00	.00	.00	.00	.17	.00	.01	.00	.00	.00	.00	.00
10	.00	.00	.17	.00	.30	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.12	.00	.17	.01	.00	.01	.00	.00	.00	.00
12	.00	.00	.00	.00	1.45	.00	.00	.00	.00	.06	.00	.00
13	.00	.00	.00	.00	.13	.01	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.85	.01	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
17	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.01	.00	.00	e.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
22	.02	.00	.00	.00	.01	---	.00	.09	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	e.06	.00	.01	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.10	.00	.00	.00	.00	.46	.00	.00	.00	.00	.00	.00
27	.01	.00	.02	.01	.00	.06	.00	.00	.00	.00	.00	.00
28	.00	.00	.32	.00	.00	.02	.00	.00	.00	.00	.00	.00
29	.00	.00	.72	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.01	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.01	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.13	0.02	1.38	1.87	4.34	---	0.10	0.17	0.00	0.36	0.00	0.00

CAL YR 1991 TOTAL 12.25

e Estimated.

## 11070500 SAN JACINTO RIVER NEAR ELSINORE, CA

LOCATION.--Lat 33°39'51", Long 117°17'35", in SE 1/4 NE 1/4 sec.9, T.6 S., R.4 W., Riverside County, Hydrologic Unit 18070203, on right bank 2.0 mi east of Elsinore, 2.1 mi downstream from Railroad Canyon Dam, and 36 mi downstream from Lake Hemet.

DRAINAGE AREA.--723 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1916 to current year. Monthly figures 1927-50, adjusted for diversion, published in WSP 1315-B.

REVISED RECORDS.--WDR CA-72-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,270 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mi downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site, at different datum.

REMARKS.--No estimated daily discharges. 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. Temescal Water Co. diverted 145 acre-ft during the current year from Railroad Canyon Reservoir for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft<sup>3</sup>/s, Feb. 17, 1927, gage height, 11.8 ft, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 913 ft<sup>3</sup>/s, Feb. 13, gage height, 7.26 ft; no flow for several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.13	.32	.71	.61	.93	9.6	.62	.11	.26	.06	.19
2	.18	.12	.40	.69	.64	5.1	23	.58	.09	.23	.02	.13
3	.15	.10	.45	.76	.65	72	16	.53	.08	.18	.01	.08
4	.15	.09	.44	.89	.65	47	10	.52	.08	.20	.03	.06
5	.18	.13	.48	2.9	.66	21	8.7	.58	.08	.10	.08	.04
6	.18	.13	.48	3.5	1.9	9.1	6.6	.65	.14	.05	.11	.01
7	.12	.15	.48	1.3	7.6	7.5	5.3	.61	.17	.32	.12	.01
8	.09	.14	.45	1.5	2.3	44	4.2	.60	.11	.58	.13	.01
9	.10	.21	.49	.91	1.8	38	3.3	.63	.16	.44	.09	.01
10	.10	.20	.57	.85	5.1	14	2.8	.57	.22	.38	.07	.02
11	.13	.16	.59	.93	2.3	6.2	2.2	.51	.29	.35	.02	.03
12	.13	.13	.55	.85	24	3.2	1.9	.53	.24	.34	.01	.01
13	.09	.20	.53	.81	577	2.3	1.6	.45	.23	.36	.06	.00
14	.07	.26	.50	.94	415	1.9	1.3	.43	.21	.33	.17	.00
15	.06	.31	.46	.97	189	1.5	1.1	.40	.27	.26	.15	.00
16	.04	.33	.48	.88	568	1.3	1.0	.36	.35	.27	.02	.00
17	.05	.31	.51	.94	142	1.2	.98	.33	.26	.25	.00	.00
18	.04	.39	.55	.84	51	1.1	.88	.28	.21	.22	.00	.00
19	.02	.39	.58	.69	26	1.0	1.0	.34	.16	.15	.00	.00
20	.02	.38	.54	.79	13	1.4	.92	.29	.15	.13	.00	.00
21	.51	.38	.52	.72	6.9	212	.72	.32	.12	.17	.00	.00
22	.31	.36	.53	.65	5.1	153	.68	.29	.09	.22	.00	.00
23	.21	.35	.56	.62	6.5	277	.64	.45	.08	.27	.00	.00
24	.18	.28	.59	.61	3.0	284	.58	.37	.06	.28	.00	.00
25	.17	.27	.58	.61	1.8	84	.55	.27	.07	.28	.05	.00
26	.18	.28	.56	.61	1.9	40	.50	.27	.09	.20	.04	.04
27	.22	.28	.56	.61	1.3	51	.49	.26	.11	.13	.02	.00
28	.16	.29	.73	.61	1.1	60	.53	.27	.12	.09	.02	.00
29	.11	.32	.81	.62	.99	36	.53	.33	.14	.07	.01	.00
30	.14	.33	1.6	.61	---	19	.59	.30	.22	.10	.00	.00
31	.11	---	.81	.61	---	9.5	---	.20	---	.13	.09	---
TOTAL	4.45	7.40	17.70	29.53	2057.80	1505.23	108.19	13.14	4.71	7.34	1.38	0.64
MEAN	.14	.25	.57	.95	71.0	48.6	3.61	.42	.16	.24	.045	.021
MAX	.51	.39	1.6	3.5	577	284	23	.65	.35	.58	.17	.19
MIN	.02	.09	.32	.61	.61	.93	.49	.20	.06	.05	.00	.00
AC-FT	8.8	15	35	59	4080	2990	215	26	9.3	15	2.7	1.3

SANTA ANA RIVER BASIN

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11070500 SAN JACINTO RIVER NEAR ELSINORE, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.59	.76	5.38	26.4	81.6	73.4	24.2	5.44	.66	.62	.41	.52
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	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1917	1917	1917	1921	1921	1921	1921	1921	1919	1918	1918	1917

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1916 - 1992	
ANNUAL TOTAL	5149.32		3757.51			
ANNUAL MEAN	14.1		10.3		15.8	
HIGHEST ANNUAL MEAN					232	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	1450	Mar 27	577	Feb 13	14000	Jan 28 1916
LOWEST DAILY MEAN	.00	Jul 29	.00	Aug 17	.00	Jul 28 1916
ANNUAL SEVEN-DAY MINIMUM	.01	Aug 8	.00	Aug 17	.00	Jul 28 1916
INSTANTANEOUS PEAK FLOW			913	Feb 13	16000	Feb 17 1927
INSTANTANEOUS PEAK STAGE			7.26	Feb 13	11.80	Feb 17 1927
ANNUAL RUNOFF (AC-FT)	10210		7450		11480	
10 PERCENT EXCEEDS	5.8		6.5		3.3	
50 PERCENT EXCEEDS	.50		.34		.00	
90 PERCENT EXCEEDS	.13		.02		.00	

## 11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA

LOCATION.--Lat 33°53'21", long 117°33'43", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on right bank 500 ft upstream from Main Street bridge in Corona and 1.5 mi upstream from topographic boundary of Prado Flood control basin.

DRAINAGE AREA.--224 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

PERIOD OF RECORD.--December 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, CA).

GAGE.--Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map. December 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.--Records 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.67 ft; minimum daily, 0.27 ft<sup>3</sup>/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge 8,850 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site (Station 11072200) 1.2 mi downstream on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,160 ft<sup>3</sup>/s, Feb. 12, gage height, 5.55 ft; minimum daily, 0.34 ft<sup>3</sup>/s, July 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	8.6	6.4	1.3	12	1.3	77	1.8	5.5	7.7	24	12
2	13	9.8	6.3	1.4	12	41	1.7	1.6	5.5	3.2	27	14
3	6.8	8.3	6.2	39	12	4.9	1.3	1.8	5.5	.34	25	12
4	6.0	11	6.7	2.9	11	1.1	1.3	1.2	7.6	.36	22	13
5	9.7	13	7.2	133	11	.94	1.2	1.4	6.6	.67	18	13
6	14	12	7.8	22	56	11	1.2	2.1	6.8	.54	20	13
7	14	8.6	7.7	105	25	3.3	1.2	1.7	7.2	4.6	21	12
8	14	2.5	7.7	6.2	10	1.8	1.4	2.0	6.5	3.8	18	13
9	14	2.5	7.9	1.4	12	.92	1.1	2.3	5.5	7.3	15	12
10	15	3.7	8.3	1.3	32	1.1	1.3	1.8	5.5	11	12	14
11	15	4.2	8.5	1.2	212	.98	1.4	2.0	5.9	10	11	13
12	15	3.0	8.1	.87	353	.98	2.6	1.8	7.1	9.5	11	13
13	15	3.5	8.4	.75	105	4.1	1.0	6.5	6.2	9.3	11	13
14	16	3.8	8.2	1.0	e20.0	10	1.1	5.7	6.1	9.7	11	13
15	15	6.1	8.4	.79	e200	9.6	1.3	3.1	6.8	11	11	12
16	19	4.2	10	.97	3.1	9.6	1.2	2.2	7.1	10	11	13
17	18	5.3	9.8	1.1	1.5	9.6	1.3	2.8	5.7	10	12	14
18	19	6.3	9.9	.81	1.7	9.9	1.2	3.9	5.1	11	11	15
19	19	5.9	12	.82	1.6	11	1.7	2.3	8.5	11	12	15
20	19	6.9	9.6	3.7	1.4	230	1.2	3.4	4.8	12	12	14
21	23	8.2	9.7	9.4	1.3	179	2.3	4.6	4.2	13	12	14
22	25	8.2	9.5	8.3	1.2	68	2.6	4.7	9.1	14	12	15
23	24	5.5	8.9	9.3	1.0	171	2.8	4.5	14	16	12	16
24	25	6.7	9.6	9.7	1.3	2.1	1.7	4.1	9.9	17	13	14
25	19	8.0	11	9.6	1.1	2.5	1.7	4.1	7.9	18	13	12
26	21	12	9.9	9.6	1.9	45	2.1	4.3	9.9	18	12	12
27	11	8.8	9.7	9.6	1.1	68	2.4	3.5	11	19	12	2.3
28	1.8	7.7	107	9.9	1.2	1.6	1.9	3.7	10	21	12	5.3
29	1.7	8.3	121	10	1.1	1.3	1.9	4.1	9.7	22	12	13
30	3.1	6.4	28	11	---	3.7	1.6	5.3	8.8	26	12	13
31	9.2	---	1.8	12	---	2.2	---	6.2	---	26	12	---
TOTAL	455.3	209.0	491.2	433.91	1085.5	907.52	123.7	100.5	220.0	353.01	449	379.6
MEAN	14.7	6.97	15.8	14.0	37.4	29.3	4.12	3.24	7.33	11.4	14.5	12.7
MAX	25	13	121	133	353	230	77	6.5	14	26	27	16
MIN	1.7	2.5	1.8	.75	1.0	.92	1.0	1.2	4.2	.34	11	2.3
AC-FT	903	415	974	861	2150	1800	245	199	436	700	891	753

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
INSTANTANEOUS PEAK FLOW	4720 Mar 1 1983
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.9	11.1	15.7	17.1	46.1	42.2	3.51	8.59	10.7	12.5	14.3	13.5
MAX	14.7	15.3	15.8	20.2	55.1	55.2	4.12	13.9	14.0	13.5	14.5	14.3
(WY)	1992	1991	1992	1991	1991	1991	1992	1991	1991	1991	1992	1991
MIN	13.0	6.97	15.5	14.0	37.4	29.3	2.89	3.24	7.33	11.4	14.0	12.7
(WY)	1991	1992	1991	1992	1992	1992	1991	1992	1992	1992	1991	1992

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1991 - 1992

ANNUAL TOTAL	7257.4	5208.24	
ANNUAL MEAN	19.9	14.2	17.3
HIGHEST ANNUAL MEAN			20.4 1991
LOWEST ANNUAL MEAN			14.2 1992
HIGHEST DAILY MEAN	630 Feb 28	353 Feb 12	630 Feb 28 1991
LOWEST DAILY MEAN	1.6 Mar 17	.34 Jul 3	.34 Jul 3 1992
ANNUAL SEVEN-DAY MINIMUM	2.2 Apr 1	.89 Jan 13	.89 Jan 13 1992
INSTANTANEOUS PEAK FLOW		2160 Feb 12	2160 Feb 12 1992
INSTANTANEOUS PEAK STAGE		5.55 Feb 12	5.55 Feb 12 1992
ANNUAL RUNOFF (AC-FT)	14400	10330	12540
10 PERCENT EXCEEDS	21	20	21
50 PERCENT EXCEEDS	13	8.4	11
90 PERCENT EXCEEDS	2.8	1.3	1.8

## 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 Schaefer Avenue, 0.8 mi downstream from San Antonio Creek, and 1.5 mi southwest of Chino.

DRAINAGE AREA.--48.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

REVISED RECORDS.--WDR CA-84-1: 1983(M).

GAGE.--Water-stage recorder. Concrete dikes formed low-water control from October 1975 to Apr. 16, 1991. Elevation of gage is 685 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. 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. California Water Project reported no releases during the year to the basin via San Antonio Creek from Rialto Pipeline below San Antonio Dam at a site 10 mi upstream. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft<sup>3</sup>/s, Feb. 27, 1983, gage height, 10.32 ft, from rating curve extended above 560 ft<sup>3</sup>/s on basis of slope-conveyance study; no flow May 21, June 30, July 1, Oct. 30, Nov. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 9.23 ft, present datum, discharge, 9,200 ft<sup>3</sup>/s, on basis of contracted-opening measurement at site 6.1 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,780 ft<sup>3</sup>/s, Feb. 12, gage height, 7.95 ft; minimum daily, 0.48 ft<sup>3</sup>/s, Dec. 21-23, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	.68	1.9	.95	.77	.96	6.0	1.1	.99	.95	.78	.81
2	.52	.74	2.1	.91	.72	95	1.1	1.0	.93	.96	.64	.71
3	.56	1.3	e2.1	19	.84	6.8	1.0	.96	.92	1.0	.70	.73
4	.61	1.1	e1.5	1.1	.79	1.1	.96	1.0	.92	.93	.75	.76
5	.99	.66	e1.8	100	2.1	1.0	.96	1.1	.94	.89	.76	.74
6	2.1	.64	e1.9	6.9	17	12	.96	1.1	.96	.95	.79	.70
7	1.5	1.0	e1.5	15	33	23	.96	1.0	.96	1.4	.78	.65
8	.56	.74	e1.7	1.2	.92	1.7	.96	1.1	1.0	1.2	.72	.67
9	.60	.55	e1.3	.86	3.1	1.1	.96	.96	.92	.85	.65	.73
10	.58	.71	e.94	.80	63	1.1	.96	.93	.95	.85	.67	.84
11	.56	.81	e1.1	.72	129	1.0	.96	1.1	.96	1.1	1.0	.77
12	.74	.67	e.92	.64	347	1.1	.96	1.1	.92	3.6	.79	.61
13	2.2	.63	e.78	.83	44	1.0	.96	1.0	1.0	.81	.75	.50
14	1.5	.58	e.94	1.0	1.5	1.0	.96	1.0	.89	.77	.76	.62
15	.57	.56	e.82	.75	120	.97	.96	.96	1.0	.72	.68	.73
16	.58	.55	e.72	.62	1.7	1.0	.99	.96	.97	.77	.67	.59
17	.59	.55	e.98	.62	1.3	.97	.96	.96	.92	.77	.73	.59
18	.77	.83	e.90	.62	1.1	.96	.96	.96	.93	.72	.78	.58
19	.55	.86	4.9	.62	.99	1.0	.96	1.1	.91	.65	.64	.53
20	1.5	.83	.57	.62	.98	81	1.0	1.0	.92	.75	.68	.52
21	1.5	.83	.48	.62	1.0	71	1.0	1.0	.91	.70	.69	.55
22	.84	.94	.48	.62	.96	42	.98	.96	.96	.74	.56	.66
23	.80	1.0	.48	.73	.96	43	1.0	.96	1.0	.72	.55	.63
24	.53	3.9	.63	.86	.98	1.4	1.1	1.0	1.0	.72	.58	.53
25	.67	2.9	.53	.83	.98	1.1	1.1	.96	.99	.72	.62	.56
26	13	1.9	.48	.83	.97	19	1.1	.97	.94	.72	.66	.57
27	3.1	1.9	.67	.91	.99	43	1.2	.96	.99	.88	.90	.59
28	1.2	2.0	31	.87	1.0	3.5	.96	1.1	1.0	.88	.82	.59
29	.77	3.0	132	.79	1.0	1.1	.96	1.0	1.0	.78	.83	.59
30	.78	1.9	3.8	.72	---	1.2	.96	.98	.93	.81	.62	.57
31	.73	---	1.1	.76	---	1.4	---	.99	---	.83	.72	---
TOTAL	42.05	35.26	201.02	162.30	778.65	461.46	34.85	31.27	28.63	29.14	22.27	19.22
MEAN	1.36	1.18	6.48	5.24	26.8	14.9	1.16	1.01	.95	.94	.72	.64
MAX	13	3.9	132	100	347	95	6.0	1.1	1.0	3.6	1.0	.84
MIN	.52	.55	.48	.62	.72	.96	.96	.93	.89	.65	.55	.50
AC-FT	83	70	399	322	1540	915	69	62	57	58	44	38

e Estimated.

## 11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.8	17.4	30.1	30.3	34.9	33.4	8.07	7.61	17.2	18.5	13.5	10.7
MAX	126	113	189	186	193	257	68.6	90.4	184	176	191	96.9
(WY)	1979	1976	1976	1976	1980	1978	1974	1974	1976	1974	1974	1974
MIN	.061	.23	.53	.55	.33	.30	.14	.22	.062	.069	.14	.13
(WY)	1978	1978	1970	1972	1972	1972	1977	1973	1977	1977	1976	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1970 - 1992	
ANNUAL TOTAL	2643.40		1846.12			
ANNUAL MEAN	7.24		5.04		19.7	
HIGHEST ANNUAL MEAN					92.4	
LOWEST ANNUAL MEAN					3.24	
HIGHEST DAILY MEAN	347	Feb 28	347	Feb 12	2060	Mar 1 1978
LOWEST DAILY MEAN	.48	Jun 16	.48	Dec 21	.00	May 21 1977
ANNUAL SEVEN-DAY MINIMUM	.52	Dec 20	.52	Dec 20	.02	Oct 28 1977
INSTANTANEOUS PEAK FLOW			3780	Feb 12	12700	Feb 27 1983
INSTANTANEOUS PEAK STAGE			7.95	Feb 12	10.32	Feb 27 1983
ANNUAL RUNOFF (AC-FT)	5240		3660		14250	
10 PERCENT EXCEEDS	2.1		2.1		72	
50 PERCENT EXCEEDS	.83		.95		.98	
90 PERCENT EXCEEDS	.57		.59		.26	

## SANTA ANA RIVER BASIN

11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA

LOCATION.--Lat 33°58'58", long 117°35'55", in SW 1/4 NE 1/4 sec.22, T.2 S., R.7 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 300 ft upstream from Merrill Avenue bridge and 4.6 mi west of Mira Loma.

DRAINAGE AREA.--75.8 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1968 to July 1977, January 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 660 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.--No estimated daily discharges. 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). Chino Basin Municipal Water District Tertiary Plant No. 1 began discharging effluent 1.5 mi upstream from station on May 8, 1985. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,100 ft<sup>3</sup>/s, Feb. 27, 1983, gage height, 7.85 ft, from floodmark on basis of slope-conveyance study of peak flow; prior to operation of Plant No. 1, no flow for most of some years; minimum daily, since 1985, 2.5 ft<sup>3</sup>/s, June 6, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,580 ft<sup>3</sup>/s, Feb. 12, gage height, 5.23 ft, minimum daily, 16 ft<sup>3</sup>/s, Oct. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	29	98	23	65	50	50	51	77	48	56	46
2	39	30	94	21	66	150	46	54	64	41	49	49
3	42	32	60	59	67	60	45	60	63	47	53	45
4	44	41	76	25	65	33	38	51	66	46	47	49
5	36	51	77	200	63	33	40	46	52	37	57	56
6	40	41	62	64	126	45	41	49	61	46	40	45
7	47	37	72	73	137	36	38	44	66	44	40	43
8	45	35	58	36	36	38	36	46	75	45	45	53
9	39	36	38	26	43	36	38	48	65	49	50	49
10	37	41	44	42	122	29	40	45	42	45	46	50
11	39	35	37	53	533	33	45	45	66	46	42	48
12	40	36	32	68	1250	34	43	46	73	50	43	47
13	44	35	39	67	270	38	43	47	69	47	78	46
14	47	31	35	67	82	43	45	40	61	45	75	45
15	44	32	29	76	236	48	47	38	60	44	60	52
16	46	24	41	64	88	54	37	36	60	39	54	49
17	45	30	37	60	61	54	40	44	54	43	57	51
18	45	38	41	67	50	50	39	42	49	44	63	54
19	46	36	72	62	47	55	42	38	52	44	59	52
20	47	37	78	66	46	214	39	43	51	42	58	55
21	50	36	55	65	43	337	46	40	51	45	55	58
22	54	39	65	51	44	134	49	44	48	42	64	54
23	48	46	62	64	48	359	42	42	48	42	55	46
24	44	50	61	65	46	81	43	44	43	44	58	51
25	39	49	74	61	44	96	43	41	55	50	42	49
26	114	45	69	65	42	121	45	51	52	50	41	48
27	57	50	65	74	55	207	49	37	50	53	43	52
28	19	67	111	69	46	59	44	27	49	54	42	41
29	16	68	205	71	49	41	53	29	49	49	42	43
30	19	91	62	68	---	43	58	42	55	44	44	45
31	30	---	33	65	---	50	---	65	---	56	47	---
TOTAL	1344	1248	1982	1937	3870	2661	1304	1391	1713	1432	1605	1471
MEAN	43.4	41.6	63.9	62.5	133	85.8	43.5	44.9	57.1	46.2	51.8	49.0
MAX	114	91	205	200	1250	359	58	65	77	56	78	58
MIN	16	24	29	21	36	29	36	27	42	37	40	41
AC-FT	2670	2480	3930	3840	7680	5280	2590	2760	3400	2840	3180	2920

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 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
INSTANTANEOUS PEAK FLOW	9100 Jan 25 1969
INSTANTANEOUS 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)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
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 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
INSTANTANEOUS PEAK FLOW	16100 Feb 27 1983
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

MEAN	32.7	33.3	35.1	47.5	61.0	56.0	28.8	26.8	28.4	27.3	28.2	37.0
MAX	52.9	55.1	63.9	62.5	133	102	43.5	44.9	57.1	46.2	51.8	52.0
(WY)	1988	1986	1992	1992	1992	1991	1992	1992	1992	1992	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 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1986 - 1992

ANNUAL TOTAL	16110	21958	
ANNUAL MEAN	44.1	60.0	36.7
HIGHEST ANNUAL MEAN			60.0 1992
LOWEST ANNUAL MEAN			26.6 1987
HIGHEST DAILY MEAN	814 Mar 1	1250 Feb 12	1250 Feb 12 1992
LOWEST DAILY MEAN	12 Apr 23	16 Oct 29	2.5 Jun 6 1987
ANNUAL SEVEN-DAY MINIMUM	17 Jan 14	25 Oct 28	12 Aug 25 1988
INSTANTANEOUS PEAK FLOW		9580 Feb 12	9580 Feb 12 1992
INSTANTANEOUS PEAK STAGE		5.23 Feb 12	5.23 Feb 12 1992
ANNUAL RUNOFF (AC-FT)	31950	43550	26600
10 PERCENT EXCEEDS	61	73	50
50 PERCENT EXCEEDS	33	47	26
90 PERCENT EXCEEDS	19	36	18

## SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA  
(National stream-quality accounting network station)

LOCATION.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona.

DRAINAGE AREA.--1,490 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.--No estimated daily discharges. 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, and return flow from irrigated areas. During the current year, no California Water Project releases were made. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,440 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 6.88 ft; minimum daily, 2.4 ft<sup>3</sup>/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 100,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,570 ft<sup>3</sup>/s, Feb. 14, gage height, 6.54 ft; minimum daily, 98 ft<sup>3</sup>/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	146	200	419	183	473	514	517	142	139	136	128
2	100	163	183	334	189	140	514	503	137	140	134	132
3	98	190	179	300	188	381	515	482	134	138	132	132
4	103	190	186	304	191	481	513	458	136	139	134	129
5	101	191	197	304	195	333	509	401	128	135	133	128
6	107	173	200	245	181	212	505	199	136	127	128	132
7	110	162	213	334	249	226	500	200	139	112	152	142
8	111	156	216	442	312	229	498	205	140	141	164	150
9	109	152	215	489	308	397	494	195	139	152	170	142
10	110	155	209	486	315	470	506	195	136	152	155	138
11	106	153	214	484	301	491	511	179	136	136	118	139
12	108	134	206	479	1690	499	506	167	142	134	112	136
13	112	134	205	474	3260	486	497	180	140	141	115	140
14	114	134	210	467	4010	469	491	173	140	141	128	144
15	112	136	210	468	1790	443	506	175	141	144	123	145
16	112	134	211	479	2690	317	511	166	142	143	125	140
17	113	147	218	477	1210	255	502	156	141	141	133	139
18	114	158	225	461	474	247	495	173	139	139	134	143
19	115	165	239	433	503	218	486	175	135	140	137	139
20	124	178	216	356	500	221	505	165	138	139	129	137
21	132	180	205	205	498	248	515	142	139	134	118	139
22	138	183	203	200	493	330	504	147	147	136	118	135
23	139	185	206	192	482	479	492	152	151	137	122	134
24	136	183	208	192	474	668	291	151	147	139	118	133
25	142	196	222	187	474	673	129	145	139	139	116	137
26	157	198	213	187	505	558	127	154	139	140	120	130
27	308	214	212	187	480	1760	127	152	139	139	119	116
28	219	201	349	206	521	836	126	148	140	140	120	115
29	144	205	314	205	507	520	124	136	139	135	122	116
30	144	203	400	198	---	519	373	144	139	136	124	125
31	154	---	456	188	---	517	---	144	---	138	126	---
TOTAL	3995	5099	7140	10382	23173	14096	12886	6679	4180	4286	4015	4035
MEAN	129	170	230	335	799	455	430	215	139	138	130	134
MAX	308	214	456	489	4010	1760	515	517	151	152	170	150
MIN	98	134	179	187	181	140	124	136	128	112	112	115
AC-FT	7920	10110	14160	20590	45960	27960	25560	13250	8290	8500	7960	8000

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	92.4	119	183	223	302	349	222	145	121	95.8	81.3	75.8
MAX	344	312	709	756	2681	2556	1101	843	736	366	352	187
(WY)	1984	1966	1967	1969	1980	1980	1980	1983	1983	1980	1983	1983
MIN	22.4	33.5	39.5	49.2	49.7	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 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1941 - 1992	
ANNUAL TOTAL	99219		99966			
ANNUAL MEAN	272		273		167	
HIGHEST ANNUAL MEAN					739	
LOWEST ANNUAL MEAN					36.4	
HIGHEST DAILY MEAN	3490	Mar 2	4010	Feb 14	6440	Feb 23 1980
LOWEST DAILY MEAN	98	Oct 3	98	Oct 3	2.4	Jul 29 1978
ANNUAL SEVEN-DAY MINIMUM	102	Sep 30	103	Oct 1	3.0	Sep 24 1973
INSTANTANEOUS PEAK FLOW			4570	Feb 14	7440	Feb 21 1980
INSTANTANEOUS PEAK STAGE			6.54	Feb 14	6.88	Feb 21 1980
INSTANTANEOUS LOW FLOW			98	Oct 3	2.4	Jul 29 1978
ANNUAL RUNOFF (AC-FT)	196800		198300		120900	
10 PERCENT EXCEEDS	490		500		290	
50 PERCENT EXCEEDS	179		165		98	
90 PERCENT EXCEEDS	120		124		36	

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.

BIOLOGICAL DATA: Water years 1975-81.

SPECIFIC CONDUCTANCE: Water years 1970 to current year.

WATER TEMPERATURE: Water years 1970 to current year.

SEDIMENT DATA: Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

CHLORIDE: October 1970 to September 1971.

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURE: October 1969 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1973 to June 1982.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperature since October 1969.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Specific conductance and water temperature values are affected by releases from Prado Dam.

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, 1,300 microsiemens, Oct. 3; minimum recorded, 252 microsiemens, Mar. 21.

WATER TEMPERATURE: Maximum recorded, 28.5°C, Aug. 13; minimum recorded, 9.5°C, Dec. 2.

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
01...	1315	107	1000	--	23.0	--	--	--	--	--	--
16...	1215	116	1020	--	20.5	--	--	--	--	--	--
NOV											
04...	1330	200	1050	--	17.0	--	--	--	--	--	--
19...	1200	163	1040	8.0	15.0	11	750	9.8	99	K1900	680
JAN											
10...	1315	490	590	--	12.0	--	--	--	--	--	--
30...	1230	192	1070	8.1	14.0	14	745	10.0	100	4600	860
FEB											
04...	1230	187	1050	--	14.0	--	--	--	--	--	--
25...	1420	481	780	--	16.0	--	--	--	--	--	--
MAR											
17...	1315	253	1140	7.9	16.0	33	747	9.5	99	1600	340
APR											
01...	1115	512	552	--	16.0	--	--	--	--	--	--
MAY											
13...	1205	177	1070	7.9	20.5	99	746	8.4	96	2000	680
21...	1215	138	1060	--	21.5	--	--	--	--	--	--
JUN											
23...	1310	150	1050	--	23.0	--	--	--	--	--	--
JUL											
08...	1115	142	1040	--	23.0	--	--	--	--	--	--
16...	1230	142	1040	8.0	23.5	18	747	8.4	101	400	540
AUG											
10...	1000	161	990	--	24.5	--	--	--	--	--	--
26...	1145	122	1030	--	22.5	--	--	--	--	--	--
SEP											
01...	1430	129	1040	--	22.5	--	--	--	--	--	--
15...	1330	146	1030	8.2	21.5	18	745	8.7	101	1000	K280

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3	
NOV 19...	290	90	83	20	96	41	2	11	244	0	200
JAN 30...	290	100	84	20	100	42	3	11	234	0	192
MAR 17...	330	84	97	22	110	41	3	10	303	0	248
MAY 13...	310	89	88	21	100	40	2	11	266	0	218
JUL 16...	280	65	78	20	100	43	3	9.9	259	0	212
SEP 15...	270	85	77	19	97	43	3	9.7	227	0	186

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
OCT 01...	--	--	--	--	626	--	--	--	--	--
16...	--	--	--	--	658	--	--	--	--	--
NOV 04...	--	--	--	--	648	--	--	--	--	--
19...	140	110	0.50	22	636	651	0.86	0.050	0.050	9.20
JAN 10...	--	--	--	--	377	--	--	--	--	--
30...	140	120	0.50	23	652	668	0.89	0.080	0.080	10.0
FEB 04...	--	--	--	--	652	--	--	--	--	--
25...	--	--	--	--	468	--	--	--	--	--
MAR 17...	130	130	0.50	23	701	712	0.95	0.260	0.220	7.70
APR 01...	--	--	--	--	343	--	--	--	--	--
MAY 13...	120	120	0.40	27	648	666	0.88	0.160	0.150	8.50
21...	--	--	--	--	664	--	--	--	--	--
JUN 23...	--	--	--	--	634	--	--	--	--	--
JUL 08...	--	--	--	--	604	--	--	--	--	--
16...	120	120	0.50	22	628	642	0.85	0.120	0.110	7.80
AUG 10...	--	--	--	--	602	--	--	--	--	--
26...	--	--	--	--	616	--	--	--	--	--
SEP 01...	--	--	--	--	684	--	--	--	--	--
15...	110	120	0.20	23	630	617	0.86	0.120	0.110	9.40

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 19...	8.70	0.100	0.100	1.0	3.40	3.10	3.20	3.10	<10	40
JAN 30...	10.0	0.160	0.150	1.1	3.40	3.20	3.10	3.00	<10	40
MAR 17...	7.50	0.570	0.570	2.0	2.50	2.20	2.30	2.20	--	--
MAY 13...	8.40	0.180	0.160	0.80	3.60	3.50	3.20	3.00	<10	48
JUL 16...	7.90	0.080	0.080	1.1	3.60	3.00	3.00	2.90	--	--
SEP 15...	9.20	0.170	0.170	1.0	2.90	2.70	2.70	2.50	40	36

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
NOV 19...	<3	19	10	91	<10	2	<1	<1.0	540	<6
JAN 30...	<3	18	7	100	10	2	3	<1.0	530	<6
MAY 13...	<3	9	7	150	10	3	<1	<1.0	550	9
SEP 15...	<3	8	8	73	20	2	<1	<1.0	490	8

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SAMPLE LOC- ATION, SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY											
13...*	1030	1.28	7.00	1080	7.9	20.0	746	8.4	95	246	98
13...*	1035	1.68	16.0	1080	7.9	20.0	746	8.4	95	262	98
13...*	1045	1.72	25.0	1080	7.9	20.0	746	8.3	94	--	--
13...*	1050	1.68	34.0	1080	7.9	20.0	746	8.3	94	273	98
SEP											
15...*	1300	1.40	6.00	--	7.9	21.5	745	8.5	--	57	90
15...*	1305	1.50	12.0	--	7.9	21.5	745	8.5	--	52	90
15...*	1310	1.59	18.0	--	8.0	21.5	745	8.4	--	50	92
15...*	1320	1.64	24.0	--	8.0	21.5	745	8.5	--	51	93
15...*	1325	1.60	30.0	--	7.9	21.5	745	8.4	--	53	89

\* Instantaneous discharge at the time of cross-sectional measurements: May 13, 177 ft<sup>3</sup>/s; Sept. 15, 146 ft<sup>3</sup>/s.

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV						
19...	1200	163	15.0	32	14	92
JAN						
30...	1230	192	14.0	44	23	94
MAR						
17...	1315	253	16.0	150	102	99
MAY						
13...	1040	177	20.0	260	124	98
13...	1205	177	20.5	255	122	98
JUL						
16...	1230	142	23.5	52	20	97
SEP						
15...	1315	146	21.5	53	21	91

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA-Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1010	960	1110	1060	1000	990	---	---	1070	1050	1040	959
2	1020	991	1110	1050	1040	990	---	---	1060	1040	1090	1030
3	1300	993	1050	1020	1040	1000	979	930	1060	1040	1070	1000
4	1270	997	1070	1020	1020	1000	970	740	1060	1030	1000	896
5	1040	997	1060	1040	1010	1000	850	730	1070	1040	947	777
6	1030	1000	1080	1050	1010	980	860	680	1070	839	930	748
7	1010	983	1060	1040	1000	980	680	590	839	688	891	731
8	1010	973	1070	1040	990	970	670	570	688	658	993	752
9	1020	985	1070	1050	1000	980	640	560	837	668	914	734
10	1010	987	1080	1050	990	980	600	570	907	737	867	736
11	1020	989	1070	1040	990	970	620	590	797	597	859	788
12	1020	991	1060	1040	990	970	640	620	606	346	931	810
13	1010	993	1060	1030	990	980	670	640	396	336	983	861
14	1010	985	1050	1030	---	---	690	670	365	325	1030	933
15	1020	978	1050	1030	---	---	770	690	405	355	1060	995
16	1030	999	1070	1030	---	---	820	770	504	395	1110	1040
17	1030	1000	1040	1010	---	---	850	800	514	444	1150	1100
18	1030	1000	1030	1010	---	---	890	840	553	503	1140	1120
19	1030	1000	1040	1000	---	---	920	880	593	533	1130	1110
20	1030	1010	1020	1000	---	---	980	920	632	573	1120	653
21	1030	1010	1030	1010	---	---	980	948	682	612	653	252
22	1030	999	1030	1000	---	---	974	948	702	642	370	341
23	1030	1010	1020	990	---	---	992	966	901	691	507	358
24	1070	1020	1020	990	---	---	1010	978	871	781	496	435
25	1080	1060	1000	980	---	---	1020	992	851	770	435	413
26	1120	977	1000	980	---	---	1030	1010	893	831	452	403
27	1040	777	1000	980	---	---	1050	1030	944	853	439	401
28	1050	1030	1020	990	---	---	1050	1030	976	875	488	428
29	1080	1030	1010	990	---	---	1070	1040	1020	926	505	477
30	1070	1040	1000	990	---	---	1070	1040	---	---	523	495
31	1070	1050	---	---	---	---	1070	1040	---	---	532	513
MONTH	1300	777	1110	980	---	---	---	---	1070	325	1150	252
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	590	530	1000	960	1060	1030	1050	1010	1050	1010	1050	1010
2	650	580	1000	960	1050	1020	1050	1010	1060	1010	1050	1010
3	690	610	1000	950	1050	1000	1060	1020	1050	1010	1040	1000
4	710	660	1000	960	1030	1010	1070	1020	1050	1000	1040	1020
5	710	670	1100	990	1030	993	1070	1020	1040	1010	1030	1010
6	690	660	1060	1030	1010	984	1070	1040	1050	1020	1020	997
7	720	660	1100	1050	1020	981	1080	1050	1020	984	1030	990
8	740	690	1100	1060	1030	978	1060	1030	996	974	1020	989
9	730	710	1100	1080	1030	984	1030	1010	998	977	1020	991
10	740	720	1100	1080	1040	1000	1040	1000	1040	969	1020	1000
11	740	720	1090	1080	1050	1010	1050	1010	1070	1040	1020	1000
12	750	710	1100	1080	1020	995	1030	991	1090	1050	1030	994
13	780	720	1080	1060	1010	990	1000	962	1080	904	1030	1000
14	780	710	1080	1060	1030	988	1020	984	1000	895	1020	1000
15	790	750	1080	1060	1040	1000	1020	986	1050	1000	1040	1000
16	790	740	1070	1050	1050	1010	1040	989	1040	1020	1050	1000
17	810	770	1070	1050	1100	1020	1040	1000	1040	1020	1060	1010
18	810	780	1070	1050	1050	1020	1050	1000	1040	1010	1060	1010
19	840	760	1070	1050	1050	1020	1040	996	1040	1010	1060	1020
20	830	780	1060	1050	1050	1020	1050	999	1030	1010	1050	1020
21	880	810	1070	1030	1050	1020	1040	1010	1040	1000	1060	1020
22	900	850	1050	1000	1060	1030	1040	1000	1030	1010	1080	1030
23	930	860	1030	989	1060	1030	1050	1020	1020	997	1070	1040
24	1010	860	1020	985	1070	1020	1050	1010	1030	1000	1080	1040
25	990	940	1030	985	1050	1010	1070	1010	1040	1010	1110	1040
26	980	950	1010	983	1030	1000	1040	1000	1040	1000	1080	1060
27	1010	950	1020	988	1040	1000	1050	1000	1040	996	1100	1050
28	1010	960	1030	993	1040	999	1050	1010	1040	1010	1100	1070
29	1020	950	1040	1010	1040	998	1060	1010	1050	999	1100	1080
30	1020	970	1030	1010	1050	1010	1040	1010	1030	1000	1120	1090
31	---	---	1050	1020	---	---	1050	1000	1030	1000	---	---
MONTH	1020	530	1100	950	1100	978	1080	962	1090	895	1120	989

## 11074000 SANTA ANA RIVER BELOW PRAOD DAM, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.0	20.5	16.5	13.5	12.0	10.5	---	---	16.0	13.0	16.5	15.5
2	24.0	20.5	16.5	13.5	13.0	9.5	---	---	16.0	13.0	16.0	12.0
3	23.5	20.5	17.0	14.0	13.5	10.5	13.5	13.0	16.5	13.0	16.0	15.5
4	23.0	20.5	18.5	15.0	14.5	12.0	13.5	13.0	16.5	12.5	16.0	15.5
5	23.0	20.0	18.5	15.5	14.5	12.5	13.5	13.0	15.5	13.0	16.0	15.0
6	22.5	20.0	19.0	16.0	14.0	11.5	17.0	11.0	15.5	14.5	16.0	15.0
7	23.0	19.5	19.0	16.0	14.0	12.0	12.5	12.0	15.0	14.5	15.5	15.0
8	22.5	20.0	19.5	17.5	15.0	13.5	12.0	11.5	15.5	15.0	16.0	15.0
9	23.0	20.0	19.0	17.5	16.5	14.5	11.5	11.0	15.5	15.0	15.5	15.0
10	23.5	20.0	19.0	17.5	16.5	15.5	12.0	11.0	15.0	15.0	15.5	15.0
11	23.0	20.0	19.0	16.5	16.5	15.5	11.5	11.5	15.0	14.5	15.5	15.0
12	23.0	20.5	19.0	16.0	16.5	15.0	12.0	11.0	14.5	13.5	16.5	15.5
13	23.0	20.0	18.5	15.5	15.5	13.0	11.5	11.0	13.5	13.0	17.0	16.0
14	22.5	19.5	18.5	15.5	---	---	12.0	11.0	13.0	12.5	17.5	17.0
15	22.0	19.5	16.0	13.0	---	---	11.5	11.0	12.5	12.5	17.5	16.5
16	22.0	19.5	16.0	13.0	---	---	12.0	11.0	12.5	12.0	17.0	16.0
17	22.0	19.5	16.5	13.5	---	---	11.5	11.0	12.0	12.0	17.5	16.0
18	21.5	18.5	17.0	15.5	---	---	11.5	11.0	12.5	12.0	17.5	16.5
19	21.5	19.0	16.0	14.5	---	---	12.5	11.5	12.5	12.0	19.0	15.5
20	21.5	19.0	16.5	13.5	---	---	14.5	12.5	13.0	12.0	18.5	15.0
21	21.5	20.0	16.5	13.5	---	---	14.5	11.5	13.0	12.5	15.0	13.0
22	20.5	20.0	16.0	13.5	---	---	15.0	11.5	13.5	13.0	14.5	14.0
23	20.5	19.0	15.5	14.0	---	---	15.0	11.0	16.0	13.5	15.0	14.5
24	20.0	18.5	16.0	13.5	---	---	15.5	11.5	15.5	14.0	15.0	14.5
25	19.0	17.5	16.0	12.5	---	---	15.0	12.0	15.5	14.5	15.0	14.5
26	18.5	17.5	16.0	13.0	---	---	15.0	11.5	16.0	15.0	15.0	14.5
27	18.5	16.5	15.5	13.0	---	---	16.0	13.0	16.0	15.0	15.5	14.5
28	17.5	15.5	15.0	14.0	---	---	15.0	12.5	16.0	15.5	15.0	15.0
29	17.5	14.5	14.0	11.5	---	---	16.0	13.5	16.5	15.5	15.5	15.0
30	17.0	15.0	13.0	11.5	---	---	16.5	12.0	---	---	15.5	15.0
31	16.5	13.5	---	---	---	---	16.5	12.5	---	---	15.5	15.0
MONTH	24.0	13.5	19.5	11.5	---	---	---	---	16.5	12.0	19.0	12.0
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.0	15.5	22.5	21.5	26.0	20.5	23.5	21.0	26.0	23.0	23.0	20.5
2	16.0	15.5	22.0	21.5	25.5	21.0	24.0	20.5	26.5	23.5	23.5	21.0
3	16.5	16.0	22.0	21.5	26.0	21.0	24.0	21.0	26.5	23.0	24.0	20.5
4	16.5	16.0	22.5	21.5	25.5	21.5	24.5	21.0	26.0	23.0	23.5	20.5
5	16.5	16.5	22.5	21.0	23.5	18.0	25.5	22.0	26.0	23.0	23.5	20.0
6	16.5	16.5	24.5	20.0	22.5	20.5	25.0	21.5	26.0	23.0	23.5	20.5
7	17.0	16.5	24.5	20.5	23.0	20.0	24.5	22.5	26.0	24.0	23.5	20.5
8	17.0	16.5	24.0	20.5	24.0	20.5	25.0	23.0	26.0	24.0	23.5	20.5
9	17.5	16.5	22.0	20.5	24.0	20.5	27.0	24.0	26.5	24.0	23.5	21.0
10	17.5	17.0	24.5	20.0	23.5	21.5	27.0	25.0	26.5	24.0	23.5	21.0
11	18.0	17.0	22.0	20.5	23.5	20.0	26.0	24.0	26.5	23.0	23.5	20.5
12	18.0	17.5	24.5	19.0	23.0	20.0	24.5	23.5	27.0	23.0	23.5	20.0
13	18.0	17.5	24.5	19.5	23.0	19.5	25.5	23.0	28.5	23.5	23.5	20.5
14	18.5	18.0	23.5	19.5	22.5	19.5	26.0	23.5	28.0	24.5	23.5	20.5
15	18.5	18.0	23.0	20.0	22.5	19.0	26.0	23.5	27.5	25.0	24.0	21.0
16	19.0	18.5	24.0	19.0	23.5	19.5	26.5	23.5	27.0	24.0	24.5	21.0
17	19.0	18.5	24.5	19.0	24.0	20.0	26.5	24.0	27.0	24.5	24.5	21.5
18	19.5	19.0	24.5	19.5	24.0	20.5	27.0	24.0	27.0	24.0	24.0	21.5
19	20.0	19.0	24.5	20.0	24.0	20.0	26.5	24.0	27.0	24.0	23.5	19.5
20	20.0	19.0	24.5	20.0	24.0	20.5	26.5	24.0	27.0	23.5	23.5	19.5
21	20.5	20.0	24.5	20.0	24.0	21.0	25.5	23.0	26.5	23.0	24.5	20.0
22	20.5	20.0	24.5	20.0	24.0	21.5	25.0	22.5	26.0	23.0	25.0	21.5
23	21.0	20.5	24.5	20.5	25.5	22.0	24.5	22.5	25.0	21.5	25.0	21.5
24	21.5	20.0	24.0	20.5	25.0	22.5	24.5	23.0	25.0	21.5	24.5	21.0
25	21.0	20.0	23.5	20.5	24.5	21.5	25.0	22.5	25.0	21.5	23.5	20.0
26	21.5	20.0	24.0	20.5	24.5	21.0	25.5	22.5	25.0	21.5	23.5	20.5
27	21.5	20.5	24.5	20.5	25.0	21.5	25.5	23.0	25.0	21.0	24.0	20.0
28	22.0	20.5	24.0	20.5	25.5	22.0	25.5	23.0	24.5	21.5	24.0	20.5
29	22.5	20.5	23.5	20.5	24.5	22.0	25.5	22.5	24.5	21.0	23.5	20.5
30	22.0	21.0	25.0	20.0	24.5	21.5	25.5	22.0	24.0	21.5	24.5	21.5
31	---	---	25.5	20.5	---	---	26.0	22.5	23.0	20.0	---	---
MONTH	22.5	15.5	25.5	19.0	26.0	18.0	27.0	20.5	28.5	20.0	25.0	19.5

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CA-88-1: 1983(M).

GAGE.--Water-stage recorder. Datum of gage is 396.35 ft, 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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 5.11 ft, present datum, from rating curve extended above 110 ft<sup>3</sup>/s on basis of optical current-meter measurement at 241 ft<sup>3</sup>/s and normal depth solution for discharge computation at gage height 4.27 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 269 ft<sup>3</sup>/s, Feb. 12, gage height, 3.54 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.4	.00	.00	.00	e.00	.00
2	.00	.00	.00	.00	.00	3.3	.29	.00	.00	.00	e.00	.00
3	.00	.00	.00	.00	.00	8.0	.02	.00	.00	.00	e.00	.00
4	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	e.00	.00
5	.00	.00	.00	8.8	.00	.01	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	1.1	.21	4.2	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.59	2.4	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.06	.08	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	10	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	92	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	56	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	3.3	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	65	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	4.8	.00	.00	.00	.00	.00	.00	.00
17	.01	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.52	.02	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.07	4.9	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	17	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	2.4	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	1.0	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.51	.00	.00	.00	.00	.00	.00
26	.09	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00
27	.06	.00	.01	.00	.00	2.3	.00	.00	.00	.00	.00	.00
28	.00	.00	.23	.00	.00	.28	.00	.00	.00	.00	.00	.00
29	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.44	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.01	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.16	0.00	2.09	10.55	248.95	45.84	1.71	0.00	0.00	0.00	0.00	0.00
MEAN	.005	.000	.067	.34	8.58	1.48	.057	.000	.000	.000	.000	.000
MAX	.09	.00	1.4	8.8	92	17	1.4	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.3	.00	4.1	21	494	91	3.4	.00	.00	.00	.00	.00

e Estimated.

11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.040	.19	.46	1.39	4.48	4.59	.53	.18	.064	.046	.019	.014
MAX	.61	1.87	6.36	13.5	46.9	36.2	5.67	3.44	1.14	.67	.29	.22
(WY)	1964	1968	1967	1969	1980	1983	1980	1980	1980	1983	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1962	1962	1963	1963	1964	1962	1962	1962	1962	1962	1962	1962

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992	
ANNUAL TOTAL	519.22		309.30			
ANNUAL MEAN	1.42		.85		.98	
HIGHEST ANNUAL MEAN					7.27	
LOWEST ANNUAL MEAN					.004	
HIGHEST DAILY MEAN	169	Mar 27	92	Feb 12	322	Mar 2 1983
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1961
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 15	.00	Oct 1	.00	Oct 1 1961
INSTANTANEOUS PEAK FLOW			269	Feb 12	796	Mar 1 1983
INSTANTANEOUS PEAK STAGE			3.54	Feb 12	5.11	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	1030		613		712	
10 PERCENT EXCEEDS	.29		.06		.20	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11075800 SANTIAGO CREEK AT MODJESKA, CA

LOCATION.--Lat 33°42'46", long 117°38'39", in NE 1/4 NE 1/4 sec.30, T.5 S., R.7 W., Orange County, Hydrologic Unit 18070203, on right bank at Santiago Canyon Road bridge, 0.9 mi northwest of Modjeska, 1.0 mi downstream from Harding Creek, and 1.5 mi downstream from Modjeska Reservoir.

DRAINAGE AREA.--13.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CA-73-1: 1969. WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,210 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Sept. 10, 1969, at site 0.6 mi upstream at datum approximately 48 ft higher. Sept. 10, 1969, to Feb. 6, 1985, at site 0.6 mi upstream at datum approximately 44 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Slight regulation by Modjeska Reservoir on Harding Creek. Santiago County Water District diverts water at Modjeska Reservoir on Harding Creek. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 6.18 ft, site and datum then in use, from rating curve extended above 840 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 200 ft<sup>3</sup>/s, on basis of culvert computation of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1545	*807	*9.40	Mar. 3	0445	104	7.04
Feb. 15	1630	120	7.10	Mar. 23	1130	242	7.52

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.05	3.2	.50	.00	.00	.00	e.00	.00
2	.00	.00	.00	.00	.04	14	.00	.00	.00	.00	e.00	.00
3	.00	.00	.00	.00	.01	72	.00	.00	.00	.00	e.00	.00
4	.00	.00	.00	.00	.01	38	.00	.00	.00	.00	e.00	.00
5	.00	.00	.00	e.05	.01	27	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	e.80	.11	24	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	e1.0	.40	21	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	1.8	.42	22	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	1.2	.49	19	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.86	2.7	16	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.63	32	15	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.50	169	12	.00	.00	.00	.00	.00	e.00
13	.00	.00	.00	.40	125	11	.00	.00	.00	.00	e.00	e.00
14	.00	.00	.00	.35	46	9.7	.00	.00	.00	.00	e.00	e.00
15	.00	.00	.00	.31	50	8.8	.00	.00	.00	.00	.00	e.00
16	.00	.00	.00	.29	39	7.8	.00	.00	.00	.00	.00	e.00
17	.00	.00	.00	.27	12	6.8	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.27	e7.5	5.8	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.25	e6.8	5.1	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.23	e6.5	5.3	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.21	e6.3	155	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.21	e6.1	137	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.18	e5.9	204	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.17	e5.6	147	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.16	e5.3	87	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.15	5.1	56	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.13	4.5	29	.00	.00	.00	e.00	.00	.00
28	.00	.00	.00	.11	3.9	11	.00	.00	.00	e.00	.00	.00
29	.00	.00	.00	.10	3.5	5.0	.00	.00	.00	e.00	.00	.00
30	.00	.00	.00	.07	---	2.4	.00	.00	.00	e.00	.00	.00
31	.00	---	.00	.05	---	1.2	---	.00	---	e.00	.00	---
TOTAL	0.00	0.00	0.00	10.75	544.24	1178.1	0.50	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.35	18.8	38.0	.017	.000	.000	.000	.000	.000
MAX	.00	.00	.00	1.8	169	204	.50	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.01	1.2	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	21	1080	2340	1.0	.00	.00	.00	.00	.00

e Estimated.

## 11075800 SANTIAGO CREEK AT MODJESKA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.23	2.15	6.39	12.2	30.4	21.9	6.32	3.24	1.40	.43	.17	.088
MAX	5.00	33.4	97.4	129	376	137	33.7	27.0	7.82	2.84	1.68	1.07
(WY)	1984	1966	1967	1969	1969	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.050	.15	.017	.000	.000	.000	.000	.000
(WY)	1962	1962	1963	1963	1965	1965	1992	1992	1987	1963	1962	1962

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1962 - 1992	
ANNUAL TOTAL	822.62		1733.59			
ANNUAL MEAN	2.25		4.74		6.95	
HIGHEST ANNUAL MEAN					47.2	
LOWEST ANNUAL MEAN					.21	
HIGHEST DAILY MEAN	121	Mar 1	204	Mar 23	3590	Feb 24 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1961
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1961
INSTANTANEOUS PEAK FLOW			807		6520	
INSTANTANEOUS PEAK STAGE			9.40		6.18	
ANNUAL RUNOFF (AC-FT)	1630		3440		5040	
10 PERCENT EXCEEDS	2.5		6.0		9.2	
50 PERCENT EXCEEDS	.00		.00		.32	
90 PERCENT EXCEEDS	.00		.00		.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 127 ft upstream from Bristol Street bridge at Santa Ana and 1,700 ft upstream from mouth at Santa Ana River.

DRAINAGE AREA.--98.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1315-B.

REVISED RECORDS.--WSP 1635: 1934, 1935(M), 1936. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 105.00 ft, Orange County Environmental Management Agency bench mark. Prior to Sept. 8, 1969, at site 0.1 mi upstream at different datum; Sept. 9, 1969, to July 21, 1976, at site 127 ft downstream at datum 2.66 ft lower.

REMARKS.--Records 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 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 9.10 ft, site and datum then in use; maximum gage height, 9.85 ft, Jan. 16, 1952, site and datum then in use; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,760 ft<sup>3</sup>/s, Feb. 12, gage height, 6.44 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	38	.02	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	2.1	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	61	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	1.7	13	13	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	9.7	20	.29	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.48	.00	.22	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.35	.00	13	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	64	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	212	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	6.8	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	38	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
20	.00	.00	.00	.00	.00	50	.00	.00	.00	.00	.00	e.00
21	.00	.00	.00	.00	.00	31	.00	.00	.00	.00	.00	e.00
22	.00	.00	.00	.00	.00	34	.00	.00	.00	.00	.00	e.00
23	.00	.00	.00	.00	.00	18	.00	.00	.00	.00	.00	e.00
24	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00	.00	e.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
26	.25	.00	.00	.00	.00	6.6	.00	.00	.00	.00	.00	e.00
27	.00	.00	.44	.00	.00	12	.00	.00	.00	.00	.00	e.00
28	.00	.00	8.7	.00	.00	.08	.00	.00	.00	.00	.00	e.00
29	.00	.00	8.7	.00	.00	.00	.00	.00	.00	.00	.00	e.00
30	.00	.00	1.2	.00	---	.00	.00	.00	.00	.00	.00	e.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.25	0.00	19.39	72.88	369.97	205.45	1.32	0.00	0.00	0.00	0.00	0.00
MEAN	.008	.000	.63	2.35	12.8	6.63	.044	.000	.000	.000	.000	.000
MAX	.25	.00	8.7	61	212	50	1.3	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.5	.00	38	145	734	408	2.6	.00	.00	.00	.00	.00

e Estimated.

11077500 SANTIAGO CREEK AT SANTA ANA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1992, BY WATER YEAR (WY)

MEAN	.15	1.17	2.19	5.24	18.4	26.2	4.39	.20	.003	.010	.032	.085
MAX	4.29	7.80	10.1	62.3	616	329	159	3.85	.067	.58	1.60	1.59
(WY)	1984	1983	1967	1952	1969	1938	1941	1941	1976	1984	1977	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1932	1932	1933	1936	1952	1933	1932	1932	1932	1932	1932	1932

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1932 - 1992	
ANNUAL TOTAL	632.31		669.26			
ANNUAL MEAN	1.73		1.83		4.78	
HIGHEST ANNUAL MEAN					71.7 1969	
LOWEST ANNUAL MEAN					.067 1961	
HIGHEST DAILY MEAN	139	Feb 27	212	Feb 12	4270	Feb 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1931
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 10	.00	Oct 1	.00	Oct 1 1931
INSTANTANEOUS PEAK FLOW			1760	Feb 12	6600	Feb 25 1969
INSTANTANEOUS PEAK STAGE			6.44	Feb 12	9.10	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	1250		1330		3460	
10 PERCENT EXCEEDS	.00		.00		.01	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## SANTA ANA RIVER BASIN

11078000 SANTA ANA RIVER AT SANTA ANA, CA

LOCATION (REVISED).--Lat 33°45'04", long 117°54'27", in NW 1/4 SE 1/4 sec.10, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on right bank 850 ft upstream from Fifth Street Bridge in Santa Ana and 1.6 mi downstream from Santiago Creek.

DRAINAGE AREA.--1,700 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1923 to September 1989, October 1990 to current year. Discharge measurements only, October 1989 to September 1990.

REVISED RECORDS.--WSP 1635: 1940(M), 1944. WDR CA-74-1: Drainage area. WDR CA-79-1: 1978(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 70 ft, above National Geodetic Vertical Datum of 1929, from topographic map. Oct. 1, 1990, to Feb. 12, 1991 at site 900 ft downstream at different datum. See WDR CA-90-1 for complete history of location and datum changes.

REMARKS.--Records fair above 200 ft<sup>3</sup>/s, and poor below. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, return flow from irrigation. Since 1940, natural flow affected by Prado flood-control reservoir, capacity, 196,200 acre-ft; three small flood-control reservoirs, combined capacity, 31,900 acre-ft; Big Bear Lake (station 11049000); and Santiago Reservoir, capacity, 25,000 acre-ft. Discharge up to 100 ft<sup>3</sup>/s can be diverted from Carbon Creek to Coyote Creek 1.5 mi upstream from mouth of Carbon Creek. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,300 ft<sup>3</sup>/s, Mar. 3, 1938, gage height, 10.20 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,500 ft<sup>3</sup>/s, Feb. 12, gage height, 8.90 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	e41	.00	.19	18	1.7	.00	.00	.00	.00
2	.00	.00	.00	e22	.00	233	10	.27	.00	.00	.00	.00
3	.00	.00	.00	e75	.00	242	1.3	.00	.00	.00	.00	.00
4	.00	.00	.00	e50	.00	2.4	.53	2.2	.00	.00	.00	.00
5	.00	.00	.00	e303	.07	1.2	.37	4.6	.00	.00	.00	.00
6	.00	.00	.00	e130	e99	138	.40	2.9	.00	.00	.00	.00
7	.00	.00	.00	e31	e222	2.4	.53	.51	.00	.00	.00	.00
8	.00	.00	.00	e1.6	e4.5	15	.54	.18	.00	.00	.00	.00
9	.00	.00	.00	e.00	e8.3	1.6	.53	.09	.00	.00	.00	.00
10	.00	.00	.00	.00	e361	.68	.56	.00	.00	.00	.00	.00
11	.00	.00	.00	e.00	e910	.32	.68	.00	.00	.00	.00	.00
12	.00	.00	.00	e.00	e2530	.23	1.0	.00	.00	.00	.00	.00
13	.00	.00	.00	e.00	e2620	.04	.63	.00	.00	.00	.00	.00
14	.00	.00	.00	e.00	e2830	.15	.28	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	e2850	.13	.07	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	e1840	.07	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	e.00	e1280	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	146	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	e.00	61	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	e.00	2.7	309	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	e.00	1.5	1020	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	e.00	1.2	217	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	e.00	.66	412	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	e.00	.28	25	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.18	249	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.08	279	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	1420	.97	.00	.00	.00	.00	.00
28	.00	.00	e125	.00	.00	904	4.7	.00	.00	.00	.00	.00
29	.00	.00	e90	.00	.00	60	3.4	.00	.00	.00	.00	.00
30	.00	.00	e315	.00	---	5.8	2.6	.00	.00	.00	.00	.00
31	.00	---	e110	.00	---	2.8	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	640.00	653.60	15768.47	5541.01	47.09	12.45	0.00	0.00	0.00	0.00
MEAN	.000	.000	20.6	21.1	544	179	1.57	.40	.000	.000	.000	.000
MAX	.00	.00	315	303	2850	1420	18	4.6	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	1270	1300	31280	10990	93	25	.00	.00	.00	.00

e Estimated.

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
INSTANTANEOUS PEAK FLOW	46300 Mar 3 1938
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.75	12.5	36.2	68.9	192	231	62.8	18.0	8.44	.47	2.19	1.58
MAX	179	154	428	796	3014	2342	889	613	433	22.9	102	40.6
(WY)	1984	1984	1985	1969	1980	1969	1980	1983	1983	1980	1983	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1940	1940	1940	1976	1949	1949	1949	1940	1940	1940	1940	1940

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1940 - 1992

ANNUAL TOTAL	22178.80	22662.62	
ANNUAL MEAN	60.8	61.9	52.5
HIGHEST ANNUAL MEAN			558 1980
LOWEST ANNUAL MEAN			.006 1949
HIGHEST DAILY MEAN	3850 Mar 1	2850 Feb 15	11400 Feb 25 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 11	.00 Oct 1	.00 Oct 1 1939
INSTANTANEOUS PEAK FLOW		16500 Feb 12	20100 Mar 1 1983
INSTANTANEOUS PEAK STAGE		8.90 Feb 12	10.66 Mar 1 1983
ANNUAL RUNOFF (AC-FT)	43990	44950	38010
10 PERCENT EXCEEDS	.17	19	8.2
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11078000 SANTA ANA RIVER AT SANTA ANA, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968-71, 1973 to current year.

WATER TEMPERATURE: Water years 1968-69, 1971, 1973-80, 1982-87.

SEDIMENT DATA: Water years 1968-71, 1973 to current year.

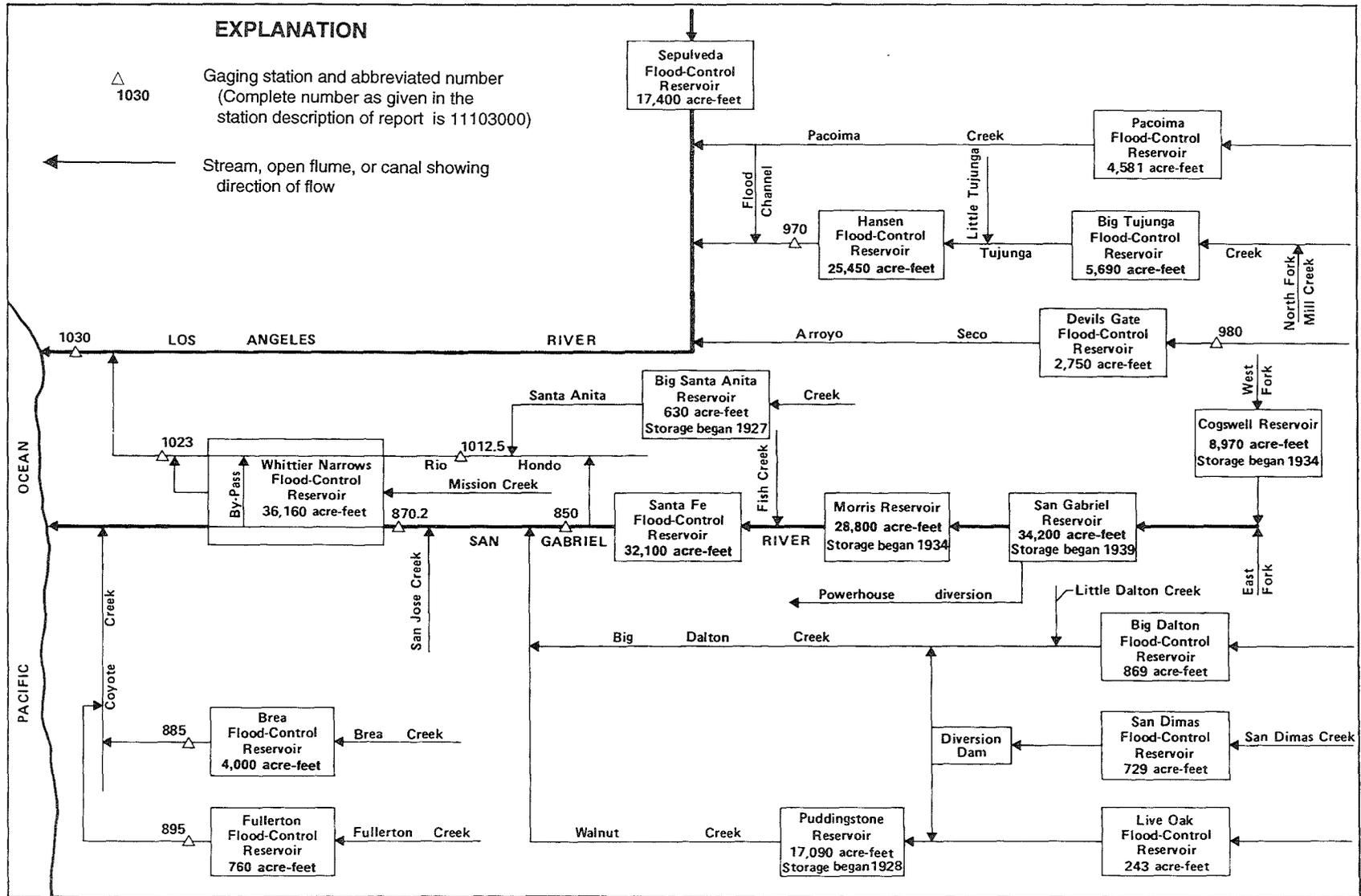
PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1967 to September 1969, October 1970 to September 1971, October 1972 to September 1980, October 1981 to September 1987.

SUSPENDED-SEDIMENT DISCHARGE: October 1967 to September 1971, October 1972 to September 1980, October 1981 to September 1987.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-	TEMPER-	SEDI-	SEDI-	SED.	SED.	SED.
		CHARGE,				MENT,	SUSP.	SUSP.
		INST.	ATURE	MENT,	DIS-	FALL	FALL	FALL
		CUBIC	WATER	SUS-	CHARGE,	DIAM.	DIAM.	DIAM.
		FEET	(DEG C)	PEND	SUS-	% FINER	% FINER	% FINER
		PER		ENDED	PEND	THAN	THAN	THAN
		SECOND		(MG/L)	(T/DAY)	.002 MM	.004 MM	.008 MM
FEB								
13...	1400	2700	15.5	2190	16000	19	23	26
		SED.						
		SUSP.						
		FALL	FALL	SIEVE	SIEVE	SIEVE	SIEVE	SIEVE
		DIAM.						
DATE		% FINER						
		THAN						
		.016 MM	.031 MM	.062 MM	.125 MM	.250 MM	.500 MM	1.00 MM
								2.00 MM
FEB								
13...	31	35	39	47	63	88	99	100



SAN GABRIEL AND LOS ANGELES RIVER BASINS

Figure 20. Diversions and storage in San Gabriel and Los Angeles River basins.

## SAN GABRIEL RIVER BASIN

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA

LOCATION.--Lat 34°06'44", long 117°58'07", in NE 1/4 SW 1/4 sec.6, T.1 S., R.10 W., Los Angeles County, Hydrologic Unit 18070106, on left bank at stilling basin of outlet of Santa Fe flood-control dam, 500 ft downstream from axis of dam, and 1.7 mi north of Baldwin Park.

DRAINAGE AREA.--236 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1315-B and 1635: 1943(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records fair. 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; 36,405 acre-ft were diverted during the current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,900 ft<sup>3</sup>/s, Jan. 26, 1969, gage height, 22.20 ft; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,900 ft<sup>3</sup>/s, Feb. 14, gage height, 13.43 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	.00	.00	.00	.00	71	90	14	.00	598	.00	.00
2	194	.00	.00	.00	.00	94	83	.00	.00	252	.00	.00
3	197	.00	.00	.00	.00	85	25	.00	.00	.00	.00	.00
4	300	.00	.00	.00	.01	85	.35	173	.00	.00	.00	.00
5	319	.00	.00	22	33	89	.30	231	.00	.00	.00	.00
6	172	.00	.00	25	90	89	128	182	.00	.00	.00	.00
7	55	.00	.00	.02	6.9	86	231	130	.00	.00	.00	.00
8	.00	.00	.00	.01	2.3	84	213	17	6.0	.00	.00	.00
9	.00	.00	.00	.84	.03	82	50	.00	73	121	.00	.00
10	.00	.00	.00	2.2	.30	92	47	.00	52	376	.00	.00
11	.00	.00	.00	.69	26	104	66	131	88	236	.00	.00
12	.00	.00	.00	.73	74	103	77	454	152	40	.00	.00
13	.00	.00	.00	13	363	98	35	553	156	33	.00	.00
14	.00	.00	.00	179	1790	95	.22	332	157	31	.00	.00
15	.00	.00	.00	347	955	93	176	.00	63	9.6	.00	71
16	.00	.17	.00	366	351	91	266	.00	.00	.05	.00	153
17	.00	1.7	.00	597	130	91	174	.00	.00	1.3	.00	210
18	.00	.00	.00	326	116	91	118	.00	.00	.08	.00	263
19	.00	.00	.00	.00	105	93	20	5.3	.00	1.4	.00	263
20	.00	.00	.00	.00	95	93	54	.00	.00	1.9	.00	277
21	.00	.00	.00	.00	87	86	156	.00	.00	.04	.00	291
22	.00	.00	.00	.00	87	82	191	.00	.00	.00	.00	301
23	.00	.00	.00	.33	90	84	64	.00	.00	.00	.00	176
24	.00	.00	.00	.00	91	88	.00	.00	175	.00	.00	.12
25	.00	.00	.00	.49	89	94	.00	.00	566	.00	.00	.03
26	.00	.00	.00	.00	286	98	.00	.00	571	.00	.00	.02
27	.00	.00	.00	.00	208	130	67	.00	573	.00	.00	.00
28	.00	.00	.00	.00	36	112	108	.00	568	.00	.00	.00
29	.00	.00	.00	.00	57	107	77	.00	582	.00	.00	.00
30	.00	.00	13	.00	---	100	26	.00	601	.00	.00	.00
31	.00	---	.01	.00	---	96	---	.00	---	.00	.00	---
TOTAL	1429.00	1.87	13.01	1880.31	5168.54	2886	2542.87	2222.30	4383.00	1701.37	0.00	2005.17
MEAN	46.1	.062	.42	60.7	178	93.1	84.8	71.7	146	54.9	.000	66.8
MAX	319	1.7	13	597	1790	130	266	553	601	598	.00	301
MIN	.00	.00	.00	.00	.00	71	.00	.00	.00	.00	.00	.00
AC-FT	2830	3.7	26	3730	10250	5720	5040	4410	8690	3370	.00	3980

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.17	15.2	27.2	98.9	197	199	65.7	54.6	26.4	6.18	6.03	11.3
MAX	46.1	577	514	2151	3259	2465	616	480	414	170	121	206
(WY)	1992	1966	1947	1969	1969	1978	1978	1958	1958	1962	1962	1946
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1943	1943	1943	1945	1947	1947	1945	1945	1945	1943	1943	1943

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1943 - 1992	
ANNUAL TOTAL	10528.82		24233.44			
ANNUAL MEAN	28.8		66.2		58.4	
HIGHEST ANNUAL MEAN					540	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	530	Sep 15	1790	Feb 14	26000	Jan 26 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 8	.00	Oct 1 1942
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 6	.00	Oct 8	.00	Oct 1 1942
INSTANTANEOUS PEAK FLOW			2900	Feb 14	30900	Jan 26 1969
INSTANTANEOUS PEAK STAGE			13.43	Feb 14	22.20	Jan 26 1969
ANNUAL RUNOFF (AC-FT)	20880		48070		42280	
10 PERCENT EXCEEDS	140		195		54	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°02'03", long 118°02'14", in La Puente Grant, Los Angeles County, Hydrologic Unit 18070106, at Peck Road 0.8 mi downstream from San Jose flood channel, 1.2 mi upstream from axis of Whittier Narrows Dam, and 1.8 mi south of El Monte.

DRAINAGE AREA.--442 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to September 1957, October 1963 to current year.

REVISED RECORDS.--WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good except discharges below 200 ft<sup>3</sup>/s, which are 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 a 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 36,405 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during the current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,600 ft<sup>3</sup>/s, Jan. 25, 1969, from rating curve extended above 29,000 ft<sup>3</sup>/s, gage height, 10.90 ft; no flow for part of some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,700 ft<sup>3</sup>/s, Feb. 12, gage height, 10.19 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	132	61	.00	82	.84	131	.00	.00	.00	96	98
2	130	131	61	.00	80	1560	4.6	.00	.00	.00	103	101
3	131	132	44	164	81	289	1.9	.00	.00	.00	106	98
4	138	141	56	6.6	88	5.2	1.8	.00	.00	.00	99	102
5	142	138	70	2780	65	.00	1.3	.00	.00	.00	52	99
6	139	130	72	245	434	373	1.1	.00	.00	.00	35	93
7	144	126	70	188	606	272	.44	.00	.00	.00	99	2.0
8	148	124	99	13	5.7	27	2.4	.00	.00	.00	99	1.8
9	147	130	73	.32	66	.96	8.7	.00	.00	.00	102	.04
10	155	148	85	.00	1000	.00	.29	.00	.00	.00	97	47
11	154	155	72	.00	4680	.00	.39	.00	.00	.00	91	101
12	141	158	58	.00	6090	12	2.4	.00	.00	28	45	93
13	132	118	56	.00	1920	.24	1.8	20	.00	2.0	30	48
14	133	18	57	.00	1120	.72	.47	85	.00	.55	98	32
15	141	.00	63	.00	2730	.96	.18	.43	.00	.00	87	.00
16	143	.00	69	.00	204	.64	.46	.00	.00	.00	60	.00
17	143	.01	64	.00	26	1.4	11	.00	.00	.00	93	39
18	146	2.0	63	.00	11	.62	6.4	.00	.00	.00	95	98
19	155	1.0	80	.00	4.1	.17	2.8	.00	.00	.00	95	74
20	153	30	65	.00	2.4	1820	.19	18	.00	46	97	53
21	151	76	68	.00	1.7	1770	.00	38	.00	38	102	106
22	154	73	71	.00	1.1	932	.00	.00	.00	45	97	99
23	155	70	72	.00	1.3	1480	.00	.00	.00	78	95	47
24	158	75	73	.00	.43	371	.00	.00	.00	80	100	65
25	149	69	70	.00	.11	251	.00	.00	.00	82	52	88
26	421	71	70	.00	.14	400	.00	.00	.00	86	30	89
27	76	61	73	83	28	843	.00	.00	.00	89	95	90
28	53	59	805	110	1.1	58	.00	.00	.00	89	92	93
29	131	59	3610	116	.70	15	.00	.00	.00	93	92	90
30	130	59	294	119	---	9.7	.00	.00	.00	95	89	93
31	130	---	1.2	107	---	6.8	---	.00	---	96	96	---
TOTAL	4550	2486.01	6545.2	3931.92	19329.78	10501.25	179.62	161.43	0.00	947.55	2619	2039.84
MEAN	147	82.9	211	127	667	339	5.99	5.21	.000	30.6	84.5	68.0
MAX	421	158	3610	2780	6090	1820	131	85	.00	96	106	106
MIN	53	.00	1.2	.00	.11	.00	.00	.00	.00	.00	30	.00
AC-FT	9020	4930	12980	7800	38340	20830	356	320	.00	1880	5190	4050

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	87.7	154	153	267	488	393	118	91.1	60.4	57.3	56.0	78.7
MAX	208	782	380	2827	4497	3796	590	274	254	230	208	205
(WY)	1979	1966	1989	1969	1980	1978	1978	1983	1976	1973	1973	1978
MIN	.000	.000	9.84	19.0	.000	.000	.47	.14	.000	.000	.000	.000
(WY)	1956	1978	1977	1968	1956	1956	1956	1957	1956	1956	1956	1957

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1956 - 1992	
ANNUAL TOTAL	48643.85		53291.60			
ANNUAL MEAN	133		146		165	
HIGHEST ANNUAL MEAN					675	
LOWEST ANNUAL MEAN					24.4	
HIGHEST DAILY MEAN	4970	Feb 28	6090	Feb 12	24800	Jan 26 1969
LOWEST DAILY MEAN	.00	Mar 7	.00	Nov 15	.00	Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 11	.00	Jan 10	.00	Oct 1 1955
INSTANTANEOUS PEAK FLOW			35700	Feb 12	46600	Jan 25 1969
INSTANTANEOUS PEAK STAGE			10.19	Feb 12	10.90	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	96490		105700		119800	
10 PERCENT EXCEEDS	143		154		208	
50 PERCENT EXCEEDS	59		45		65	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA

LOCATION.--Lat 33°53'16", long 117°55'32", in NE 1/4 NE 1/4 sec.28, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on right bank 0.2 mi downstream from Brea Dam and 1 mi north of Fullerton.

DRAINAGE AREA.--21.6 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1942 to current year.

REVISED RECORDS.--WSP 1041: 1944(M). WSP 1635: 1956, 1958. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 200 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to Dec. 4, 1964, at datum 1.03 ft higher.

REMARKS.--Records poor except for discharges above 100 ft<sup>3</sup>/s, which are fair. Flow regulated by Brea flood-control reservoir, capacity, 4,000 acre-ft. No diversion upstream from station. Since August 1966 low flow mostly the result of irrigation wastewater from golf course 0.8 mi upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,700 ft<sup>3</sup>/s, Feb. 18, 1980; no flow for parts of some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,350 ft<sup>3</sup>/s, Feb. 12, gage height, 5.92 ft; minimum daily, 0.59 ft<sup>3</sup>/s, Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.4	2.0	3.6	2.4	5.3	12	3.2	1.7	2.8	1.6	1.4
2	1.3	2.4	2.3	3.5	2.5	116	7.0	3.0	1.3	2.9	1.5	1.4
3	1.5	1.6	2.3	19	2.4	57	6.8	3.0	1.6	2.6	1.3	1.4
4	1.5	1.6	2.3	5.2	2.7	15	5.6	2.8	1.4	2.4	1.6	1.8
5	1.6	1.6	2.3	133	6.0	9.0	5.2	2.9	1.5	2.3	1.3	1.8
6	1.4	1.7	1.9	39	50	53	4.9	3.2	1.5	2.4	1.4	1.7
7	1.6	2.1	1.6	24	57	35	4.9	2.9	1.4	2.5	1.0	2.4
8	1.1	2.5	3.4	7.4	9.2	22	3.5	5.6	1.4	2.9	1.0	1.5
9	1.8	2.1	2.0	4.0	13	9.9	3.8	5.5	1.8	3.0	1.1	1.6
10	1.5	1.3	2.1	3.5	134	7.6	3.7	5.1	1.6	2.3	1.0	1.5
11	1.7	2.4	5.3	3.2	203	6.5	5.1	2.9	1.5	2.6	.91	1.5
12	.59	2.3	2.5	2.8	366	5.7	5.1	2.7	3.1	7.9	.97	1.4
13	.96	2.4	1.4	3.5	172	4.6	5.1	2.4	1.8	3.4	1.1	1.7
14	1.5	1.5	1.6	2.7	37	4.3	3.8	2.5	3.0	1.9	1.1	1.3
15	1.7	2.0	1.7	2.7	208	4.0	4.5	2.6	3.4	2.0	1.3	1.4
16	1.9	2.3	1.7	3.5	53	3.7	3.5	2.5	2.5	2.5	1.4	1.4
17	2.0	2.2	1.6	3.1	22	3.5	5.0	2.5	2.7	2.4	1.6	1.6
18	2.0	2.1	1.6	2.7	16	e3.3	4.2	2.5	4.0	2.5	2.2	1.5
19	1.9	2.2	2.5	2.8	17	e3.5	3.7	2.3	3.4	2.5	1.1	1.8
20	1.9	2.2	1.8	2.6	15	e90	3.9	2.8	4.2	2.5	1.4	1.8
21	1.7	2.2	1.6	2.6	15	138	4.0	2.7	3.7	2.4	1.1	1.3
22	1.7	2.3	1.7	2.4	13	90	3.9	2.3	3.3	1.9	1.1	1.6
23	1.9	2.0	1.8	2.6	12	160	3.9	2.3	3.9	2.0	1.1	1.7
24	1.9	1.6	1.9	2.3	8.7	26	3.6	2.8	3.1	1.8	1.1	2.2
25	1.9	1.5	2.1	2.4	6.2	14	3.6	1.5	2.7	2.0	1.1	2.2
26	5.5	2.4	1.7	2.7	5.9	19	3.6	2.6	2.3	2.0	.96	2.1
27	17	2.4	2.6	3.2	5.4	103	3.5	3.2	2.4	1.9	1.3	2.0
28	2.4	2.3	40	2.8	5.8	18	3.5	3.8	2.8	2.4	1.3	1.5
29	2.6	2.3	114	2.8	5.7	11	3.5	3.5	2.6	2.5	1.3	.82
30	2.0	2.1	28	2.8	---	9.0	3.5	2.1	2.8	1.9	1.2	.93
31	2.1	---	5.3	2.8	---	9.2	---	1.6	---	1.5	1.3	---
TOTAL	71.35	62.0	244.6	301.2	1465.9	1056.1	137.9	91.3	74.4	78.6	38.74	48.25
MEAN	2.30	2.07	7.89	9.72	50.5	34.1	4.60	2.95	2.48	2.54	1.25	1.61
MAX	17	2.5	114	133	366	160	12	5.6	4.2	7.9	2.2	2.4
MIN	.59	1.3	1.4	2.3	2.4	3.3	3.5	1.5	1.3	1.5	.91	.82
AC-FT	142	123	485	597	2910	2090	274	181	148	156	77	96

e Estimated.

11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.91	2.99	3.73	6.89	11.6	8.73	2.73	.68	.39	.37	.53	.73
MAX	15.3	31.6	26.6	39.4	165	79.9	50.3	4.49	2.48	2.67	4.68	7.02
(WY)	1984	1984	1989	1979	1980	1978	1983	1977	1992	1991	1983	1986
MIN	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1943	1943	1951	1951	1951	1951	1950	1942	1942	1942	1942	1942

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1942 - 1992	
ANNUAL TOTAL	2560.90		3670.34			
ANNUAL MEAN	7.02		10.0		3.31	
HIGHEST ANNUAL MEAN					20.9	
LOWEST ANNUAL MEAN					.001	
HIGHEST DAILY MEAN	290	Mar 1	366	Feb 12	1700	Feb 18 1980
LOWEST DAILY MEAN	.59	Oct 12	.59	Oct 12	.00	Mar 24 1942
ANNUAL SEVEN-DAY MINIMUM	.74	Feb 13	1.0	Aug 7	.00	Apr 29 1942
INSTANTANEOUS PEAK FLOW			1350	Feb 12	a	Feb 18 1980
INSTANTANEOUS PEAK STAGE			5.92	Feb 12	a	Feb 18 1980
ANNUAL RUNOFF (AC-FT)	5080		7280		2400	
10 PERCENT EXCEEDS	5.6		14		2.5	
50 PERCENT EXCEEDS	2.3		2.4		.20	
90 PERCENT EXCEEDS	1.2		1.4		.00	

a Instantaneous peak discharge and stage for period of record are unknown, but probably occurred on February 18, 1980.

11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA

LOCATION.--Lat 33°53'45", long 117°53'07", in NW 1/4 SW 1/4 sec.24, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on left bank of outlet channel of Fullerton Dam and 1.6 mi southeast of Brea.

DRAINAGE AREA.--4.94 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1245: 1950(M). WSP 1928: Drainage area. WDR CA-82-1: 1981.

GAGE.--Water-stage recorder. Elevation of gage is 250 ft above National Geodetic Vertical Datum of 1929, from topographic map. V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956. Prior to Dec. 3, 1971, at datum 3.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Fullerton flood-control reservoir, capacity, 760 acre-ft (resurvey of 1970). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 8.25 ft, present datum; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 373 ft<sup>3</sup>/s, Feb. 12, gage height, 8.25 ft; minimum daily, 0.23 ft<sup>3</sup>/s, Feb. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.32	e.35	e.36	e.51	.31	.94	2.3	.38	.29	.30	.37	e.39
2	e.34	e.36	e.30	e.36	.30	41	.56	.38	.30	.30	.34	.36
3	e.28	e.36	e.29	e2.0	.30	8.1	.43	.36	.30	.30	.38	.35
4	e.36	e.36	e.36	e.58	.30	.44	.47	.37	.30	.30	.37	.32
5	e.36	e.36	e.36	e52	1.8	.36	.55	.37	.35	.29	.32	.34
6	e.36	e.36	e.36	e6.0	18	23	.51	.38	.30	.36	.38	.32
7	e.36	e.36	e.36	e8.4	22	9.4	.52	.35	.30	.39	.33	.36
8	e.36	e.36	e.81	1.0	.59	2.8	.43	.39	.29	.47	.35	.39
9	e.36	e.36	e.94	.51	4.8	.48	.43	.39	.31	.40	.31	.39
10	e.36	e.36	e4.9	.50	74	.43	.43	.34	.31	.39	.34	.41
11	e.42	e.36	e1.1	.51	75	.40	.43	.34	.31	.44	.38	.37
12	e.28	e.36	e.36	.43	147	.59	.43	.35	.31	1.3	.36	.39
13	e.32	e.36	e.36	.43	85	.43	.51	.32	.29	.55	.34	.37
14	e.30	e.36	e.36	.43	1.7	.36	.51	.32	.29	.42	.32	.39
15	e.30	e.30	e.36	.36	69	.33	.51	.32	.28	.36	.33	.40
16	e.36	e.36	e.36	.30	1.1	.35	.46	.34	.34	.36	.32	.43
17	e.36	e.51	e.36	.37	.61	.39	.36	.30	.30	.41	.34	.38
18	e.36	e.57	e.36	.35	.45	.39	.36	.32	.29	.33	.35	.35
19	e.36	e.36	e.36	.26	.43	.40	.36	.32	.28	.31	.32	.35
20	e.36	e.35	e.36	.28	.42	51	.36	.33	.32	.34	.34	.31
21	e.36	e.36	e.30	.36	.39	35	.36	.32	.28	.36	.32	.32
22	e.36	e.36	e.36	.33	.36	31	.36	.32	.29	.32	.35	.35
23	e1.5	e.28	e.36	.33	.31	50	.37	.32	.32	.37	.35	.34
24	e.40	e.28	e.36	.38	.29	.76	.36	.34	.33	.43	.39	.35
25	e.36	e.30	e.36	.35	.32	.54	.41	.35	.41	.37	.37	.32
26	e9.0	e.44	e.36	.33	1.0	7.7	.36	.38	.35	.40	.36	.33
27	e7.5	e.36	e4.2	.36	1.1	38	.36	.34	.35	.46	.34	.30
28	e.42	e.36	e17	.39	.53	.61	.38	.33	.35	.40	.32	.32
29	e.36	e.35	e37	.34	.23	.51	.36	.33	.31	.38	.39	.33
30	e.36	e.28	e11	.36	---	.48	.38	.36	.30	.40	.34	.32
31	e.30	---	e.51	.30	---	4.9	---	.32	---	.35	.34	---
TOTAL	27.80	10.85	85.19	79.41	507.64	311.09	14.62	10.68	9.35	12.56	10.76	10.65
MEAN	.90	.36	2.75	2.56	17.5	10.0	.49	.34	.31	.41	.35	.35
MAX	9.0	.57	.37	.52	147	.51	2.3	.39	.41	1.3	.39	.43
MIN	.28	.28	.29	.26	.23	.33	.36	.30	.28	.29	.31	.30
AC-FT	55	22	169	158	1010	617	29	21	19	25	21	21

e Estimated.

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
INSTANTANEOUS PEAK FLOW	298 Mar 16 1943
INSTANTANEOUS 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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.52	1.09	1.64	3.11	4.14	3.09	.90	.37	.27	.29	.35	.44
MAX	5.31	5.76	9.04	14.8	25.0	18.6	6.28	1.92	.88	1.01	1.72	2.53
(WY)	1984	1986	1989	1979	1980	1983	1958	1977	1988	1991	1977	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1955	1955	1963	1964	1966	1955	1961	1955	1955	1955	1955

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1955 - 1992

ANNUAL TOTAL	887.52	1090.60	
ANNUAL MEAN	2.43	2.98	1.34
HIGHEST ANNUAL MEAN			4.76 1978
LOWEST ANNUAL MEAN			.028 1964
HIGHEST DAILY MEAN	102 Mar 27	147 Feb 12	221 Mar 1 1983
LOWEST DAILY MEAN	.15 Feb 26	.23 Feb 29	.00 Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	.20 Feb 20	.30 Jun 13	.00 Oct 1 1954
INSTANTANEOUS PEAK FLOW		373 Feb 12	392 Mar 1 1983
INSTANTANEOUS PEAK STAGE		8.25 Feb 12	8.25 Mar 1 1983
ANNUAL RUNOFF (AC-FT)	1760	2160	970
10 PERCENT EXCEEDS	.96	1.2	.96
50 PERCENT EXCEEDS	.43	.36	.15
90 PERCENT EXCEEDS	.30	.30	.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 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1932 to February 1938, August 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1975, published as Tujunga Creek below Hansen Dam.

REVISED RECORDS.--WDR CA-84-1: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 943.32 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers benchmark). See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.--No estimated daily discharges. Records poor. Flow regulated since July 1931 by Big Tujunga flood-control reservoir, capacity, 5,690 acre-ft, and since September 1940 by Hansen flood-control reservoir, capacity, 25,450 acre-ft. Several small diversions for domestic use and irrigation. Since about 1948, Los Angeles County Department of Public Works has diverted water 0.3 mi upstream from gage to spreading grounds, as shown in footnote below table. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s, Feb. 10, 1978, Mar. 2, 1983; maximum gage height, 7.64 ft, Mar. 2, 1983; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 54,000 ft<sup>3</sup>/s, estimated, Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,680 ft<sup>3</sup>/s, Feb. 11, gage height, 4.37 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	38	280	82	82	3.4	.50	15
2	.00	.00	.00	.00	.00	99	258	61	94	2.7	.50	14
3	.00	.00	.00	.00	.00	344	192	52	68	3.4	.50	14
4	.00	.00	.00	.00	.00	81	199	46	6.0	3.4	.50	14
5	.00	.00	.00	84	.00	131	213	84	6.1	1.9	.50	14
6	.00	.00	.00	66	.00	203	180	92	6.1	.00	.50	14
7	.00	.00	.00	.00	23	115	137	95	6.1	.00	.50	14
8	.00	.00	.00	.00	63	106	102	116	6.1	.00	.50	15
9	.00	.00	.00	.00	66	122	103	118	6.1	.00	.50	15
10	.00	.00	.00	.00	395	64	80	121	6.1	.00	.50	14
11	.00	.00	.00	.00	3350	32	77	80	6.1	.00	.50	14
12	.00	.00	.00	.00	2470	41	76	26	6.1	.00	.50	14
13	.00	.00	.00	.00	2580	38	68	.50	6.1	.00	.50	14
14	.00	.00	.00	.00	1260	38	61	2.2	6.1	.00	.50	15
15	.00	.00	.00	.00	983	38	59	3.4	41	.07	.50	15
16	.00	.00	.00	.00	535	39	26	3.4	57	.50	.50	16
17	.00	.00	.00	.00	280	40	6.9	3.4	54	1.0	.50	16
18	.00	.00	.00	.00	216	36	17	3.4	26	2.4	.50	14
19	.00	.00	.00	.00	99	37	16	3.4	8.0	2.4	.47	14
20	.00	.00	.00	.00	65	172	15	3.4	8.0	2.9	.00	13
21	.00	.00	.00	.00	50	373	15	3.4	8.0	.50	.00	12
22	.00	.00	.00	.00	47	365	14	3.4	6.9	.50	.00	13
23	.00	.00	.00	.00	39	1070	14	3.4	3.3	.50	.00	13
24	.00	.00	.00	.00	42	779	14	3.4	2.6	.50	.00	11
25	.00	.00	.00	.00	40	586	14	3.4	2.2	.50	12	9.7
26	.00	.00	.00	.00	39	279	12	53	.50	.50	16	9.7
27	.00	.00	.00	.00	39	476	5.4	78	1.1	.50	16	9.7
28	.00	.00	.00	.00	38	367	3.4	93	3.4	.50	16	9.7
29	.00	.00	.00	.00	38	346	3.4	88	3.4	.50	14	9.7
30	.00	.00	.00	.00	---	287	46	86	3.3	.50	14	9.7
31	.00	---	.00	.00	---	268	---	85	---	.50	15	---
TOTAL	0.00	0.00	0.00	150.00	12757.00	7010	2307.1	1496.10	539.70	29.57	112.47	395.2
MEAN	.000	.000	.000	4.84	440	226	76.9	48.3	18.0	.95	3.63	13.2
MAX	.00	.00	.00	84	3350	1070	280	121	94	3.4	16	16
MIN	.00	.00	.00	.00	.00	32	3.4	.50	.50	.00	.00	9.7
AC-FT	.00	.00	.00	298	25300	13900	4580	2970	1070	59	223	784
a	209	177	399	1410	28700	16710	7450	4240	2780	1280	955	813

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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.17	7.91	3.35	24.3	71.1	75.8	22.7	13.2	4.27	1.21	.78	2.47
MAX	32.2	153	65.3	538	954	1387	252	285	64.6	26.8	18.4	41.4
(WY)	1984	1984	1984	1969	1969	1983	1983	1983	1978	1979	1979	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1948	1948	1950	1949	1949	1950	1950	1949	1948	1948	1948	1948

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1948 - 1992	
ANNUAL TOTAL	1332.05		24797.14			
ANNUAL MEAN	3.65		67.8		18.8	
HIGHEST ANNUAL MEAN					188	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	333	Mar 1	3350	Feb 11	11400	Mar 2 1983
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1947
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1947
INSTANTANEOUS PEAK FLOW			4680	Feb 11	15200	Feb 10 1978
INSTANTANEOUS PEAK STAGE			4.37	Feb 11	7.64	Mar 2 1983
ANNUAL RUNOFF (AC-FT)	2640		49190		13640	
10 PERCENT EXCEEDS	6.1		109		5.2	
50 PERCENT EXCEEDS	.00		2.6		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11098000 ARROYO SECO NEAR PASADENA, CA

LOCATION.--Lat 34°13'20", long 118°10'36", in NW 1/4 NE 1/4 sec.31, T.2 N., R.12 W., Los Angeles County, Hydrologic Unit 18070105, on right bank 0.7 mi east of Angeles Crest Highway, 1.5 mi upstream from Millard Canyon, and 5.5 mi northwest of Pasadena.

DRAINAGE AREA.--16.0 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1910 to January 1913 (fragmentary), April 1913 to November 1915, April 1916 to current year.

REVISED RECORDS.--WSP 1315-B: 1914(M), 1918(M), 1920-21(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

REMARKS.--Records good except those for estimated daily discharges and discharges below 1 ft<sup>3</sup>/s, which are fair. No regulation or diversion upstream from station. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,620 ft<sup>3</sup>/s, Mar. 2, 1938, gage height, 9.42 ft, present datum, on basis of slope-area measurement of peak flow; no flow at times in some years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1330	294	3.25	Mar. 2	2215	238	3.10
Feb. 11	0645	*1,710	*5.25	Mar. 23	0730	475	3.60

Minimum daily, .09 ft<sup>3</sup>/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	1.0	.82	2.9	1.9	24	75	17	6.5	5.3	2.0	1.4
2	.10	.60	.64	2.1	1.9	68	67	16	6.3	5.1	2.0	1.4
3	.11	.35	.64	5.5	1.8	124	60	15	6.2	4.8	1.9	1.5
4	.13	.30	.61	7.5	1.8	60	56	14	6.1	4.8	2.0	1.5
5	.18	.38	.64	78	1.8	50	53	17	6.4	4.4	2.0	1.5
6	.18	.43	.66	35	4.1	57	50	19	6.6	4.0	2.1	1.5
7	.13	.45	.68	18	42	61	46	17	6.2	4.0	2.0	1.3
8	.12	.51	.66	e13	18	63	42	15	5.5	4.6	1.8	1.1
9	.11	.61	.83	e8.5	11	54	39	15	5.0	4.8	1.6	.98
10	.10	.59	.84	e6.2	264	50	37	14	5.0	4.5	1.5	.98
11	.11	.43	.91	e5.1	736	47	34	14	5.4	5.8	1.6	.97
12	.12	.41	.86	e4.1	472	44	32	14	5.2	9.3	1.4	.97
13	.12	.33	.87	e3.8	200	41	30	13	4.9	8.0	1.5	.95
14	.12	.48	.90	e3.4	128	39	29	13	4.8	6.1	1.6	.92
15	.11	.65	.89	e3.0	100	37	27	13	4.7	5.1	1.4	.92
16	.13	.68	.88	e2.7	72	36	27	12	4.7	4.5	1.3	.87
17	.14	.75	.84	e2.6	71	34	25	12	4.6	4.2	1.1	.83
18	.13	.67	.80	e2.6	63	33	24	12	4.3	3.9	1.1	.84
19	.10	.56	1.1	e2.4	57	31	22	11	4.5	3.3	1.0	.80
20	.12	.53	2.0	e2.4	50	60	22	11	4.6	3.0	1.0	.79
21	.19	.48	1.2	e2.4	43	101	21	10	4.7	2.9	1.0	.79
22	.39	.45	.60	e2.3	38	123	20	9.8	4.4	3.1	1.2	.77
23	.40	.36	.62	e2.3	34	263	20	8.8	4.3	3.2	1.1	.72
24	.28	.36	.56	e2.2	30	164	19	7.9	4.2	3.1	1.1	.71
25	.20	.40	.56	e2.1	28	126	18	8.3	4.1	3.0	1.2	.75
26	1.2	.42	.57	e2.2	27	100	18	8.3	4.3	2.8	1.2	.73
27	.95	.48	.65	2.2	27	119	17	8.5	4.8	2.6	1.1	.76
28	.41	.70	3.4	2.1	27	103	17	8.6	4.7	2.3	1.0	.82
29	.33	.88	33	2.0	25	92	16	8.6	4.8	2.2	1.0	.81
30	.62	.77	20	1.9	---	84	16	7.9	5.1	2.1	1.1	.77
31	1.0	---	4.9	1.9	---	79	---	6.9	---	2.1	1.2	---
TOTAL	8.42	16.01	83.33	232.4	2576.3	2367	979	377.6	152.9	128.9	44.1	29.65
MEAN	.27	.53	2.69	7.50	88.8	76.4	32.6	12.2	5.10	4.16	1.42	.99
MAX	1.2	1.0	.33	78	736	263	75	19	6.6	9.3	2.1	1.5
MIN	.09	.30	.56	1.9	1.8	24	16	6.9	4.1	2.1	1.0	.71
AC-FT	17	32	165	461	5110	4690	1940	749	303	256	87	59

e Estimated.

11098000 ARROYO SECO NEAR PASADENA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.14	4.03	9.03	16.4	31.0	27.8	14.0	6.48	3.27	1.60	.96	1.02
MAX	8.54	97.4	132	251	344	235	91.5	48.0	19.2	10.7	7.70	8.26
(WY)	1984	1966	1922	1969	1914	1938	1941	1983	1983	1969	1983	1976
MIN	.000	.060	.12	.58	.93	1.16	.69	.50	.35	.042	.000	.000
(WY)	1927	1934	1991	1991	1924	1961	1961	1961	1961	1960	1925	1925

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1911 - 1992
ANNUAL TOTAL	1865.18	6995.61	
ANNUAL MEAN	5.11	19.1	9.64
HIGHEST ANNUAL MEAN			57.8 1969
LOWEST ANNUAL MEAN			.75 1951
HIGHEST DAILY MEAN	246 Mar 1	736 Feb 11	3690 Feb 20 1914
LOWEST DAILY MEAN	.09 Oct 1	.09 Oct 1	.00 Aug 18 1920
ANNUAL SEVEN-DAY MINIMUM	.11 Oct 9	.11 Oct 9	.00 Aug 18 1920
INSTANTANEOUS PEAK FLOW		1710 Feb 11	8620 Mar 2 1938
INSTANTANEOUS PEAK STAGE		5.25 Feb 11	9.42 Mar 2 1938
ANNUAL RUNOFF (AC-FT)	3700	13880	6980
10 PERCENT EXCEEDS	8.2	50	15
50 PERCENT EXCEEDS	.87	3.1	1.8
90 PERCENT EXCEEDS	.21	.43	.20

## REVISION OF RECORDS FOR A DISCONTINUED STATION

11100000 SANTA ANITA CREEK NEAR SIERRA MADRE, CA

LOCATION.--Lat 34°11'30", long 118°00'59", in SW 1/4 NE 1/4 sec.10, T.1 N., R.11 W., Los Angeles County, on right bank at head of Hermits Falls, 0.9 mile upstream from Big Santa Anita Dam, and 3 miles northeast of Sierra Madre.

DRAINAGE AREA.--9.71 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1916 to September 1970 (discontinued).

REVISED RECORDS (Also, see revisions below).--WSP 1315-B: 1917-18(M), 1926(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,475.3 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Forest Service). Prior to Mar. 2, 1938 at datum 0.4 ft lower (destroyed by flood). Mar. 18 to Sept. 27, 1938, at datum 0.7 ft higher.

REMARKS.--No diversions above station.

AVERAGE DISCHARGE.--54 years, 6.71 ft<sup>3</sup>/s, 4,860 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,000 ft<sup>3</sup>/s (revised), Jan. 25, 1969, estimated, gage height, 18.44 ft, from floodmarks; no flow for several months in most years.

REVISIONS.--The maximum discharge for the period of record has been revised to 7,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 18.44 ft. These figures supersede those published in WSP 2128.

## 11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°03'30", long 118°04'15", in Potrero Grande Grant, Los Angeles County, Hydrologic Unit 18070105, on right bank 0.3 mi downstream from Garvey Avenue, 0.4 mi downstream from Rubio Wash, 2.8 mi upstream from axis of Whittier Narrows Dam, and 2.2 mi west of El Monte.

DRAINAGE AREA.--91.2 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1956 to current year.

GAGE.--Water-stage recorder. Concrete trapezoidal channel. Datum of gage is 217.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs, and Sierra Madre, Las Flores, and Rubio debris basins, combined capacity, 2,195 acre-ft. Many diversions upstream from station for domestic use and irrigation. Los Angeles County Department of Public Works diverted 36,405 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion provided by the Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft<sup>3</sup>/s, Feb. 16, 1980, gage height, 7.35 ft; no flow for some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,800 ft<sup>3</sup>/s, Feb. 12, gage height, 6.19 ft; minimum daily, 0.19 ft<sup>3</sup>/s, Dec. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	.45	.19	.31	.51	.27	280	.57	161	78	14	.32
2	.61	.38	.24	.64	.43	939	33	.43	161	78	5.6	.56
3	.51	.25	.40	172	.44	301	32	.48	160	87	4.5	.65
4	.59	.53	.68	1.1	1.1	3.5	31	.52	160	94	3.0	.76
5	.57	.72	.73	898	35	14	31	2.4	161	97	1.9	.49
6	.62	.58	.60	16	413	342	19	2.7	156	100	1.3	.27
7	.72	.48	.42	227	677	16	.77	10	144	102	1.0	.29
8	.98	.38	.27	1.9	.81	17	.94	7.9	144	106	.52	.62
9	2.1	.65	4.8	.48	188	15	.95	8.9	172	103	.37	.96
10	.72	.53	.22	.28	1040	12	.90	9.4	220	120	.56	.53
11	.85	.73	4.6	.44	2840	7.1	.91	8.1	256	259	.42	.79
12	.60	.61	2.5	.25	2900	32	.75	7.9	264	325	.53	.43
13	.51	.78	1.7	.23	998	31	.62	6.6	264	139	.44	.38
14	.88	.51	2.6	.32	81	29	.86	33	264	110	.56	.40
15	1.1	.37	.25	.77	791	28	.93	53	252	128	.42	.60
16	1.1	.27	.47	.55	50	29	1.0	52	186	144	.32	.49
17	1.2	.59	.52	.52	46	14	.52	51	135	161	.80	.51
18	.71	.78	.33	4.3	28	4.4	.45	48	98	170	.41	.47
19	.61	.41	3.5	7.4	41	4.9	.42	78	84	182	.51	.47
20	.65	.33	.40	3.2	31	840	.58	118	77	189	.44	.60
21	1.1	.77	1.5	1.7	5.9	475	1.7	114	72	189	.52	.65
22	.87	.47	.47	2.0	5.7	678	2.2	109	68	168	.43	.59
23	.95	.34	.85	.92	5.6	953	1.2	132	65	151	.29	.69
24	.59	.40	.37	10	5.3	114	.92	143	66	139	.41	.64
25	.75	.70	.27	20	1.8	85	.35	152	68	129	.57	.57
26	230	.73	.61	25	.33	211	.32	156	72	121	.46	.54
27	4.5	.44	108	23	.35	601	.45	161	75	121	.54	.44
28	.78	.23	274	15	.27	57	.68	161	76	115	.67	.55
29	.77	.22	1170	9.0	.28	52	.74	161	78	79	.35	.76
30	1.1	.32	23	4.1	---	32	.51	161	79	45	.26	.98
31	.51	---	.67	1.3	---	11	---	161	---	28	.54	---
TOTAL	258.12	14.95	1653.67	1447.71	10187.82	5948.17	445.67	2109.90	4238	4057	42.64	17.00
MEAN	8.33	.50	53.3	46.7	351	192	14.9	68.1	141	131	1.38	.57
MAX	230	.78	1170	898	2900	953	280	161	264	325	14	.98
MIN	.51	.22	.19	.23	.27	.27	.32	.43	65	28	.26	.27
AC-FT	512	30	3280	2870	20210	11800	884	4180	8410	8050	85	34

## 11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.8	41.4	41.7	67.2	130	93.9	41.5	24.0	19.9	13.0	8.55	9.96
MAX	253	284	178	747	860	796	236	168	141	187	112	109
(WY)	1984	1966	1978	1969	1969	1983	1983	1986	1992	1983	1991	1982
MIN	.59	.087	.49	.95	.34	.31	.47	.41	.13	.26	.035	.097
(WY)	1978	1957	1959	1976	1961	1956	1977	1959	1956	1956	1956	1956

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1956 - 1992	
ANNUAL TOTAL	16656.79		30420.65			
ANNUAL MEAN	45.6		83.1		42.2	
HIGHEST ANNUAL MEAN					187	
LOWEST ANNUAL MEAN					6.01	
HIGHEST DAILY MEAN	1900	Feb 28	2900	Feb 12	7700	Jan 25 1969
LOWEST DAILY MEAN	.09	Apr 28	.19	Dec 1	.00	Mar 3 1956
ANNUAL SEVEN-DAY MINIMUM	.22	May 15	.29	Nov 27	.00	Apr 5 1956
INSTANTANEOUS PEAK FLOW			11800	Feb 12	18200	Feb 16 1980
INSTANTANEOUS PEAK STAGE			6.19	Feb 12	7.35	Feb 16 1980
ANNUAL RUNOFF (AC-FT)	33040		60340		30560	
10 PERCENT EXCEEDS	31		172		82	
50 PERCENT EXCEEDS	.59		1.6		1.9	
90 PERCENT EXCEEDS	.25		.38		.44	

## 11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA

LOCATION.--Lat 34°01'00", long 118°05'15", in Paso de Bartolo Grant, Los Angeles County, Hydrologic Unit 18070105, on right levee 0.2 mi upstream from Beverly Boulevard, 0.4 mi downstream from axis of Whittier Narrows Dam, and 1.0 mi northeast of Montebello.

DRAINAGE AREA.--124 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 175 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges and discharges below 100 ft<sup>3</sup>/s, which are poor. Flow regulated by Whittier Narrows flood-control reservoir, capacity, 36,160 acre-ft. There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,800 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 13.82 ft, from rating curve extended above 15,000 ft<sup>3</sup>/s on basis of gate openings at dam at gage heights 12.32 and 13.82 ft; no flow at times in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,900 ft<sup>3</sup>/s, Feb. 12, gage height, 11.71 ft; minimum daily, .07 ft<sup>3</sup>/s, Aug. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	382	339	140	28	36	98	19	291	33	26	8.4
2	211	410	322	131	28	812	114	19	321	23	8.8	15
3	222	455	280	352	28	968	144	17	354	31	1.3	17
4	301	465	280	382	28	40	166	16	383	39	7.7	20
5	352	409	287	1520	53	33	149	21	410	48	7.9	13
6	343	410	298	757	478	359	143	38	440	38	2.1	6.2
7	343	484	303	172	1460	68	64	50	477	31	17	7.0
8	331	432	381	188	60	49	76	56	496	45	21	16
9	329	401	286	67	46	42	116	43	537	80	32	25
10	313	394	326	12	1400	69	104	30	580	126	38	14
11	329	373	410	12	4460	59	111	31	596	245	56	21
12	347	367	186	10	6690	70	106	40	592	305	13	11
13	342	335	83	6.8	924	77	87	44	587	169	.07	9.9
14	351	318	185	2.9	867	74	85	76	569	147	16	10
15	317	308	185	3.0	2420	76	89	108	588	111	29	16
16	283	303	204	2.5	110	82	81	121	557	141	11	13
17	283	296	121	2.5	77	80	81	128	518	208	40	14
18	292	306	35	3.4	51	63	87	119	461	261	42	13
19	295	310	67	3.4	57	42	78	137	408	332	46	13
20	275	300	67	4.3	51	899	57	182	357	399	62	16
21	258	341	150	3.9	27	1200	57	178	304	349	115	17
22	287	355	229	8.2	25	537	52	168	261	215	109	16
23	303	366	216	18	22	2180	47	164	130	231	129	72
24	294	372	205	40	14	231	38	170	100	195	133	138
25	e295	319	220	45	11	163	37	187	91	149	78	132
26	e300	262	222	52	25	128	35	197	57	143	9.8	147
27	e270	344	219	52	28	172	35	211	54	102	14	153
28	203	361	1130	32	28	98	25	232	45	125	17	152
29	314	334	2480	22	29	96	22	257	43	101	9.2	155
30	343	334	6260	20	---	94	22	261	41	78	6.4	155
31	359	---	209	28	---	94	---	282	---	45	14	---
TOTAL	9330	10846	16185	4092.9	19525	8991	2406	3602	10648	4545	1111.27	1415.5
MEAN	301	362	522	132	673	290	80.2	116	355	147	35.8	47.2
MAX	359	484	6260	1520	6690	2180	166	282	596	399	133	155
MIN	203	262	35	2.5	11	33	22	16	41	23	.07	6.2
AC-FT	18510	21510	32100	8120	38730	17830	4770	7140	21120	9020	2200	2810

e Estimated.

## 11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	100	135	145	260	464	361	115	105	84.1	67.4	51.9	75.1
MAX	302	362	522	2045	3459	2265	371	261	355	183	244	413
(WY)	1984	1992	1992	1969	1969	1983	1983	1983	1992	1983	1991	1991
MIN	.001	7.08	10.3	29.2	22.1	15.6	4.25	10.6	.093	1.10	4.74	.13
(WY)	1978	1978	1977	1976	1984	1972	1977	1972	1977	1972	1980	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1967 - 1992	
ANNUAL TOTAL	94060.7		92697.67			
ANNUAL MEAN	258		253		162	
HIGHEST ANNUAL MEAN					529	
LOWEST ANNUAL MEAN					40.9	
HIGHEST DAILY MEAN	6260	Dec 30	6690	Feb 12	21200	Mar 2 1983
LOWEST DAILY MEAN	1.6	Jan 8	.07	Aug 13	.00	Oct 29 1966
ANNUAL SEVEN-DAY MINIMUM	4.6	May 1	3.1	Jan 14	.00	Sep 10 1969
INSTANTANEOUS PEAK FLOW			28900	Feb 12	38800	Jan 25 1969
INSTANTANEOUS PEAK STAGE			11.71	Feb 12	13.82	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	186600		183900		117400	
10 PERCENT EXCEEDS	410		417		229	
50 PERCENT EXCEEDS	148		120		76	
90 PERCENT EXCEEDS	30		14		2.7	

11103000 LOS ANGELES RIVER AT LONG BEACH, CA  
(National stream-quality accounting network station)

LOCATION.--Lat 33°49'02", long 118°12'20", in Los Cerritos Grant, Los Angeles County, Hydrologic Unit 18070105, on right bank 5,000 ft upstream from Willow Street, 3.4 mi north of Long Beach, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--827 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1928 to September 1983, October 1988 to current year. October 1983 to September 1988, available in files of Los Angeles County Department of Public Works; not reviewed by U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 11.91 ft above National Geodetic Vertical Datum of 1929 (levels by Los Angeles County Department of Public Works). See WSP 1735 for history of changes prior to Jan. 19, 1956.

REMARKS.--No estimated daily discharges. Flow regulated since September 1940 by Hansen flood-control reservoir, capacity, 25,450 acre-ft, from April 1983 survey; Sepulveda flood-control reservoir, capacity, 17,400 acre-ft, from December 1982 survey; and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth reservoirs and at times discharges imported water into Los Angeles River upstream from station. Many diversions upstream from station for domestic use and irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 129,000 ft<sup>3</sup>/s, Feb. 16, 1980, gage height, 17.99 ft; no flow at times in 1929-30, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 23,800 ft<sup>3</sup>/s, Feb. 12; minimum daily, 110 ft<sup>3</sup>/s, Oct. 8, 9, 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	137	151	332	501	361	1230	287	172	184	168	146
2	118	130	151	312	529	5800	635	234	175	179	167	150
3	118	128	128	1300	513	5950	374	198	177	184	162	152
4	118	128	147	484	459	993	355	203	174	182	163	146
5	118	136	159	4860	478	627	358	207	169	174	154	146
6	118	144	149	1220	3640	3080	359	304	176	179	164	146
7	118	143	156	1600	5640	646	322	266	169	188	175	144
8	110	141	456	760	1200	688	319	275	169	210	172	143
9	110	142	181	368	909	456	387	288	169	209	165	151
10	140	142	166	346	14400	471	350	288	172	211	161	148
11	139	144	196	332	18900	430	319	265	178	240	161	146
12	132	143	161	329	23800	413	316	214	176	361	171	145
13	129	141	162	328	8550	397	316	188	171	251	171	143
14	124	141	158	347	3330	390	310	178	158	203	164	143
15	114	137	156	350	8330	386	303	188	159	207	166	144
16	114	130	157	337	2050	378	301	190	161	215	164	141
17	113	126	154	351	1660	370	305	191	160	211	164	146
18	112	126	158	352	1510	374	307	184	171	208	161	142
19	113	121	170	338	1060	377	298	177	171	202	164	144
20	114	132	164	332	981	5570	285	182	169	202	168	144
21	114	134	161	338	816	3850	273	184	168	207	159	142
22	112	135	161	336	652	3420	282	177	169	212	154	138
23	112	140	158	352	613	7360	285	176	167	205	158	145
24	110	137	158	344	595	1330	263	171	166	195	164	148
25	110	139	160	338	579	1090	262	167	157	204	162	148
26	472	139	163	342	558	812	256	174	157	199	160	147
27	723	145	164	341	569	4460	247	182	159	190	169	146
28	265	141	5240	349	566	876	240	182	163	195	161	141
29	187	138	9370	316	541	762	239	180	163	195	160	142
30	161	137	2150	336	---	716	251	175	163	193	159	143
31	161	---	187	352	---	761	---	174	---	191	160	---
TOTAL	4920	4097	21552	18722	103929	53594	10347	6449	5028	6386	5071	4350
MEAN	159	137	695	604	3584	1729	345	208	168	206	164	145
MAX	723	145	9370	4860	23800	7360	1230	304	178	361	175	152
MIN	110	121	128	312	459	361	239	167	157	174	154	138
AC-FT	9760	8130	42750	37140	206100	106300	20520	12790	9970	12670	10060	8630

## 11103000 LOS ANGELES RIVER AT LONG BEACH, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	43.6	200	229	470	701	640	191	69.6	39.2	35.8	40.1	49.1
MAX	160	2333	1070	5181	6749	6188	1197	669	168	206	264	307
(WY)	1990	1966	1966	1969	1980	1983	1983	1983	1992	1992	1977	1976
MIN	1.85	1.94	3.84	6.25	6.71	5.21	1.17	1.92	2.20	1.96	1.84	2.43
(WY)	1932	1930	1930	1936	1933	1931	1934	1934	1930	1930	1930	1930

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1930 - 1992	
ANNUAL TOTAL	127711		244445			
ANNUAL MEAN	350		668		223	
HIGHEST ANNUAL MEAN					1072	1969
LOWEST ANNUAL MEAN					17.0	1930
HIGHEST DAILY MEAN	10700	Feb 28	23800	Feb 12	55000	Jan 25 1969
LOWEST DAILY MEAN	108	Sep 10	110	Oct 8	.00	Nov 3 1930
ANNUAL SEVEN-DAY MINIMUM	112	Sep 10	112	Oct 19	.03	Nov 3 1930
INSTANTANEOUS PEAK FLOW					129000	Feb 16 1980
INSTANTANEOUS PEAK STAGE					17.99	Feb 16 1980
ANNUAL RUNOFF (AC-FT)	253300		484900		161700	
10 PERCENT EXCEEDS	333		813		209	
50 PERCENT EXCEEDS	139		179		30	
90 PERCENT EXCEEDS	118		137		4.9	

11103000 LOS ANGELES RIVER AT LONG BEACH, CA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to September 30 (discontinued).  
 CHEMICAL DATA: Water years 1973 to September 30 (discontinued).  
 BIOLOGICAL DATA: Water years 1973-81.  
 SPECIFIC CONDUCTANCE: Water years 1974-75, 1980-83.  
 WATER TEMPERATURE: Water years 1974-75, 1980-83.  
 SEDIMENT DATA: Water years 1975 to September 30 (discontinued).

PERIOD OF DAILY RECORD.--  
 SPECIFIC CONDUCTANCE: October 1973 to September 1975, July 1980 to September 1983.  
 WATER TEMPERATURE: October 1973 to September 1975, January 1980 to September 1983.

INSTRUMENTATION.--Water-quality monitor recording specific conductance and water temperature from October 1973 to September 1975, January 1980 to September 1983.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, (PER-CENT OF SATUR-ATION)	OXYGEN, (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, UM-MF (COLS./100 ML)	STREP-TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)
DEC 12...	1245	139	1100	9.0	19.5	2.6	760	16.8	184	1100	6700
MAR 18...	1215	193	1270	9.2	19.5	35	757	16.6	183	200	42
JUL 14...	1305	159	1040	9.3	32.5	3.0	756	17.6	246	500	K170
SEP 22...	1300	134	1090	9.8	32.5	1.7	767	22.3	307	880	31

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3)
DEC 12...	210	75	54	19	130	55	4	12	110	29	138
MAR 18...	360	180	90	33	120	41	3	9.1	139	41	182
JUL 14...	240	87	62	20	110	49	3	12	88	47	150
SEP 22...	250	87	65	22	120	49	3	12	56	72	166

DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
DEC 12...	160	160	0.60	19	748	675	1.02	0.770	0.760	4.40
MAR 18...	260	140	0.50	13	812	805	1.10	1.50	1.50	3.90
JUL 14...	170	120	0.50	20	622	626	0.85	1.30	1.30	3.30
SEP 22...	190	130	0.60	18	660	658	0.90	<0.010	<0.010	<0.050

## 11103000 LOS ANGELES RIVER AT LONG BEACH, CA--Continued

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTH TOTAL (MG/L AS P)	PHOS- PHORUS ORTH, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)
DEC 12...	4.40	7.60	7.10	10	2.70	2.40	2.60	2.60	10	28
MAR 18...	3.90	5.50	5.40	7.4	2.00	1.80	1.70	1.60	20	43
JUL 14...	3.40	3.40	2.80	6.0	2.00	0.700	1.50	0.530	10	30
SEP 22...	<0.050	0.020	0.010	<0.20	0.030	0.020	0.020	0.010	<10	28

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
DEC 12...	<3	25	43	24	20	11	<1	<1.0	410	<6
MAR 18...	<3	<3	47	23	20	9	3	<1.0	640	<6
JUL 14...	<3	<3	45	3	20	8	2	<1.0	470	<6
SEP 22...	<3	10	59	1	30	7	2	<1.0	500	<6

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DEPTH AT SAMPLE LOC- TION, TOTAL (FEET)	SAMPLE LOC- ATION, SECTION (FT FM L BANK)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED OXYGEN, (PER- CENT SOLVED SATUR- ATION)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM		
JUL											
14...*	1330	0.18	218	1030	9.7	32.5	756	>20.0	14	92	
14...*	1333	1.53	160	1050	9.3	32.5	756	16.9	236	76	
14...*	1336	1.45	152	1050	9.3	32.5	756	17.1	239	89	
14...*	1337	1.50	146	1060	9.3	32.5	756	17.7	247	78	
14...*	1338	0.52	138	1050	9.4	32.5	756	18.6	260	87	
SEP											
22...*	1350	0.30	124	1130	10.5	34.0	767	20.0	282	23	92
22...*	1353	1.40	104	1100	10.2	33.0	767	22.8	316	27	63
22...*	1356	1.40	97.0	1090	10.2	32.5	767	22.2	306	21	67
22...*	1359	1.40	94.0	1090	10.1	32.5	767	24.0	330	18	70
22...*	1402	1.40	91.0	1100	10.2	32.5	767	22.4	308	17	84

\* Instantaneous discharge at the time of cross-sectional measurement: July 14, 159 ft<sup>3</sup>/s; Sept. 22, 134 ft<sup>3</sup>/s.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC						
12...	1250	139	19.5	7	1.1	82
MAR						
18...	1215	193	19.5	26	1.6	78
JUL						
14...	1315	159	32.5	15	1.3	84
SEP						
22...	1300	134	32.5	21	1.1	75

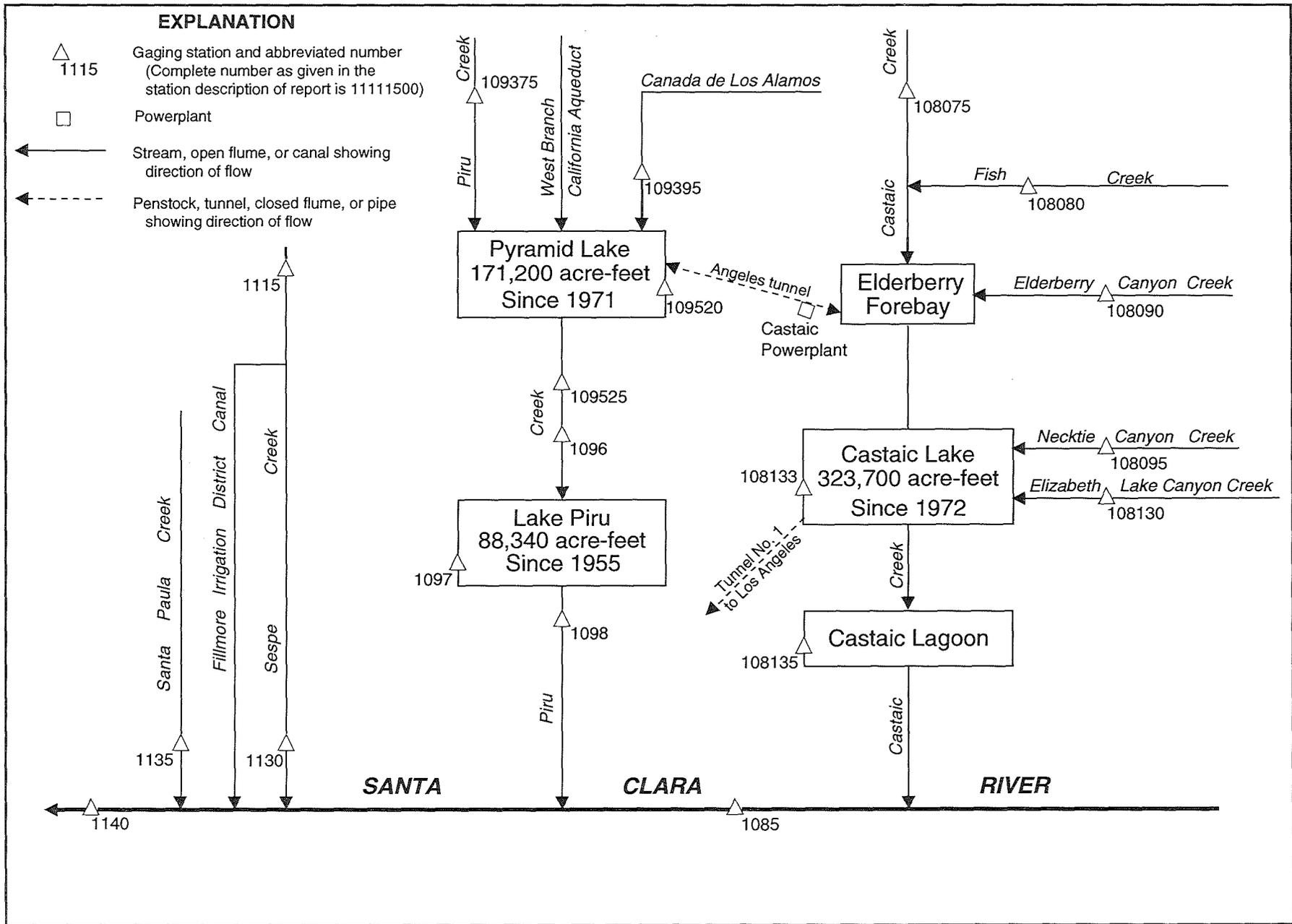


Figure 21. Diversions and storage in Santa Clara River basin.

## 11108075 CASTAIC CREEK ABOVE FISH CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°36'23", long 118°39'51", in SW 1/4 SE 1/4 sec.15, T.6 N., R.17 W, Los Angeles County, Hydrologic Unit 18070102, on left bank 100 ft upstream from bridge, 1.4 mi north of Castaic powerplant, and 8.5 mi northwest of Castaic.

DRAINAGE AREA.--37.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 1978 (published as Castaic Creek One Mile above Fish Creek), October 1988 to current year. October 1968 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Station is used to monitor natural inflow to Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 7.00 ft, from information furnished by California Department of Water Resources; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 11,000 ft<sup>3</sup>/s, Jan. 19, 1969, gage height unknown, from information furnished by California Department of Water Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,960 ft<sup>3</sup>/s, Feb. 12, gage height, 6.85 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.67	e10	28	4.7	1.3	.37	.00	.00
2	.00	.00	.00	.00	.65	e15	27	4.4	1.3	.36	.00	.00
3	.00	.00	.00	.00	.63	e16	25	4.2	1.3	.36	.00	.00
4	.00	.00	.00	.00	.65	e13	23	4.2	1.2	.36	.00	.00
5	.00	.00	.00	1.0	.69	e13	22	4.0	1.2	.35	.00	.00
6	.00	.00	.00	2.6	1.2	e25	20	4.1	1.2	.33	.00	.00
7	.00	.00	.00	7.3	7.0	e21	18	e3.8	1.2	.30	.00	.00
8	.00	.00	.00	4.8	e8.1	e20	17	e3.5	1.1	.30	.00	.00
9	.00	.00	.00	2.3	e7.5	e19	16	e3.3	1.1	.29	.00	.00
10	.00	.00	.00	2.0	e248	e15	15	e3.0	1.1	.27	.00	.00
11	.00	.00	.00	1.9	e340	e12	14	e2.9	1.1	.26	.00	.00
12	.00	.00	.00	1.7	e675	e11	13	e2.8	1.0	.26	.00	.00
13	.00	.00	.00	1.5	e295	e11	12	e2.7	1.0	.24	.00	.00
14	.00	.00	.00	1.4	e90	e12	11	e2.6	.98	.23	.00	.00
15	.00	.00	.00	1.2	e140	e12	11	e2.5	.93	.22	.00	.00
16	.00	.00	.00	1.2	e100	e10	9.7	e2.4	.91	.17	.00	.00
17	.00	.00	.00	1.1	e70	e10	9.1	e2.3	.86	.14	.00	.00
18	.00	.00	.00	.99	e66	e9.0	8.4	e2.3	.83	.09	.00	.00
19	.00	.00	.00	.84	e50	e9.0	7.9	e2.2	.77	.05	.00	.00
20	.00	.00	.00	.84	e38	e18	7.3	e2.1	.73	.03	.00	.00
21	.00	.00	.00	.79	e30	e27	7.0	e2.0	.68	.01	.00	.00
22	.00	.00	.00	.77	e26	e26	7.0	e1.9	.65	.00	.00	.00
23	.00	.00	.00	.79	e21	e95	6.7	e1.8	.60	.00	.00	.00
24	.00	.00	.00	.77	e19	e60	6.4	e1.7	.57	.00	.00	.00
25	.00	.00	.00	.75	e18	e40	6.1	e1.5	.54	.00	.00	.00
26	.00	.00	.00	.73	e16	e30	6.1	e1.5	.49	.00	.00	.00
27	.00	.00	.00	.66	e16	e32	5.9	e1.4	.46	.00	.00	.00
28	.00	.00	.00	.65	e15	e31	5.7	e1.3	.44	.00	.00	.00
29	.00	.00	.23	.64	e14	e29	5.3	e1.3	.40	.00	.00	.00
30	.00	.00	1.6	.62	---	e28	5.1	e1.2	.38	.00	.00	.00
31	.00	---	.00	.66	---	e27	---	e1.3	---	.00	.00	---
TOTAL	0.00	0.00	24.60	40.50	2314.09	706.0	375.7	80.9	26.32	4.99	0.00	0.00
MEAN	.000	.000	.79	1.31	79.8	22.8	12.5	2.61	.88	.16	.000	.000
MAX	.00	.00	.23	7.3	675	95	28	4.7	1.3	.37	.00	.00
MIN	.00	.00	.00	.00	.63	9.0	5.1	1.2	.38	.00	.00	.00
AC-FT	.00	.00	49	80	4590	1400	745	160	52	9.9	.00	.00

e Estimated.

11108075 CASTAIC CREEK ABOVE FISH CREEK, NEAR CASTAIC, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.021	.018	.89	3.46	36.0	31.5	7.28	2.58	.90	.35	.19	.19
MAX	.13	.11	4.44	18.4	133	149	27.2	10.7	4.44	1.92	1.16	1.16
(WY)	1977	1977	1978	1978	1978	1978	1978	1978	1978	1978	1978	1978
MIN	.000	.000	.000	.000	.073	.10	.018	.000	.000	.000	.000	.000
(WY)	1978	1978	1989	1990	1990	1990	1990	1989	1989	1989	1989	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1977 - 1992
ANNUAL TOTAL	683.17	3573.10	
ANNUAL MEAN	1.87	9.76	6.78
HIGHEST ANNUAL MEAN			28.6 1978
LOWEST ANNUAL MEAN			.016 1990
HIGHEST DAILY MEAN	130 Mar 19	675 Feb 12	1610 Mar 4 1978
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jul 5 1977
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jul 5 1977
INSTANTANEOUS PEAK FLOW		5960 Feb 12	6300 Mar 4 1978
INSTANTANEOUS PEAK STAGE		6.85 Feb 12	7.00 Mar 4 1978
ANNUAL RUNOFF (AC-FT)	1360	7090	4910
10 PERCENT EXCEEDS	2.0	19	8.2
50 PERCENT EXCEEDS	.00	.36	.00
90 PERCENT EXCEEDS	.00	.00	.00

## 11108080 FISH CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°36'09", long 118°39'43", NE 1/4 NE 1/4 sec.22, T.6 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 700 ft upstream from confluence of Fish Creek with Castaic Creek and 8.1 mi northwest of Castaic.

DRAINAGE AREA.--27.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. June 1965 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,620 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Station is used to monitor natural inflow to Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,260 ft<sup>3</sup>/s, estimated, Mar. 4, 1978, gage height, 4.80 ft, from information furnished by California Department of Water Resources; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 5,990 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 4.98 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,820 ft<sup>3</sup>/s, Feb. 12, gage height, 4.50 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	1.1	14	40	7.5	2.1	.01	.00	.00
2	.00	.00	.00	.00	1.1	19	36	7.0	2.0	.01	.00	.00
3	.00	.00	.00	.00	1.1	23	34	6.9	1.8	.01	.00	.00
4	.00	.00	.00	.00	1.0	18	30	6.5	1.6	.01	.00	.00
5	.00	.00	.00	1.5	1.1	18	26	6.3	1.6	.01	.00	.00
6	.00	.00	.00	1.1	2.3	34	24	4.9	1.7	.01	.00	.00
7	.00	.00	.00	6.1	6.1	28	23	4.9	1.7	.01	.00	.00
8	.00	.00	.00	11	8.1	26	20	4.7	1.5	.00	.00	.00
9	.00	.00	.00	5.9	7.8	22	19	4.4	1.3	.00	.00	.00
10	.00	.00	.00	3.7	248	19	18	4.2	1.2	.00	.00	.00
11	.00	.00	.00	2.8	413	18	17	4.3	1.2	.00	.00	.00
12	.00	.00	.00	2.3	882	17	14	4.6	1.1	.00	.00	.00
13	.00	.00	.00	1.9	364	17	14	4.3	1.0	.00	.00	.00
14	.00	.00	.00	1.6	103	16	e14	4.3	.89	.00	.00	.00
15	.00	.00	.00	1.5	162	15	e14	4.6	.84	.00	.00	.00
16	.00	.00	.00	1.5	134	14	e13	4.1	.74	.00	.00	.00
17	.00	.00	.00	1.3	99	13	e13	3.6	.62	.00	.00	.00
18	.00	.00	.00	1.1	74	14	e12	3.4	.53	.00	.00	.00
19	.00	.00	.00	.87	53	14	e12	3.6	.46	.00	.00	.00
20	.00	.00	.00	.91	45	30	e11	3.5	.39	.00	.00	.00
21	.00	.00	.00	.89	39	34	10	3.0	.33	.00	.00	.00
22	.00	.00	.00	.88	32	32	9.3	2.8	.27	.00	.00	.00
23	.00	.00	.00	.87	28	111	8.7	2.6	.22	.00	.00	.00
24	.00	.00	.00	.91	27	78	7.5	2.6	.18	.00	.00	.00
25	.00	.00	.00	1.1	25	65	6.8	2.4	.13	.00	.00	.00
26	.00	.00	.00	1.1	19	51	6.0	2.4	.10	.00	.00	.00
27	.00	.00	.00	.98	17	53	5.7	2.4	.08	.00	.00	.00
28	.00	.00	.00	1.1	16	51	6.0	2.5	.05	.00	.00	.00
29	.00	.00	9.4	1.1	14	44	5.9	2.5	.04	.00	.00	.00
30	.00	.00	2.2	1.1	---	36	6.3	2.4	.02	.00	.00	.00
31	.00	---	.00	1.1	---	36	---	2.2	---	.00	.00	---
TOTAL	0.00	0.00	11.60	56.21	2823.7	980	476.2	125.4	25.69	0.07	0.00	0.00
MEAN	.000	.000	.37	1.81	97.4	31.6	15.9	4.05	.86	.002	.000	.000
MAX	.00	.00	9.4	11	882	111	40	7.5	2.1	.01	.00	.00
MIN	.00	.00	.00	.00	1.0	13	5.7	2.2	.02	.00	.00	.00
AC-FT	.00	.00	23	111	5600	1940	945	249	51	.1	.00	.00

e Estimated.

11108080 FISH CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.25	4.87	41.6	39.2	10.6	3.92	1.41	.42	.018	.000
MAX	.000	.000	1.11	27.0	150	182	42.5	17.5	7.53	2.55	.11	.000
(WY)	1977	1977	1978	1978	1978	1978	1978	1978	1978	1978	1978	1977
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1977	1977	1977	1989	1989	1989	1989	1989	1989	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1977 - 1992	
ANNUAL TOTAL	886.09		4498.87			
ANNUAL MEAN	2.43		12.3		8.33	
HIGHEST ANNUAL MEAN					35.1 1978	
LOWEST ANNUAL MEAN					.000 1989	
HIGHEST DAILY MEAN	135	Mar 19	882	Feb 12	999	Feb 9 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1976
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1976
INSTANTANEOUS PEAK FLOW			1820	Feb 12	4260	Mar 4 1978
INSTANTANEOUS PEAK STAGE			4.50	Feb 12	4.80	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	1760		8920		6040	
10 PERCENT EXCEEDS	3.0		24		11	
50 PERCENT EXCEEDS	.00		.01		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11108090 ELDERBERRY CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.--Lat 34°34'20", long 118°37'28", in NW 1/4 NW 1/4 sec.31, T.6 N., R.31 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 2.8 mi southeast of Castaic powerplant, and 5.5 mi northwest of Castaic.

DRAINAGE AREA.--2.50 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1977 to September 1978, October 1988 to current year. October 1966 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow into Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft<sup>3</sup>/s, estimated, Mar. 4, 1978, gage height, 6.00 ft, from information furnished by California Department of Water Resources; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 127 ft<sup>3</sup>/s, Feb. 12, gage height, 2.88 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.06	.00	.34	1.8	.11	.00	.00	.00	.00
2	.00	.00	.00	.07	.00	.78	1.6	.11	.00	.00	.00	.00
3	.00	.00	.00	.07	.00	1.9	1.4	.11	.00	.00	.00	.00
4	.00	.00	.00	.08	.00	.96	1.3	.09	.00	.00	.00	.00
5	.00	.00	.00	.69	.00	.79	1.2	.11	.00	.00	.00	.00
6	.00	.00	.00	.56	.00	4.3	1.0	.22	.00	.00	.00	.00
7	.00	.00	.00	1.8	.00	2.1	.94	.13	.00	.00	.00	.00
8	.00	.00	.00	1.5	2.1	1.8	.85	.11	.00	.00	.00	.00
9	.00	.00	.00	.62	1.3	1.5	.74	.10	.00	.00	.00	.00
10	.00	.00	.00	.29	35	1.3	.68	.09	.00	.00	.00	.00
11	.00	.00	.00	.17	31	1.1	.62	.09	.00	.00	.00	.00
12	.00	.00	.00	.12	56	.95	.54	.09	.00	.00	.00	.00
13	.00	.00	.00	.10	17	.85	.50	.08	.00	.00	.00	.00
14	.00	.00	.00	.07	10	.79	.47	.07	.00	.00	.00	.00
15	.00	.00	.00	.03	29	.75	.43	.07	.00	.00	.00	.00
16	.00	.00	.00	.02	12	.71	.38	.06	.00	.00	.00	.00
17	.00	.00	.00	.01	6.7	.62	.35	.06	.00	.00	.00	.00
18	.00	.00	.00	.00	4.1	.60	.31	.06	.00	.00	.00	.00
19	.00	.00	.00	.00	3.2	.55	.28	.05	.00	.00	.00	.00
20	.00	.00	.00	.00	2.5	2.7	.26	.05	.00	.00	.00	.00
21	.00	.00	.00	.00	1.9	3.2	.26	.05	.00	.00	.00	.00
22	.00	.00	.00	.00	1.5	5.3	.23	.05	.00	.00	.00	.00
23	.00	.00	.00	.00	1.1	18	.20	.05	.00	.00	.00	.00
24	.00	.00	.00	.00	.85	7.6	.19	.04	.00	.00	.00	.00
25	.00	.00	.00	.00	58	5.0	.17	.03	.00	.00	.00	.00
26	.00	.00	.00	.00	.43	4.3	.16	.03	.00	.00	.00	.00
27	.00	.00	.00	.00	.39	4.0	.14	.03	.00	.00	.00	.00
28	.00	.00	.00	.00	.36	3.0	.13	.02	.00	.00	.00	.00
29	.00	.00	.00	.00	.35	2.6	.12	.02	.00	.00	.00	.00
30	.00	.00	1.1	.00	---	2.3	.10	.02	.00	.00	.00	.00
31	.00	---	.09	.00	---	2.1	---	.03	---	.00	.00	---
TOTAL	0.00	0.00	1.19	6.26	274.78	82.79	17.35	2.23	0.00	0.00	0.00	0.00
MEAN	.000	.000	.038	.20	9.48	2.67	.58	.072	.000	.000	.000	.000
MAX	.00	.00	1.1	1.8	58	18	1.8	.22	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.34	.10	.02	.00	.00	.00	.00
AC-FT	.00	.00	2.4	12	545	164	34	4.4	.00	.00	.00	.00

11108090 ELDERBERRY CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.019	1.00	5.58	4.86	.69	.13	.010	.000	.000	.000
MAX	.000	.000	.058	4.68	17.7	19.1	2.68	.55	.051	.000	.000	.000
(WY)	1978	1978	1989	1978	1978	1978	1978	1978	1978	1978	1978	1978
MIN	.000	.000	.000	.000	.14	.000	.000	.000	.000	.000	.000	.000
(WY)	1978	1978	1978	1990	1990	1990	1989	1989	1989	1978	1978	1978

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1978 - 1992	
ANNUAL TOTAL	92.62		384.60			
ANNUAL MEAN	.25		1.05		1.00	
HIGHEST ANNUAL MEAN					3.64 1978	
LOWEST ANNUAL MEAN					.011 1990	
HIGHEST DAILY MEAN	11	Mar 1	58	Feb 25	200	Mar 4 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1977
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1977
INSTANTANEOUS PEAK FLOW			127	Feb 12	1100	Mar 4 1978
INSTANTANEOUS PEAK STAGE			2.88	Feb 12	6.00	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	184		763		723	
10 PERCENT EXCEEDS	.10		1.4		.81	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11108095 NECKTIE CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA

LOCATION.-- Lat 34°33'38", long 118°36'51", in SW 1/4 SE 1/4 sec.31, T.6 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 4.7 mi southeast of Castaic powerplant, and 5 mi north of Castaic.

DRAINAGE AREA.--2.12 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. February 1967 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,560 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow to Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft<sup>3</sup>/s, estimated, Mar. 4, 1978, gage height, 5.10 ft; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 125 ft<sup>3</sup>/s, Feb. 12, gage height, 2.53 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.02	.44	2.1	.15	.01	.00	.00	.00
2	.00	.00	.00	.00	.01	1.2	1.8	.12	.01	.00	.00	.00
3	.00	.00	.00	.00	.01	2.6	1.5	.13	.00	.00	.00	.00
4	.00	.00	.00	.00	.01	1.1	1.3	.12	.00	.00	.00	.00
5	.00	.00	.00	.40	.02	1.2	1.2	.14	.00	.00	.00	.00
6	.00	.00	.00	.91	.09	4.6	1.1	.17	.00	.00	.00	.00
7	.00	.00	.00	2.4	7.8	2.8	1.0	.14	.00	.00	.00	.00
8	.00	.00	.00	2.2	5.2	2.2	1.0	.12	.00	.00	.00	.00
9	.00	.00	.00	.67	2.9	2.0	.94	.12	.00	.00	.00	.00
10	.00	.00	.00	.28	68	1.8	.90	.10	.00	.00	.00	.00
11	.00	.00	.00	.19	64	1.6	.85	.10	.00	.00	.00	.00
12	.00	.00	.00	.13	62	1.4	.81	.11	.00	.00	.00	.00
13	.00	.00	.00	.12	32	1.3	.72	.09	.00	.00	.00	.00
14	.00	.00	.00	.09	18	1.2	.62	.10	.00	.00	.00	.00
15	.00	.00	.00	.07	33	1.1	.55	.10	.00	.00	.00	.00
16	.00	.00	.00	.05	18	1.0	.47	.09	.00	.00	.00	.00
17	.00	.00	.00	.05	10	.94	.43	.07	.00	.00	.00	.00
18	.00	.00	.00	.04	5.9	.83	.40	.06	.00	.00	.00	.00
19	.00	.00	.00	.03	4.0	.77	.36	.06	.00	.00	.00	.00
20	.00	.00	.00	.03	3.3	3.1	.36	.06	.00	.00	.00	.00
21	.00	.00	.00	.03	2.6	3.7	.34	.06	.00	.00	.00	.00
22	.00	.00	.00	.03	2.1	5.1	.30	.06	.00	.00	.00	.00
23	.00	.00	.00	.03	1.7	16	.28	.05	.00	.00	.00	.00
24	.00	.00	.00	.03	1.5	8.5	.28	.05	.00	.00	.00	.00
25	.00	.00	.00	.03	1.2	5.1	.29	.05	.00	.00	.00	.00
26	.00	.00	.00	.03	.97	4.9	.27	.05	.00	.00	.00	.00
27	.00	.00	.00	.03	.80	4.4	.25	.05	.00	.00	.00	.00
28	.00	.00	.00	.03	.66	3.7	.25	.05	.00	.00	.00	.00
29	.00	.00	1.6	.03	.57	2.9	.23	.04	.00	.00	.00	.00
30	.00	.00	.95	.03	---	2.5	.18	.04	.00	.00	.00	.00
31	.00	---	.00	.03	---	2.2	---	.04	---	.00	.00	---
TOTAL	0.00	0.00	2.55	7.99	346.36	92.18	21.08	2.69	0.02	0.00	0.00	0.00
MEAN	.000	.000	.082	.26	11.9	2.97	.70	.087	.001	.000	.000	.000
MAX	.00	.00	1.6	2.4	68	16	2.1	.17	.01	.00	.00	.00
MIN	.00	.00	.00	.00	.01	.44	.18	.04	.00	.00	.00	.00
AC-FT	.00	.00	5.1	16	687	183	42	5.3	.04	.00	.00	.00

11108095 NECKTIE CANYON CREEK ABOVE CASTAIC CREEK, NEAR CASTAIC, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.089	1.74	6.66	5.91	.89	.14	.031	.000	.000	.000
MAX	.000	.000	.39	9.74	27.0	28.8	4.33	.65	.19	.000	.000	.000
(WY)	1977	1977	1978	1978	1978	1978	1978	1978	1978	1977	1977	1977
MIN	.000	.000	.000	.000	.008	.002	.000	.000	.000	.000	.000	.000
(WY)	1977	1977	1977	1990	1977	1990	1989	1989	1989	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1977 - 1992	
ANNUAL TOTAL	134.66		472.87			
ANNUAL MEAN	.37		1.29		1.26	
HIGHEST ANNUAL MEAN					5.81	
LOWEST ANNUAL MEAN					.012	
HIGHEST DAILY MEAN	18	Mar 27	68	Feb 10	333	Mar 4 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1976
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1976
INSTANTANEOUS PEAK FLOW			125	Feb 12	1200	Mar 4 1978
INSTANTANEOUS PEAK STAGE			2.53	Feb 12	5.10	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	267		938		912	
10 PERCENT EXCEEDS	.22		1.9		.80	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11108130 ELIZABETH LAKE CANYON CREEK ABOVE CASTAIC LAKE, NEAR CASTAIC, CA

LOCATION.--Lat 34°34'46", long 118°33'15", unsurveyed, Los Angeles County, Hydrologic Unit 18070102, on left bank 0.4 mi northeast of Elizabeth Lake Guard Station, and 7.0 mi northeast of Castaic on Lake Hughes Road.

DRAINAGE AREA.--43.7 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> of noncontributing area in Elizabeth and Hughes Lake basins.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. January 1962 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor inflow into Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,800 ft<sup>3</sup>/s, Feb. 9, 1978, gage height, 5.79 ft; no flow for many days in water years 1977, and 1989-92.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 7,500 ft<sup>3</sup>/s, estimated, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,110 ft<sup>3</sup>/s, Feb. 12, gage height, 4.47 ft; no flow Oct. 1 to Nov. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.16	1.1	1.3	18	36	8.0	2.8	1.4	.17	.10
2	.00	.00	.17	.91	1.2	23	30	7.6	2.7	1.4	.19	.11
3	.00	.00	.18	.85	1.1	21	27	6.5	2.7	1.2	.21	.15
4	.00	.00	.20	.73	1.0	14	27	6.4	2.7	1.3	.18	.17
5	.00	.00	.20	7.1	1.0	13	25	9.6	2.9	1.4	.16	.16
6	.00	.00	.22	3.3	1.7	20	23	10	3.5	1.1	.16	.16
7	.00	.00	.22	7.9	11	13	22	7.7	3.5	1.1	.17	.15
8	.00	.00	.25	8.0	14	11	21	6.2	3.2	1.2	.16	.13
9	.00	.00	.29	3.0	10	9.8	21	5.7	3.0	1.3	.15	.11
10	.00	.00	.29	2.3	253	8.6	20	5.1	3.1	1.2	.13	.11
11	.00	.00	.28	1.9	295	8.2	20	6.3	3.2	1.4	.12	.11
12	.00	.00	.27	1.5	743	7.8	18	6.5	3.1	1.8	.11	.11
13	.00	.00	.27	1.3	236	8.1	18	5.6	2.9	1.7	.10	.11
14	.00	.00	.27	1.2	99	8.6	18	5.5	2.8	1.4	.10	.11
15	.00	.00	.28	1.2	187	9.8	17	5.6	2.8	1.2	.09	.10
16	.00	.00	.28	1.1	122	13	16	5.2	2.7	.95	.09	.10
17	.00	.00	.27	1.2	86	15	15	4.7	2.7	.83	.09	.10
18	.00	.00	.27	1.4	62	15	14	4.1	2.6	.75	.09	.10
19	.00	.00	.27	1.4	49	17	13	3.9	2.6	.64	.09	.09
20	.00	.00	.27	1.4	41	31	13	4.0	2.6	.50	.09	.09
21	.00	.00	.28	1.4	34	46	11	3.7	2.6	.42	.08	.09
22	.00	.00	.27	1.4	29	45	11	3.5	2.0	.47	.08	.09
23	.00	.00	.29	1.4	25	114	10	3.5	1.8	.40	.08	.08
24	.00	.00	.29	1.4	20	84	9.8	3.3	1.8	.40	.08	.08
25	.00	.00	.29	1.4	22	63	8.9	3.4	1.4	.40	.08	.08
26	.00	.11	.29	1.4	22	55	7.2	3.4	1.1	.36	.08	.08
27	.00	.14	.34	1.4	20	54	8.4	3.5	1.2	.26	.08	.08
28	.00	.13	1.1	1.3	19	46	8.7	3.7	1.1	.20	.08	.08
29	.00	.14	11	1.3	18	44	7.6	3.7	1.2	.22	.09	.07
30	.00	.14	4.9	1.3	---	42	8.3	3.4	1.3	.21	.09	.07
31	.00	---	1.7	1.3	---	38	---	3.1	---	.18	.09	---
TOTAL	0.00	0.66	25.66	63.79	2424.3	915.9	504.9	162.4	73.6	27.29	3.56	3.17
MEAN	.000	.022	.83	2.06	83.6	29.5	16.8	5.24	2.45	.88	.11	.11
MAX	.00	.14	11	8.0	743	114	36	10	3.5	1.8	.21	.17
MIN	.00	.00	.16	.73	1.0	7.8	7.2	3.1	1.1	.18	.08	.07
AC-FT	.00	1.3	51	127	4810	1820	1000	322	146	54	7.1	6.3

11108130 ELIZABETH LAKE CANYON CREEK ABOVE CASTAIC LAKE, NEAR CASTAIC, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.077	.14	1.03	6.22	43.9	53.2	17.8	6.80	2.88	1.40	.54	.67
MAX	.28	.34	2.35	30.2	167	256	79.5	29.8	13.8	7.36	3.09	3.87
(WY)	1977	1989	1978	1978	1978	1978	1978	1978	1978	1978	1978	1978
MIN	.000	.000	.17	.31	1.31	1.37	1.00	.34	.071	.000	.000	.000
(WY)	1990	1991	1991	1991	1977	1977	1989	1990	1990	1989	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1977 - 1992	
ANNUAL TOTAL	1227.01		4205.23			
ANNUAL MEAN	3.36		11.5		11.0	
HIGHEST ANNUAL MEAN					48.8	
LOWEST ANNUAL MEAN					.66	
HIGHEST DAILY MEAN	146	Mar 27	743	Feb 12	1670	Mar 4 1978
LOWEST DAILY MEAN	.00	Jul 23	.00	Oct 1	.00	Aug 9 1977
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 23	.00	Oct 1	.00	Aug 9 1977
INSTANTANEOUS PEAK FLOW			2110	Feb 12	3800	Feb 9 1978
INSTANTANEOUS PEAK STAGE			4.47	Feb 12	5.79	Feb 9 1978
ANNUAL RUNOFF (AC-FT)	2430		8340		7990	
10 PERCENT EXCEEDS	4.9		21		15	
50 PERCENT EXCEEDS	.25		1.2		.34	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11108133 CASTAIC LAKE NEAR CASTAIC, CA

LOCATION.--Lat 34°31'18", long 118°36'18", in SW 1/4 NW 1/4 sec.18, T.5 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, on center of upstream face of Castaic Dam and 3.0 mi north of Castaic.

DRAINAGE AREA.--137 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> non-contributing 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earthfill dam. Storage began April 1972. Dead storage below outlet tower to downstream distribution system, 1,799 acre-ft, elevation, 1,213 ft. Capacity below spillway level, 323,699 acre-ft, elevation 1,515 ft. Lake receives natural inflow from Castaic Creek and its tributaries, and water diverted from Pyramid Lake through Angeles Tunnel. Water is released downstream through Castaic Tunnel No. 1 and to Castaic Lagoon. Records, including extremes, represent total contents at 2400 hours.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 319,513 acre-ft, May 21, 1992, elevation, 1,513.12 ft; minimum, 147,551 acre-ft, Nov. 8, 1988, elevation, 1,419.08 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 319,513 acre-ft, May 21, elevation, 1,513.12 ft; minimum, 245,054 acre-ft, Nov. 10, elevation, 1,476.96 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on data provided by California Department of Water Resources in 1978.)

1470	231,964	1500	291,186
1480	250,894	1510	310,451
1490	270,629	1520	334,985

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294495	260167	261569	297166	303819	309449	316460	303712	312680	308470	295680	272140
2	292701	258003	265301	298464	302744	309122	318051	302228	313798	309296	294199	271334
3	293439	255888	267839	297825	301842	308731	317277	302099	314941	308079	294683	269706
4	293586	253763	268962	297081	302507	308274	316438	303755	314633	306496	297121	267979
5	291438	253763	271112	296486	304207	307927	315645	307320	313886	305869	297418	266339
6	289362	253413	271817	298208	303647	307732	314809	310233	312505	305977	295975	264764
7	287358	251242	270068	299872	303217	307493	313996	312658	311477	307797	294556	263213
8	287462	249080	268300	302293	302593	307255	313228	314325	311958	310015	293161	263312
9	287212	247024	270269	306410	302014	309057	312505	314259	314391	310255	291857	263471
10	287295	245054	273312	305999	304703	308796	311739	314128	315755	308752	292488	261727
11	286483	246585	276072	305567	310407	308535	310975	316152	316571	307363	295063	259911
12	284263	249003	277805	305156	316505	308209	310233	318560	318294	306129	294007	258317
13	282001	251997	278684	304681	317962	307797	311215	319269	316571	306778	292678	256729
14	279852	255224	277009	304164	316880	307406	313710	318007	314897	307884	291331	258651
15	277703	255322	275340	305178	316372	306778	314457	316262	313206	307168	289926	259832
16	276520	253336	276316	306951	315909	307276	312943	314523	314040	306410	288420	261648
17	277172	251396	279770	306388	316637	306626	311433	312877	315623	307341	289235	262321
18	277887	253802	282919	305848	317763	306215	309666	312242	316836	306475	287919	261016
19	275563	255771	285320	305286	317299	305783	307992	314831	314743	305783	286399	259675
20	273191	261826	285548	304768	317034	305718	308340	317476	312702	306930	284903	258298
21	270871	262678	283952	304142	316549	305459	310713	319513	310669	307450	283414	259202
22	270430	260463	282403	305437	315843	305394	311674	317830	310756	306605	282032	262955
23	270229	258278	283167	304789	315007	306302	311106	316108	310756	305739	280735	265461
24	268942	256260	286795	306302	314237	306280	308970	314413	310975	304854	279321	263928
25	266658	257356	287420	305610	313469	307645	306778	312746	311171	303841	277808	262440
26	264545	261431	291375	304832	312702	307558	304638	313294	309470	302894	276257	260858
27	262321	261787	292595	305999	311870	308970	303626	314479	307081	302808	274853	259300
28	260266	262519	291291	307580	311062	308274	305048	315513	305459	301392	273456	259222
29	260009	264863	290263	306756	310233	307623	305739	315601	305804	299958	272021	258946
30	260009	263213	291585	305783	---	309166	305156	313908	307428	298464	270569	257336
31	260128	---	295447	304811	---	313096	---	312177	---	297059	270508	---
MAX	294495	264863	295447	307580	317962	313096	318051	319513	318294	310255	297418	272140
MIN	260009	245054	261569	296486	301842	305394	303626	302099	305459	297059	270508	256729
a	1484.73	1486.29	1502.22	1506.40	1508.90	1510.21	1506.56	1509.79	1507.61	1502.78	1489.94	1483.31
b	-36061	+3085	+32234	+9364	+5422	+2863	-7940	+7021	-4749	-10369	-26551	-13172

CAL YR 1991 MAX 313864 MIN 167697 b +88867  
WTR YR 1992 MAX 319513 MIN 245054 b -38853

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

## 11108135 CASTAIC LAGOON PARSHALL FLUME NEAR CASTAIC, CA

LOCATION.--Lat 34°29'50", long 118°36'49", in SW 1/4 SE 1/4 sec.24, T.5 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, at southeast end of lagoon under Lake Hughes Road bridge, 0.5 mi east of Castaic on Lake Hughes Road.

DRAINAGE AREA.--138 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> noncontributing area in Elizabeth Canyon Creek basin.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. June 1972 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 1,140 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor outflow from Castaic Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,000 ft<sup>3</sup>/s, Feb. 13, 1992; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 7,670 ft<sup>3</sup>/s, Mar. 2, 1983, gage height, 4.10 ft; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,000 ft<sup>3</sup>/s, Feb. 13; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	100	10	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	100	10	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	100	10	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	100	10	5.0	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	100	10	13	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	100	11	13	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	100	11	13	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	87	11	13	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	60	11	7.0	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	60	11	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	60	11	.00	.00	.00	.00
12	.00	.00	.00	.00	1850	.00	45	11	.00	.00	.00	.00
13	.00	.00	.00	.00	3000	.00	40	11	.00	.00	.00	.00
14	.00	.00	.00	.00	1200	.00	40	11	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	40	11	.00	12	.00	.00
16	.00	.00	.00	.00	.00	.00	36	11	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	32	11	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	32	11	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	32	11	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	25	11	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	93	25	11	.00	.00	.00	.00
30	.00	.00	10	.00	---	100	25	11	.00	.00	.00	.00
31	.00	---	6.6	.00	---	100	---	11	---	.00	.00	---
TOTAL	0.00	0.00	16.60	0.00	6050.00	293.00	1539	336	64.00	12.00	0.00	0.00
MEAN	.000	.000	.54	.000	209	9.45	51.3	10.8	2.13	.39	.000	.000
MAX	.00	.00	10	.00	3000	100	100	11	13	12	.00	.00
MIN	.00	.00	.00	.00	.00	.00	25	10	.00	.00	.00	.00
AC-FT	.00	.00	33	.00	12000	581	3050	666	127	24	.00	.00

## 11108135 CASTAIC LAGOON PARSHALL FLUME NEAR CASTAIC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.089	.000	35.8	1.58	11.6	13.9	29.5	15.8	1.35	2.66
MAX	.000	.000	.54	.000	209	9.45	51.3	72.7	175	94.2	8.10	16.0
(WY)	1977	1977	1992	1977	1992	1992	1992	1978	1978	1978	1978	1978
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1977 - 1992	
ANNUAL TOTAL	16.60		8310.60			
ANNUAL MEAN	.045		22.7		9.13	
HIGHEST ANNUAL MEAN					32.1	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	10	Dec 30	3000	Feb 13	3000	Feb 13 1992
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1976
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1976
ANNUAL RUNOFF (AC-FT)	33		16480		6620	
10 PERCENT EXCEEDS	.00		17		3.1	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA

LOCATION.--Lat 34°23'59", long 118°42'14", in San Francisco Grant, Ventura County, Hydrologic Unit 18070102, on downstream end of old diversion weir on right bank, on private road 0.2 mi south of Highway 126, 0.8 mi west of Los Angeles-Ventura County line, and 6.4 mi west of intersection of Highway 126 and Interstate 5.  
DRAINAGE AREA.--625 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1952 to current year.

CHEMICAL DATA: Water years 1969, 1972-88.

BIOLOGICAL DATA: Water years 1979-80.

WATER TEMPERATURE: Water years 1969-78 (observed), February to September 1980.

SEDIMENT DATA: Water years 1969-88.

REVISED RECORDS.--WDR CA-78-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 794.93 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Base flow affected by pumping from wells along stream for irrigation. Flow partly regulated since January 1972 by Castaic Lake (station 11108133), capacity, 324,000 acre-ft. Imported water from California Water Project stored and released at Castaic Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,800 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 19.01 ft, from rating curve extended above 9,200 ft<sup>3</sup>/s on basis of field estimate of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1700	6,200	11.18	Mar. 2	2230	3,020	8.68
Jan. 5	1530	2,490	9.15	Mar. 6	0315	3,560	8.94
Feb. 12	1200	*12,300	*13.08	Mar. 20	1800	3,810	9.16

Minimum daily, 13 ft<sup>3</sup>/s, Nov. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	14	22	31	31	30	148	35	30	23	22	19
2	15	14	23	28	33	408	133	34	29	23	21	19
3	15	14	22	30	37	362	112	41	28	23	21	19
4	15	14	22	18	39	54	90	36	27	23	20	19
5	15	14	22	536	43	44	91	34	28	22	19	18
6	15	14	21	76	106	398	87	45	28	25	18	18
7	16	13	21	375	230	80	92	34	27	24	18	19
8	15	13	25	99	62	33	87	32	28	23	18	19
9	15	14	23	54	45	35	84	35	27	23	17	19
10	14	14	25	44	2590	39	92	36	27	22	17	19
11	14	15	25	37	2200	40	97	37	27	22	17	19
12	15	14	22	33	5080	40	99	37	27	23	17	19
13	15	14	21	30	4240	40	96	36	27	23	17	18
14	16	14	21	29	2280	39	84	35	27	21	17	19
15	15	14	22	27	1140	35	85	34	28	21	17	19
16	16	16	23	27	105	39	77	32	26	21	16	19
17	16	18	24	27	80	40	75	31	25	21	17	20
18	16	20	24	27	96	42	66	30	26	20	16	19
19	15	20	24	26	71	43	56	29	26	20	16	19
20	15	21	24	28	61	533	58	28	25	21	16	19
21	17	22	24	28	61	309	59	27	24	22	15	20
22	16	22	24	28	47	83	55	26	24	21	16	19
23	15	21	25	28	35	521	43	21	24	21	16	20
24	16	21	25	28	36	229	41	22	23	22	18	20
25	16	21	24	27	55	202	42	25	22	22	17	19
26	16	20	25	27	53	210	40	28	23	23	17	18
27	21	19	25	27	45	232	40	30	23	24	17	17
28	15	20	112	27	40	178	38	30	22	24	18	19
29	15	20	1320	26	34	168	36	31	22	24	18	20
30	14	21	79	27	---	166	35	30	23	24	19	19
31	14	---	45	29	---	156	---	29	---	23	19	---
TOTAL	478	511	2184	1884	18975	4828	2238	990	773	694	547	569
MEAN	15.4	17.0	70.5	60.8	654	156	74.6	31.9	25.8	22.4	17.6	19.0
MAX	21	22	1320	536	5080	533	148	45	30	25	22	20
MIN	14	13	21	18	31	30	35	21	22	20	15	17
AC-FT	948	1010	4330	3740	37640	9580	4440	1960	1530	1380	1080	1130

## 11108500 SANTA CLARA RIVER AT LOS ANGELES-VENTURA COUNTY LINE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1971, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.06	26.9	31.1	85.0	167	50.5	47.7	15.3	7.64	4.30	2.90	2.30
MAX	29.1	267	291	1211	2351	479	419	88.2	44.6	26.4	17.8	16.8
(WY)	1970	1966	1966	1969	1969	1969	1958	1967	1969	1969	1969	1969
MIN	.000	.52	.83	.99	1.16	1.24	.88	.44	.20	.003	.000	.000
(WY)	1961	1965	1961	1965	1965	1965	1961	1961	1961	1961	1960	1960

## SUMMARY STATISTICS

## WATER YEARS 1953 - 1971

ANNUAL MEAN	36.2
HIGHEST ANNUAL MEAN	350 1969
LOWEST ANNUAL MEAN	.77 1961
HIGHEST DAILY MEAN	28800 Feb 25 1969
LOWEST DAILY MEAN	.00 Jul 9 1959
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 9 1960
INSTANTANEOUS PEAK FLOW	68800 Jan 25 1969
INSTANTANEOUS PEAK STAGE	19.01 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	26210
10 PERCENT EXCEEDS	31
50 PERCENT EXCEEDS	2.0
90 PERCENT EXCEEDS	.30

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.9	36.2	57.1	78.0	170	174	63.9	41.4	34.2	23.2	18.6	20.9
MAX	60.5	131	169	253	757	1101	189	168	188	106	43.5	34.5
(WY)	1979	1979	1989	1979	1980	1983	1983	1983	1978	1978	1983	1983
MIN	7.28	8.61	14.6	18.3	15.5	18.2	13.4	10.7	7.84	3.63	2.44	7.59
(WY)	1974	1978	1977	1975	1977	1977	1977	1976	1976	1976	1976	1977

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1972 - 1992

ANNUAL TOTAL	17596	34671	
ANNUAL MEAN	48.2	94.7	61.3
HIGHEST ANNUAL MEAN			173 1983
LOWEST ANNUAL MEAN			14.4 1976
HIGHEST DAILY MEAN	1790	Mar 1	5080 Feb 12 Mar 2 1983
LOWEST DAILY MEAN	12	Sep 2	13 Nov 7 1.9 Aug 30 1976
ANNUAL SEVEN-DAY MINIMUM	13	Aug 5	14 Nov 2 2.0 Aug 28 1976
INSTANTANEOUS PEAK FLOW			12300 Feb 12 30600 Mar 1 1983
INSTANTANEOUS PEAK STAGE			13.08 Feb 12 11.78 Mar 1 1983
ANNUAL RUNOFF (AC-FT)	34900	68770	44410
10 PERCENT EXCEEDS	36	92	93
50 PERCENT EXCEEDS	21	24	28
90 PERCENT EXCEEDS	14	16	12

## 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, on left bank 300 ft downstream from the confluence of Piru Creek and Buck Creek and 2.3 mi southeast of U.S. Forest Service Hardluck Campground.

DRAINAGE AREA.--198 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. February 1975 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 2,700 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor flow into Pyramid Lake.

COOPERATION.--Records were provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft<sup>3</sup>/s, estimated, Mar. 4, 1978, gage height, 10.08 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,400 ft<sup>3</sup>/s, Feb. 12, gage height, 12.06 ft; minimum daily, 0.60 ft<sup>3</sup>/s, Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.68	1.7	2.3	7.9	11	153	283	106	35	17	9.4	7.3
2	.67	1.7	2.3	7.1	11	422	273	98	33	16	9.2	7.5
3	.68	1.7	2.4	7.8	11	512	245	93	31	15	8.9	7.8
4	.68	1.6	2.4	8.1	11	351	238	90	30	15	8.6	8.0
5	.68	1.7	2.4	116	12	297	227	97	29	14	8.5	7.7
6	.68	1.7	2.4	68	317	366	214	126	29	14	8.5	7.4
7	.68	1.6	2.5	32	485	289	204	122	30	14	8.5	7.1
8	.70	1.6	3.8	23	229	250	197	95	29	15	8.5	6.9
9	.70	1.6	5.0	17	174	219	191	87	28	18	8.4	6.9
10	.70	1.7	3.8	15	542	201	187	81	26	20	8.2	6.9
11	.70	1.8	3.5	14	1370	191	180	77	26	17	7.9	7.0
12	.70	1.8	3.3	13	6540	188	175	75	25	17	7.5	7.1
13	.70	1.8	3.2	12	900	177	170	72	25	18	7.2	7.4
14	.70	1.8	3.1	13	570	168	169	69	25	17	7.0	7.5
15	.65	1.8	3.1	12	476	160	163	67	24	19	7.1	7.5
16	.60	1.9	3.0	11	439	155	158	65	24	17	7.2	7.7
17	.63	2.0	3.0	11	374	147	159	62	22	15	6.9	13
18	.64	2.0	3.0	11	321	138	170	59	22	14	6.7	14
19	.64	2.1	3.3	11	302	134	156	58	21	13	6.4	11
20	.65	2.2	3.4	10	297	321	145	57	20	12	6.1	8.8
21	.66	2.2	3.1	9.9	302	427	144	55	20	12	6.0	7.8
22	.74	2.2	3.1	9.6	310	439	137	52	19	12	6.2	7.3
23	.90	2.2	3.0	9.4	280	619	135	49	17	12	6.4	8.4
24	1.0	2.2	3.1	9.5	219	500	134	47	17	12	6.5	9.8
25	1.1	2.2	3.1	9.6	195	411	131	44	17	11	6.8	8.5
26	1.3	2.3	3.0	9.4	186	395	128	42	17	11	6.8	7.5
27	1.8	2.3	4.2	9.4	176	444	124	42	17	11	6.6	7.0
28	1.7	2.2	7.9	9.5	165	372	118	42	16	10	6.4	6.2
29	1.7	2.3	55	9.9	155	313	115	41	16	10	6.4	6.5
30	1.7	2.4	20	10	---	286	111	39	17	9.9	6.8	6.2
31	1.7	---	10	10	---	284	---	36	---	9.6	7.3	---
TOTAL	27.76	58.3	176.7	526.1	15380	9329	5181	2145	707	437.5	228.9	239.7
MEAN	.90	1.94	5.70	17.0	530	301	173	69.2	23.6	14.1	7.38	7.99
MAX	1.8	2.4	55	116	6540	619	283	126	35	20	9.4	14
MIN	.60	1.6	2.3	7.1	11	134	111	36	16	9.6	6.0	6.2
AC-FT	55	116	350	1040	30510	18500	10280	4250	1400	868	454	475

## 11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.25	2.24	9.15	26.2	193	186	93.4	34.9	12.0	5.60	3.07	3.61
MAX	2.37	3.42	33.1	108	556	674	235	93.5	37.5	18.0	10.4	12.1
(WY)	1977	1977	1978	1978	1978	1978	1978	1978	1978	1978	1978	1978
MIN	.099	1.16	1.62	2.28	5.36	5.31	2.67	1.21	.46	.001	.000	.000
(WY)	1978	1978	1981	1991	1990	1990	1990	1990	1990	1990	1989	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1977 - 1992
ANNUAL TOTAL	8640.96	34436.96	
ANNUAL MEAN	23.7	94.1	46.6
HIGHEST ANNUAL MEAN			146
LOWEST ANNUAL MEAN			2.45
HIGHEST DAILY MEAN	354 Mar 19	6540 Feb 12	7010 Feb 9 1978
LOWEST DAILY MEAN	.18 Sep 4	.60 Oct 16	.00 Sep 6 1977
ANNUAL SEVEN-DAY MINIMUM	.21 Aug 31	.64 Oct 15	.00 Sep 6 1977
INSTANTANEOUS PEAK FLOW		17400 Feb 12	19000 Mar 4 1978
INSTANTANEOUS PEAK STAGE		12.06 Feb 12	12.06 Feb 12 1992
ANNUAL RUNOFF (AC-FT)	17140	68310	33760
10 PERCENT EXCEEDS	62	257	103
50 PERCENT EXCEEDS	2.2	12	3.6
90 PERCENT EXCEEDS	.48	1.7	.02

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 above Pyramid Landing on Pyramid Lake.

DRAINAGE AREA.--61.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. March 1965 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Elevation of gage is 2,800 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Station is used to monitor natural inflow to Pyramid Lake.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 5.10 ft; minimum daily, 0.30 ft<sup>3</sup>/s, May 10, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 688 ft<sup>3</sup>/s, Feb. 12, gage height, 4.40 ft; minimum daily, 1.1 ft<sup>3</sup>/s, Sept. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.0	2.4	2.5	2.9	3.0	4.9	3.1	2.3	2.6	1.6	1.5
2	1.8	1.9	2.5	2.8	2.8	6.4	3.3	2.9	1.9	2.0	1.6	1.7
3	1.8	1.7	2.4	3.4	2.8	11	2.9	2.7	1.7	1.8	1.6	1.7
4	1.8	1.7	2.5	2.8	2.7	4.9	3.2	2.9	1.6	1.5	1.6	1.6
5	1.7	1.7	2.5	19	3.0	3.6	3.3	3.1	1.7	1.3	1.7	1.6
6	1.7	1.8	2.7	3.9	14	4.7	3.1	3.4	1.9	1.4	1.8	1.6
7	1.7	1.7	2.8	6.9	20	4.4	3.1	3.5	1.9	1.4	1.7	1.4
8	1.7	1.7	4.4	4.4	3.5	3.8	3.2	3.2	1.9	1.6	1.6	1.3
9	1.8	1.8	3.0	3.3	4.2	4.0	3.6	3.3	1.9	2.2	1.6	1.1
10	1.7	1.9	2.9	3.0	24	4.0	3.6	3.1	1.8	2.5	1.5	1.4
11	1.9	1.9	2.8	3.0	9.1	3.6	3.8	3.1	1.8	2.4	1.5	1.3
12	3.3	1.8	2.6	3.0	389	3.5	3.4	3.4	2.0	2.3	1.6	1.3
13	2.1	1.9	2.6	3.0	82	3.2	3.7	3.7	2.0	2.2	1.5	1.4
14	1.8	2.0	2.5	2.8	4.4	3.2	3.5	3.3	2.0	2.3	1.5	1.5
15	1.8	2.0	2.5	2.6	35	3.2	3.5	2.8	2.0	2.2	1.6	1.4
16	1.8	2.1	2.6	2.5	4.2	3.0	3.3	2.6	2.0	2.2	1.5	1.4
17	1.7	2.3	2.4	2.3	3.4	3.1	3.2	2.6	2.0	2.1	1.5	1.3
18	1.7	2.3	2.5	2.2	3.3	6.2	3.3	2.5	1.9	2.0	1.5	1.3
19	1.7	3.9	3.2	2.4	3.3	12	3.4	2.7	1.9	2.0	1.5	1.2
20	1.7	2.0	2.4	2.3	3.5	28	4.0	2.9	2.0	1.9	1.4	1.2
21	1.6	2.3	2.3	2.5	3.4	17	3.9	2.7	2.0	1.8	1.5	1.4
22	2.0	2.1	2.2	2.8	3.5	7.3	3.8	2.5	2.0	1.6	1.6	1.4
23	2.3	1.9	2.2	2.6	3.5	7.0	3.0	2.6	1.9	1.7	1.6	1.7
24	2.1	2.0	2.0	2.5	3.4	2.0	2.8	2.4	1.9	1.9	1.5	1.8
25	2.1	2.2	2.0	2.5	3.4	2.0	2.8	2.3	1.9	2.0	1.7	1.3
26	2.8	2.3	2.0	2.5	3.2	2.1	2.5	2.3	1.9	1.8	1.7	1.4
27	2.6	2.3	2.0	2.4	2.9	9.8	2.5	2.4	2.1	1.6	1.8	1.5
28	2.1	2.3	5.4	2.9	2.9	2.3	2.7	2.4	2.1	1.6	1.7	1.7
29	2.3	2.4	20	3.0	2.8	2.2	2.9	2.6	2.3	1.6	1.4	1.7
30	2.1	2.4	3.8	2.8	---	2.5	3.1	2.6	2.9	1.8	1.4	1.7
31	2.0	---	2.4	3.0	---	3.1	---	2.4	---	1.7	1.4	---
TOTAL	61.0	62.3	100.5	107.6	646.1	176.1	99.3	88.0	59.2	59.0	48.7	43.8
MEAN	1.97	2.08	3.24	3.47	22.3	5.68	3.31	2.84	1.97	1.90	1.57	1.46
MAX	3.3	3.9	20	19	389	28	4.9	3.7	2.9	2.6	1.8	1.8
MIN	1.6	1.7	2.0	2.2	2.7	2.0	2.5	2.3	1.6	1.3	1.4	1.1
AC-FT	121	124	199	213	1280	349	197	175	117	117	97	87

## 11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.80	2.18	2.61	2.85	16.3	10.9	2.46	1.91	1.69	1.40	1.46	1.54
MAX	2.30	2.72	3.24	3.47	64.3	40.5	3.31	2.84	2.09	1.90	1.57	1.74
(WY)	1990	1991	1992	1992	1978	1978	1992	1992	1991	1992	1992	1990
MIN	1.40	1.56	1.93	2.38	1.80	1.80	1.50	.83	1.18	.97	1.32	1.27
(WY)	1977	1978	1977	1978	1977	1977	1977	1977	1978	1977	1977	1977

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1977 - 1992
ANNUAL TOTAL	1112.04	1551.6	
ANNUAL MEAN	3.05	4.24	3.85
HIGHEST ANNUAL MEAN			9.72
LOWEST ANNUAL MEAN			1.54
HIGHEST DAILY MEAN	181	389	1220
LOWEST DAILY MEAN	.94	1.1	.30
ANNUAL SEVEN-DAY MINIMUM	1.2	1.3	.36
INSTANTANEOUS PEAK FLOW		688	2990
INSTANTANEOUS PEAK STAGE		4.40	5.10
ANNUAL RUNOFF (AC-FT)	2210	3080	2790
10 PERCENT EXCEEDS	3.0	3.8	3.0
50 PERCENT EXCEEDS	2.1	2.3	1.9
90 PERCENT EXCEEDS	1.4	1.5	1.3

11109520 PYRAMID LAKE NEAR GORMAN, CA

LOCATION.--Lat 34°38'41", long 118°45'47", in NW 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, on center of upstream face of Pyramid Dam and 11.5 mi southeast of Gorman. DRAINAGE AREA.--295 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam. Storage began August 1974. 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, 171,196 acre-ft, elevation, 2,579 ft. Lake receives natural flow from Piru Creek, Canada de Los Alamos, and imported water from West Branch California Aqueduct. Water is released through the Angeles Tunnel to Castaic powerplant and during periods of low electricity demand water from Elderberry Forebay is pumped back to Pyramid Lake. Water is also released to Piru Creek to satisfy minimum fishwater release requirements (see station 11109525). Records, including extremes, represent contents at 2400 hours.

COOPERATION.--Records provided by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 170,043 acre-ft, Nov. 5, 1989; elevation, 2,578.11 ft; minimum, 137,883 acre-ft, Nov. 26, 1991, elevation, 2,551.53 ft.

EXTREMES (at 2400) FOR CURRENT YEAR.--Maximum contents, 168,896 acre-ft, Oct. 27, elevation, 2,577.22 ft; minimum, 137,883 acre-ft, Nov. 26, elevation, 2,551.53 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on data provided by California Department of Water Resources in 1978.)

2545	130,601	2565	153,364
2550	136,154	2570	159,778
2555	141,850	2575	166,057
2560	147,680	2580	172,497

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159927	162923	144549	149767	161208	162283	160374	162534	165384	161733	161520	163476
2	161845	163955	141918	142784	163955	162935	158640	163463	164346	160672	165029	162033
3	161558	168472	139749	140172	161583	163803	161720	165118	161720	162083	164308	158085
4	160760	167588	140814	144444	160710	163476	157876	164801	160884	163665	163023	156967
5	163803	166146	141884	150793	159245	162722	162371	164561	160548	166146	161558	158516
6	167268	163438	142888	150733	158442	161408	163652	163791	162083	164270	160909	160548
7	165701	160334	143886	151451	158011	162321	161845	162910	165105	162986	159952	163099
8	164194	157593	144444	150960	157925	164864	161570	161783	164018	159146	162697	163803
9	160946	160212	143004	151451	159431	164599	161308	162772	162697	154454	166222	162045
10	158085	164131	142230	151835	161508	164396	161533	164839	161595	154369	164738	160385
11	161558	159679	142692	152629	164005	163249	160797	165308	161121	157089	162684	159320
12	162835	156697	143503	157544	166031	161295	163300	164106	159580	162133	159493	159283
13	166579	155829	141262	158418	162709	160735	163866	163111	160498	162321	157740	159902
14	168421	154030	144782	158714	160822	160884	162697	161733	162634	159964	155171	160399
15	168498	149588	145776	159184	159357	162496	161345	160573	162459	157617	156967	160909
16	166299	152930	145156	157261	160250	160573	160548	160374	161046	156808	160386	159456
17	164056	158529	143758	156857	159320	160747	160760	162659	159468	153365	162446	156318
18	159518	155025	143421	159023	157384	159505	159307	161508	158788	155634	162509	154369
19	157605	148283	141584	163993	155451	159258	160237	160934	158665	161046	161196	155196
20	162760	145998	140024	163174	155317	159035	160797	160014	160200	163011	160175	158603
21	165257	143503	144281	163023	154357	160959	161608	159530	163249	161820	160113	157753
22	164561	143514	145647	161570	155378	163174	160934	158134	161620	160188	162321	155585
23	165092	144468	143468	159072	160150	163036	159977	159902	159481	159134	166655	154479
24	166426	147056	143712	154697	161633	163942	158504	162058	159122	158874	166834	151895
25	168883	144596	145764	154418	160175	164359	160984	164295	158628	159468	165308	153848
26	166592	137883	143549	158147	160685	165156	164535	163816	159023	165092	164485	156086
27	168896	138837	140138	159270	161633	166834	164056	163665	161295	165435	163728	159270
28	167741	141976	141999	159295	161034	166273	163237	163791	161808	164801	162133	159728
29	166681	141216	145249	159122	162095	164953	162998	162609	162471	163665	164106	159048
30	166630	143839	143329	158924	---	163199	163426	164207	162283	162433	166770	158788
31	164902	---	144281	159357	---	161183	---	166681	---	159902	164877	---
MAX	168896	168472	145776	163993	166031	166834	164535	166681	165384	166146	166834	163803
MIN	157605	137883	139749	140172	154357	159035	157065	158134	158628	153365	155171	151895
a	2574.09	2556.72	2557.10	2569.66	2571.86	2571.13	2572.92	2575.49	2572.01	2570.10	2574.07	2569.20
b	+518	-21063	+442	+15076	+2738	-912	+2243	+3255	-4398	-2381	+4975	-6089
CAL YR 1991	MAX 168999	MIN 137883	b	-19208								
WTR YR 1992	MAX 168896	MIN 137883	b	-5596								

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.61 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, at downstream base of dam and 11.7 mi southeast of Gorman.

DRAINAGE AREA.--295 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Flow meters with totalizer. Elevation of gage is 2,200 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Flow regulated beginning December 1971 by Pyramid Lake, capacity, 171,196 acre-ft. Station is operated to satisfy fishwater release requirements as prescribed by the Federal Energy Regulatory Commission.

COOPERATION.--Records provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,920 ft<sup>3</sup>/s, Feb. 12, 1992; minimum daily, 5.0 ft<sup>3</sup>/s, many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,920 ft<sup>3</sup>/s, Feb. 12,; minimum daily, 5.0 ft<sup>3</sup>/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	10	5.0	25	15	150	5.0	11	15	25	26	25
2	16	10	5.0	25	15	150	5.0	11	15	25	26	25
3	12	10	5.0	25	15	250	5.0	11	15	25	26	25
4	12	10	5.0	30	15	250	5.0	11	15	25	26	25
5	12	15	5.0	30	15	250	5.0	11	16	25	26	25
6	12	10	5.0	100	15	250	5.0	11	18	25	26	25
7	16	15	5.0	100	10	250	5.0	11	18	25	26	25
8	13	10	5.0	30	10	250	5.0	12	18	25	26	25
9	16	10	5.0	30	25	250	5.0	12	20	25	26	25
10	16	10	5.0	20	350	250	5.0	12	20	25	26	25
11	10	10	5.0	20	350	300	5.0	13	20	25	26	25
12	12	10	25	21	2920	300	5.0	13	20	25	26	25
13	12	9.0	25	21	2020	300	5.0	13	20	25	26	25
14	16	5.0	25	21	2020	300	5.0	14	20	25	26	25
15	16	5.0	25	20	1820	300	5.0	14	20	26	25	25
16	16	5.0	25	15	1020	300	5.0	14	20	26	25	25
17	16	5.0	35	15	500	300	5.0	14	20	26	25	25
18	12	5.0	35	15	500	300	5.0	14	20	26	25	26
19	16	5.0	35	15	500	300	5.0	15	20	26	25	26
20	17	5.0	45	15	275	350	5.0	15	20	26	25	26
21	17	5.0	45	15	250	500	5.0	15	20	26	25	26
22	10	5.0	45	15	250	500	5.0	15	20	26	25	26
23	10	5.0	47	15	250	775	5.0	16	20	26	25	26
24	10	5.0	55	15	250	100	5.0	16	20	26	25	26
25	10	5.0	55	15	250	55	5.0	16	20	26	25	26
26	10	5.0	55	15	145	50	5.0	16	22	26	25	26
27	10	5.0	55	15	145	50	5.0	16	22	26	25	26
28	10	5.0	40	15	145	50	5.0	16	22	26	25	26
29	10	5.0	35	15	145	50	12	16	24	26	25	26
30	10	5.0	25	15	---	5.0	15	16	25	26	25	26
31	10	---	25	15	---	5.0	---	16	---	26	25	---
TOTAL	401	224.0	812.0	758	14240	7490.0	167.0	426	585	792	789	763
MEAN	12.9	7.47	26.2	24.5	491	242	5.57	13.7	19.5	25.5	25.5	25.4
MAX	17	15	55	100	2920	775	15	16	25	26	26	26
MIN	10	5.0	5.0	15	10	5.0	5.0	11	15	25	25	25
AC-FT	795	444	1610	1500	28250	14860	331	845	1160	1570	1560	1510

## 11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.4	17.5	19.3	12.4	135	94.7	21.5	33.1	21.1	20.5	17.8	18.3
MAX	16.3	47.6	37.4	24.5	491	242	61.9	97.3	40.0	28.4	25.5	25.4
(WY)	1989	1991	1991	1992	1992	1992	1991	1991	1991	1991	1992	1992
MIN	11.5	7.40	5.27	5.00	5.00	15.0	5.57	10.6	12.5	13.6	12.9	13.0
(WY)	1990	1989	1990	1991	1991	1990	1992	1990	1990	1989	1989	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1989 - 1992	
ANNUAL TOTAL	12601.0		27447.0			
ANNUAL MEAN	34.5		75.0		34.8	
HIGHEST ANNUAL MEAN					75.0	
LOWEST ANNUAL MEAN					10.8	
HIGHEST DAILY MEAN	400	Mar 21	2920	Feb 12	2920	Feb 12 1992
LOWEST DAILY MEAN	5.0	Jan 1	5.0	Nov 14	5.0	Nov 15 1988
ANNUAL SEVEN-DAY MINIMUM	5.0	Jan 1	5.0	Nov 14	5.0	Nov 15 1988
ANNUAL RUNOFF (AC-FT)	24990		54440		25220	
10 PERCENT EXCEEDS	100		250		50	
50 PERCENT EXCEEDS	25		20		15	
90 PERCENT EXCEEDS	5.0		5.0		5.0	

## SANTA CLARA RIVER BASIN

11109600 PIRU CREEK ABOVE LAKE PIRU, CA

LOCATION.--Lat 34°31'23", long 118°45'22", in NE 1/4 NW 1/4 sec.15, T.5 N., R.18 W., Ventura County, Hydrologic Unit 18070102, on left bank near Blue Point, 1.3 mi downstream from Agua Blanca Creek, 4.3 mi upstream from Santa Felicia Dam, 8.0 mi northeast of Piru, and 15 mi downstream from Pyramid Dam.

DRAINAGE AREA.--372 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to current year.  
CHEMICAL DATA.--Water years 1972-80.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,058.55 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Forest Service). Prior to Dec. 15, 1972, at site 0.3 mi upstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated beginning December 1971 by Pyramid Lake, capacity, 171,196 acre-ft. Imported water from the California Water Project stored and released at Pyramid Dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 18.6 ft, site and datum then in use, from floodmarks, from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.2 ft and inflow-outflow records for Lake Piru; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 35,000 ft<sup>3</sup>/s, and is the greatest since that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,900 ft<sup>3</sup>/s, Feb. 12, gage height, 10.39 ft from rating curve extended above 1,000 ft<sup>3</sup>/s on basis of slope area measurements at gage heights 7.80 and 11.36 ft; minimum daily, 3.4 ft<sup>3</sup>/s, Nov. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.1	4.0	e30	18	e154	172	47	30	32	28	26
2	11	7.4	4.0	e30	17	e314	161	47	30	33	28	27
3	12	7.4	3.8	e30	17	e607	148	45	29	32	28	26
4	12	7.4	3.7	e30	15	e395	139	44	28	33	29	25
5	11	7.4	3.6	e35	13	e350	130	45	29	33	30	25
6	12	8.5	3.7	e80	36	e487	121	58	32	29	29	25
7	12	7.3	3.8	e110	168	e395	114	55	33	30	28	25
8	12	7.7	5.3	e80	287	e373	105	46	31	32	28	26
9	10	8.3	4.4	57	149	e360	101	43	32	35	27	26
10	8.3	8.2	3.9	47	2530	e354	96	42	32	33	27	26
11	12	7.9	3.9	37	4510	e347	94	42	33	34	27	26
12	13	7.4	3.9	35	6900	e348	90	44	31	37	26	26
13	7.6	7.4	13	33	2340	e372	85	41	30	40	25	27
14	8.6	7.3	23	32	e858	e368	83	39	29	37	25	25
15	11	6.3	25	31	e1090	e359	78	40	30	35	25	25
16	11	4.1	26	29	e755	e366	75	39	35	34	26	25
17	12	3.7	31	27	e743	e361	70	38	31	33	27	25
18	10	3.6	32	25	e774	e357	67	36	30	31	27	24
19	9.2	3.6	34	25	e655	e360	64	35	30	30	26	24
20	9.1	3.6	34	24	e419	731	61	36	30	30	25	23
21	9.5	3.6	43	23	e388	1340	59	35	29	31	26	24
22	10	3.6	47	23	e372	1460	56	34	28	32	27	25
23	5.8	3.4	47	22	e351	1830	55	35	27	32	26	24
24	4.1	3.6	47	21	e332	1810	53	37	26	31	26	25
25	6.7	3.6	54	20	e316	601	51	37	26	32	28	23
26	6.8	3.6	55	19	e264	230	47	36	25	31	28	24
27	9.0	3.6	56	20	e168	350	45	35	27	30	28	24
28	7.8	3.6	64	19	e160	257	44	35	27	30	27	23
29	8.4	3.6	e50	19	e158	233	45	35	27	31	27	23
30	8.1	3.8	e40	18	---	213	45	33	30	30	27	23
31	7.6	---	e35	18	---	177	---	32	---	28	27	---
TOTAL	298.6	167.6	804.0	1049	24803	16259	2554	1246	887	1001	838	745
MEAN	9.63	5.59	25.9	33.8	855	524	85.1	40.2	29.6	32.3	27.0	24.8
MAX	13	8.5	64	110	6900	1830	172	58	35	40	30	27
MIN	4.1	3.4	3.6	18	13	154	44	32	25	28	25	23
AC-FT	592	332	1590	2080	49200	32250	5070	2470	1760	1990	1660	1480

e Estimated.

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 TOTAL	
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
INSTANTANEOUS PEAK FLOW	31200 Feb 25 1969
INSTANTANEOUS PEAK STAGE	18.60 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 - 1992, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	
MEAN	10.5	14.0	35.3	62.0	197	199	79.4	50.4	28.1	17.5	14.2	12.6
MAX	37.7	39.4	180	273	855	1126	289	204	93.7	46.8	37.4	29.3
(WY)	1984	1991	1984	1978	1992	1983	1983	1983	1978	1979	1978	1978
MIN	2.17	4.09	4.05	5.64	13.9	11.2	6.11	5.46	3.84	6.32	.80	.16
(WY)	1973	1978	1990	1991	1987	1977	1977	1972	1976	1972	1972	1972

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1972 - 1992

ANNUAL TOTAL	14500.6	50652.2	
ANNUAL MEAN	39.7	138	59.3
HIGHEST ANNUAL MEAN			182 1978
LOWEST ANNUAL MEAN			9.52 1990
HIGHEST DAILY MEAN	755 Mar 19	6900 Feb 12	14000 Mar 1 1983
LOWEST DAILY MEAN	3.4 Feb 25	3.4 Nov 23	.07 Jun 9 1972
ANNUAL SEVEN-DAY MINIMUM	3.6 Nov 18	3.6 Nov 18	.09 Sep 3 1972
INSTANTANEOUS PEAK FLOW		14900 Feb 12	20850 Mar 1 1983
INSTANTANEOUS PEAK STAGE		10.39 Feb 12	11.36 Mar 1 1983
ANNUAL RUNOFF (AC-FT)	28760	100500	42920
10 PERCENT EXCEEDS	105	349	110
50 PERCENT EXCEEDS	12	30	14
90 PERCENT EXCEEDS	4.1	7.4	5.3

## 11109700 LAKE PIRU NEAR PIRU, CA

LOCATION.--Lat 34°27'41", long 118°45'02", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, near center of Santa Felicia Dam on Piru Creek, 0.5 mi downstream from Santa Felicia Canyon, 4.2 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.--425 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1955 to current year. Prior to October 1985, monthend elevation and contents only.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum. Jan. 27, 1956, to Dec. 1, 1980, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity below spillway level at elevation 1,055.0 ft, 88,340 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use, and irrigation on the Oxnard Plain.

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 (at 2400) FOR CURRENT YEAR.--Maximum contents, 88,500 acre-ft, Mar. 29 to Apr. 1, 2; maximum elevation, 1,055.16 ft, Apr. 2; minimum contents 15,400 acre-ft, Nov. 8-13, Dec. 1-15; minimum elevation 971.09 ft, Dec. 12.

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	1,040	70,900
980	20,300	1,010	42,000	1,050	82,300
990	26,700	1,020	50,800	1,060	94,600
		1,030	60,500		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42800	19900	15400	17500	19700	66400	88500	86800	83100	82300	83300	83600
2	42200	19200	15400	17600	19700	67200	88500	86700	82900	82400	83300	83600
3	41500	e18500	15400	17600	19800	68300	88400	86600	82700	82400	83300	83600
4	40900	e17700	15400	17700	19800	69100	88400	86400	82600	82500	83300	83600
5	40300	e16900	15400	18000	19800	69900	88400	86400	82400	82500	83300	83700
6	39700	e16100	15400	18200	19900	e70700	88300	86500	82300	82600	83400	83700
7	39100	e15500	15400	18600	20500	e71500	88300	86500	82100	82600	83400	83700
8	38400	15400	15400	18900	21300	e72200	88300	86300	82000	82600	83400	83700
9	37800	15400	15400	19000	21900	72900	88300	86200	81900	82700	83400	83700
10	37200	15400	15400	19000	24600	73600	88200	86100	81800	82700	83400	83700
11	36500	15400	15400	19100	28400	74100	88200	86000	81800	82700	83400	83700
12	35900	15400	15400	19200	32800	73600	88200	85800	81900	82800	83400	83800
13	35300	15400	15400	19200	46100	74200	88200	85700	81900	82900	83500	83800
14	34700	15500	15400	19200	49600	75800	88100	85600	81900	82900	83500	83800
15	33900	15500	15400	19300	54000	76300	88100	85400	82000	83000	83500	83800
16	33100	15500	15500	19300	56200	76800	88100	85300	82000	83000	83500	83800
17	32300	15500	15500	19400	57700	77300	88000	85100	82000	83000	83500	83900
18	31400	15500	15600	19400	59100	77800	87900	85000	82000	83100	83500	83900
19	30600	15500	15800	19400	60300	78300	87800	84800	82100	83100	83500	83900
20	29700	15500	15800	19400	61100	79400	87700	84700	82100	83100	83500	83900
21	28900	15500	15900	19500	61800	80700	87600	84600	82100	83100	83500	83800
22	28100	15500	16000	19500	62500	81800	87500	84500	82200	83100	83500	83500
23	27200	15500	16000	19500	63200	82500	87400	84300	82200	83100	83500	83100
24	26400	15500	16100	19600	63800	83300	87300	84200	82200	83100	83500	82500
25	25500	15500	16200	19600	64400	86100	87400	84000	82200	83100	83500	81900
26	24700	15500	16300	19600	64900	86600	87400	83900	82200	83200	83600	81100
27	23800	15500	16400	19600	65300	87300	87300	83700	82300	83200	83600	80300
28	23200	15500	16600	19600	65700	88300	87200	83600	82300	83200	83600	79400
29	22300	15500	17100	19700	66000	88500	87100	83500	82300	83200	83600	78500
30	21400	15500	17400	19700	---	88500	87000	83300	82300	83300	83600	77600
31	20600	---	17500	19700	---	88500	---	83200	---	83300	83600	---
MAX	42800	19900	17500	19700	66000	88500	88500	86800	83100	83300	83600	83900
MIN	20600	15400	15400	17500	19700	66400	87000	83200	81800	82300	83300	77600
a	980.53	971.28	975.10	979.05	1035.39	1055.16	1053.87	1050.76	1050.00	1050.82	1051.07	1045.95
b	-20400	-5100	+2000	+2200	+46300	+22500	-1600	-3800	-900	+1000	+300	-6000

CAL YR 1991 b -5100  
WTR YR 1992 b +34600

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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to September 1968, October 1973 to current year.

CHEMICAL DATA.--Water years 1969, 1974-80.

WATER TEMPERATURE.--Water year 1969.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 858.8 ft above National Geodetic Vertical Datum of 1929 (levels by United Water Conservation District).

REMARKS.--Records good except for estimated daily discharges, which are poor. Since May 1955 flow regulated by Lake Piru (station 11109700) and since December 1971 by Pyramid Lake (station 11109520). Imported water from the California Water Project stored by Pyramid Lake. Spill from Lake Piru bypasses gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 623 ft<sup>3</sup>/s, Aug. 2, 1982, gage height, 3.82 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 509 ft<sup>3</sup>/s, Sept. 29, gage height, 3.64 ft; minimum daily, 3.1 ft<sup>3</sup>/s, June 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4.3	317	6.9	6.6	6.8	36	4.7	101	103	5.5	6.8	6.3
2	e286	217	e6.8	6.6	6.9	23	39	101	103	5.3	6.6	6.3
3	e286	274	6.8	6.6	6.9	3.2	94	102	103	5.3	6.6	e6.3
4	286	392	6.9	6.6	6.9	3.7	92	93	103	5.5	6.6	e6.3
5	285	393	6.9	6.6	5.1	3.8	92	7.0	103	5.5	6.6	e6.3
6	283	391	6.9	6.4	7.4	3.9	92	32	103	5.5	6.6	e6.3
7	285	389	6.6	6.5	7.5	27	93	101	103	5.5	6.6	e6.3
8	289	126	6.6	6.3	7.5	38	94	101	103	5.5	6.6	e6.3
9	288	6.9	6.6	6.3	7.5	43	94	101	103	5.5	6.6	e6.3
10	287	7.2	6.6	6.3	7.9	43	94	101	50	5.5	6.6	e6.3
11	290	7.4	6.6	6.3	7.6	33	95	103	6.9	5.7	6.3	e6.3
12	289	7.5	6.6	6.3	8.7	36	96	103	3.1	5.7	6.3	e6.3
13	286	7.2	6.6	6.3	8.8	42	96	103	5.0	5.5	6.3	e6.3
14	286	7.3	6.6	6.3	7.7	64	96	103	5.6	5.5	6.3	e6.3
15	350	7.3	6.6	6.3	6.4	66	82	103	5.6	5.7	6.3	e6.3
16	393	6.2	6.6	6.3	28	67	96	103	5.5	3.7	6.3	e6.3
17	397	6.3	6.6	10	42	65	98	103	5.5	4.8	6.3	e6.3
18	394	6.3	6.6	8.4	41	64	99	103	5.7	6.0	6.3	e6.3
19	391	6.3	4.4	5.3	42	53	99	103	5.7	6.1	6.3	e6.3
20	391	6.0	4.7	6.3	41	41	99	103	5.7	6.3	6.3	e6.3
21	393	6.0	4.3	6.7	38	89	99	73	5.8	6.3	6.3	e80
22	389	6.0	4.3	7.3	38	115	99	103	6.0	6.3	6.3	162
23	394	6.2	4.3	7.5	38	251	100	103	6.0	6.3	6.3	224
24	399	6.7	5.6	7.5	36	253	39	103	6.3	6.3	6.3	317
25	398	6.8	6.3	15	31	154	14	103	6.1	6.3	6.4	318
26	383	6.7	6.3	12	35	39	71	103	5.8	6.4	6.3	435
27	392	6.6	6.4	6.6	35	26	101	103	5.5	6.6	6.4	436
28	315	6.6	6.4	6.6	35	33	101	103	5.5	6.8	6.3	462
29	389	6.6	6.5	6.7	35	26	101	103	5.5	6.9	6.3	500
30	393	6.8	6.3	6.9	---	3.9	101	103	5.5	6.9	6.4	506
31	393	---	6.3	6.9	---	4.5	---	103	---	6.9	6.3	---
TOTAL	10284.3	2645.9	192.5	222.3	624.6	1750.0	2570.7	2973.0	1089.3	181.6	198.8	3566.0
MEAN	332	88.2	6.21	7.17	21.5	56.5	85.7	95.9	36.3	5.86	6.41	119
MAX	399	393	6.9	15	42	253	101	103	103	6.9	6.8	506
MIN	4.3	6.0	4.3	5.3	5.1	3.2	4.7	7.0	3.1	3.7	6.3	6.3
AC-FT	20400	5250	382	441	1240	3470	5100	5900	2160	360	394	7070

e Estimated.

## 11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1968, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	13.9	33.1	10.4	14.2	25.3	49.7	46.0	56.8	94.4	88.0	44.3
MAX	29.8	97.7	235	34.6	35.7	115	136	194	245	465	396	248
(WY)	1961	1967	1959	1966	1966	1963	1964	1966	1962	1958	1958	1967
MIN	.000	.86	.003	.15	.018	.006	5.59	6.76	6.76	6.82	6.93	5.94
(WY)	1956	1956	1956	1968	1957	1957	1957	1964	1964	1959	1959	1968

## SUMMARY STATISTICS

## WATER YEARS 1956 - 1968

ANNUAL MEAN	40.8
HIGHEST ANNUAL MEAN	102
LOWEST ANNUAL MEAN	10.0
HIGHEST DAILY MEAN	526
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	544
INSTANTANEOUS PEAK STAGE	3.66
ANNUAL RUNOFF (AC-FT)	29540
10 PERCENT EXCEEDS	101
50 PERCENT EXCEEDS	8.6
90 PERCENT EXCEEDS	1.4

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1992, 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
MEAN	68.7	22.2	12.9	8.73	13.4	20.8	18.8	44.9	54.3	82.1	80.3	87.2									
MAX	332	108	62.3	56.5	123	113	109	224	241	271	322	294									
(WY)	1992	1979	1979	1984	1984	1984	1980	1988	1987	1986	1982	1979									
MIN	4.17	4.68	3.91	.000	.049	.16	.088	.004	1.49	4.09	3.94	4.32									
(WY)	1987	1987	1978	1978	1983	1983	1983	1983	1983	1983	1991	1991									

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1972 - 1992

ANNUAL TOTAL	19270.4	26299.0	
ANNUAL MEAN	52.8	71.9	43.1
HIGHEST ANNUAL MEAN			103
LOWEST ANNUAL MEAN			7.03
HIGHEST DAILY MEAN	399	506	526
LOWEST DAILY MEAN	1.4	3.1	.00
ANNUAL SEVEN-DAY MINIMUM	2.4	4.8	.00
INSTANTANEOUS PEAK FLOW		509	623
INSTANTANEOUS PEAK STAGE		3.64	3.82
ANNUAL RUNOFF (AC-FT)	38220	52160	31190
10 PERCENT EXCEEDS	278	286	154
50 PERCENT EXCEEDS	4.8	6.9	6.7
90 PERCENT EXCEEDS	2.9	5.5	3.0

1111500 SESPE CREEK NEAR WHEELER SPRINGS, CA

LOCATION.--Lat 34°34'40", long 119°15'25", in NW 1/4 SW 1/4 sec.30, T.6 N., R.22 W., Ventura County, Hydrologic Unit 18070102, on right bank at Sespe Gorge, 1.6 mi upstream from Tule Creek, and 5 mi northeast of Wheeler Springs.

DRAINAGE AREA.--49.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1947 to current year. Discharge estimated for period October 1947 to July 1948.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,500.65 ft above National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District).

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, 11,600 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 15.02 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for many days in some years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	0930	1,240	4.76	Mar. 6	0045	422	3.41
Feb. 6	1115	386	3.55	Mar. 22	2030	1,050	4.42
Feb. 12	0745	*8,400	*12.29				

Minimum daily, .35 ft<sup>3</sup>/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	.45	1.1	2.0	2.8	14	93	31	7.6	3.9	1.5	.97
2	.46	.44	1.2	1.8	2.8	97	80	29	7.0	3.6	1.2	.94
3	.48	.45	1.2	9.8	2.7	83	69	27	6.4	3.4	1.0	1.0
4	.51	.45	1.2	4.1	2.7	51	63	23	6.1	3.4	1.1	.94
5	.47	.46	1.2	251	2.8	52	57	29	6.0	3.0	1.2	e.93
6	.44	.48	1.2	31	199	173	50	36	6.2	2.8	1.2	e.92
7	.41	.56	1.2	15	149	87	45	21	6.4	2.9	1.4	e.91
8	.41	.57	1.3	8.7	64	69	41	15	6.1	3.9	1.3	e.90
9	.40	.57	1.3	6.1	187	56	37	12	5.6	4.9	1.2	e.89
10	.40	.58	1.3	5.3	1370	47	35	11	5.6	4.1	1.1	e.88
11	.41	.63	1.2	4.8	1530	40	32	9.9	5.4	4.3	.84	e.87
12	.41	.64	1.2	4.3	2970	34	28	9.5	5.3	5.8	.76	e.87
13	.37	.66	1.2	4.0	1170	29	24	8.7	5.2	5.5	.84	e.86
14	.37	.70	1.2	3.9	416	23	22	8.5	5.1	4.7	.74	e.86
15	.37	.65	1.2	3.8	674	19	20	7.8	5.2	4.2	.77	e.85
16	.38	.70	1.2	3.6	352	15	17	7.4	5.2	3.9	.70	e.85
17	.38	.72	1.2	3.5	230	12	14	7.0	5.2	3.5	.64	e.84
18	.37	.76	1.2	3.4	168	10	13	7.4	5.2	2.9	.68	e.83
19	.37	.82	1.2	3.2	128	8.4	11	7.4	4.6	2.7	.64	e.82
20	.35	.96	1.2	3.1	110	197	10	7.4	4.4	2.8	.59	e.82
21	.38	.99	1.2	3.1	89	183	9.6	e7.4	4.3	2.9	.63	e.81
22	.40	1.0	1.2	3.1	79	319	9.1	e7.4	3.9	2.9	.71	e.80
23	.43	1.0	1.2	3.0	64	480	9.0	e7.2	3.8	3.0	.74	e.79
24	.44	1.0	1.2	2.9	49	286	8.9	e7.2	4.0	3.1	.79	e.78
25	.45	1.0	1.2	2.9	41	211	8.8	e7.4	3.7	3.0	.86	e.78
26	.47	.99	1.2	2.9	34	180	8.4	e7.4	3.5	2.8	.85	e.77
27	.38	1.0	1.4	2.9	28	168	20	e7.6	3.4	2.5	.85	e.77
28	.39	1.1	2.3	2.9	22	133	33	e7.6	3.3	2.3	.82	e.76
29	.40	1.1	20	2.9	18	112	32	e7.8	3.3	2.0	.83	e.76
30	.44	1.1	6.3	2.9	---	111	32	e8.0	3.7	1.8	1.1	e.75
31	.45	---	2.6	2.9	---	102	---	e8.0	---	1.6	1.2	---
TOTAL	12.79	22.53	64.0	404.8	10154.8	3401.4	931.8	398.0	150.7	104.1	28.78	25.52
MEAN	.41	.75	2.06	13.1	350	110	31.1	12.8	5.02	3.36	.93	.85
MAX	.51	1.1	20	251	2970	480	93	36	7.6	5.8	1.5	1.0
MIN	.35	.44	1.1	1.8	2.7	8.4	8.4	7.0	3.3	1.6	.59	.75
AC-FT	25	45	127	803	20140	6750	1850	789	299	206	57	51

e Estimated.

## 11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.73	5.24	7.44	18.7	54.2	47.4	22.7	7.48	2.60	1.14	.61	.81
MAX	10.3	131	85.5	270	356	553	233	59.5	18.6	8.08	5.11	10.7
(WY)	1984	1966	1966	1969	1978	1983	1958	1983	1983	1983	1983	1976
MIN	.019	.077	.063	.16	.67	.95	.68	.43	.15	.023	.000	.000
(WY)	1962	1951	1991	1991	1951	1951	1951	1961	1951	1951	1951	1951

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1948 - 1992	
ANNUAL TOTAL	6987.24		15699.22			
ANNUAL MEAN	19.1		42.9		13.9	
HIGHEST ANNUAL MEAN					78.4	
LOWEST ANNUAL MEAN					.33	
HIGHEST DAILY MEAN	1830	Mar 18	2970	Feb 12	6430	Mar 1 1983
LOWEST DAILY MEAN	.00	Jan 1	.35	Oct 20	.00	Aug 25 1949
ANNUAL SEVEN-DAY MINIMUM	.09	Jan 1	.37	Oct 14	.00	Aug 25 1949
INSTANTANEOUS PEAK FLOW			8400	Feb 12	11600	Mar 1 1983
INSTANTANEOUS PEAK STAGE			12.29	Feb 12	15.02	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	13860		31140		10040	
10 PERCENT EXCEEDS	23		69		16	
50 PERCENT EXCEEDS	1.1		3.0		1.4	
90 PERCENT EXCEEDS	.27		.50		.10	

11113000 SESPE CREEK NEAR FILLMORE, CA

LOCATION.--Lat 34°27'03", long 118°55'30", in NE 1/4 NW 1/4 NE 1/4 sec.12, T.4 N., R.20 W., Ventura County, Hydrologic Unit 18070102, on right bank 0.1 mi downstream from Little Sespe Creek and 3.5 mi north of Fillmore.

DRAINAGE AREA.--251 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1911 to September 1913, October 1927 to September 1985, October 1990 to current year; combined records of creek and canal, October 1927 to September 1939 monthly only, October 1939 to September 1985, October 1990 to current year. Prior to 1935, published as "at Sespe."

GAGE.--Water-stage recorder on creek; water-stage recorder and Parshall flume on canal. Elevation of creek gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Canal gage is at different datum. See WSP 1315-B for history of changes prior to Jan. 17, 1946.

REMARKS.--Records fair. No regulation upstream from station. Fillmore Irrigation Co. has diverted water 1 mi upstream since September 1911. For records of combined discharge of Sespe Creek and Fillmore Irrigation Company's canal, see following page.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 73,000 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 22.40 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 22.40 ft; maximum gage height, 24.95 ft, Feb. 25, 1969, from debris wave; no flow at times in some years. Combined creek and canal: Maximum discharge 73,000 ft<sup>3</sup>/s, Feb. 10, 1978; minimum daily, 1.1 ft<sup>3</sup>/s, July 31, Aug. 2, 1951.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1330	1,360	7.92	Mar. 2	2200	2,020	7.41
Jan. 5	1815	1,910	8.44	Mar. 6	0745	1,680	7.12
Feb. 7	0545	1,510	8.07	Mar. 23	0445	4,960	9.07
Feb. 12	1100	*44,000	*17.95				

Minimum daily, 0.10 ft<sup>3</sup>/s, Oct. 2, 3.

Combined creek and canal: Maximum discharge, 44,000 ft<sup>3</sup>/s, Feb. 12; minimum daily, 3.2 ft<sup>3</sup>/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.19	.17	46	32	201	574	132	60	30	12	6.5
2	.10	.18	.20	34	31	727	530	129	55	31	10	6.6
3	.10	.16	.19	31	30	1220	483	125	54	31	12	6.4
4	.11	.16	.21	41	30	654	453	119	53	32	14	7.5
5	.12	.21	.16	945	30	522	411	119	54	32	14	5.7
6	.14	.15	.15	433	298	1150	375	169	54	33	15	5.7
7	.14	.15	.18	186	1170	735	346	165	55	32	14	5.7
8	.33	.14	.95	146	539	630	325	134	55	32	13	5.8
9	.70	.15	1.2	97	345	546	308	117	54	35	12	5.2
10	.18	.17	.26	78	7430	498	305	110	51	36	13	5.0
11	.15	.15	.26	67	10000	459	297	107	48	38	13	5.3
12	.28	.18	.23	60	17000	419	279	106	47	40	11	4.6
13	.18	.30	.64	56	6320	380	e268	102	45	42	8.1	4.8
14	.16	.37	3.0	51	2460	353	e257	97	45	41	7.2	5.2
15	.14	.44	1.3	48	4110	328	e247	97	45	40	7.6	6.5
16	.14	.83	2.2	46	2600	309	e237	96	43	33	7.2	7.8
17	.15	1.4	1.9	45	1510	286	e227	94	42	29	6.7	6.4
18	.15	1.0	.97	44	966	271	e218	92	41	28	7.2	5.8
19	.15	.18	3.1	42	742	260	e204	92	41	24	6.9	7.4
20	.26	.19	2.3	40	614	925	e196	91	41	20	6.2	7.4
21	.31	.19	3.0	38	562	1420	e187	90	39	19	6.3	5.1
22	.17	.16	.55	36	507	1520	179	87	36	18	6.7	5.7
23	.16	.16	1.1	36	460	3360	168	84	35	18	7.5	5.6
24	.16	.14	.62	34	364	1840	165	83	33	17	8.1	7.4
25	.16	.16	2.0	36	314	1330	159	79	31	16	5.0	7.7
26	.84	.16	3.7	35	287	1090	155	75	30	16	6.1	6.1
27	2.4	.17	7.6	36	265	1120	148	73	30	15	6.1	6.7
28	.45	.17	.22	36	244	896	140	72	29	13	6.5	7.7
29	.31	.19	468	35	221	761	139	70	29	13	6.7	6.1
30	.26	.17	266	35	---	676	135	69	30	12	7.5	6.1
31	.21	---	79	33	---	634	---	65	---	11	6.0	---
TOTAL	9.30	8.37	873.14	2926	59481	25520	8115	3140	1305	827	282.6	185.5
MEAN	.30	.28	28.2	94.4	2051	823	270	101	43.5	26.7	9.12	6.18
MAX	2.4	1.4	468	945	17000	3360	574	169	60	42	15	7.8
MIN	.10	.14	.15	31	30	201	135	65	29	11	5.0	4.6
AC-FT	18	17	1730	5800	118000	50620	16100	6230	2590	1640	561	368

e Estimated.

## 11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.40	42.8	95.5	205	459	365	166	49.2	16.6	6.44	3.35	3.35
MAX	55.4	1285	698	3378	3231	2301	1632	327	109	56.5	44.5	45.6
(WY)	1984	1966	1966	1969	1969	1978	1958	1983	1941	1983	1983	1939
MIN	.000	.000	.000	1.35	4.74	2.82	.67	.25	.000	.000	.000	.000
(WY)	1913	1930	1930	1948	1951	1961	1961	1961	1928	1928	1912	1912

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1912 - 1992	
ANNUAL TOTAL	40239.38		102672.91			
ANNUAL MEAN	110		281		116	
HIGHEST ANNUAL MEAN					641	
LOWEST ANNUAL MEAN					1.78	
HIGHEST DAILY MEAN	6540	Mar 19	17000	Feb 12	29100	Jan 25 1969
LOWEST DAILY MEAN	.08	Sep 27	.10	Oct 2	.00	Jul 11 1912
ANNUAL SEVEN-DAY MINIMUM	.12	Sep 26	.13	Oct 1	.00	Jul 11 1912
INSTANTANEOUS PEAK FLOW			44000	Feb 12	73000	Feb 10 1978
INSTANTANEOUS PEAK STAGE			17.95	Feb 12	24.95	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	79810		203700		84160	
10 PERCENT EXCEEDS	178		524		165	
50 PERCENT EXCEEDS	1.4		32		8.6	
90 PERCENT EXCEEDS	.16		.18		.10	

11113001 SESPE CREEK NEAR FILLMORE, CA--Continued

SESPE CREEK AND FILLMORE IRRIGATION COMPANY CANAL  
 COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	4.1	4.1	46	32	201	574	139	66	37	20	15
2	3.4	4.1	4.1	34	31	727	530	136	64	39	20	16
3	3.4	4.1	4.1	31	30	1220	483	132	63	39	20	16
4	3.5	4.0	4.2	41	30	654	453	127	61	39	20	14
5	3.5	4.0	4.2	945	30	522	411	127	61	39	20	14
6	3.6	3.8	4.1	433	298	1150	375	178	61	39	20	15
7	3.5	3.8	4.3	186	1170	735	346	172	62	39	19	14
8	3.3	3.9	5.1	146	539	630	325	141	60	39	19	13
9	3.7	4.0	5.5	97	345	546	308	124	58	43	18	13
10	3.4	4.1	4.7	78	7430	498	305	116	57	44	18	13
11	3.2	4.0	4.8	67	10000	459	297	112	54	45	18	13
12	4.0	3.8	6.0	60	17000	419	279	112	53	47	16	13
13	3.8	3.7	6.3	56	6320	380	268	110	51	48	16	13
14	3.8	3.8	7.2	51	2460	353	257	105	50	46	15	13
15	3.5	3.7	6.5	48	4110	328	247	105	51	43	15	13
16	3.5	3.9	6.9	46	2600	309	237	104	50	39	15	13
17	3.5	4.4	7.2	45	1510	286	227	102	49	36	14	12
18	3.5	5.0	6.9	44	966	271	218	100	48	34	14	12
19	3.3	4.3	7.9	42	742	260	204	99	47	30	14	12
20	3.4	4.1	7.4	40	614	925	196	99	46	28	13	12
21	3.6	4.2	8.2	38	562	1420	187	97	44	27	13	12
22	3.7	4.1	6.9	36	507	1520	179	94	42	27	13	12
23	4.0	4.0	7.4	36	460	3360	168	91	41	27	13	11
24	4.1	3.8	7.2	34	364	1840	165	89	39	26	13	12
25	4.1	4.0	7.8	36	314	1330	159	85	39	25	13	13
26	4.8	4.0	8.7	35	287	1090	155	81	38	26	15	13
27	6.9	4.0	11	36	265	1120	151	79	38	24	15	13
28	5.1	4.1	23	36	244	896	144	78	37	22	15	14
29	4.6	4.1	469	35	221	761	146	76	37	21	14	13
30	4.4	4.1	266	35	---	676	142	75	38	21	13	13
31	4.1	---	79	33	---	634	---	70	---	20	14	---
TOTAL	119.8	121.0	1005.7	2926	59481	25520	8136	3355	1505	1059	495	395
MEAN	3.86	4.03	32.4	94.4	2051	823	271	108	50.2	34.2	16.0	13.2
MAX	6.9	5.0	469	945	17000	3360	574	178	66	48	20	16
MIN	3.2	3.7	4.1	31	30	201	142	70	37	20	13	11
AC-FT	238	240	1990	5800	118000	50620	16140	6650	2990	2100	982	783

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.34	57.7	103	231	472	377	189	61.8	26.7	13.8	9.33	8.28
MAX	84.3	1286	698	3378	3231	2301	1632	327	120	63.0	44.5	31.2
(WY)	1984	1966	1966	1969	1969	1978	1958	1983	1941	1941	1983	1941
MIN	2.21	3.53	3.13	4.11	8.07	11.6	7.60	4.18	2.52	1.48	1.40	1.70
(WY)	1962	1978	1991	1991	1951	1961	1961	1961	1951	1961	1951	1951

SUMMARY STATISTICS

	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1940 - 1992
ANNUAL TOTAL	41603.5	104118.5	
ANNUAL MEAN	114	284	128
HIGHEST ANNUAL MEAN			643
LOWEST ANNUAL MEAN			4.85
HIGHEST DAILY MEAN	6540	Mar 19	17000
LOWEST DAILY MEAN	2.7	Jan 16	3.2
ANNUAL SEVEN-DAY MINIMUM	3.0	Jan 11	3.5
INSTANTANEOUS PEAK FLOW			44000
ANNUAL RUNOFF (AC-FT)	82520	206500	73000
10 PERCENT EXCEEDS	178	524	92820
50 PERCENT EXCEEDS	6.1	37	177
90 PERCENT EXCEEDS	3.5	4.0	17
			3.7

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1927 to current year. March 1912 to September 1913, at site 1.2 mi upstream; records not equivalent.

CHEMICAL DATA.--1969-80

WATER TEMPERATURE.--1969-71, 1974-75.

REVISED RECORDS.--WSP 1635: 1933(M), 1934, 1936(M), 1941(M). WSP 1715: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 785 ft above National Geodetic Vertical Datum of 1929, 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.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow affected by pumping and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 15.18 ft, from floodmark, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of critical-depth measurement at gage height 12.2 ft; no flow at times in 1927, 1949, 1951-52, 1965.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1900	239	3.59	Mar. 7	1500	271	6.44
Jan. 5	1015	413	4.11	Mar. 23	0315	815	7.88
Feb. 12	unkown	*10,000	*16.40				

Minimum daily, 1.3 ft<sup>3</sup>/s, Oct. 2, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.6	2.0	13	6.0	85	102	32	20	13	10	7.4
2	1.3	1.7	2.0	12	5.9	95	83	32	19	13	10	7.5
3	1.5	1.7	1.9	14	5.9	111	64	32	19	13	9.7	7.4
4	1.5	1.6	1.8	13	5.9	92	69	31	18	13	9.5	7.3
5	1.5	1.5	1.7	127	5.8	105	67	31	19	13	9.2	7.0
6	1.5	1.5	1.7	34	48	100	67	31	19	12	9.0	6.9
7	1.4	1.5	1.7	24	134	94	71	30	18	12	9.1	7.1
8	1.4	1.5	2.1	16	70	90	69	30	17	13	9.0	7.0
9	1.5	1.6	2.2	13	55	94	55	30	17	13	8.8	7.1
10	1.4	1.7	2.0	11	412	92	59	29	17	13	8.7	7.1
11	1.3	1.7	2.2	11	e1120	67	48	28	17	14	8.7	7.1
12	1.4	1.6	2.1	9.9	e2200	e65	47	28	17	17	8.8	7.1
13	1.5	1.6	2.1	9.6	e1200	e60	e47	27	16	16	8.7	6.9
14	1.5	1.6	2.2	9.1	e700	e55	e46	26	16	15	8.5	7.2
15	1.4	1.6	2.3	8.7	e600	e55	e46	26	15	14	8.8	7.2
16	1.4	1.7	2.4	8.4	555	e50	e45	25	15	13	7.4	7.0
17	1.4	1.8	2.2	8.1	240	e50	44	27	15	13	6.0	7.2
18	1.5	2.2	2.2	7.9	150	e55	43	31	15	15	5.9	7.0
19	1.4	1.9	2.2	7.8	105	55	41	31	15	17	6.0	6.4
20	1.4	1.8	2.2	7.6	130	95	39	30	15	16	5.9	6.5
21	1.4	1.7	2.3	7.5	97	156	39	29	15	16	5.9	6.4
22	1.6	1.8	2.4	7.1	108	249	38	28	14	15	6.1	6.3
23	1.6	1.6	2.3	6.9	109	507	37	28	13	15	6.5	6.4
24	1.6	1.7	2.2	6.9	93	375	36	27	12	15	6.9	6.3
25	1.6	1.7	2.4	6.8	87	251	35	24	12	14	6.9	6.2
26	2.1	1.7	2.4	6.7	99	195	35	23	12	14	7.1	5.8
27	2.2	1.7	3.3	6.7	90	177	34	23	12	13	6.9	5.6
28	1.8	1.7	5.3	6.4	83	163	33	23	13	13	6.9	6.0
29	1.7	1.8	65	6.2	79	142	33	23	13	12	6.9	5.7
30	1.7	1.9	26	6.2	---	134	33	22	13	11	7.1	5.6
31	1.7	---	12	6.1	---	116	---	20	---	11	7.4	---
TOTAL	47.6	50.7	166.8	438.6	8593.5	4030	1505	857	468	427	242.3	201.7
MEAN	1.54	1.69	5.38	14.1	296	130	50.2	27.6	15.6	13.8	7.82	6.72
MAX	2.2	2.2	65	127	2200	507	102	32	20	17	10	7.5
MIN	1.3	1.5	1.7	6.1	5.8	50	33	20	12	11	5.9	5.6
AC-FT	94	101	331	870	17050	7990	2990	1700	928	847	481	400

e Estimated.

## SANTA CLARA RIVER BASIN

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11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.86	8.27	15.6	37.9	80.3	66.1	34.5	13.7	7.75	4.69	3.07	3.02
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	.000	.000	.000	.76	.97	1.69	.000	.081	.000	.000	.000	.000
(WY)	1929	1930	1930	1928	1930	1961	1928	1928	1928	1928	1928	1928

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	7867.8		17028.2			
ANNUAL MEAN	21.6		46.5		22.8	
HIGHEST ANNUAL MEAN					156 1969	
LOWEST ANNUAL MEAN					1.37 1951	
HIGHEST DAILY MEAN	451	Mar 18	2200	Feb 12	8900	Feb 25 1969
LOWEST DAILY MEAN	1.0	Feb 2	1.3	Oct 2	.00	Oct 1 1927
ANNUAL SEVEN-DAY MINIMUM	1.2	Jan 31	1.4	Oct 6	.00	Oct 1 1927
INSTANTANEOUS PEAK FLOW			10000	Feb 12	21000	Feb 25 1969
INSTANTANEOUS PEAK STAGE			16.40	Feb 12	15.18	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	15610		33780		16540	
10 PERCENT EXCEEDS	36		93		33	
50 PERCENT EXCEEDS	2.8		12		4.6	
90 PERCENT EXCEEDS	1.4		1.6		.80	

## 11114000 SANTA CLARA RIVER AT MONTALVO, CA

LOCATION.--Lat 34°14'31", long 119°11'21", in San Miguel Grant, Ventura County, Hydrologic Unit 18070102, on downstream end of center pier of southbound bridge on U.S. Highway 101, 0.9 mi southeast of Montalvo, and 4.5 mi upstream from mouth.  
DRAINAGE AREA.--1,612 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1927 to September 1932, October 1949 to September 1988, October 1989 to current year. Monthly discharge only for 1950-67, published in WDR 1968. October 1949 to September 1969, published as "at Saticoy."

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Two water-stage recorders. Datum of main gage is 46.88 ft above National Geodetic Vertical Datum of 1929 (levels by Ventura County Flood Control District). Oct. 1, 1927, to Sept. 30, 1932, and Oct. 1, 1949, to Sept. 30, 1967, at same site at different datums. Oct. 1, 1967, to Feb. 2, 1970, at site 3.9 mi upstream at different datum. Supplementary gage 0.7 mi upstream at different datum. Prior to Oct. 1, 1991 at datum 5.0 ft higher.

REMARKS.--Records poor. 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, 171,196 acre-ft, 42 mi upstream since December 1971; by Castaic Lake (station 11108133), capacity 324,000 acre-ft, 43 mi upstream since January 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 17.41 ft, at datum 5.0 ft higher; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 120,000 ft<sup>3</sup>/s, estimated by Ventura County Flood Control District.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 104,000 ft<sup>3</sup>/s, Feb. 12, gage height, 14.68 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	e.50	e.01	e370	940	e.60	e.25	e.15	e.10	.11
2	e.00	e.00	e.00	.32	e.01	e1800	905	e.60	e.23	e.20	e.10	.11
3	e.00	e.00	e.00	.58	e.01	1350	876	e.60	e.21	e.20	e.10	.08
4	e.00	e.00	.00	.24	e.01	609	877	e.60	e.19	e.20	e.10	.12
5	e.00	e.00	e.00	584	2.0	218	864	e.60	e.18	e.20	e.10	e.09
6	e.00	e.00	e.00	704	5.1	1310	e820	e.60	e.17	e.20	e.10	e.09
7	e.00	.00	e.00	68	645	537	e750	e.75	e.16	e.20	e.10	e.09
8	e.00	.00	e.00	163	515	435	e560	e.73	e.15	e.20	e.10	e.09
9	e.00	e.00	e.00	7.4	83	350	e340	e.71	e.15	e.20	e.10	e.09
10	e.00	e.00	e.00	6.6	6430	308	e200	e.69	e.14	e.20	e.10	e.09
11	e.00	e.00	e.00	6.3	10800	277	e110	e.67	e.15	e.20	e.10	e.08
12	e.00	e.00	e.00	6.0	28400	214	e70	e.65	e.15	e.15	e.10	e.08
13	e.00	e.00	e.00	5.7	e17000	151	e40	e.63	e.15	e.15	e.10	e.08
14	e.00	e.00	e.00	5.6	e5700	113	e25	e.61	e.15	e.15	e.10	e.08
15	e.00	e.00	e.00	5.4	e8000	122	e16	e.59	e.15	e.15	e.10	e.08
16	e.00	e.00	e.00	e5.0	e4700	104	e12	e.57	e.15	e.15	e.10	e.08
17	e.00	e.00	e.00	e4.6	e1540	95	e7.5	e.55	e.15	e.15	e.10	e.08
18	e.00	e.00	e.00	e4.1	e1000	88	e5.0	e.53	e.15	e.15	.09	e.08
19	e.00	e.00	e.00	e3.0	e700	88	e3.5	e.51	e.15	e.15	.09	e.08
20	e.00	e.00	e.00	e2.0	e550	890	e2.6	e.49	e.15	e.15	.05	e.08
21	e.00	e.00	e.00	e1.0	491	1930	e1.9	e.47	e.15	e.15	.03	e.08
22	e.00	e.00	e.00	e.50	458	1420	e1.3	e.45	e.15	e.15	.03	e.07
23	e.00	e.00	e.00	e.30	401	6000	e1.0	e.43	e.15	e.15	.05	e.07
24	e.00	e.00	e.00	e.10	e320	1890	e.80	e.41	e.15	e.15	.08	e.07
25	e.00	e.00	e.00	e.05	e260	1520	e.70	e.39	e.15	e.10	.07	e.07
26	e.00	e.00	e.00	e.03	e220	1360	e.70	e.37	e.15	e.10	.09	e.07
27	e.00	e.00	e.00	e.02	e190	1590	e.70	e.35	e.15	e.10	.10	e.07
28	e.00	e.00	e.00	e.01	e180	1190	e.65	e.33	e.15	e.10	.10	e.07
29	e.00	e.00	e650	e.01	e170	980	e.65	e.31	e.15	e.10	.12	e.07
30	e.00	e.00	e90	e.01	---	907	e.65	e.29	e.15	e.10	.10	e.07
31	e.00	---	44	e.01	---	949	---	e.27	---	e.10	.09	---
TOTAL	0.00	0.00	804.00	1584.38	88760.14	29165	7432.65	16.35	4.83	4.80	2.79	2.47
MEAN	.000	.000	25.9	51.1	3061	941	248	.53	.16	.15	.090	.082
MAX	.00	.00	650	704	28400	6000	940	.75	.25	.20	.12	.12
MIN	.00	.00	.00	.01	.01	88	.65	.27	.14	.10	.03	.07
AC-FT	.00	.00	1590	3140	176100	57850	14740	32	9.6	9.5	5.5	4.9

e Estimated.

11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.15	57.1	90.1	270	709	520	173	22.5	2.56	1.30	.24	1.19
MAX	34.7	1603	917	5477	7314	5985	2668	736	76.7	28.8	8.85	31.7
(WY)	1984	1966	1966	1969	1969	1983	1958	1983	1983	1983	1969	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1928	1928	1930	1951	1951	1931	1950	1932	1928	1928	1928	1928

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1928 - 1992	
ANNUAL TOTAL	40923.18		127777.41			
ANNUAL MEAN	112		349		151	
HIGHEST ANNUAL MEAN					1229	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	13000	Mar 19	28400	Feb 12	92300	Feb 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1927
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1927
INSTANTANEOUS PEAK FLOW			104000	Feb 12	165000	Jan 25 1969
INSTANTANEOUS PEAK STAGE			14.68	Feb 12	17.41	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	81170		253400		109300	
10 PERCENT EXCEEDS	.50		591		59	
50 PERCENT EXCEEDS	.00		.15		.00	
90 PERCENT EXCEEDS	.00		.00		.00	



PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM- PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	TETHER LINE USED IN SAMPLNG (YES=1) (CODE)	START- ING TIME (2400 HOURS)	END- ING TIME (2400 HOURS)	TIME ON BED FOR BED LOAD SAMPLE (SEC)	HORI- ZONTAL WIDTH OF VER- TICAL (FEET)
FEB 20...	1130	1000	1120	0.250	0	1100	1200	10	4.0

DATE	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMT (NUM)	VER- TICALS IN COM- POSITE SAMPLE (NUM)	NUMBER OF SAM- PLING POINTS (COUNT)	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE T/D/FT	SEDI- MENT DIS- CHARGE, BEDLOAD (TONS/ DAY)
FEB 20...	1	48	48	2.00	549	16.0	1.98	358

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM
FEB 20...	4	37	70	85	92	96	98	100

VENTURA RIVER BASIN

11118500 VENTURA RIVER NEAR VENTURA, CA

LOCATION.--Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, Ventura County, Hydrologic Unit 18070101, on right bank 420 ft downstream from bridge on Casitas Pass Road at Foster Memorial Park, 0.2 mi downstream from Coyote Creek, and 5 mi north of Ventura.

DRAINAGE AREA.--188 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to January 1914, October 1929 to current year; combined records of river and diversion, October 1932 to current year.

REVISED RECORDS.--WSP 1565: 1957. WSP 1928: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage on river; water-stage recorder and Parshall flume on diversion. Datum of gage is 205.23 ft, 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 poor. Flow partly regulated since March 1948 by Matilija Reservoir, usable capacity, 1,480 acre-ft, and since October 1959 by Casitas Reservoir, capacity, 267,000 acre-ft. Water diverted to Casitas Reservoir on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. AVERAGE DISCHARGE (river only) represents flow to ocean regardless of upstream development. For records of combined discharge of river and Ventura City diversion, see following page.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 63,600 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 24.14 ft, from rating curve extended above 34,000 ft<sup>3</sup>/s; maximum gage height, 29.3 ft, Jan. 25, 1969, present datum, from floodmarks; no flow at times in many years.

Combined river and diversion: Maximum discharge, 63,600 ft<sup>3</sup>/s, Feb. 10, 1978; no flow Nov. 28, 29, 1977; Oct. 23-26, 1989; July 9-11, 1990.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 45,800 ft<sup>3</sup>/s, Feb. 12, gage height, 20.66 ft; no flow for many days.

Combined river and diversion: Maximum discharge, 45,800 ft<sup>3</sup>/s, Feb. 12; minimum daily, 3.9 ft<sup>3</sup>/s, Jan. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.48	.47	39	44	17	12	3.2	1.4	2.7
2	.00	.00	.00	.06	.37	65	41	18	12	2.8	1.8	3.5
3	.00	.00	.00	.00	.59	80	38	21	10	3.0	1.7	2.9
4	.00	.00	.00	.00	.07	46	37	19	8.7	2.3	1.8	1.9
5	.00	.00	.00	187	1.9	43	36	20	8.8	2.3	1.9	1.5
6	.00	.00	.00	e75	9.9	266	31	19	9.4	3.4	2.0	1.4
7	.00	.00	.00	e32	9.6	87	29	16	8.6	2.6	2.4	1.6
8	.00	.00	.00	15	5.8	72	28	17	9.1	3.8	1.8	1.7
9	.00	.00	.00	5.8	7.7	52	28	16	7.9	2.3	2.3	1.4
10	.00	.00	.00	1.9	1380	49	29	17	6.4	1.9	2.2	1.2
11	.00	.00	.00	.21	2870	48	27	16	5.9	4.3	2.4	1.4
12	.00	.00	.00	.09	8670	43	26	15	6.2	9.0	2.2	1.3
13	.00	.00	.00	.04	3140	38	26	14	6.1	6.4	2.1	e1.5
14	.00	.00	.00	.00	1080	37	26	12	5.6	5.6	2.2	e1.5
15	.00	.00	.00	.00	2330	37	25	11	5.8	3.1	2.1	e1.5
16	.00	.00	.00	.00	900	36	23	13	4.6	2.4	1.6	e1.5
17	.00	.00	.00	.00	442	34	23	13	4.7	2.5	1.4	e1.5
18	.00	.00	.00	.00	237	30	22	12	4.6	1.8	1.5	1.3
19	.00	.00	.00	.00	136	30	23	9.3	6.6	3.1	1.8	1.3
20	.00	.00	.00	.00	97	97	23	11	5.6	1.8	1.5	1.7
21	.00	.00	.00	.00	81	98	21	12	6.2	1.7	1.1	1.8
22	.00	.00	.00	.00	69	138	20	12	6.6	1.8	1.2	1.2
23	.00	.00	.00	.00	62	341	20	11	4.5	2.1	1.4	1.3
24	.00	.00	.00	.00	56	161	20	10	3.8	2.0	1.0	1.4
25	.00	.00	.00	.00	52	98	18	10	3.1	1.9	1.0	1.3
26	.00	.00	.00	.00	49	83	17	8.6	3.4	2.3	.99	1.3
27	.00	.00	.00	.00	46	71	17	9.4	4.0	2.3	.88	1.3
28	.00	.00	12	.00	41	59	19	9.7	4.4	1.6	.85	1.3
29	.00	.00	110	.00	39	52	17	8.9	3.8	1.6	.75	1.4
30	.00	.00	44	4.8	---	49	17	9.7	4.0	2.1	1.6	e1.6
31	.00	---	7.3	3.7	---	49	---	10	---	1.6	3.6	---
TOTAL	0.00	0.00	173.30	326.08	21813.40	2428	771	417.6	192.4	88.6	52.47	48.2
MEAN	.000	.000	5.59	10.5	752	78.3	25.7	13.5	6.41	2.86	1.69	1.61
MAX	.00	.00	110	187	8670	341	44	21	12	9.0	3.6	3.5
MIN	.00	.00	.00	.00	.07	30	17	8.6	3.1	1.6	.75	1.2
AC-FT	.00	.00	344	647	43270	4820	1530	828	382	176	104	96

e Estimated.

11118500 VENTURA RIVER NEAR VENTURA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.29	5.15	36.5	121	192	237	78.0	26.1	12.1	6.15	3.59	2.51
MAX	21.4	38.8	174	1103	1058	1951	874	226	103	56.1	35.8	21.2
(WY)	1942	1947	1932	1952	1941	1938	1941	1941	1941	1941	1941	1941
MIN	.000	.000	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1931	1930	1951	1949	1934	1934	1931	1930	1930

SUMMARY STATISTICS

WATER YEARS 1930 - 1957

ANNUAL MEAN	59.7
HIGHEST ANNUAL MEAN	354
LOWEST ANNUAL MEAN	.000
HIGHEST DAILY MEAN	17900
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	39200
INSTANTANEOUS PEAK STAGE	19.20
ANNUAL RUNOFF (AC-FT)	43230
10 PERCENT EXCEEDS	71
50 PERCENT EXCEEDS	1.9
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.40	16.4	25.7	88.8	256	160	56.6	22.7	9.91	5.85	3.08	2.67
MAX	40.9	278	234	1880	1899	1797	758	238	79.6	38.5	17.4	15.2
(WY)	1984	1966	1966	1969	1969	1983	1983	1983	1978	1978	1978	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1962	1965	1969	1976	1961	1990	1961	1961	1961	1961	1961	1961

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1960 - 1992

ANNUAL TOTAL	9809.53	26311.05	
ANNUAL MEAN	26.9	71.9	53.1
HIGHEST ANNUAL MEAN			345
LOWEST ANNUAL MEAN			.29
HIGHEST DAILY MEAN	2990	Mar 19	8670
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			45800
INSTANTANEOUS PEAK STAGE			20.66
ANNUAL RUNOFF (AC-FT)	19460	52190	38440
10 PERCENT EXCEEDS	15	49	33
50 PERCENT EXCEEDS	.00	2.2	2.5
90 PERCENT EXCEEDS	.00	.00	.00

## VENTURA RIVER BASIN

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, October 1985 to September 1986.

SUSPENDED-SEDIMENT DISCHARGE: October 1968 to September 1973, October 1974 to September 1981, October 1985 to September 1986.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM
DEC											
30...	1600	19	13.0	144	7.4	98	--	--	--	--	--
JAN											
07...	1625	23	11.0	97	6.0	96	--	--	--	--	--
FEB											
04...	1350	0.10	14.0	86	0.02	65	--	--	--	--	--
12...	1730	3770	--	7670	78100	83	91	96	98	99	100
20...	1445	94	17.0	25	6.3	--	--	--	--	--	--
MAR											
10...	1010	48	15.0	24	3.1	70	--	--	--	--	--
24...	1350	148	19.0	109	44	84	93	98	100	--	--
JUN											
10...	0930	6.3	19.5	37	0.63	13	--	--	--	--	--
SEP											
30...	0900	1.7	19.0	42	0.19	--	--	--	--	--	--

11118501 VENTURA RIVER NEAR VENTURA, CA--Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA  
 COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e10	9.2	10	11	50	56	38	e33		19	18
2	11	e10	9.1	10	10	78	53	38	e33		19	15
3	11	e10	9.1	11	11	92	50	37	e31		20	18
4	11	e10	9.0	11	11	58	49	39	e30		19	17
5	11	e10	8.4	198	10	56	48	40			19	16
6	11	e9.9	8.2	87	17	275	47	e39		20	19	16
7	11	e9.9	8.2	43	17	99	44	e36	e3	21	18	17
8	11	9.9	8.2	26	15	86	46	e37	e3	17	19	17
9	11	9.9	7.4	18	14	67	41	e36		20	19	16
10	e11	9.9	9.0	15	1390	62	42	e37		20	18	16
11	e11	9.9	9.3	13	2870	59	45	e36		15	18	16
12	e11	9.9	8.9	13	8680	57	42	e35	25	22	18	16
13	e11	9.8	7.6	12	3140	52	39	e34	24	19	18	16
14	e11	9.8	6.8	12	1080	51	41	e32	24	20	18	16
15	e10	9.8	6.8	12	2330	51	40	e31	24	22	18	16
16	e10	9.8	7.9	12	905	51	40	e33	25	18	18	16
17	e10	9.7	7.5	12	447	48	39	e33	23	20	17	16
18	e10	9.7	8.5	11	242	47	40	e32	24	19	17	16
19	e10	9.7	8.4	11	141	45	38	e29	23	19	17	16
20	e10	9.6	8.3	11	102	109	38	e31	24	19	17	15
21	e10	9.5	8.3	11	86	106	37	e32	21	20	17	16
22	e10	9.5	8.2	11	74	148	40	e32	24	19	17	15
23	e10	9.6	8.2	11	67	353	39	e31	20	19	17	15
24	e10	9.5	8.2	11	62	173	39	e30	23	19	17	15
25	e10	9.5	8.1	11	58	110	39	e30	22	19	16	15
26	e10	9.4	8.2	11	55	95	38	e29	20	19	16	15
27	e10	9.4	7.9	10	52	83	37	e29	21	19	16	15
28	e10	9.3	21	11	51	71	38	e31	21	19	16	15
29	e10	9.2	119	3.9	55	64	39	e30	22	19	16	15
30	e10	9.3	55	5.0	---	61	38	e31	22	19	15	16
31	e10	---	18	13	---	61	---	e31	---	19	17	---
TOTAL	324	291.4	435.9	656.9	22003	2818	1262	1039	762	601	545	477
MEAN	10.5	9.71	14.1	21.2	759	90.9	42.1	33.5	25.4	19.4	17.6	15.9
MAX	11	10	119	198	8680	353	56	40	33	22	20	18
MIN	10	9.2	6.8	3.9	10	45	37	29	20	15	15	15
AC-FT	643	578	865	1300	43640	5590	2500	2060	1510	1190	1080	946

e Estimated.



11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA

LOCATION.--Lat 34°24'05", long 119°29'08", in El Rincon Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 100 ft upstream from bridge on State Highway 192, 165 ft downstream from Gobernador Creek, and 1.8 mi northeast of Carpinteria.

DRAINAGE AREA.--13.1 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to July 1, 1958, at site 100 ft downstream, at datum 6.00 ft higher. July 2, 1958, to Aug. 27, 1970, at site 65 ft downstream at datum 4.00 ft higher. Aug. 28, 1970, to Sept. 30, 1977, at site 100 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records fair. No regulation upstream from station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 mi upstream from station. Small lake 0.8 mi southeast of station and outside the drainage area stores storm runoff and surplus water diverted from Gobernador Creek by Gobernador Land and Water Co. At times this lake is drained by pumping water back into Gobernador Creek 1,000 ft upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft<sup>3</sup>/s, Dec. 27, 1971, gage height, 14.10 ft, from floodmark, from rating curve extended above 130 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 125 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	0830	*1,410	*6.76	Mar. 6	0015	285	4.92
Feb. 15	0830	357	5.11	Mar. 22	2115	130	4.38

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	4.1	6.7	1.3	.27	.01	.00	.00
2	.00	.00	.00	.00	.00	9.4	6.0	1.2	.26	.03	.00	.00
3	.00	.00	.00	.03	.00	6.2	5.6	1.2	.23	.01	.00	.00
4	.00	.00	.00	.01	.00	4.3	5.5	1.1	.22	.02	.00	.00
5	.00	.00	.00	11	.39	7.9	5.5	1.3	.29	.00	.00	.00
6	.00	.00	.00	9.7	2.2	56	5.1	1.6	.33	.00	.00	.00
7	.00	.00	.00	6.0	.00	15	4.8	1.5	.26	.00	.00	.00
8	.00	.00	.00	4.1	.00	11	4.5	1.4	.21	.00	.00	.00
9	.00	.00	.00	1.0	.33	8.7	4.4	1.3	.14	.00	.00	.00
10	.00	.00	.00	.00	81	7.4	4.2	1.2	.15	.00	.00	.00
11	.00	.00	.00	.00	124	6.7	3.9	1.1	.22	.03	.00	.00
12	.00	.00	.00	.00	383	6.2	3.6	1.1	.13	.61	.00	.00
13	.00	.00	.00	.00	269	6.5	3.4	.90	.03	.33	.00	.00
14	.00	.00	.00	.00	59	5.6	3.2	.79	.02	.06	.00	.00
15	.00	.00	.00	.16	102	4.7	3.1	.83	.01	.00	.00	.00
16	.00	.00	.00	.00	50	4.3	2.9	.82	.01	.00	.00	.00
17	.00	.00	.00	.00	33	4.0	2.6	.68	.00	.00	.00	.00
18	.00	.00	.00	.00	24	3.8	2.4	.58	.00	.00	.00	.00
19	.00	.00	.00	.00	18	3.6	2.2	.60	.00	.00	.00	.00
20	.00	.00	.00	.00	15	6.6	2.1	.57	.00	.00	.00	.00
21	.00	.00	.00	.00	12	5.2	2.1	.47	.00	.00	.00	.00
22	.00	.00	.00	.00	11	17	2.0	.45	.00	.00	.00	.00
23	.00	.00	.00	.00	9.2	42	1.9	.43	.00	.00	.00	.00
24	.00	.00	.00	.00	8.0	18	1.9	.46	.00	.00	.00	.00
25	.00	.00	.00	.00	6.9	13	1.7	.53	.00	.00	.00	.00
26	.00	.00	.00	.00	6.2	11	1.6	.57	.00	.00	.00	.00
27	.00	.00	.96	.00	5.2	10	1.5	.53	.00	.00	.00	.00
28	.00	.00	.51	.00	4.4	8.4	1.4	.47	.00	.00	.00	.00
29	.00	.00	7.0	.00	4.2	7.7	1.4	.47	.00	.00	.00	.00
30	.00	.00	7.4	.00	---	7.4	1.4	.43	.00	.00	.00	.00
31	.00	---	.48	.00	---	7.3	---	.30	---	.00	.00	---
TOTAL	0.00	0.00	16.35	32.00	1228.02	329.0	98.6	26.18	2.78	1.10	0.00	0.00
MEAN	.000	.000	.53	1.03	42.3	10.6	3.29	.84	.093	.035	.000	.000
MAX	.00	.00	7.4	11	383	56	6.7	1.6	.33	.61	.00	.00
MIN	.00	.00	.00	.00	.00	3.6	1.4	.30	.00	.00	.00	.00
AC-FT	.00	.00	32	63	2440	653	196	52	5.5	2.2	.00	.00

## 11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.094	.88	2.56	8.32	13.2	7.76	3.90	.77	.27	.12	.053	.062
MAX	3.59	16.7	38.9	160	209	66.6	67.8	9.93	4.38	2.23	1.21	.99
(WY)	1984	1966	1967	1969	1969	1983	1958	1983	1983	1941	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1946	1944	1948	1945	1948	1947	1947	1945	1942	1942	1942	1942

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1941 - 1992

ANNUAL TOTAL	879.06	1734.03		
ANNUAL MEAN	2.41	4.74	2.90	
HIGHEST ANNUAL MEAN			33.5	1969
LOWEST ANNUAL MEAN			.000	1951
HIGHEST DAILY MEAN	212	Mar 18	383	Feb 12
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1
INSTANTANEOUS PEAK FLOW			1410	Feb 12
INSTANTANEOUS PEAK STAGE			6.76	Feb 12
ANNUAL RUNOFF (AC-FT)	1740		3440	
10 PERCENT EXCEEDS	.94		6.9	
50 PERCENT EXCEEDS	.00		.00	
90 PERCENT EXCEEDS	.00		.00	

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA

LOCATION.--Lat 34°25'35", long 119°43'20", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on left bank 200 ft downstream from Los Olivos Street in Santa Barbara.

DRAINAGE AREA.--8.38 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and low-flow concrete control. Concrete-lined channel. Elevation of gage is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. At times water is released to creek for ground-water recharge from Gibraltar tunnel several miles upstream. Control installed Nov. 26, 1979.

EXTREMES FOR PERIOD OF RECORD --Maximum discharge, 2,580 ft<sup>3</sup>/s, Jan. 18, 1973, gage height, 4.97 ft, from rating curve extended above 41 ft<sup>3</sup>/s on basis of computation of flow in concrete-lined channel; maximum gage height, 5.45 ft, Feb. 16, 1980; no flow most of each year.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	0700	1,270	4.39	Feb. 15	0645	*1,300	*4.42

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.19	.00	.00	.18	1.8	.00	.00	.00	.00	.00
2	.00	.00	.18	.00	.00	2.9	1.4	.00	.00	.00	.00	.00
3	.00	.09	.14	3.8	.00	.58	1.0	.00	.00	.00	.00	.00
4	.00	.01	.06	.07	.00	.15	.87	.00	.00	.00	.00	.00
5	.00	.00	.00	46	.00	7.8	.97	.00	.00	.00	.00	.00
6	.00	.00	.00	5.2	1.8	8.1	.86	.17	.00	.00	.00	.00
7	.21	.00	.00	3.7	.16	4.4	.15	.05	.00	.00	.00	.00
8	.00	.10	.05	.46	.00	2.2	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.06	3.6	1.3	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	59	.89	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	29	.60	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	222	.96	.00	.00	.00	.35	.00	.00
13	.00	.00	.00	.00	107	.29	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	32	.07	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	160	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.11	44	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.77	19	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.71	11	.00	.00	.37	.00	.00	.00	.00
19	.00	.00	.00	.05	7.5	.00	.00	.10	.00	.00	.00	.00
20	.00	.17	.00	.00	5.6	4.8	.00	.00	.00	.00	.00	.00
21	.00	.04	.00	.00	4.0	2.9	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	6.3	15	.00	.00	.00	.00	.00	.00
23	.00	.00	.06	.00	9.8	30	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	2.2	9.3	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	1.5	6.3	.00	.00	.00	.00	.00	.00
26	1.9	.13	.06	.00	1.0	4.3	.00	.00	.00	.00	.00	.00
27	.02	.11	9.5	.00	.62	5.1	.00	.00	.00	.00	.00	.00
28	.00	.04	1.5	.00	.18	3.1	.00	.00	.00	.00	.00	.00
29	.00	.07	30	.00	.15	2.6	.00	.00	.00	.00	.00	.00
30	.00	.10	3.6	.61	---	2.4	.00	.00	.00	.00	.00	.00
31	.00	---	.05	.07	---	2.3	---	.00	---	.00	.00	---
TOTAL	2.13	0.86	45.39	61.61	727.41	118.52	7.05	0.69	0.00	0.35	0.00	0.00
MEAN	.069	.029	1.46	1.99	25.1	3.82	.23	.022	.000	.011	.000	.000
MAX	1.9	.17	30	46	222	30	1.8	.37	.00	.35	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	4.2	1.7	90	122	1440	235	14	1.4	.00	.7	.00	.00

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.12	1.27	2.56	5.30	10.2	8.22	2.01	.86	.14	.029	.050	.18
MAX	2.01	14.0	13.9	39.6	54.8	62.3	17.2	8.88	1.25	.49	1.08	1.37
(WY)	1984	1973	1972	1978	1978	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1975	1973	1976	1972	1972	1972	1972	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	563.39		964.01			
ANNUAL MEAN	1.54		2.63		2.54	
HIGHEST ANNUAL MEAN					15.1	
LOWEST ANNUAL MEAN					.12	
HIGHEST DAILY MEAN	140	Mar 18	222	Feb 12	879	Mar 4 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 10	.00	Oct 8	.00	Oct 1 1970
INSTANTANEOUS PEAK FLOW			1300	Feb 15	2580	Jan 18 1973
INSTANTANEOUS PEAK STAGE			4.42	Feb 15	5.45	Feb 16 1980
ANNUAL RUNOFF (AC-FT)	1120		1910		1840	
10 PERCENT EXCEEDS	.21		2.5		2.3	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11119780 ARROYO BURRO AT SANTA BARBARA, CA

LOCATION.--Lat 34°26'13", long 119°44'44", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on right bank 0.2 mi south of State Street on Hope Avenue in Santa Barbara.

DRAINAGE AREA.--6.65 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1988, published as Arroyo Burro Creek.

REVISED RECORDS.--WDR CA-76-1: 1974(M), 1975(P).

GAGE.--Water-stage recorder and concrete-lined channel with a low-water control. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair. Small amount of inflow occurs at times from large shopping center that empties water directly into the stream. Partial regulation by Lauro Canyon Reservoir on San Roque Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft<sup>3</sup>/s, Mar. 4, 1978, Feb. 16, 1980, from rating curve extended above 50 ft<sup>3</sup>/s on basis of slope-conveyance study; maximum gage height, 5.67 ft, Mar. 4, 1978; no flow for many days in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	0700	*1,250	*5.25	Feb. 15	0615	868	4.51

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.06	.01	.01	1.3	2.1	.22	.01	.00	.00	.00
2	.00	.00	.00	.01	.01	4.3	1.9	.21	.01	.00	.00	.00
3	.00	.00	.91	6.0	.00	1.4	1.6	.20	.00	.00	.00	.00
4	.00	.00	.42	.03	.00	1.3	1.6	.24	.00	.00	.00	.00
5	.00	.00	.01	36	.05	9.9	1.5	.25	.05	.00	.00	.00
6	.00	.00	.00	2.0	2.8	4.5	e1.5	.57	.05	.71	.00	.00
7	.00	.00	.01	4.1	.45	3.0	e1.4	.31	.00	.69	.00	.00
8	.00	.01	.06	.35	.00	2.2	e1.4	.29	.00	.00	.00	.00
9	.01	.00	.16	.18	6.4	2.6	e1.3	.29	.00	.02	.00	.00
10	.00	.00	.31	.20	e40	2.3	e1.2	.18	.00	.00	.00	.00
11	.00	.00	.00	.10	e10	1.7	e1.1	.16	.00	.08	.00	.00
12	.00	.00	.00	.08	e222	1.6	e1.1	.19	.01	1.4	.00	.00
13	.00	.00	.01	.04	53	1.5	e.99	.18	.00	.00	.00	.00
14	.00	.00	.00	.02	15	1.4	e.95	.16	.01	.00	.00	.00
15	.00	.00	.00	.01	115	1.3	.84	.16	.01	.00	.00	.00
16	.00	.00	.00	.01	23	e1.2	.73	.15	.01	.00	.00	.00
17	.00	.08	e.00	.01	12	e1.1	.67	.14	.01	.00	.03	.00
18	.00	.00	e.00	.00	8.8	e1.0	.57	.12	.00	.00	.00	.00
19	.00	.00	e.00	.01	6.4	e.90	.48	.10	.01	.00	.00	.00
20	.00	.00	e.00	.01	5.2	6.3	.46	.08	.00	.00	.00	.00
21	.00	.00	e.00	.00	4.2	3.4	.44	.04	.00	.00	.00	.00
22	.00	.00	e.00	.01	3.3	11	.40	.04	.00	.00	.00	.00
23	.00	.00	.02	.01	2.6	15	.34	.04	.00	.00	.00	.00
24	.00	.00	.00	.00	2.1	4.5	.32	.08	.00	.00	.00	.00
25	.00	.00	.00	.00	2.9	3.7	.29	.13	.01	.00	.00	.00
26	1.7	.00	.00	.01	2.0	3.4	.28	.14	.01	.00	.00	.00
27	.00	.00	7.9	.00	1.9	4.1	.27	.12	.00	.00	.00	.00
28	.00	.01	2.7	.00	1.7	2.9	.22	.09	.00	.00	.00	.00
29	.00	.00	36	.01	1.4	2.3	.21	.08	.00	.00	.00	.00
30	.00	.02	2.6	.01	---	2.2	.23	.04	.00	.00	.00	.00
31	.00	---	.05	.01	---	2.2	---	.01	---	.00	.00	---
TOTAL	1.71	0.12	51.22	49.23	542.22	105.50	26.39	5.01	0.20	2.90	0.03	0.00
MEAN	.055	.004	1.65	1.59	18.7	3.40	.88	.16	.007	.094	.001	.000
MAX	1.7	.08	36	36	222	15	2.1	.57	.05	1.4	.03	.00
MIN	.00	.00	.00	.00	.00	.90	.21	.01	.00	.00	.00	.00
AC-FT	3.4	.2	102	98	1080	209	52	9.9	.4	5.8	.06	.00

e Estimated.

## 11119780 ARROYO BURRO AT SANTA BARBARA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.28	1.04	2.70	3.96	8.53	6.67	1.19	.33	.058	.036	.048	.29
MAX	4.07	9.65	16.1	25.6	38.7	44.2	10.8	3.05	.74	.26	.51	3.27
(WY)	1984	1973	1975	1978	1978	1978	1983	1983	1983	1983	1983	1983
MIN	.002	.004	.006	.023	.022	.007	.004	.002	.000	.000	.001	.000
(WY)	1991	1990	1990	1972	1977	1990	1977	1973	1973	1973	1972	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	601.38		784.53			
ANNUAL MEAN	1.65		2.14		2.06	
HIGHEST ANNUAL MEAN					9.97	
LOWEST ANNUAL MEAN					.19	
HIGHEST DAILY MEAN	166	Mar 18	222	Feb 12	585	Mar 4 1978
LOWEST DAILY MEAN	.00	Jan 8	.00	Oct 1	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	May 2	.00	Oct 1	.00	Oct 10 1970
INSTANTANEOUS PEAK FLOW			1250	Feb 12	1850	Mar 4 1978
INSTANTANEOUS PEAK STAGE			5.25	Feb 12	5.67	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	1190		1560		1490	
10 PERCENT EXCEEDS	.77		2.6		1.6	
50 PERCENT EXCEEDS	.00		.00		.02	
90 PERCENT EXCEEDS	.00		.00		.00	

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA

LOCATION.--Lat 34°26'42", long 119°48'10", in Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank at University Drive, 0.2 mi east of Patterson Avenue, and 1.5 mi northeast of Goleta.

DRAINAGE AREA.--6.35 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Some pumping for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft<sup>3</sup>/s, Feb. 15, 1992, gage height, 7.10 ft, from rating curve extended above 290 ft<sup>3</sup>/s on basis of critical depth measurement of peak flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1630	527	3.21	Feb. 12	0645	1,690	5.58
Jan. 5	0630	140	2.29	Feb. 15	0545	*2,500	*7.10

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.29	.00	2.0	1.8	.00	.00	.00	.00	.00
2	.00	.00	.00	.18	.00	2.0	e1.3	.00	.00	.00	.00	.00
3	.00	.00	.00	1.6	.00	1.9	e.90	.00	.00	.00	.00	.00
4	.00	.00	.00	.18	.00	1.8	e.60	.00	.00	.00	.00	.00
5	.00	.00	.00	56	.00	2.3	e.40	.00	.00	.00	.00	.00
6	.00	.00	e.00	9.1	.92	4.1	e.30	.00	.00	.00	.00	.00
7	.00	.00	e.00	.70	.02	3.1	e.20	.00	.00	.00	.00	.00
8	.00	.00	e.00	.28	.00	2.2	e.15	.00	.00	.00	.00	.00
9	.00	.00	e.00	.16	3.3	1.8	e.10	.00	.00	.00	.00	.00
10	.00	.00	e.00	.11	101	e1.5	e.08	.00	.00	.00	.00	.00
11	.00	.00	e.00	.10	15	e1.3	e.06	.00	.00	.00	.00	.00
12	.00	.00	e.00	.10	446	e1.0	e.04	.00	.00	.00	.00	.00
13	.00	.00	e.00	.06	41	e.80	e.03	.00	.00	.00	.00	.00
14	.00	.00	e.00	.03	4.8	e.70	e.02	.00	.00	.00	.00	.00
15	.00	.00	e.00	.00	254	e.60	e.01	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	e22	e.60	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	e9.0	e.58	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	e5.0	e.59	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	e4.2	e.65	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	3.7	e.80	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	3.2	e1.0	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	2.6	e2.3	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	2.5	6.8	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	2.4	3.8	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	2.2	2.2	.00	.00	.00	.00	.00	.00
26	.02	.00	.00	.00	2.2	1.8	.00	.00	.00	.00	.00	.00
27	.00	.00	3.2	.00	2.2	1.9	.00	.00	.00	.00	.00	.00
28	.00	.00	.27	.00	2.1	1.6	.00	.00	.00	.00	.00	.00
29	.00	.00	89	.00	2.0	1.6	.00	.00	.00	.00	.00	.00
30	.00	.00	7.1	.00	---	1.8	.00	.00	.00	.00	.00	.00
31	.00	---	.59	.00	---	2.9	---	.00	---	.00	.00	---
TOTAL	0.02	0.00	100.16	68.89	931.34	58.02	5.99	0.00	0.00	0.00	0.00	0.00
MEAN	.001	.000	3.23	2.22	32.1	1.87	.20	.000	.000	.000	.000	.000
MAX	.02	.00	89	56	446	6.8	1.8	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.58	.00	.00	.00	.00	.00	.00
AC-FT	.04	.00	199	137	1850	115	12	.00	.00	.00	.00	.00

e Estimated.

## ATASCADERO CREEK BASIN

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	.27	1.47	3.15	7.35	6.60	.88	.24	.082	.035	.032	.047
MAX	2.05	2.35	8.18	23.1	34.6	32.9	7.64	3.42	1.15	.52	.27	.50
(WY)	1984	1983	1984	1983	1978	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.002	.001	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1975	1990	1989	1977	1972	1972	1972	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	1041.50		1164.42			
ANNUAL MEAN	2.85		3.18		1.66	
HIGHEST ANNUAL MEAN					7.77	
LOWEST ANNUAL MEAN					.039	
HIGHEST DAILY MEAN	344	Mar 18	446	Feb 12	446	Feb 12 1992
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 10	.00	Oct 1	.00	Oct 1 1970
INSTANTANEOUS PEAK FLOW			2500	Feb 15	2500	Feb 15 1992
INSTANTANEOUS PEAK STAGE			7.10	Feb 15	7.10	Feb 15 1992
ANNUAL RUNOFF (AC-FT)	2070		2310		1200	
10 PERCENT EXCEEDS	.43		2.0		1.0	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11120000 ATASCADERO CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°25'29", long 119°48'39", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on downstream side of center pier of county road bridge 100 ft downstream from Maria Ygnacio Creek, 1.3 mi upstream from mouth, and 1.3 mi southeast of Goleta.

DRAINAGE AREA.--18.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1941 to current year. Prior to October 1947, published as "Alascadero Creek near Goleta."

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8.59 ft, 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 discharges below 1.0 ft<sup>3</sup>/s and 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, 5,380 ft<sup>3</sup>/s, Jan. 18, 1973, gage height, 17.1 ft, present datum, from rating curve extended above 2,300 ft<sup>3</sup>/s; maximum gage height, 17.3 ft, from floodmark, Dec. 3, 1974, present datum; no flow some days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 225 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1100	1,550	7.38	Feb. 15	unknown	e5,000	unknown
Jan. 5	0645	667	5.98	Mar. 5	2230	269	4.40
Feb. 12	0700	*5,380	*11.11				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	2.0	e.00	2.5	e6.0	.04	.04	.00	.00	.00
2	.00	.00	.00	1.7	e.00	8.9	e5.0	.02	.05	.01	.00	.00
3	.00	.00	.00	19	e.00	.89	e4.5	.02	.05	.01	.00	.00
4	.00	.00	.00	1.4	e.00	.52	e3.5	.02	.06	.01	.00	.00
5	.00	.00	.00	209	e.00	27	e2.5	.01	.06	.01	.00	.00
6	.00	.00	.00	8.0	4.0	27	e2.0	.03	.07	.01	.00	.00
7	.00	.00	.00	15	.28	5.4	e1.5	.37	.07	.00	.00	.00
8	.00	.00	.00	.93	.16	4.1	e1.2	.23	.04	.00	.00	.00
9	.00	.00	.00	.40	21	3.2	e1.0	.09	.04	.00	.00	.00
10	.00	.00	.00	.28	352	2.1	e.80	.06	.02	.01	.00	.00
11	.00	.00	.00	.19	65	1.3	e.60	.04	.03	.01	.00	.00
12	.00	.00	.00	.11	1140	1.2	e.50	.05	.03	.93	.00	.00
13	.00	.00	.00	.10	181	1.1	e.45	.07	.02	.44	.00	.00
14	.00	.00	.00	.09	48	.99	e.40	.05	.01	.01	.00	.00
15	.00	.00	.00	.08	e800	.95	e.35	.05	.00	.00	.00	.00
16	.00	.00	.00	.08	e65	.93	e.25	.09	.00	.00	.00	.00
17	.00	.00	.00	e.07	e25	.98	.35	.07	.00	.00	.00	.00
18	.00	.00	.00	e.06	e13	.90	.18	.04	.00	.00	.00	.00
19	.00	.00	.00	e.05	e12	.92	.09	.03	.01	.00	.00	.00
20	.00	.00	.00	e.04	11	23	.06	.03	.01	.00	.00	.00
21	.00	.00	.00	e.03	9.1	e40	.02	.03	.02	.00	.00	.00
22	.00	.00	.00	e.02	7.5	e60	.01	.03	.01	.00	.00	.00
23	.00	.00	.00	e.01	5.7	e100	.01	.03	.01	.00	.00	.00
24	.00	.00	.00	e.00	4.8	e50	.24	.05	.02	.00	.00	.00
25	.00	.00	.00	e.00	4.2	e25	.03	.08	.01	.00	.00	.00
26	.00	.00	.00	e.00	3.8	e13	.01	.08	.01	.00	.00	.00
27	1.6	.00	50	e.00	3.4	e8.0	.18	.06	.01	.00	.00	.00
28	.01	.00	120	e.00	2.9	7.6	.46	.06	.03	.00	.00	.00
29	.00	.00	364	e.00	2.7	7.0	.42	.05	.02	.00	.00	.00
30	.00	.00	35	e.00	---	7.4	.24	.04	.01	.00	.00	.00
31	.00	---	4.1	e.00	---	7.8	---	.04	---	.00	.00	---
TOTAL	1.61	0.00	573.10	258.64	2781.54	439.68	32.85	1.96	0.76	1.45	0.00	0.00
MEAN	.052	.000	18.5	8.34	95.9	14.2	1.09	.063	.025	.047	.000	.000
MAX	1.6	.00	364	209	1140	100	6.0	.37	.07	.93	.00	.00
MIN	.00	.00	.00	.00	.00	.52	.01	.01	.00	.00	.00	.00
AC-FT	3.2	.00	1140	513	5520	872	65	3.9	1.5	2.9	.00	.00

e Estimated.

## ATASCADERO CREEK BASIN

11120000 ATASCADERO CREEK NEAR GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.32	3.41	5.44	14.2	18.1	11.9	3.81	.50	.13	.039	.066	.27
MAX	8.08	49.8	41.5	230	143	89.2	63.5	8.69	2.20	.28	1.41	4.68
(WY)	1984	1966	1967	1969	1962	1978	1958	1983	1983	1983	1983	1976
MIN	.000	.000	.000	.000	.000	.010	.000	.000	.000	.000	.000	.000
(WY)	1942	1942	1943	1951	1948	1990	1950	1942	1942	1942	1942	1942

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1942 - 1992	
ANNUAL TOTAL	3532.31		4091.59			
ANNUAL MEAN	9.68		11.2		4.78	
HIGHEST ANNUAL MEAN					29.0	
LOWEST ANNUAL MEAN					.018	
HIGHEST DAILY MEAN	938	Mar 18	1140	Feb 12	2410	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 13	.00	Oct 1	.00	Oct 1 1941
INSTANTANEOUS PEAK FLOW			5380		5380	
INSTANTANEOUS PEAK STAGE			11.11		17.30	
ANNUAL RUNOFF (AC-FT)	7010		8120		3460	
10 PERCENT EXCEEDS	1.4		7.1		2.1	
50 PERCENT EXCEEDS	.00		.00		.02	
90 PERCENT EXCEEDS	.00		.00		.00	

11120500 SAN JOSE CREEK NEAR GOLETA, CA

LOCATION.--Lat 34°27'33", long 119°48'29", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 1.1 mi downstream from unnamed tributary and 1.7 mi northeast of Goleta.

DRAINAGE AREA.--5.51 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1941 to current year.

CHEMICAL DATA: Water years 1978-91.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete low-water control. Datum of gage is 95.61 ft, 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.--No estimated daily discharges. Records poor. No regulation upstream from station. Many small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 10.10 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 9.32 ft; maximum gage height, 12.74 ft, present datum, Jan. 21, 1943; no flow at times in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	0815	127	4.46	Feb. 12	0515	*1,480	*7.68

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	3.6	.35	1.5	2.2	.58	.14	.05	.03	.03
2	.00	.00	.00	2.0	.31	1.7	2.2	.62	.14	.08	.03	.03
3	.00	.00	.00	1.2	.38	1.6	2.2	.56	.10	.08	.03	.03
4	.00	.00	.00	.60	.38	1.5	2.2	.56	.09	.08	.03	.03
5	.00	.00	.00	49	.38	5.2	2.2	.56	.13	.08	.03	.03
6	.00	.00	.01	21	.75	13	2.1	.49	.11	.08	.03	.03
7	.00	.00	.01	13	.66	4.5	1.9	.48	.09	.08	.03	.03
8	.00	.00	.01	8.7	.59	3.2	1.6	.48	.12	.08	.03	.03
9	.00	.00	.01	5.8	1.1	2.6	1.6	.43	.06	.08	.09	.03
10	.00	.00	.01	4.4	89	2.4	1.6	.38	.06	.09	.09	.02
11	.01	.00	.01	2.7	36	1.9	1.5	.38	.12	.10	.03	.02
12	.01	.00	.01	1.9	278	1.6	1.4	.37	.12	.29	.03	.02
13	.01	.00	.00	1.4	42	1.5	1.3	.30	.07	.38	.03	.02
14	.01	.01	.00	1.1	17	1.4	.94	.30	.06	.38	.03	.02
15	.01	.00	.00	.59	28	1.3	.94	.30	.04	.32	.03	.02
16	.01	.00	.00	.56	15	1.2	.93	.28	.03	.11	.03	.02
17	.01	.01	.01	.52	10	1.3	.83	.22	.03	.03	.03	.02
18	.01	.01	.01	.48	7.2	1.4	.75	.19	.03	.03	.03	.02
19	.01	.01	.01	.48	6.8	1.5	.65	.10	.03	.03	.02	.02
20	.01	.01	.01	.48	5.5	1.7	.56	.08	.03	.03	.02	.02
21	.01	.01	.01	.42	4.5	2.3	.56	.06	.06	.05	.02	.02
22	.01	.01	.01	.38	3.5	5.5	.56	.06	.05	.05	.02	.02
23	.01	.01	.01	.38	2.9	19	.56	.06	.03	.06	.05	.02
24	.00	.01	.02	.38	2.8	7.5	.56	.08	.03	.09	.11	.02
25	.00	.01	.02	.38	2.4	5.0	.56	.10	.03	.10	.04	.02
26	.01	.02	.02	.39	1.9	4.1	.56	.10	.03	.10	.03	.02
27	.02	.02	.39	.48	1.7	3.3	.56	.10	.03	.11	.03	.02
28	.01	.01	3.1	.48	1.6	2.5	.60	.10	.03	.10	.03	.02
29	.00	.00	15	.48	1.6	2.4	.58	.14	.03	.04	.03	.02
30	.00	.00	22	.48	---	2.4	.56	.13	.03	.05	.03	.02
31	.00	---	6.4	.45	---	2.5	---	.13	---	.03	.03	---
TOTAL	0.17	0.15	47.09	124.21	562.30	108.5	35.26	8.72	1.95	3.26	1.12	0.69
MEAN	.005	.005	1.52	4.01	19.4	3.50	1.18	.28	.065	.11	.036	.023
MAX	.02	.02	22	49	278	19	2.2	.62	.14	.38	.11	.03
MIN	.00	.00	.00	.38	.31	1.2	.56	.06	.03	.03	.02	.02
AC-FT	.3	.3	93	246	1120	215	70	17	3.9	6.5	2.2	1.4

## SAN JOSE CREEK BASIN

11120500 SAN JOSE CREEK NEAR GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.26	1.16	2.48	5.35	7.08	5.61	2.76	.73	.29	.15	.13	.14
MAX	6.40	21.2	23.5	35.6	53.4	37.3	29.0	4.91	1.69	.98	.89	1.40
(WY)	1984	1966	1967	1952	1962	1978	1958	1983	1983	1983	1954	1954
MIN	.000	.000	.000	.000	.021	.10	.021	.000	.000	.000	.000	.000
(WY)	1947	1948	1948	1948	1948	1990	1990	1948	1946	1946	1946	1946

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1941 - 1992
ANNUAL TOTAL	817.72	893.42	
ANNUAL MEAN	2.24	2.44	2.00
HIGHEST ANNUAL MEAN			9.80
LOWEST ANNUAL MEAN			.042
HIGHEST DAILY MEAN	226	278	602
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		1480	2000
INSTANTANEOUS PEAK STAGE		7.68	12.74
ANNUAL RUNOFF (AC-FT)	1620	1770	1450
10 PERCENT EXCEEDS	1.4	2.7	1.9
50 PERCENT EXCEEDS	.01	.08	.23
90 PERCENT EXCEEDS	.00	.00	.00

11120510 SAN JOSE CREEK AT GOLETA, CA

LOCATION.--Lat 34°25'49", long 119°49'16", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank south of Hollister Avenue on Kellogg Avenue and 0.5 mi southeast of Goleta.

DRAINAGE AREA.--9.42 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to September 1992 (discontinued).

REVISED RECORDS.--WDR CA-75-1: 1973(M).

GAGE.--Water-stage recorder and concrete channel. Elevation of gage is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,330 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 5.65 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-conveyance computation of flow in concrete channel; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s and maximum (\*), from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1630	314	2.54	Feb. 12	0645	2,030	5.18
Feb. 10	1500	458	2.88	Feb. 15	0545	*2,050	*5.21

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.00	.25	.15	2.0	2.5	.37	.06	.00	.00	.00
2	.01	.00	.00	.17	.16	4.1	2.5	.35	.05	.00	.00	.04
3	.03	.00	.00	1.0	.26	2.3	2.2	.32	.05	.00	.00	.03
4	.02	.00	.00	.25	.23	2.1	2.0	.55	.03	.00	.00	.01
5	.04	.01	.00	20	.32	6.0	1.7	.26	.06	.00	.00	.01
6	.02	.01	.00	1.6	.97	12	1.6	.23	.07	.00	.00	.00
7	.02	.01	.06	1.4	.40	5.4	1.4	.21	.06	.00	.00	.00
8	.02	.01	.14	.62	.29	3.9	1.3	.18	.05	.00	.00	.00
9	.02	.02	.01	.42	1.3	2.7	1.3	.15	.04	.00	.00	.00
10	.03	.01	.01	.42	92	2.5	1.2	.21	.03	.00	.00	.00
11	.02	.01	.01	.33	8.3	2.2	1.1	.28	.03	.00	.00	.00
12	.03	.01	.00	.35	423	2.0	1.0	.30	.03	.17	.00	.00
13	.02	.01	.01	.35	45	1.8	.98	.34	.02	.06	.00	.00
14	.02	.01	.00	.32	14	1.7	.98	.24	.02	.03	.00	.00
15	.02	.01	.00	.27	223	1.7	.92	.18	.02	.02	.00	.00
16	.02	.01	.00	.26	11	1.6	.90	.13	.02	.02	.00	.00
17	.04	.26	.01	.28	7.8	1.5	1.3	.08	.01	.01	.00	.00
18	.01	.02	.01	.26	6.0	1.4	.82	.13	.01	.01	.00	.00
19	.01	.01	.01	.24	6.3	1.3	.68	.10	.01	.01	.00	.00
20	.01	.00	.00	.24	5.6	3.1	.54	.08	.01	.01	.00	.00
21	.01	.01	.00	.23	5.1	4.5	.58	.07	.01	.01	.00	.00
22	.02	.01	.00	.24	4.1	3.7	.51	.07	.01	.01	.00	.00
23	.01	.00	.00	.24	3.5	11	.42	.06	.01	.01	.00	.00
24	.01	.00	.00	.24	2.9	7.8	.42	.05	.00	.01	.00	.00
25	.01	.00	.00	.24	2.5	6.0	.42	.05	.00	.01	.00	.00
26	.52	.00	.00	.22	2.4	4.8	.42	.04	.00	.01	.00	.00
27	.01	.00	1.4	.20	2.3	4.4	.35	.06	.00	.01	.00	.00
28	.00	.00	6.0	.22	2.7	3.6	.33	.08	.00	.00	.00	.00
29	.01	.00	41	.18	2.1	2.9	.31	.08	.00	.00	.00	.00
30	.00	.00	2.1	.18	---	2.6	.28	.08	.00	.00	.00	.00
31	.01	---	.50	.15	---	2.8	---	.07	---	.00	.00	---
TOTAL	1.04	0.44	51.27	31.37	873.68	115.4	30.96	5.40	0.71	0.41	0.00	0.09
MEAN	.034	.015	1.65	1.01	30.1	3.72	1.03	.17	.024	.013	.000	.003
MAX	.52	.26	41	20	423	12	2.5	.55	.07	.17	.00	.04
MIN	.00	.00	.00	.15	.15	1.3	.28	.04	.00	.00	.00	.00
AC-FT	2.1	.9	102	62	1730	229	61	11	1.4	.8	.00	.2

## SAN JOSE CREEK BASIN

11120510 SAN JOSE CREEK AT GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.41	1.26	2.81	5.44	10.4	9.27	2.34	.71	.23	.10	.098	.19
MAX	7.11	7.65	16.5	40.5	40.5	52.7	16.1	6.31	3.17	1.75	1.85	1.67
(WY)	1984	1973	1984	1983	1978	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.005	.083	.000	.000	.000	.000	.000	.000	.000
(WY)	1981	1981	1990	1976	1972	1990	1972	1972	1972	1971	1972	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	786.83		1110.77			
ANNUAL MEAN	2.16		3.03		2.74	
HIGHEST ANNUAL MEAN					12.4	
LOWEST ANNUAL MEAN					.15	
HIGHEST DAILY MEAN	235	Mar 18	423	Feb 12	649	Mar 4 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 28	.00	Jun 30 1971
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 12	.00	Nov 23	.00	Jun 30 1971
INSTANTANEOUS PEAK FLOW			2050	Feb 15	2330	Mar 4 1978
INSTANTANEOUS PEAK STAGE			5.21	Feb 15	5.65	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	1560		2200		1980	
10 PERCENT EXCEEDS	.81		2.6		2.7	
50 PERCENT EXCEEDS	.01		.02		.03	
90 PERCENT EXCEEDS	.00		.00		.00	

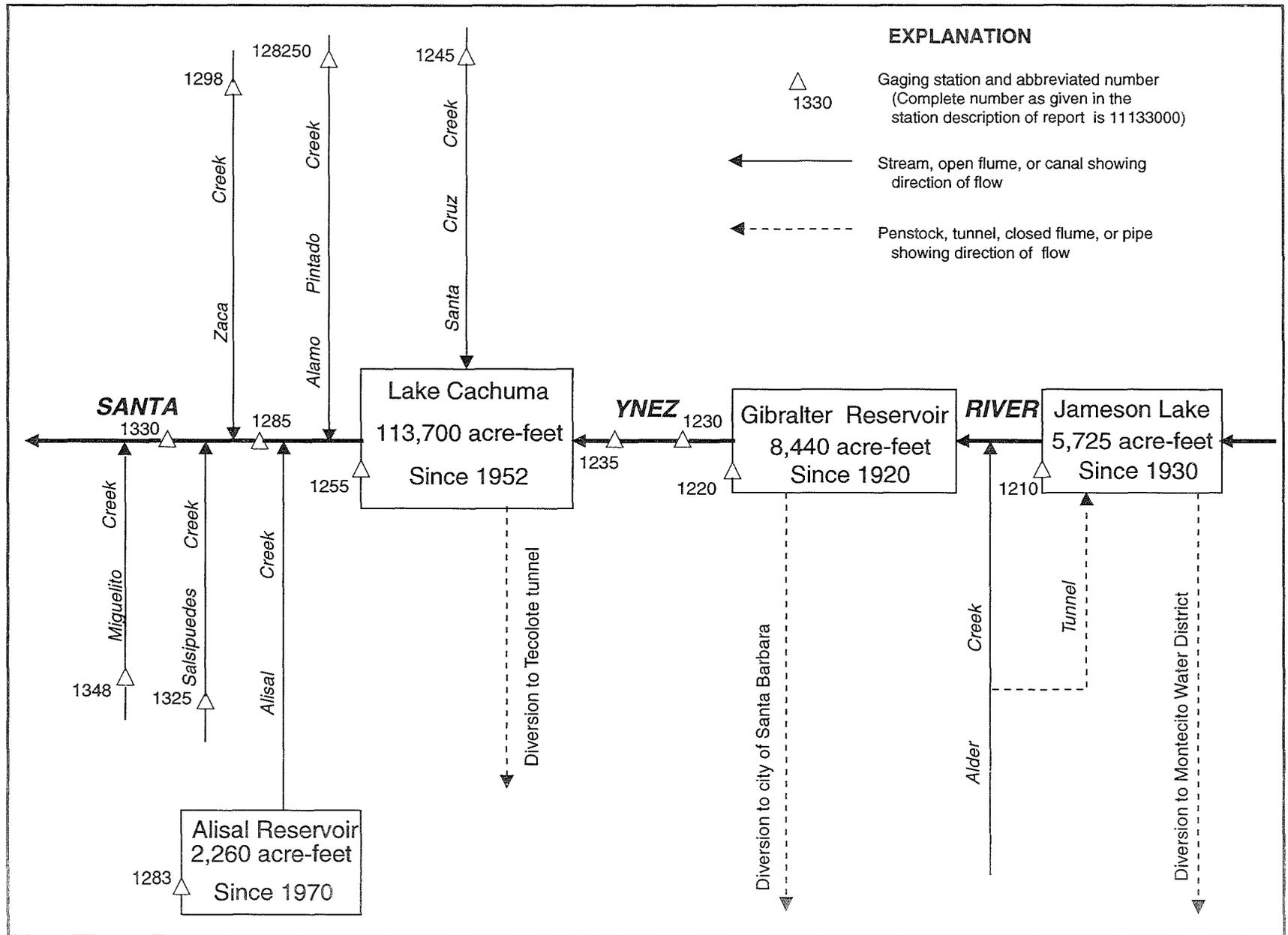


Figure 22. Diversions and storage in Santa Ynez River basin.

## 11121000 SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CA

LOCATION.--Lat 34°29'32", long 119°30'25", in NE 1/4 NW 1/4 sec.28, T.5 N., R.25 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream face of Juncal Dam, 6.5 mi north of Carpinteria, and 8 mi northeast of Montecito.

DRAINAGE AREA.--13.9 mi<sup>2</sup>, excludes area of Alder Creek.

PERIOD OF RECORD.--December 1930 to current year. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.--Two water-stage recorders. Datum of lake gage is 2,021.6 ft above National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation Benchmark). 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 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 survey made in 1980. Lake capacity at spillway level, gage height 223.82 ft, 5,725 acre-ft. Dead storage, 32 acre-ft, below lowest outlet at gage height 139.0 ft included in these records. 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.

COOPERATION.--Reservoir-operation records and related data provided by Montecito Water District.

AVERAGE DISCHARGE.--61 years (water years 1932-92), spill and release, 7.01 ft<sup>3</sup>/s, 5,080 acre-ft/yr.

## MONTHLY NET INFLOW, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Elevation (feet) <sup>a</sup>	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Spill and release (acre- feet)	Evapo- ration and seepage (acre- feet)	Total inflow (acre- feet)	Rain on reservoir (acre- feet)	Net inflow (acre- feet)
Sept. 30.....	2,219.90	5,220	--	--	--	--	--	--	--
Oct. 31.....	2,218.62	5,060	-160	94	0	71	5	5	0
Nov. 30.....	2,217.66	4,950	-110	82	0	29	1	1	0
Dec. 31.....	2,217.78	4,960	+10	77	0	15	102	79	23
CAL YR 1991.....	--	--	+3,750	891	994	407	6,042	315	5,727
Jan. 31.....	2,220.11	5,240	+280	62	0	14	356	50	306
Feb. 29.....	2,223.92	5,740	+500	58	5,860	14	6,432	223	6,209
Mar. 31.....	2,224.05	5,760	+20	61	3,070	16	3,167	104	3,063
Apr. 30.....	2,223.97	5,740	-20	68	1,310	47	1,405	4	1,401
May 31.....	2,223.90	5,740	0	67	729	49	845	3	842
June 30.....	2,223.85	5,730	-10	77	90	59	216	0	216
July 31.....	2,223.38	5,670	-60	104	1	64	109	10	99
Aug. 31.....	2,221.86	5,470	-200	160	0	76	36	0	36
Sept. 30.....	2,220.47	5,290	-180	150	0	58	28	0	28
WTR YR 1992.....	--	--	+70	1,060	11,060	512	12,702	479	12,223

<sup>a</sup> Elevation at 0800.

NOTE.--For months when inflow to the lake was small and other quantities were large, preliminary computations may indicate negative net inflow. This arises primarily from the difficulty of computing net inflow as the residual of several large quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

11122000 SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'34", long 119°41'08", in NW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream face of Gibraltar Dam and 7 mi north of Santa Barbara.

DRAINAGE AREA.--216 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1920 to current year. November 1903 to November 1918 (fragmentary) at river station at damsite; records not equivalent because records since April 1920 are based on operation of Gibraltar Reservoir, and since December 1930, Jameson Lake. Prior to October 1945, published as "Santa Ynez River near Santa Barbara."

REVISED RECORDS.--WDR CA-86-1: 1934-43.

GAGE.--Two water-stage recorders. Datum of gage is National Geodetic Vertical Datum of 1929. Supplementary gage and sharp-crested weir on diversion from reservoir at different datum. See WSP 1735 for history of changes on both gages prior to Oct. 1, 1955. Spill and release measured by streamgaging station below dam (station 11123000).

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) to city of Santa Barbara, spill and release 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 survey made in February 1989. Reservoir capacity at spillway level, elevation, 1,399.82 ft, 8,440 acre-feet. Lowest outlet at elevation 1,333.86 ft. Flow regulated by Jameson Lake (station 11121000) since December 1930.

COOPERATION.--Reservoir-operation records and related data provided by city of Santa Barbara.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

Date	Eleva- tion (feet)a	Contents (acre- feet)	Change in contents (acre- feet)	Draft (acre- feet)	Spill and release (acre- feet)	Evapo- ration and seepage (acre- feet)	Total inflow (acre- feet)	Rain on reservoir (acre- feet)	Net inflow (acre- feet)
Sept. 30.....	1,394.06	6,970	--	--	--	--	--	--	--
Oct. 31.....	1,391.34	6,380	-590	588	0	75	73	6	67
Nov. 30.....	1,388.92	5,850	-530	524	0	42	36	2	34
Dec. 31.....	1,388.42	5,750	-100	540	10	25	475	127	348
CAL YR 1991.....	--	--	+5,750	3,459	31,074	1,087	41,370	528	40,842
Jan. 31.....	1,396.65	7,670	+1,920	431	68	27	2,446	84	2,362
Feb. 29.....	1,400.13	8,610	+940	215	60,700	30	61,885	459	61,426
Mar. 31.....	1,399.73	8,500	-110	231	19,770	35	19,926	150	19,776
Apr. 30.....	1,400.03	8,580	+80	284	7,810	104	8,278	1	8,277
May 31.....	1,399.97	8,560	-20	536	1,940	107	2,563	4	2,559
June 30.....	1,399.42	8,410	-150	563	114	129	656	0	656
July 31.....	1,398.63	8,200	-210	190	111	139	230	2	228
Aug. 31.....	1,395.28	7,300	-900	278	492	155	25	0	25
Sept. 30.....	1,393.78	6,940	-360	277	0	113	30	0	30
WTR YR 1992.....	--	--	-30	4,657	91,015	981	96,623	835	95,788

a Elevation at 0800.

NOTE.--For months when inflow to the reservoir was small and other quantities were large, negative figures of inflow may appear. This arises primarily from the difficulty of computing inflow as the residual of several larger quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

## 11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'28", long 119°41'11", in SW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on left bank 700 ft downstream from Gibraltar Dam and 7 mi north of Santa Barbara.

DRAINAGE AREA.--216 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only prior to October 1933. Daily records for water years 1934-43 in files of U.S. Geological Survey.

REVISED RECORDS.--WDR CA-86-1: 1934-43.

GAGE.--Two water-stage recorders. Datum of gage on main channel is 1,227 ft above National Geodetic Vertical Datum of 1929. Supplementary gage and sharp-crested weir on the release channel from Gibraltar Dam to river at different datum. See WSP 1735 for history of changes on both gages prior to May 20, 1958.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Jameson Lake (station 11121000) and Gibraltar Reservoir (station 11122000). City of Santa Barbara diverted 4,657 acre-ft during current year from Gibraltar Reservoir; Montecito Water District diverted 1,060 acre-ft during current year from Jameson Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 25.8 ft, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 and 25.8 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,800 ft<sup>3</sup>/s, Feb. 12, gage height, 17.60; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	1.5	192	278	57	5.9	.00	9.4	.00
2	.00	.00	.00	.00	1.7	367	264	56	3.0	.00	9.1	.00
3	.00	.00	.00	.06	2.0	337	231	54	2.4	.00	9.2	.00
4	.00	.00	.00	.04	2.4	223	228	51	2.4	.00	9.6	.00
5	.00	.00	.00	10	2.3	238	218	50	2.5	.00	11	.00
6	.00	.00	.00	.67	4.9	656	194	47	2.5	.00	12	.00
7	.00	.00	.00	.18	4.3	341	185	51	2.7	.00	12	.00
8	.00	.00	.00	.10	3.8	289	179	56	3.4	.00	13	.00
9	.00	.00	.00	.04	12	246	154	53	18	.00	13	.00
10	.00	.00	.00	.03	1930	230	149	48	9.3	.00	15	.00
11	.00	.00	.00	.04	4670	193	150	43	1.4	.00	16	.00
12	.00	.00	.00	.07	7730	221	144	37	.81	.00	17	.00
13	.00	.00	.00	.06	4340	165	110	38	.71	.00	16	.00
14	.00	.00	.00	.09	1540	165	131	38	.72	.00	18	.00
15	.00	.00	.00	.14	3500	164	131	36	.65	.00	18	.00
16	.00	.00	.00	.20	1610	134	111	33	.56	.00	19	.00
17	.00	.00	.00	.32	991	152	108	30	.35	.00	19	.00
18	.00	.00	.00	.37	733	137	106	27	.07	.00	9.8	.00
19	.00	.00	.00	.44	586	127	85	25	.03	.00	.12	.00
20	.00	.00	.00	.71	491	224	83	18	.01	.00	.08	.00
21	.00	.00	.00	1.0	427	271	86	15	.00	.00	.03	.00
22	.00	.00	.00	1.3	353	418	85	16	.00	.00	.00	.00
23	.00	.00	.00	1.3	312	929	82	16	.00	.00	.00	.00
24	.00	.00	.00	1.4	266	667	79	14	.00	.00	.00	.00
25	.00	.00	.00	1.5	258	503	76	14	.00	.00	.00	.00
26	.00	.00	.00	1.6	232	452	72	8.5	.00	.00	.00	.00
27	.00	.00	.00	1.6	198	512	53	7.4	.00	3.2	.00	.00
28	.00	.00	.00	1.6	201	391	49	8.6	.00	8.8	.00	.00
29	.00	.00	.00	1.8	200	363	57	9.7	.00	9.6	.00	.00
30	.00	.00	4.1	5.9	---	355	58	10	.00	10	.00	.00
31	.00	---	.03	1.7	---	307	---	9.1	---	9.3	.00	---
TOTAL	0.00	0.00	5.08	34.26	30602.9	9969	3936	976.3	57.41	40.90	246.33	0.00
MEAN	.000	.000	.16	1.11	1055	322	131	31.5	1.91	1.32	7.95	.000
MAX	.00	.00	4.1	10	7730	929	278	57	18	10	19	.00
MIN	.00	.00	.00	.00	1.5	127	49	7.4	.00	.00	.00	.00
AC-FT	.00	.00	10	68	60700	19770	7810	1940	114	81	489	.00

11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.76	6.91	27.2	95.7	202	219	97.9	23.3	5.62	2.60	.86	.37
MAX	32.6	336	607	2077	2189	1712	1168	258	82.9	43.6	7.95	2.92
(WY)	1984	1966	1967	1969	1969	1983	1958	1983	1983	1983	1992	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1960	1959	1944	1938	1949	1948	1948	1940	1960	1960	1960	1960

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1934 - 1992	
ANNUAL TOTAL	15683.41		45868.18			
ANNUAL MEAN	43.0		125		56.1	
HIGHEST ANNUAL MEAN					437	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	2230	Mar 19	7730	Feb 12	26600	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Dec 16 1933
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Dec 16 1933
INSTANTANEOUS PEAK FLOW			15800	Feb 12	54200	Jan 25 1969
INSTANTANEOUS PEAK STAGE			17.60	Feb 12	25.80	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	31110		90980		40620	
10 PERCENT EXCEEDS	48		234		66	
50 PERCENT EXCEEDS	.00		.13		.08	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°32'37", long 119°51'50", in San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.3 mi downstream from Los Laureles Canyon Creek, 10 mi downstream from Gibraltar Reservoir, and 13.3 mi east of Santa Ynez.

DRAINAGE AREA.--277 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1947 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 787.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,500 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft<sup>3</sup>/s on basis of peak flow for station below Gibraltar Dam plus tributary inflow; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,300 ft<sup>3</sup>/s, Feb. 12, gage height, 13.44 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	3.0	2.8	265	284	64	17	1.4	.58	.70
2	.00	.00	.00	1.2	2.8	375	288	62	15	1.5	.52	.67
3	.00	.00	.00	1.1	2.6	533	244	60	13	1.6	.52	.64
4	.00	.00	.00	1.8	2.8	306	237	58	9.9	1.4	1.2	.64
5	.00	.00	.00	312	2.8	301	235	56	9.2	1.3	3.4	.58
6	.00	.00	.00	148	5.7	800	219	55	9.1	1.3	5.6	.55
7	.00	.00	.00	47	9.9	503	202	55	8.5	1.3	8.5	.52
8	.00	.00	.00	28	7.5	371	201	60	8.8	1.2	9.2	.50
9	.00	.00	.00	18	13	332	183	64	8.8	1.2	9.7	.47
10	.00	.00	.00	13	1260	284	169	60	17	1.2	9.2	.45
11	.00	.00	.00	11	3350	275	174	56	17	1.2	9.2	.42
12	.00	.00	.00	8.6	16000	270	174	55	12	1.2	9.7	.39
13	.00	.00	.00	7.0	5470	236	156	48	8.6	1.2	9.7	.34
14	.00	.00	.00	6.0	2280	217	137	48	6.0	1.3	9.7	.32
15	.00	.00	.00	5.5	4450	217	158	48	5.1	1.3	9.7	.26
16	.00	.00	.00	4.9	2230	203	137	44	4.5	1.2	9.2	.22
17	.00	.00	.00	4.4	1440	180	124	40	3.9	1.1	9.2	.18
18	.00	.00	.00	4.0	1080	171	125	36	3.5	1.1	9.2	.13
19	.00	.00	.00	3.6	831	150	118	35	3.2	.98	8.1	.09
20	.00	.00	.00	3.3	737	197	93	32	3.1	.94	3.5	.02
21	.00	.00	.00	3.2	645	310	99	27	2.9	.94	2.1	.00
22	.00	.00	.00	3.1	556	347	99	23	2.5	.91	1.5	.00
23	.00	.00	.00	3.1	470	1140	99	23	2.3	.87	1.2	.00
24	.00	.00	.00	3.2	453	797	91	22	2.1	.83	1.1	.00
25	.00	.00	.00	3.2	393	552	91	22	2.0	.80	1.0	.00
26	.00	.00	.00	3.2	313	488	85	22	1.9	.76	.94	.00
27	.00	.00	.00	3.0	313	523	80	19	1.9	.73	.87	.00
28	.00	.00	.00	2.5	281	422	53	16	1.8	.70	.80	.00
29	.00	.00	81	2.8	279	391	60	17	1.6	.67	.80	.00
30	.00	.00	100	2.8	---	348	64	18	1.6	.64	.73	.00
31	.00	---	10	2.8	---	358	---	17	---	.58	.70	---
TOTAL	0.00	0.00	191.00	664.3	42880.9	11862	4479	1262	203.8	33.35	147.36	8.09
MEAN	.000	.000	6.16	21.4	1479	383	149	40.7	6.79	1.08	4.75	.27
MAX	.00	.00	100	312	16000	1140	288	64	17	1.6	9.7	.70
MIN	.00	.00	.00	1.1	2.6	150	53	16	1.6	.58	.52	.00
AC-FT	.00	.00	379	1320	85050	23530	8880	2500	404	66	292	16

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.48	8.92	39.6	137	271	237	113	31.0	7.69	2.12	.57	.17
MAX	18.8	315	608	2755	2682	2454	1480	320	109	30.3	7.20	4.21
(WY)	1984	1966	1967	1969	1969	1983	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000
(WY)	1948	1948	1948	1948	1948	1990	1951	1951	1948	1948	1947	1947

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1947 - 1992	
ANNUAL TOTAL	18754.72		61731.80			
ANNUAL MEAN	51.4		169		69.7	
HIGHEST ANNUAL MEAN					554	
LOWEST ANNUAL MEAN					.013	
HIGHEST DAILY MEAN	2410	Mar 19	16000	Feb 12	33700	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Jun 24 1947
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Jul 5 1947
INSTANTANEOUS PEAK FLOW			40300	Feb 12	67500	Jan 25 1969
INSTANTANEOUS PEAK STAGE			13.44	Feb 12	18.88	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	37200		122400		50490	
10 PERCENT EXCEEDS	76		307		70	
50 PERCENT EXCEEDS	.03		2.8		.00	
90 PERCENT EXCEEDS	.00		.00		.00	



11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°35'48", long 119°54'28", in San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 0.6 mi downstream from Pine Canyon and 9.9 mi east of Santa Ynez.

DRAINAGE AREA.--74.0 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.--Water-stage recorder. Datum of gage is 783.38 ft above National Geodetic Vertical Datum of 1929. See WSP 1735 for history of changes prior to Sept. 27, 1952. Sept. 27, 1952, to June 24, 1969, at datum 3.25 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 14.45 ft, from floodmark, present datum, from rating curve extended above 2,500 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 14.16 ft; no flow at times since 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*), from rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.10 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	1245	368	8.82	Mar. 6	0400	239	8.32
Feb. 12	1000	*4,820	*12.82	Mar. 23	0345	245	8.35
Feb. 15	0915	1,060	10.04	Mar. 27	0845	152	7.93

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.82	2.6	49	69	22	11	4.0	.46	.00
2	.00	.00	.00	.35	2.6	63	64	21	10	3.9	.38	.00
3	.00	.00	.00	.50	2.6	56	61	20	9.5	3.8	.27	.00
4	.00	.00	.00	3.1	2.6	50	58	20	9.5	3.7	.21	.00
5	.00	.00	.00	104	2.7	51	56	19	9.2	3.6	.16	.00
6	.00	.00	.00	36	4.5	147	54	20	9.2	3.2	.15	.00
7	.00	.00	.00	16	6.2	86	52	20	9.4	3.0	.13	.00
8	.00	.00	.00	13	4.7	70	49	19	9.5	2.9	.10	.00
9	.00	.00	.00	7.9	5.0	62	47	18	9.3	3.2	.09	.00
10	.00	.00	.00	6.2	374	57	45	17	8.9	3.4	.07	.00
11	.00	.00	.00	4.8	720	53	44	17	8.8	3.6	.06	.00
12	.00	.00	.00	3.9	1700	50	43	19	8.7	4.0	.06	.00
13	.00	.00	.00	3.5	e640	48	41	18	e8.5	4.5	.06	.00
14	.00	.00	.00	3.1	e280	46	40	17	e7.5	4.4	.06	.00
15	.00	.00	.00	3.0	e530	45	39	17	e7.0	4.0	.05	.00
16	.00	.00	.00	2.9	e340	44	37	16	e7.0	3.3	.05	.00
17	.00	.00	.00	2.9	e240	42	35	15	e6.8	2.8	.04	.00
18	.00	.00	.00	2.8	e180	41	34	15	5.8	2.3	.04	.00
19	.00	.00	.00	2.7	e160	40	32	15	5.7	2.0	.03	.00
20	.00	.00	.00	2.6	127	46	31	15	5.4	1.7	.03	.00
21	.00	.00	.00	2.6	110	49	31	14	5.2	1.6	.01	.00
22	.00	.00	.00	2.6	97	77	29	14	4.9	1.5	.01	.00
23	.00	.00	.00	2.6	87	196	28	13	4.6	1.4	.00	.00
24	.00	.00	.00	2.6	76	122	26	13	4.5	1.4	.00	.00
25	.00	.00	.00	2.6	69	90	26	13	4.3	1.3	.00	.00
26	.00	.00	.00	2.6	63	82	25	12	4.2	1.2	.00	.00
27	.00	.00	.00	2.6	58	126	24	12	4.2	1.1	.00	.00
28	.00	.00	.00	2.5	55	93	23	12	4.0	.90	.00	.00
29	.00	.00	8.7	2.5	53	82	23	12	4.0	.76	.00	.00
30	.00	.00	23	2.5	---	79	22	12	4.1	.67	.00	.00
31	.00	---	3.8	2.5	---	77	---	11	---	.59	.00	---
TOTAL	0.00	0.00	35.50	248.27	5992.5	2219	1188	498	210.7	79.72	2.52	0.00
MEAN	.000	.000	1.15	8.01	207	71.6	39.6	16.1	7.02	2.57	.081	.000
MAX	.00	.00	23	104	1700	196	69	22	11	4.5	.46	.00
MIN	.00	.00	.00	.35	2.6	40	22	11	4.0	.59	.00	.00
AC-FT	.00	.00	70	492	11890	4400	2360	988	418	158	5.0	.00

e Estimated.

## SANTA YNEZ RIVER BASIN

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.54	3.16	11.4	29.9	58.7	51.6	31.9	12.4	4.92	1.70	.67	.38
MAX	12.4	50.4	205	510	743	338	378	98.1	40.3	20.5	9.93	4.64
(WY)	1984	1966	1967	1968	1969	1983	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.10	.23	.11	.000	.000	.000	.000	.000
(WY)	1954	1954	1954	1963	1951	1948	1961	1961	1961	1959	1953	1953

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1942 - 1992

ANNUAL TOTAL	7109.31	10474.21	
ANNUAL MEAN	19.5	28.6	17.0
HIGHEST ANNUAL MEAN			134 1969
LOWEST ANNUAL MEAN			.066 1990
HIGHEST DAILY MEAN	977 Mar 18	1700 Feb 12	5000 Feb 24 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Jul 6 1953
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Jul 6 1953
INSTANTANEOUS PEAK FLOW		4820 Feb 12	7050 Feb 24 1969
INSTANTANEOUS PEAK STAGE		12.82 Feb. 12	14.45 Feb 24 1969
ANNUAL RUNOFF (AC-FT)	14100	20780	12350
10 PERCENT EXCEEDS	30	59	28
50 PERCENT EXCEEDS	.00	2.6	.91
90 PERCENT EXCEEDS	.00	.00	.00



## SANTA YNEZ RIVER BASIN

11125500 LAKE CACHUMA NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°34'57", long 119°58'47", in Lomas de la Purification Grant, Santa Barbara County, Hydrologic Unit 18060010, at Bradbury Dam on Santa Ynez River, on upstream face near left end of dam, and 6.1 mi east of Santa Ynez.

DRAINAGE AREA.--417 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1952 to current year. Prior to October 1985, only monthend elevations and contents and total diversions published. November 1952 to October 1960, published as "Cachuma Reservoir near Santa Ynez."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Bureau of Reclamation bench mark). 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, 531 acre-ft, included in contents. Capacity below sill of inlet to Tecolote tunnel, elevation, 660 ft, 26,771 acre-ft; below spillway level, elevation, 720 ft, 113,716 acre-ft; and below top of four radial gates, elevation, 750 ft, 190,409 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, nearby communities, Santa Ynez River Water Conservation District, and Cachuma recreation area.

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, 178,839 acre-ft, May 18, 19, elevation, 746.11 ft; minimum, 50,535 acre-ft, Dec. 27, elevation, 682.56 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on surveys by U.S. Bureau of Reclamation)

680	47,346	710	93,627	740	161,730
690	60,576	720	113,716	750	190,409
700	75,972	730	136,306		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60908	52814	51389	51312	52749	139615	167965	177826	178547	176181	171121	163140
2	60605	52762	51364	51299	52735	140151	168716	177883	178518	176066	170953	162896
3	60277	52722	51312	51338	52722	141199	169439	177941	178489	175720	170812	162625
4	59950	52683	51299	51351	52722	141939	170080	177999	178431	175376	170615	162299
5	59608	52644	51286	51583	52709	142581	170671	178028	178403	175120	170474	162055
6	59281	52618	51248	52369	52762	143917	171234	178085	178374	174920	170305	161784
7	58971	52578	51222	52591	52788	145640	171741	178143	178316	174636	170136	161489
8	58607	52526	51196	52696	52775	146594	172276	178258	178258	174350	170052	161194
9	58270	52487	51157	52762	52775	147327	172727	178287	178201	174237	169884	160927
10	57906	52421	51132	52801	53429	148009	173182	178403	178172	174122	169772	160632
11	57559	52382	51119	52827	58971	148667	173581	178489	178114	173980	169633	160337
12	57215	52330	51080	52827	68737	149204	174008	178576	178056	173895	169411	160123
13	56871	52279	51042	52827	93931	149818	174350	178664	177970	173780	169355	159909
14	56526	52176	50991	52827	103801	150329	174664	178693	177854	173695	169216	159695
15	56213	52098	50966	52853	109594	150764	175034	178722	177768	173638	169077	159561
16	55888	52034	50941	52853	119930	151173	175348	178752	177681	173524	168938	159427
17	55577	52008	50928	52853	124208	151561	175691	178781	177624	173438	168772	159320
18	55252	51957	50890	52853	127159	151975	175921	178839	177537	173324	168688	159186
19	54915	51931	50826	52827	129367	152389	176210	178839	177479	173182	168549	159106
20	54649	51892	50750	52840	131204	152803	176412	178810	177393	173096	168355	158972
21	54423	51866	50712	52827	132399	153476	176614	178781	177306	172925	167854	158867
22	54144	51828	50700	52814	133693	154179	176816	178781	177220	172812	167465	158814
23	53877	51802	50674	52814	134713	156273	177018	178752	177162	172642	167022	158443
24	53691	51750	50636	52814	135712	158734	177220	178752	177047	172501	166583	158205
25	53560	51712	50598	52814	136474	160364	177393	178722	176931	172304	166171	157993
26	53442	51699	50560	52801	137221	161596	177537	178693	176816	172107	165732	157834
27	53285	51647	50535	52801	137919	162841	177595	178664	176729	171938	165292	157648
28	53167	51583	50750	52801	138496	164197	177710	178635	176585	171769	164853	157437
29	53036	51518	50991	52788	139079	165237	177768	178635	176470	171600	164414	157225
30	52893	51454	51222	52788	---	166116	177797	178606	176325	171460	164007	157066
31	52853	---	51312	52775	---	167105	---	178576	---	171290	163601	---
MAX	60908	52814	51389	52853	139079	167105	177797	178839	178547	176181	171121	163140
MIN	52853	51454	50535	51299	52709	139615	167965	177826	176325	171290	163601	157066
a	684.36	683.28	683.17	684.30	731.15	741.97	745.75	746.02	745.24	743.47	740.69	738.25
b	-8,142	-1,399	-142	+1,463	+86,304	+28,026	+10,692	+779	-2,251	-5,035	-7,689	-6,535
c	1,451	1,276	1,051	529	719	563	1,156	1,840	1,632	2,844	3,462	2,590

CAL YR 1991 b +21,818

WTR YR 1992 b +96,071

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversions, in acre-feet, to Tecolote tunnel.



## 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, 1.5 mi northeast of Solvang.

DRAINAGE AREA.--29.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to September 1985, October 1989 to current year. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

GAGE.--Water-stage recorder. Datum of gage is 540.49 ft, Santa Barbara County datum.

REMARKS.--No estimated daily discharges. Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 900 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 6.10 ft, from rating curve extended above 70 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 4.90 ft and 5.51 ft; maximum gage height, 6.80 ft, Feb. 9, 1978, from floodmark; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 10.32 ft, from information provided by Santa Barbara County Flood Control District.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	2300	112	2.70	Feb. 15	0730	557	4.78
Jan. 5	1045	107	2.71	Mar. 6	0015	178	3.13
Feb. 12	0915	*615	*5.67				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	31	.00	7.1	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	1.2	.00	20	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.17	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	9.4	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	19	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	177	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	159	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	40	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	201	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	94	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	24	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	9.7	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	7.3	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	6.4	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	5.9	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	5.3	.07	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	2.1	.05	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.28	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.16	.03	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.80	.00	.03	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	30	.00	.03	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	2.3	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	33.10	32.38	760.96	27.37	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	1.07	1.04	26.2	.88	.000	.000	.000	.000	.000	.000
MAX	.00	.00	30	31	201	20	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	66	64	1510	54	.00	.00	.00	.00	.00	.00

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.038	.092	.29	.90	4.02	5.00	.55	.18	.057	.055	.061	.043
MAX	.43	.78	1.92	9.94	26.2	42.2	8.24	2.30	.48	.58	.52	.39
(WY)	1985	1984	1984	1983	1992	1983	1983	1983	1983	1983	1983	1984
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1971	1973	1971	1971	1971	1971	1971	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	577.29		853.81			
ANNUAL MEAN	1.58		2.33		.93	
HIGHEST ANNUAL MEAN					6.23 1983	
LOWEST ANNUAL MEAN					.000 1990	
HIGHEST DAILY MEAN	249	Mar 18	201	Feb 15	316	Mar 4 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1970
INSTANTANEOUS PEAK FLOW			615	Feb 12	900	Mar 1 1983
INSTANTANEOUS PEAK STAGE			5.67	Feb 12	6.80	Feb 9 1978
ANNUAL RUNOFF (AC-FT)	1150		1690		671	
10 PERCENT EXCEEDS	.00		.00		.45	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## SANTA YNEZ RIVER BASIN

11128300 ALISAL RESERVOIR NEAR SOLVANG, CA

LOCATION.--Lat 34°32'56", long 120°07'45", in NE 1/4 NW 1/4 sec.4, T.5 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, in cove on right bank 0.4 mi upstream from reservoir spillway and 3 mi south of Solvang.

DRAINAGE AREA.--7.83 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1971 to current year. Prior to October 1985, only monthend elevations and contents published.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft between bottom of outlet gate at elevation 555.70 ft, and crest of spillway at elevation 599.88 ft. Dead storage, 110 acre-ft. Inflow must total 150 acre-ft during any one month between November and June in order to store flows for that water year.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,770 acre-ft, Mar. 4, 1978, elevation, 604.31 ft; minimum, 748 acre-ft, Nov. 8-10, 1972, elevation, 577.15 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,740 acre-ft, Feb. 12, elevation, 604.03 ft; minimum contents, 1,940 acre-ft, Dec. 22, 26, 27, elevation, 594.96 ft, Dec. 27.

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	600	2,380
595	1,940	605	2,840

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2080	2010	1970	2110	e2350	e2330	2380	2370	2360	2330	2260	2170
2	2080	2010	1970	2110	e2350	e2350	2380	2370	2360	2330	2250	2170
3	2070	2010	1960	2120	e2350	e2350	2380	2370	2360	2320	2250	2160
4	2070	2000	1960	2130	e2350	e2350	2380	2370	2350	2320	2250	2160
5	2070	2000	1960	2230	e2350	e2410	2380	2370	2350	2320	2250	2160
6	2070	2000	1960	2260	e2360	e2390	2380	2370	2350	2320	2240	2160
7	2060	2000	1960	2280	e2370	e2390	2380	2370	2350	2320	2240	2160
8	2060	2000	1960	2290	e2370	e2380	2380	2370	2350	2320	2240	2150
9	2060	1990	1960	2300	e2390	e2380	2380	2370	2350	2320	2230	2150
10	2050	1990	1960	e2310	e2460	e2380	2380	2370	2350	2320	2230	2150
11	2050	1990	1960	e2310	e2430	e2380	2380	2370	2350	2320	2230	2140
12	2050	1990	1960	e2320	e2480	2380	2380	2370	2350	2320	2230	2140
13	2050	1990	1960	e2320	e2430	2380	2380	2370	2350	2310	2230	2140
14	2050	1990	1960	e2330	e2420	2380	2380	2370	2350	2310	2220	2140
15	2040	1990	1950	e2330	e2450	2380	2380	2370	2350	2310	2220	2130
16	2040	1980	1960	e2330	e2420	2380	2380	2370	2340	2310	2220	2130
17	2040	1990	1950	e2330	e2410	2380	2380	2370	2350	2300	2220	2130
18	2040	1980	1950	e2340	e2410	2380	2370	2370	2340	2300	2210	2120
19	2030	1980	1950	e2340	e2410	2380	2370	2370	2340	2300	2210	2120
20	2030	1980	1950	e2340	e2410	2380	2370	2370	2340	2290	2210	2120
21	2030	1980	1950	e2340	e2410	2380	2370	2370	2340	2290	2200	2120
22	2030	1980	1950	e2340	e2410	2410	2370	2360	2340	2290	2200	2120
23	2020	1980	1950	e2340	e2410	2400	2370	2360	2340	2280	2200	2110
24	2020	1980	1950	e2340	e2410	2390	2370	2360	2340	2280	2190	2110
25	2020	1980	1950	e2340	e2380	2390	2370	2360	2340	2280	2190	2110
26	2020	1970	1950	e2340	e2320	2390	2370	2360	2330	2280	2190	2100
27	2020	1970	1960	e2340	e2300	2390	2370	2360	2330	2270	2180	2100
28	2020	1970	1990	e2350	e2310	2390	2370	2360	2330	2270	2180	2100
29	2020	1970	2090	e2350	e2320	2390	2370	2360	2330	2270	2180	2100
30	2010	1970	2110	e2350	---	2390	2370	2360	2330	2260	2170	2090
31	2010	---	2110	e2350	---	2380	---	2360	---	2260	2170	---
MAX	2080	2010	2110	2350	2480	2410	2380	2370	2360	2330	2260	2170
MIN	2010	1970	1950	2110	2300	2330	2370	2360	2330	2260	2170	2090
a	595.90	595.36	596.99	599.66	599.36	600.05	599.90	599.78	599.41	598.67	597.69	596.82
b	-70	-40	+140	+240	-30	+60	-10	-10	-30	-70	-90	-80

CAL YR 1991 b +960

WTR YR 1992 b +10

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11128500 SANTA YNEZ RIVER AT SOLVANG, CA

LOCATION.--Lat 34°35'06", long 120°08'37", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, near left bank on downstream end of pier of Alisal Road bridge, 25 ft downstream from Alisal Creek, 0.8 mi southwest of Solvang, and 10 mi downstream from Lake Cachuma.

DRAINAGE AREA.--579 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to current year.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 357.43 ft above National Geodetic Vertical Datum of 1929. Various datums used during period of record. July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 2.00 ft higher. Oct. 1, 1968, to Sept. 30, 1988 water-stage recorder at datum 5.00 ft higher.

REMARKS.--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (stations 11121000, 11122000, and 11125500). 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.

EXTREMES FOR PERIOD OF RECORD (water years 1928-36, 1946-91).--Maximum discharge, 82,000 ft<sup>3</sup>/s, Jan. 25, 1969, estimated on basis of discharge measurements up to 81,000 ft<sup>3</sup>/s for Santa Ynez River near Buellton, gage height, 17.1 ft, from floodmark; no flow for several months in many years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,300 ft<sup>3</sup>/s, Feb. 12, gage height, 10.54 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	20	.00	10	7.6	22	29	e.40	.00	.00	.00	86
2	.00	17	.00	5.4	3.9	37	40	e.30	.00	.00	.00	42
3	.00	14	.00	3.6	2.1	26	51	e.20	.00	.00	.00	47
4	.00	11	.00	1.3	3.1	20	47	e.10	.00	.00	.00	49
5	4.1	9.5	.00	201	35	51	42	e.10	.00	.00	.00	52
6	58	8.4	.00	65	110	185	37	e.10	.00	.00	.00	53
7	79	3.2	.00	26	200	79	29	e.10	.00	.00	.00	60
8	88	.73	.00	14	.281	48	34	.00	.00	.00	.00	64
9	101	3.6	.00	10	287	32	41	.00	.00	.00	.00	70
10	104	3.2	.00	15	417	21	51	.00	.00	.00	.00	76
11	103	.33	.00	11	351	10	60	.00	.00	.00	.00	71
12	112	.00	.00	9.7	4910	27	69	.00	.00	.00	.00	39
13	123	.00	.00	6.5	1310	25	73	.00	.00	.00	.00	32
14	134	.00	.00	7.3	e330	18	76	.00	.00	.00	.00	34
15	137	.00	.00	18	2330	14	77	.00	.00	.00	.00	8.6
16	130	.00	.00	30	e260	9.6	78	.00	.00	.00	.00	.00
17	132	.00	.00	30	e130	6.4	81	.00	.00	.00	.00	.00
18	135	.00	.00	25	e110	4.3	84	.00	.00	.00	.00	.00
19	130	.00	.00	21	e105	2.5	90	.00	.00	.00	.00	.00
20	112	.00	.00	17	e95	7.3	80	.00	.00	.00	.00	.00
21	107	.00	.00	14	e90	6.9	47	.00	.00	.00	.00	.00
22	105	.00	.00	9.8	e80	16	28	.00	.00	.00	.00	.00
23	99	.00	.00	5.6	62	49	7.7	.00	.00	.00	.00	22
24	62	.00	.00	5.1	52	27	e6.0	.00	.00	.00	.00	15
25	58	.00	.00	8.4	46	28	e5.0	.00	.00	.00	5.9	7.3
26	57	.00	.00	12	38	66	e4.0	.00	.00	.00	127	14
27	56	.00	.00	14	34	109	e3.0	.00	.00	.00	92	19
28	58	.00	6.6	14	31	49	e2.0	.00	.00	.00	79	24
29	58	.00	250	15	25	28	e1.0	.00	.00	.00	83	23
30	57	.00	36	14	---	28	e.50	.00	.00	.00	86	23
31	38	---	19	14	---	28	---	.00	---	.00	90	---
TOTAL	2437.10	90.96	311.60	652.7	11735.7	1080.0	1273.20	1.30	0.00	0.00	562.90	930.90
MEAN	78.6	3.03	10.1	21.1	405	34.8	42.4	.042	.000	.000	18.2	31.0
MAX	137	20	250	201	4910	185	90	.40	.00	.00	127	86
MIN	.00	.00	.00	1.3	2.1	2.5	.50	.00	.00	.00	.00	.00
AC-FT	4830	180	618	1290	23280	2140	2530	2.6	.00	.00	1120	1850

e Estimated.

## 11128500 SANTA YNEZ RIVER AT SOLVANG, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1950, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.92	7.04	32.8	62.0	176	52.4	48.1	11.7	8.56	4.00	2.41	2.51
MAX	6.69	34.9	257	211	1240	164	375	59.3	36.8	17.0	6.36	5.69
(WY)	1939	1947	1932	1935	1932	1935	1935	1935	1938	1938	1938	1938
MIN	.25	2.40	4.20	4.87	5.90	4.95	3.51	2.36	1.27	.21	.000	.000
(WY)	1950	1930	1930	1948	1948	1950	1931	1948	1948	1949	1948	1948

## SUMMARY STATISTICS

## WATER YEARS 1929 - 1950

ANNUAL TOTAL	
ANNUAL MEAN	32.9
HIGHEST ANNUAL MEAN	152 1932
LOWEST ANNUAL MEAN	3.31 1948
HIGHEST DAILY MEAN	12300 Feb 9 1932
LOWEST DAILY MEAN	.00 Jul 15 1931
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 15 1931
INSTANTANEOUS PEAK FLOW	18700 Feb 9 1932
ANNUAL RUNOFF (AC-FT)	23800
10 PERCENT EXCEEDS	35
50 PERCENT EXCEEDS	5.3
90 PERCENT EXCEEDS	1.5

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1992, BY WATER YEAR (WY)

MEAN	4.69	4.32	20.6	168	287	344	127	37.9	9.24	4.10	3.53	4.70
MAX	88.7	96.2	263	2893	4445	4029	1258	568	105	41.0	49.0	35.5
(WY)	1992	1966	1984	1969	1969	1983	1983	1983	1983	1969	1986	1981
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1952	1963	1976	1991	1989	1961	1961	1961	1957	1954	1954

## SUMMARY STATISTICS

## FOR 1991 CALENDAR YEAR

## FOR 1992 WATER YEAR

## WATER YEARS 1952 - 1992

ANNUAL TOTAL	9366.33	20234.33	
ANNUAL MEAN	25.7	55.3	83.6
HIGHEST ANNUAL MEAN			758 1969
LOWEST ANNUAL MEAN			.86 1961
HIGHEST DAILY MEAN	1860 Mar 19	5000 Feb 15	40000 Jan 25 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Nov 9	.00 Oct 1 1951
INSTANTANEOUS PEAK FLOW		20300 Feb 12	82000 Jan 25 1969
INSTANTANEOUS PEAK STAGE		10.54 Feb 12	17.10 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	18580	40130	60560
10 PERCENT EXCEEDS	61	92	58
50 PERCENT EXCEEDS	.00	.55	1.3
90 PERCENT EXCEEDS	.00	.00	.00

11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.--Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2 ft upstream from bridge on frontage road, 0.9 mi upstream from Dry Creek, 2.4 mi north of Buellton, and 4.0 mi upstream from mouth.

DRAINAGE AREA.-- 32.8 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1963 to September 1981, October 1989 to Sept. 30, 1992 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 471.54 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Some pumping from wells along stream for irrigation upstream from station. Small regulation by Zaca Lake, about 15 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 9.20 ft; maximum gage height, 9.66 ft, Mar. 4, 1978; no flow most of each year.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1500	124	4.10	Feb. 15	0700	512	7.71
Jan. 5	0600	99	3.81	Mar. 5	2045	56	3.30
Feb. 12	0715	*669	*9.05				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.01	2.8	.64	.05	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	3.3	.68	.04	.00	.00	.00	.00
3	.00	.00	.00	.08	.01	4.0	.57	.03	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	3.9	.54	.03	.00	.00	.00	.00
5	.00	.00	.00	34	.00	9.7	.76	.05	.00	.00	.00	.00
6	.00	.00	.00	4.8	.05	4.3	.96	.06	.00	.00	.00	.00
7	.00	.00	.00	1.9	.04	.26	.55	.07	.00	.00	.00	.00
8	.00	.00	.00	1.2	.00	.08	.59	.07	.00	.00	.00	.00
9	.00	.00	.00	.62	.56	.18	.46	.04	.00	.00	.00	.00
10	.00	.00	.00	.48	18	.27	.33	.00	.00	.00	.00	.00
11	.00	.00	.00	.35	24	.71	.24	.00	.00	.00	.00	.00
12	.00	.00	.00	.18	234	2.2	.23	.02	.00	.00	.00	.00
13	.00	.00	.00	.09	92	.16	.80	.01	.00	.00	.00	.00
14	.00	.00	.00	.08	34	.09	.29	.00	.00	.00	.00	.00
15	.00	.00	.00	.07	184	.11	.24	.07	.00	.00	.00	.00
16	.00	.00	.00	.06	52	.11	.15	.02	.00	.00	.00	.00
17	.00	.00	.00	.05	30	.12	.15	.00	.00	.00	.00	.00
18	.00	.00	.00	.16	19	.15	.11	.00	.00	.00	.00	.00
19	.00	.00	.00	.09	14	.13	.02	.00	.00	.00	.00	.00
20	.00	.00	.00	.04	10	.23	.04	.00	.00	.00	.00	.00
21	.00	.00	.00	.03	7.5	.46	.26	.00	.00	.00	.00	.00
22	.00	.00	.00	.03	5.1	3.1	1.2	.00	.00	.00	.00	.00
23	.00	.00	.00	.03	6.3	2.2	.20	.00	.00	.00	.00	.00
24	.00	.00	.00	.03	4.2	1.1	.15	.00	.00	.00	.00	.00
25	.00	.00	.00	.04	3.6	.87	.13	.00	.00	.00	.00	.00
26	.00	.00	.00	.04	3.5	1.3	.07	.00	.00	.00	.00	.00
27	.00	.00	.09	.02	2.0	.80	.05	.00	.00	.00	.00	.00
28	.00	.00	.11	.03	2.5	.67	.07	.00	.00	.00	.00	.00
29	.00	.00	34	.02	1.5	.60	.05	.00	.00	.00	.00	.00
30	.00	.00	4.3	.00	---	.57	.04	.00	.00	.00	.00	.00
31	.00	---	.04	.01	---	.59	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	38.54	44.53	747.87	45.06	10.57	0.56	0.00	0.00	0.00	0.00
MEAN	.000	.000	1.24	1.44	25.8	1.45	.35	.018	.000	.000	.000	.000
MAX	.00	.00	34	34	234	9.7	1.2	.07	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.08	.02	.00	.00	.00	.00	.00
AC-FT	.00	.00	76	88	1480	89	21	1.1	.00	.00	.00	.00

11129800 ZACA CREEK NEAR BUELLTON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.003	.21	1.79	6.43	3.26	.90	.19	.023	.000	.000	.003
MAX	.002	.033	2.88	32.1	56.8	24.0	6.32	2.15	.40	.000	.000	.059
(WY)	1977	1966	1967	1969	1969	1978	1969	1967	1967	1964	1964	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1964	1967	1964	1968	1964	1964	1964	1964	1964	1964	1964	1964

## SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1964 - 1992

ANNUAL TOTAL	334.98	887.13	
ANNUAL MEAN	.92	2.42	1.04
HIGHEST ANNUAL MEAN			9.23 1969
LOWEST ANNUAL MEAN			.000 1990
HIGHEST DAILY MEAN	87 Mar 19	234 Feb 12	450 Feb 24 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
INSTANTANEOUS PEAK FLOW		669 Feb 12	1390 Feb 24 1969
INSTANTANEOUS PEAK STAGE		9.05 Feb 12	9.66 Mar 4 1978
ANNUAL RUNOFF (AC-FT)	664	1760	750
10 PERCENT EXCEEDS	.03	1.2	.16
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA

LOCATION.--Lat 34°35'19", long 120°24'27", in W 1/2 sec.24, T.6 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at bridge on Jalama Road, 0.4 mi downstream from El Jaro Creek, and 4.4 mi southeast of Lompoc.

DRAINAGE AREA.--47.1 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1941 to current year.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder and concrete low-water control. Elevation of gage is 220 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--No estimated daily discharges, records fair. No regulation upstream from station. Small diversions for irrigation upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s, Mar. 15, 1952, gage height, 20.8 ft; no flow at times in some years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	0615	*4,240	*8.21	Mar. 5	2045	1,110	4.69
Feb. 15	0515	2,470	6.50				

Minimum daily, 0.05 ft<sup>3</sup>/s, Oct. 10-19, Nov. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.06	.08	1.4	.48	6.4	8.6	2.2	2.2	1.2	.51	.28
2	.06	.06	.09	.58	.52	12	8.1	2.4	2.0	1.3	.43	.25
3	.06	.06	.09	.47	.51	8.6	7.8	2.4	1.7	1.4	.40	.24
4	.06	.06	.09	.42	.51	6.4	7.3	2.6	1.6	1.2	.35	.28
5	.06	.06	.08	45	.53	118	7.0	2.8	1.7	.99	.34	.28
6	.06	.06	.09	13	2.8	88	6.7	2.9	2.0	.81	.36	.26
7	.06	.06	.10	7.5	2.5	48	6.3	3.0	1.8	.71	.36	.28
8	.06	.05	.10	5.1	1.3	24	6.1	3.2	1.6	.67	.32	.27
9	.06	.06	.09	2.8	9.8	16	5.4	3.7	1.4	.70	.30	.29
10	.05	.06	.09	1.9	88	13	5.3	3.9	1.5	.75	.28	.30
11	.05	.06	.09	1.3	40	12	5.3	3.7	1.6	.88	.29	.29
12	.05	.06	.09	.74	1050	10	4.9	4.1	1.4	1.3	.31	.29
13	.05	.06	.09	.51	169	9.5	4.8	4.2	1.1	2.3	.29	.30
14	.05	.06	.09	.46	46	8.9	4.5	4.3	1.0	1.5	.28	.30
15	.05	.06	.09	.43	515	8.4	4.1	4.6	1.1	1.1	.28	.30
16	.05	.06	.09	.43	88	7.9	3.9	5.1	1.2	.90	.26	.29
17	.05	.07	.10	.51	53	7.4	4.0	5.0	1.2	.78	.26	.29
18	.05	.07	.11	.51	33	7.2	3.2	5.0	1.2	.66	.25	.31
19	.05	.06	.11	.48	25	7.1	3.1	5.1	1.3	.56	.25	.32
20	.06	.07	.11	.42	21	14	3.1	5.1	1.3	.52	.26	.32
21	.06	.07	.12	.44	16	13	2.8	5.2	1.2	.51	.27	.35
22	.06	.07	.14	.44	13	35	2.6	5.3	1.1	.48	.26	.36
23	.06	.07	.15	.44	11	63	2.4	5.1	1.1	.51	.27	.37
24	.06	.07	.15	.44	9.9	19	2.2	4.9	1.0	.52	.26	.41
25	.06	.07	.15	.47	8.9	14	2.2	4.6	1.0	.53	.27	.41
26	.09	.07	.15	.51	8.1	13	2.2	4.5	1.0	.54	.27	.40
27	.07	.07	1.0	.45	7.5	13	2.0	4.6	1.2	.56	.31	.47
28	.06	.07	3.6	.44	6.7	11	2.0	4.5	1.3	.59	.35	.71
29	.06	.07	36	.44	6.2	9.8	2.2	4.1	1.3	.61	.34	.93
30	.06	.08	8.9	.44	---	10	2.0	3.5	1.2	.63	.25	1.2
31	.06	---	2.0	.44	---	9.4	---	2.4	---	.57	.25	---
TOTAL	1.81	1.93	54.23	88.91	2234.25	643.0	132.1	124.0	41.3	26.28	9.48	11.35
MEAN	.058	.064	1.75	2.87	77.0	20.7	4.40	4.00	1.38	.85	.31	.38
MAX	.09	.08	36	45	1050	118	8.6	5.3	2.2	2.3	.51	1.2
MIN	.05	.05	.08	.42	.48	6.4	2.0	2.2	1.0	.48	.25	.24
AC-FT	3.6	3.8	108	176	4430	1280	262	246	82	52	19	23

## SANTA YNEZ RIVER BASIN

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.73	2.26	7.82	19.6	35.9	29.3	14.7	4.05	2.08	1.20	.83	.71
MAX	4.26	48.6	102	142	294	183	158	28.5	12.5	8.23	5.77	4.51
(WY)	1942	1966	1956	1983	1962	1978	1941	1983	1983	1941	1941	1941
MIN	.000	.041	.050	.081	.33	.36	.21	.000	.000	.000	.015	.010
(WY)	1962	1991	1990	1991	1991	1990	1989	1961	1961	1961	1972	1972

## SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1941 - 1992

ANNUAL TOTAL	2284.15	3368.64	
ANNUAL MEAN	6.26	9.20	9.48
HIGHEST ANNUAL MEAN			50.9
LOWEST ANNUAL MEAN			.17
HIGHEST DAILY MEAN	1230	Mar 18	1050
LOWEST DAILY MEAN	.05	Aug 25	.05
ANNUAL SEVEN-DAY MINIMUM	.05	Aug 25	.05
INSTANTANEOUS PEAK FLOW			4240
INSTANTANEOUS PEAK STAGE			8.21
ANNUAL RUNOFF (AC-FT)	4530	6680	6870
10 PERCENT EXCEEDS	1.4	9.9	10
50 PERCENT EXCEEDS	.11	.60	1.2
90 PERCENT EXCEEDS	.06	.06	.08





SANTA YNEZ RIVER BASIN

407

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 32 mi downstream from Lake Cachuma.

DRAINAGE AREA.--789 mi<sup>2</sup>.

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 (prior to Apr. 10 1991 at datum 5 ft higher) above National Geodetic Vertical Datum of 1929, from topographic map. 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good 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). 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.

EXTREMES FOR PERIOD OF RECORD (water years 1952-63, 1964-91).--Maximum discharge, 80,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 24.20 ft, from supplementary gage; no flow at times in each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 9, 1907, reached a stage of 22.0 ft, site and datum then in use, discharge, 120,000 ft<sup>3</sup>/s, from mean-depth study.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,200 ft<sup>3</sup>/s, Feb. 12, gage height, 14.77 ft; no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	30	e.80	e2.4	20	119	94	17	9.4	1.7	.41	49
2	.00	26	e.77	e1.9	19	136	91	16	9.1	1.6	.19	58
3	.00	20	e.74	e2.0	19	145	85	16	8.5	1.6	.12	43
4	.00	17	e.70	e2.0	18	120	83	17	8.2	1.2	.10	35
5	.00	14	e.65	e532	17	218	75	18	7.7	1.1	.02	36
6	.00	12	e.60	e390	19	641	70	18	7.5	.99	.01	38
7	.00	9.7	e.55	e171	22	358	65	18	6.6	.78	.02	39
8	.00	7.5	e.50	102	19	233	61	18	6.4	.81	.00	42
9	.00	6.4	e.44	85	19	185	59	17	5.7	.65	.03	44
10	.00	5.6	e.40	72	308	163	56	16	5.3	.67	.00	44
11	.00	4.5	e.30	62	1090	147	54	16	5.5	.64	.00	46
12	.00	3.1	e.27	52	5590	137	52	16	5.0	.58	.00	47
13	.00	2.7	e.22	45	2820	126	49	16	5.0	.63	.00	44
14	.00	2.6	e.15	41	1130	117	47	16	4.8	.68	.00	38
15	4.2	2.3	e.00	38	3040	114	44	15	5.0	.63	.00	37
16	38	2.1	e.00	35	1430	109	41	15	4.9	.75	.00	35
17	57	e2.0	e.00	33	767	102	38	15	4.6	.90	.00	28
18	69	e1.7	e.00	31	512	97	36	15	4.4	1.0	.00	21
19	75	e1.6	e.00	30	390	93	34	14	4.2	1.4	.00	16
20	84	e1.5	e.00	28	331	101	32	13	4.3	1.5	.00	13
21	79	e1.4	e.00	26	286	129	32	12	3.7	1.5	.00	11
22	73	e1.3	e.00	25	249	154	30	11	3.3	1.3	.00	8.7
23	74	e1.3	e.00	25	208	416	28	9.2	3.1	1.5	.00	7.2
24	75	e1.2	e.00	24	178	264	27	8.7	3.1	.89	.00	6.6
25	66	e1.1	e.00	24	159	178	25	8.5	2.7	.79	.00	7.5
26	50	e1.1	e.00	24	162	146	23	8.8	2.5	.89	.00	13
27	44	e1.0	e.00	23	165	195	21	9.1	2.2	.76	.00	16
28	39	e.94	e.00	22	138	147	21	8.7	2.0	.76	.00	19
29	35	e.90	244	21	123	111	20	9.1	1.8	.78	.00	20
30	33	e.85	341	20	---	104	18	9.4	1.8	.55	4.0	21
31	31	---	e5.5	20	---	99	---	9.6	---	.49	32	---
TOTAL	926.20	183.39	597.59	2009.3	19248	5404	1411	426.1	148.3	30.02	36.90	883.0
MEAN	29.9	6.11	19.3	64.8	664	174	47.0	13.7	4.94	.97	1.19	29.4
MAX	84	30	341	532	5590	641	94	18	9.4	1.7	32	58
MIN	.00	.85	.00	1.9	17	93	18	8.5	1.8	.49	.00	6.6
AC-FT	1840	364	1190	3990	38180	10720	2800	845	294	60	73	1750

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 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.13	5.84	27.8	163	331	347	155	47.5	11.2	3.16	1.13	1.66
MAX	29.9	112	291	3303	4969	3590	1154	618	177	30.0	16.9	29.4
(WY)	1992	1966	1984	1969	1969	1983	1983	1983	1983	1983	1986	1992
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1955	1955	1989	1961	1990	1961	1961	1961	1960	1954	1954

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1952 - 1992	
ANNUAL TOTAL	12242.04		31303.80			
ANNUAL MEAN	33.5		85.5		89.8	
HIGHEST ANNUAL MEAN					853	
LOWEST ANNUAL MEAN					1969	
HIGHEST DAILY MEAN	3470	Mar 19	5590	Feb 12	38000	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Sep 18 1953
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 23 1953
INSTANTANEOUS PEAK FLOW			13200	Feb 12	80000	Jan 25 1969
INSTANTANEOUS PEAK STAGE			14.77	Feb 12	24.20	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	24280		62090		65050	
10 PERCENT EXCEEDS	43		146		75	
50 PERCENT EXCEEDS	.19		13		1.0	
90 PERCENT EXCEEDS	.00		.00		.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 at upstream end of debris dam and 1,900 ft south of Lompoc Union High School.

DRAINAGE AREA.--11.6 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1970 to May 6, 1986, October 1987 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 97.94 ft 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 fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station; some pumping from wells along stream for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft<sup>3</sup>/s, Mar. 18, 1991, gage height, 3.62 ft, from theoretical rating curve above 50 ft<sup>3</sup>/s; no flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 5.83 ft, site in use prior to 1986, from floodmark, discharge, 680 ft<sup>3</sup>/s.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 27	1745	*479	*1.96	Feb. 15	0415	232	1.48
Dec. 31	1345	176	1.34	Mar. 5	1930	199	1.40
Feb. 12	0245	426	1.87				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.00	.00	e2.1	.02	.04	.13	.06	.03	.00	e.01	.00
2	e.02	.00	.00	e1.3	.02	.26	.13	.06	.03	.00	e.01	.00
3	e.02	.00	.00	e.69	.03	.09	.13	.07	.03	.00	e.01	.00
4	e.03	.00	.00	e.39	.05	.03	.16	.07	.03	.00	e.01	.00
5	e.02	.00	.00	24	.05	12	.14	.07	.02	.00	e.01	.00
6	e.02	.01	.00	e1.8	.60	4.8	.13	.09	.03	.00	e.01	.02
7	e.02	.00	.07	e.53	.07	1.4	.12	.07	.04	.01	e.01	.03
8	e.00	.02	.00	e.12	.05	e.43	.11	.08	.02	.02	e.01	.03
9	.01	.03	.00	e.05	9.4	e.23	.10	.08	.00	.03	e.01	.02
10	.02	.04	.00	e.04	18	e.13	.10	.06	.00	.02	e.01	.02
11	.03	.03	.00	e.03	7.8	e.08	.10	.08	.00	.02	e.01	.02
12	.01	.03	.00	e.03	107	e.08	.18	.07	.00	.03	e.01	.02
13	.00	.03	.01	e.02	28	e.06	.12	.08	.01	.03	e.01	.02
14	.00	.02	.00	e.02	5.3	e.06	.07	.08	.00	.03	e.01	.02
15	.01	.01	.00	e.01	46	e.05	.07	.08	.00	.03	e.01	.02
16	.01	.01	.00	e.01	5.1	.05	.10	.08	.00	.02	e.01	.03
17	.01	.03	.00	e.01	e2.4	.05	.07	.07	.00	.01	e.01	.03
18	.01	.02	.00	.00	e1.1	.05	.10	.07	.00	.02	e.01	.03
19	.01	.01	.00	.03	e.43	.06	.07	.06	.00	.02	e.01	.03
20	.01	.00	.00	.03	e.23	.61	.11	.03	.00	.00	e.01	.00
21	.01	.01	.00	.03	.13	.27	.11	.02	.00	.01	e.00	.02
22	.02	.01	.00	.03	.07	4.1	.12	.02	.00	.02	e.00	.04
23	.02	.01	.00	.06	.04	6.2	.11	.05	.00	.02	e.00	.04
24	.02	.02	.00	.01	.02	.85	.08	.06	.00	e.02	.00	.06
25	.02	.00	.00	.01	.02	.60	.08	.05	.00	e.02	.00	.02
26	.72	.01	.00	.01	.02	.48	.08	.02	.00	e.02	.00	.01
27	.02	.02	14	.01	.02	.32	.08	.01	.00	e.02	.00	.02
28	.00	.02	e1.4	.01	.02	.19	.10	.02	.00	e.02	.00	.01
29	.00	.00	14	.01	.02	.13	.13	.02	.00	e.02	.00	.00
30	.00	.00	2.8	.01	---	.16	.09	.03	.00	e.02	.00	.00
31	.00	---	7.7	.01	---	.14	---	.03	---	e.02	.00	---
TOTAL MEAN	1.12	0.39	39.98	31.41	232.01	34.00	3.22	1.74	0.24	0.50	0.20	0.56
MAX	.036	.013	1.29	1.01	8.00	1.10	.11	.056	.008	.016	.006	.019
MIN	.72	.04	14	24	107	12	.18	.09	.04	.03	.01	.06
AC-FT	.00	.00	.00	.00	.02	.03	.07	.01	.00	.00	.00	.00
AC-FT	2.2	.8	79	62	460	67	6.4	3.5	.5	1.0	.4	1.1

e Estimated.

## SANTA YNEZ RIVER BASIN

11134800 MIGUELITO CREEK AT LOMPOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.24	.46	1.30	2.35	4.82	5.61	1.96	.97	.62	.44	.35	.32
MAX	1.39	1.67	4.33	15.8	19.7	26.5	14.2	6.04	3.79	2.64	2.33	2.05
(WY)	1984	1983	1984	1983	1978	1983	1983	1983	1983	1983	1983	1983
MIN	.001	.001	.008	.019	.047	.091	.076	.053	.008	.016	.006	.000
(WY)	1973	1978	1990	1991	1972	1972	1972	1972	1992	1992	1972	1972

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	470.88		345.37			
ANNUAL MEAN	1.29		.94		1.58	
HIGHEST ANNUAL MEAN					7.96	
LOWEST ANNUAL MEAN					.15	
HIGHEST DAILY MEAN	231	Mar 18	107	Feb 12	231	Mar 18 1991
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 8	.00	Jul 21 1971
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 12	.00	Oct 28	.00	Sep 8 1971
INSTANTANEOUS PEAK FLOW			479	Dec 27	1750	Mar 18 1991
INSTANTANEOUS PEAK STAGE			1.96	Dec 27	3.62	Mar 18 1991
ANNUAL RUNOFF (AC-FT)	934		685		1150	
10 PERCENT EXCEEDS	.46		.28		2.3	
50 PERCENT EXCEEDS	.03		.02		.31	
90 PERCENT EXCEEDS	.00		.00		.02	

11134800 MIGUELITO CREEK AT LOMPOC, CA--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1980-86, 1988 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
JAN 08...	1505	0.10	1170	17.8	9.5	825
MAY 08...	1125	0.10	1600	18.2	17.5	1120
JUL 16...	1135	0.04	1630	18.5	26.5	1120

11135800 SAN ANTONIO CREEK AT LOS ALAMOS, CA

LOCATION.--Lat 34°44'36", long 120°16'12", in Los Alamos Grant, Santa Barbara County, Hydrologic Unit 18060009, on left bank 100 ft upstream from bridge on northbound lane of U.S. Highway 101 at Los Alamos.

DRAINAGE AREA.--34.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to September 1992 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharge, which are poor. No regulation upstream from station. Pumping for irrigation of about 1,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,230 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.6 ft, from floodmarks, from rating curve extended above 150 ft<sup>3</sup>/s on basis of computation of peak flow through culverts; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 30 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1230	102	2.47	Feb. 12	0830	*1,010	*6.17
Jan. 5	0630	100	2.46	Feb. 15	0700	669	4.84

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	13	.00	2.5	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	e1.3	.00	6.3	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.50	.00	2.2	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.27	.00	.59	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.31	.07	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	23	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	31	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	330	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	e150	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	57	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	225	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	e130	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	e70	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	e40	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	e20	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	12	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	8.5	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	6.8	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	5.5	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	4.3	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	3.0	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	10	.00	.00	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	e.06	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	e.02	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	10.08	15.07	1116.51	11.66	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.33	.49	38.5	.38	.000	.000	.000	.000	.000	.000
MAX	.00	.00	10	13	330	6.3	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	20	30	2210	23	.00	.00	.00	.00	.00	.00

e Estimated.

11135800 SAN ANTONIO CREEK AT LOS ALAMOS, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.041	.14	1.71	7.65	10.9	.39	.047	.019	.003	.000	.008
MAX	.000	.55	.89	33.2	58.3	144	6.66	.69	.42	.069	.000	.18
(WY)	1971	1974	1984	1983	1978	1983	1983	1983	1983	1983	1971	1990
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1971	1973	1976	1977	1972	1971	1971	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	974.45		1153.32			
ANNUAL MEAN	2.67		3.15		1.72	
HIGHEST ANNUAL MEAN					18.9	
LOWEST ANNUAL MEAN					.001	
HIGHEST DAILY MEAN	290	Mar 18	330	Feb 12	1430	Mar 1 1983
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1970
INSTANTANEOUS PEAK FLOW			1010	Feb 12	3230	Mar 1 1983
INSTANTANEOUS PEAK STAGE			6.17	Feb 12	11.60	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	1930		2290		1250	
10 PERCENT EXCEEDS	.02		.00		.20	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.--Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060009, on Vandenberg Military Reservation on downstream side of San Antonio Road bridge, 0.7 mi east of junction of San Antonio Road and Lompoc-Casmalia Road, and 3.8 mi south of Casmalia.

DRAINAGE AREA.--135 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to June 27, 1958, at datum 2.00 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Flow affected by pumping from wells along stream for irrigation upstream from station. At times water is released to creek from Vandenberg Air Force Base water-treatment plant.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,680 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 14.32 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 12.93 ft; minimum daily, 0.10 ft<sup>3</sup>/s, June 19, 20, 1957.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 24	2100	367	4.52	Feb. 12	1100	*1,160	*7.35
Jan. 5	1045	583	5.45	Feb. 15	1115	847	6.86

Minimum daily, 0.27 ft<sup>3</sup>/s, Sept. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.65	.40	.41	1.2	e.55	1.5	1.1	1.1	.51	.61	e.39	.45
2	.60	.42	.44	.86	e.55	1.9	1.0	.92	.51	.61	e.39	.42
3	.52	.41	.45	.76	e.55	1.8	1.0	.88	.48	.62	e.39	.39
4	.51	.38	.47	.69	e.52	1.4	1.0	.88	.48	.58	e.39	.36
5	.57	.42	.46	205	e.52	1.5	1.1	.87	.49	.56	e.39	.37
6	.54	.42	.48	39	e.54	14	1.1	.82	e.50	.51	e.40	.41
7	.54	.42	.62	16	e.74	6.4	1.1	.82	e.51	.51	e.40	.43
8	.50	.45	.60	6.9	e1.2	2.3	1.1	.67	e.52	.49	e.40	.43
9	.49	.46	.48	3.3	2.5	1.8	1.2	.56	e.53	.50	e.40	.45
10	.50	.49	.48	e2.3	38	1.6	1.3	.53	e.58	.49	e.40	.50
11	.50	.44	.47	e1.8	90	1.7	1.3	.53	.55	.52	e.41	.55
12	.54	.40	.47	e1.5	485	1.8	1.2	.56	.46	e.58	.42	.56
13	.46	.39	.48	e1.3	331	1.5	1.1	.55	.40	e.52	.41	.61
14	.45	.40	.48	e1.0	91	1.4	1.1	.54	.41	.46	.41	.64
15	.48	.40	.47	e.90	360	1.3	1.1	.56	.38	.38	.44	.61
16	.53	.42	.45	e.80	e150	1.3	1.2	.57	.40	.35	.45	.61
17	.49	.55	.47	e.70	e80	1.3	1.3	.52	.40	.35	.44	.52
18	.46	.61	.48	e.70	e50	1.3	1.4	.51	.43	.34	.44	.54
19	.46	.43	.46	e.65	e30	1.2	1.4	.53	.44	.33	.40	.52
20	.47	.40	.45	e.63	e20	1.3	1.4	.52	.45	.34	.43	.50
21	.50	.37	.46	e.63	e10	1.3	1.4	.52	.48	.34	.39	.37
22	.49	.39	.46	e.63	4.6	1.4	1.4	.53	.47	.36	.44	.36
23	.42	.39	.48	e.63	3.0	5.7	1.4	.53	.49	.36	.41	.28
24	.41	.34	.86	e.63	2.5	1.6	1.4	.52	.49	.37	.43	.31
25	.44	.38	.55	e.63	2.2	1.3	1.5	.53	.49	.36	.46	.29
26	.72	.38	.58	e.63	2.1	1.3	1.5	.54	.51	.38	.34	.27
27	.99	.38	2.5	e.63	1.9	1.2	1.4	.53	.49	.37	.38	.32
28	.48	.39	8.6	e.58	1.7	1.2	1.5	.53	.51	.38	.37	.35
29	.42	.43	81	e.58	1.6	1.1	1.3	.53	.63	.38	.40	.43
30	.46	.42	111	e.58	---	1.1	1.2	.53	.65	.38	.41	e.64
31	.39	---	7.2	e.58	---	1.1	---	.51	---	.38	.41	---
TOTAL	15.98	12.58	223.26	292.72	1762.27	66.6	37.5	19.24	14.64	13.71	12.64	13.49
MEAN	.52	.42	7.20	9.44	60.8	2.15	1.25	.62	.49	.44	.41	.45
MAX	.99	.61	111	205	485	14	1.5	1.1	.65	.62	.46	.64
MIN	.39	.34	.41	.58	.52	1.1	1.0	.51	.38	.33	.34	.27
AC-FT	32	25	443	581	3500	132	74	38	29	27	25	27

e Estimated.

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.82	1.66	2.93	9.58	23.9	18.6	7.56	1.37	.91	.66	.69	.73
MAX	2.36	6.73	10.6	99.5	163	234	149	3.85	2.07	1.59	1.84	2.23
(WY)	1964	1973	1956	1983	1962	1983	1958	1983	1983	1983	1981	1972
MIN	.19	.19	.29	.41	.54	.44	.30	.24	.17	.18	.21	.16
(WY)	1990	1990	1990	1991	1991	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1956 - 1992	
ANNUAL TOTAL	2908.15		2484.63			
ANNUAL MEAN	7.97		6.79		5.68	
HIGHEST ANNUAL MEAN					39.7	
LOWEST ANNUAL MEAN					.47	
HIGHEST DAILY MEAN	1050	Mar 19	485	Feb 12	2040	Mar 2 1983
LOWEST DAILY MEAN	.29	Sep 23	.27	Sep 26	.00	May 20 1965
ANNUAL SEVEN-DAY MINIMUM	.30	Sep 19	.31	Sep 22	.13	Jul 27 1990
INSTANTANEOUS PEAK FLOW			1160	Feb 12	4680	Mar 1 1983
INSTANTANEOUS PEAK STAGE			7.35	Feb 12	14.32	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	5770		4930		4120	
10 PERCENT EXCEEDS	2.4		1.8		4.4	
50 PERCENT EXCEEDS	.53		.53		1.1	
90 PERCENT EXCEEDS	.37		.38		.36	

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.  
 CHEMICAL DATA: Water years 1978 to current year.  
 pH: December 1981 to September 1983.  
 WATER TEMPERATURE: December 1981 to September 1983.

PERIOD OF DAILY RECORD.--  
 pH: December 1981 to September 1983.  
 WATER TEMPERATURE: December 1981 to September 1983.

INSTRUMENTATION.--Water-quality monitor from December 1981 to September 1983.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	
OCT	08...	1310	0.54	2370	7.8	16.5	758	4.2	44	460	120	38	330
NOV	06...	1320	0.45	2390	7.6	12.0	--	--	--	--	--	--	--
DEC	03...	1435	0.47	2240	7.9	7.0	--	--	--	--	--	--	--
JAN	08...	1605	4.4	1390	7.3	11.0	--	--	--	--	--	--	--
FEB	21...	1015	10	1940	7.9	15.5	--	--	620	150	59	160	
MAR	11...	1320	1.8	3150	7.1	15.5	--	--	--	--	--	--	
APR	09...	0830	1.1	3070	7.4	13.5	--	--	--	--	--	--	
MAY	08...	1325	0.63	2860	7.5	19.5	--	--	--	--	--	--	
JUN	11...	0920	0.57	2570	7.7	18.0	--	--	--	--	--	--	
JUL	14...	1145	0.48	2460	8.0	22.0	--	--	--	--	--	--	
AUG	11...	1600	0.39	2250	7.9	21.0	--	--	--	--	--	--	
SEP	09...	1225	0.50	2310	8.0	17.5	--	--	490	130	41	340	

DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD (MG/L AS HCO3)	ALKA-LINITY WAT WH TOT IT FIELD (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	
OCT	08...	60	7	19	517	424	230	360	0.20	46	1470	1400
NOV	06...	--	--	--	--	--	--	--	--	--	1410	--
DEC	03...	--	--	--	--	--	--	--	--	--	1270	--
JAN	08...	--	--	--	--	--	--	--	--	--	810	--
FEB	21...	36	3	8.7	212	174	500	190	0.60	45	1300	1260
MAR	11...	--	--	--	--	--	--	--	--	--	2470	--
APR	09...	--	--	--	--	--	--	--	--	--	2400	--
MAY	08...	--	--	--	--	--	--	--	--	--	1870	--
JUN	11...	--	--	--	--	--	--	--	--	--	1680	--
JUL	14...	--	--	--	--	--	--	--	--	--	1560	--
AUG	11...	--	--	--	--	--	--	--	--	--	1460	--
SEP	09...	59	7	18	532	436	250	490	0.40	39	1490	1610

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	ALA- CHLOR TOTAL RECOVER (UG/L)	AME- TRYNE TOTAL
OCT 08...	2.00	--	--	--	--	--	2000	30	40	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	1.77	7.49	0.110	7.60	2.50	0.560	790	12	820	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 14...	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	2.03	4.39	0.110	4.50	0.280	4.30	2200	20	50	<0.10	<0.10

DATE	ATRA- ZINE WATER UNFLTRD REC (UG/L)	DEETHYL ATRA- ZINE, WATER, WHOLE, TOTAL (UG/L)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L)	BROM- ACIL WATER WHLREC (UG/L)	BUTA- CHLOR WATER WHLREC (UG/L)	BUTYL- ATE WATER WHLREC (UG/L)	CARBOX- IN WATER WHOLE RECOV- ERABLE (UG/L)	CYAN- AZINE TOTAL (UG/L)	CYCLO- ATE WATER WHOLE RECOV- ERABLE (UG/L)	DIPHEN- AMID WATER WHOLE RECOV- ERABLE (UG/L)	HEXAZI- NONE WATER WHOLE RECOV- ERABLE (UG/L)
OCT 08...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--
DEC 03...	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--
FEB 21...	--	--	--	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--
JUN 11...	--	--	--	--	--	--	--	--	--	--	--
JUL 14...	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	<0.1	<0.20	<0.20	<0.20	<0.10	<0.10	<0.20	<0.20	<0.10	<0.10	<0.20

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PROPA- CHLOR WATER WHOLE RECOV. (UG/L)	PRO- PAZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	TER- BACIL WATER WHOLE RECOV. (UG/L)	TRI- FLURA- LIN TOTAL RECOVER (UG/L)	VER- NOLATE WATER WHOLE RECOV. (UG/L)
OCT											
08...	--	--	--	--	--	--	--	--	--	--	--
NOV											
06...	--	--	--	--	--	--	--	--	--	--	--
DEC											
03...	--	--	--	--	--	--	--	--	--	--	--
JAN											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
11...	--	--	--	--	--	--	--	--	--	--	--
APR											
09...	--	--	--	--	--	--	--	--	--	--	--
[B MAY											
08...	--	--	--	--	--	--	--	--	--	--	--
JUN											
11...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
AUG											
11...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA

LOCATION.--Lat 35°01'19", long 120°13'39", SW 1/4 sec.14, T.11 N., R.32 W., San Luis Obispo-Santa Barbara County line, Hydrologic Unit 18060007, on downstream side of bridge on State Highway 166, 1.5 mi downstream from Buckhorn Canyon, and 13 mi northeast of Santa Maria.

DRAINAGE AREA.--886 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to December 1905 (published as Santa Maria River near Santa Maria), October 1959 to current year. Monthly discharge only for October 1903 and July 1904. Yearly estimate for water year 1941 (incomplete), published in WSP 1315-B.

REVISED RECORDS.--WDR CA-71-1: Drainage area. WDR-CA-77-1: 1976.

GAGE.--Water-stage recorder. Elevation of gage is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1959, nonrecording gage at different site and datum.

REMARKS.--Records fair. No regulation upstream from station. Pumping from wells along stream for irrigation of several thousand acres in Upper Cuyama Valley.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,800 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 13.70 ft, from rating curve extended above 4,900 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.85 ft; maximum gage height, 14.74 ft, Mar. 4, 1978; no flow at times in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 6	0845	321	7.85	Mar. 23	2045	217	7.86
Feb. 12	2030	*8,760	*11.35	Mar. 27	2345	301	7.96
Feb. 15	1715	548	8.22	July 13	1730	375	8.04

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.06	.01	4.1	.61	7.2	e8.0	2.5	e1.2	1.1	.84	e.29
2	.05	.05	.01	2.0	.61	7.4	e7.4	2.5	e1.2	1.1	.77	e.29
3	.04	.03	.01	2.3	.62	9.2	e7.2	2.4	e1.2	1.1	.74	e.32
4	.05	.02	.01	2.5	.61	8.1	e6.8	2.5	e1.3	1.1	.61	e.35
5	.06	.02	.00	59	.61	8.0	e6.4	2.5	e1.3	1.1	.56	e.35
6	.07	.01	.00	101	.61	10	e6.0	2.6	e1.3	1.0	.50	e.35
7	.06	.01	.04	19	.61	9.7	5.8	32	e1.3	1.0	.50	e.34
8	.05	.01	.02	7.7	10	9.6	5.4	18	e1.3	1.0	.48	e.30
9	.05	.02	.00	4.4	7.3	8.0	5.3	6.2	1.3	1.1	.42	e.30
10	.03	.02	.00	3.2	15	7.2	4.6	e5.0	1.3	1.1	.42	e.29
11	.05	.01	.00	2.6	289	6.5	4.8	e4.0	1.3	1.2	e.42	.27
12	.04	.00	.00	2.3	1520	6.0	4.7	e3.2	1.2	1.5	e.42	.25
13	.03	.01	.00	2.0	1200	5.6	4.6	e2.8	1.2	68	e.43	.25
14	.03	.01	.00	1.8	290	5.4	4.5	e2.5	1.2	37	e.39	.24
15	.02	.02	.00	1.8	308	5.5	4.4	e2.2	1.2	6.9	e.37	.24
16	.02	.01	.00	1.6	e340	5.2	4.2	e2.0	1.2	4.5	e.38	.25
17	.02	.06	.00	1.4	e200	5.1	4.1	e1.9	1.2	4.2	e.38	.24
18	.02	.04	.00	1.2	e110	5.2	3.9	e1.8	1.2	3.4	e.39	.23
19	.01	.02	.00	1.2	e44	5.1	3.8	e1.7	1.2	2.9	e.42	.23
20	.03	.01	.00	.99	31	5.7	3.8	e1.6	1.2	2.6	e.42	.21
21	.02	.01	.00	.86	21	6.1	3.3	e1.5	1.2	2.3	e.42	.23
22	.04	.01	.00	.78	17	21	3.1	e1.5	1.1	2.0	e.40	.23
23	.05	.00	.00	.70	15	49	3.0	e1.4	1.1	1.6	e.38	.23
24	.05	.00	.00	.69	12	71	3.0	e1.4	1.1	1.6	e.37	.22
25	.07	.00	.00	.69	11	17	2.9	e1.3	1.1	1.4	e.37	.21
26	.20	.00	.00	.69	9.9	28	2.8	e1.3	1.1	1.4	e.35	.21
27	.12	.00	.21	.69	8.8	23	2.7	e1.2	1.1	1.3	e.35	.19
28	.09	.00	.32	.69	8.0	98	2.6	e1.2	1.1	1.2	e.35	.20
29	.08	.01	9.9	.67	7.6	15	2.6	e1.2	1.1	.99	e.35	.20
30	.07	.01	14	.63	---	e10	2.6	e1.2	1.1	.91	e.32	.20
31	.06	---	22	.62	---	e8.8	---	e1.2	---	.87	e.29	---
TOTAL	1.64	0.48	46.53	229.80	4478.88	486.6	134.3	114.3	35.9	158.47	13.81	7.71
MEAN	.053	.016	1.50	7.41	154	15.7	4.48	3.69	1.20	5.11	.45	.26
MAX	.20	.06	22	101	1520	98	8.0	32	1.3	68	.84	.35
MIN	.01	.00	.00	.62	.61	5.1	2.6	1.2	1.1	.87	.29	.19
AC-FT	3.3	1.0	92	456	8880	965	266	227	71	314	27	15

e Estimated.

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.59	2.68	13.4	26.8	83.5	73.9	20.9	5.81	2.77	1.29	.70	1.53
MAX	8.40	23.6	275	467	920	944	214	53.6	23.6	8.87	6.99	22.7
(WY)	1984	1966	1967	1969	1969	1983	1967	1983	1983	1969	1983	1990
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1960	1960	1960	1960	1964	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1960 - 1992
ANNUAL TOTAL	9847.79	5708.42	
ANNUAL MEAN	27.0	15.6	19.2
HIGHEST ANNUAL MEAN			141
LOWEST ANNUAL MEAN			.002
HIGHEST DAILY MEAN	3730 Mar 19	1520 Feb 12	9390 Feb 25 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Nov 12	.00 Oct 1 1959
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Dec 9	.00 Oct 1 1959
INSTANTANEOUS PEAK FLOW		8760 Feb 12	17800 Feb 25 1969
INSTANTANEOUS PEAK STAGE		11.35 Feb 12	13.70 Dec 25 1969
ANNUAL RUNOFF (AC-FT)	19530	11320	13880
10 PERCENT EXCEEDS	9.9	9.9	12
50 PERCENT EXCEEDS	.21	1.1	.40
90 PERCENT EXCEEDS	.00	.01	.00





11138500 SISQUOC RIVER NEAR SISQUOC, CA

LOCATION.--Lat 34°50'23", long 120°10'02", in Sisquoc Grant, Santa Barbara County, Hydrologic Unit 18060008, on left bank 2.6 mi upstream from La Brea Creek and 7 mi east of Sisquoc.

DRAINAGE AREA.--281 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1943 to current year. October 1929 to September 1933, at site 0.2 mi downstream; low-flow records not equivalent owing to diversion immediately upstream. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 624.30 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WSP 1735 for history of changes prior to Aug. 24, 1951.

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, 23,200 ft<sup>3</sup>/s, Dec. 6, 1966, gage height, 15.75 ft, from rating curve extended above 1,700 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 10.08 and 15.75 ft; no flow Nov. 11-18, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 11,000 ft<sup>3</sup>/s, gage height, 8.1 ft, from high-water mark in gage well, at site in use 1929-33, from rating curve extended above 2,800 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 5	2045	391	3.10	Mar. 6	1100	292	2.80
Feb. 12	1215	*8,150	*9.39	Mar. 27	0730	387	3.09

Minimum daily, 0.11 ft<sup>3</sup>/s, Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.30	.57	11	16	122	159	e38	14	3.6	3.4	e1.3
2	.27	.29	.33	7.3	16	124	145	e36	12	3.6	3.2	e1.4
3	.20	.22	.33	6.1	16	130	135	e36	13	3.6	2.8	e1.3
4	.27	.22	.33	4.4	15	117	128	e36	12	3.6	2.3	e1.3
5	.32	.24	.32	134	15	113	122	e32	11	3.4	2.3	e1.2
6	.35	.25	.32	193	16	232	116	e34	11	3.1	2.3	e1.1
7	.30	.19	.45	99	25	184	110	49	13	2.8	2.2	e1.3
8	.19	.24	.45	81	35	160	103	46	12	2.8	2.0	e1.4
9	.21	.45	.38	58	39	145	98	37	12	2.8	2.0	e1.5
10	.15	.54	.37	46	242	161	95	32	12	2.7	1.8	e1.3
11	.19	.40	.35	38	1010	137	89	30	12	3.5	1.8	1.0
12	.27	.24	.36	32	2310	126	85	30	11	5.5	1.7	.93
13	.11	.23	.37	28	892	118	81	29	11	7.9	1.6	.91
14	.14	.32	.38	26	518	113	77	28	10	8.3	1.6	1.1
15	.17	.35	.34	23	861	108	74	26	10	5.6	1.7	1.1
16	.20	.35	.37	21	654	104	71	25	10	4.8	1.6	1.1
17	.28	.54	.40	20	502	100	67	22	9.7	5.4	e1.5	1.0
18	.26	.63	.48	19	403	97	e64	21	9.1	4.9	e1.4	1.1
19	.21	.50	.51	18	341	94	e62	20	8.5	4.4	e1.3	1.1
20	.13	.53	.56	17	295	95	e60	20	8.2	4.2	e1.3	1.2
21	.20	.57	.51	17	268	116	e57	20	7.5	3.9	e1.2	1.3
22	.32	.47	.51	17	237	121	e55	18	6.9	3.0	e1.2	1.3
23	.32	.43	.51	17	e230	239	e53	17	6.2	3.1	e1.3	1.4
24	.17	.47	.54	17	e220	236	e52	16	6.1	3.1	e1.1	1.3
25	.15	.54	.57	17	e190	193	e48	16	5.9	3.7	e1.2	1.2
26	.64	.50	.61	17	e165	183	e46	15	5.4	3.8	e1.3	1.2
27	.66	.59	.90	17	148	315	e45	15	4.9	4.0	e1.2	1.2
28	.32	.58	1.9	16	139	232	e43	15	4.3	3.9	e1.1	1.2
29	.32	.86	5.8	16	131	191	e43	16	4.2	3.9	e1.1	1.3
30	.44	1.2	80	16	---	173	e42	15	3.8	3.6	e1.2	1.2
31	.34	---	28	16	---	185	---	14	---	3.4	e1.3	---
TOTAL	8.47	13.24	127.82	1064.8	9949	4764	2425	804	276.7	125.9	53.0	36.24
MEAN	.27	.44	4.12	34.3	343	154	80.8	25.9	9.22	4.06	1.71	1.21
MAX	.66	1.2	80	193	2310	315	159	49	14	8.3	3.4	1.5
MIN	.11	.19	.32	4.4	15	94	42	14	3.8	2.7	1.1	.91
AC-FT	17	26	254	2110	19730	9450	4810	1590	549	250	105	72

e Estimated.

## SANTA MARIA RIVER BASIN

11138500 SISQUOC RIVER NEAR SISQUOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.58	7.07	27.8	71.1	138	132	88.7	28.4	10.2	4.10	2.24	2.39
MAX	46.0	80.5	555	1457	1731	871	975	208	80.1	33.9	17.4	17.9
(WY)	1968	1966	1967	1969	1969	1983	1958	1967	1983	1983	1983	1967
MIN	.13	.15	.20	.42	.97	1.44	.55	.34	.73	.32	.16	.20
(WY)	1990	1990	1990	1991	1949	1948	1990	1990	1990	1989	1989	1989

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1944 - 1992	
ANNUAL TOTAL	13585.56		19648.17			
ANNUAL MEAN	37.2		53.7		42.4	
HIGHEST ANNUAL MEAN					361	
LOWEST ANNUAL MEAN					1.07	
HIGHEST DAILY MEAN	2400	Mar 19	2310	Feb 12	14800	Jan 25 1969
LOWEST DAILY MEAN	.11	Oct 13	.11	Oct 13	.00	Nov 11 1967
ANNUAL SEVEN-DAY MINIMUM	.18	Oct 10	.18	Oct 10	.00	Nov 11 1967
INSTANTANEOUS PEAK FLOW			8150	Feb 12	23200	Dec 6 1966
INSTANTANEOUS PEAK STAGE			9.39	Feb 12	15.75	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	26950		38970		30720	
10 PERCENT EXCEEDS	82		138		66	
50 PERCENT EXCEEDS	.87		5.4		2.3	
90 PERCENT EXCEEDS	.30		.32		.80	





11140000 SISQUOC RIVER NEAR GAREY, CA

LOCATION.--Lat 34°53'38", long 120°18'20", in SW 1/4 sec.36, T.10 N., R.33 W., Santa Barbara County, Hydrologic Unit 18060008, on downstream side of Santa Maria Mesa Road bridge near left bank, 0.6 mi northeast of Garey, and 3.7 mi downstream from Tepusquet Creek.

DRAINAGE AREA.--471 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to current year. Records for water year 1941 incomplete; yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

REVISED RECORDS.--WSP 1011: 1941, 1943. WSP 1928: Drainage area.

GAGE.--Two water-stage recorders. Datum of main gage is 354.8 ft, 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.

REMARKS.--Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of about 7,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,600 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.16 ft, from rating curve extended above 22,000 ft<sup>3</sup>/s; maximum gage height, 13.50 ft, Dec. 6, 1966; no flow for many days in each year.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 7	1815	3,630	7.26	Mar. 6	0745	488	6.26
Feb. 12	1345	*8,550	*8.51	Mar. 27	0930	597	6.26

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	131	173	15	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	124	142	14	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	121	124	11	.00	.00	.00	.00
4	.00	.00	.00	e.00	.00	121	113	11	.00	.00	.00	.00
5	.00	.00	.00	e180	.00	124	106	12	.00	.00	.00	.00
6	.00	.00	.00	e300	.00	284	98	13	.00	.00	.00	.00
7	.00	.00	.00	e140	.00	153	92	27	.00	.00	.00	.00
8	.00	.00	.00	53	e.70	113	83	52	.00	.00	.00	.00
9	.00	.00	.00	32	e7.0	96	77	35	.00	.00	.00	.00
10	.00	.00	.00	3.8	e80	137	75	20	.00	.00	.00	.00
11	.00	.00	.00	.00	1630	107	71	13	.00	.00	.00	.00
12	.00	.00	.00	.00	3420	92	69	12	.00	.00	.00	.00
13	.00	.00	.00	.00	2260	83	61	12	.00	.00	.00	.00
14	.00	.00	.00	.00	254	79	60	9.5	.00	.00	.00	.00
15	.00	.00	.00	.00	1450	77	58	7.6	.00	.00	.00	.00
16	.00	.00	.00	.00	820	74	55	5.1	.00	.00	.00	.00
17	.00	.00	.00	.00	e600	70	50	3.4	.00	.00	.00	.00
18	.00	.00	.00	.00	e460	66	47	2.2	.00	.00	.00	.00
19	.00	.00	.00	.00	e400	59	43	1.3	.00	.00	.00	.00
20	.00	.00	.00	.00	e340	55	40	.91	.00	.00	.00	.00
21	.00	.00	.00	.00	e300	80	36	.92	.00	.00	.00	.00
22	.00	.00	.00	.00	e260	98	35	.55	.00	.00	.00	.00
23	.00	.00	.00	.00	e240	311	33	.18	.00	.00	.00	.00
24	.00	.00	.00	.00	e230	321	31	.03	.00	.00	.00	.00
25	.00	.00	.00	.00	e210	206	28	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	e200	158	25	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	149	432	23	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	135	304	21	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	132	218	15	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	181	15	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	211	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	708.80	13577.70	4686	1899	278.69	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	22.9	468	151	63.3	8.99	.000	.000	.000	.000
MAX	.00	.00	.00	300	3420	432	173	52	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	55	15	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1410	26930	9290	3770	553	.00	.00	.00	.00

e Estimated.

## SANTA MARIA RIVER BASIN

11140000 SISQUOC RIVER NEAR GAREY, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.14	2.91	18.4	70.6	147	146	74.9	13.8	1.86	.19	.052	.11
MAX	3.88	39.0	506	1531	2165	1833	1072	211	53.0	9.09	1.40	4.00
(WY)	1968	1966	1967	1969	1969	1983	1958	1983	1983	1983	1967	1967
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1942	1942	1944	1944	1947	1947	1947	1946	1945	1942	1942	1942

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1942 - 1992	
ANNUAL TOTAL	16647.82		21150.19			
ANNUAL MEAN	45.6		57.8		39.1	
HIGHEST ANNUAL MEAN					397	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	1700	Mar 27	3420	Feb 12	13200	Feb 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1941
INSTANTANEOUS PEAK FLOW			8550	Feb 12	33600	Mar 1 1983
INSTANTANEOUS PEAK STAGE			8.51	Feb 12	13.50	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	33020		41950		28310	
10 PERCENT EXCEEDS	59		131		30	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11140600 BRADLEY DITCH NEAR DONOVAN ROAD, AT SANTA MARIA, CA

LOCATION.--Lat 34°58'00", long 120°25'00", in NE 1/4 NE 1/4 sec.11, T.10 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on left bank 250 ft upstream from bridge on Donovan Road and 0.2 mi east of U.S. Highway 101 in Santa Maria.

DRAINAGE AREA.--5.47 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to September 1978, October 1979 to September 1992 (discontinued).

GAGE.--Water-stage recorder on concrete-lined channel. Elevation of gage is 225 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to September 1978, at site 50 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records fair, except Apr. 9 to May 6, which are poor. Extensive channel modification in 1979 water year widened the concrete-lined channel. No regulation upstream from station. Many diversions upstream from station for irrigation during growing season, and some waste water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 539 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 4.59 ft, from rating curve extended above 69 ft<sup>3</sup>/s on basis of slope-conveyance studies of discharge; maximum gage height, 5.85 ft, Mar. 4, 1978; no flow for several days in most years.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	0815	142	2.81	Feb. 15	0400	*339	*3.81
Jan. 5	0600	148	2.85				

Minimum daily, 0.01 ft<sup>3</sup>/s, Nov. 25, Jan. 10, Feb. 22, and Mar. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.77	.19	.02	.19	.57	.19	.33	1.7	1.0	.68	.98
2	1.3	.82	.12	.11	.27	1.1	1.0	.89	1.0	1.1	.74	2.0
3	.48	1.3	.71	2.3	.08	.11	.42	1.0	.39	.85	.34	1.6
4	.11	1.1	.72	.11	.61	.32	.29	.94	.29	1.6	.11	1.3
5	.70	.27	.79	54	.99	.93	.60	.29	.97	2.1	1.0	1.7
6	1.1	.28	.71	3.1	.61	1.4	.91	.72	.52	1.4	.98	1.7
7	.04	.79	1.9	3.9	.25	.79	.92	.74	.41	1.6	.92	2.1
8	.33	.77	.13	.14	.07	.10	1.3	.71	.21	.50	.71	1.0
9	.81	.85	.47	.02	.61	.04	.96	.16	1.8	.82	.29	1.7
10	1.7	1.2	1.1	.01	10	.07	.99	.36	1.2	2.2	.46	1.6
11	.70	.18	.58	.06	2.8	.40	.93	.44	.62	1.9	.41	1.5
12	1.1	.26	.61	.02	56	.11	.82	.55	.84	3.7	1.0	.62
13	.33	.76	1.3	.29	85	.13	.13	.32	.91	1.7	1.6	2.5
14	.05	.89	.27	.21	1.9	1.2	.18	.91	.37	.32	.98	.81
15	.79	1.6	.09	.16	92	.86	.54	1.2	.91	.20	1.1	.79
16	1.3	.95	.13	.40	5.9	.01	.62	1.0	.49	.26	.72	.74
17	.61	2.3	.27	.58	.44	.41	.38	.91	1.8	.15	.59	1.1
18	.77	.04	.74	.22	.10	1.2	.11	.40	1.0	.29	.54	1.0
19	.13	.24	.23	.56	.02	.87	.34	.11	1.7	.32	.54	1.2
20	.60	.53	.52	.62	.87	.38	.09	1.3	2.5	.34	.99	.73
21	.45	.85	1.3	.46	.04	.79	.26	2.1	1.6	.60	1.9	.84
22	.51	.67	.21	.68	.01	2.0	.50	1.5	.84	.54	.87	2.8
23	1.3	.51	.45	1.0	.04	.96	.93	1.8	.72	.25	2.0	1.0
24	1.2	.03	.78	.48	.03	.04	1.4	1.2	.65	.33	.87	1.4
25	.63	.01	.36	.73	.03	.03	.53	.10	3.2	.28	.85	1.7
26	3.4	.34	.17	.24	.07	.66	.74	.07	1.5	.96	2.1	2.1
27	.45	.77	13	.47	.03	.43	.34	1.4	1.8	.87	1.4	1.1
28	.18	.04	6.1	.69	.43	.18	.27	1.0	.84	.46	2.4	.58
29	.54	.09	32	.66	.26	.04	.46	1.5	1.5	.76	1.7	2.0
30	.07	.71	6.4	.48	---	.20	.54	.83	1.3	.36	.76	1.2
31	.46	---	.07	.89	---	.06	---	.58	---	.14	1.1	---
TOTAL	22.17	19.92	72.42	73.61	259.65	16.39	17.69	25.36	33.58	27.90	30.65	41.39
MEAN	.72	.66	2.34	2.37	8.95	.53	.59	.82	1.12	.90	.99	1.38
MAX	3.4	2.3	32	54	92	2.0	1.4	2.1	3.2	3.7	2.4	2.8
MIN	.03	.01	.07	.01	.01	.01	.09	.07	.21	.14	.11	.58
AC-FT	44	40	144	146	515	33	35	50	67	55	61	82

## 11140600 BRADLEY DITCH NEAR DONOVAN ROAD, AT SANTA MARIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.90	.80	1.33	1.92	3.66	3.39	1.02	.73	.78	.95	1.04	.91
MAX	4.17	2.25	3.66	10.3	19.0	11.5	3.74	1.71	2.22	1.97	1.72	2.64
(WY)	1982	1973	1975	1983	1978	1991	1982	1987	1987	1983	1987	1976
MIN	.036	.25	.26	.081	.13	.32	.15	.14	.16	.17	.14	.11
(WY)	1971	1976	1976	1971	1974	1971	1977	1971	1977	1978	1978	1978

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1971 - 1992	
ANNUAL TOTAL	605.90		640.73			
ANNUAL MEAN	1.66		1.75		1.44	
HIGHEST ANNUAL MEAN					3.48	
LOWEST ANNUAL MEAN					.38	
HIGHEST DAILY MEAN	132	Mar 18	92	Feb 15	191	Feb 10 1978
LOWEST DAILY MEAN	.00	Mar 7	.01	Nov 25	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.08	Jan 10	.04	Feb 21	.00	Dec 3 1970
INSTANTANEOUS PEAK FLOW			339		539	
INSTANTANEOUS PEAK STAGE			3.81		4.59	
ANNUAL RUNOFF (AC-FT)	1200		1270		1050	
10 PERCENT EXCEEDS	1.3		1.8		2.0	
50 PERCENT EXCEEDS	.43		.71		.59	
90 PERCENT EXCEEDS	.06		.10		.04	

11141050 ORCUTT CREEK NEAR ORCUTT, CA

LOCATION.--Lat 34°53'01", long 120°29'38", in SW 1/4 SE 1/4 sec.6, T.9 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on right bank 10 ft upstream from Black Road bridge, 0.2 mi northeast of State Highway 1, and 3.0 mi northwest of Orcutt.

DRAINAGE AREA.--18.5 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1992 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records 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, 1,830 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 7.53 ft, from floodmarks, from rating curve extended above 10 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 4.83 and 7.53 ft; maximum gage height, 8.56 ft, Feb. 12, 1992; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25 ft<sup>3</sup>/s and maximum (\*).

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 28	1145	108	4.96	Feb. 12	0715	*256	*8.56
Jan. 5	0330	134	5.85	Feb. 15	0530	185	6.86
Feb. 5	1145	44	4.38				

No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.03	.02	.00	.20	1.9	.18	.06	.08	.04	.01	.00
2	.01	.03	.01	.01	.31	2.3	.13	.06	.08	.20	.07	.00
3	.02	.18	.02	.52	.39	2.2	.21	.06	.08	.04	.00	.00
4	.05	.79	.08	.16	.33	1.9	.21	.05	.08	.06	.00	.00
5	.04	.02	.03	1.6	2.8	1.7	.24	.08	.08	.13	.00	.00
6	.01	.02	.27	.07	.52	1.5	.19	.08	.09	.24	.00	.00
7	.05	.17	.40	.03	.70	1.3	.07	.08	.09	.12	.00	.00
8	.23	.03	.04	.08	.96	1.2	.16	.20	e.09	.07	.00	.00
9	.02	.07	.03	.08	1.2	.80	.25	.07	e.06	.01	.00	.00
10	.01	.06	.22	.09	1.5	.59	.27	.08	e.05	.02	.00	.00
11	.01	.27	.36	.07	1.8	.65	.29	.12	.04	.05	.00	.00
12	.03	.03	.36	.07	e60	e.63	.03	.11	.02	.19	.00	.00
13	.02	.03	.60	.12	e47	e1.1	.12	.08	.05	.05	.00	.00
14	.02	.37	.36	.16	7.0	e1.1	.06	.07	.05	.02	.00	.00
15	.00	.15	.58	.16	e75	e1.1	.09	.10	.04	.00	.00	.00
16	.02	.04	.39	.15	35	e1.2	.20	.10	.10	.00	.00	.00
17	.00	.21	.16	.16	13	e1.1	.35	.07	.06	.00	.00	.00
18	.02	.04	.08	.14	6.6	e1.4	.03	.08	.05	.01	.00	.00
19	.01	.02	.12	.19	6.0	e1.3	.04	.07	.04	.00	.00	.00
20	.03	.01	.26	.20	5.4	e1.4	.04	.07	.05	.00	.00	.01
21	.01	.01	.32	.18	3.8	e1.5	.04	.07	.04	.00	.00	.01
22	.01	.01	.59	.24	3.3	e1.7	.04	.08	.02	.00	.00	.01
23	.00	.01	.37	.25	3.0	e1.2	.05	.10	.06	.00	.00	.01
24	.00	.02	.36	.24	3.4	e.63	.05	.09	.05	.00	.00	.01
25	.01	.19	.08	.23	3.7	e.30	.08	.09	.07	.00	.00	.11
26	.19	.03	.17	.23	2.9	e.30	.05	.09	.07	.01	.00	.00
27	.05	.03	8.1	.30	2.6	.34	.05	.08	.08	.16	.00	.00
28	.02	.02	19	.24	2.3	.20	.05	.08	.12	.01	.00	.01
29	.02	.02	33	.38	2.1	.18	.05	.08	.06	.03	.00	.01
30	.02	.03	16	.29	---	.26	.05	.09	.04	.00	.00	.01
31	.02	---	.77	.24	---	.29	---	.09	---	.00	.00	---
TOTAL	0.95	2.94	83.15	6.88	292.81	33.27	3.67	2.63	1.89	1.46	0.08	0.19
MEAN	.031	.098	2.68	.22	10.1	1.07	.12	.085	.063	.047	.003	.006
MAX	.23	.79	33	1.6	75	2.3	.35	.20	.12	.24	.07	.11
MIN	.00	.01	.01	.00	.20	.18	.03	.05	.02	.00	.00	.00
AC-FT	1.9	5.8	165	14	581	66	7.3	5.2	3.7	2.9	.2	.4

e Estimated.

11141050 ORCUTT CREEK NEAR ORCUTT, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1992, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.078	.21	.82	1.46	3.20	6.38	.62	.22	.14	.097	.10	.088
MAX	.29	.63	2.68	12.2	13.7	41.2	3.17	.77	.43	.29	.23	.18
(WY)	1984	1983	1992	1983	1983	1983	1983	1988	1988	1989	1983	1983
MIN	.000	.016	.073	.040	.070	.059	.020	.031	.024	.008	.003	.006
(WY)	1990	1985	1990	1985	1984	1989	1990	1986	1984	1990	1992	1992

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR		FOR 1992 WATER YEAR		WATER YEARS 1983 - 1992	
ANNUAL TOTAL	355.56		429.92		1.11	
ANNUAL MEAN	.97		1.17		6.06 1983	
HIGHEST ANNUAL MEAN					.090 1990	
LOWEST ANNUAL MEAN						
HIGHEST DAILY MEAN	77	Mar 18	75	Feb 15	582	Mar 1 1983
LOWEST DAILY MEAN	.00	Mar 3	.00	Oct 1	.00	Oct 1 1982
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 6	.00	Jul 19	.00	Oct 1 1982
INSTANTANEOUS PEAK FLOW			256	Feb 12	1830	Mar 1 1983
INSTANTANEOUS PEAK STAGE			8.56	Feb 12		
ANNUAL RUNOFF (AC-FT)	705		853		806	
10 PERCENT EXCEEDS	.36		1.3		.60	
50 PERCENT EXCEEDS	.03		.07		.06	
90 PERCENT EXCEEDS	.00		.00		.01	



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-flow or floodflow 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 1992

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Bristol Lake basin							
10253000	Gourd Creek near Ludlow, CA	Lat 34°40'35", long 116°01'20", in SW 1/4 sec.23, T.7 N., R.9 E., San Bernardino County, Hydrologic Unit 18090208, at culvert on U.S. Highway 66, 8.5 mi southeast of Ludlow.	0.30	1959-74, 1976-92	2-12-92	11.77	21.7
10261800	Beacon Creek at Helendale, CA	Lat 34°45'00", long 117°18'53", in SE 1/4 sec.29, T.8 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, at culvert on county road (formerly U.S. Highways 66 and 91), 0.6 mi northeast of Helendale.	.72	1959-60, 1961-67*, 1968-69, 1976-92	2-12-92	11.85	a
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, 4.3 mi east of Barstow.	.24	1956-66, 1967-73*, 1976-92	2-12-92	8.20	2.0
Antelope Valley							
10263900	Buckhorn Creek near Valyermo, CA	Lat 34°20'35", long 117°55'13", in SW 1/4 sec.15, T.3 N., R.10 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 2, Angeles National Forest, 8.1 mi southwest of Valyermo.	.48	1961-66*, 1967-69, 1971-73, 1977-92	1-12-92	2.25	16
10264503	Barrel Springs Tributary at California Aqueduct Crossing, near Palmdale, CA	Lat 34°31'56", long 118°04'32", in NW 1/4 SW 1/4 sec.7, T.5 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on California Aqueduct, 0.25 mi upstream of Barrel Springs, and 3.5 mi southeast of Palmdale.	.80	1989-92	2-12-92	10.51	67
10264504	Lake Palmdale Tributary at Highway 14, near Palmdale, CA	Lat 34°31'47", long 118°06'47", in NW 1/4 SW 1/4 sec.11, T.5 N., R.12 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 14, 1.75 mi upstream of Lake Palmdale, and 3.25 mi south of Palmdale.	.34	1989-92	2-12-92	3.80	7.5

a Peak discharge indeterminate.

\* Operated as a continuous-record station.

Annual maximum discharge at crest-stage partial-record stations during water year 1992--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Antelope Valley--Continued							
10264520	Amaragosa Creek Tributary near Leona Valley (formerly "near Palmdale"), CA	Lat 34°37'51", long 118°19'32", in SE 1/4 SE 1/4 sec.2, T.6 N., R.14 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on Elizabeth Lake Road, 2.4 mi northwest of Leona Valley, and 12.5 mi northwest of Palmdale.	0.05	1959-73, 1989-92	2-12-92	4.67	5.3
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, 8.5 mi northwest of Fairmont.	3.60	1959-64, 1965-73*, 1974, 1978-92	2-12-92	12.16	245
10264610	Horned Toad Hills Creek near Mojave, CA	Lat 35°05'19", long 118°11'01", in NW 1/4 SW 1/4 sec.32, T.12 N., R.12 W., Kern County, Hydrologic Unit 18090206, at culvert on Southern Pacific Railroad, 1.5 mi north of junction of State Highways 14 and 58, and 2.2 mi north of Mojave.	.10	1989-92	2-13-92	7.15	20
10264650	Bissell Hills Creek at Edwards Air Force Base, CA	Lat 34°53'47", long 117°56'40", in SE 1/4 SW 1/4 sec.4, T.9 N., R.10 W., Kern County, Hydrologic Unit 18090206, at culvert on Rosamond Boulevard, 1.75 mi south of Edwards Air Force Base.	.76	1989-92	2-13-92	8.09	2.0
10264680	Mescal Creek Tributary at Big Pines, CA	Lat 34°22'28", long 117°41'59", in NW 1/4 SE 1/4 sec.3, T.3 N., R.8 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on Angeles Crest Highway 0.7 mi southwest of Big Pines (Angeles National Forest).	.06	1961-73, 1989-92	2-12-92	4.79	9.9
Franklin Creek basin							
11119530	Franklin Creek at Carpinteria, CA	Lat 34°24'17", long 119°31'05", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on right bank 20 ft downstream from Malibu Drive bridge, 0.5 mi north of Carpinteria, and 0.9 mi upstream from mouth.	1.81	1970-78*, 1981-92	2-12-92	2.95	566
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, 1981-92	2-12-92	6.35	82

\* Operated as a continuous-record station.  
e Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1992--Continued

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Santa Ynez River basin--Continued							
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	1972-75*, 1976-92	2-12-92	a	a
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, 1980-92	2-12-92	1.84	95

\* Operated as a continuous-record station.  
a Peak discharge indeterminate.

## Miscellaneous sites

Discharge measurements in the following table were made at miscellaneous sites throughout the area covered by this volume.

Discharge measurements made at miscellaneous sites during water year 1992

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
Antelope Valley						
3428321175122	Big Rock Creek at Big Rock Siphon, near Valyermo, CA	Lat 34°28'32", long 117°51'22", in NE 1/4 SE 1/4 sec.31, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, at Big Rock Creek Siphon Crossing, and 2.1 mi north of Valyermo.	--		6-12-92	30.5
3431161175159	Big Rock Wash at Power Line, near Llano, CA	Lat 34°31'16", long 117°51'59", in SW 1/4 NW 1/4 sec.17, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, at Power Line Crossing, 0.85 mi west of 165th Street East, and 2.1 north west of Llano.	--		6-11-92	0.63
10263775	Big Rock Wash at Southern Pacific Railroad, near Llano, CA	Lat 34°32'00", long 117°50'41", in NE 1/4 SW 1/4 sec.8, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, at Southern Pacific Railroad Crossing, 0.75 mi northwest of junction with 165th Street East, and 2.4 mi northwest of Llano.	53.9	1990-91	10-1-91 11-12-91 12-4-91 1-13-92 2-11-92 3-12-92 6-11-92	0 0 0 0 130 12.2 0
10263780	Big Rock Wash at Avenue "T", near Llano, CA	Lat 34°32'33", long 117°50'52", in SW 1/4 SW 1/4 sec.5, T.5 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, at road fords on Avenue "T", 0.8 mi west of 165th Street East, and 3 mi northwest of Llano.	54.2	1990-91	10-1-91 11-12-91 12-4-91 1-13-92 2-11-92 3-12-92 5-15-92 6-11-92	0 0 0 0 91.1 10.4 42.4 0
Santa Maria River basin						
345727120375401	Green Canyon Creek at Main Street, near Guadalupe, CA	Lat 34°57'27", long 120°37'54", Santa Barbara County, Hydrologic Unit 180060008, at culvert on West Main Street, 3.6 mi southwest of Guadalupe. Tributary to Santa Maria River.	--	1984-91	10-8-91 11-6-91 12-3-91 1-7-92 2-11-92 3-11-92 4-9-92 4-16-92 5-5-92 6-8-92 7-14-92 8-10-92 8-27-92 9-9-92	10.5 7.86 10.4 34.01 5.87 4.45 10.2 12.2 12.6 5.94 6.74 12.1 10.7 8.56

SANTA MARIA RIVER BASIN

345556120274001 LA BREA RECHARGE POND AT SANTA MARIA, CA

LOCATION.--Lat 34°55'56", long 120°27'40", unsurveyed, Santa Barbara County, Hydrologic Unit 18060008, at inflow structure of recharge pond, 2.1 mi southwest of Santa Maria.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
FEB 27...	0835	132	18.0	16.0	--	--	--	--	--	--
MAR 16...	1230	249	18.3	--	--	--	--	--	--	--
APR 09...	1505	336	18.8	22.0	--	--	--	--	--	--
17...	0815	742	8.7	18.5	290	71	27	44	25	1

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3	ALKA- LINITY WAT WH TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
FEB 27...	--	--	--	--	--	--	--	70
MAR 16...	--	--	--	--	--	--	--	169
APR 09...	--	--	--	--	--	--	--	217
17...	3.3	140	133	210	30	0.20	11	494

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
FEB 27...	--	--	--	--	--	--	--	--	--
MAR 16...	--	--	--	--	--	--	--	--	--
APR 09...	--	--	--	--	--	--	--	--	--
17...	477	0.67	<0.010	0.130	0.010	0.030	130	<3	<1

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.--

CHEMICAL DATA: Water years 1986 to September 1992 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CAC03)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
APR 16...	1215	12	2110	8.2	18.0	765	8.4	89	940	210	100	130
AUG 27...	0920	11	2340	8.1	17.0	764	7.8	81	1100	240	110	150
DATE	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE WATER WH IT FIELD (MG/L AS HCO3)	ALKA-LINITY WAT WH TOT IT FIELD (MG/L AS CAC03)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
APR 16...	23	2	5.8	339	278	570	130	0.20	30	1580	1470	2.15
AUG 27...	24	2	5.9	432	354	700	170	0.60	30	1750	1620	2.38
DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALA-CHLOR TOTAL RECOVER (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
APR 16...	28.5	0.540	29.0	0.320	0.400	250	10	40	<1	<1.0	<0.10	<0.1
AUG 27...	--	--	--	--	--	300	<10	70	<1	<1.0	<0.10	<0.1
DATE	AME-TRYNE TOTAL	ATRA-ZINE WATER UNFLTRD REC (UG/L)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L)	BROM-ACIL WATER WHLREC (UG/L)	BUTA-CHLOR WATER WHLREC (UG/L)	BUTYL-ATE WATER WHLREC (UG/L)	CARBOX-IN WATER WHOLE RECOV-ERABLE (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-PYRIFOS TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL (UG/L)	CYCLO-ATE WATER WHOLE RECOV-ERABLE (UG/L)
APR 16...	<0.10	<0.1	<0.20	<0.20	<0.20	<0.10	<0.10	<0.20	<1.0	0.57	<0.20	<0.10
AUG 27...	<0.10	<0.1	<0.20	<0.20	<0.20	<0.10	<0.10	<0.20	<1.0	0.20	<0.20	<0.10
DATE	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DEF TOTAL (UG/L)	DI-AZINON, TOTAL (UG/L)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DIPHEN-AMID WATER WHOLE RECOV-ERABLE (UG/L)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L)	
APR 16...	9.1	23	8.3	<0.01	0.06	0.7	<0.10	<0.01	<0.1	1.0	<0.01	<0.01
AUG 27...	2.3	27	14	<0.01	0.06	1.1	<0.10	<0.01	<0.1	2.3	<0.01	<0.01

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	HEXAZI- NONE WATER RECOV- ERABLE (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PARA- THION, TOTAL (UG/L)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG)
APR 16...	<0.1	<0.1	<0.20	<0.1	0.01	<1.0	<0.01	<0.20	<0.10	<0.1	<0.01	<1.00
AUG 27...	<0.1	<0.1	<0.20	<0.1	<0.01	<0.5	<0.01	<0.20	<0.10	<0.1	<0.01	<1.00
DATE	PHORATE TOTAL (UG/L)	PROME- TONE TOTAL (UG/L)	PROME- TRYNE TOTAL (UG/L)	PROPA- CHLOR WATER WHOLE RECOV. (UG/L)	PRO- PAZINE TOTAL (UG/L)	SIME- TRYNE TOTAL (UG/L)	SIMA- ZINE TOTAL (UG/L)	TER- BACIL WATER WHOLE RECOV. (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL RECOVER (UG/KG)	TRI- FLURA- LIN TOTAL RECOVER (UG/L)	TOTAL TRI- THION (UG/L)	VER- NOLATE WATER WHOLE RECOV. (UG/L)
APR 16...	<0.01	<0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	<10	<0.10	<0.01	<0.10
AUG 27...	<0.01	<0.20	0.60	<0.10	<0.10	<0.10	0.20	<0.20	<10	<0.10	<0.01	<0.10

## 11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA

LOCATION.--Lat 33°29'54", long 117°39'54", on line between secs.1 and 12, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on left bank 30 ft downstream from Del Obispo Street bridge in San Juan Capistrano.

DRAINAGE AREA.--54.1 mi<sup>2</sup>.

PERIOD OF RECORD.--

SEDIMENT RECORDS: Water years 1971-78, December 1983 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1970 to September 1977, December 1983 to September 1984.

SUSPENDED-SEDIMENT DISCHARGE: October 1970 to September 1977, December 1983 to September 1984.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	TEMPER- ATURE WATER (DEG C)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM	SED. SUSP. FALL DIAM. % FINER THAN .004 MM	SED. SUSP. FALL DIAM. % FINER THAN .008 MM
OCT								
17...	1200	0.31	27.0	10	0.01	--	--	--
NOV								
13...	1200	0.43	23.0	39	0.05	--	--	--
DEC								
26...	1300	0.37	19.0	10	0.01	--	--	--
30...	1300	8.7	15.5	255	6.0	--	--	--
JAN								
31...	1215	0.30E	20.0	14	0.01	--	--	--
FEB								
07...	1000	60	14.5	5570	902	--	--	--
07...	1010	148	14.5	7820	3120	--	--	--
07...	1140	284	15.0	10600	8130	35	36	37
07...	1145	260	15.0	11100	7790	--	--	--
12...	2140	1200	13.0	13000	42100	20	24	26
12...	2155	992	13.0	10600	28400	--	--	--
15...	2015	606	12.5	5050	8260	20	21	24
15...	2025	540	12.5	5250	7650	--	--	--
28...	1230	1.1	23.5	4	0.01	--	--	--
MAR								
16...	1300	7.1	22.5	31	0.59	--	--	--
21...	1345	169	17.5	1250	570	32	36	38
MAY								
07...	1305	1.5	24.5	6	0.02	--	--	--
JUN								
11...	1615	1.8	27.5	31	0.15	--	--	--
JUL								
24...	1300	0.25	29.5	1	0.00	--	--	--
SEP								
02...	1245	0.10	29.0	33	0.01	--	--	--

SAN JUAN CREEK BASIN

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	SED. SUSP. FALL DIAM.	SED. SUSP. FALL DIAM.	SED. SUSP. SIEVE DIAM.					
	% FINER THAN .016 MM	% FINER THAN .031 MM	% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM	% FINER THAN 1.00 MM	% FINER THAN 2.00 MM
OCT 17...	--	--	82	--	--	--	--	--
NOV 13...	--	--	82	--	--	--	--	--
DEC 26...	--	--	100	--	--	--	--	--
30...	--	--	97	--	--	--	--	--
JAN 31...	--	--	30	--	--	--	--	--
FEB 07...	--	--	77	91	97	99	100	--
07...	--	--	76	--	--	--	--	--
07...	46	58	74	88	94	99	100	--
07...	--	--	78	--	--	--	--	--
12...	31	38	45	54	65	82	94	98
12...	--	--	50	--	--	--	--	--
15...	29	34	41	49	63	84	95	99
15...	--	--	38	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
MAR 16...	--	--	80	--	--	--	--	--
21...	46	54	64	72	84	98	100	--
MAY 07...	--	--	67	--	--	--	--	--
JUN 11...	--	--	66	--	--	--	--	--
JUL 24...	--	--	100	--	--	--	--	--
SEP 02...	--	--	52	--	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	NUMBER OF SAM-PLING POINTS (COUNT)	DIS-CHARGE, CUBIC FEET PER SECOND	BED MAT. SIEVE DIAM.				
				% FINER THAN .062 MM	% FINER THAN .125 MM	% FINER THAN .250 MM	% FINER THAN .500 MM	
JUN 11...	1635	1	1.8	0	1	3	13	
11...	1640	1	1.8	1	2	5	14	
11...	1650	1	1.8	1	2	5	11	
11...	1655	1	1.8	1	2	4	8	
DATE	BED MAT. SIEVE DIAM.		BED MAT. SIEVE DIAM.		BED MAT. SIEVE DIAM.		BED MAT. SIEVE DIAM.	
	% FINER THAN 1.00 MM	% FINER THAN 2.00 MM	% FINER THAN 4.00 MM	% FINER THAN 8.00 MM	% FINER THAN 16.0 MM	% FINER THAN 32.0 MM		
JUN 11...	27	36	47	60	79	100		
11...	29	37	46	58	76	100		
11...	19	25	32	44	64	100		
11...	20	34	50	70	87	100		

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA--Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAM-PLING METHOD, CODES	SAMPLER TYPE (CODE)	BAG MESH SIZE BEDLOAD SAMPLER (MM)	TETHER LINE USED IN SAMPLNG (YES=1) (CODE)	START-ING TIME (2400 HOURS)	END-ING TIME (2400 HOURS)	TIME ON BED FOR BED LOAD SAMPLE (SEC)	HORI-ZONTAL WIDTH OF VER-TICAL (FEET)	COMPSTD SAMPLES IN X-SEC BEDLOAD MEASMNT (NUM)
DEC										
30...	1315	1000	1120	0.250	0	1310	1315	15	2.0	2
30...	1325	1000	1120	0.250	0	1320	1325	15	2.0	2
FEB										
07...	1110	1000	1120	0.250	0	1100	1115	10	2.0	2
07...	1120	1000	1120	0.250	0	1115	1130	10	2.0	2
12...	2245	1000	1100	0.250	0	2230	2255	10	3.0	2
12...	2310	1000	1100	0.250	0	2300	2315	10	3.0	2
MAR										
21...	1415	1000	1120	0.250	0	1410	1420	10	3.0	2
21...	1430	1000	1120	0.250	0	1425	1435	10	3.0	2

DATE	VER-TICALS IN COM-POSITE SAMPLE (NUM)	NUMBER OF SAM-PLING POINTS (COUNT)	SAMPLE LOC-ATION, CROSS SECTION (FT FM L BANK)	DIS-CHARGE, INST. CUBIC FEET PER SECOND	TEMPER-ATURE WATER (DEG C)	DISCH, BEDLOAD AV UNIT FOR COM POSITE SAMPLE T/D/FT	SEDI-MENT DIS-CHARGE, BEDLOAD (TONS/ DAY)	SED. BEDLOAD SIEVE DIAM. % FINER THAN .062 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .125 MM
DEC									
30...	14	14	1.00	8.7	15.5	0.05	2.4	--	--
30...	14	14	1.00	8.7	15.5	0.12	2.4	--	--
FEB									
07...	31	31	1.00	302	15.0	2.10	96	1	4
07...	31	31	1.00	302	15.0	1.00	96	2	6
12...	14	14	1.50	665	13.0	4.50	271	--	1
12...	14	14	1.50	540	13.0	8.40	271	--	1
MAR									
21...	20	20	1.50	169	17.5	7.10	420	--	--
21...	20	20	1.50	169	17.5	6.90	420	--	--

DATE	SED. BEDLOAD SIEVE DIAM. % FINER THAN .250 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN .500 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 1.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 2.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 4.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 8.00 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 16.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 32.0 MM	SED. BEDLOAD SIEVE DIAM. % FINER THAN 64.0 MM
DEC									
30...	1	36	84	96	100	--	--	--	--
30...	--	16	54	80	91	99	100	--	--
FEB									
07...	12	45	63	70	74	80	85	91	100
07...	18	66	89	94	95	96	100	--	--
12...	7	31	54	62	66	69	77	95	100
12...	5	22	42	54	60	63	69	86	100
MAR									
21...	4	24	45	61	71	79	90	98	100
21...	5	31	52	61	69	78	87	97	100



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## FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	$2.54 \times 10^1$	millimeters (mm)
	$2.54 \times 10^{-2}$	meters (m)
feet (ft)	$3.048 \times 10^{-1}$	meters (m)
miles (mi)	$1.609 \times 10^0$	kilometers (km)
<i>Area</i>		
acres	$4.047 \times 10^3$	square meters (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometers (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometers (km <sup>2</sup> )
square miles (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometers (km <sup>2</sup> )
<i>Volume</i>		
gallons (gal)	$3.785 \times 10^0$	liters (L)
	$3.785 \times 10^0$	cubic decimeters (dm <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic meters (m <sup>3</sup> )
million gallons	$3.785 \times 10^3$	cubic meters (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
cubic feet (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeters (dm <sup>3</sup> )
	$2.832 \times 10^{-2}$	cubic meters (m <sup>3</sup> )
cfs-days	$2.447 \times 10^3$	cubic meters (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
acre-feet (acre-ft)	$1.233 \times 10^3$	cubic meters (m <sup>3</sup> )
	$1.233 \times 10^{-3}$	cubic hectometers (hm <sup>3</sup> )
	$1.233 \times 10^{-6}$	cubic kilometers (km <sup>3</sup> )
<i>Flow</i>		
cubic feet per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liters per second (L/s)
	$2.832 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$2.832 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
gallons per minute (gal/min)	$6.309 \times 10^{-2}$	liters per second (L/s)
	$6.309 \times 10^{-2}$	cubic decimeters per second (dm <sup>3</sup> /s)
	$6.309 \times 10^{-5}$	cubic meters per second (m <sup>3</sup> /s)
million gallons per day	$4.381 \times 10^1$	cubic decimeters per second (dm <sup>3</sup> /s)
	$4.381 \times 10^{-2}$	cubic meters per second (m <sup>3</sup> /s)
<i>Mass</i>		
tons (short)	$9.072 \times 10^{-1}$	megagrams (Mg) or metric tons

U.S. DEPARTMENT OF THE INTERIOR  
U.S. Geological Survey, Room W-2233  
2800 Cottage Way, Federal Building  
Sacramento, CA 95825

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