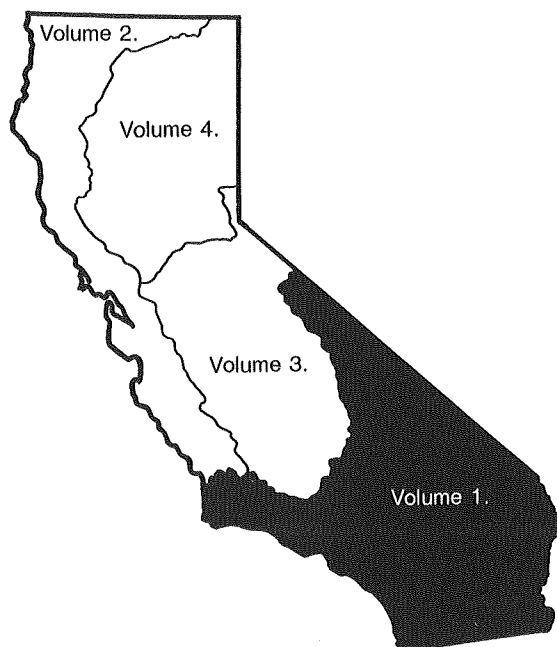




# Water Resources Data California Water Year 1996

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-96-1  
Prepared in cooperation with the California Department of  
Water Resources and with other agencies

# CALENDAR FOR WATER YEAR 1996

1995

| OCTOBER |    |    |    |    |    |    | NOVEMBER |    |    |    |    |    |    | DECEMBER |    |    |    |    |    |    |
|---------|----|----|----|----|----|----|----------|----|----|----|----|----|----|----------|----|----|----|----|----|----|
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| 22      | 23 | 24 | 25 | 26 | 27 | 28 | 19       | 20 | 21 | 22 | 23 | 24 | 25 | 17       | 18 | 19 | 20 | 21 | 22 | 23 |
| 29      | 30 | 31 |    |    |    |    | 26       | 27 | 28 | 29 | 30 |    |    | 24       | 25 | 26 | 27 | 28 | 29 | 30 |
|         |    |    |    |    |    |    |          |    |    |    |    |    |    | 31       |    |    |    |    |    |    |

1996

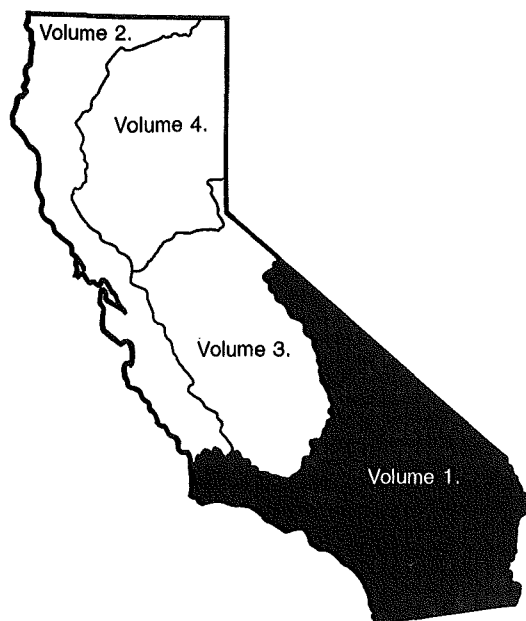
| JANUARY |    |    |    |    |    |    | FEBRUARY |    |    |    |    |    |    | MARCH     |    |    |    |    |    |    |
|---------|----|----|----|----|----|----|----------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
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| 14      | 15 | 16 | 17 | 18 | 19 | 20 | 11       | 12 | 13 | 14 | 15 | 16 | 17 | 10        | 11 | 12 | 13 | 14 | 15 | 16 |
| 21      | 22 | 23 | 24 | 25 | 26 | 27 | 18       | 19 | 20 | 21 | 22 | 23 | 24 | 17        | 18 | 19 | 20 | 21 | 22 | 23 |
| 28      | 29 | 30 | 31 |    |    |    | 25       | 26 | 27 | 28 | 29 |    |    | 24        | 25 | 26 | 27 | 28 | 29 | 30 |
|         |    |    |    |    |    |    |          |    |    |    |    |    |    | 31        |    |    |    |    |    |    |
| APRIL   |    |    |    |    |    |    | MAY      |    |    |    |    |    |    | JUNE      |    |    |    |    |    |    |
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| 21      | 22 | 23 | 24 | 25 | 26 | 27 | 19       | 20 | 21 | 22 | 23 | 24 | 25 | 16        | 17 | 18 | 19 | 20 | 21 | 22 |
| 28      | 29 | 30 |    |    |    |    | 26       | 27 | 28 | 29 | 30 | 31 |    | 23        | 24 | 25 | 26 | 27 | 28 | 29 |
|         |    |    |    |    |    |    |          |    |    |    |    |    |    | 30        |    |    |    |    |    |    |
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| 7       | 8  | 9  | 10 | 11 | 12 | 13 | 4        | 5  | 6  | 7  | 8  | 9  | 10 | 8         | 9  | 10 | 11 | 12 | 13 | 14 |
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|         | 22 | 23 | 24 | 25 | 26 | 27 | 18       | 19 | 20 | 21 | 22 | 23 | 24 | 22        | 23 | 24 | 25 | 26 | 27 | 28 |
| 28      | 29 | 30 | 31 |    |    |    | 25       | 26 | 27 | 28 | 29 | 30 | 31 | 29        | 30 |    |    |    |    |    |



# Water Resources Data California Water Year 1996

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

by G.L. Rockwell, P.D. Hayes, and J. Agajanian



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-96-1  
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**

**Gordon P. Eaton, Director**

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1997



## PREFACE

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

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

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

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

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(l), elevation, gage heights, or contents; (c), chemical; (b), biological; (p), precipitation;  
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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                   |
| 10255805    | Coyote Creek below Box Canyon, near Borrego Springs        | 154                              | 1984-94                   |
| 10255820    | Yaqui Pass Wash near Borrego                               | .041                             | 1965-69                   |
| 10255850    | Vallecito Creek near Julian                                | 39.7                             | 1964-83                   |
| 10255885    | San Felipe Creek near Westmorland                          | 1,693                            | 1961-91                   |
| 10256000    | Whitewater River at White Water                            | 57.5                             | 1949-79                   |
| 10256050    | Whitewater Municipal West Company Diversion at White Water | --                               | 1966-70, 1971-73, 1975-81 |
| 10256060    | Whitewater River at White Water Cutoff at White Water      | 59.1                             | 1985-93                   |
| 10256200    | San Geronio River near Banning                             | 14.8                             | 1976-81                   |
| 10256300    | San Geronio River at Banning                               | 44.2                             | 1981                      |
| 10256400    | San Geronio River near White Water                         | 154                              | 1966-73, 1975-78          |
| 10257710    | Chino Canyon Creek near Palm Springs                       | 3.88                             | 1975-85                   |
| 10257800    | Long Creek near Desert Hot Springs                         | 19.6                             | 1963-71                   |
| 10258030    | Tahquitz Creek at Palm Springs                             | --                               | 1983                      |
| 10258100    | Palm Canyon Creek Tributary near Anza                      | .47                              | 1967-73                   |
| 10259600    | Cottonwood Wash near Cottonwood 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                   |
| 10260620    | Houston Creek above Lake Gregory, at Crestline             | .35                              | 1979-93                   |
| 10260630    | Abondigas Creek above Lake Gregory, at Crestline           | 1.15                             | 1979-93                   |
| 10260650    | Houston Creek below Lake Gregory, at Crestline             | 2.68                             | 1979-93                   |
| 10260820    | West Fork Mojave River below Silverwood Lake               | 34.0                             | 1981-83                   |
| 10261000    | West Fork Mojave River near Hesperia                       | 70.3                             | 1905-22, 1930-71          |
| 10261900    | Mojave River at Wild Crossing, near Helendale              | 957                              | 1966-70                   |
| 10262000    | Mojave River near Hodge                                    | 1,091                            | 1930-32, 1970-93          |
| 10263675    | Big Rock Creek Wash at Highway 138, near Llano             | 53.1                             | 1989-92                   |
| 10264500    | Little Rock Creek near Palmdale                            | 78.0                             | 1968                      |
| 10264502    | Peach Tree Creek near Littlerock                           | .04                              | 1989-94                   |
| 10264508    | Somerset Creek at Palmdale                                 | .50                              | 1989-94                   |
| 10264510    | Inn Creek at Palmdale                                      | .03                              | 1989-94                   |
| 10264530    | Pine Creek near Palmdale                                   | 1.78                             | 1989-94                   |
| 10264550    | City Ranch Creek near Palmdale                             | .39                              | 1989-94                   |
| 10264555    | Estates Creek near Quartz Hill                             | .11                              | 1989-94                   |
| 10264590    | Cottonwood Creek near Rosamond                             | 35.7                             | 1965-72                   |
| 10264600    | Oak Cree, near Mojave                                      | 15.8                             | 1957-86                   |
| 10264605    | Joshua Creek near Mojave                                   | 3.83                             | 1989-94                   |
| 10264710    | Goler Gulch near Randsburg                                 | 41.3                             | 1966-72                   |
| 10264740    | Cache Creek near Mojave                                    | 96.5                             | 1965-72                   |
| 10264750    | Pine Tree Creek near Mojave                                | 33.5                             | 1958-79                   |
| 10264770    | Cottonwood Creek near Cantil                               | 163                              | 1966-72                   |
| 10264870    | Little Lake Creek near Little Lake                         | 8.60                             | 1964-68                   |
| 10264878    | Ninemile Creek near Brown                                  | 10.4                             | 1962-71                   |
| 10265160    | Little Hot Creek below Hot Springs, near Mammoth Lakes     | 6.37                             | 1990-95                   |
| 10265200    | Convict Creek near Mammoth Lakes                           | 18.2                             | 1925-78                   |
| 10265500    | Owens River near Round Valley                              | 425                              | 1909-23, 1928-40          |
| 10265700    | Rock Creek at Little Round Valley, near Bishop             | 35.8                             | 1925-78                   |
| 10267000    | Pine Creek at Division Box, near Bishop                    | 36.4                             | 1922-79                   |
| 10268000    | Owens River at Pleasant Valley, near Bishop                | 583                              | 1918-40                   |
| 10268700    | Silver Canyon Creek near Laws                              | 19.7                             | 1930-78                   |
| 10270960    | Coyote Creek near Bishop                                   | 25.8                             | 1991-96                   |
| 10271210    | Bishop Creek below Powerplant No. 6, near Bishop           | 104                              | 1936-90                   |

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|-------------|---|----------------------------------|------------------------------------|
| 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          |
| 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                            |
| 11013500    | Tijuana River near Nestor                                   | 1,695                            | 1937-82                            |
| 11013600    | Jamul Creek at Lee Valley, near Jamul                       | 2.26                             | 1984-85, 1987-88                   |
| 11013700    | Jamul Creek Tributary near Jamul                            | 2.47                             | 1973                               |
| 11014700    | Telegraph Canyon Creek at Chula Vista                       | 6.23                             | 1973                               |
| 11014850    | Japacha Creek near Descanso                                 | 2.40                             | 1965-67                            |
| 11016000    | Sweetwater River near Dehesa                                | 112                              | 1913-16                            |
| 11021500    | San Vicente Creek near Foster                               | 66.0                             | 1942                               |
| 11022000    | San Vicente Creek at San Vicente dam, at Foster             | 74.2                             | 1937-41                            |
| 11022350    | Forester Creek at El Cajon                                  | 21.3                             | 1983-93                            |
| 11023200    | San Clemente Canyon Creek at Miramar Naval Air Station      | 5.60                             | 1973                               |
| 11023250    | Poway Creek near Poway                                      | 7.92                             | 1978-87                            |
| 11023310    | Rattlesnake Creek at Poway                                  | 8.13                             | 1978-89                            |
| 11023315    | Poway Creek Tributary at Oak Knoll Road, near Poway         | .93                              | 1972-75                            |
| 11023318    | Pomerado Creek at Glenoak Road, near Poway                  | 2.43                             | 1970-75                            |
| 11023320    | Pomerado Creek at Poway Road, near Poway                    | 4.14                             | 1971-75                            |
| 11023330    | Los Penasquitos Creek below Poway Creek, near Poway         | 31.2                             | 1970-93                            |
| 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                            |
| 11030730    | Escondido Creek near Olivenhain                             | 64.6                             | 1973                               |
| 11031000    | San Luis Rey River near Warner Springs                      | 33.6                             | 1913-15                            |
| 11031500    | Agua Caliente Creek near Warner Springs                     | 19.0                             | 1961-87                            |
| 11033000    | West Fork San Luis Rey River near Warner Springs            | 25.5                             | 1913-15, 1957-86                   |
| 11035000    | San Luis Rey River at Lake Henshaw, near Mesa Grande        | 206                              | 1912-22                            |
| 11037650    | Pauma Valley Water Company diversion near Pauma Valley      | --                               | 1966-70, 1972-81                   |
| 11037700    | Pauma Creek near Pauma Valley                               | 11.0                             | 1965-81                            |
| 11037701    | Pauma Creek and Diversion near Pauma Valley                 | 11.0                             | 1965-81                            |
| 11038500    | San Luis Rey River near Pala                                | 317                              | 1909-11, 1913-15                   |
| 11039100    | San Luis Rey River Tributary near Pala                      | 1.01                             | 1966-73                            |
| 11039600    | Bubble-Up Creek near Pala                                   | 4.11                             | 1991                               |
| 11039800    | San Luis Rey River at Couser Canyon Bridge, near Pala       | 364                              | 1986-93                            |
| 11040000    | San Luis Rey River at Monserate Narrows, near Pala          | 373                              | 1938-41, 1947-86                   |
| 11040200    | Keys Creek Tributary at Valley Center                       | 7.65                             | 1970-83, 1991                      |
| 11040500    | San Luis Rey River at Bonsall                               | 456                              | 1912-15                            |
| 11040700    | San Luis Rey River below Moosa Canyon, near Bonsall         | 499                              | 1984-85                            |

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| Station No. | Station name   | Drainage area (mi <sup>2</sup> ) | Period of record |
|-------------|--|----------------------------------|------------------|
| 11041000    | San Luis Rey River near Bonsall  | 513                              | 1930-79          |
| 11042490    | Wilson Creek above Vail Lake, near Radec                                   | 122                              | 1990-94          |
| 11042520    | Temecula Creek at Nigger Canyon, near Temecula                             | 320                              | 1923-48          |
| 11042600    | Temecula Creek below Vail Dam  | 320                              | 1978             |
| 11044500    | Santa Margarita River near Fallbrook                                       | 644                              | 1925-80          |
| 11044600    | Santa Margarita River Tributary near Fallbrook                             | .52                              | 1962-65          |
| 11045000    | Santa Margarita River near De Luz Station                                  | 705                              | 1925-26          |
| 11046200    | San Onofre Creek near San Onofre   | 34.6                             | 1951-67          |
| 11046250    | San Onofre Creek at San Onofre   | 42.2                             | 1947-67, 1989    |
| 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          |
| 11046501    | San Juan Creek near San Juan Capistrano plus canal                         | 117                              | 1955-71          |
| 11047200    | Oso Creek at Crown Valley Parkway, near Mission Viejo                      | 14.0                             | 1970-81          |
| 11047500    | Aliso Creek at El Toro   | 7.92                             | 1931-80          |
| 11047700    | Aliso Creek at South Laguna  | 34.4                             | 1983-87          |
| 11048000    | Irvine Ranch Drainage Canal, near Tustin                                   | 92.0                             | 1931-40          |
| 11048555    | San Diego Creek at Campus Drive, near Irvine                               | --                               | 1978-79, 1983-85 |
| 11049600    | Greenspot Pipeline near Mentone  | --                               | 1972-73          |
| 11051600    | Santa Ana River spreading diversion near Mentone                           | 213                              | 1952-77          |
| 11054000    | Mill Creek near Yucaipa (REVISED RECORDS IN WDR CA-92-1)                   | 42.4                             | 1920-38, 1948-86 |
| 11054600    | Crafton near Mentone   | --                               | 1972-79          |
| 11055000    | Mill Creek near Mentone  | 50.5                             | 1939-65          |
| 11056000    | Santa Ana River near San Bernardino  | 306                              | 1929-37, 1955-61 |
| 11056500    | Little San Geronimo River near Beaumont (REVISED RECORDS IN WDR CA-92-1)   | 1.74                             | 1949-85          |
| 11057490    | San Timoteo Creek at Loma Linda  | 125                              | 1979-80          |
| 11058600    | Waterman Canyon Creek near Arrowhead Springs                               | 4.65                             | 1912-14, 1920-85 |
| 11059000    | Warm Creek Floodway at San Bernardino                                      | 75.1                             | 1961-81          |
| 11059100    | San Bernardino Water-Quality Control Plant at San Bernardino               | --                               | 1973-82          |
| 11060300    | Lytle Creek at Channel, at San Bernardino                                  | --                               | 1929-30, 1932-57 |
| 11060500    | Meeks and Daley Canal near Colton  | --                               | 1921-81          |
| 11062200    | Fontana Union Water Co. Lytle Creek return flow channel near Fontana       | --                               | 1973-80          |
| 11062810    | West San Bernardino County Water District Rialto Diversion near Fontana    | --                               | 1981             |
| 11063000    | Cajon Creek near Keenbrook   | 40.6                             | 1920-71, 1978-83 |
| 11064000    | Lytle Creek (East Channel) at San Bernardino                               | --                               | 1929-57          |
| 11065800    | Warm Creek near Colton   | 198                              | 1921-61          |
| 11065801    | Warm Creek near Colton plus diversion                                      | 259                              | 1920-61          |
| 11066050    | Santa Ana River at Colton  | 740                              | 1962-66          |
| 11066100    | Lytle Creek West Channel at Colton   | --                               | 1929-45          |
| 11066440    | Santa Ana River at Mission Boulevard, at Riverside                         | 808                              | 1971-82          |
| 11066478    | Riverside Water-Quality Control Plant Weir No. 1                           | --                               | 1973-81          |
| 11066479    | Riverside Water-Quality Control Plant Weir No. 2                           | --                               | 1973-81          |
| 11066480    | Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington | --                               | 1966-81          |
| 11066500    | Santa Ana River at Riverside Narrows, near Arlington                       | 853                              | 1929-73          |
| 11066550    | Sheehan Diversion at Riverside Narrows, near Arlington                     | --                               | 1964-65, 1967-68 |
| 11066950    | Day Creek Diversion near Etiwanda  | --                               | 1966-69, 1971    |
| 11067000    | Day Creek near Etiwanda  | 4.56                             | 1929-72          |
| 11068000    | Santa Ana River at Auburndale Bridge, near Corona                          | 1,010                            | 1961-68          |
| 11069300    | South Fork San Jacinto River tributary near Valle Vista                    | 2.20                             | 1962-67          |
| 11069500    | San Jacinto River near San Jacinto   | 141                              | 1920-91          |
| 11069501    | San Jacinto River near San Jacinto plus canals                             | 141                              | 1949-81, 1983-89 |
| 11070000    | Bautista Creek near Hemet  | 39.6                             | 1948-69          |
| 11070050    | Bautista Creek at Valle Vista  | 48.5                             | 1970-87          |
| 11070232    | East Fork Pigeon Pass Creek at Heacock Street, near Sunnymead              | .48                              | 1970-75          |
| 11070240    | Sunnymead Channel at Alessandro Boulevard, near Sunnymead                  | 13.3                             | 1970-75, 1990-93 |
| 11070256    | Perris Valley Storm Drain at Nandino Avenue, near March Air Force Base     | 50.6                             | 1970-75, 1990-93 |
| 11070262    | Perris Valley Storm Drain Lateral "B" near March Air Force Base            | 10.6                             | 1970-75, 1990-93 |
| 11070263    | Unnamed creek tributary to Perris Reservoir near Moreno Valley             | .46                              | 1989-91          |
| 11070375    | San Jacinto River at Railroad Canyon Weir, near Elsinore                   | 562                              | 1952-84          |
| 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          |

## DISCONTINUED GAGING STATIONS--Continued

| Station No. | Station name  | Drainage area (mi <sup>2</sup> ) | Period of record         |
|-------------|---|----------------------------------|--------------------------|
| 11075740    | Carbon Creek near Yorba Linda   | 20.1                             | 1950-61                  |
| 11077000    | Santiago Creek near Villa Park  | 84.6                             | 1921-63                  |
| 11077001    | Santiago Creek plus diversion near Villa Park                                 | 83.8                             | 1921-31                  |
| 11078100    | Santa Ana River at Adams Avenue, near Costa Mesa                              | 1,701                            | 1975-77                  |
| 11078110    | Rubio Wash at Glendon Way   | --                               | 1973-75                  |
| 11078120    | Compton Creek at 120th Street   | --                               | 1974-75                  |
| 11078130    | Arcadia Wash at Grand Avenue  | --                               | 1974-75                  |
| 11078140    | Eaton Wash at Loftas Drive  | --                               | 1974-75                  |
| 11078150    | Limekiln Creek above Aliso Creek  | --                               | 1973-74                  |
| 11078170    | Puddingstone Creek below Puddingstone Dam                                     | --                               | 1974                     |
| 11078190    | Santa Fe Diversion Channel  | --                               | 1974                     |
| 11078191    | West Fork San Gabriel River below Cogswell Dam                                | --                               | 1975                     |
| 11080000    | East Fork San Gabriel River at Camp Bonita                                    | 58.2                             | 1928-32                  |
| 11080500    | East Fork San Gabriel River near Camp Bonita                                  | 84.6                             | 1933-79                  |
| 11081000    | Bear Creek near Camp Rincon   | 28.2                             | 1930-36                  |
| 11081500    | North Fork San Gabriel River at Camp Rincon                                   | 18.6                             | 1930-36                  |
| 11082000    | West Fork San Gabriel River at Camp Rincon                                    | 104                              | 1928-78                  |
| 11083500    | San Gabriel River near Azusa  | 214                              | 1894, 1896-1959, 1961-66 |
| 11084000    | Rogers Creek near Azusa   | 6.64                             | 1918-62                  |
| 11084500    | Fish Creek near Duarte  | 6.36                             | 1916-79                  |
| 11085019    | San Gabriel River below Valley Boulevard                                      | --                               | 1973-74                  |
| 11086000    | Dalton Creek near Glendora  | 7.24                             | 1913-62                  |
| 11086300    | San Dimas Creek below San Dimas Dam   | 16.3                             | 1957-78                  |
| 11086400    | San Dimas Creek near San Dimas  | 18.3                             | 1917-56                  |
| 11086500    | Little Dalton Creek near Glendora   | 2.72                             | 1939-68, 1970-71         |
| 11086990    | San Jose Creek near El Monte  | 87.8                             | 1965-78                  |
| 11087100    | Rio Hondo Flood Flow Channel at Whittier Narrows Dam                          | --                               | 1966-70                  |
| 11087195    | San Jose Creek near Whittier  | 88.7                             | 1929-64                  |
| 11087500    | San Gabriel River at Pico   | 447                              | 1929-78                  |
| 11088000    | San Gabriel River at Spring Street, near Los Alamitos                         | 472                              | 1937-51, 1953-79         |
| 11089000    | Brea Creek at Fullerton   | 23.6                             | 1931-69                  |
| 11090000    | Fullerton Creek at Fullerton  | 7.50                             | 1936-64                  |
| 11090200    | Fullerton Creek at Richman Avenue, at Fullerton                               | 12.1                             | 1960-77, 1979-81         |
| 11090500    | Coyote Creek near Artesia   | 120                              | 1930-63                  |
| 11090700    | Coyote Creek at Los Alamitos  | 150                              | 1964-78                  |
| 11092450    | Los Angeles River at Sepulveda Dam  | 158                              | 1932-79                  |
| 11093000    | Pacoima Creek near San Fernando   | 28.3                             | 1917-79                  |
| 11093490    | North Fork Mill Creek near La Canada  | 5.80                             | 1966-73                  |
| 11093500    | Mill Creek near Colby Ranch   | 21.7                             | 1931-34                  |
| 11094000    | Big Tujunga Creek below Mill Creek, near Colby Ranch (formerly Tujunga Creek) | 64.9                             | 1948-71                  |
| 11094500    | Big Tujunga Creek near Colby Ranch (formerly Tujunga Creek)                   | 67.5                             | 1931-50                  |
| 11095000    | Fox Creek near Colby Ranch  | 9.22                             | 1931-37                  |
| 11095500    | Big Tujunga Creek near Sunland (formerly Tujunga Creek)                       | 106                              | 1917-77                  |
| 11096000    | Haines Creek near Tujunga   | 1.26                             | 1917-34, 1936-61         |
| 11096500    | Little Tujunga Creek near San Fernando  | 21.1                             | 1929-73                  |
| 11097500    | Los Angeles River at Los Angeles  | 514                              | 1930-79                  |
| 11098500    | Los Angeles River near Downey   | 599                              | 1928-78                  |
| 11099500    | Sawpit Creek near Monrovia  | 5.21                             | 1916-61                  |
| 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                  |
| 11108075    | Castaic Creek above Fish Creek, near Castaic                                  | 37.0                             | 1977-78, 1989-93         |
| 11108080    | Fish Creek above Castaic Creek, near Castaic                                  | 27.2                             | 1977-78, 1989-93         |
| 11108090    | Elderberry Canyon Creek above Castaic Creek, near Castaic                     | 2.50                             | 1978, 1989-93            |
| 11108095    | Necktie Canyon Creek above Castaic Creek, near Castaic                        | 2.12                             | 1977-78, 1989-93         |
| 11108130    | Elizabeth Lake Canyon Creek above Castaic Lake, near Castaic                  | 43.7                             | 1977-78, 1989-93         |
| 11108135    | Castaic Lagoon Parshall Flume near Castaic                                    | 138                              | 1977-78, 1988-96         |
| 11108145    | Castaic Creek near Saugus   | 184                              | 1947-76                  |

## DISCONTINUED GAGING STATIONS--Continued

| Station No. | Station name  | Drainage area (mi <sup>2</sup> ) | Period of record          |
|-------------|---|----------------------------------|---------------------------|
| 11108500    | Santa Clara River at Los Angeles-Ventura County Line      | 625                              | 1953-96                   |
| 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          |
| 11113001    | Sespe Creek and Fillmore Irrigation Company Canal         | --                               | 1927-85, 1990-93          |
| 11113900    | Saticoy Diversion near Saticoy                            | --                               | 1969-81, 1983-87          |
| 11114500    | Matilija Creek above reservoir, near Matilija Hot Springs | 50.7                             | 1948-69                   |
| 11115500    | Matilija Creek at Matilija Hot Springs                    | 54.6                             | 1928-88                   |
| 11116000    | North Fork Matilija Creek at Matilija Hot Springs         | 15.6                             | 1928-32, 1934-73, 1974-83 |
| 11116500    | Ventura River near Ojai                                   | 70.7                             | 1912-14, 1922-24, 1983-84 |
| 11116550    | Ventura River near Meiners Oaks                           | 76.4                             | 1959-79, 1981-82, 1984-88 |
| 11117000    | San Antonio Creek near Ojai                               | 33.7                             | 1928-32                   |
| 11117600    | Coyote Creek near Oak View                                | 13.2                             | 1959-88                   |
| 11117800    | Santa Ana Creek near Oak View                             | 9.11                             | 1959-88                   |
| 11118000    | Coyote Creek near Ventura                                 | 41.2                             | 1928-32, 1934-58, 1970-82 |
| 11119660    | San Ysidro Creek at Montecito                             | 3.07                             | 1980-83                   |
| 11119700    | Sycamore Creek at Santa Barbara                           | 3.41                             | 1971-72, 1980             |
| 11119750    | Mission Creek near Mission Street, at Santa Barbara       | 8.38                             | 1971-96                   |
| 11119760    | Victoria Street drain at outlet, at Santa Barbara         | 0.625                            | 1970-78                   |
| 11119780    | Arroyo Burro at Santa Barbara                             | 6.65                             | 1970-93                   |
| 11119900    | Atascadero Creek at Puente Road, near Goleta              | 3.86                             | 1971-72                   |
| 11120510    | San Jose Creek at Goleta                                  | 9.42                             | 1970-92                   |
| 11120520    | San Pedro Creek at Goleta                                 | 3.21                             | 1971-72                   |
| 11120530    | Tecolotito Creek near Goleta                              | 4.42                             | 1970-72, 1980-82, 1987-91 |
| 11120550    | Gaviota Creek near Gaviota                                | 18.8                             | 1967-86                   |
| 11120600    | Jalama Creek near Lompoc                                  | 20.5                             | 1966-82                   |
| 11120700    | Canada Honda Creek near Lompoc                            | 3.09                             | 1959-62                   |
| 11120800    | Canada Honda Creek near Point Arguello                    | 8.47                             | 1959-62                   |
| 11124000    | Santa Cruz Creek above Stuke Canyon                       | 64.9                             | 1947-52                   |
| 11125000    | Cachuma Creek near Santa Ynez                             | 23.8                             | 1951-62                   |
| 11126500    | Santa Agueda Creek near Santa Ynez                        | 55.8                             | 1941-71, 1977-78          |
| 11127000    | San Lucas Creek near Santa Ynez                           | 3.2                              | 1953-54                   |
| 11127500    | Zanja de Cota Creek near Santa Ynez                       | 13.8                             | 1955-61                   |
| 11128000    | Santa Ynez River at Grand Avenue, near Santa Ynez         | 513                              | 1955-65                   |
| 11128400    | Alisal Creek near Solvang                                 | 12.3                             | 1955, 1957-72             |
| 11129000    | Nojoqui Creek near Buellton                               | 15.1                             | 1953-54                   |
| 11129500    | Santa Ynez River at Buellton                              | 611                              | 1955-59                   |
| 11130000    | Zaca Creek at Buellton                                    | 39.4                             | 1941-63                   |
| 11130500    | Santa Ynez River near Buellton                            | 668                              | 1952-74                   |
| 11131000    | Santa Ynez River at Santa Rosa Dam site, near Buellton    | 700                              | 1955-64                   |
| 11131500    | Santa Ynez River at Coopers East Fork, near Lompoc        | 708                              | 1955-76                   |
| 11132000    | Santa Ynez River below Santa Rita Creek, near Lompoc      | 733                              | 1955-62                   |
| 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                   |
| 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                   |
| 11160020    | San Lorenzo River near Boulder Creek                      | 6.17                             | 1968-92                   |

## 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 |
|-------------|---|----------------------------------|------------------|
| 10260640    | Lake Gregory at Crestline                                     | 2.66                             | 1978-93          |
| 10287000    | Mono Lake near Mono Lake                                      | 785                              | 1912-90          |
| 11013200    | Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico | 977                              | 1937-90          |
| 11014550    | Lower Otay Lake near Chula Vista                              | 99.0                             | 1945-59, 1972-93 |
| 11020600    | El Capitan Lake near Lakeside                                 | 188                              | 1936-66, 1972-93 |
| 11030020    | Lake Hodges near Escondido                                    | 303                              | 1945-68, 1972-93 |
| 11030700    | Lake Wohlford near Escondido                                  | 7.96                             | 1972-93          |
| 11011000    | Barrett Lake near Dulzura                                     | 245                              | 1960-66, 1986-93 |
| 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             |
|-------------|--|----------------------------------|-----------------|------------------------------|
| 10254670    | Alamo River at Drop No. 3, near Calipatria                                 | --                               | WQ,B,C,<br>T,S, | 1969-70, 1975-77,<br>1979-94 |
| 10254970    | New River at International Boundary, at Calexico                           | --                               | B,C,T,S         | 1969-71, 1973-85             |
| 10256000    | Whitewater River at White Water  | 57.5                             | S               | 1972                         |
| 10256060    | Whitewater River at White Water Cutoff, at White Water                     | 59.1                             | WQ              | 1972-76, 1978-96             |
| 10261500    | Mojave River at Lower Narrows, near Victorville                            | 513                              | C,T             | 1962-81                      |
| 10263675    | Big Rock Creek Wash at Highway 138, near Llano                             | 53.1                             | P               | 1989-92                      |
| 10264502    | Peach Tree Creek near Littlerock   | .04                              | P               | 1989-94                      |
| 10264605    | Joshua Creek near Mojave   | 3.83                             | P               | 1989-94                      |
| 10265150    | Hot Creek at flume near Mammoth  | 68.3                             | C,T             | 1983-88                      |
| 10277400    | Owens River below Tinemaha Reservoir, near Big Pine                        | 1,964                            | C,T             | 1975-81                      |
| 11013500    | Tijuana River near Nestor  | 1,695                            | T,S             | 1970-71, 1976,<br>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,B,C,<br>T,S  | 1969-93                      |
| 11046000    | Santa Margarita River at Ysidora   | 723                              | S               | 1969-71, 1973-74,<br>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,<br>1982       |
| 11046530    | San Juan Creek at La Novia Street Bridge, at San Juan Capistrano           | 109                              | T,S             | 1986-93                      |
| 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, 1984-93             |
| 11048500    | San Diego Creek at Culver Drive, near Irvine                               | 41.8                             | T,S             | 1972-85                      |
| 11048530    | El Modena Irvine Channel near Irvine                                       | --                               | T,S             | 1975-79                      |
| 11048540    | Peters Canyon Wash at Barranca Road, near Irvine                           | --                               | T,S             | 1975-79, 1983-85             |
| 11048550    | San Diego Creek at Lane Road, near Irvine                                  | --                               | T,S             | 1972-76                      |
| 11048555    | San Diego Creek at Campus Drive, near Irvine                               | --                               | T,S             | 1972-76, 1978-79,<br>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                      |
| 11057500    | San Timoteo Creek near Loma Linda  | 125                              | T,S             | 1979-81, 1992-94             |
| 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                              | T               | 1982-83                      |
| 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                         |
| 11070240    | Sunnymead Channel at Alessandro Boulevard near Sunnymead                   | 13.3                             | P               | 1990-93                      |
| 11070262    | Perris Valley Storm Drain Lateral "B" near March Air Force Base            | 10.6                             | P               | 1991                         |

## DISCONTINUED WATER-QUALITY STATIONS--Continued

| Station No. | Station name   | Drainage area (mi <sup>2</sup> ) | Type of record | Period of record                |
|-------------|--|----------------------------------|----------------|---------------------------------|
| 11070263    | Unnamed creek tributary to Perris Reservoir near Moreno                  | .46                              | P              | 1980-91                         |
| 11074000    | Santa Ana River below Prado Dam  | 1,490                            | B,S            | 1974-94                         |
| 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                            | T              | 1968-69, 1971, 1973-80, 1982-87 |
| 11078100    | Santa Ana River at Adams Avenue, near Costa Mesa                         | 1,701                            | T,S            | 1974-76                         |
| 11102250    | Mission Creek below Whittier Narrows Dam                                 | --                               | C              | 1956-70                         |
| 11103000    | Los Angeles River at Long Beach  | 827                              | WQ,C,          |                                 |
|             |  |                                  | T,S            | 1973-82                         |
| 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 Piuma 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,T,        |                                 |
|             |  |                                  | S              | 1969-88                         |
| 11109550    | Piru Creek above Frenchmans Flat   | 308                              | C              | 1972-80                         |
| 11109600    | Piru Creek above Lake Piru   | 372                              | C              | 1972-80                         |
| 11109800    | Piru Creek below Santa Felicia Dam                                       | 425                              | C,T            | 1969, 1974-80                   |
| 11110000    | Piru Creek near Piru   | 437                              | C,T            | 1970-71                         |
| 11110500    | Hopper Creek near Piru   | 23.6                             | T,S            | 1977-78                         |
| 11113000    | Sespe Creek near Fillmore  | 251                              | C,S            | 1967-78                         |
| 11113500    | Santa Paula Creek near Santa Paula                                       | 38.4                             | C,T            | 1969-80                         |
| 11113900    | Saticoy Diversion near Saticoy   | --                               | C,T            | 1969-71, 1982-87                |
| 11113910    | Santa Clara River at diversion, near Saticoy                             | --                               | C              | 1971                            |
| 11114000    | Santa Clara River at Montalvo  | 1,612                            | T,S            | 1968-85, 1988-93                |
| 11117500    | San Antonio Creek at Casitas Springs                                     | 51.2                             | T,S            | 1977-78                         |
| 11118500    | Ventura River near Ventura   | 188                              | WQ,T           | 1907-08, 1967-81, 1986          |
| 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                         |
| 11133000    | Santa Ynez River at Narrows, near Lompoc                                 | 789                              | WQ             | 1978-88                         |
| 11141000    | Santa Maria River at Guadalupe   | 1,741                            | T,S            | 1969-70                         |

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



WATER RESOURCES DATA--CALIFORNIA, WATER YEAR 1996  
VOLUME 1--SOUTHERN GREAT BASIN FROM MEXICAN BORDER TO MONO LAKE BASIN,  
AND PACIFIC SLOPE BASINS FROM TIJUANA RIVER TO SANTA MARIA RIVER

By G.L. Rockwell, P.D. Hayes, and J. Agajanian

INTRODUCTION

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

This volume of the report includes records on surface water in the State. Specifically, it contains (1) discharge records for 149 streamflow-gaging stations, 6 crest-stage partial-record streamflow stations; (2) stage and contents records for 21 lakes and reservoirs, gage height for 1 station; (3) water-quality records for 19 streamflow-gaging stations and 17 partial-record stations; and (4) precipitation records for 4 stations. Records included for stream stages are only a small fraction of those obtained during the water year.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of 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-96-1." 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.

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) 278-3100.

COOPERATION

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

Antelope Valley-East Kern Water Agency, Wallace G. Spinarski, General Manager.  
Borrego Water District, Linden Burzell, General Manager.

California Department of Water Resources, David N. Kennedy, Director.  
 Carpinteria County Water District, Charles Hamilton, General Manager/Secretary.  
 Casitas Municipal Water District, John J. Johnson, General Manager.  
 Coachella Valley Water District, Thomas E. Levy, General Manager-Chief Engineer.  
 Desert Water Agency, Jack H. Oberle, General Manager.  
 Eastern Municipal Water District, John B. Brudin, General Manager.  
 Imperial County Department of Public Works, John J. Armas, Director.  
 Imperial Irrigation District, Eldon L. Moore, General Manager.  
 Irvine Ranch Water District, Ronald E. Young, General Manager.  
 Lompoc, city of, Gary Keefe, Utility Director.  
 Mojave Water Agency, Larry Rowe, General Manager.  
 Mono County, Energy Management Department, Daniel Lyster, Director.  
 Montecito Water District, C. Charles Evans, General Manager/Secretary.  
 Orange County Water District, William R. Mills, Jr., General Manager.  
 Padre Dam Municipal Water District, August Caires, General Manager.  
 Pechanga Indian Reservation, Mark A. Macarro, Spokesman.  
 Riverside County Flood Control and Water Conservation District, David P. Zappe, General Manager-Chief Engineer.  
 San Bernardino Valley Municipal Water District, G. Louis Fletcher, General Manager-Chief Engineer.  
 San Bernardino Environmental Public Works Agency-Flood Control District, Ken A. Miller, Director.  
 San Diego, City of, Milton Mills, Jr., Water Utilities Director.  
 San Diego County Department of Public Works, Tom Garibay, Director.  
 San Juan Basin Authority, William P. Becker, General Manager.  
 Santa Barbara, City of, Department of Public Works, David H. Johnson, Director.  
 Santa Barbara County Flood Control and Water Conservation District and Water Agency, Thomas D. Fayram, Deputy Director.  
 Santa Margarita River Watershed, James S. Jenks, Watermaster.  
 Santa Maria Valley Water Conservation District, Maurice F. Twitchell, Secretary.  
 Santa Ynez River Water Conservation District, Bruce A. Wales, General Manager.  
 Sweetwater Authority, Richard A. Reynolds, General Manager.  
 United Water Conservation District, Frederick J. Gientke, General Manager.  
 Ventura County Public Works Agency, Arthur Goulet, Director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Bureau of Reclamation, U.S. Department of the Interior; Camp Pendleton Marine Corps Base, U.S. Marine Corps; and Southwest Division, Naval Facilities Engineering Command, Department of the Navy.

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

#### SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the 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 human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, the Columbia, the Colorado, and the Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) provide the mechanism to evaluate the effectiveness of the significant reduction in SO<sub>2</sub> emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; and (3) provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO<sub>2</sub> and NO<sub>x</sub> scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the World Wide Web at:

<http://nadp.nrel.colostate.edu/NADP>

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

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the World Wide Web at:

[http://wwwrvares.er.usgs.gov/nawqa/nawqa\\_home.html](http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html)

Radiochemical Programs 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.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data also are obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

#### EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1996 water year that began October 1, 1995, and ended September 30, 1996. 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. 1). 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.

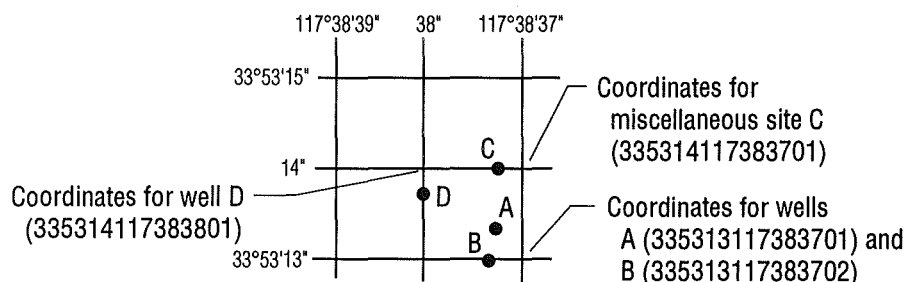


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

### Records of Stage and Water Discharge

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

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

### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the 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 digital recorders, data collection platforms, or data loggers that sample stage values at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapters A1 through A19, and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

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

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

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

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

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

#### Data Presentation

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

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

#### Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments 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 currently in use, the datum of the current gage referred to sea level (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 (IN.) 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 10 percent of the time for the designated period.

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

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements 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 20192, maintains an index of sites as well as an index of records of discharge collected by other agencies but not published by the U.S. Geological Survey. Information on records at specific sites can be obtained from that office upon request.

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

### Records of Surface-Water Quality

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

### 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 or stored electronically on a data logger. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 2 through 12.



### Arrangement of Records

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

### Onsite Measurements and Sample Collection

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

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream-Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District Office.

Historical and current (1996) 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. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

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

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of 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 to analyze sediment samples and to compute sediment records are described in the Techniques of Water-Resources Investigations, Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

#### 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 include 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 20192

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. 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.)

## 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  $\pm$  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  $\pm$  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  $\pm$  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 (g/m<sup>3</sup>) and periphyton and benthic organisms in grams per square meter (g/m<sup>2</sup>).

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:

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

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes 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 (ft<sup>3</sup>/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 in 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 sea level. 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 (CaCO<sub>3</sub>).

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the 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 human activities.

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,  $\text{mg/L}$ ) 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 Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) provide the mechanism to evaluate the effectiveness of the significant reduction in  $\text{SO}_2$  emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; and (3) provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for  $\text{SO}_2$  and  $\text{NO}_x$  scheduled to begin in 2000.

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) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, the Columbia, the Colorado, and the Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

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

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Nanograms per liter (NG/L,  $\text{ng/L}$ ) 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 ( $m^2$ ), 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.

Sea level refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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 ( $\text{mg/L}$ ).

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 emerged 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.)

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data also are obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

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, 1996, is called the "1996 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, Branch of Information Services, Box 25286, Federal Center, Denver, CO 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "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.S. 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 W.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 measurement 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, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 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, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. Levels at streamflow gaging stations, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. Simulation of soluble waste transport and buildup in surface waters using tracers, by F.A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. Stream-gaging cableways, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.
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- 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.
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- 6-A5. A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details, by L.J. Torak. USGS--TWRI Book 6, Chapter A5. 1993. 243 pages.
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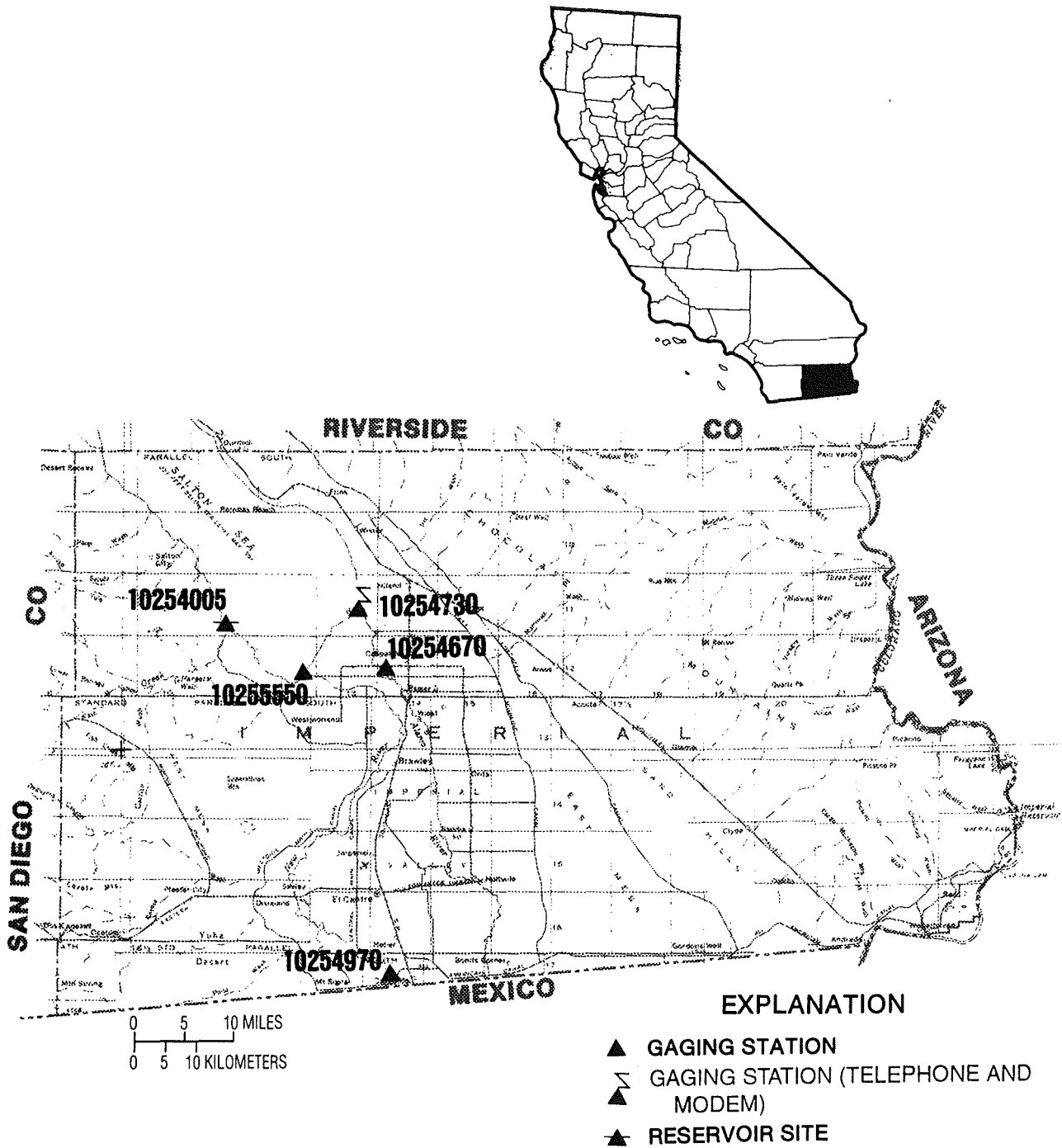


Figure 2. Location of discharge and water-quality stations in Imperial County.

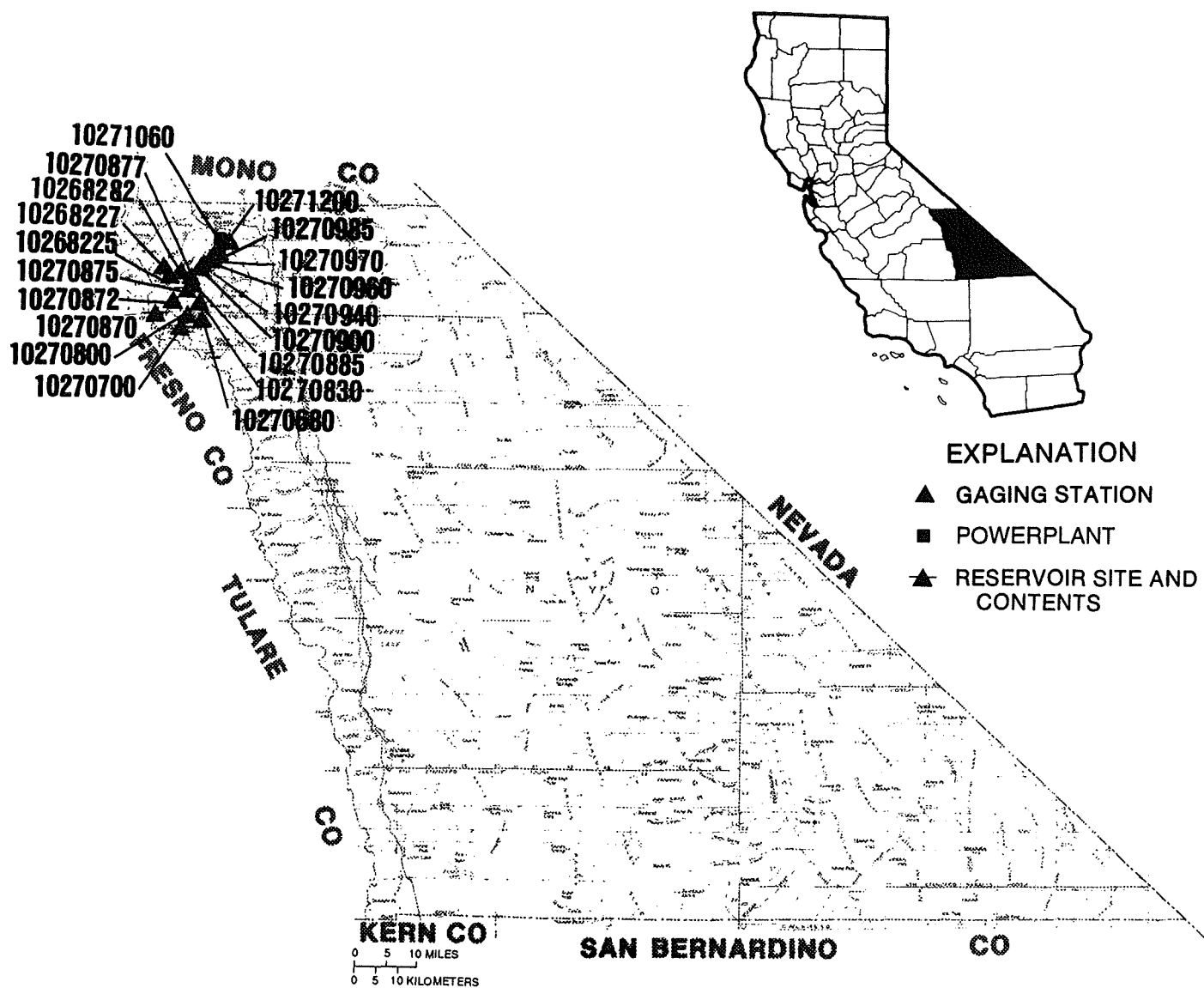


Figure 3. Location of discharge stations in Inyo County.



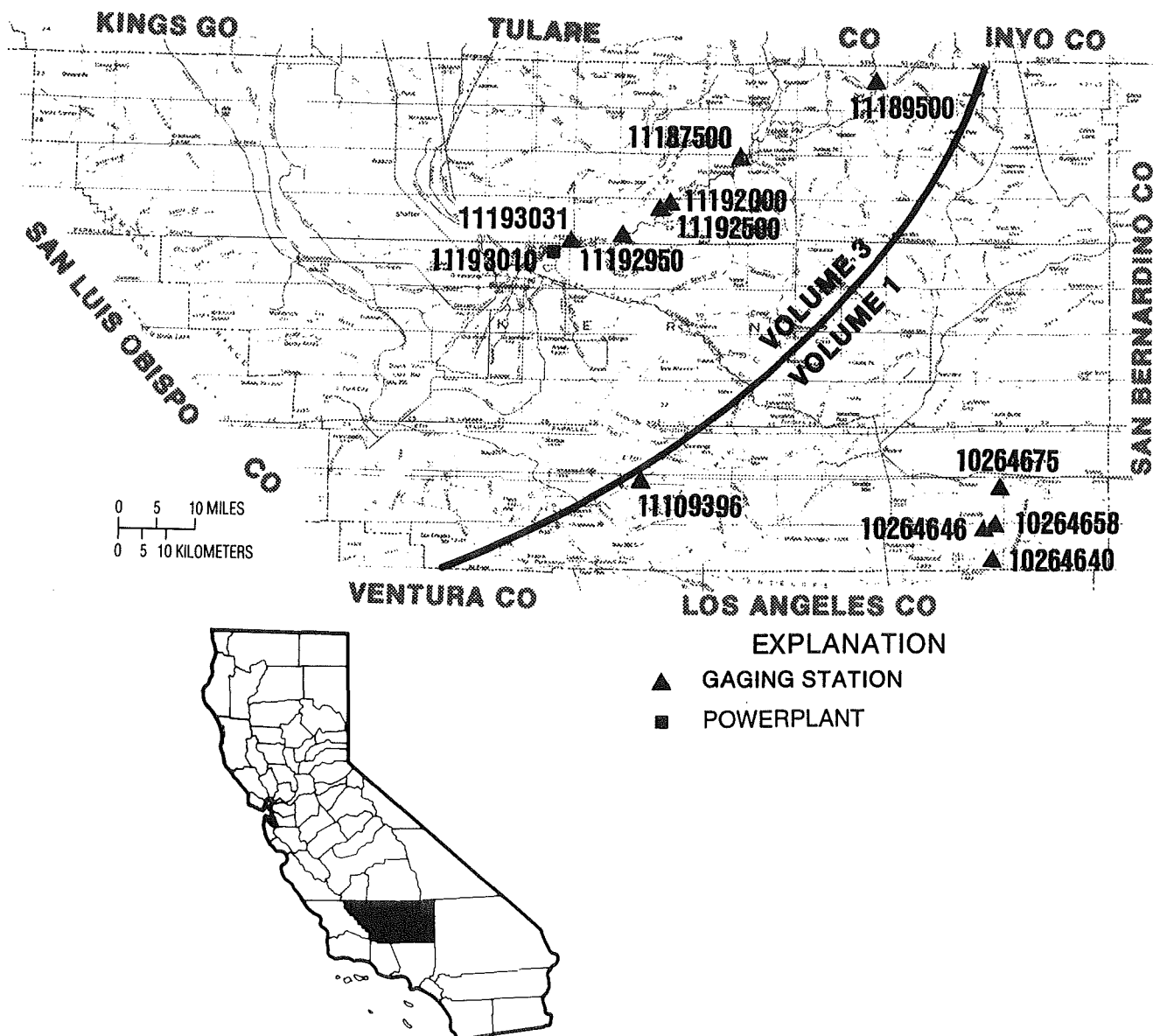
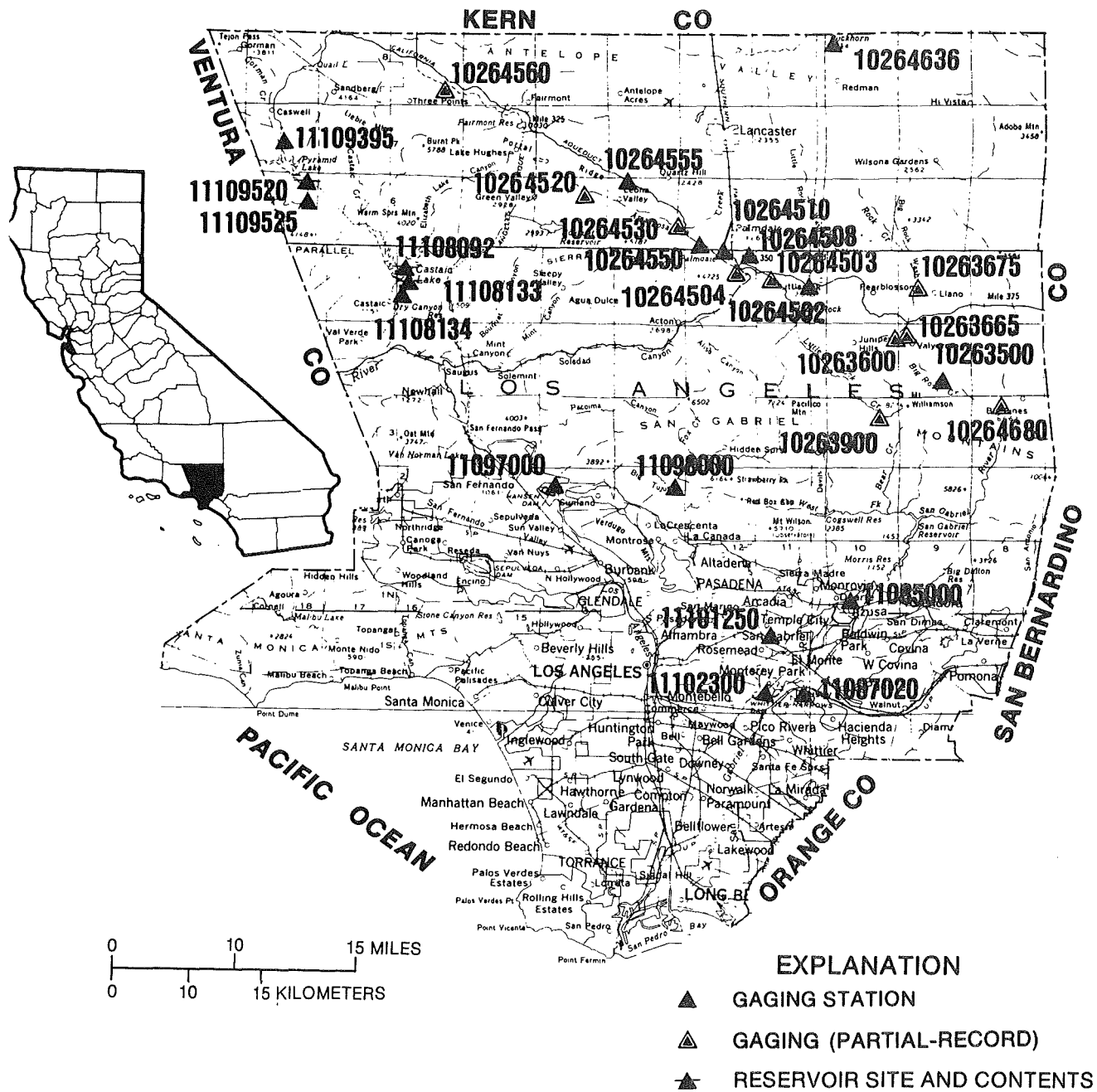
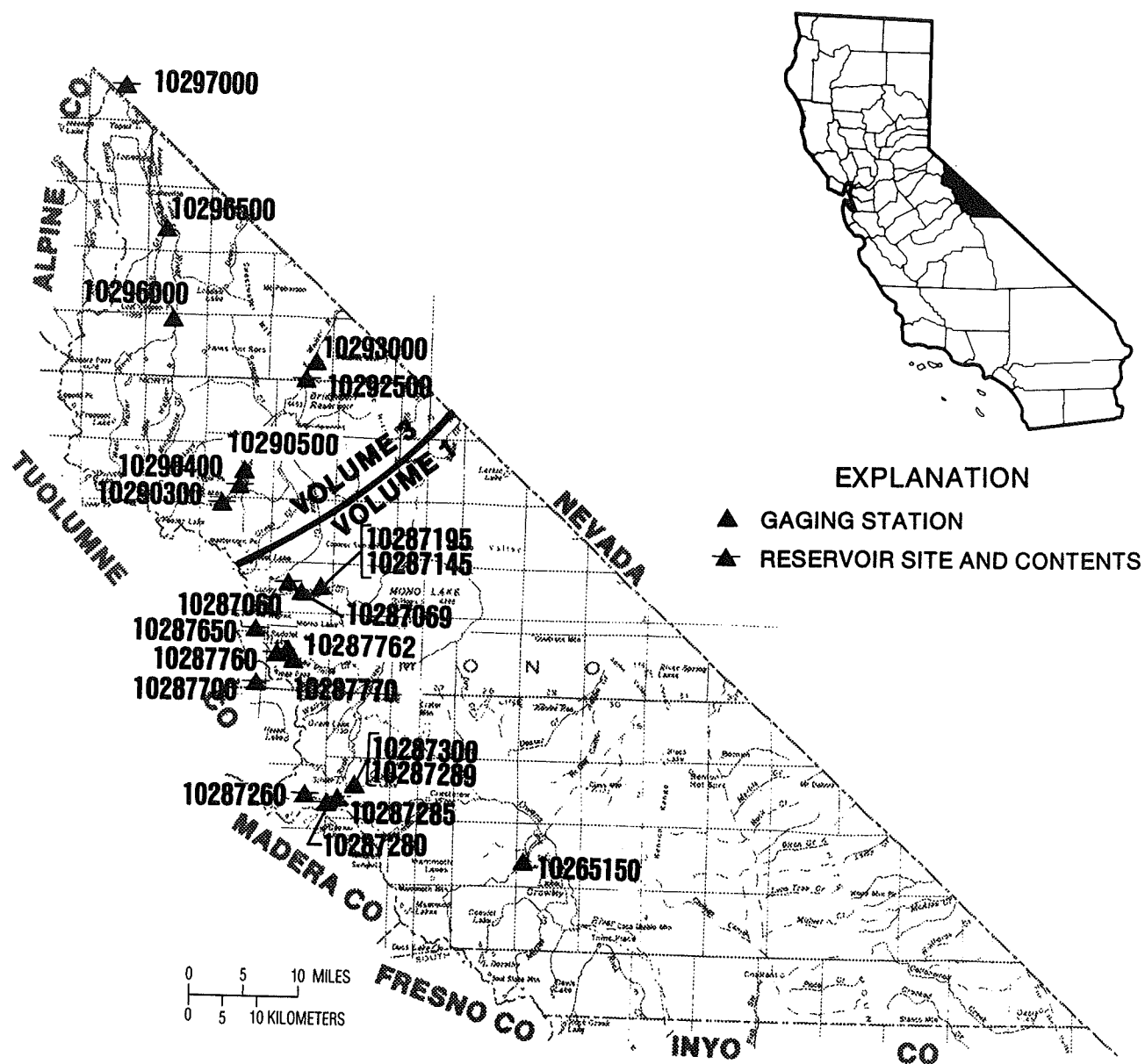


Figure 4. Location of discharge stations in Kern County.  
 (NOTE: Records for stations 11187500 through 11193031 published in volume 3.)





## EXPLANATION

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

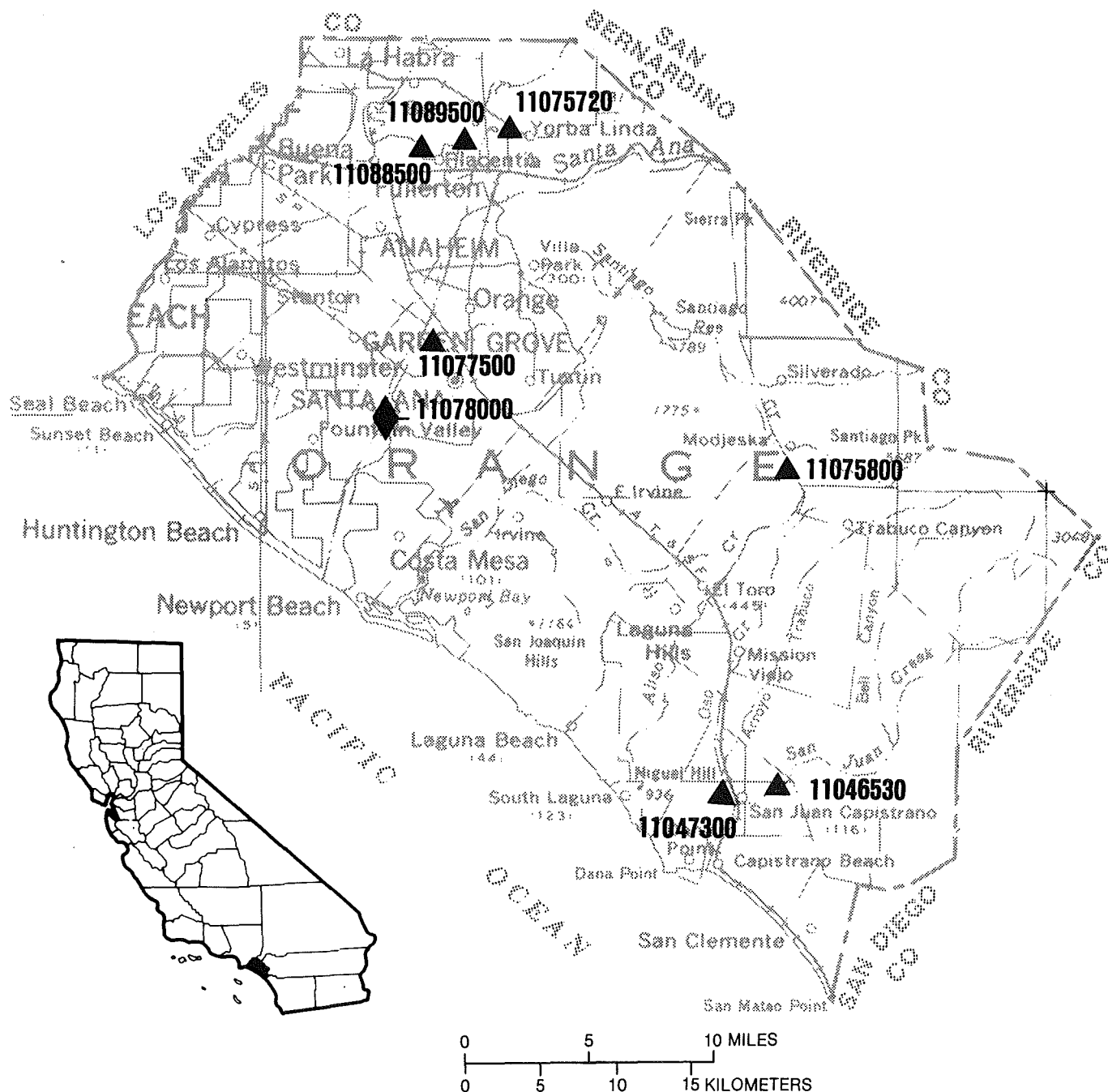


Figure 7. Location of discharge and water-quality stations in Orange County.

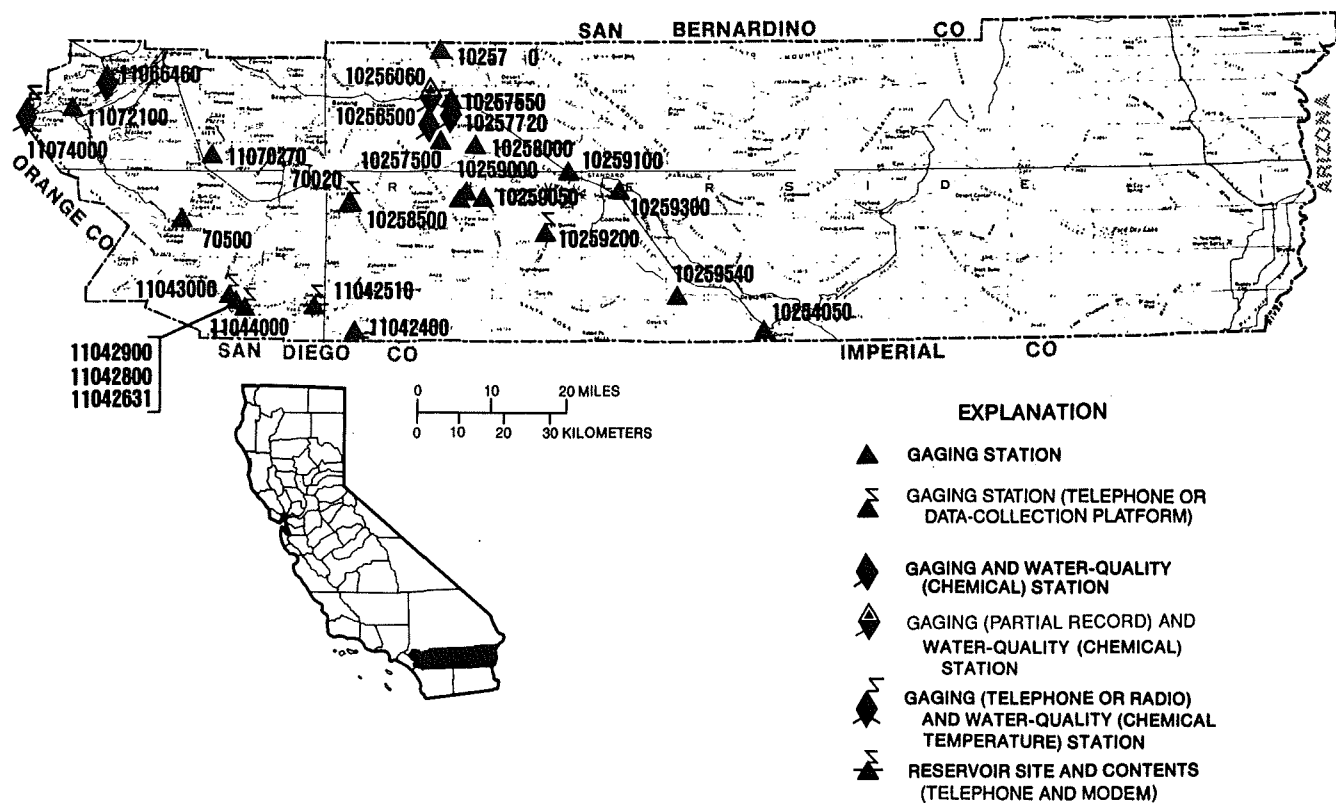


Figure 8. Location of discharge and water-quality stations in Riverside County.

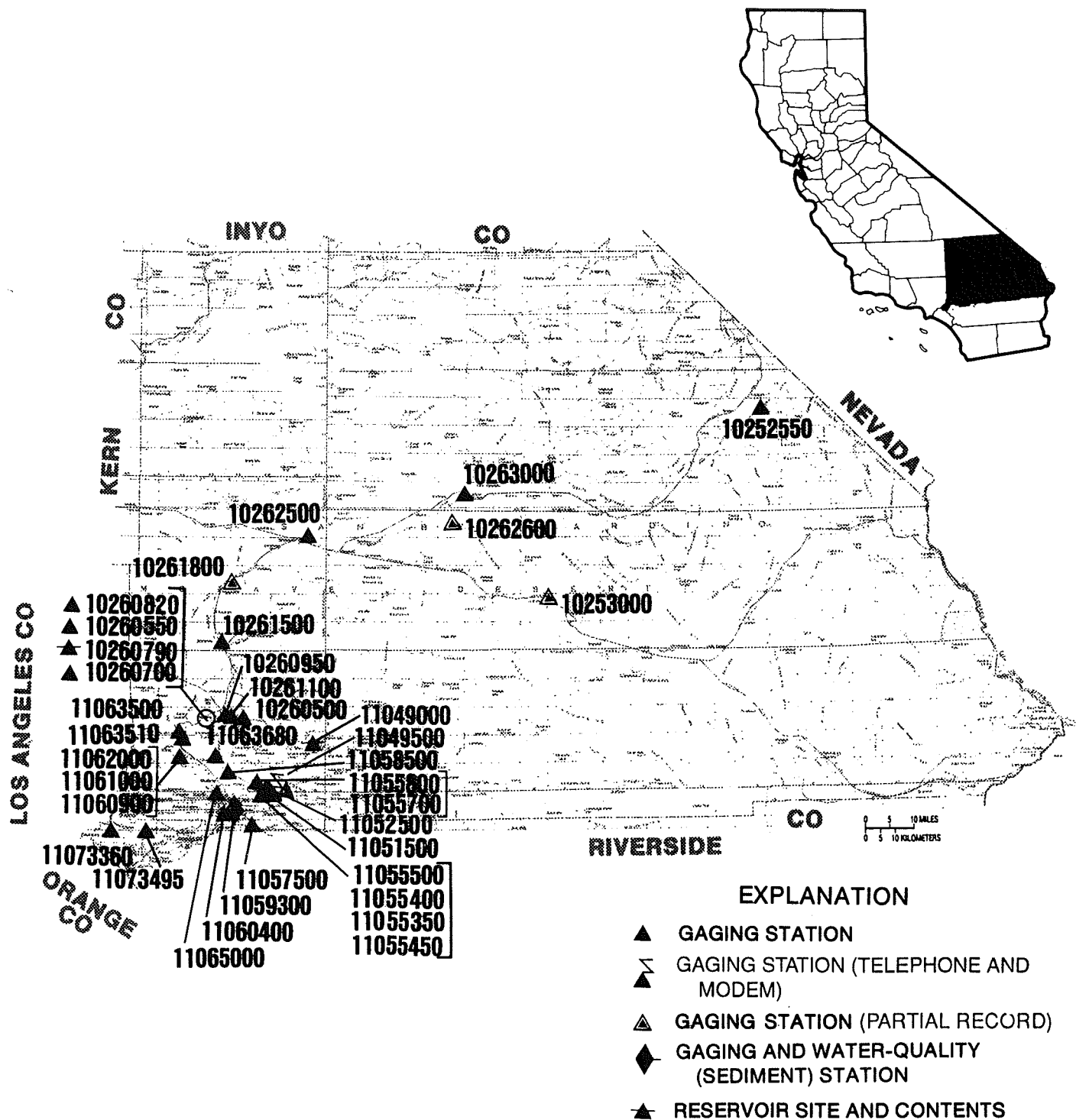


Figure 9. Location of discharge and water-quality stations in San Bernardino County.

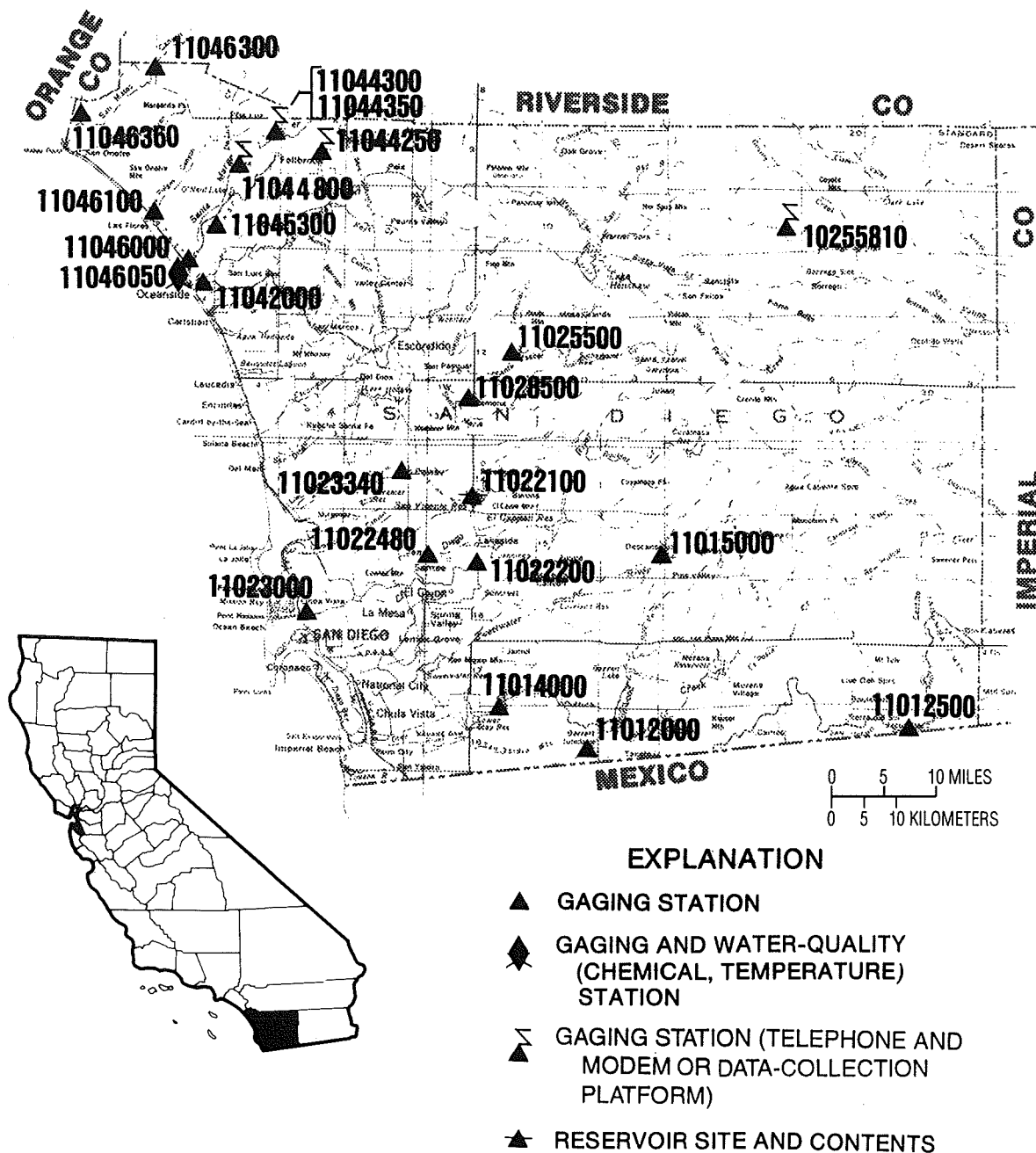


Figure 10. Location of discharge and water-quality stations in San Diego County.

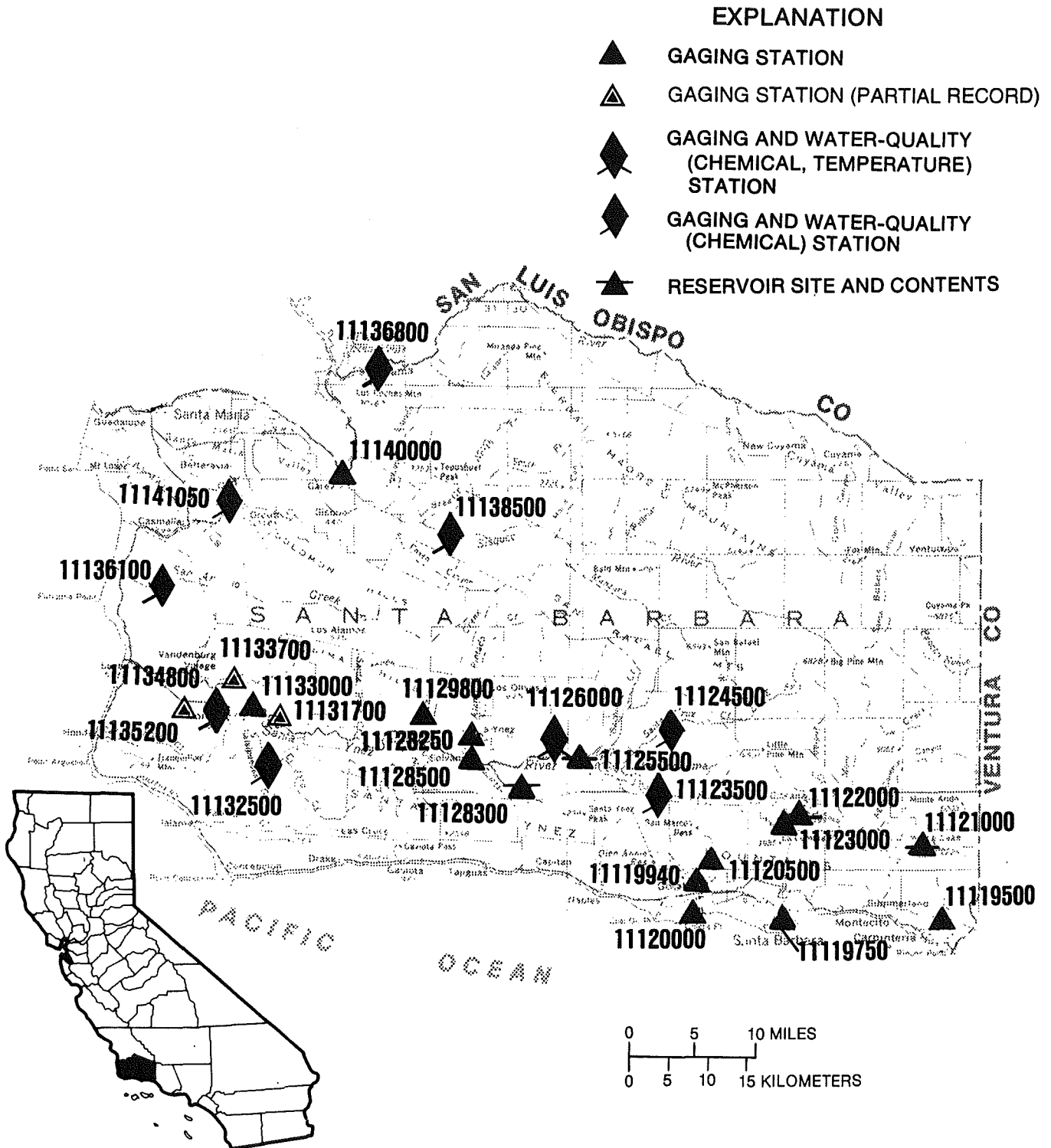


Figure 11. Location of discharge and water-quality stations in Santa Barbara County.



## EXPLANATION

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

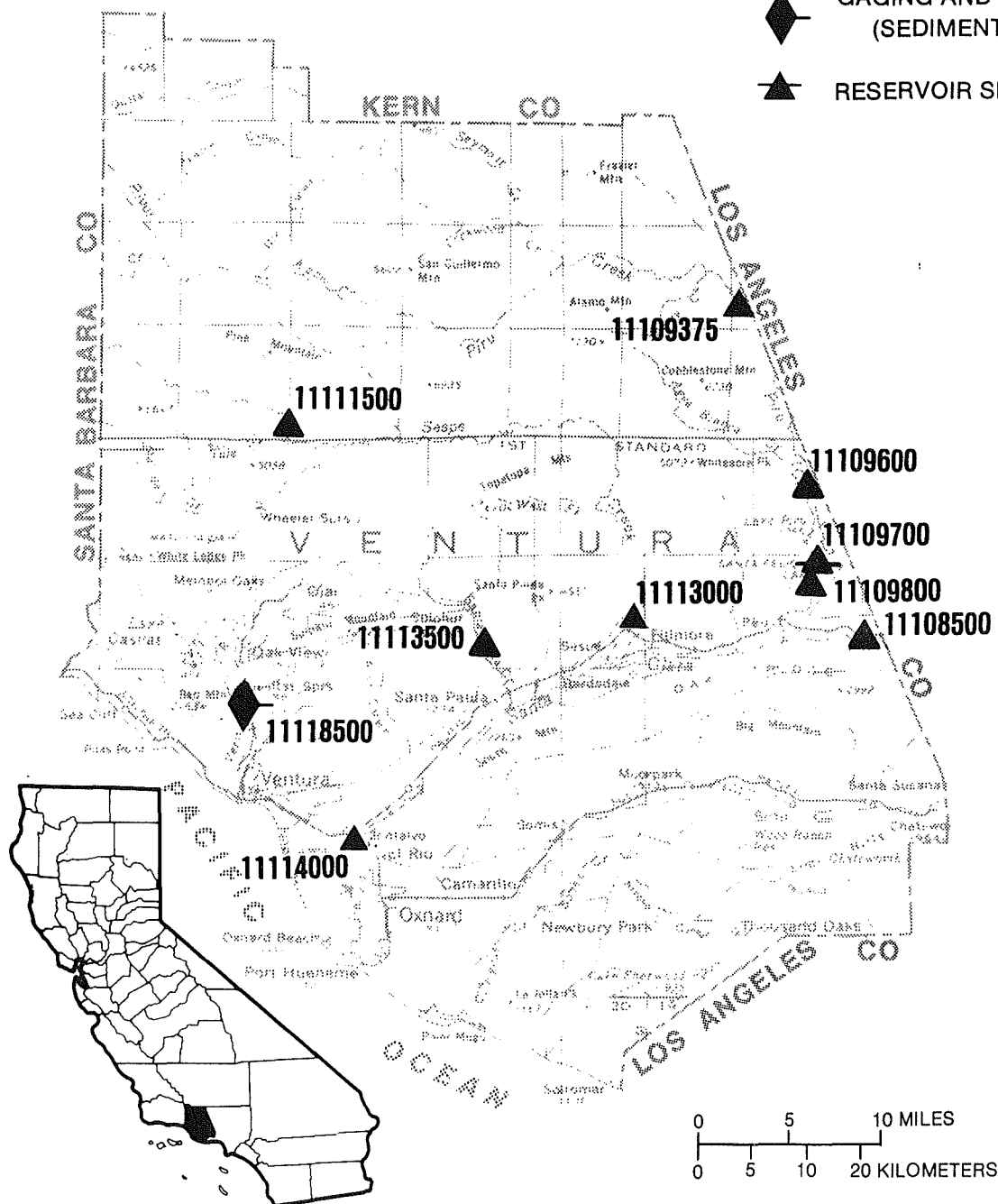


Figure 12. Location of discharge and water-quality stations in Ventura County.



## GAGING STATION AND WATER-QUALITY RECORDS

Remark Codes

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

PRINTED OUTPUTREMARK

|    |  |
|----|--|
| 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).  |
| ND | Not detected.  |
| &  | Biological organism estimated as dominant.   |
| *  | Instantaneous streamflow at the time of cross-sectional measurements.  |
| ** | Partial sampled width.   |
| 1  | Laboratory value.  |
| 2  | Laboratory fixed-end point titration.  |
| A  | Samples collected by another agency.   |
| N  | Suspended-sediment concentration value determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol. |

## Dissolved Trace-Element Concentrations

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

## Change in National Trends Network procedures

NOTE: Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).



## 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.--0.84 mi<sup>2</sup>, revised.

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 and crest-stage gage. Elevation of gage is 5,640 ft above sea level, from topographic map.

REMARKS.--Records poor. 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, from rating curve extended above 2.5 ft<sup>3</sup>/s on basis of slope-conveyance studies, or maximum:

| Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|---------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Jul. 15 | unknown | unknown                           | 9.75                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
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  | .46  |
| 7     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .11  |
| 8     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .07  |
| 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  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | .00  | .20  | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .00  | .00  | .04  | .00  | .00  | .00  | e1.0 | .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  | .29  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | .11  | .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 | 0.40 | 0.24 | 0.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.64 |
| MEAN  | .000 | .000 | .000 | .000 | .014 | .008 | .000 | .000 | .000 | .032 | .000 | .021 |
| MAX   | .00  | .00  | .00  | .00  | .29  | .20  | .00  | .00  | .00  | 1.0  | .00  | .46  |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | .00  | .8   | .5   | .00  | .00  | .00  | 2.0  | .00  | 1.3  |

e Estimated.

## THE GREAT BASIN

## BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .093 | .034 | .13  | .20  | .20  | .33  | .065 | .001 | .002 | .15  | .28  | .021 |
| MAX  | 2.81 | .67  | 1.27 | 2.22 | 1.44 | 2.23 | .95  | .010 | .054 | 2.45 | 2.70 | .34  |
| (WY) | 1977 | 1966 | 1966 | 1993 | 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1964 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 71.29                  |  |  | 2.28                |  |  |                         |  |  |
| ANNUAL MEAN              | .20                    |  |  | .006                |  |  | .12                     |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | .36                     |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .001                    |  |  |
| HIGHEST DAILY MEAN       | 10                     |  |  | 1.0                 |  |  | 80                      |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     |  |  | 814                     |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 9.75                |  |  | 9.75                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 141                    |  |  | 4.5                 |  |  | 89                      |  |  |
| 10 PERCENT EXCEEDS       | .34                    |  |  | .00                 |  |  | .07                     |  |  |
| 50 PERCENT EXCEEDS       | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| 90 PERCENT EXCEEDS       | .00                    |  |  | .00                 |  |  | .00                     |  |  |

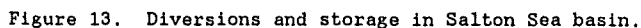


Figure 13. Diversions and storage in Salton Sea basin.

## 10254005 SALTON SEA NEAR WESTMORLAND, CA

LOCATION.--Lat 33°11'33", long 115°49'59", in SE 1/4 SW 1/4 sec.21, T.11 S., R.11 E., Imperial County, Hydrologic Unit 18100200, on western shore at Sandy Beach and 15.5 mi northwest of Westmorland.

DRAINAGE AREA.--8,360 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--November 1904 to current year. Records prior to 1932 are published in WSP 735. Monthend elevations only prior to October 1987.

REVISED RECORDS.--WDR CA-87-1: 1980-85.

GAGE.--Water-stage recorder. Datum of gage is sea level. See WSP 1734 for history of changes prior to Mar. 2, 1956.

REMARKS.--Bottom of sea is 277.7 ft below sea level. See WSP 300, 735, and 918 for condensed history of Salton Sea. See schematic diagram of Salton Sea basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 195.9 ft below sea level, in February and March 1907; minimum since 1906, 251.6 ft below sea level in November 1924.

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation, 226.7 ft below sea level, Apr. 27 to May 18; minimum, 227.8 ft below sea level, Sept. 28-30.

ELEVATION (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY         | OCT         | NOV         | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------------|-------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1           | -227.4      | -227.5      | -227.5  | -227.4  | -227.3  | -227.1  | -226.8  | -226.7  | -226.9  | -227.1  | e-227.2 | e-227.5 |
| 2           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.1  | -226.8  | -226.7  | -226.9  | -227.1  | -227.2  | e-227.5 |
| 3           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.1  | -226.8  | -226.7  | -226.9  | -227.1  | -227.2  | -227.5  |
| 4           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | -227.1  | -227.3  | -227.5  |
| 5           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | -227.1  | -227.3  | -227.5  |
| 6           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | -227.1  | -227.3  | -227.5  |
| 7           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | -227.1  | e-227.3 | -227.5  |
| 8           | -227.4      | -227.5      | -227.5  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.5  |
| 9           | -227.4      | -227.5      | -227.4  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.5  |
| 10          | -227.4      | -227.5      | -227.4  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.5  |
| 11          | -227.4      | -227.5      | -227.4  | -227.4  | -227.2  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.5  |
| 12          | -227.4      | -227.5      | -227.5  | -227.4  | -227.1  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.5  |
| 13          | -227.4      | -227.5      | -227.5  | -227.4  | -227.1  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.6  |
| 14          | -227.4      | -227.5      | -227.5  | -227.4  | -227.1  | -227.0  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.6  |
| 15          | -227.4      | -227.5      | -227.5  | -227.4  | -227.1  | -226.9  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.6  |
| 16          | -227.4      | -227.5      | -227.4  | -227.4  | -227.1  | -226.9  | -226.8  | -226.7  | -226.9  | e-227.1 | e-227.3 | -227.6  |
| 17          | -227.4      | -227.5      | -227.4  | -227.4  | -227.1  | -226.9  | -226.8  | -226.7  | -226.9  | e-227.2 | e-227.3 | -227.7  |
| 18          | -227.5      | -227.5      | -227.4  | -227.4  | -227.1  | -226.9  | -226.8  | -226.7  | -226.9  | e-227.2 | e-227.4 | -227.7  |
| 19          | -227.5      | -227.5      | -227.4  | -227.4  | -227.1  | -226.9  | -226.8  | -226.8  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 20          | -227.5      | -227.5      | -227.4  | -227.3  | -227.1  | -226.9  | -226.8  | -226.8  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 21          | -227.5      | -227.5      | -227.4  | -227.3  | -227.1  | -226.9  | -226.8  | -226.8  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 22          | -227.5      | -227.5      | -227.4  | -227.3  | -227.0  | -226.8  | -226.8  | -226.8  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 23          | -227.5      | -227.5      | -227.5  | -227.3  | -227.0  | -226.8  | -226.8  | -226.8  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 24          | -227.5      | -227.5      | -227.5  | -227.3  | -227.0  | -226.8  | -226.8  | -226.8  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 25          | -227.5      | -227.5      | -227.5  | -227.3  | -227.1  | -226.8  | -226.8  | -226.9  | -227.0  | e-227.2 | e-227.4 | -227.7  |
| 26          | -227.5      | -227.5      | -227.5  | -227.3  | -227.1  | -226.8  | -226.8  | -226.9  | -227.1  | e-227.2 | e-227.4 | -227.7  |
| 27          | -227.5      | -227.5      | -227.5  | -227.3  | -227.1  | -226.8  | -226.7  | -226.9  | -227.1  | e-227.2 | e-227.4 | -227.7  |
| 28          | -227.5      | -227.5      | -227.5  | -227.3  | -227.1  | -226.8  | -226.7  | -226.9  | -227.1  | e-227.2 | e-227.4 | -227.8  |
| 29          | -227.5      | -227.5      | -227.5  | -227.3  | -227.1  | -226.8  | -226.7  | -226.9  | -227.1  | e-227.2 | e-227.4 | -227.8  |
| 30          | -227.5      | -227.5      | -227.5  | -227.3  | ---     | -226.8  | -226.7  | -226.9  | -227.1  | e-227.2 | e-227.4 | -227.8  |
| 31          | -227.5      | ---         | -227.4  | -227.3  | ---     | -226.8  | ---     | -226.9  | ---     | e-227.2 | e-227.5 | ---     |
| MAX         | -227.40     | -227.50     | -227.40 | -227.30 | -227.00 | -226.80 | -226.70 | -226.70 | -226.90 | -227.10 | -227.20 | -227.50 |
| MIN         | -227.50     | -227.50     | -227.50 | -227.40 | -227.30 | -227.10 | -226.80 | -226.80 | -227.10 | -227.20 | -227.50 | -227.80 |
| CAL YR 1995 | MAX -226.60 | MIN -227.60 |         |         |         |         |         |         |         |         |         |         |
| WTR YR 1996 | MAX -226.70 | MIN -227.80 |         |         |         |         |         |         |         |         |         |         |

e Estimated.



## 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  | 0           | 5    | 0               | 0    | 0     | 0            | 0     | 0               | 1    | 125  | 153  | 201   |
| New River    | 10330       | 9800 | 14340           | 9930 | 11240 | 13050        | 11210 | 14960           | 9870 | 8670 | 8540 | 9710  |
| CAL YR 1995: | Alamo River |      | 1,230 acre-ft   |      |       | WTR YR 1996: |       | 485 acre-ft     |      |      |      |       |
| CAL YR 1995: | New River   |      | 142,400 acre-ft |      |       | WTR YR 1996: |       | 131,600 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 sea level, from topographic map. Prior to Dec. 21, 1984, at same site, at datum 2.50 ft lower.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (January 1961 to September 1990), 9,900 ft<sup>3</sup>/s, Sept. 24, 1976, gage height, 16.8 ft, present datum, from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; maximum gage height, 19.4 ft, present datum, Mar. 2, 1983 (backwater from Salton Sea and channel vegetation); no flow for many days since 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN  | FEB  | MAR  | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-------|------|------|------|------|------|-------|------|------|------|------|------|
| 1     | .18   | 1.2  | 1.7  | 2.7  | 3.2  | 2.8  | 2.0   | .24  | .14  | .00  | .00  | .00  |
| 2     | .20   | 1.2  | 1.8  | 2.6  | 3.4  | 2.8  | 1.8   | .25  | .12  | .00  | .00  | .00  |
| 3     | .23   | 1.3  | 1.8  | 2.5  | 3.1  | 2.8  | 1.8   | .26  | .11  | .00  | .00  | .00  |
| 4     | .26   | 1.2  | 1.9  | 2.5  | 3.1  | 2.8  | 1.7   | .27  | .07  | .00  | .00  | .00  |
| 5     | .26   | 1.1  | 2.0  | 2.7  | 3.1  | 2.9  | 1.5   | .26  | .04  | .00  | .00  | .00  |
| 6     | .28   | 1.1  | 2.1  | 2.7  | 3.1  | 2.8  | 1.4   | .25  | .02  | .00  | .00  | .00  |
| 7     | .32   | 1.2  | 2.2  | 2.8  | 3.1  | 2.7  | 1.3   | .23  | .00  | .00  | .00  | .00  |
| 8     | .37   | 1.3  | 2.2  | 2.8  | 3.0  | 2.6  | 1.4   | .22  | .00  | .00  | .00  | .00  |
| 9     | .40   | 1.3  | 2.1  | 2.8  | 2.9  | 2.6  | 1.4   | .20  | .00  | .00  | .00  | .00  |
| 10    | .44   | 1.3  | 2.1  | 2.8  | 2.9  | 2.7  | 1.3   | .17  | .00  | .00  | .00  | .00  |
| 11    | .47   | 1.3  | 2.2  | 2.8  | 2.9  | 2.7  | 1.2   | .15  | .00  | .00  | .00  | .00  |
| 12    | .48   | 1.3  | 2.3  | 2.7  | 2.9  | 2.7  | 1.2   | .14  | .00  | .00  | .00  | .00  |
| 13    | .49   | 1.4  | 2.4  | 2.7  | 3.1  | 2.7  | 1.1   | .12  | .00  | .00  | .00  | .00  |
| 14    | .49   | 1.5  | 2.4  | 2.7  | 3.1  | 3.0  | 1.1   | .11  | .00  | .00  | .00  | .00  |
| 15    | .50   | 1.5  | 2.2  | 2.7  | 3.1  | 3.6  | .94   | .10  | .00  | .00  | .00  | .00  |
| 16    | .55   | 1.5  | 2.2  | 2.8  | 3.0  | 3.4  | .95   | .07  | .00  | .00  | .00  | .00  |
| 17    | .58   | 1.4  | 2.2  | 2.9  | 3.0  | 3.0  | 1.0   | .06  | .00  | .00  | .00  | .00  |
| 18    | .59   | 1.4  | 2.1  | 2.9  | 3.0  | 2.8  | 1.1   | .05  | .00  | .00  | .00  | .00  |
| 19    | .62   | 1.5  | 2.1  | 2.8  | 3.0  | 2.6  | .97   | .06  | .00  | .00  | .00  | .00  |
| 20    | .65   | 1.4  | 2.3  | 2.8  | 3.0  | 2.5  | .89   | .06  | .00  | .00  | .00  | .00  |
| 21    | .68   | 1.4  | 2.4  | 2.9  | 2.9  | 2.5  | .85   | .05  | .00  | .00  | .00  | .00  |
| 22    | .66   | 1.5  | 2.5  | 2.9  | 2.8  | 2.5  | .82   | .05  | .00  | .00  | .00  | .00  |
| 23    | .63   | 1.5  | 2.4  | 3.0  | 2.7  | 2.4  | .75   | .05  | .00  | .00  | .00  | .00  |
| 24    | .62   | 1.6  | 2.5  | 2.9  | 2.6  | 2.3  | .68   | .04  | .00  | .00  | .00  | .00  |
| 25    | .76   | 1.6  | 2.6  | 2.9  | 2.6  | 2.1  | .63   | .06  | .00  | .00  | .00  | .00  |
| 26    | .85   | 1.7  | 2.6  | 3.0  | 2.8  | 2.2  | .60   | .10  | .00  | .00  | .00  | .00  |
| 27    | .89   | 1.5  | 2.6  | 3.0  | 3.0  | 2.2  | .55   | .13  | .00  | .00  | .00  | .00  |
| 28    | .93   | 1.4  | 2.6  | 3.0  | 2.9  | 2.0  | .45   | .14  | .00  | .00  | .00  | .00  |
| 29    | .98   | 1.3  | 2.7  | 3.0  | 2.9  | 2.1  | .32   | .14  | .00  | .00  | .00  | .00  |
| 30    | 1.0   | 1.6  | 2.7  | 3.1  | ---  | 2.0  | .26   | .14  | .00  | .00  | .00  | .00  |
| 31    | 1.1   | ---  | 2.7  | 3.2  | ---  | 1.9  | ---   | .16  | ---  | .00  | .00  | ---  |
| TOTAL | 17.46 | 41.5 | 70.6 | 87.6 | 86.2 | 80.7 | 31.96 | 4.33 | 0.50 | 0.00 | 0.00 | 0.00 |
| MEAN  | .56   | 1.38 | 2.28 | 2.83 | 2.97 | 2.60 | 1.07  | .14  | .017 | .000 | .000 | .000 |
| MAX   | 1.1   | 1.7  | 2.7  | 3.2  | 3.4  | 3.6  | 2.0   | .27  | .14  | .00  | .00  | .00  |
| MIN   | .18   | 1.1  | 1.7  | 2.5  | 2.6  | 1.9  | .26   | .04  | .00  | .00  | .00  | .00  |
| AC-FT | 35    | 82   | 140  | 174  | 171  | 160  | 63    | 8.6  | 1.0  | .00  | .00  | .00  |

WTR YR 1996 TOTAL 420.85 MEAN 1.15 MAX 3.6 MIN .00 AC-FT 835

10254050 SALT CREEK NEAR MECCA, CA--Continued

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

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 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 | 1.58 | 4.13 | 4.26 | 3.79 | 2.37 | 1.49 | .86  | .41  | .70  | .58  |
| (WY) | 1990 | 1979 | 1979 | 1990 | 1990 | 1990 | 1986 | 1986 | 1989 | 1989 | 1989 | 1978 |

## SUMMARYSTATISTICS

WATER YEARS 1962 - 1990

|                         |       |             |
|-------------------------|-------|-------------|
| ANNUALMEAN              | 6.97  |             |
| HIGHESTANNUAL MEAN      | 23.7  |             |
| LOWESTANNUAL MEAN       | 2.57  | Mar 2 1989  |
| HIGHESTDAILY MEAN       | 2830  | Mar 2 1983  |
| LOWESTDAILY MEAN        | .06   | Nov 1 1978  |
| ANNUALSEVEN-DAY MINIMUM | .07   | Oct 30 1978 |
| INSTANTANEOUSPEAK FLOW  | 9900  | Sep 24 1976 |
| INSTANTANEOUSPEAK STAGE | 16.80 | Sep 24 1976 |
| ANNUALRUNOFF (AC-FT)    | 5050  |             |
| 10PERCENT EXCEEDS       | 10    |             |
| 50PERCENT EXCEEDS       | 4.6   |             |
| 90PERCENT EXCEEDS       | 1.3   |             |

## SALTON SEA BASIN

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

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

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

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

BIOLOGICAL DATA: Water years 1979-81.

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

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

SEDIMENT DATA: Water years 1979-94.

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

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

REMARKS.--Records good. Flow is mainly return from irrigated areas. See schematic diagram of Salton Sea basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 801   | 658   | 612   | 463   | 640   | 780   | 911   | 922   | 745   | 714   | 715   | 664   |
| 2     | 792   | 669   | 614   | 391   | 629   | 756   | 875   | 912   | 727   | 689   | 698   | 642   |
| 3     | 788   | 668   | 600   | 477   | 611   | 701   | 909   | 915   | 753   | 708   | 677   | 655   |
| 4     | 781   | 663   | 578   | 602   | 608   | 667   | 897   | 965   | 758   | 691   | 690   | 651   |
| 5     | 746   | 674   | 603   | 622   | 599   | 679   | 890   | 890   | 744   | 716   | 660   | 625   |
| 6     | 787   | 646   | 613   | 614   | 590   | 688   | 914   | 806   | 738   | 734   | 657   | 670   |
| 7     | 750   | 646   | 614   | 642   | 605   | 741   | 941   | 842   | 747   | 726   | 673   | 660   |
| 8     | 759   | 656   | 636   | 574   | 653   | 779   | 863   | 818   | 747   | 722   | 686   | 675   |
| 9     | 721   | 671   | 623   | 590   | 671   | 826   | 852   | 787   | 749   | 716   | 721   | 649   |
| 10    | 682   | 678   | 605   | 615   | 676   | 859   | 882   | 819   | 747   | 718   | 670   | 638   |
| 11    | 697   | 683   | 561   | 596   | 668   | 886   | 885   | 832   | 744   | 762   | 670   | 622   |
| 12    | 720   | 667   | 521   | 620   | 665   | 963   | 877   | 803   | 719   | 749   | 670   | 657   |
| 13    | 733   | 655   | 551   | 628   | 667   | 893   | 905   | 766   | 718   | 795   | 650   | 655   |
| 14    | 745   | 639   | 596   | 616   | 652   | 888   | 908   | 715   | 749   | 728   | 674   | 655   |
| 15    | 751   | 652   | 615   | 566   | 625   | 925   | 922   | 742   | 779   | 711   | 698   | 670   |
| 16    | 735   | 645   | 573   | 614   | 614   | 901   | 909   | 758   | 731   | 681   | 695   | 655   |
| 17    | 726   | 661   | 553   | 597   | 627   | 890   | 949   | 745   | 714   | 668   | 703   | 658   |
| 18    | 731   | 663   | 525   | 630   | 627   | 819   | 1020  | 757   | 749   | 649   | 718   | 673   |
| 19    | 721   | 667   | 516   | 651   | 645   | 771   | 951   | 752   | 762   | 685   | 710   | 665   |
| 20    | 729   | 658   | 569   | 648   | 631   | 807   | 969   | 738   | 742   | 709   | 662   | 685   |
| 21    | 703   | 659   | 594   | 634   | 634   | 853   | 940   | 720   | 712   | 714   | 660   | 732   |
| 22    | 668   | 648   | 590   | 604   | 655   | 869   | 895   | 721   | 723   | 723   | 677   | 792   |
| 23    | 652   | 667   | 616   | 590   | 661   | 897   | 933   | 713   | 697   | 750   | 680   | 790   |
| 24    | 670   | 596   | 626   | 624   | 667   | 959   | 989   | 735   | 671   | 749   | 685   | 760   |
| 25    | 682   | 603   | 468   | 630   | 720   | 957   | 973   | 778   | 669   | 725   | 664   | 795   |
| 26    | 658   | 610   | 360   | 686   | 761   | 915   | 963   | 735   | 686   | 728   | 648   | 765   |
| 27    | 664   | 594   | 436   | 667   | 789   | 902   | 1040  | 706   | 683   | 753   | 667   | 776   |
| 28    | 693   | 533   | 541   | 629   | 846   | 903   | 1050  | 724   | 666   | 745   | 677   | 799   |
| 29    | 690   | 559   | 567   | 571   | 797   | 875   | 1020  | 730   | 709   | 725   | 680   | 795   |
| 30    | 669   | 605   | 572   | 576   | ---   | 875   | 938   | 741   | 700   | 733   | 682   | 778   |
| 31    | 666   | ---   | 568   | 605   | ---   | 928   | ---   | 746   | ---   | 735   | 682   | ---   |
| TOTAL | 22310 | 19293 | 17616 | 18572 | 19233 | 26152 | 27970 | 24333 | 21778 | 22351 | 21099 | 20906 |
| MEAN  | 720   | 643   | 568   | 599   | 663   | 844   | 932   | 785   | 726   | 721   | 681   | 697   |
| MAX   | 801   | 683   | 636   | 686   | 846   | 963   | 1050  | 965   | 779   | 795   | 721   | 799   |
| MIN   | 652   | 533   | 360   | 391   | 590   | 667   | 852   | 706   | 666   | 649   | 648   | 622   |
| AC-FT | 44250 | 38270 | 34940 | 36840 | 38150 | 51870 | 55480 | 48260 | 43200 | 44330 | 41850 | 41470 |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 785  | 668  | 546  | 521  | 602  | 820  | 963  | 841  | 698  | 691  | 707  | 727  |
| MAX  | 895  | 809  | 666  | 640  | 718  | 947  | 1208 | 1000 | 888  | 888  | 846  | 847  |
| (WY) | 1992 | 1991 | 1991 | 1993 | 1991 | 1995 | 1994 | 1994 | 1994 | 1994 | 1994 | 1994 |
| MIN  | 655  | 569  | 379  | 392  | 445  | 697  | 812  | 706  | 515  | 556  | 593  | 631  |
| (WY) | 1982 | 1982 | 1986 | 1995 | 1980 | 1987 | 1986 | 1982 | 1982 | 1982 | 1982 | 1986 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1980 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 274035                 |  |  |  | 261613              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 751                    |  |  |  | 715                 |  |  |  | 714                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 833                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 628                     |  |  |  |
| HIGHEST DAILY MEAN       | 1400                   |  |  |  | Apr 19              |  |  |  | 4670                    |  |  |  |
| LOWEST DAILY MEAN        | 330                    |  |  |  | Jan 30              |  |  |  | 259                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 348                    |  |  |  | Jan 11              |  |  |  | 277                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 1120                |  |  |  | Apr 18                  |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 2.65                |  |  |  | Apr 18                  |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 543500                 |  |  |  | 518900              |  |  |  | (a) 7.20                |  |  |  |
| 10 PERCENT EXCEEDS       | 984                    |  |  |  | 896                 |  |  |  | 931                     |  |  |  |
| 50 PERCENT EXCEEDS       | 787                    |  |  |  | 692                 |  |  |  | 700                     |  |  |  |
| 90 PERCENT EXCEEDS       | 470                    |  |  |  | 600                 |  |  |  | 502                     |  |  |  |

(a) Affected by backwater.

## SALTON SEA BASIN

10254730 ALAMO RIVER NEAR NILAND, CA

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

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

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

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

COOPERATION.--Gage-height record provided by Imperial Irrigation District for the following dates: Oct. 30, 31.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 936   | 810   | 677   | 543   | 740   | 948   | 1050  | 1100  | 870   | 804   | 864   | 810   |
| 2     | 936   | 807   | 682   | 454   | 718   | 922   | 1050  | 1060  | 848   | 790   | 847   | 769   |
| 3     | 936   | 812   | 666   | 533   | 680   | 818   | 1040  | 1080  | 870   | 814   | 812   | 757   |
| 4     | 927   | 813   | 650   | 670   | 679   | 777   | 1050  | 1090  | 905   | 819   | 821   | 752   |
| 5     | 851   | 778   | 654   | 688   | 668   | 778   | 1050  | 1060  | 889   | 856   | 773   | 694   |
| 6     | 882   | 771   | 689   | 661   | 658   | 832   | 1070  | 948   | 858   | 855   | 766   | 774   |
| 7     | 871   | 710   | 676   | 697   | 686   | 879   | 1090  | 948   | 869   | 875   | 812   | 782   |
| 8     | 864   | 716   | 729   | 628   | 746   | 957   | 1040  | 948   | 890   | 866   | 814   | 824   |
| 9     | 847   | 734   | 694   | 639   | 781   | 1000  | 1020  | 948   | 908   | 852   | 836   | 830   |
| 10    | 791   | 784   | 644   | 692   | 783   | 1030  | 1060  | 966   | 890   | 869   | 811   | 769   |
| 11    | 816   | 803   | 608   | 670   | 767   | 1070  | 1100  | 983   | 900   | 896   | 768   | 735   |
| 12    | 840   | 778   | 568   | 694   | 758   | 1130  | 1080  | 957   | 889   | 885   | 800   | 798   |
| 13    | 909   | 768   | 616   | 691   | 793   | 1100  | 1110  | 914   | 883   | 918   | 763   | 797   |
| 14    | 918   | 732   | 662   | 670   | 760   | 1080  | 1090  | 855   | 918   | 887   | 816   | 782   |
| 15    | 894   | 708   | 694   | 626   | 713   | 1100  | 1110  | 870   | 963   | 851   | 867   | 785   |
| 16    | 871   | 732   | 663   | 665   | 665   | 1090  | 1080  | 870   | 909   | 875   | 874   | 765   |
| 17    | 869   | 729   | 613   | 671   | 692   | 1070  | 1130  | 905   | 874   | 825   | 879   | 782   |
| 18    | 864   | 773   | 586   | 699   | 677   | 1000  | 1160  | 905   | 909   | 799   | 863   | 815   |
| 19    | 834   | 769   | 575   | 729   | 740   | 948   | 1120  | 887   | 909   | 814   | 868   | 805   |
| 20    | 857   | 747   | 621   | 715   | 742   | 957   | 1110  | 896   | 884   | 845   | 819   | 834   |
| 21    | 825   | 744   | 671   | 704   | 720   | 983   | 1120  | 879   | 848   | 849   | 827   | 901   |
| 22    | 785   | 740   | 660   | 682   | 750   | 992   | 1100  | 857   | 873   | 861   | 824   | 939   |
| 23    | 728   | 770   | 688   | 633   | 763   | 1040  | 1090  | 846   | 868   | 909   | 828   | 958   |
| 24    | 749   | 687   | 692   | 683   | 760   | 1080  | 1120  | 879   | 850   | 897   | 809   | 976   |
| 25    | 788   | 669   | 539   | 701   | 852   | 1100  | 1100  | 896   | 812   | 878   | 775   | 967   |
| 26    | 752   | 671   | 409   | 774   | 896   | 1120  | 1090  | 868   | 857   | 893   | 764   | 958   |
| 27    | 756   | 661   | 482   | 736   | 957   | 1080  | 1140  | 811   | 842   | 936   | 787   | 958   |
| 28    | 817   | 623   | 591   | 673   | 1000  | 1100  | 1170  | 847   | 810   | 927   | 778   | 976   |
| 29    | 819   | 638   | 642   | 625   | 983   | 1090  | 1160  | 860   | 850   | 854   | 824   | 976   |
| 30    | 825   | 669   | 642   | 626   | ---   | 1080  | 1120  | 879   | 830   | 835   | 819   | 926   |
| 31    | 833   | ---   | 626   | 659   | ---   | 1080  | ---   | 905   | ---   | 875   | 839   | ---   |
| TOTAL | 26190 | 22146 | 19609 | 20531 | 22127 | 31231 | 32820 | 28717 | 26275 | 26709 | 25347 | 25194 |
| MEAN  | 845   | 738   | 633   | 662   | 763   | 1007  | 1094  | 926   | 876   | 862   | 818   | 840   |
| MAX   | 936   | 813   | 729   | 774   | 1000  | 1130  | 1170  | 1100  | 963   | 936   | 879   | 976   |
| MIN   | 728   | 623   | 409   | 454   | 658   | 777   | 1020  | 811   | 810   | 790   | 763   | 694   |
| AC-FT | 51950 | 43930 | 38890 | 40720 | 43890 | 61950 | 65100 | 56960 | 52120 | 52980 | 50280 | 49970 |

10254730 ALAMO RIVER NEAR NILAND, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 948  | 760  | 639  | 638  | 760  | 973  | 1089 | 957  | 820  | 824  | 843  | 901  |
| 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  | 495  | 734  | 797  | 684  | 646  | 636  | 656  | 667  |
| (WY) | 1986 | 1966 | 1986 | 1978 | 1993 | 1987 | 1965 | 1964 | 1964 | 1985 | 1986 | 1992 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1961 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 308620                 | 306896              |                         |
| ANNUAL MEAN              | 846                    | 839                 | 846                     |
| HIGHEST ANNUAL MEAN      |                        |                     | 991                     |
| LOWEST ANNUAL MEAN       |                        |                     | 680                     |
| HIGHEST DAILY MEAN       | 1260                   | Apr 2               | 4500                    |
| LOWEST DAILY MEAN        | 362                    | Jan 15              | 288                     |
| ANNUAL SEVEN-DAY MINIMUM | 388                    | Jan 11              | 323                     |
| ANNUAL RUNOFF (AC-FT)    | 612100                 | 608700              | 613000                  |
| 10 PERCENT EXCEEDS       | 1150                   | 1080                | 1110                    |
| 50 PERCENT EXCEEDS       | 869                    | 831                 | 838                     |
| 90 PERCENT EXCEEDS       | 541                    | 665                 | 601                     |

## SALTON SEA BASIN

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 sea level, from topographic map.

REMARKS.--Records good. Discharge represents seepage and return flow from irrigated areas. See schematic diagram of Salton Sea basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 833 ft<sup>3</sup>/s, Dec. 9, 1982, gage height, 14.73 ft; minimum daily, 115 ft<sup>3</sup>/s, Nov. 27, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC   | JAN  | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|------|-------|------|-------|-------|-------|-------|------|------|------|------|
| 1     | 165   | 172  | 190   | 196  | 165   | 212   | 182   | 299   | 197  | 153  | 131  | 159  |
| 2     | 167   | 173  | 206   | 189  | 166   | 212   | 182   | 299   | 193  | 155  | 130  | 159  |
| 3     | 168   | 174  | 213   | 197  | 166   | 211   | 195   | 292   | 188  | 156  | 127  | 162  |
| 4     | 172   | 182  | 218   | 205  | 162   | 210   | 189   | 290   | 188  | 165  | 121  | 163  |
| 5     | 169   | 188  | 235   | 203  | 160   | 221   | 181   | 292   | 183  | 164  | 121  | 162  |
| 6     | 169   | 184  | 242   | 194  | 168   | 225   | 180   | 293   | 183  | 156  | 122  | 177  |
| 7     | 167   | 177  | 248   | 180  | 175   | 226   | 179   | 298   | 179  | 149  | 126  | 181  |
| 8     | 168   | 168  | 244   | 162  | 176   | 231   | 179   | 291   | 171  | 149  | 132  | 178  |
| 9     | 175   | 160  | 232   | 160  | 179   | 235   | 178   | 272   | 165  | 151  | 134  | 168  |
| 10    | 174   | 159  | 225   | 160  | 175   | 235   | 179   | 268   | 163  | 150  | 135  | 167  |
| 11    | 170   | 154  | 228   | 162  | 166   | 232   | 173   | 269   | 169  | 145  | 142  | 166  |
| 12    | 171   | 154  | 236   | 162  | 187   | 237   | 165   | 255   | 164  | 141  | 141  | 163  |
| 13    | 172   | 161  | 226   | 157  | 181   | 244   | 162   | 253   | 158  | 157  | 140  | 162  |
| 14    | 166   | 162  | 228   | 154  | 194   | 253   | 163   | 269   | 157  | 151  | 136  | 157  |
| 15    | 166   | 153  | 233   | 152  | 224   | 246   | 173   | 271   | 156  | 142  | 153  | 152  |
| 16    | 165   | 143  | 228   | 153  | 236   | 237   | 173   | 259   | 149  | 151  | 147  | 153  |
| 17    | 170   | 143  | 243   | 150  | 240   | 230   | 172   | 229   | 150  | 142  | 149  | 160  |
| 18    | 166   | 144  | 261   | 147  | 229   | 228   | 172   | 200   | 159  | 131  | 141  | 163  |
| 19    | 157   | 145  | 269   | 144  | 233   | 227   | 170   | 186   | 158  | 125  | 148  | 163  |
| 20    | 167   | 147  | 267   | 145  | 229   | 226   | 166   | 189   | 157  | 125  | 144  | 171  |
| 21    | 166   | 157  | 261   | 142  | 229   | 214   | 161   | 189   | 151  | 125  | 139  | 168  |
| 22    | 164   | 170  | 245   | 143  | 215   | 195   | 162   | 190   | 154  | 123  | 137  | 162  |
| 23    | 164   | 174  | 229   | 146  | 202   | 179   | 172   | 204   | 158  | 127  | 138  | 160  |
| 24    | 165   | 164  | 224   | 150  | 194   | 175   | 192   | 197   | 173  | 130  | 136  | 160  |
| 25    | 167   | 165  | 221   | 155  | 198   | 175   | 236   | 191   | 174  | 129  | 135  | 162  |
| 26    | 165   | 174  | 231   | 150  | 203   | 176   | 255   | 219   | 163  | 126  | 144  | 159  |
| 27    | 164   | 178  | 245   | 147  | 201   | 179   | 222   | 205   | 155  | 131  | 146  | 159  |
| 28    | 168   | 172  | 251   | 146  | 204   | 181   | 217   | 218   | 152  | 129  | 149  | 165  |
| 29    | 170   | 172  | 231   | 147  | 209   | 179   | 243   | 217   | 153  | 129  | 153  | 160  |
| 30    | 175   | 174  | 214   | 152  | ---   | 175   | 277   | 226   | 154  | 130  | 155  | 153  |
| 31    | 174   | ---  | 206   | 158  | ---   | 173   | ---   | 213   | ---  | 133  | 152  | ---  |
| TOTAL | 5206  | 4943 | 7230  | 5008 | 5666  | 6579  | 5650  | 7543  | 4974 | 4370 | 4304 | 4894 |
| MEAN  | 168   | 165  | 233   | 162  | 195   | 212   | 188   | 243   | 166  | 141  | 139  | 163  |
| MAX   | 175   | 188  | 269   | 205  | 240   | 253   | 277   | 299   | 197  | 165  | 155  | 181  |
| MIN   | 157   | 143  | 190   | 142  | 160   | 173   | 161   | 186   | 149  | 123  | 121  | 152  |
| AC-FT | 10330 | 9800 | 14340 | 9930 | 11240 | 13050 | 11210 | 14960 | 9870 | 8670 | 8540 | 9710 |



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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 230  | 219  | 262  | 264  | 267  | 281  | 290  | 270  | 224  | 236  | 269  | 248  |
| 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  | 149  | 122  | 167  | 162  | 179  | 190  | 188  | 177  | 154  | 139  | 139  | 152  |
| (WY) | 1993 | 1995 | 1980 | 1996 | 1991 | 1995 | 1996 | 1990 | 1992 | 1994 | 1996 | 1992 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1980 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 71780                  |  |  |  | 66367               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 197                    |  |  |  | 181                 |  |  |  | 255                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 362                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 181                     |  |  |  |
| HIGHEST DAILY MEAN       | 399                    |  |  |  | 299                 |  |  |  | 735                     |  |  |  |
| LOWEST DAILY MEAN        | 132                    |  |  |  | 121                 |  |  |  | 115                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 134                    |  |  |  | 125                 |  |  |  | 120                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 311                 |  |  |  | 833                     |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 10.03               |  |  |  | 14.73                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 142400                 |  |  |  | 131600              |  |  |  | 184700                  |  |  |  |
| 10 PERCENT EXCEEDS       | 252                    |  |  |  | 236                 |  |  |  | 371                     |  |  |  |
| 50 PERCENT EXCEEDS       | 188                    |  |  |  | 170                 |  |  |  | 237                     |  |  |  |
| 90 PERCENT EXCEEDS       | 152                    |  |  |  | 142                 |  |  |  | 160                     |  |  |  |

## SALTON SEA BASIN

10255550 NEW RIVER NEAR WESTMORLAND, CA

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

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

GAGE.--Water-stage recorder. Elevation of gage is 220 ft below sea level, from topographic map.

REMARKS.--Records good except discharges during period of channel dredging (Jan. 30 to Feb. 28), which are fair. Discharge mainly represents seepage and return flow from irrigated areas. See schematic diagram of Salton Sea basin.

COOPERATION.--Gage-height record provided by Imperial Irrigation District for the following dates: June 24-30, 1996.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 635   | 549   | 507   | 485   | 532   | 654   | 743   | 833   | 708   | 619   | 577   | 554   |
| 2     | 636   | 561   | 521   | 462   | 530   | 634   | 728   | 840   | 692   | 622   | 583   | 543   |
| 3     | 639   | 581   | 542   | 464   | 519   | 645   | 773   | 846   | 705   | 626   | 584   | 573   |
| 4     | 602   | 551   | 551   | 497   | 506   | 656   | 777   | 834   | 700   | 637   | 611   | 587   |
| 5     | 603   | 550   | 546   | 523   | 500   | 642   | 805   | 837   | 701   | 617   | 592   | 599   |
| 6     | 616   | 511   | 543   | 543   | 534   | 648   | 766   | 803   | 697   | 623   | 592   | 618   |
| 7     | 597   | 504   | 576   | 522   | 531   | 663   | 758   | 795   | 708   | 609   | 581   | 609   |
| 8     | 616   | 500   | 564   | 471   | 538   | 715   | 749   | 790   | 716   | 625   | 591   | 626   |
| 9     | 592   | 509   | 547   | 449   | 571   | 726   | 779   | 759   | 709   | 625   | 591   | 600   |
| 10    | 565   | 491   | 542   | 449   | 630   | 735   | 778   | 766   | 699   | 609   | 598   | 567   |
| 11    | 585   | 497   | 524   | 453   | 615   | 754   | 787   | 733   | 683   | 617   | 586   | 592   |
| 12    | 619   | 493   | 511   | 463   | 607   | 762   | 785   | 745   | 648   | 618   | 581   | 601   |
| 13    | 636   | 478   | 523   | 475   | 662   | 780   | 789   | 745   | 647   | 615   | 583   | 590   |
| 14    | 617   | 488   | 518   | 508   | 658   | 747   | 772   | 734   | 634   | 610   | 565   | 578   |
| 15    | 622   | 487   | 501   | 531   | 592   | 758   | 754   | 736   | 637   | 609   | 595   | 584   |
| 16    | 587   | 495   | 533   | 539   | 579   | 753   | 769   | 755   | 670   | 601   | 613   | 585   |
| 17    | 618   | 498   | 522   | 539   | 595   | 731   | 765   | 749   | 656   | 599   | 628   | 596   |
| 18    | 633   | 499   | 503   | 526   | 594   | 709   | 756   | 748   | 664   | 607   | 617   | 621   |
| 19    | 642   | 484   | 508   | 538   | 595   | 743   | 762   | 725   | 662   | 605   | 605   | 631   |
| 20    | 616   | 484   | 545   | 539   | 602   | 775   | 796   | 701   | 648   | 602   | 607   | 634   |
| 21    | 592   | 469   | 570   | 524   | 637   | 808   | 801   | 679   | 635   | 592   | 588   | 643   |
| 22    | 594   | 476   | 586   | 522   | 666   | 787   | 794   | 693   | 630   | 607   | 581   | 624   |
| 23    | 558   | 490   | 580   | 507   | 681   | 789   | 768   | 701   | 625   | 614   | 564   | 632   |
| 24    | 562   | 478   | 536   | 510   | 676   | 797   | 759   | 690   | 583   | 625   | 567   | 642   |
| 25    | 568   | 475   | 502   | 525   | 688   | 771   | 785   | 726   | 596   | 600   | 564   | 622   |
| 26    | 580   | 485   | 463   | 538   | 701   | 758   | 790   | 724   | 615   | 618   | 576   | 625   |
| 27    | 599   | 490   | 489   | 522   | 713   | 746   | 827   | 685   | 617   | 644   | 592   | 598   |
| 28    | 594   | 494   | 522   | 516   | 683   | 779   | 865   | 710   | 623   | 662   | 586   | 637   |
| 29    | 599   | 505   | 536   | 486   | 663   | 755   | 815   | 696   | 636   | 617   | 575   | 644   |
| 30    | 583   | 507   | 536   | 486   | ---   | 767   | 803   | 705   | 642   | 613   | 587   | 632   |
| 31    | 558   | ---   | 508   | 502   | ---   | 755   | ---   | 718   | ---   | 585   | 562   | ---   |
| TOTAL | 18673 | 15079 | 16455 | 15614 | 17598 | 22742 | 23398 | 23201 | 19786 | 19072 | 18222 | 18187 |
| MEAN  | 602   | 503   | 531   | 504   | 607   | 734   | 780   | 748   | 660   | 615   | 588   | 606   |
| MAX   | 642   | 581   | 586   | 543   | 713   | 808   | 865   | 846   | 716   | 662   | 628   | 644   |
| MIN   | 558   | 469   | 463   | 449   | 500   | 634   | 728   | 679   | 583   | 585   | 562   | 543   |
| AC-FT | 37040 | 29910 | 32640 | 30970 | 34910 | 45110 | 46410 | 46020 | 39250 | 37830 | 36140 | 36070 |

## 10255550 NEW RIVER NEAR WESTMORLAND, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 642  | 563  | 547  | 563  | 596  | 673  | 723  | 658  | 588  | 592  | 609  | 618  |
| MAX  | 837  | 760  | 707  | 795  | 789  | 810  | 953  | 853  | 763  | 808  | 913  | 807  |
| (WY) | 1953 | 1954 | 1963 | 1944 | 1944 | 1954 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1943 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 233230                 |  |  |  | 228027              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 639                    |  |  |  | 623                 |  |  |  | 614                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 741                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 484                     |  |  |  |
| HIGHEST DAILY MEAN       | 875                    |  |  |  | 865                 |  |  |  | 3000                    |  |  |  |
| LOWEST DAILY MEAN        | 463                    |  |  |  | 449                 |  |  |  | 150                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 479                    |  |  |  | 467                 |  |  |  | 284                     |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 462600                 |  |  |  | 452300              |  |  |  | 444700                  |  |  |  |
| 10 PERCENT EXCEEDS       | 774                    |  |  |  | 767                 |  |  |  | 760                     |  |  |  |
| 50 PERCENT EXCEEDS       | 636                    |  |  |  | 609                 |  |  |  | 603                     |  |  |  |
| 90 PERCENT EXCEEDS       | 507                    |  |  |  | 502                 |  |  |  | 481                     |  |  |  |

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

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 1,200 ft above sea level, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station. See schematic diagram of Salton Sea basin.

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 or maximum:

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 1 | 0845 | 9.9                               | 2.67                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1     | .00  | .00  | .33   | .81   | 5.1   | 2.1   | .93   | .14  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .34   | .75   | 2.2   | 2.1   | 1.0   | .13  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .36   | .77   | 1.4   | 1.9   | .99   | .12  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .39   | .76   | 1.1   | 1.7   | .93   | .12  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .40   | .77   | 1.0   | 2.4   | .82   | .12  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .43   | .76   | .96   | 1.8   | .78   | .11  | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .45   | .72   | .91   | 1.4   | .72   | .11  | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .47   | .71   | .84   | 1.3   | .62   | .10  | .00  | .00  | .00  | .00  |
| 9     | .00  | .00  | .50   | .72   | .83   | 1.2   | .55   | .10  | .00  | .00  | .00  | .00  |
| 10    | .00  | .00  | .51   | .76   | .84   | 1.1   | .56   | .09  | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .53   | .77   | .86   | 1.0   | .63   | .08  | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | .52   | .77   | .92   | 1.1   | .60   | .06  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .58   | .77   | 1.1   | 4.7   | .60   | .04  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .80   | .77   | .99   | 4.2   | .58   | .02  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .72   | .77   | .89   | 2.3   | .50   | .01  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .74   | .78   | .85   | 1.9   | .50   | .00  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .74   | .92   | .82   | 1.6   | .55   | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .72   | .92   | .77   | 1.3   | .79   | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .74   | .89   | .80   | 1.1   | .74   | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .76   | .91   | .87   | .98   | .55   | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .76   | .98   | .99   | .95   | .48   | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .79   | 2.3   | 1.5   | .95   | .41   | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .81   | 1.6   | .92   | 1.0   | .35   | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .86   | 1.3   | .85   | 1.0   | .29   | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .88   | 1.3   | 1.3   | 1.0   | .25   | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .87   | 1.4   | 2.7   | 1.1   | .22   | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .85   | 1.1   | 1.9   | 1.0   | .20   | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .06  | .84   | 1.0   | 2.3   | 1.0   | .17   | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .23  | .88   | 1.0   | 2.2   | 1.2   | .16   | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .31  | .88   | 1.0   | ---   | 1.1   | .15   | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .87   | 1.1   | ---   | 1.0   | ---   | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.60 | 20.32 | 29.88 | 38.71 | 48.48 | 16.62 | 1.35 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .020 | .66   | .96   | 1.33  | 1.56  | .55   | .044 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .31  | .88   | 2.3   | 5.1   | 4.7   | 1.0   | .14  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .33   | .71   | .77   | .95   | .15   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | 1.2  | 40    | 59    | 77    | 96    | 33    | 2.7  | .00  | .00  | .00  | .00  |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .18  | .35  | .81  | 1.77 | 2.89 | 3.20 | 1.60 | .70  | .24  | .21  | .51  | .17  |
| MAX  | 2.83 | 2.97 | 5.29 | 27.4 | 32.5 | 29.3 | 11.2 | 7.55 | 3.96 | 4.46 | 10.6 | 3.27 |
| (WY) | 1984 | 1984 | 1984 | 1993 | 1980 | 1983 | 1980 | 1980 | 1980 | 1979 | 1979 | 1983 |
| MIN  | .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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1951 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 745.88                 |  |  |  | 155.96              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 2.04                   |  |  |  | .43                 |  |  |  |                         |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 1.04                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 7.61                    |  |  |  |
| HIGHEST DAILY MEAN       | 149                    |  |  |  | 5.1                 |  |  |  | 277                     |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 9.9                 |  |  |  | 2640                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 2.67                |  |  |  | 9.80                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 1480                   |  |  |  | 309                 |  |  |  | 755                     |  |  |  |
| 10 PERCENT EXCEEDS       | 3.7                    |  |  |  | 1.1                 |  |  |  | 2.1                     |  |  |  |
| 50 PERCENT EXCEEDS       | .51                    |  |  |  | .00                 |  |  |  | .10                     |  |  |  |
| 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. Station discontinued as continuous-record site effective Sept. 30, 1993.

GAGE.--None. Elevation of station is 1,360 ft above sea level, from topographic map.

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

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

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) |
|---------|------|-----------------------------------|
| Oct. 4  | 0847 | 186                               |
| Nov. 13 | 1040 | 190                               |
| Nov. 28 | 1137 | 16.5                              |
| Jan. 4  | 1153 | 15.4                              |
| Feb. 8  | 0730 | 16.9                              |
| Mar. 6  | 1504 | 39.5                              |
| Apr. 3  | 0840 | 15.7                              |
| Apr. 17 | 1745 | 317                               |
| May 6   | 0820 | 202                               |
| June 4  | 0637 | 382                               |
| July 1  | 0810 | 269                               |
| Aug. 6  | 0743 | 266                               |
| Sept. 5 | 0735 | 337                               |

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 September 1996 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME  | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND    | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM)               | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS)     | TEMPER-<br>ATURE<br>WATER<br>(DEG C)                               | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3)     | HARD-<br>NESS<br>NONCARB<br>DISSOLV<br>FLD. AS<br>CACO3<br>(MG/L) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                       | SODIUM<br>PERCENT   |
|--------------|---|---|---|---|--|---|---|--|--|--|---|
| NOV<br>13... | 1155  | 190   | 970   | 8.5   | 20.0   | 290   | 160   | 72   | 27   | 89   | 39  |
| APR<br>16... | 1530  | E250  | 1000  | 8.5   | 19.0   | 300   | 160   | 76   | 26   | 89   | 39  |
| DATE         | RATIO   | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | BICAR-<br>BONATE<br>WATER<br>DIS IT<br>FIELD<br>MG/L AS<br>HCO3 | CAR-<br>BONATE<br>WATER<br>DIS IT<br>FIELD<br>MG/L AS<br>CO3  | ALKA-<br>LINITY<br>WAT DIS<br>TOT IT<br>FIELD<br>MG/L AS<br>CACO3  | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)       | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)               | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)    | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| NOV<br>13... | 2   | 4.7   | 146   | 5   | 128  | 240   | 80  | 0.50   | 9.3  | 604  | 600   |
| APR<br>16... | 2   | 4.8   | 153   | 4   | 132  | 250   | 83  | 0.40   | 7.9  | 628  | 617   |
| DATE         | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN, AM-<br>MONIA +<br>ORGANIC<br>DIS.<br>(MG/L<br>AS N) | PHOS-<br>PHORUS<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)     | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)       | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B)           | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)                         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN)                |
| NOV<br>13... | 0.82  | <0.010  | 0.170   | <0.015  | <0.20  | <0.010  | <0.010  | 2  | 130  | <3   | <1  |
| APR<br>16... | 0.85  | <0.010  | 0.200   | <0.015  | <0.20  | <0.010  | <0.010  | 2  | 130  | 3  | <1  |

## 10256500 SNOW CREEK NEAR WHITE WATER, CA

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

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

## WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR CA-89-1: Drainage area. WDR CA-90-1: 1980 Combined discharge. WDR CA-93-1: 1991.

WDR CA-96-1: 1969(M), 1976(M).

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

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

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

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

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

| Date    | Time | Creek only<br>Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Combined creek and diversion<br>Discharge<br>(ft <sup>3</sup> /s) |
|---------|------|---|---------------------|---|
| Feb. 21 | 1515 | 169   | 3.78                | 169   |

REVISIONS.--The maximum discharges for the water years 1969 and 1976 have been revised to 9,900 ft<sup>3</sup>/s,

Jan. 25, 1969, gage height, 13.8 ft, from floodmarks, site and datum then in use, and 2,800 ft<sup>3</sup>/s,

Sept. 10, 1976, gage height, 6.80 ft, site and datum then in use, superseding figures published in reports for 1969 and 1976.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1     | .88   | 2.0   | 1.0   | 1.2   | 28    | 5.2   | 3.2   | 2.5   | .70   | 3.1   | 1.3   | .36  |
| 2     | .92   | 3.4   | 1.0   | 1.2   | 12    | 3.5   | 5.8   | 2.5   | .55   | 2.2   | .91   | .44  |
| 3     | .77   | .90   | 1.0   | 1.2   | 9.3   | 3.4   | 3.4   | 2.4   | .29   | 3.2   | .18   | .42  |
| 4     | .78   | .80   | .99   | 1.3   | 8.1   | 5.2   | 3.3   | 2.2   | .14   | 3.0   | .71   | .42  |
| 5     | 1.1   | .74   | 1.0   | 1.3   | 7.5   | 29    | 3.1   | 1.9   | .35   | 1.2   | .08   | .39  |
| 6     | .97   | .76   | 1.1   | 1.3   | 6.1   | 15    | 2.9   | 2.0   | .34   | .19   | .10   | .42  |
| 7     | .95   | .79   | 1.0   | 1.3   | 2.7   | 9.6   | 2.8   | 1.9   | .35   | .25   | .08   | .53  |
| 8     | .94   | .78   | .97   | 1.2   | 2.2   | 7.2   | 2.7   | 1.8   | .33   | .31   | .06   | .45  |
| 9     | .90   | .77   | 1.0   | 1.2   | 2.1   | 6.3   | 2.5   | 1.8   | .28   | .51   | .08   | .42  |
| 10    | .86   | .81   | 1.0   | 1.2   | 2.0   | 6.0   | 2.7   | 1.7   | .20   | .59   | .10   | .41  |
| 11    | .86   | .82   | .96   | 1.2   | 1.7   | 5.6   | 2.7   | 1.6   | .17   | .48   | .13   | .38  |
| 12    | .87   | .94   | .88   | 1.2   | 3.0   | 6.9   | 2.6   | 1.6   | .14   | .44   | .20   | .36  |
| 13    | .83   | .87   | 3.1   | 1.1   | 5.6   | 12    | 2.7   | 1.6   | .18   | .69   | .19   | .45  |
| 14    | .72   | .95   | 3.5   | 1.1   | 5.8   | 13    | 2.6   | 1.5   | .20   | 1.1   | 1.2   | .42  |
| 15    | .72   | .90   | 3.1   | 1.1   | 3.2   | 12    | 2.5   | 1.5   | .20   | .98   | 2.8   | .44  |
| 16    | .73   | .88   | 5.6   | 1.0   | 1.4   | 12    | 2.6   | 1.8   | .19   | 1.5   | 1.5   | .42  |
| 17    | .56   | .90   | 5.6   | 4.4   | 1.3   | 11    | 2.5   | 1.5   | .17   | 1.7   | .45   | .41  |
| 18    | .80   | .99   | 2.9   | 4.4   | 1.2   | 9.1   | 15    | 1.3   | .15   | 1.4   | .40   | .45  |
| 19    | .83   | .94   | 1.2   | 4.4   | 2.0   | 7.6   | 9.1   | 1.3   | .13   | 1.3   | .46   | .33  |
| 20    | .90   | .90   | 1.1   | 4.6   | 62    | 6.8   | 4.3   | 1.3   | .14   | 1.2   | .67   | .20  |
| 21    | .80   | .90   | 1.1   | 5.2   | 76    | 6.5   | 3.6   | 1.2   | .47   | 1.3   | .47   | .18  |
| 22    | .87   | .84   | 1.1   | 7.3   | 30    | 6.5   | 3.2   | 1.1   | .57   | 1.2   | 1.4   | .18  |
| 23    | .98   | .95   | 4.3   | 5.6   | 15    | 6.2   | 3.0   | 1.1   | .53   | 1.1   | 2.2   | .21  |
| 24    | .96   | 1.0   | 5.9   | 5.3   | 13    | 5.7   | 2.8   | 1.2   | .54   | 1.2   | 2.8   | .19  |
| 25    | .98   | 1.0   | 5.9   | 5.1   | 12    | 4.7   | 3.2   | 1.3   | .47   | 1.3   | 2.7   | .23  |
| 26    | .85   | .97   | 3.7   | 3.0   | 11    | 4.1   | 3.5   | 1.1   | .70   | 1.5   | 2.9   | .25  |
| 27    | .84   | 1.1   | 1.2   | 1.1   | 8.4   | 3.9   | 3.5   | 1.1   | .77   | 1.2   | 1.5   | .18  |
| 28    | .92   | .97   | 1.1   | .90   | 7.8   | 4.8   | 3.8   | .98   | .75   | 1.7   | .57   | .15  |
| 29    | .97   | .96   | 1.0   | .94   | 7.7   | 5.4   | 3.1   | .93   | .57   | 1.3   | .48   | .14  |
| 30    | .95   | .97   | 1.1   | 2.6   | ---   | 3.6   | 2.7   | .94   | 1.2   | 1.3   | .61   | .16  |
| 31    | 1.0   | ---   | 1.2   | 16    | ---   | 3.4   | ---   | .85   | ---   | 1.4   | .43   | ---  |
| TOTAL | 27.01 | 30.50 | 65.60 | 89.94 | 348.1 | 241.2 | 111.4 | 47.50 | 11.77 | 39.84 | 27.66 | 9.99 |
| MEAN  | .87   | 1.02  | 2.12  | 2.90  | 12.0  | 7.78  | 3.71  | 1.53  | .39   | 1.29  | .89   | .33  |
| MAX   | 1.1   | 3.4   | 5.9   | 16    | 76    | 29    | 15    | 2.5   | 1.2   | 3.2   | 2.9   | .53  |
| MIN   | .56   | .74   | .88   | .90   | 1.2   | 3.4   | 2.5   | .85   | .13   | .19   | .06   | .14  |
| AC-FT | 54    | 60    | 130   | 178   | 690   | 478   | 221   | 94    | 23    | 79    | 55    | 20   |



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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.49 | 3.69 | 5.72 | 16.1 | 24.4 | 19.1 | 12.0 | 11.8 | 6.72 | 3.99 | 3.26 | 2.24 |
| MAX  | 6.55 | 13.3 | 24.0 | 131  | 173  | 71.5 | 28.6 | 40.8 | 31.7 | 14.4 | 18.0 | 7.55 |
| (WY) | 1993 | 1984 | 1984 | 1993 | 1980 | 1995 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 |
| MIN  | .008 | .30  | .000 | .99  | 3.14 | 2.32 | 1.09 | .29  | .14  | .000 | .001 | .17  |
| (WY) | 1985 | 1982 | 1982 | 1984 | 1984 | 1984 | 1984 | 1984 | 1984 | 1981 | 1981 | 1981 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1979 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 6292.81                |  |  |  | 1050.51             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 17.2                   |  |  |  | 2.87                |  |  |  | 9.22                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 28.4                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 2.21                    |  |  |  |
| HIGHEST DAILY MEAN       | 481                    |  |  |  | 76                  |  |  |  | 909                     |  |  |  |
| LOWEST DAILY MEAN        | .56                    |  |  |  | .06                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .74                    |  |  |  | .09                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 169                 |  |  |  | 1910                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 3.78                |  |  |  | 7.35                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 12480                  |  |  |  | 2080                |  |  |  | 6680                    |  |  |  |
| 10 PERCENT EXCEEDS       | 34                     |  |  |  | 6.1                 |  |  |  | 20                      |  |  |  |
| 50 PERCENT EXCEEDS       | 8.1                    |  |  |  | 1.1                 |  |  |  | 3.5                     |  |  |  |
| 90 PERCENT EXCEEDS       | .90                    |  |  |  | .29                 |  |  |  | .22                     |  |  |  |

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

SNOW CREEK AND SNOW CREEK DIVERSION NEAR WHITE WATER  
 COMBINED DISCHARGE, IN CUBIC FEET PER SECOND,  
 WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
 DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1     | e4.5  | e4.8  | e5.2  | e5.4  | 28    | e7.9  | e7.2  | e7.1  | e5.2  | 3.1  | e2.8 | e2.9 |
| 2     | e4.5  | e5.0  | e5.2  | e5.3  | 12    | e7.7  | e7.9  | e7.1  | e5.0  | e2.9 | e2.9 | e2.9 |
| 3     | e4.5  | e5.3  | e5.1  | e5.2  | 9.3   | e7.8  | e7.7  | e7.0  | e4.9  | 3.2  | e3.1 | e2.9 |
| 4     | e4.5  | e5.2  | e5.3  | e5.2  | 8.1   | e8.1  | e7.6  | e6.8  | e4.8  | 3.0  | e3.0 | e3.0 |
| 5     | e4.8  | e5.0  | e5.3  | e5.1  | 7.5   | 29    | e7.4  | e6.5  | e4.4  | e3.4 | e3.0 | e3.0 |
| 6     | e4.8  | e5.0  | e5.4  | e5.0  | e7.5  | e18   | e7.2  | e6.6  | e4.5  | e3.2 | e2.9 | e3.0 |
| 7     | e4.7  | e5.1  | e5.3  | e5.0  | e7.4  | e14   | e7.1  | e6.3  | e4.5  | e3.2 | e2.9 | e3.1 |
| 8     | e4.8  | e5.1  | e5.3  | e4.9  | e6.7  | e11   | e7.1  | e6.2  | e4.5  | e3.3 | e2.9 | e3.1 |
| 9     | e4.8  | e5.2  | e5.3  | e4.9  | e6.2  | e10   | e6.8  | e6.2  | e4.5  | e3.4 | e2.9 | e3.1 |
| 10    | e4.9  | e5.2  | e5.3  | e4.9  | e6.1  | e10   | e6.9  | e6.1  | e4.4  | e3.4 | e3.0 | e3.2 |
| 11    | e4.9  | e5.2  | e5.5  | e4.8  | e5.8  | e9.8  | e7.0  | e6.0  | e4.4  | e3.4 | e3.0 | e3.2 |
| 12    | e5.0  | e5.3  | e5.4  | e4.8  | e5.7  | e10   | e6.9  | e6.0  | e4.3  | e3.3 | e3.1 | e3.2 |
| 13    | e4.9  | e5.4  | e5.4  | e4.7  | 5.6   | 12    | e7.0  | e6.0  | e4.1  | e3.4 | e3.1 | e3.2 |
| 14    | e4.8  | e5.3  | e6.2  | e4.7  | 5.8   | 13    | e6.9  | e5.9  | e4.3  | e3.6 | e2.8 | e3.2 |
| 15    | e4.8  | e5.3  | e5.9  | e4.7  | e5.3  | 12    | e6.8  | e5.9  | e4.3  | e3.5 | 2.8  | e3.3 |
| 16    | e4.9  | e5.3  | 5.6   | e4.7  | e5.7  | 12    | e7.0  | e6.2  | e4.1  | e2.9 | e2.8 | e3.3 |
| 17    | e5.0  | e5.3  | 5.6   | e4.5  | e5.6  | 11    | e7.0  | e5.9  | e4.2  | e2.9 | e2.6 | e3.3 |
| 18    | e5.2  | e5.4  | e5.7  | 4.4   | e5.8  | 9.1   | e16   | e5.7  | e4.1  | e2.9 | e2.7 | e3.4 |
| 19    | e5.1  | e5.3  | e5.5  | 4.4   | e5.3  | e9.4  | e12   | e5.7  | e4.1  | e2.8 | e2.8 | e3.3 |
| 20    | e5.2  | e5.2  | e5.4  | 4.6   | 62    | e9.8  | e8.6  | e5.7  | e3.9  | e2.8 | e3.0 | e3.4 |
| 21    | e5.1  | e5.2  | e5.4  | 5.2   | 76    | e9.7  | e7.9  | e5.6  | e3.8  | e2.8 | e2.9 | e3.4 |
| 22    | e5.2  | e5.0  | e5.4  | 7.3   | 30    | e10   | e7.5  | e5.5  | e3.9  | e2.8 | e2.9 | e3.5 |
| 23    | e5.1  | e5.1  | e5.8  | 5.6   | 15    | e9.8  | e7.3  | e5.5  | e3.8  | e2.7 | e3.0 | e3.6 |
| 24    | e5.2  | e5.1  | 5.9   | 5.3   | 13    | e9.7  | e7.1  | e5.6  | e3.8  | e2.8 | 2.8  | e3.6 |
| 25    | e5.1  | e5.1  | 5.9   | 5.1   | 12    | e8.9  | e7.7  | e5.6  | e3.8  | e2.9 | 2.7  | e3.6 |
| 26    | e4.9  | e5.3  | e6.0  | e5.1  | 11    | e8.3  | e8.0  | e5.5  | e3.8  | e3.0 | 2.9  | e3.7 |
| 27    | e4.9  | e5.2  | e5.5  | e5.1  | 8.4   | e8.0  | e8.0  | e5.5  | e3.7  | e2.8 | e2.9 | e3.7 |
| 28    | e5.1  | e5.3  | e5.4  | e5.1  | 7.8   | e7.7  | e8.3  | e5.4  | e3.4  | e3.2 | e3.0 | e3.6 |
| 29    | e5.1  | e5.3  | e5.3  | e5.1  | 7.7   | e8.1  | e7.6  | e5.3  | e3.2  | e2.9 | e3.0 | e3.6 |
| 30    | e5.1  | e5.3  | e5.4  | e5.0  | ---   | e7.6  | e7.2  | e5.3  | e3.2  | e2.8 | e3.1 | e3.7 |
| 31    | e5.2  | ---   | e5.5  | 16    | ---   | e7.6  | ---   | e5.2  | ---   | e2.9 | e2.9 | ---  |
| TOTAL | 152.6 | 155.8 | 170.4 | 167.1 | 392.3 | 327.0 | 234.7 | 184.9 | 124.9 | 95.2 | 90.2 | 99.0 |
| MEAN  | 4.92  | 5.19  | 5.50  | 5.39  | 13.5  | 10.5  | 7.82  | 5.96  | 4.16  | 3.07 | 2.91 | 3.30 |
| MAX   | 5.2   | 5.4   | 6.2   | 16    | 76    | 29    | 16    | 7.1   | 5.2   | 3.6  | 3.1  | 3.7  |
| MIN   | 4.5   | 4.8   | 5.1   | 4.4   | 5.3   | 7.6   | 6.8   | 5.2   | 3.2   | 2.7  | 2.6  | 2.9  |
| AC-FT | 303   | 309   | 338   | 331   | 778   | 649   | 466   | 367   | 248   | 189  | 179  | 196  |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 4.82 | 7.45 | 10.7 | 15.4 | 16.7 | 14.7 | 12.9 | 12.8 | 9.24 | 6.30 | 5.37 | 5.37 |
| MAX  | 10.7 | 82.5 | 76.7 | 178  | 173  | 72.0 | 36.7 | 45.7 | 37.6 | 20.2 | 20.7 | 32.5 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1980 | 1995 | 1969 | 1983 | 1983 | 1983 | 1983 | 1976 |
| MIN  | 2.76 | 2.75 | 3.11 | 3.30 | 3.40 | 3.39 | 3.16 | 2.55 | 2.35 | 2.31 | 2.35 | 2.40 |
| (WY) | 1962 | 1963 | 1963 | 1961 | 1961 | 1961 | 1961 | 1961 | 1961 | 1961 | 1960 | 1961 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1921 - 1996

|                          |        |        |       |
|--------------------------|--------|--------|-------|
| ANNUAL TOTAL             | 7335.4 | 2194.1 |       |
| ANNUAL MEAN              | 20.1   | 5.99   | 10.3  |
| HIGHEST ANNUAL MEAN      |        |        | 33.0  |
| LOWEST ANNUAL MEAN       |        |        | 2.96  |
| HIGHEST DAILY MEAN       | 481    | Mar 5  | 3490  |
| LOWEST DAILY MEAN        | 3.9    | Sep 29 | 2.1   |
| ANNUAL SEVEN-DAY MINIMUM | 4.1    | Sep 24 | 2.1   |
| INSTANTANEOUS PEAK FLOW  |        |        | 9900  |
| INSTANTANEOUS PEAK STAGE |        |        | 13.80 |
| ANNUAL RUNOFF (AC-FT)    | 14550  | 4350   | 7450  |
| 10 PERCENT EXCEEDS       | 34     | 8.3    | 16    |
| 50 PERCENT EXCEEDS       | 11     | 5.2    | 5.8   |
| 90 PERCENT EXCEEDS       | 5.1    | 2.9    | 3.2   |

e Estimated.

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 1995 TO SEPTEMBER 1996

| 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 CAC03) | HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (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 |
|-----------|------|---|---------------------------------|--|----------------------------|---------------------------------|--|---------------------------------|-------------------------------------|---------------------------------|----------------|
| NOV 27... | 1145 | a5.2                                    | 104                             | 8.2                                    | 11.5                       | 34                              | 0  | 12                              | 0.99                                | 8.8                             | 35             |
| APR 16... | 0930 | a7.0                                    | 94                              | 8.1                                    | 11.5                       | 31                              | 0  | 11                              | 0.90                                | 7.3                             | 32             |

| DATE      | 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 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) |
|-----------|---------------------------|------------------------------------|--|---|--|----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|---|---|
| NOV 27... | 0.7                       | 1.8                                | 62   | 0   | 51   | 1.1                              | 1.4                                | <0.10                             | 21                                | 72  | 78  |
| APR 16... | 0.6                       | 1.8                                | 57   | 0   | 46   | 1.2                              | 1.3                                | <0.10                             | 20                                | 68  | 72  |

| DATE      | 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) | NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) | PHOS-PHORUS DIS-SOLVED (MG/L AS P) | PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) | ARSENIC DIS-SOLVED (UG/L AS AS) | BORON, DIS-SOLVED (UG/L AS B) | IRON, DIS-SOLVED (UG/L AS FE) | MANGA-NESE, DIS-SOLVED (UG/L AS MN) |
|-----------|-------------------------------------|---|---|---|--|------------------------------------|---|---------------------------------|-------------------------------|-------------------------------|-------------------------------------|
| NOV 27... | 0.10                                | <0.010                                    | <0.050                                    | <0.015                                    | <0.20  | <0.010                             | <0.010                                    | <1                              | 20                            | <3.0                          | <1.0                                |
| APR 16... | 0.09                                | <0.010                                    | 0.090                                     | <0.015                                    | <0.20  | 0.010                              | <0.010                                    | <1                              | 30                            | 5.0                           | <1.0                                |

a Discharge represents total flow (creek plus diversion).

## SALTON SEA BASIN

## 10257500 FALLS CREEK NEAR WHITE WATER, CA

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

DRAINAGE AREA.--4.14 mi<sup>2</sup>.

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

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

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

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

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion).-- Maximum discharge, 154 ft<sup>3</sup>/s, Jan. 10, 1995, gage height, 6.14 ft (creek gage; no diversion at peak), from rating curve extended above 4 ft<sup>3</sup>/s on basis of critical depth computations; minimum daily, 0.39 ft<sup>3</sup>/s, Sept. 1, 1996.

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

| Date    | Time | Creek only<br>Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Combined creek and diversion<br>Discharge<br>(ft <sup>3</sup> /s) |
|---------|------|---|---------------------|---|
| Feb. 20 | 1100 | 35  | 5.15                | 35  |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|-------|
| 1     | e.80  | 1.2   | .65   | .57   | 3.1   | 1.2   | .28   | .41  | .09  | .52  | e.48  | .39   |
| 2     | e.76  | 1.4   | .64   | .58   | e2.2  | .72   | .79   | .43  | .15  | .41  | e.49  | .42   |
| 3     | e.68  | .93   | .88   | .53   | e1.7  | .70   | .29   | .41  | .65  | .55  | e.47  | .44   |
| 4     | e.80  | .88   | .73   | .58   | e1.5  | 1.1   | .29   | .39  | .44  | .52  | e.46  | .47   |
| 5     | e.95  | .89   | .64   | .59   | e1.4  | 2.0   | .23   | .47  | .25  | .26  | e.49  | .48   |
| 6     | .83   | .91   | .63   | .59   | e1.3  | e.93  | .21   | .35  | .25  | .30  | .51   | .50   |
| 7     | .82   | .93   | .66   | .58   | e1.2  | e.75  | .19   | .30  | .29  | .28  | .48   | .55   |
| 8     | .81   | .93   | .70   | .54   | e.72  | e.67  | .22   | .30  | .27  | .28  | .45   | .56   |
| 9     | .80   | .83   | .69   | .54   | .54   | e.60  | 1.1   | .34  | .22  | .28  | .45   | .52   |
| 10    | .80   | .81   | .61   | .54   | .51   | e.56  | .59   | .32  | .25  | .11  | .45   | .51   |
| 11    | .80   | .84   | .83   | .47   | .49   | e.65  | .18   | .25  | .21  | .09  | .45   | .47   |
| 12    | .80   | .83   | .89   | .39   | e.73  | e1.2  | .19   | .22  | .21  | .25  | .44   | .46   |
| 13    | .76   | .81   | 1.2   | .36   | e1.1  | e1.8  | .19   | .27  | .20  | .07  | .45   | .51   |
| 14    | .83   | .82   | 1.1   | .37   | e1.1  | e1.8  | .20   | .21  | .23  | .30  | .46   | .55   |
| 15    | .80   | .81   | .92   | .37   | e1.1  | e1.6  | .19   | .23  | .20  | .20  | .46   | .53   |
| 16    | .85   | .82   | 1.4   | .57   | e1.1  | e1.4  | .23   | .32  | .19  | .17  | .44   | .54   |
| 17    | .80   | .82   | 1.4   | 1.2   | e.65  | e1.2  | .13   | .24  | .15  | .13  | .45   | .59   |
| 18    | .83   | .83   | .90   | 1.4   | .38   | e.90  | 1.5   | .18  | .13  | .10  | .42   | .71   |
| 19    | .81   | .83   | .59   | 1.4   | .92   | e.50  | 1.0   | .12  | .09  | .07  | .45   | .72   |
| 20    | .91   | .84   | .64   | 1.4   | 13    | e.54  | .55   | .25  | .12  | .07  | .43   | .78   |
| 21    | .74   | .87   | .57   | 1.7   | e16   | e.45  | .55   | .20  | .22  | .07  | .42   | .78   |
| 22    | .80   | .86   | .57   | 1.6   | e5.0  | e.48  | .50   | .13  | .28  | .07  | .42   | .80   |
| 23    | .83   | .85   | 1.4   | 1.4   | e2.5  | .45   | .46   | .17  | .28  | .27  | .45   | .81   |
| 24    | .86   | .85   | 1.4   | 1.4   | 2.1   | .51   | .43   | .24  | .24  | e.44 | .46   | .78   |
| 25    | .86   | .86   | 1.4   | 1.4   | 2.1   | .40   | .54   | .31  | .22  | e.48 | .62   | .83   |
| 26    | .82   | .77   | .92   | .83   | 1.9   | .40   | .62   | .34  | .29  | e.56 | .49   | .82   |
| 27    | .82   | .77   | .50   | .81   | 1.8   | .36   | .57   | .20  | .24  | e.44 | .46   | .73   |
| 28    | .81   | .70   | .56   | .94   | 1.8   | .65   | .59   | .17  | .03  | e.63 | .48   | .66   |
| 29    | .83   | .69   | .52   | .61   | 1.7   | .69   | .51   | .15  | .10  | e.48 | .48   | .59   |
| 30    | .87   | .65   | .58   | .98   | ---   | .31   | .43   | .14  | .46  | e.48 | .48   | .54   |
| 31    | .96   | ---   | .55   | 2.3   | ---   | .28   | ---   | .14  | ---  | e.52 | .44   | ---   |
| TOTAL | 25.44 | 25.83 | 25.67 | 27.54 | 69.64 | 25.80 | 13.75 | 8.20 | 6.95 | 9.40 | 14.38 | 18.04 |
| MEAN  | .82   | .86   | .83   | .89   | 2.40  | .83   | .46   | .26  | .23  | .30  | .46   | .60   |
| MAX   | .96   | 1.4   | 1.4   | 2.3   | 16    | 2.0   | 1.5   | .47  | .65  | .63  | .62   | .83   |
| MIN   | .68   | .65   | .50   | .36   | .38   | .28   | .13   | .12  | .03  | .07  | .42   | .39   |
| AC-FT | 50    | 51    | 51    | 55    | 138   | 51    | 27    | 16   | 14   | 19   | 29    | 36    |

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.30 | 1.49 | 1.99 | 2.06 | 2.05 | 2.28 | 2.36 | 2.03 | 1.44 | 1.02 | 1.01 | 1.07 |
| MAX  | 2.52 | 2.81 | 5.68 | 4.58 | 4.46 | 8.75 | 7.90 | 4.25 | 2.78 | 2.37 | 2.67 | 2.23 |
| (WY) | 1923 | 1923 | 1927 | 1995 | 1995 | 1995 | 1926 | 1926 | 1926 | 1926 | 1926 | 1926 |
| MIN  | .40  | .76  | .74  | .89  | .91  | .83  | .46  | .26  | .23  | .30  | .46  | .53  |
| (WY) | 1995 | 1929 | 1995 | 1996 | 1929 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1928 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1923 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 1023.49                |  |  | 270.64              |  |  |                         |  |  |
| ANNUAL MEAN              | 2.80                   |  |  | .74                 |  |  | 1.71                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 2.77                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .74                     |  |  |
| HIGHEST DAILY MEAN       | 50                     |  |  | Mar 5               |  |  | 16                      |  |  |
| LOWEST DAILY MEAN        | .50                    |  |  | Dec 27              |  |  | .03                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .67                    |  |  | Dec 4               |  |  | .10                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     |  |  | 35                      |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |                     |  |  | 5.15                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 2030                   |  |  | 537                 |  |  | 1240                    |  |  |
| 10 PERCENT EXCEEDS       | 3.9                    |  |  | 1.3                 |  |  | 2.8                     |  |  |
| 50 PERCENT EXCEEDS       | 1.8                    |  |  | .55                 |  |  | 1.3                     |  |  |
| 90 PERCENT EXCEEDS       | .80                    |  |  | .20                 |  |  | .50                     |  |  |

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

FALLS CREEK AND FALLS CREEK DIVERSION NEAR WHITE WATER  
COMBINED DISCHARGE, IN CUBIC FEET PER SECOND,  
WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|------|------|------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | e1.4 | e1.7 | e1.3 | e1.3 | 3.1   | e1.6 | e.96  | e1.1  | e.74  | e.62  | e.48  | .39   |
| 2     | e1.3 | e1.9 | e1.3 | e1.3 | e2.2  | e1.5 | e1.0  | e1.1  | e.72  | e.50  | e.49  | .42   |
| 3     | e1.3 | e1.5 | e1.3 | e1.2 | e1.7  | e1.5 | e.99  | e1.1  | e.75  | .55   | e.47  | .44   |
| 4     | e1.4 | e1.5 | e1.3 | e1.3 | e1.5  | e1.6 | e.96  | e1.0  | e.72  | .52   | e.46  | .47   |
| 5     | e1.5 | e1.5 | e1.3 | e1.3 | e1.4  | 2.0  | e.93  | e1.0  | e.73  | e.46  | e.49  | .48   |
| 6     | e1.4 | e1.5 | e1.3 | e1.3 | e1.3  | e1.3 | e.91  | e.97  | e.73  | e.44  | .51   | .50   |
| 7     | e1.4 | e1.5 | e1.3 | e1.3 | e1.2  | e1.5 | e.89  | e.95  | e.77  | e.46  | .48   | .55   |
| 8     | e1.4 | e1.5 | e1.3 | e1.2 | e1.2  | e1.4 | e.86  | e.95  | e.75  | e.46  | .45   | .56   |
| 9     | e1.4 | e1.4 | e1.3 | e1.2 | e1.4  | e1.4 | e1.8  | e.99  | e.70  | e.51  | .45   | .52   |
| 10    | e1.4 | e1.4 | e1.2 | e1.2 | e1.3  | e1.3 | e1.0  | e.97  | e.73  | e.53  | .45   | .51   |
| 11    | e1.4 | e1.5 | e1.3 | e1.1 | e1.3  | e1.4 | e.88  | e.90  | e.69  | e.49  | .45   | .47   |
| 12    | e1.4 | e1.4 | e1.3 | e1.1 | e1.2  | e1.7 | e.89  | e.87  | e.69  | e.49  | .44   | .46   |
| 13    | e1.3 | e1.4 | e1.5 | e1.1 | e1.1  | e1.8 | e.89  | e.92  | e.68  | e.47  | .45   | .51   |
| 14    | e1.4 | e1.4 | e1.5 | e1.1 | e1.1  | e1.8 | e.90  | e.86  | e.71  | e.54  | .46   | .55   |
| 15    | e1.4 | e1.4 | e1.3 | e1.1 | e1.1  | e1.6 | e.89  | e.88  | e.68  | e.62  | .46   | .53   |
| 16    | e1.4 | e1.4 | 1.4  | e1.2 | e1.1  | e1.4 | e.86  | e.97  | e.67  | e.59  | .44   | .54   |
| 17    | e1.4 | e1.4 | 1.4  | 1.2  | e1.1  | e1.2 | e.83  | e.89  | e.63  | e.55  | .45   | .59   |
| 18    | e1.4 | e1.4 | e1.3 | 1.4  | e.99  | e1.3 | e1.7  | e.83  | e.61  | e.52  | .42   | .71   |
| 19    | e1.4 | e1.4 | e1.2 | 1.4  | e1.0  | e1.3 | e1.4  | e.77  | e.57  | e.49  | .45   | .72   |
| 20    | e1.4 | e1.5 | e1.2 | 1.4  | 13    | e1.3 | e1.2  | e.90  | e.60  | e.49  | .43   | .78   |
| 21    | e1.3 | e1.5 | e1.2 | 1.7  | e16   | e1.2 | e1.2  | e.85  | e.70  | e.49  | .42   | .78   |
| 22    | e1.4 | e1.5 | e1.2 | 1.6  | e5.0  | e1.2 | e1.2  | e.78  | e.76  | e.47  | .42   | .80   |
| 23    | e1.4 | e1.5 | e1.6 | 1.4  | e2.5  | e1.2 | e1.2  | e.82  | e.76  | e.41  | .45   | .81   |
| 24    | e1.4 | e1.5 | 1.4  | 1.4  | 2.1   | e1.3 | e1.1  | e.89  | e.72  | e.44  | .46   | .78   |
| 25    | e1.4 | e1.5 | 1.4  | 1.4  | 2.1   | e1.2 | e1.2  | e.96  | e.70  | e.48  | .62   | .83   |
| 26    | e1.4 | e1.4 | e1.2 | e1.2 | 1.9   | e1.2 | e1.3  | e.93  | e.77  | e.56  | .49   | .82   |
| 27    | e1.4 | e1.4 | e1.1 | e1.2 | 1.8   | e1.1 | e1.3  | e.85  | e.72  | e.44  | .46   | .73   |
| 28    | e1.4 | e1.3 | e1.2 | e1.3 | 1.8   | e1.1 | e1.3  | e.82  | e.51  | e.63  | .48   | .66   |
| 29    | e1.4 | e1.3 | e1.2 | e1.3 | 1.7   | e1.1 | e1.2  | e.80  | e.46  | e.48  | .48   | .59   |
| 30    | e1.5 | e1.3 | e1.2 | e1.3 | ---   | e1.1 | e1.1  | e.79  | e.53  | e.48  | .48   | .54   |
| 31    | e1.5 | ---  | e1.2 | 2.3  | ---   | e1.0 | ---   | e.79  | ---   | e.52  | .44   | ---   |
| TOTAL | 43.3 | 43.8 | 40.2 | 40.8 | 74.19 | 42.6 | 32.84 | 28.20 | 20.50 | 15.70 | 14.38 | 18.04 |
| MEAN  | 1.40 | 1.46 | 1.30 | 1.32 | 2.56  | 1.37 | 1.09  | .91   | .68   | .51   | .46   | .60   |
| MAX   | 1.5  | 1.9  | 1.6  | 2.3  | 16    | 2.0  | 1.8   | 1.1   | .77   | .63   | .62   | .83   |
| MIN   | 1.3  | 1.3  | 1.1  | 1.1  | .99   | 1.0  | .83   | .77   | .46   | .41   | .42   | .39   |
| AC-FT | 86   | 87   | 80   | 81   | 147   | 84   | 65    | 56    | 41    | 31    | 29    | 36    |

e Estimated.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.04 | 1.18 | 1.09 | 2.95 | 3.53 | 5.06 | 2.01 | 2.44 | 1.85 | 1.41 | 1.11 | 1.06 |
| MAX  | 1.40 | 1.46 | 1.30 | 4.58 | 4.55 | 8.75 | 2.92 | 3.97 | 3.02 | 2.32 | 1.76 | 1.52 |
| (WY) | 1996 | 1996 | 1996 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 |
| MIN  | .68  | .90  | .89  | 1.32 | 2.56 | 1.37 | 1.09 | .91  | .68  | .51  | .46  | .60  |
| (WY) | 1995 | 1995 | 1995 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1995 - 1996

|                          |         |        |      |
|--------------------------|---------|--------|------|
| ANNUAL TOTAL             | 1141.40 | 414.55 |      |
| ANNUAL MEAN              | 3.13    | 1.13   | 2.06 |
| HIGHEST ANNUAL MEAN      |         |        | 2.99 |
| LOWEST ANNUAL MEAN       |         |        | 1.13 |
| HIGHEST DAILY MEAN       | 50      | Mar 5  | 50   |
| LOWEST DAILY MEAN        | .73     | Jan 2  | .39  |
| ANNUAL SEVEN-DAY MINIMUM | 1.2     | Dec 25 | .43  |
| INSTANTANEOUS PEAK FLOW  |         |        | 154  |
| ANNUAL RUNOFF (AC-FT)    | 2260    | 822    | 1490 |
| 10 PERCENT EXCEEDS       | 4.1     | 1.5    | 3.4  |
| 50 PERCENT EXCEEDS       | 2.3     | 1.1    | 1.4  |
| 90 PERCENT EXCEEDS       | 1.3     | .47    | .53  |

## 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 sea level, from topographic map.

REMARKS.--Records good. 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. See schematic diagram of Salton Sea basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV    | DEC   | JAN   | FEB   | MAR  | APR    | MAY     | JUN   | JUL     | AUG     | SEP     |
|-------|-------|--------|-------|-------|-------|------|--------|---------|-------|---------|---------|---------|
| 1     | 138   | 170    | 5.7   | 8.7   | 77    | 24   | 11     | 251     | 250   | 222     | 258     | .00     |
| 2     | 138   | 149    | 5.4   | 8.8   | 28    | 23   | 14     | 253     | 247   | 219     | 259     | .00     |
| 3     | 137   | 112    | 5.7   | 8.8   | 23    | 23   | 12     | 254     | 227   | 140     | 255     | 148     |
| 4     | 139   | 173    | 5.7   | 9.0   | 19    | 21   | 15     | 256     | 216   | .00     | 255     | 264     |
| 5     | 137   | 173    | 5.1   | 9.1   | 14    | 63   | 19     | 203     | 215   | .00     | 257     | 262     |
| 6     | 141   | 173    | 5.0   | 9.6   | 12    | 36   | 9.2    | 174     | 217   | .00     | 255     | 259     |
| 7     | 142   | 177    | 4.2   | 8.6   | 13    | 34   | 5.5    | 255     | 225   | .00     | 255     | 271     |
| 8     | 143   | 169    | 5.2   | 7.9   | 55    | 31   | 103    | 257     | 222   | 139     | 258     | 291     |
| 9     | 145   | 173    | 5.4   | 6.6   | 6.1   | 30   | 187    | 254     | 223   | 245     | 254     | 280     |
| 10    | 148   | 173    | 5.6   | 6.1   | 4.7   | 23   | 186    | 254     | 218   | 247     | 233     | 280     |
| 11    | 147   | 175    | 6.4   | 6.0   | 3.9   | 25   | 189    | 257     | 218   | 234     | 252     | 279     |
| 12    | 147   | 177    | 6.3   | 7.5   | 3.5   | 29   | 190    | 256     | 217   | 234     | 247     | 278     |
| 13    | 149   | 175    | 10    | 8.1   | 3.4   | 39   | 191    | 228     | 216   | 235     | 248     | 269     |
| 14    | 148   | 176    | 14    | 8.1   | 2.7   | 32   | 189    | 200     | 216   | 234     | 247     | 274     |
| 15    | 149   | 178    | 9.2   | 7.5   | 2.6   | 28   | 206    | 209     | 215   | 232     | 252     | 273     |
| 16    | 143   | 177    | 8.5   | 5.5   | 2.3   | 28   | 229    | 209     | 214   | 231     | 251     | 265     |
| 17    | 150   | 176    | 12    | 9.8   | 2.3   | 25   | 280    | 215     | 212   | 230     | 249     | 264     |
| 18    | 150   | 77     | 14    | 9.9   | 2.1   | 24   | 269    | 220     | 207   | 230     | 248     | 261     |
| 19    | 154   | 5.8    | 14    | 12    | 2.5   | 24   | 279    | 216     | 216   | 230     | 249     | 263     |
| 20    | 136   | 6.1    | 12    | 14    | 57    | 21   | 293    | 218     | 213   | 229     | 248     | 260     |
| 21    | 155   | 6.4    | 12    | 13    | 128   | 18   | 291    | 220     | 213   | 231     | 248     | 260     |
| 22    | 159   | 6.9    | 14    | 38    | 59    | 15   | 286    | 223     | 214   | 232     | 251     | 254     |
| 23    | 160   | 7.2    | 16    | 21    | 47    | 28   | 279    | 227     | 215   | 229     | 251     | 258     |
| 24    | 160   | 6.2    | 15    | 16    | 46    | 32   | 267    | 97      | 213   | 233     | 249     | 259     |
| 25    | 162   | 6.3    | 14    | 13    | 52    | 27   | 256    | .67     | 214   | 230     | 243     | 258     |
| 26    | 162   | 5.1    | 12    | 14    | 42    | 29   | 258    | .00     | 215   | 229     | 243     | 253     |
| 27    | 163   | 7.8    | 10    | 14    | 27    | 24   | 255    | .00     | 216   | 231     | 244     | 260     |
| 28    | 166   | 8.8    | 10    | 12    | 25    | 13   | 262    | 133     | 224   | 243     | 247     | 261     |
| 29    | 167   | 7.1    | 9.6   | 12    | 26    | 12   | 260    | 247     | 227   | 287     | 248     | 260     |
| 30    | 166   | 5.4    | 9.3   | 11    | ---   | 11   | 258    | 245     | 225   | 271     | 165     | 259     |
| 31    | 168   | ---    | 8.4   | 70    | ---   | 11   | ---    | 249     | ---   | 258     | .00     | ---     |
| TOTAL | 4669  | 3032.1 | 289.7 | 405.6 | 786.1 | 803  | 5548.7 | 6280.67 | 6580  | 6205.00 | 7419.00 | 7323.00 |
| MEAN  | 151   | 101    | 9.35  | 13.1  | 27.1  | 25.9 | 185    | 203     | 219   | 200     | 239     | 244     |
| MAX   | 168   | 178    | 16    | 70    | 128   | 63   | 293    | 257     | 250   | 287     | 259     | 291     |
| MIN   | 136   | 5.1    | 4.2   | 5.5   | 2.1   | 11   | 5.5    | .00     | 207   | .00     | .00     | .00     |
| AC-FT | 9260  | 6010   | 575   | 805   | 1560  | 1590 | 11010  | 12460   | 13050 | 12310   | 14720   | 14530   |
| a     | 10610 | 5970   | 0     | 11    | 113   | 0    | 10210  | 18340   | 17670 | 15660   | 17960   | 16370   |
| b     | 274   | 175    | 152   | 173   | 142   | 200  | 162    | 147     | 98    | 116     | 132     | 132     |

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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 133  | 132  | 105  | 145  | 129  | 135  | 126  | 87.0 | 108  | 95.1 | 102  | 129  |
| 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1985 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 37690.20               |  |  |  | 49341.87            |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 103                    |  |  |  | 135                 |  |  |  | 129                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 308                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 11.9                    |  |  |  |
| HIGHEST DAILY MEAN       | 363 Feb 14             |  |  |  | 293 Apr 20          |  |  |  | 2600 Jan 7 1993         |  |  |  |
| LOWEST DAILY MEAN        | .00 Jan 14             |  |  |  | .00 May 26          |  |  |  | .00 Mar 4 1985          |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jan 14             |  |  |  | 2.6 Feb 13          |  |  |  | .00 Feb 16 1986         |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 325 Sep 7           |  |  |  | 2530 Jan 10 1995        |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 4.86 Sep 7          |  |  |  | (a) 8.32 Jan 10 1995    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 74760                  |  |  |  | 97870               |  |  |  | 93120                   |  |  |  |
| 10 PERCENT EXCEEDS       | 189                    |  |  |  | 258                 |  |  |  | 340                     |  |  |  |
| 50 PERCENT EXCEEDS       | 121                    |  |  |  | 160                 |  |  |  | 16                      |  |  |  |
| 90 PERCENT EXCEEDS       | 6.3                    |  |  |  | 6.1                 |  |  |  | .00                     |  |  |  |

(a) Peak stage in main channel; portion of flow occurred in overflow channel.



## 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 sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Slight regulation of low flow by two small dams with a combined capacity of about 3 acre-ft, 2 mi upstream from station. See schematic diagram of Salton Sea basin.

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

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Jan. 31 | 2245 | 5.4                               | 1.74                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|-------|-------|------|------|------|------|
| 1     | 2.2  | 1.2  | 2.3  | 1.7  | 3.7  | 2.4  | 1.7   | .85   | .44  | .19  | .08  | .02  |
| 2     | 1.9  | 1.3  | 2.3  | 1.8  | 3.1  | 2.4  | 1.8   | .83   | .38  | .18  | .12  | .03  |
| 3     | 1.8  | 1.2  | 2.3  | 1.8  | 3.0  | 2.3  | 1.8   | .81   | .33  | .21  | .15  | .09  |
| 4     | 1.7  | 1.3  | 2.1  | 1.9  | 2.9  | 2.2  | 1.7   | .82   | .31  | .21  | .16  | .08  |
| 5     | 1.9  | 1.2  | 2.1  | 2.0  | 2.8  | 2.4  | 1.6   | .78   | .31  | .17  | .15  | .10  |
| 6     | 2.0  | 1.3  | 2.1  | 2.0  | 2.7  | 2.2  | 1.6   | .77   | .31  | .16  | .15  | .11  |
| 7     | 1.9  | e1.3 | 2.1  | 1.9  | 2.7  | 2.2  | 1.6   | .75   | .31  | .17  | .13  | .12  |
| 8     | 1.8  | e1.4 | 2.1  | 1.9  | 2.7  | 2.1  | 1.5   | .75   | .31  | .17  | .11  | .16  |
| 9     | 1.6  | e1.4 | 2.1  | 1.9  | 2.7  | 2.0  | 1.4   | .75   | .30  | .17  | .09  | .16  |
| 10    | 1.5  | e1.5 | 2.1  | 1.9  | 2.6  | 2.0  | 1.6   | .71   | .30  | .20  | .07  | .14  |
| 11    | 1.4  | e1.5 | 2.0  | 1.9  | 2.5  | 2.0  | 1.6   | .64   | .30  | .19  | .05  | .14  |
| 12    | 1.4  | e1.5 | 2.0  | 2.0  | 2.7  | 2.1  | 1.5   | .57   | .30  | .16  | .02  | .12  |
| 13    | 1.4  | e1.6 | 2.0  | 1.9  | 2.8  | 2.4  | 1.5   | .54   | .30  | .16  | .00  | .15  |
| 14    | 1.3  | e1.6 | 2.0  | 1.9  | 2.7  | 2.2  | 1.5   | .55   | .30  | .16  | .00  | .19  |
| 15    | 1.3  | e1.7 | 2.1  | 1.9  | 2.6  | 2.2  | 1.4   | .56   | .29  | .19  | .00  | .16  |
| 16    | 1.3  | e1.7 | 2.1  | 1.9  | 2.4  | 2.1  | 1.5   | .60   | .27  | .19  | .02  | .17  |
| 17    | 1.4  | e1.7 | 2.1  | 1.8  | 2.4  | 2.0  | 1.5   | .61   | .26  | .17  | .04  | .18  |
| 18    | 1.3  | e1.8 | 2.0  | 2.0  | 2.4  | 1.9  | 1.5   | .56   | .26  | .16  | .07  | .18  |
| 19    | 1.3  | e1.8 | 2.0  | 2.0  | 2.4  | 1.9  | 1.5   | .56   | .25  | .13  | .10  | .19  |
| 20    | 1.2  | e1.9 | 2.0  | 2.0  | 2.9  | 1.9  | 1.4   | .58   | .22  | .12  | .10  | .18  |
| 21    | 1.2  | e1.9 | 2.0  | 2.1  | 2.9  | 1.8  | 1.4   | .56   | .25  | .11  | .05  | .18  |
| 22    | 1.2  | e1.9 | 2.0  | 2.3  | 2.6  | 1.9  | 1.3   | .56   | .28  | .10  | .01  | .17  |
| 23    | 1.3  | e2.0 | 2.1  | 2.3  | 2.6  | 2.0  | 1.2   | .58   | .27  | .05  | .00  | .17  |
| 24    | 1.4  | e2.0 | 2.1  | 2.2  | 2.6  | 2.0  | 1.1   | .73   | .26  | .04  | .00  | .17  |
| 25    | 1.3  | e2.0 | 2.0  | 2.2  | 2.8  | 2.0  | 1.0   | .83   | .27  | .04  | .00  | .18  |
| 26    | 1.3  | e2.1 | 2.0  | 2.2  | 2.8  | 1.9  | .96   | .72   | .28  | .06  | .00  | .18  |
| 27    | 1.3  | e2.1 | 1.9  | 2.2  | 2.6  | 1.9  | .91   | .59   | .33  | .17  | .00  | .17  |
| 28    | 1.2  | e2.2 | 1.9  | 2.1  | 2.5  | 1.9  | .92   | .55   | .31  | .17  | .02  | .17  |
| 29    | 1.2  | e2.2 | 1.9  | 2.1  | 2.5  | 1.9  | 1.0   | .51   | .26  | .17  | .09  | .18  |
| 30    | 1.2  | e2.2 | 1.9  | 2.1  | ---  | 1.8  | .97   | .52   | .21  | .12  | .06  | .17  |
| 31    | 1.2  | ---  | 1.9  | 2.7  | ---  | 1.8  | ---   | .49   | ---  | .09  | .09  | ---  |
| TOTAL | 45.4 | 50.5 | 63.6 | 62.6 | 78.6 | 63.8 | 41.96 | 20.23 | 8.77 | 4.58 | 1.93 | 4.41 |
| MEAN  | 1.46 | 1.68 | 2.05 | 2.02 | 2.71 | 2.06 | 1.40  | .65   | .29  | .15  | .062 | .15  |
| MAX   | 2.2  | 2.2  | 2.3  | 2.7  | 3.7  | 2.4  | 1.8   | .85   | .44  | .21  | .16  | .19  |
| MIN   | 1.2  | 1.2  | 1.9  | 1.7  | 2.4  | 1.8  | .91   | .49   | .21  | .04  | .00  | .02  |
| AC-FT | 90   | 100  | 126  | 124  | 156  | 127  | 83    | 40    | 17   | 9.1  | 3.8  | 8.7  |

e Estimated.

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .92  | 1.17 | 1.24 | 3.80 | 9.40 | 7.36 | 5.96 | 4.84 | 3.12 | 2.09 | 1.60 | 1.00 |
| MAX  | 3.83 | 4.54 | 4.51 | 29.2 | 174  | 49.6 | 31.6 | 25.8 | 16.4 | 10.1 | 5.42 | 4.74 |
| (WY) | 1970 | 1984 | 1979 | 1980 | 1980 | 1980 | 1993 | 1993 | 1993 | 1980 | 1983 | 1993 |
| MIN  | .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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1968 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 1960.19                |        | 446.38              |        |                         |             |
| ANNUAL MEAN              | 5.37                   |        | 1.22                |        | 3.51                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 28.3                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .000                    |             |
| HIGHEST DAILY MEAN       | 31                     | Feb 14 | 3.7                 | Feb 1  | 540                     | Feb 18 1980 |
| LOWEST DAILY MEAN        | .75                    | Jan 20 | .00                 | Aug 13 | .00                     | Oct 1 1967  |
| ANNUAL SEVEN-DAY MINIMUM | .96                    | Jan 16 | .00                 | Aug 22 | .00                     | Oct 1 1967  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 5.4                 | Jan 31 | 1750                    | Aug 17 1983 |
| INSTANTANEOUS PEAK STAGE |                        |        | 1.74                | Jan 31 | 6.40                    | Jan 25 1969 |
| ANNUAL RUNOFF (AC-FT)    | 3890                   |        | 885                 |        | 2540                    |             |
| 10 PERCENT EXCEEDS       | 13                     |        | 2.3                 |        | 7.2                     |             |
| 50 PERCENT EXCEEDS       | 3.5                    |        | 1.3                 |        | .67                     |             |
| 90 PERCENT EXCEEDS       | 1.3                    |        | .11                 |        | .00                     |             |

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

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

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

## WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since June 25, 1996. Elevation of gage is 2,100 ft above sea level, from topographic map.

REMARKS.--Records poor. Two small diversions 2 mi upstream, one for city of Palm Springs and one for Palm Springs aerial tramway. See schematic diagram of Salton Sea basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1     | .73   | e.40  | .48   | .96   | 3.1   | 2.5   | .66   | .01  | .00  | .00  | .00  | .00  |
| 2     | .73   | e.48  | .61   | 1.0   | 2.3   | 2.5   | .80   | .01  | .00  | .00  | .00  | .00  |
| 3     | .63   | e.54  | .66   | 1.0   | 1.7   | 2.5   | .93   | .13  | .00  | .00  | .00  | .00  |
| 4     | e.50  | e.36  | .66   | 1.0   | 1.5   | 2.5   | .90   | .28  | .00  | .00  | .00  | .00  |
| 5     | e.47  | e.34  | .66   | 1.0   | 1.3   | 2.0   | .87   | .26  | .00  | .00  | .00  | .00  |
| 6     | e.37  | e.35  | .47   | 1.0   | 1.0   | 1.8   | .74   | .26  | .00  | .00  | .00  | .00  |
| 7     | e.32  | e.35  | .43   | 1.0   | 1.0   | 1.6   | .85   | .26  | .00  | .00  | .00  | .00  |
| 8     | e.32  | e.37  | .63   | 1.0   | 1.0   | 1.5   | .80   | .27  | .00  | .00  | .00  | .00  |
| 9     | e.31  | .32   | .66   | .91   | 1.0   | 1.5   | .58   | .27  | .00  | .00  | .00  | .00  |
| 10    | e.31  | .48   | .66   | .66   | 1.0   | 1.5   | 1.0   | .23  | .00  | .00  | .00  | .00  |
| 11    | e.31  | .48   | .73   | .66   | 1.0   | 1.5   | 1.1   | .24  | .00  | .00  | .00  | .00  |
| 12    | e.31  | .53   | .90   | .66   | 1.0   | 1.6   | e.95  | .23  | .00  | .00  | .00  | .00  |
| 13    | e.30  | .48   | .91   | .66   | 1.0   | 2.3   | e.81  | .23  | .00  | .00  | .00  | .00  |
| 14    | e.31  | .53   | .90   | .66   | 1.0   | 2.5   | e.76  | .25  | .00  | .00  | .00  | .00  |
| 15    | e.32  | .48   | .66   | .66   | 1.1   | 2.3   | e.75  | .26  | .00  | .00  | .00  | .00  |
| 16    | e.31  | .44   | .91   | .72   | 1.0   | 1.7   | e.52  | .33  | .00  | .00  | .00  | .00  |
| 17    | e.32  | .30   | 1.0   | .53   | 1.0   | 1.5   | e.40  | .34  | .00  | .00  | .00  | .00  |
| 18    | e.33  | .48   | 1.0   | .62   | .93   | 1.3   | e.28  | .33  | .00  | .00  | .00  | .00  |
| 19    | e.31  | .48   | 1.0   | .67   | .89   | 1.0   | e.22  | .36  | .00  | .00  | .00  | .00  |
| 20    | e.35  | .50   | 1.0   | .66   | 2.7   | .88   | e.16  | .33  | .00  | .00  | .00  | .00  |
| 21    | e.29  | .32   | 1.0   | 1.3   | 3.2   | .66   | e.10  | .02  | .00  | .00  | .00  | .00  |
| 22    | e.30  | .48   | 1.0   | 2.4   | 3.1   | .66   | e.08  | .02  | .00  | .00  | .00  | .00  |
| 23    | e.31  | .58   | 1.8   | 2.0   | 2.9   | .91   | e.01  | .03  | .00  | .00  | .00  | .00  |
| 24    | e.33  | .66   | 1.5   | 2.0   | 2.5   | 1.0   | e.00  | .36  | .00  | .00  | .00  | .00  |
| 25    | e.33  | .66   | 1.5   | 1.8   | 2.9   | 1.0   | e.00  | .72  | .00  | .00  | .00  | .00  |
| 26    | e.33  | .66   | 1.3   | 1.5   | 3.1   | 1.0   | .00   | .36  | .00  | .00  | .00  | .00  |
| 27    | e.32  | .74   | 1.0   | 1.5   | 3.1   | 1.0   | .00   | .32  | .00  | .00  | .00  | .00  |
| 28    | e.32  | .77   | 1.0   | 1.5   | 2.5   | 1.0   | .00   | .30  | .00  | .00  | .00  | .00  |
| 29    | e.32  | .45   | 1.0   | 1.5   | 2.5   | 1.0   | .01   | .30  | .00  | .00  | .00  | .00  |
| 30    | e.33  | .48   | 1.0   | 1.3   | ---   | 1.0   | .01   | .33  | .00  | .00  | .00  | .00  |
| 31    | e.35  | ---   | 1.0   | 2.2   | ---   | .89   | ---   | .23  | ---  | .00  | .00  | ---  |
| TOTAL | 11.39 | 14.49 | 28.03 | 35.03 | 52.32 | 46.60 | 14.29 | 7.87 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .37   | .48   | .90   | 1.13  | 1.80  | 1.50  | .48   | .25  | .000 | .000 | .000 | .000 |
| MAX   | .73   | .77   | 1.8   | 2.4   | 3.2   | 2.5   | 1.1   | .72  | .00  | .00  | .00  | .00  |
| MIN   | .29   | .30   | .43   | .53   | .89   | .66   | .00   | .01  | .00  | .00  | .00  | .00  |
| AC-FT | 23    | 29    | 56    | 69    | 104   | 92    | 28    | 16   | .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 - 1996, BY WATER YEAR (WY)

|                          | OCT                    | NOV  | DEC  | JAN  | FEB  | MAR                 | APR  | MAY  | JUN                     | JUL  | AUG  | SEP  |
|--------------------------|------------------------|------|------|------|------|---------------------|------|------|-------------------------|------|------|------|
| MEAN                     | .35                    | .47  | .51  | 2.34 | 3.01 | 2.48                | 1.48 | .70  | .25                     | .054 | .11  | .24  |
| MAX                      | 1.19                   | 1.32 | 1.49 | 14.0 | 17.8 | 8.82                | 3.85 | 2.09 | .77                     | .28  | .65  | 1.38 |
| (WY)                     | 1994                   | 1987 | 1994 | 1993 | 1993 | 1993                | 1993 | 1993 | 1995                    | 1987 | 1993 | 1993 |
| 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 1995 CALENDAR YEAR |      |      |      |      | FOR 1996 WATER YEAR |      |      | WATER YEARS 1987 - 1996 |      |      |      |
| ANNUAL TOTAL             | 677.22                 |      |      |      |      | 210.02              |      |      |                         |      |      |      |
| ANNUAL MEAN              | 1.86                   |      |      |      |      | .57                 |      |      | .99                     |      |      |      |
| HIGHEST ANNUAL MEAN      |                        |      |      |      |      |                     |      |      | 4.02                    |      |      |      |
| LOWEST ANNUAL MEAN       |                        |      |      |      |      |                     |      |      | .19                     |      |      |      |
| HIGHEST DAILY MEAN       | 15                     |      |      |      |      | 3.2                 |      |      | 49                      |      |      |      |
| LOWEST DAILY MEAN        | .00                    |      |      |      |      | .00                 |      |      | .00                     |      |      |      |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |      |      |      |      | .00                 |      |      | .00                     |      |      |      |
| INSTANTANEOUS PEAK FLOW  |                        |      |      |      |      | 5.2                 |      |      | 153                     |      |      |      |
| INSTANTANEOUS PEAK STAGE |                        |      |      |      |      | 8.77                |      |      | 10.18                   |      |      |      |
| ANNUAL RUNOFF (AC-FT)    | 1340                   |      |      |      |      | 417                 |      |      | 716                     |      |      |      |
| 10 PERCENT EXCEEDS       | 5.2                    |      |      |      |      | 1.5                 |      |      | 2.3                     |      |      |      |
| 50 PERCENT EXCEEDS       | .74                    |      |      |      |      | .33                 |      |      | .29                     |      |      |      |
| 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 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM)             | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS)       | TEMPER-<br>ATURE<br>WATER<br>(DEG C)                          | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3)                   | HARD-<br>NESS<br>NONCARB<br>DISSOLV<br>FLD. AS<br>CACO3<br>(MG/L) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                  | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)      | SODIUM<br>PERCENT  |   |
|--------------|------|--|---|---|---|---|---|---|--|---|--|---|
|              |      |  |   |   |   |   |   |   |  |   |  |   |
| NOV<br>13... | 1630 | 0.48   | 220   | 8.5   | 14.5  | 84  | 0   | 29  | 2.9  | 11  | 21   |   |
| APR<br>15... | 1300 | 0.73   | 205   | 8.6   | 17.5  | 83  | 0   | 29  | 2.6  | 9.5   | 19   |   |
| DATE         |      | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO                | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)           | BICAR-<br>BONATE<br>WATER<br>DIS IT<br>FIELD<br>MG/L AS<br>HCO3 | CAR-<br>BONATE<br>WATER<br>DIS IT<br>FIELD<br>MG/L AS<br>CO3  | ALKA-<br>LINITY<br>WAT DIS<br>TOT IT<br>FIELD<br>MG/L AS<br>CACO3 | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)                     | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)           | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)   | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) |
| NOV<br>13... | 0.5  | 5.3  | 123   | 1   | 103   | 4.3   | 2.7   | <0.10   | 19   | 142   | 136  |   |
| APR<br>15... | 0.5  | 5.2  | 109   | 2   | 93  | 5.2   | 2.6   | <0.10   | 17   | 134   | 127  |   |
| DATE         |      | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT)    | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N)   | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>DIS.<br>(MG/L<br>AS N) | PHOS-<br>PHORUS<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)               | PHOS-<br>PHORUS<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)         | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B)        | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)                         | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN)                |
| NOV<br>13... | 0.19 | <0.010   | <0.050  | <0.015  | <0.20   | <0.010  | <0.010  | <1  | 20   | 6.0   | <1.0   |   |
| APR<br>15... | 0.18 | <0.010   | 0.080   | <0.015  | <0.20   | <0.010  | <0.010  | <1  | 30   | 13  | 1.0  |   |

## 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 sea level (levels by Riverside County Flood Control District). Prior to Aug. 25, 1970, at datum 2.00 ft higher.

REMARKS.--Records fair. No regulation or diversion upstream from station. See schematic diagram of Salton Sea basin.

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

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Apr. 18 | 1230 | 12                                | 4.36                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN   | FEB   | MAR   | APR   | MAY  | JUN   | JUL  | AUG  | SEP  |
|-------|-------|------|------|-------|-------|-------|-------|------|-------|------|------|------|
| 1     | .78   | 1.1  | 1.2  | 1.6   | 6.8   | 5.0   | 5.1   | 4.0  | 1.1   | .24  | .00  | .00  |
| 2     | .75   | 1.1  | 1.2  | 1.6   | 4.2   | 4.8   | 5.9   | 3.8  | 1.0   | .22  | .00  | .00  |
| 3     | .72   | 1.1  | 1.2  | 1.5   | 3.1   | 4.7   | 5.6   | 3.6  | .92   | .21  | .00  | .00  |
| 4     | .70   | 1.1  | 1.2  | 1.5   | 3.0   | 4.6   | 5.3   | 3.3  | .82   | .20  | .00  | .00  |
| 5     | .69   | 1.1  | 1.2  | 1.6   | 3.0   | 5.6   | 5.1   | 3.2  | .76   | .21  | .00  | .00  |
| 6     | .73   | 1.2  | 1.1  | 1.5   | 3.6   | 5.9   | 4.9   | 2.9  | .74   | .18  | .00  | .00  |
| 7     | .75   | 1.2  | 1.1  | 1.4   | 3.4   | 6.3   | 4.7   | 2.8  | .69   | .18  | .00  | .00  |
| 8     | .74   | 1.2  | 1.1  | 1.2   | 3.4   | 5.7   | 4.6   | 2.6  | .67   | .16  | .00  | .00  |
| 9     | .73   | 1.2  | 1.1  | 1.2   | 3.2   | 5.5   | 6.9   | 2.5  | .60   | .15  | .00  | .00  |
| 10    | .73   | 1.1  | 1.1  | 1.1   | 3.2   | 5.7   | 8.5   | 2.4  | .57   | .14  | .00  | .00  |
| 11    | .74   | 1.1  | 1.1  | 1.1   | 3.1   | 5.7   | 9.3   | 2.2  | .55   | .13  | .00  | .00  |
| 12    | .74   | 1.1  | 1.1  | 1.1   | 2.9   | 5.8   | 10    | 2.1  | .52   | .12  | .00  | .00  |
| 13    | .74   | 1.1  | 1.2  | 1.1   | 3.2   | 6.7   | 8.1   | 1.9  | .50   | .12  | .00  | .00  |
| 14    | .74   | 1.0  | 1.5  | 1.1   | 3.1   | 6.6   | 4.9   | 1.9  | .47   | .14  | .00  | .00  |
| 15    | .74   | 1.0  | 1.9  | 1.1   | 2.8   | 5.7   | 4.8   | 1.8  | .45   | .15  | .00  | .00  |
| 16    | .75   | 1.0  | 1.7  | 1.1   | 2.8   | 5.9   | 4.8   | 1.8  | .43   | .12  | .00  | .00  |
| 17    | .76   | 1.0  | 1.6  | .95   | 2.8   | 6.0   | 4.8   | 1.9  | .41   | .12  | .00  | .00  |
| 18    | .76   | 1.0  | 1.5  | 1.3   | 2.7   | 6.7   | 8.0   | 1.7  | .38   | .13  | .00  | .00  |
| 19    | .78   | 1.1  | 1.5  | 1.2   | 2.7   | 7.0   | 8.1   | 1.5  | .34   | .16  | .00  | .00  |
| 20    | .75   | 1.1  | 1.5  | 1.3   | 4.1   | 7.2   | 7.0   | 1.5  | .30   | .18  | .00  | .00  |
| 21    | .76   | 1.0  | 1.4  | 1.4   | 5.2   | 7.2   | 6.4   | 1.5  | .28   | .22  | .00  | .00  |
| 22    | .76   | 1.0  | 1.4  | 1.9   | 5.2   | 7.3   | 5.9   | 1.4  | .27   | .13  | .00  | .00  |
| 23    | .80   | 1.0  | 1.8  | 1.4   | 5.0   | 6.8   | 5.4   | 1.4  | .29   | .11  | .00  | .00  |
| 24    | .84   | 1.0  | 1.8  | 1.4   | 5.1   | 6.4   | 5.2   | 1.4  | .29   | .09  | .00  | .00  |
| 25    | .87   | 1.1  | 1.7  | 1.4   | 5.2   | 5.9   | 5.2   | 1.9  | .28   | .08  | .00  | .00  |
| 26    | .87   | 1.3  | 1.7  | 1.4   | 5.3   | 5.6   | 5.1   | 1.8  | .29   | .08  | .00  | .00  |
| 27    | .87   | 1.2  | 1.6  | 1.3   | 5.9   | 5.5   | 5.0   | 1.7  | .33   | .09  | .00  | .00  |
| 28    | .87   | 1.3  | 1.6  | 1.3   | 6.0   | 5.4   | 4.9   | 1.4  | .36   | .07  | .00  | .00  |
| 29    | .91   | 1.2  | 1.6  | 1.3   | 5.1   | 6.1   | 4.7   | 1.3  | .32   | .05  | .00  | .00  |
| 30    | .93   | 1.2  | 1.6  | 1.3   | ---   | 5.3   | 4.3   | 1.3  | .27   | .02  | .00  | .00  |
| 31    | 1.0   | ---  | 1.7  | 3.2   | ---   | 5.2   | ---   | 1.2  | ---   | .01  | .00  | ---  |
| TOTAL | 24.30 | 33.2 | 44.0 | 42.85 | 115.1 | 183.8 | 178.5 | 65.7 | 15.20 | 4.21 | 0.00 | 0.00 |
| MEAN  | .78   | 1.11 | 1.42 | 1.38  | 3.97  | 5.93  | 5.95  | 2.12 | .51   | .14  | .000 | .000 |
| MAX   | 1.0   | 1.3  | 1.9  | 3.2   | 6.8   | 7.3   | 10    | 4.0  | 1.1   | .24  | .00  | .00  |
| MIN   | .69   | 1.0  | 1.1  | .95   | 2.7   | 4.6   | 4.3   | 1.2  | .27   | .01  | .00  | .00  |
| AC-FT | 48    | 66   | 87   | 85    | 228   | 365   | 354   | 130  | 30    | 8.4  | .00  | .00  |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .58  | 1.81 | 3.59 | 6.43 | 7.78 | 8.82 | 11.3 | 14.4 | 7.10 | 2.26 | .96  | .72  |
| MAX  | 8.64 | 43.1 | 72.5 | 81.3 | 117  | 72.0 | 57.3 | 78.3 | 58.0 | 24.9 | 6.36 | 4.88 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1980 | 1995 | 1969 | 1969 | 1980 | 1980 | 1980 | 1976 |
| MIN  | .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 1995 CALENDAR YEAR |     |   | FOR 1996 WATER YEAR |     |    | WATER YEARS 1948 - 1996 |     |         |
|--------------------------|------------------------|-----|---|---------------------|-----|----|-------------------------|-----|---------|
| ANNUAL TOTAL             | 6051.74                |     |   | 706.86              |     |    | 5.46                    |     |         |
| ANNUAL MEAN              | 16.6                   |     |   | 1.93                |     |    | 32.9                    |     |         |
| HIGHEST ANNUAL MEAN      |                        |     |   |                     |     |    | 1980                    |     |         |
| LOWEST ANNUAL MEAN       |                        |     |   |                     |     |    | 1961                    |     |         |
| HIGHEST DAILY MEAN       | 342                    | Mar | 6 | 10                  | Apr | 12 | 1080                    | Jan | 25 1969 |
| LOWEST DAILY MEAN        | .69                    | Oct | 5 | .00                 | Aug | 1  | .00                     | Oct | 1 1947  |
| ANNUAL SEVEN-DAY MINIMUM | .72                    | Oct | 3 | .00                 | Aug | 1  | .00                     | Oct | 1 1947  |
| INSTANTANEOUS PEAK FLOW  |                        |     |   | 12                  | Apr | 18 | 2900                    | Nov | 22 1965 |
| INSTANTANEOUS PEAK STAGE |                        |     |   | 4.36                | Apr | 18 | 15.78                   | Sep | 7 1981  |
| ANNUAL RUNOFF (AC-FT)    | 12000                  |     |   | 1400                |     |    | 3960                    |     |         |
| 10 PERCENT EXCEEDS       | 38                     |     |   | 5.6                 |     |    | 12                      |     |         |
| 50 PERCENT EXCEEDS       | 6.7                    |     |   | 1.1                 |     |    | 1.0                     |     |         |
| 90 PERCENT EXCEEDS       | .85                    |     |   | .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 sea level, from topographic map. Prior to Jan. 14, 1942, at datum 0.2 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Salton Sea basin.

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

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

| Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|---------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| July 28 | Unknown | 47                                | 2.48                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|-------|------|------|-------|-------|-------|------|------|------|------|------|
| 1     | .18  | .66   | 1.0  | 1.4  | 13    | 3.2   | 1.3   | .03  | .00  | .00  | .00  | .00  |
| 2     | .16  | .68   | 1.0  | 1.5  | 5.8   | 3.1   | 1.2   | .02  | .00  | .00  | .00  | .00  |
| 3     | .13  | .67   | 1.0  | 1.5  | 4.3   | 3.1   | 1.2   | .01  | .00  | .00  | .00  | .00  |
| 4     | .14  | .60   | 1.0  | 1.5  | 3.9   | 3.0   | 1.1   | .01  | .00  | .00  | .00  | .00  |
| 5     | .19  | .51   | 1.0  | 1.5  | 3.5   | 4.4   | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 6     | .27  | .62   | 1.0  | 1.5  | 3.3   | 4.4   | .91   | .00  | .00  | .00  | .00  | .00  |
| 7     | .30  | .65   | 1.1  | 1.5  | 3.2   | 3.9   | .87   | .00  | .00  | .00  | .00  | .00  |
| 8     | .29  | .62   | 1.1  | 1.4  | 3.0   | 3.7   | .78   | .00  | .00  | .00  | .00  | .00  |
| 9     | .26  | .61   | 1.1  | 1.4  | 2.9   | 3.6   | .66   | .00  | .00  | .00  | .00  | .62  |
| 10    | .23  | .59   | 1.1  | 1.4  | 2.8   | 3.3   | .68   | .00  | .00  | .00  | .00  | .00  |
| 11    | .23  | .60   | 1.1  | 1.4  | 2.8   | 3.4   | .68   | .00  | .00  | .00  | .00  | .00  |
| 12    | .24  | .66   | 1.1  | 1.4  | 2.8   | 3.3   | .70   | .00  | .00  | .00  | .00  | .00  |
| 13    | .25  | .68   | 1.1  | 1.4  | 3.2   | 5.9   | .62   | .00  | .00  | .00  | .00  | .00  |
| 14    | .24  | .67   | 1.4  | 1.4  | 2.9   | 8.2   | .56   | .00  | .00  | .00  | .00  | .00  |
| 15    | .22  | .67   | 1.3  | 1.5  | 2.8   | 6.0   | .51   | .00  | .00  | .00  | .00  | .00  |
| 16    | .24  | .68   | 1.3  | 1.5  | 2.7   | 5.0   | .51   | .00  | .00  | .00  | .00  | .00  |
| 17    | .25  | .70   | 1.2  | 1.3  | 2.7   | 4.3   | .56   | .00  | .00  | .00  | .00  | .00  |
| 18    | .27  | .67   | 1.2  | 1.5  | 2.7   | 3.8   | .64   | .00  | .00  | .00  | .00  | .00  |
| 19    | .25  | .70   | 1.2  | 1.6  | 2.7   | 3.4   | .80   | .00  | .00  | .00  | .00  | .00  |
| 20    | .23  | .72   | 1.4  | 1.6  | 3.2   | 3.0   | .67   | .00  | .00  | .00  | .00  | .00  |
| 21    | .23  | .72   | 1.3  | 1.8  | 3.7   | 2.9   | .51   | .00  | .00  | .00  | .00  | .00  |
| 22    | .20  | .75   | 1.4  | 3.9  | 4.2   | 2.7   | .45   | .00  | .00  | .00  | .00  | .00  |
| 23    | .25  | .75   | 1.8  | 2.6  | 3.0   | 2.4   | .38   | .00  | .00  | .00  | .00  | .00  |
| 24    | .34  | .71   | 1.8  | 2.2  | 2.7   | 2.4   | .30   | .00  | .00  | .00  | .00  | .00  |
| 25    | .38  | .71   | 1.6  | 2.0  | 2.8   | 2.2   | .21   | .00  | .00  | .00  | .00  | .00  |
| 26    | .35  | .75   | 1.5  | 1.9  | 3.8   | 2.0   | .14   | .00  | .00  | .00  | .00  | .00  |
| 27    | .38  | .78   | 1.4  | 1.9  | 3.6   | 1.9   | .08   | .00  | .00  | .00  | .00  | .00  |
| 28    | .36  | .98   | 1.4  | 1.9  | 3.6   | 1.6   | .04   | .00  | .00  | e1.7 | .00  | .00  |
| 29    | .37  | 1.0   | 1.4  | 1.8  | 3.3   | 1.6   | .05   | .00  | .00  | e.01 | .00  | .00  |
| 30    | .42  | .99   | 1.5  | 1.8  | ---   | 1.5   | .04   | .00  | .00  | e.00 | .00  | .00  |
| 31    | .52  | ---   | 1.5  | 2.2  | ---   | 1.4   | ---   | .00  | ---  | e.00 | .00  | ---  |
| TOTAL | 8.37 | 21.10 | 39.3 | 53.2 | 104.9 | 104.6 | 18.15 | 0.07 | 0.00 | 1.71 | 0.00 | 0.62 |
| MEAN  | .27  | .70   | 1.27 | 1.72 | 3.62  | 3.37  | .60   | .002 | .000 | .055 | .000 | .021 |
| MAX   | .52  | 1.0   | 1.8  | 3.9  | 13    | 8.2   | 1.3   | .03  | .00  | 1.7  | .00  | .62  |
| MIN   | .13  | .51   | 1.0  | 1.3  | 2.7   | 1.4   | .04   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | 17   | 42    | 78   | 106  | 208   | 207   | 36    | .1   | .00  | 3.4  | .00  | 1.2  |

e Estimated.



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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .37  | .87  | 3.99 | 9.14 | 19.5 | 20.0 | 7.46 | 2.25 | .69  | .78  | 1.03 | .89  |
| MAX  | 5.95 | 20.6 | 39.6 | 203  | 318  | 188  | 80.8 | 24.1 | 9.87 | 15.1 | 33.0 | 19.5 |
| (WY) | 1984 | 1966 | 1983 | 1993 | 1980 | 1983 | 1958 | 1983 | 1980 | 1979 | 1983 | 1976 |
| MIN  | .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 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1930 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 6813.92                | 352.02              |                         |
| ANNUAL MEAN              | 18.7                   | .96                 | 5.54                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 47.4 1980               |
| LOWEST ANNUAL MEAN       |                        |                     | .000 1972               |
| HIGHEST DAILY MEAN       | 670 Mar 11             | 13 Feb 1            | 2040 Feb 21 1980        |
| LOWEST DAILY MEAN        | .03 Aug 11             | .00 May 5           | .00 Jul 16 1930         |
| ANNUAL SEVEN-DAY MINIMUM | .04 Aug 5              | .00 May 5           | .00 Jul 16 1930         |
| INSTANTANEOUS PEAK FLOW  |                        | 47 Jul 28           | 7000 Feb 21 1980        |
| INSTANTANEOUS PEAK STAGE |                        | 2.48 Jul 28         | 7.29 Feb 21 1980        |
| ANNUAL RUNOFF (AC-FT)    | 13520                  | 698                 | 4010                    |
| 10 PERCENT EXCEEDS       | 33                     | 3.0                 | 6.5                     |
| 50 PERCENT EXCEEDS       | 1.8                    | .36                 | .00                     |
| 90 PERCENT EXCEEDS       | .18                    | .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. WDR CA-91-1: 1986(M), 1988(M).

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

REMARKS.--Records good. No regulation upstream from station. One small diversion for domestic use about 1 mi upstream from station. See schematic diagram of Salton Sea basin.

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

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

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 1 | 0115 | 13                                | 2.75                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR   | APR  | MAY  | JUN   | JUL   | AUG   | SEP   |
|-------|------|------|------|------|------|-------|------|------|-------|-------|-------|-------|
| 1     | 1.9  | 2.3  | 2.1  | 2.3  | 7.3  | 3.1   | 2.5  | 1.7  | 1.3   | .88   | .74   | .71   |
| 2     | 1.9  | 2.3  | 2.2  | 2.3  | 3.6  | 3.0   | 2.6  | 1.7  | 1.2   | .88   | .82   | .74   |
| 3     | 1.8  | 2.3  | 2.2  | 2.3  | 3.0  | 3.0   | 2.6  | 1.7  | 1.1   | 1.1   | .81   | .82   |
| 4     | 1.8  | 2.2  | 2.2  | 2.3  | 2.8  | 3.1   | 2.5  | 1.7  | 1.1   | 1.0   | .73   | .85   |
| 5     | 1.9  | 2.1  | 2.2  | 2.3  | 2.7  | 6.1   | 2.4  | 1.6  | 1.1   | .83   | .77   | .91   |
| 6     | 1.9  | 2.3  | 2.2  | 2.3  | 2.8  | 4.6   | 2.4  | 1.6  | 1.1   | .82   | .78   | .87   |
| 7     | 1.9  | 2.2  | 2.2  | 2.3  | 2.6  | 3.9   | 2.4  | 1.6  | 1.1   | .91   | .75   | 1.0   |
| 8     | 2.0  | 2.2  | 2.2  | 2.2  | 2.5  | 3.5   | 2.3  | 1.6  | 1.1   | .90   | .74   | 1.3   |
| 9     | 2.0  | 2.2  | 2.2  | 2.2  | 2.4  | 3.3   | 2.2  | 1.6  | 1.0   | .92   | .77   | 1.0   |
| 10    | 2.0  | 2.2  | 2.2  | 2.2  | 2.4  | 3.2   | 2.2  | 1.5  | 1.0   | 1.0   | .80   | .89   |
| 11    | 1.9  | 2.2  | 2.2  | 2.2  | 2.4  | 3.1   | 2.3  | 1.4  | 1.0   | .93   | .78   | .85   |
| 12    | 2.0  | 2.1  | 2.2  | 2.2  | 2.4  | 3.3   | 2.3  | 1.4  | 1.0   | .85   | .74   | .77   |
| 13    | 2.0  | 2.1  | 2.4  | 2.2  | 2.4  | 4.5   | 2.2  | 1.4  | 1.0   | .82   | .73   | .86   |
| 14    | 1.9  | 2.1  | 2.8  | 2.2  | 2.4  | 4.7   | 2.2  | 1.4  | 1.0   | .92   | .81   | .95   |
| 15    | 1.9  | 2.1  | 2.4  | 2.2  | 2.3  | 3.8   | 2.2  | 1.3  | 1.0   | 1.1   | .76   | .96   |
| 16    | 2.0  | 2.2  | 2.4  | 2.2  | 2.3  | 3.7   | 2.2  | 1.4  | 1.0   | 1.1   | .75   | 1.0   |
| 17    | 2.0  | 2.2  | 2.3  | 2.2  | 2.3  | 3.4   | 2.2  | 1.5  | .96   | .90   | .69   | .97   |
| 18    | 2.0  | 2.2  | 2.3  | 2.2  | 2.2  | 3.4   | 2.7  | 1.3  | .94   | .81   | .73   | .97   |
| 19    | 1.9  | 2.2  | 2.2  | 2.2  | 2.3  | 3.3   | 2.4  | 1.3  | .90   | .78   | .74   | .92   |
| 20    | 1.9  | 2.2  | 2.3  | 2.2  | 5.9  | 3.1   | 2.2  | 1.4  | .86   | .73   | .71   | .94   |
| 21    | 2.0  | 2.2  | 2.3  | 2.7  | 6.2  | 3.1   | 2.2  | 1.4  | .92   | .76   | .66   | .95   |
| 22    | 2.0  | 2.2  | 2.3  | 3.3  | 5.3  | 3.0   | 2.1  | 1.4  | .98   | .76   | .67   | .95   |
| 23    | 2.0  | 2.1  | 2.7  | 2.6  | 3.8  | 2.9   | 2.0  | 1.3  | .99   | .71   | .71   | .96   |
| 24    | 2.1  | 2.1  | 2.5  | 2.5  | 3.4  | 2.9   | 2.0  | 1.5  | 1.0   | .72   | .69   | .94   |
| 25    | 2.1  | 2.0  | 2.4  | 2.4  | 3.4  | 2.8   | 1.9  | 1.6  | .99   | .76   | .82   | .96   |
| 26    | 2.1  | 2.1  | 2.4  | 2.4  | 3.5  | 2.8   | 1.8  | 1.5  | 1.1   | .85   | .76   | .99   |
| 27    | 2.1  | 2.1  | 2.3  | 2.3  | 3.2  | 2.7   | 1.8  | 1.4  | 1.1   | .94   | .78   | .90   |
| 28    | 2.1  | 2.1  | 2.3  | 2.3  | 3.4  | 2.7   | 1.8  | 1.4  | 1.1   | .93   | .85   | .87   |
| 29    | 2.1  | 2.1  | 2.3  | 2.3  | 3.1  | 2.8   | 1.8  | 1.4  | .99   | .92   | .85   | .86   |
| 30    | 2.2  | 2.1  | 2.4  | 2.3  | ---  | 2.7   | 1.8  | 1.4  | .89   | .78   | .87   | .86   |
| 31    | 2.3  | ---  | 2.4  | 4.3  | ---  | 2.6   | ---  | 1.4  | ---   | .67   | .82   | ---   |
| TOTAL | 61.7 | 65.0 | 71.7 | 74.1 | 94.3 | 104.1 | 66.2 | 45.8 | 30.82 | 26.98 | 23.63 | 27.52 |
| MEAN  | 1.99 | 2.17 | 2.31 | 2.39 | 3.25 | 3.36  | 2.21 | 1.48 | 1.03  | .87   | .76   | .92   |
| MAX   | 2.3  | 2.3  | 2.8  | 4.3  | 7.3  | 6.1   | 2.7  | 1.7  | 1.3   | 1.1   | .87   | 1.3   |
| MIN   | 1.8  | 2.0  | 2.1  | 2.2  | 2.2  | 2.6   | 1.8  | 1.3  | .86   | .67   | .66   | .71   |
| AC-FT | 122  | 129  | 142  | 147  | 187  | 206   | 131  | 91   | 61    | 54    | 47    | 55    |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.37 | 2.21 | 3.16 | 4.88 | 5.73 | 6.14 | 4.48 | 3.07 | 1.97 | 1.41 | 1.41 | 1.27 |
| MAX  | 5.60 | 19.2 | 30.2 | 46.5 | 56.4 | 33.7 | 20.0 | 17.4 | 12.4 | 7.51 | 9.52 | 6.05 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1980 | 1980 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 |
| MIN  | .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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1949 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 2048.5                 |  |  | 691.85              |  |  |                         |  |  |
| ANNUAL MEAN              | 5.61                   |  |  | 1.89                |  |  | 3.08                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 12.4                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .66                     |  |  |
| HIGHEST DAILY MEAN       | 87                     |  |  | Mar 5               |  |  | 395                     |  |  |
| LOWEST DAILY MEAN        | 1.7                    |  |  | Jan 2               |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 1.8                    |  |  | Aug 2               |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     |  |  | 1960                    |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |                     |  |  | 7.11                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 4060                   |  |  | 1370                |  |  | 2230                    |  |  |
| 10 PERCENT EXCEEDS       | 10                     |  |  | 3.0                 |  |  | 5.5                     |  |  |
| 50 PERCENT EXCEEDS       | 2.8                    |  |  | 2.0                 |  |  | 1.7                     |  |  |
| 90 PERCENT EXCEEDS       | 1.9                    |  |  | .81                 |  |  | .58                     |  |  |

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 sea level, from topographic map.

REMARKS.--Records fair. No regulation upstream from station. Two diversions for domestic use upstream from station on Andreas Creek. See schematic diagram of Salton Sea basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | 2.9  | .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  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | .12  | .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  | .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  | .11  | .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 | 3.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .000 | .10  | .000 | .000 | .000 | .000 | .004 | .000 | .000 |
| MAX   | .00  | .00  | .00  | .00  | 2.9  | .00  | .00  | .00  | .00  | .11  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | .00  | 6.0  | .00  | .00  | .00  | .00  | .2   | .00  | .00  |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .000 | .050 | 25.3 | 4.72 | 12.1 | .42  | .36  | .000 | .058 | .55  | .25  |
| MAX  | .000 | .000 | .45  | 202  | 35.2 | 93.3 | 3.81 | 2.26 | .001 | .52  | 1.77 | 2.23 |
| (WY) | 1988 | 1988 | 1993 | 1993 | 1993 | 1995 | 1993 | 1993 | 1993 | 1991 | 1989 | 1995 |
| 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1988 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 3909.87                |  |  | 3.13                |  |  |                         |  |  |
| ANNUAL MEAN              | 10.7                   |  |  | .009                |  |  | 3.68                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 20.4                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 1040                   |  |  | Mar 6               |  |  | 1700                    |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | Jan 1               |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | Jan 15              |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 47                  |  |  | 8280                    |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 6.44                |  |  | 8.70                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 7760                   |  |  | 6.2                 |  |  | 2660                    |  |  |
| 10 PERCENT EXCEEDS       | 2.5                    |  |  | .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.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 230 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,060 ft<sup>3</sup>/s, Jan. 7, 1993, gage height, 5.93 ft, from rating curve extended above 1,460 ft<sup>3</sup>/s on basis of critical depth computations; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | .30  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | .15  | .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     | .23  | .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  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | .00  | .02  | .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  | .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 | 0.38 | 0.00 | 0.00 | 0.00 | 0.30 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .012 | .000 | .000 | .000 | .010 | .001 | .000 | .000 | .000 | .000 | .000 | .000 |
| MAX   | .23  | .00  | .00  | .00  | .30  | .02  | .00  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .8   | .00  | .00  | .00  | .6   | .04  | .00  | .00  | .00  | .00  | .00  | .00  |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .005 | .004 | .041 | 47.0 | 8.84 | 10.8 | .052 | .035 | .005 | .004 | .14  | .20  |
| MAX  | .016 | .021 | .18  | 310  | 52.3 | 66.0 | .21  | .27  | .041 | .026 | .78  | 1.30 |
| (WY) | 1993 | 1990 | 1993 | 1993 | 1993 | 1995 | 1993 | 1993 | 1994 | 1991 | 1989 | 1995 |
| MIN  | .000 | .000 | .000 | .000 | .010 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1990 | 1991 | 1994 | 1994 | 1996 | 1990 | 1989 | 1989 | 1989 | 1989 | 1990 | 1989 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1989 - 1996

|                          |         |        |      |
|--------------------------|---------|--------|------|
| ANNUAL TOTAL             | 2840.81 | 0.70   |      |
| ANNUAL MEAN              | 7.78    | .002   |      |
| HIGHEST ANNUAL MEAN      |         |        | 5.62 |
| LOWEST ANNUAL MEAN       |         |        | 30.4 |
| HIGHEST DAILY MEAN       | 1160    | Mar 6  | .002 |
| LOWEST DAILY MEAN        | .00     | Jan 1  | 2950 |
| ANNUAL SEVEN-DAY MINIMUM | .00     | Jan 17 | .00  |
| INSTANTANEOUS PEAK FLOW  |         |        | .00  |
| INSTANTANEOUS PEAK STAGE |         |        | 2.4  |
| ANNUAL RUNOFF (AC-FT)    | 5630    |        | 1.13 |
| 10 PERCENT EXCEEDS       | .02     |        | 1.4  |
| 50 PERCENT EXCEEDS       | .00     |        | 4070 |
| 90 PERCENT EXCEEDS       | .00     |        | .00  |

## SALTON SEA BASIN

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 sea level, from topographic map.

REMARKS.--Records good. No regulation or diversion upstream from station. See schematic diagram of Salton Sea basin.

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

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

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 2 | 0115 | 0.69                              | 1.24                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|-------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .26  | .58   | .37  | .18  | .03  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .28  | .63   | .37  | .17  | .02  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .28  | .53   | .36  | .17  | .03  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .29  | .48   | .35  | .16  | .03  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .29  | .46   | .35  | .15  | .03  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .00  | .28  | .45   | .35  | .14  | .02  | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .00  | .28  | .44   | .37  | .14  | .03  | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .00  | .28  | .42   | .36  | .14  | .03  | .00  | .00  | .00  | .00  |
| 9     | .00  | .00  | .00  | .28  | .41   | .32  | .13  | .03  | .00  | .00  | .00  | .00  |
| 10    | .00  | .00  | .00  | .28  | .39   | .31  | .12  | .02  | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .00  | .28  | .39   | .29  | .12  | .03  | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | .00  | .28  | .40   | .29  | .11  | .03  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | .28  | .46   | .35  | .10  | .03  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .28  | .44   | .39  | .09  | .03  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .28  | .43   | .38  | .08  | .03  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00  | .27  | .40   | .35  | .08  | .02  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00  | .27  | .39   | .33  | .09  | .02  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00  | .28  | .36   | .32  | .08  | .01  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .27  | .35   | .31  | .08  | .01  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .26  | .36   | .29  | .08  | .01  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .27  | .34   | .28  | .07  | .01  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .36  | .34   | .26  | .07  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .01  | .32  | .34   | .25  | .06  | .01  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .34  | .37   | .25  | .06  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .34  | .37   | .23  | .06  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .34  | .43   | .21  | .05  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .06  | .35  | .41   | .21  | .05  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .23  | .37  | .40   | .21  | .04  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .26  | .39  | .38   | .20  | .04  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .27  | .40  | ---   | .19  | .03  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .26  | .42  | ---   | .18  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 1.09 | 9.45 | 12.15 | 9.28 | 2.94 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .035 | .30  | .42   | .30  | .098 | .016 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .27  | .42  | .63   | .39  | .18  | .03  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .26  | .34   | .18  | .03  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | 2.2  | 19   | 24    | 18   | 5.8  | 1.0  | .00  | .00  | .00  | .00  |



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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .26  | .96  | 2.11 | 4.99 | 8.39 | 6.62 | 2.17 | .87  | .36  | .82  | 1.09 | 1.40 |
| MAX  | 4.62 | 16.3 | 23.5 | 88.6 | 101  | 49.3 | 12.4 | 7.15 | 3.97 | 11.8 | 15.3 | 38.1 |
| (WY) | 1984 | 1966 | 1983 | 1993 | 1980 | 1983 | 1983 | 1983 | 1983 | 1979 | 1984 | 1976 |
| MIN  | .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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1962 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 1440.52                |  |  |  | 35.42               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 3.95                   |  |  |  | .097                |  |  |  |                         |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 2.48                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 15.1                    |  |  |  |
| HIGHEST DAILY MEAN       | 121                    |  |  |  | .63                 |  |  |  | .002                    |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | 850                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  | .00                    |  |  |  | .69                 |  |  |  | 7100                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 1.24                |  |  |  | 10.27                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 2860                   |  |  |  | 70                  |  |  |  | 1800                    |  |  |  |
| 10 PERCENT EXCEEDS       | 8.8                    |  |  |  | .36                 |  |  |  | 3.1                     |  |  |  |
| 50 PERCENT EXCEEDS       | .18                    |  |  |  | .00                 |  |  |  | .06                     |  |  |  |
| 90 PERCENT EXCEEDS       | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |

## SALTON SEA BASIN

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 sea level, from topographic map. Prior to Oct. 1, 1979, water-stage recorder at site 0.5 mi upstream at different datum. Oct. 1, 1979, to Feb. 17, 1983, and Feb. 18, 1983, to Nov. 18, 1991, at same site at different datums.

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

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

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

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

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 1 | 0215 | 0.57                              | 7.15                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | .03  | .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  | .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  | .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  | .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 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .000 | .001 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .00  | .00  | .03  | .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  | .00  | .06  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .009 | .090 | 2.62 | 24.2 | 14.7 | 5.28 | .021 | .012 | .010 | 1.24 | 1.23 | 2.87 |
| MAX  | .17  | .88  | 61.3 | 513  | 278  | 56.2 | .16  | .35  | .19  | 32.1 | 29.4 | 86.2 |
| (WY) | 1979 | 1979 | 1967 | 1993 | 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1966 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 2297.26                |  |  | 0.03                |  |  |                         |  |  |
| ANNUAL MEAN              | 6.29                   |  |  | .000                |  |  | 4.35                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 47.4                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 967                    |  |  | Mar 6               |  |  | 5000                    |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | Jan 1               |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | Jan 14              |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     |  |  | 11400                   |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |                     |  |  | 14.41                   |  |  |
| ANNUAL RUNOFF (AC-FT)    | 4560                   |  |  |                     |  |  | 3150                    |  |  |
| 10 PERCENT EXCEEDS       | .00                    |  |  |                     |  |  | .00                     |  |  |
| 50 PERCENT EXCEEDS       | .00                    |  |  |                     |  |  | .00                     |  |  |
| 90 PERCENT EXCEEDS       | .00                    |  |  |                     |  |  | .00                     |  |  |

## SALTON SEA BASIN

10259540 WHITEWATER RIVER NEAR MECCA, CA

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

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

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

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

REMARKS.--Records fair except for estimated daily discharges, which are poor. Most flow represents seepage and return flow from irrigated areas. No discharge records computed above 200 ft<sup>3</sup>/s since October 1992. See schematic diagram of Salton Sea basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 75   | 86   | 76   | 78   | 72   | 91   | 95   | 99   | 70   | 65   | 89   | 83   |
| 2     | 75   | 85   | 74   | 75   | 80   | 90   | 92   | 95   | 85   | 70   | 79   | 76   |
| 3     | 74   | 84   | 75   | 77   | 78   | 91   | 87   | 94   | 84   | 75   | 74   | 79   |
| 4     | 74   | 87   | 72   | 79   | 80   | 86   | 89   | 87   | 75   | 74   | 81   | 84   |
| 5     | 73   | 97   | 72   | 76   | 86   | 85   | 81   | 86   | 81   | 73   | 95   | 82   |
| 6     | 76   | 105  | 75   | 74   | 88   | 85   | 92   | 89   | 80   | 69   | 104  | 94   |
| 7     | 78   | 88   | 82   | 75   | 88   | 85   | 99   | 90   | 83   | 71   | 91   | 96   |
| 8     | 76   | 84   | 76   | 75   | 89   | 93   | 96   | 93   | 79   | 69   | 87   | 93   |
| 9     | 73   | 86   | 69   | 70   | e92  | 105  | 89   | 99   | 78   | 70   | 86   | 90   |
| 10    | 72   | 82   | 73   | 70   | e91  | 96   | 93   | 95   | 75   | 69   | 88   | 87   |
| 11    | 72   | 78   | 73   | 64   | e90  | 88   | 96   | 91   | 70   | 72   | 84   | 86   |
| 12    | 73   | 80   | 71   | 70   | e84  | 98   | 97   | 92   | 71   | 78   | 78   | 88   |
| 13    | 69   | 80   | 65   | 69   | e82  | 98   | 93   | 90   | 77   | 70   | 80   | 87   |
| 14    | 61   | 79   | 59   | 68   | e85  | 93   | 89   | 86   | 78   | 85   | 82   | 86   |
| 15    | 74   | 78   | 69   | 67   | e82  | 85   | 89   | 84   | 82   | 85   | 84   | 85   |
| 16    | 75   | 78   | 72   | 71   | e85  | 78   | 93   | 78   | 82   | 85   | 89   | 86   |
| 17    | 77   | 79   | 76   | 69   | e87  | 78   | 88   | 88   | 70   | 84   | 89   | 78   |
| 18    | 78   | 81   | 77   | 69   | e92  | 85   | 88   | 90   | 66   | 85   | 96   | 79   |
| 19    | 77   | 78   | 76   | 76   | e88  | 85   | 87   | 100  | 66   | 88   | 89   | 80   |
| 20    | 76   | 77   | 80   | 76   | e85  | 79   | 97   | 99   | 64   | 90   | 88   | 78   |
| 21    | 76   | 76   | 77   | 79   | e87  | 84   | 97   | 91   | 65   | 87   | 97   | 81   |
| 22    | 79   | 75   | 80   | 83   | e90  | 90   | 94   | 83   | 68   | 85   | 96   | 88   |
| 23    | 78   | 76   | 81   | 80   | e92  | 89   | 84   | 84   | 68   | 82   | 87   | 85   |
| 24    | 82   | 73   | 82   | 79   | e91  | 93   | 84   | 92   | 66   | 91   | 80   | 85   |
| 25    | 78   | 73   | 78   | 77   | e91  | 88   | 89   | 87   | 63   | 93   | 84   | 83   |
| 26    | 82   | 77   | 71   | 74   | e90  | 85   | 93   | 83   | 60   | 94   | 87   | 85   |
| 27    | 81   | 74   | 73   | 71   | e88  | 82   | 93   | 80   | 62   | 98   | 78   | 79   |
| 28    | 81   | 77   | 85   | 77   | e85  | 81   | 98   | 75   | 61   | 82   | 77   | 79   |
| 29    | 83   | 73   | 76   | 75   | e85  | 82   | 89   | 71   | 64   | 93   | 80   | 83   |
| 30    | 82   | 73   | 75   | 72   | ---  | 87   | 94   | 79   | 71   | 89   | 86   | 82   |
| 31    | 82   | ---  | 80   | 73   | ---  | 97   | ---  | 76   | ---  | 81   | 86   | ---  |
| TOTAL | 2362 | 2419 | 2320 | 2288 | 2503 | 2732 | 2745 | 2726 | 2164 | 2512 | 2671 | 2537 |
| MEAN  | 76.2 | 80.6 | 74.8 | 73.8 | 86.3 | 88.1 | 91.5 | 87.9 | 72.1 | 81.0 | 86.2 | 84.6 |
| MAX   | 83   | 105  | 85   | 83   | 92   | 105  | 99   | 100  | 85   | 98   | 104  | 96   |
| MIN   | 61   | 73   | 59   | 64   | 72   | 78   | 81   | 71   | 60   | 65   | 74   | 76   |
| AC-FT | 4690 | 4800 | 4600 | 4540 | 4960 | 5420 | 5440 | 5410 | 4290 | 4980 | 5300 | 5030 |

WTR YR 1996 TOTAL 29979 MEAN 81.9 MAX 105 MIN 59 AC-FT 59460

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

## WATER YEARS 1961 - 1992

|                          |       |             |
|--------------------------|-------|-------------|
| ANNUAL MEAN              | 111   |             |
| HIGHEST ANNUAL MEAN      | 156   | 1976        |
| LOWEST ANNUAL MEAN       | 68.4  | 1961        |
| HIGHEST DAILY MEAN       | 2500  | Jan 25 1969 |
| LOWEST DAILY MEAN        | 37    | Nov 25 1960 |
| ANNUAL SEVEN-DAY MINIMUM | 37    | Nov 24 1960 |
| ANNUAL RUNOFF (AC-FT)    | 80380 |             |
| 10 PERCENT EXCEEDS       | 140   |             |
| 50 PERCENT EXCEEDS       | 108   |             |
| 90 PERCENT EXCEEDS       | 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 sea level, from topographic map. See WSP 1314 for history of changes prior to Dec. 10, 1938.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Slight regulation by Lake Arrowhead, capacity, 48,000 acre-ft, principally used for recreation. Sewage effluent from Lake Arrowhead area is released above gage at times.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--------|------|-----------------------------------|---------------------|
| Feb. 21 | 1245 | 5,500                             | 6.50                | Mar. 5 | 0615 | 2,290                             | 4.51                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR  | APR  | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|------|------|-------|-------|------|-------|-------|
| 1     | 5.2   | 8.7   | 9.8   | 17    | 211   | 57   | 37   | 14    | 8.1   | 2.8  | e1.2  | e.83  |
| 2     | 4.7   | 8.9   | 9.8   | 13    | 74    | 56   | 51   | 13    | 7.7   | 2.7  | e1.2  | e.83  |
| 3     | 4.1   | 8.9   | 9.8   | 12    | 48    | 56   | 47   | 13    | 7.0   | 2.6  | e1.2  | e.83  |
| 4     | 3.7   | 8.9   | 9.8   | 11    | 38    | 53   | 42   | 12    | 6.0   | 2.5  | e1.1  | e.83  |
| 5     | 4.2   | 8.9   | 10    | 12    | 33    | 1010 | 38   | 12    | 5.5   | 2.4  | e1.1  | e.84  |
| 6     | 4.4   | 8.9   | 10    | 11    | 32    | 254  | 36   | 11    | 5.5   | 2.4  | e1.1  | e.85  |
| 7     | 4.3   | 9.0   | 10    | 11    | 31    | 131  | 33   | 10    | 5.4   | 2.3  | e1.1  | e.85  |
| 8     | 4.2   | 9.0   | 10    | 11    | 28    | 97   | 32   | 10    | 5.1   | 2.3  | e1.0  | e.86  |
| 9     | 3.8   | 9.0   | 11    | 11    | 27    | 84   | 31   | 10    | 4.9   | 2.3  | e1.0  | e.87  |
| 10    | 3.5   | 9.0   | 10    | 11    | 26    | 78   | 30   | 10    | 4.7   | 2.2  | e1.0  | e.88  |
| 11    | 3.3   | 9.0   | 10    | 10    | 25    | 72   | 29   | 9.8   | 4.4   | 2.1  | e1.0  | e.88  |
| 12    | 4.0   | 9.0   | 10    | 10    | 23    | 69   | 29   | 10    | 4.2   | e2.0 | e.98  | e.89  |
| 13    | 5.3   | 9.0   | 10    | 10    | 22    | 145  | 28   | 11    | 4.1   | e2.0 | e.97  | e.90  |
| 14    | 5.7   | 9.2   | 19    | 10    | 21    | 146  | 27   | 11    | 3.9   | e1.9 | e.95  | e.94  |
| 15    | 5.7   | 9.2   | 29    | 10    | 21    | 127  | 26   | 11    | 3.8   | e1.8 | e.95  | e1.0  |
| 16    | 5.5   | 9.2   | 14    | 9.9   | 20    | 83   | 26   | 11    | 3.6   | e1.8 | e.93  | e1.0  |
| 17    | 5.5   | 9.2   | 12    | 9.9   | 19    | 82   | 27   | 11    | 3.6   | e1.7 | e.92  | e1.1  |
| 18    | 5.3   | 9.2   | 11    | 10    | 17    | 81   | 36   | 11    | 3.4   | e1.7 | e.91  | e1.2  |
| 19    | 5.1   | 9.2   | 11    | 10    | 16    | 75   | 45   | 11    | 3.4   | e1.7 | e.90  | e1.3  |
| 20    | 6.9   | 9.2   | 11    | 9.9   | 1490  | 69   | 35   | 10    | 3.3   | e1.6 | e.89  | e1.4  |
| 21    | 7.6   | 9.2   | 11    | 11    | 3910  | 65   | 32   | 10    | 3.3   | e1.5 | e.88  | e1.4  |
| 22    | 7.8   | 9.4   | 11    | 19    | 716   | 63   | 30   | 10    | 3.1   | e1.5 | e.87  | e1.4  |
| 23    | 7.8   | 9.4   | 15    | 17    | 195   | 60   | 28   | 10    | 3.1   | e1.5 | e.86  | e1.4  |
| 24    | 8.1   | 9.4   | 23    | 13    | 109   | 56   | 27   | 11    | 3.0   | e1.5 | e.86  | e1.4  |
| 25    | 8.3   | 9.4   | 17    | 13    | 86    | 52   | 26   | 12    | 3.0   | e1.4 | e.85  | e1.4  |
| 26    | 8.5   | 9.4   | 13    | 12    | 75    | 49   | 24   | 11    | 3.0   | e1.4 | e.85  | e1.4  |
| 27    | 8.5   | 9.5   | 13    | 12    | 63    | 46   | 23   | 8.8   | 2.9   | e1.3 | e.84  | e1.4  |
| 28    | 8.6   | 9.6   | 13    | 12    | 60    | 44   | 20   | 8.4   | 2.8   | e1.3 | e.84  | e1.4  |
| 29    | 8.6   | 9.6   | 13    | 14    | 57    | 44   | 15   | 8.4   | 2.8   | e1.3 | e.84  | e1.5  |
| 30    | 8.6   | 9.6   | 13    | 13    | ---   | 41   | 15   | 8.4   | 2.8   | e1.3 | e.84  | e1.5  |
| 31    | 8.6   | ---   | 17    | 28    | ---   | 39   | ---  | 8.3   | ---   | e1.2 | e.84  | ---   |
| TOTAL | 185.4 | 275.1 | 396.2 | 383.7 | 7493  | 3384 | 925  | 328.1 | 127.4 | 58.0 | 29.77 | 33.28 |
| MEAN  | 5.98  | 9.17  | 12.8  | 12.4  | 258   | 109  | 30.8 | 10.6  | 4.25  | 1.87 | .96   | 1.11  |
| MAX   | 8.6   | 9.6   | 29    | 28    | 3910  | 1010 | 51   | 14    | 8.1   | 2.8  | 1.2   | 1.5   |
| MIN   | 3.3   | 8.7   | 9.8   | 9.9   | 16    | 39   | 15   | 8.3   | 2.8   | 1.2  | .84   | .83   |
| AC-FT | 368   | 546   | 786   | 761   | 14860 | 6710 | 1830 | 651   | 253   | 115  | 59    | 66    |

e Estimated.

## 10260500 DEEP CREEK NEAR HESPERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.28 | 19.7 | 57.0 | 137  | 211  | 221  | 145  | 62.4 | 17.4 | 5.67 | 3.22 | 3.60 |
| MAX  | 42.0 | 606  | 843  | 2062 | 2028 | 1539 | 747  | 248  | 67.0 | 25.9 | 29.2 | 54.3 |
| (WY) | 1984 | 1966 | 1922 | 1993 | 1993 | 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 | 1857 | 1905 | 1951 | 1951 | 1956 | 1951 | 1934 | 1956 | 1961 | 1933 | 1933 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1905 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 70336.2                |  |  |  | 13618.95            |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 193                    |  |  |  | 37.2                |  |  |  |                         |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 73.2                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 411                     |  |  |  |
| HIGHEST DAILY MEAN       |                        |  |  |  |                     |  |  |  | 3.06                    |  |  |  |
| LOWEST DAILY MEAN        | 7200                   |  |  |  | 3910                |  |  |  | 14700                   |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 3.3                    |  |  |  | .83                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  | 3.9                    |  |  |  | .83                 |  |  |  | .07                     |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 5500                |  |  |  | 46600                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 139500                 |  |  |  | 27010               |  |  |  | 53060                   |  |  |  |
| 10 PERCENT EXCEEDS       | 350                    |  |  |  | 52                  |  |  |  | 141                     |  |  |  |
| 50 PERCENT EXCEEDS       | 20                     |  |  |  | 9.4                 |  |  |  | 10                      |  |  |  |
| 90 PERCENT EXCEEDS       | 4.3                    |  |  |  | 1.0                 |  |  |  | 1.0                     |  |  |  |

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

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

DRAINAGE AREA.--3.22 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1995 to September 1996. Unpublished records for water years 1961-95 available in files of the California Department of Water Resources.

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

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

COOPERATION.--Records were collected by California Department of Water Resources, 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, 360 ft<sup>3</sup>/s, Feb. 20, 1996, gage height, 3.47 ft; no flow July 7 to Sept. 30, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB    | MAR   | APR  | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|--------|-------|------|-------|------|------|------|------|
| 1     | .07  | .11  | .18  | .39   | 6.2    | 3.5   | 2.7  | 1.2   | .84  | .08  | .00  | .00  |
| 2     | .06  | .11  | .17  | .39   | 2.3    | 3.5   | 3.0  | 1.1   | .65  | .05  | .00  | .00  |
| 3     | .06  | .10  | .17  | .39   | 1.5    | 3.3   | 2.6  | 1.1   | .45  | .05  | .00  | .00  |
| 4     | .06  | .09  | .17  | .39   | 1.2    | 9.7   | 2.5  | 1.1   | .43  | .06  | .00  | .00  |
| 5     | .06  | .09  | .17  | .39   | 1.0    | 25    | 2.3  | 1.1   | .40  | .03  | .00  | .00  |
| 6     | .06  | .10  | .17  | .39   | .88    | 11    | 2.2  | 1.0   | .38  | .02  | .00  | .00  |
| 7     | .05  | .09  | .17  | .37   | .85    | 7.7   | 2.1  | .99   | .34  | .00  | .00  | .00  |
| 8     | .06  | .09  | .18  | .35   | .78    | 6.1   | 2.0  | .97   | .32  | .00  | .00  | .00  |
| 9     | .06  | .09  | .19  | .35   | .71    | 5.3   | 1.9  | .94   | .30  | .00  | .00  | .00  |
| 10    | .06  | .10  | .19  | .35   | .71    | 4.6   | 1.8  | .90   | .28  | .00  | .00  | .00  |
| 11    | .05  | .11  | .19  | .35   | .71    | 4.2   | 1.8  | .78   | .28  | .00  | .00  | .00  |
| 12    | .06  | .11  | .20  | .35   | .71    | 5.7   | 1.8  | .73   | .26  | .00  | .00  | .00  |
| 13    | .06  | .10  | .82  | .35   | .65    | 23    | 1.8  | .71   | .25  | .00  | .00  | .00  |
| 14    | .05  | .11  | .57  | .34   | .59    | 12    | 1.7  | .70   | .24  | .00  | .00  | .00  |
| 15    | .06  | .11  | .42  | .31   | .59    | 8.6   | 1.7  | .71   | .23  | .00  | .00  | .00  |
| 16    | .07  | .11  | .38  | .32   | .59    | 7.1   | 1.9  | .78   | .21  | .00  | .00  | .00  |
| 17    | .07  | .11  | .35  | .35   | .59    | 6.2   | 2.4  | .78   | .20  | .00  | .00  | .00  |
| 18    | .06  | .09  | .33  | .35   | .59    | 5.6   | 5.2  | .75   | .18  | .00  | .00  | .00  |
| 19    | .06  | .10  | .31  | .35   | 1.9    | 5.1   | 3.1  | .75   | .16  | .00  | .00  | .00  |
| 20    | .06  | .12  | .31  | .35   | 112    | 4.6   | 2.6  | .72   | .16  | .00  | .00  | .00  |
| 21    | .06  | .14  | .31  | .45   | 58     | 4.2   | 2.3  | .70   | .18  | .00  | .00  | .00  |
| 22    | .06  | .15  | .31  | .53   | 27     | 4.1   | 2.2  | .71   | .20  | .00  | .00  | .00  |
| 23    | .07  | .16  | .37  | .44   | 12     | 4.0   | 2.0  | .69   | .17  | .00  | .00  | .00  |
| 24    | .07  | .17  | .39  | .44   | 7.3    | 3.8   | 1.9  | .71   | .17  | .00  | .00  | .00  |
| 25    | .08  | .16  | .39  | .44   | 5.7    | 3.6   | 1.8  | .71   | .18  | .00  | .00  | .00  |
| 26    | .08  | .17  | .39  | .44   | 4.7    | 3.4   | 1.7  | .77   | .24  | .00  | .00  | .00  |
| 27    | .07  | .17  | .39  | .44   | 4.0    | 3.2   | 1.5  | 1.0   | .25  | .00  | .00  | .00  |
| 28    | .07  | .17  | .39  | .44   | 3.7    | 3.1   | 1.4  | 1.1   | .21  | .00  | .00  | .00  |
| 29    | .08  | .17  | .39  | .44   | 3.5    | 3.0   | 1.3  | 1.1   | .16  | .00  | .00  | .00  |
| 30    | .08  | .17  | .39  | .44   | ---    | 2.8   | 1.2  | 1.2   | .12  | .00  | .00  | .00  |
| 31    | .09  | ---  | .39  | 8.7   | ---    | 2.6   | ---  | .98   | ---  | .00  | .00  | ---  |
| TOTAL | 2.01 | 3.67 | 9.75 | 20.38 | 260.95 | 199.6 | 64.4 | 27.48 | 8.44 | 0.29 | 0.00 | 0.00 |
| MEAN  | .065 | .12  | .31  | .66   | 9.00   | 6.44  | 2.15 | .89   | .28  | .009 | .000 | .000 |
| MAX   | .09  | .17  | .82  | 8.7   | 112    | 25    | 5.2  | 1.2   | .84  | .08  | .00  | .00  |
| MIN   | .05  | .09  | .17  | .31   | .59    | 2.6   | 1.2  | .69   | .12  | .00  | .00  | .00  |
| AC-FT | 4.0  | 7.3  | 19   | 40    | 518    | 396   | 128  | 55    | 17   | .6   | .00  | .00  |

## SUMMARY STATISTICS

## FOR 1996 WATER YEAR

|                          |             |
|--------------------------|-------------|
| ANNUAL TOTAL             | 596.97      |
| ANNUAL MEAN              | 1.63        |
| HIGHEST DAILY MEAN       | 112 Feb 20  |
| LOWEST DAILY MEAN        | .00 Jul 7   |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jul 7   |
| INSTANTANEOUS PEAK FLOW  | 360 Feb 20  |
| INSTANTANEOUS PEAK STAGE | 3.47 Feb 20 |
| ANNUAL RUNOFF (AC-FT)    | 1180        |
| 10 PERCENT EXCEEDS       | 3.5         |
| 50 PERCENT EXCEEDS       | .25         |
| 90 PERCENT EXCEEDS       | .00         |



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

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

DRAINAGE AREA.--11.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1995 to September 1996. Unpublished records for water years 1961-95 available in files of the California Department of Water Resources.

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

REMARKS.--Flow slightly regulated by Lake Gregory 3.2 mi upstream.

COOPERATION.--Records were collected by California Department of Water Resources, 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, 706 ft<sup>3</sup>/s, Feb. 20, 1996, gage height, 5.81 ft; no flow July 12 to Sept. 30, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1     | .10  | .39   | .40   | .64   | 31    | 8.6   | 8.3   | 1.9   | .96   | .10  | .00  | .00  |
| 2     | .08  | .37   | .40   | .63   | 13    | 9.0   | 13    | 1.8   | .90   | .08  | .00  | .00  |
| 3     | .08  | .36   | .40   | .63   | 7.0   | 21    | 8.5   | 1.7   | .84   | .07  | .00  | .00  |
| 4     | .07  | .35   | .40   | .63   | 3.5   | 45    | 6.8   | 1.7   | .78   | .05  | .00  | .00  |
| 5     | .07  | .32   | .40   | .63   | 2.9   | 139   | 5.3   | 1.7   | .75   | .04  | .00  | .00  |
| 6     | .07  | .32   | .40   | .63   | 2.7   | 35    | 4.0   | 1.6   | .73   | .03  | .00  | .00  |
| 7     | .08  | .33   | .40   | .64   | 2.5   | 22    | 3.7   | 1.6   | .59   | .02  | .00  | .00  |
| 8     | .09  | .33   | .40   | .64   | 2.2   | 17    | 3.5   | 1.5   | .53   | .02  | .00  | .00  |
| 9     | .09  | .33   | .40   | .64   | 2.0   | 14    | 3.4   | 1.5   | .49   | .01  | .00  | .00  |
| 10    | .09  | .32   | .40   | .63   | 1.8   | 12    | 3.4   | 1.5   | .44   | .01  | .00  | .00  |
| 11    | .09  | .35   | .40   | .61   | 1.6   | 11    | 3.3   | 1.4   | .45   | .01  | .00  | .00  |
| 12    | .09  | .34   | .40   | .63   | 1.4   | 21    | 3.2   | 1.3   | .40   | .00  | .00  | .00  |
| 13    | .09  | .34   | 1.4   | .64   | 1.4   | 46    | 3.0   | 1.2   | .37   | .00  | .00  | .00  |
| 14    | .09  | .34   | 1.8   | .66   | 1.4   | 27    | 2.9   | 1.2   | .35   | .00  | .00  | .00  |
| 15    | .10  | .34   | .72   | .65   | 1.3   | 20    | 2.8   | 1.1   | .33   | .00  | .00  | .00  |
| 16    | .11  | .34   | .61   | .66   | 1.5   | 17    | 2.8   | 1.2   | .29   | .00  | .00  | .00  |
| 17    | .11  | .36   | .56   | .85   | 1.3   | 14    | 3.7   | 1.2   | .27   | .00  | .00  | .00  |
| 18    | .10  | .36   | .56   | .72   | 1.2   | 13    | 6.8   | 1.1   | .25   | .00  | .00  | .00  |
| 19    | .11  | .36   | .56   | .67   | 4.7   | 12    | 3.9   | 1.1   | .21   | .00  | .00  | .00  |
| 20    | .11  | .36   | .56   | .67   | 266   | 11    | 3.5   | 1.1   | .18   | .00  | .00  | .00  |
| 21    | .12  | .36   | .56   | .91   | 252   | 10    | 3.3   | 1.1   | .18   | .00  | .00  | .00  |
| 22    | .15  | .36   | .56   | 1.5   | 64    | 9.2   | 3.0   | 1.1   | .21   | .00  | .00  | .00  |
| 23    | .20  | .36   | .67   | .97   | 24    | 9.0   | 2.8   | 1.1   | .20   | .00  | .00  | .00  |
| 24    | .21  | .36   | .71   | .88   | 15    | 8.5   | 2.6   | 1.1   | .20   | .00  | .00  | .00  |
| 25    | .22  | .37   | .68   | .88   | 12    | 7.9   | 2.5   | 1.3   | .21   | .00  | .00  | .00  |
| 26    | .22  | .36   | .67   | .88   | 10    | 7.2   | 2.4   | 1.2   | .26   | .00  | .00  | .00  |
| 27    | .21  | .38   | .67   | .85   | 9.3   | 7.0   | 2.2   | 1.1   | .34   | .00  | .00  | .00  |
| 28    | .20  | .40   | .67   | .84   | 8.7   | 6.7   | 2.2   | 1.1   | .27   | .00  | .00  | .00  |
| 29    | .22  | .40   | .67   | .86   | 8.3   | 6.2   | 2.1   | 1.0   | .19   | .00  | .00  | .00  |
| 30    | .24  | .40   | .73   | .81   | ---   | 5.8   | 2.0   | 1.0   | .14   | .00  | .00  | .00  |
| 31    | .30  | ---   | .73   | 17    | ---   | 5.5   | ---   | .98   | ---   | .00  | .00  | ---  |
| TOTAL | 4.11 | 10.66 | 18.89 | 39.48 | 753.7 | 597.6 | 120.9 | 40.48 | 12.31 | 0.44 | 0.00 | 0.00 |
| MEAN  | .13  | .36   | .61   | 1.27  | 26.0  | 19.3  | 4.03  | 1.31  | .41   | .014 | .000 | .000 |
| MAX   | .30  | .40   | 1.8   | 17    | 266   | 139   | 13    | 1.9   | .96   | .10  | .00  | .00  |
| MIN   | .07  | .32   | .40   | .61   | 1.2   | 5.5   | 2.0   | .98   | .14   | .00  | .00  | .00  |
| AC-FT | 8.2  | 21    | 37    | 78    | 1490  | 1190  | 240   | 80    | 24    | .9   | .00  | .00  |

## SUMMARY STATISTICS

## FOR 1996 WATER YEAR

|                          |             |
|--------------------------|-------------|
| ANNUAL TOTAL             | 1598.57     |
| ANNUAL MEAN              | 4.37        |
| HIGHEST DAILY MEAN       | 266 Feb 20  |
| LOWEST DAILY MEAN        | .00 Jul 12  |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jul 12  |
| INSTANTANEOUS PEAK FLOW  | 706 Feb 20  |
| INSTANTANEOUS PEAK STAGE | 5.81 Feb 20 |
| ANNUAL RUNOFF (AC-FT)    | 3170        |
| 10 PERCENT EXCEEDS       | 8.5         |
| 50 PERCENT EXCEEDS       | .40         |
| 90 PERCENT EXCEEDS       | .00         |

## MOJAVE RIVER BASIN

10260790 SILVERWOOD LAKE NEAR HESPERIA, CA

LOCATION.--Lat 34°18'15", long 117°19'05", in SW 1/4 NE 1/4 sec.32, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, San Bernardino National Forest, in control structure near spillway of Cedar Springs Dam, and 8.7 mi south of Hesperia.

DRAINAGE AREA.--34.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1995 to September 1996. Unpublished records for water years 1972-95 available in files of the California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Lake is formed by earthfill dam completed in 1972. Capacity, 74,970 acre-ft, at spillway crest of 3,355 ft. Dead storage at invert of outlet structure, 3,967 acre-ft, elevation 3,235 ft. Lake is a holding basin for California Aqueduct. See REMARKS for station 10260820.

COOPERATION.--Records were collected by California Department of Water Resources 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, 53,612 acre-feet, Oct. 1, 1995, elevation, 3331.14 ft; minimum, 38,006 acre-feet, Mar. 22, 1996, elevation, 3310.24 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table provided by California Department of Water Resources, dated January 1978)

|       |        |       |        |
|-------|--------|-------|--------|
| 3,300 | 31,395 | 3,335 | 56,811 |
| 3,315 | 41,311 | 3,345 | 65,554 |
| 3,325 | 48,732 | 3,355 | 74,970 |

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 53612   | 42939   | 38579   | 39066   | 38929   | 38901   | 38784   | 38922   | 38503   | 38224   | 38757   | 38915   |
| 2   | 53189   | 42549   | 38128   | 39004   | 38709   | 39025   | 38723   | 38695   | 38784   | 38176   | 38695   | 39004   |
| 3   | 52905   | 42196   | 38832   | 38901   | 38340   | 38990   | 38825   | 38970   | 38224   | 38415   | 38278   | 38764   |
| 4   | 52477   | 42038   | 38949   | 38819   | 38867   | 39052   | 38558   | 38661   | 38503   | 38503   | 38764   | 38640   |
| 5   | 51851   | 41831   | 38791   | 38497   | 38572   | 38592   | 38380   | 38894   | 38394   | 38647   | 39066   | 38860   |
| 6   | 51651   | 41724   | 38777   | 38729   | 38572   | 38736   | 38326   | 38716   | 38764   | 38647   | 38771   | 38709   |
| 7   | 51372   | 41567   | 38812   | 39059   | 38319   | 38922   | 38299   | 38421   | 38743   | 38647   | 38997   | 38874   |
| 8   | 51006   | 41510   | 38805   | 39032   | 38415   | 38977   | 38135   | 38798   | 38565   | 38251   | 39052   | 39052   |
| 9   | 50594   | 41439   | 38929   | 38956   | 38387   | 39080   | 38169   | 38599   | 38640   | 38367   | 38476   | 39073   |
| 10  | 49902   | 41396   | 38819   | 38798   | 38340   | 39052   | 38135   | 38340   | 38237   | 38265   | 38190   | 39633   |
| 11  | 49409   | 41269   | 38887   | 38640   | 39052   | 38977   | 38060   | 38736   | 38353   | 38449   | 38380   | 39585   |
| 12  | 48918   | 41099   | 38901   | 38469   | 38579   | 39073   | 38401   | 38558   | 38237   | 38654   | 38217   | 39564   |
| 13  | 48500   | 40731   | 38949   | 38326   | 38510   | 38915   | 38081   | 38568   | 38258   | 38915   | 38421   | 39543   |
| 14  | 48045   | 40366   | 38929   | 38346   | 38333   | 38839   | 38353   | 38915   | 38606   | 38695   | 38538   | 39585   |
| 15  | 47830   | 39926   | 38839   | 38128   | 38285   | 38784   | 38203   | 38695   | 38929   | 38551   | 38449   | 39724   |
| 16  | 47402   | 39536   | 38819   | 38394   | 38312   | 38784   | 38305   | 38716   | 38825   | 38456   | 38586   | 39370   |
| 17  | 47120   | 39606   | 38984   | 38278   | 38462   | 39073   | 38088   | 38476   | 38750   | 38360   | 38640   | 39578   |
| 18  | 46900   | 39828   | 38894   | 38469   | 38346   | 38984   | 38791   | 38435   | 38791   | 38128   | 38702   | 39633   |
| 19  | 46642   | 39849   | 38812   | 38333   | 38825   | 38764   | 38688   | 38784   | 38565   | 38483   | 38483   | 39724   |
| 20  | 46196   | 39745   | 38764   | 38305   | 38867   | 38421   | 38874   | 38757   | 38709   | 38476   | 38688   | 39654   |
| 21  | 45948   | 39599   | 38647   | 38887   | 38497   | 38018   | 39004   | 38867   | 38592   | 38777   | 38846   | 39696   |
| 22  | 45693   | 39425   | 38510   | 38777   | 38224   | 38006   | 38374   | 38326   | 38380   | 38984   | 38929   | 39765   |
| 23  | 45238   | 39204   | 38531   | 38867   | 38394   | 38394   | 38750   | 38333   | 38901   | 39018   | 38867   | 39682   |
| 24  | 44941   | 39032   | 38798   | 38812   | 38285   | 38196   | 38977   | 38633   | 38380   | 38791   | 38640   | 39488   |
| 25  | 44748   | 38846   | 38935   | 38819   | 38380   | 38771   | 38750   | 38627   | 38572   | 38970   | 38633   | 39564   |
| 26  | 44511   | 38572   | 39025   | 38606   | 38688   | 38394   | 38271   | 38681   | 38531   | 39046   | 38586   | 39772   |
| 27  | 44319   | 38013   | 38935   | 38394   | 38688   | 38380   | 39052   | 38633   | 38237   | 38846   | 38572   | 39800   |
| 28  | 44106   | 38060   | 38894   | 38929   | 38729   | 38503   | 39032   | 38661   | 38428   | 38627   | 38620   | 39536   |
| 29  | 43886   | 38094   | 38798   | 38970   | 38915   | 38942   | 38661   | 38839   | 38894   | 38922   | 38627   | 39661   |
| 30  | 43550   | 38757   | 38675   | 38784   | ---     | 38860   | 38901   | 38880   | 38565   | 38784   | 38743   | 39724   |
| 31  | 43295   | ---     | 38977   | 39032   | ---     | 39025   | ---     | 38380   | ---     | 38825   | 38846   | ---     |
| MAX | 53612   | 42939   | 39025   | 39066   | 39052   | 39080   | 39052   | 38970   | 38929   | 39046   | 39066   | 39800   |
| MIN | 43295   | 38013   | 38128   | 38128   | 38224   | 38006   | 38060   | 38326   | 38224   | 38128   | 38190   | 38640   |
| a   | 3317.76 | 3311.34 | 3311.66 | 3311.74 | 3311.57 | 3311.73 | 3311.55 | 3310.79 | 3311.06 | 3311.44 | 3311.47 | 3312.74 |
| b   | -10513  | -4538   | +220    | +55     | -117    | +110    | -124    | -521    | +185    | +260    | +21     | +878    |

WTR YR 1996 MAX 53612 MIN 38006 b -14084

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 10260820 WEST FORK MOJAVE RIVER BELOW SILVERWOOD LAKE, NEAR HESPERIA, CA

LOCATION.--Lat 34°18'15", long 117°19'06", in SW 1/4 NE 1/4 sec.32, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, San Bernardino National Forest, in control room under spillway, at Cedar Springs Dam, and 8.7 mi south of Hesperia.

DRAINAGE AREA.--34.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1980 to September 1983 and October 1995 to September 1996. Unpublished records for water years 1973-95 available in files of the California Department of Water Resources.

GAGE.--Flow-meter on release valve and theoretical rating on two slide gates. Elevation of gage is 3,180 ft above sea level, from topographic map. Prior to October 1983, at site 0.3 mi downstream, at different datum.

REMARKS.--Flow regulated by Silverwood Lake (station 10260790). Lake stores water received from the California Aqueduct through Mojave Siphon Powerplant (station 10260780) until it is transferred to San Bernardino area through Devil Canyon Powerplant (station 11063682). Las Flores Release from Aqueduct (station 10260822) delivers water to vicinity of West Fork Mojave River.

COOPERATION.--Records collected by California Department of Water Resources, 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, 2,290 ft<sup>3</sup>/s, Mar. 2, 1983, gage height, 7.51 ft, site and datum then in use; no flow for most of every year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC   | JAN  | FEB     | MAR    | APR    | MAY    | JUN   | JUL   | AUG   | SEP   |
|-------|-------|------|-------|------|---------|--------|--------|--------|-------|-------|-------|-------|
| 1     | .00   | .00  | .00   | .00  | 8.1     | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 2     | .00   | .00  | .00   | .00  | 34      | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 3     | .00   | .00  | .00   | .00  | 34      | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 4     | .00   | .00  | .00   | .00  | .00     | 50     | .00    | .00    | .00   | .00   | .00   | .00   |
| 5     | .00   | .00  | .00   | .00  | .00     | 150    | .00    | .00    | .00   | .00   | .00   | .00   |
| 6     | .00   | .00  | .00   | .00  | .00     | 50     | .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    | 22     | .00    | .00   | .00   | .00   | .00   |
| 10    | .00   | .00  | .00   | .00  | .00     | .00    | 41     | .00    | .00   | .00   | .00   | .00   |
| 11    | .00   | .00  | .00   | .00  | .00     | .00    | 42     | .00    | .00   | .00   | .00   | .00   |
| 12    | .00   | .00  | .00   | .00  | .00     | 50     | 42     | .00    | .00   | .00   | .00   | .00   |
| 13    | .00   | .00  | .00   | .00  | .00     | 150    | 42     | .00    | .00   | .00   | .00   | .00   |
| 14    | .00   | .00  | .00   | .00  | .00     | 55     | 42     | .00    | .00   | .00   | .00   | .00   |
| 15    | .00   | .00  | .00   | .00  | .00     | 41     | 13     | .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    | 20     | .00   | .00   | .00   | .00   |
| 18    | .00   | .00  | .00   | .00  | .00     | .00    | .00    | 39     | .00   | .00   | .00   | .00   |
| 19    | .00   | .00  | .00   | .00  | .00     | .00    | .00    | 39     | .00   | .00   | .00   | .00   |
| 20    | .00   | .00  | .00   | .00  | 730     | .00    | .00    | 39     | .00   | .00   | .00   | .00   |
| 21    | .00   | .00  | .00   | .00  | 520     | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 22    | .00   | .00  | .00   | .00  | 135     | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 23    | .00   | .00  | .00   | .00  | 150     | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 24    | .00   | .00  | .00   | .00  | 97      | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 25    | .00   | .00  | .00   | .00  | 97      | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| 26    | .00   | .00  | .00   | .00  | 43      | .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   | 2.5  | ---     | .00    | ---    | .00    | ---   | .00   | .00   | ---   |
| TOTAL | 0.00  | 0.00 | 0.00  | 2.50 | 1848.10 | 546.00 | 244.00 | 137.00 | 0.00  | 0.00  | 0.00  | 0.00  |
| MEAN  | .000  | .000 | .000  | .081 | 63.7    | 17.6   | 8.13   | 4.42   | .000  | .000  | .000  | .000  |
| MAX   | .00   | .00  | .00   | 2.5  | 730     | 150    | 42     | 39     | .00   | .00   | .00   | .00   |
| MIN   | .00   | .00  | .00   | .00  | .00     | .00    | .00    | .00    | .00   | .00   | .00   | .00   |
| AC-FT | .00   | .00  | .00   | 5.0  | 3670    | 1080   | 484    | 272    | .00   | .00   | .00   | .00   |
| a     | 1390  | 4070 | 14910 | 7410 | 12670   | 10370  | 60130  | 56340  | 51950 | 61560 | 63390 | 64590 |
| b     | 11650 | 8600 | 14880 | 7880 | 16050   | 13580  | 60700  | 57870  | 53090 | 63880 | 64720 | 65420 |
| c     | 0     | 0    | 87    | 234  | 649     | 1060   | 877    | 448    | 160   | 30    | 0     | 0     |

a Flow, in acre-ft, through Mojave Siphon Powerplant, provided by California Department of Water Resources.

b Flow, in acre-ft, through Devil Canyon Powerplant, provided by California Department of Water Resources.

c Flow, in acre-ft, from the Las Flores Release, provided by California Department of Water Resources.

## 10260820 WEST FORK MOJAVE RIVER BELOW SILVERWOOD LAKE, NEAR HESPERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .089 | 1.15 | 12.8 | 18.4 | 118  | 209  | 34.4 | 22.6 | 2.47 | .094 | .091 | .31  |
| MAX  | .19  | 4.03 | 50.8 | 66.6 | 403  | 739  | 84.1 | 75.5 | 9.84 | .25  | .25  | 1.18 |
| (WY) | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 |
| MIN  | .000 | .000 | .000 | .081 | .72  | 5.93 | .26  | .086 | .000 | .000 | .000 | .000 |
| (WY) | 1996 | 1996 | 1996 | 1996 | 1981 | 1981 | 1981 | 1981 | 1981 | 1996 | 1996 | 1996 |

## SUMMARY STATISTICS

## FOR 1996 WATER YEAR

## WATER YEARS 1981 - 1996

|                          |         |        |       |
|--------------------------|---------|--------|-------|
| ANNUAL TOTAL             | 2777.60 |        |       |
| ANNUAL MEAN              | 7.59    | 34.6   |       |
| HIGHEST ANNUAL MEAN      |         | 118    | 1983  |
| LOWEST ANNUAL MEAN       |         | 1.14   | 1981  |
| HIGHEST DAILY MEAN       | 730     | Feb 20 | 1990  |
| LOWEST DAILY MEAN        | .00     | Oct 1  | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00     | Oct 1  | .00   |
| INSTANTANEOUS PEAK FLOW  | 1920    | Feb 20 | 2290  |
| INSTANTANEOUS PEAK STAGE |         |        | 7.51  |
| ANNUAL RUNOFF (AC-FT)    | 5510    |        | 25070 |
| TOTAL FLOW (AC-FT) a     | 408800  |        |       |
| TOTAL FLOW (AC-FT) b     | 438300  |        |       |
| TOTAL FLOW (AC-FT) c     | 3550    |        |       |
| 10 PERCENT EXCEEDS       | .00     |        | 50    |
| 50 PERCENT EXCEEDS       | .00     |        | .09   |
| 90 PERCENT EXCEEDS       | .00     |        | .00   |

a Flow, in acre-ft, through Mojave Siphon Powerplant, provided by California Department of Water Resources.

b Flow, in acre-ft, through Devil Canyon Powerplant, provided by California Department of Water Resources.

c Flow, in acre-ft, from the Las Flores Release, provided by California Department of Water Resources.

## 10260950 WEST FORK MOJAVE RIVER ABOVE MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA

LOCATION.--Lat 34°20'20", long 117°15'25", in NW 1/4 NW 1/4 sec.24, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank on upstream wingwall of concrete double-box culvert on Arrowhead Lake Road, 0.1 mi northeast of junction with Highway 174, 4.5 mi downstream from Cedar Springs Dam on Silverwood Lake, and 6.5 mi southeast of Hesperia.

DRAINAGE AREA.--70.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to current year. October 1974 to September 1991 published incorrectly as station 10261000. Records for station 10261000 are not equivalent due to difference in drainage area.

REVISED RECORDS.--WDR CA-84: 1983.

GAGE.--Water-stage recorder. Elevation of gage is 3,040 ft above sea level, from topographic map.

REMARKS.--Records poor. Regulated by Silverwood Lake (holding basin for imported water), total capacity, 78,000 acre-ft, 4.5 mi upstream, which releases all natural inflow as soon as possible after a storm.

EXTREMES FOR THE PERIOD OF RECORD.--Maximum discharge, 11,300 ft<sup>3</sup>/s, Feb. 10, 1978, gage height unknown, on basis of slope-area measurement of peak flow; maximum gage height, 23.2 ft, Feb. 10, 1978, backwater from Mojave River Forks Reservoir; no flow for several months in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 26,100 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow for station 10261000 at site 1.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB     | MAR    | APR   | MAY    | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|---------|--------|-------|--------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | 26      | 22     | 6.2   | 2.2    | e.00 | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00  | 13      | 22     | 10    | 3.1    | e.00 | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00  | 7.9     | 21     | 8.3   | 5.1    | e.00 | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .00  | 5.0     | 36     | 6.6   | 4.6    | e.00 | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00  | 4.7     | 588    | 5.2   | 1.1    | e.00 | .00  | .00  | .00  |
| 6     | .00  | .00  | .00  | .00  | 4.6     | 74     | 5.2   | .77    | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .00  | .00  | e.00    | 31     | 5.2   | .61    | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .00  | .00  | e.00    | 28     | 4.9   | .59    | .00  | .00  | .00  | .00  |
| 9     | .00  | .00  | .00  | .00  | e.00    | 25     | 14    | .62    | .00  | .00  | .00  | .00  |
| 10    | .00  | .00  | .00  | .00  | e.00    | 18     | 50    | .56    | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .00  | .00  | e.00    | 16     | 50    | .54    | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | .00  | .00  | e.00    | 36     | 48    | .53    | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | .00  | e.00    | 233    | 48    | .40    | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | e.00    | 105    | 47    | .18    | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .00  | e.00    | 54     | 28    | .18    | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00  | .00  | e.00    | 25     | 4.3   | .18    | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00  | .00  | e.00    | 18     | 3.6   | 1.9    | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00  | .00  | e.00    | 14     | 5.3   | 22     | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .00  | e.00    | 11     | 3.7   | 28     | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .00  | e729    | 11     | 3.5   | 28     | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | e520    | 10     | 3.5   | 6.8    | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | e135    | 11     | 3.4   | e.00   | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .00  | .00  | 203     | 10     | 3.4   | e.00   | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .00  | 91      | 9.3    | 3.4   | e.00   | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .00  | 104     | 9.5    | 3.4   | e.00   | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00  | 66      | 8.3    | 2.9   | e.00   | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .01  | .00  | 19      | 7.6    | 2.3   | e.00   | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | 20      | 6.9    | 1.8   | e.00   | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00  | .00  | 22      | 6.8    | 1.8   | e.00   | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00  | .00  | ---     | 6.2    | 2.0   | e.00   | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00  | 9.5  | ---     | 6.4    | ---   | e.00   | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.01 | 9.50 | 1970.20 | 1480.0 | 384.9 | 107.96 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .31  | 67.9    | 47.7   | 12.8  | 3.48   | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .01  | 9.5  | 729     | 588    | 50    | 28     | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00     | 6.2    | 1.8   | .00    | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .02  | 19   | 3910    | 2940   | 763   | 214    | .00  | .00  | .00  | .00  |

e Estimated.

10260950 WEST FORK MOJAVE RIVER ABOVE MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.06 | 5.61 | 15.5 | 79.6 | 165  | 170  | 56.6 | 31.3 | 14.4 | 1.15 | .080 | .64  |
| MAX  | 41.8 | 50.4 | 68.6 | 810  | 883  | 948  | 253  | 296  | 169  | 9.23 | 1.05 | 8.29 |
| (WY) | 1994 | 1993 | 1984 | 1993 | 1993 | 1983 | 1980 | 1978 | 1978 | 1993 | 1983 | 1993 |
| MIN  | .000 | .000 | .000 | .000 | .61  | .24  | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1975 | 1975 | 1976 | 1975 | 1991 | 1977 | 1987 | 1984 | 1975 | 1975 | 1975 | 1975 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1975 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 30050.36               |        | 3952.57             |        |                         |             |
| ANNUAL MEAN              | 82.3                   |        | 10.8                |        | 44.7                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 183                     |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .94                     |             |
| HIGHEST DAILY MEAN       | 1970                   | Jan 11 | 729                 | Feb 20 | 4900                    | Feb 10 1978 |
| LOWEST DAILY MEAN        | .00                    | Jan 1  | .00                 | Oct 1  | .00                     | Oct 1 1974  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Aug 12 | .00                 | Oct 1  | .00                     | Oct 1 1974  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 2440                | Feb 20 | 11300                   | Feb 10 1978 |
| INSTANTANEOUS PEAK STAGE |                        |        | 6.63                | Feb 20 | 23.20                   | Feb 10 1978 |
| ANNUAL RUNOFF (AC-FT)    | 59600                  |        | 7840                |        | 32350                   |             |
| 10 PERCENT EXCEEDS       | 150                    |        | 17                  |        | 69                      |             |
| 50 PERCENT EXCEEDS       | 8.2                    |        | .00                 |        | .00                     |             |
| 90 PERCENT EXCEEDS       | .00                    |        | .00                 |        | .00                     |             |

## 10261100 MOJAVE RIVER BELOW MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA

LOCATION.--Lat 34°21'17", long 117°14'40", in NE 1/4 NE 1/4 sec.13, T.3 N, R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 0.8 mi downstream from Mojave River Forks Reservoir, 6.2 mi downstream from Silverwood Lake on West Fork Mojave River, 6.5 mi southeast of Hesperia, and 12.2 mi downstream from Lake Arrowhead on Deep Creek (head of Mojave River).

DRAINAGE AREA.--211 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1971 to September 1974, October 1980 to current year. Prior to 1990, published as "below Forks Reservoir" and "below Mojave Forks Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 3,000 ft above sea level, from topographic map. October 1971 to September 1974, water-stage recorder at site 0.8 mi upstream on reservoir outlet channel at different datum. Prior to December 14, 1995, at datum 5.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow partially regulated by Lake Arrowhead, capacity, 48,000 acre-ft, used principally for recreation; Silverwood Lake, capacity, 78,000 acre-ft, used for the storage and distribution of imported water and recreation; and Mojave River Forks Reservoir, capacity 89,700 acre-ft, used for flood control. Silverwood Lake releases all natural inflow to the West Fork Mojave River as soon as possible after a storm. Sewage effluent from Lake Arrowhead area is released above gage at times.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,300 ft<sup>3</sup>/s, Feb. 8, 1993, maximum gage height, 12.61 ft, Jan. 7, 1993; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR  | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|------|------|
| 1     | e2.0  | e5.7  | e6.1  | 8.3   | 238   | 70    | 61   | 8.6   | 3.8   | .00  | .00  | .00  |
| 2     | e2.0  | e5.8  | e6.1  | 8.1   | 84    | 75    | 75   | 10    | 3.7   | .00  | .00  | .00  |
| 3     | e2.0  | e5.8  | e6.1  | 7.8   | 55    | 83    | 72   | 8.3   | 3.9   | .00  | .00  | .00  |
| 4     | e2.0  | e5.8  | e6.2  | 8.0   | e43   | 88    | 66   | 8.0   | 3.4   | .00  | .00  | .00  |
| 5     | e2.0  | e5.9  | e6.2  | 8.0   | e37   | 1340  | 66   | 7.2   | 3.8   | .00  | .00  | .00  |
| 6     | e2.0  | e5.9  | e6.2  | 7.8   | e36   | 400   | 58   | 6.7   | 4.0   | .00  | .00  | .00  |
| 7     | e2.0  | e5.9  | e6.2  | 7.8   | e31   | 143   | 50   | 5.8   | 3.5   | .00  | .00  | .00  |
| 8     | e2.0  | e5.9  | e6.2  | 7.6   | e28   | 127   | 44   | 4.8   | 2.3   | .00  | .00  | .00  |
| 9     | e2.0  | e5.9  | e6.3  | 7.7   | e27   | 123   | 44   | 5.1   | 1.7   | .00  | .00  | .00  |
| 10    | e2.0  | e5.9  | e6.3  | 8.0   | e26   | 106   | 72   | 5.0   | 1.2   | .00  | .00  | .00  |
| 11    | e2.1  | e5.9  | e6.4  | 7.7   | e25   | 100   | 88   | 4.6   | .00   | .00  | .00  | .00  |
| 12    | e2.2  | e5.9  | e6.4  | 8.0   | e23   | 110   | 79   | 3.5   | .00   | .00  | .00  | .00  |
| 13    | e2.3  | e5.9  | e6.4  | 7.8   | e22   | 464   | 72   | 3.1   | .00   | .00  | .00  | .00  |
| 14    | e2.6  | e5.9  | 8.3   | 8.7   | e21   | 362   | 72   | 2.7   | .00   | .00  | .00  | .00  |
| 15    | e2.8  | e5.9  | 10    | 7.4   | e21   | 228   | 64   | 3.5   | .00   | .00  | .00  | .00  |
| 16    | e3.1  | e5.9  | 8.4   | 6.6   | e20   | 133   | 46   | 3.7   | .00   | .00  | .00  | .00  |
| 17    | e3.3  | e5.9  | 8.1   | 6.5   | e19   | 132   | 43   | 4.3   | .00   | .00  | .00  | .00  |
| 18    | e3.5  | e5.9  | 8.1   | 6.6   | e17   | 132   | 43   | 16    | .00   | .00  | .00  | .00  |
| 19    | e3.8  | e6.0  | 7.9   | 6.8   | e16   | 123   | 48   | 21    | .00   | .00  | .00  | .00  |
| 20    | e4.0  | e6.0  | 7.8   | 7.0   | 2220  | 119   | 46   | 20    | .00   | .00  | .00  | .00  |
| 21    | e4.2  | e6.0  | 7.8   | 7.6   | 4500  | 111   | 43   | 14    | .00   | .00  | .00  | .00  |
| 22    | e4.4  | e6.0  | 7.8   | 9.5   | 862   | 111   | 41   | 6.4   | .00   | .00  | .00  | .00  |
| 23    | e4.5  | e6.0  | 8.3   | 11    | 427   | 115   | 40   | 5.3   | .00   | .00  | .00  | .00  |
| 24    | e4.7  | e6.0  | 8.8   | 9.7   | 180   | 108   | 38   | 5.5   | .00   | .00  | .00  | .00  |
| 25    | e4.9  | e6.0  | 8.3   | 9.3   | 166   | 97    | 38   | 7.1   | .00   | .00  | .00  | .00  |
| 26    | e5.0  | e6.0  | 8.1   | 8.7   | 151   | 82    | 38   | 8.0   | .00   | .00  | .00  | .00  |
| 27    | e5.2  | e6.1  | 8.0   | 8.6   | 97    | 79    | 37   | 5.4   | .00   | .00  | .00  | .00  |
| 28    | e5.3  | e6.1  | 8.1   | 8.6   | 84    | 82    | 35   | 5.0   | .00   | .00  | .00  | .00  |
| 29    | e5.4  | e6.1  | 7.9   | 9.3   | 76    | 79    | 14   | 4.7   | .00   | .00  | .00  | .00  |
| 30    | e5.5  | e6.1  | 7.9   | 9.4   | ---   | 75    | 11   | 6.3   | .00   | .00  | .00  | .00  |
| 31    | e5.6  | ---   | 8.2   | 95    | ---   | 69    | ---  | 3.9   | ---   | .00  | .00  | ---  |
| TOTAL | 104.4 | 178.1 | 228.9 | 338.9 | 9552  | 5466  | 1544 | 223.5 | 31.30 | 0.00 | 0.00 | 0.00 |
| MEAN  | 3.37  | 5.94  | 7.38  | 10.9  | 329   | 176   | 51.5 | 7.21  | 1.04  | .000 | .000 | .000 |
| MAX   | 5.6   | 6.1   | 10    | 95    | 4500  | 1340  | 88   | 21    | 4.0   | .00  | .00  | .00  |
| MIN   | 2.0   | 5.7   | 6.1   | 6.5   | 16    | 69    | 11   | 2.7   | .00   | .00  | .00  | .00  |
| AC-FT | 207   | 353   | 454   | 672   | 18950 | 10840 | 3060 | 443   | 62    | .00  | .00  | .00  |

e Estimated.

## 10261100 MOJAVE RIVER BELOW MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 7.61 | 19.7 | 54.8 | 238  | 333  | 321  | 144  | 54.4 | 17.5 | 3.81 | 1.93 | 1.52 |
| MAX  | 57.8 | 73.9 | 263  | 2873 | 2910 | 2004 | 544  | 333  | 109  | 17.1 | 22.7 | 12.0 |
| (WY) | 1984 | 1983 | 1972 | 1993 | 1993 | 1983 | 1983 | 1983 | 1993 | 1983 | 1983 | 1993 |
| MIN  | .000 | .000 | .000 | .000 | 11.1 | 15.0 | 10.6 | .20  | .000 | .000 | .000 | .000 |
| (WY) | 1986 | 1989 | 1990 | 1991 | 1987 | 1972 | 1972 | 1990 | 1989 | 1985 | 1985 | 1984 |

## SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1972 - 1996

|                          |         |          |       |
|--------------------------|---------|----------|-------|
| ANNUAL TOTAL             | 86444.6 | 17667.10 |       |
| ANNUAL MEAN              | 237     | 48.3     | 98.7  |
| HIGHEST ANNUAL MEAN      |         |          | 592   |
| LOWEST ANNUAL MEAN       |         |          | 7.34  |
| HIGHEST DAILY MEAN       | 6800    | Jan 11   | 4500  |
| LOWEST DAILY MEAN        | 1.6     | Aug 15   | .00   |
| ANNUAL SEVEN-DAY MINIMUM | 1.6     | Aug 15   | .00   |
| INSTANTANEOUS PEAK FLOW  |         |          | 8600  |
| INSTANTANEOUS PEAK STAGE |         |          | 9.79  |
| ANNUAL RUNOFF (AC-FT)    | 171500  | 35040    | 71490 |
| 10 PERCENT EXCEEDS       | 451     | 82       | 158   |
| 50 PERCENT EXCEEDS       | 26      | 5.9      | 8.0   |
| 90 PERCENT EXCEEDS       | 1.7     | .00      | .00   |



## 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, and 3 mi northwest of Victorville.

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

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

CHEMICAL DATA: Specific conductance 1975-81.

WATER TEMPERATURE: Water years 1962-80.

REVISED RECORDS.--WSP 1927: Drainage area.

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

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Flow regulated by Mojave River Forks Reservoir, capacity 89,700 acre-ft, since 1971, 17.8 mi upstream, Silverwood Lake, capacity 78,000 acre-ft, since 1971, and Lake Arrowhead, capacity, 48,000 acre-ft, since 1922. Some water is imported into basin. Diversions and pumping for irrigation and for Mojave State Fish Hatchery upstream from station.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC  | JAN  | FEB  | MAR  | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|
| 1     | e2.4  | e7.2  | e14  | 19   | 27   | 28   | 20    | 12    | 6.0   | 2.6  | 1.7  | 1.6  |
| 2     | e2.5  | e7.4  | e14  | 24   | 24   | 30   | 20    | 15    | 5.6   | 2.9  | 1.7  | 1.7  |
| 3     | e2.7  | e7.6  | e14  | 19   | 25   | 30   | 13    | 20    | 5.3   | 3.0  | 1.6  | 1.6  |
| 4     | e2.9  | e7.8  | e13  | 16   | 25   | 31   | 15    | 20    | 5.3   | 2.8  | 1.6  | 1.5  |
| 5     | e3.0  | e8.0  | e12  | 16   | 24   | 33   | 16    | 21    | 5.5   | 2.6  | 1.1  | 1.5  |
| 6     | e3.2  | e8.3  | e12  | 17   | 21   | 120  | 24    | 19    | 5.6   | 2.6  | 1.4  | 1.5  |
| 7     | e3.3  | e8.5  | e12  | 19   | 19   | 40   | 20    | 11    | 5.4   | 2.3  | 1.8  | 1.6  |
| 8     | e3.4  | e8.9  | e12  | 19   | 19   | 36   | 21    | 10    | 5.3   | 2.2  | 1.5  | 1.7  |
| 9     | e3.6  | e9.1  | e13  | 20   | 19   | 35   | 12    | 9.3   | 5.1   | 2.0  | 1.3  | 1.5  |
| 10    | e3.7  | e9.4  | e13  | 23   | 19   | 31   | 22    | 6.8   | 4.9   | 1.8  | 1.3  | 1.6  |
| 11    | e3.9  | e9.7  | e13  | 19   | 19   | 29   | 23    | 7.0   | 4.7   | 1.7  | 1.4  | 1.7  |
| 12    | e4.0  | e10   | e13  | 19   | 19   | 26   | 19    | 7.5   | 4.4   | 1.7  | 1.4  | 1.7  |
| 13    | e4.2  | e10   | 13   | 19   | 24   | 26   | 11    | 7.2   | 4.8   | 1.6  | 1.5  | 1.8  |
| 14    | e4.3  | e10   | 13   | 19   | 24   | 26   | 9.3   | 6.4   | 5.2   | 1.7  | 1.6  | 1.8  |
| 15    | e4.5  | e10   | 14   | 19   | 21   | 26   | 8.1   | 6.9   | 5.1   | 1.9  | 1.6  | 1.7  |
| 16    | e4.7  | e11   | 16   | 19   | 19   | 26   | 9.7   | 7.1   | 4.7   | 1.9  | 1.5  | 1.7  |
| 17    | e4.8  | e11   | 16   | 19   | 19   | 25   | 9.8   | 7.7   | 4.6   | 1.9  | 1.5  | 1.7  |
| 18    | e5.0  | e12   | 16   | 21   | 19   | 24   | 8.1   | 8.0   | 4.6   | 2.0  | 1.5  | 1.6  |
| 19    | e5.1  | e12   | 16   | 24   | 19   | 24   | 8.1   | 7.8   | 4.3   | 1.6  | 1.6  | 1.5  |
| 20    | e5.3  | e12   | 16   | 24   | 31   | 25   | 10    | 7.3   | 4.2   | 1.6  | 1.8  | 1.4  |
| 21    | e5.5  | e12   | 17   | 26   | 916  | 25   | 11    | 7.1   | 3.6   | 1.7  | 1.8  | 1.6  |
| 22    | e5.6  | e13   | 24   | 23   | 376  | 24   | 14    | 6.8   | 3.3   | 1.8  | 1.9  | 1.5  |
| 23    | e5.8  | e13   | 32   | 17   | 109  | 25   | 16    | 6.5   | 3.6   | 1.9  | 2.2  | 1.7  |
| 24    | e5.9  | e13   | 25   | 16   | 41   | 26   | 16    | 7.3   | 3.6   | 1.6  | 2.1  | 1.7  |
| 25    | e6.1  | e13   | 20   | 22   | 33   | 25   | 16    | 7.4   | 3.2   | 1.6  | 2.0  | 1.7  |
| 26    | e6.2  | e13   | 19   | 17   | 32   | 24   | 13    | 6.8   | 3.2   | 1.6  | 2.1  | 1.7  |
| 27    | e6.4  | e14   | 22   | 16   | 31   | 20   | 13    | 6.3   | 3.7   | 1.9  | 2.0  | 1.6  |
| 28    | e6.5  | e14   | 24   | 16   | 29   | 16   | 12    | 6.5   | 3.5   | 2.4  | 1.8  | 1.7  |
| 29    | e6.7  | e14   | 25   | 19   | 30   | 16   | 11    | 6.3   | 2.9   | 2.3  | 1.8  | 1.7  |
| 30    | e6.8  | e14   | 23   | 19   | ---  | 16   | 10    | 6.4   | 2.7   | 1.7  | 1.9  | 1.7  |
| 31    | e7.0  | ---   | 19   | 23   | ---  | 20   | ---   | 6.6   | ---   | 1.7  | 1.8  | ---  |
| TOTAL | 145.0 | 322.9 | 525  | 608  | 2033 | 908  | 431.1 | 291.0 | 133.9 | 62.6 | 51.8 | 49.0 |
| MEAN  | 4.68  | 10.8  | 16.9 | 19.6 | 70.1 | 29.3 | 14.4  | 9.39  | 4.46  | 2.02 | 1.67 | 1.63 |
| MAX   | 7.0   | 14    | 32   | 26   | 916  | 120  | 24    | 21    | 6.0   | 3.0  | 2.2  | 1.8  |
| MIN   | 2.4   | 7.2   | 12   | 16   | 19   | 16   | 8.1   | 6.3   | 2.7   | 1.6  | 1.1  | 1.4  |
| AC-FT | 288   | 640   | 1040 | 1210 | 4030 | 1800 | 855   | 577   | 266   | 124  | 103  | 97   |

e Estimated.

## MOJAVE RIVER BASIN

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 24.8 | 36.6 | 52.8 | 102  | 213  | 231  | 129  | 46.2 | 22.2 | 15.3 | 15.5 | 17.5 |
| MAX  | 58.2 | 222  | 376  | 1487 | 2334 | 2229 | 1015 | 261  | 157  | 32.5 | 29.3 | 41.7 |
| (WY) | 1977 | 1966 | 1967 | 1993 | 1993 | 1938 | 1958 | 1978 | 1978 | 1969 | 1969 | 1976 |
| MIN  | 4.65 | 10.7 | 13.5 | 19.3 | 18.2 | 12.6 | 11.6 | 9.06 | 4.46 | 2.02 | 1.67 | 1.63 |
| (WY) | 1992 | 1995 | 1995 | 1990 | 1991 | 1990 | 1990 | 1990 | 1996 | 1996 | 1996 | 1996 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1931 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 57150.70               |        | 5561.3              |        |                         |             |
| ANNUAL MEAN              | 157                    |        | 15.2                |        | 74.7                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 402                     |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 12.3                    |             |
| HIGHEST DAILY MEAN       | 4500                   | Mar 12 | 916                 | Feb 21 | 21000                   | Feb 25 1969 |
| LOWEST DAILY MEAN        | .00                    | Sep 21 | 1.1                 | Aug 5  | .00                     | Sep 21 1995 |
| ANNUAL SEVEN-DAY MINIMUM | .37                    | Sep 20 | 1.4                 | Aug 5  | .37                     | Sep 20 1995 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 1320                | Feb 21 | 70600                   | Mar 2 1938  |
| INSTANTANEOUS PEAK STAGE |                        |        | 3.69                | Feb 21 | 23.70                   | Mar 2 1938  |
| ANNUAL RUNOFF (AC-FT)    | 113400                 |        | 11030               |        | 54140                   |             |
| 10 PERCENT EXCEEDS       | 325                    |        | 25                  |        | 54                      |             |
| 50 PERCENT EXCEEDS       | 13                     |        | 8.2                 |        | 28                      |             |
| 90 PERCENT EXCEEDS       | 2.8                    |        | 1.7                 |        | 12                      |             |

## 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.

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 sea level.

REMARKS.--Flow regulated by Mojave River Forks Reservoir, capacity, 89,700 acre-ft, since 1971, 60 mi upstream, Silverwood Lake, capacity, 78,000 acre-ft, since 1971, and Lake Arrowhead, capacity, 48,000 acre-ft, since 1922. Some water is imported into basin. Diversions and pumping for irrigation of about 15,000 acres upstream from station.

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.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .001 | .37  | 3.56 | 26.2 | 98.7 | 118  | 43.0 | 5.49 | .001 | .004 | .022 | .017 |
| MAX  | .061 | 20.2 | 116  | 747  | 1640 | 1962 | 547  | 93.5 | .080 | .090 | 1.31 | .71  |
| (WY) | 1959 | 1966 | 1967 | 1969 | 1993 | 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 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1931 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 5602.00                |                     |                         |
| ANNUAL MEAN              | 15.3                   |                     | 24.2                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 202                     |
| LOWEST ANNUAL MEAN       |                        |                     | .000                    |
| HIGHEST DAILY MEAN       | 1400                   | Mar 11              | 18100                   |
| LOWEST DAILY MEAN        | .00                    | Jan 1               | .00                     |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Jan 1               | .00                     |
| INSTANTANEOUS PEAK FLOW  |                        |                     | 64300                   |
| INSTANTANEOUS PEAK STAGE |                        |                     | 8.60                    |
| ANNUAL RUNOFF (AC-FT)    | 11110                  |                     | 17530                   |
| 10 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |
| 50 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |
| 90 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |

## 10263000 MOJAVE RIVER AT AFTON, CA

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

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

PERIOD OF RECORD.--October 1929 to September 1932, October 1952 to current year. Records for water year 1930 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 sea level. Dec. 21, 1929, to Sept. 30, 1932, at site 1.7 mi downstream at different datum; October 1952 to May 1978, at datum 2 ft higher.

REMARKS.--Records poor. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in reservoirs 100 mi upstream. For description of upstream reservoirs see Mojave River at Barstow (station 10262500).

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

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| July 14 | 2215 | 680                               | 4.03                | Sept. 7 | 2100 | 322                               | 3.44                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL   | AUG  | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|------|-------|
| 1     | .18   | .62   | .99   | .69   | 1.1   | .99   | .87   | .34  | .14  | .07   | .03  | .08   |
| 2     | .19   | .63   | .91   | .69   | 1.0   | .96   | .81   | .29  | .13  | .05   | .02  | .05   |
| 3     | .20   | .65   | .84   | .70   | .96   | 1.0   | .79   | .24  | .12  | .03   | .01  | .05   |
| 4     | .17   | .66   | .87   | .74   | .88   | .92   | .77   | .23  | .10  | .01   | .02  | .09   |
| 5     | .20   | .67   | .87   | .71   | .83   | .95   | .68   | .21  | .08  | .00   | .05  | .15   |
| 6     | .24   | .66   | .88   | .72   | .78   | .92   | .72   | .20  | .06  | .00   | .06  | .16   |
| 7     | .26   | .67   | .90   | .74   | .80   | .96   | .73   | .19  | .06  | .01   | .08  | 41    |
| 8     | .27   | .67   | .82   | .77   | .80   | 1.0   | .68   | .16  | .05  | .01   | .08  | 13    |
| 9     | .27   | .69   | .78   | .77   | .79   | 1.1   | .62   | .14  | .05  | .00   | .07  | .34   |
| 10    | .29   | .68   | .80   | .80   | .77   | 1.1   | .59   | .15  | .03  | .00   | .08  | .31   |
| 11    | .31   | .68   | .84   | .80   | .76   | 1.0   | .57   | .16  | .02  | .01   | .07  | .30   |
| 12    | .31   | .69   | .84   | .80   | .76   | .96   | .58   | .15  | .02  | .01   | .07  | .29   |
| 13    | .32   | .70   | .84   | .96   | .74   | .97   | .57   | .12  | .03  | .00   | .08  | .29   |
| 14    | .34   | .73   | .76   | .96   | .75   | 1.0   | .61   | .10  | .03  | .49   | .07  | .31   |
| 15    | .37   | .71   | .73   | .99   | .74   | 1.0   | .64   | .10  | .03  | 39    | .08  | .31   |
| 16    | .38   | .71   | .76   | 1.0   | .74   | 1.0   | .63   | .11  | .03  | .15   | .10  | .31   |
| 17    | .39   | .73   | .74   | .93   | .75   | 1.0   | .59   | .12  | .02  | .12   | .06  | .32   |
| 18    | .42   | .77   | .76   | .88   | .79   | 1.1   | .55   | .12  | .02  | .10   | .04  | .32   |
| 19    | .43   | .79   | .77   | .91   | .83   | 1.1   | .49   | .12  | .02  | .09   | .07  | .33   |
| 20    | .45   | .81   | .70   | .88   | .89   | 1.0   | .51   | .13  | .02  | .09   | .09  | .34   |
| 21    | .46   | .84   | .70   | .92   | 1.1   | 1.0   | .50   | .13  | .01  | .08   | .10  | .36   |
| 22    | .44   | .87   | .70   | .95   | 1.0   | .93   | .50   | .12  | .01  | .07   | .11  | .34   |
| 23    | .51   | .86   | .84   | .88   | .90   | .89   | .48   | .13  | .03  | .06   | .13  | .33   |
| 24    | .56   | .82   | .79   | .92   | .93   | .93   | .44   | .17  | .02  | .04   | .14  | .34   |
| 25    | .58   | .82   | .76   | .93   | 1.0   | .94   | .39   | .29  | .02  | .04   | .14  | .34   |
| 26    | .59   | .87   | .69   | .84   | 1.1   | .92   | .39   | .26  | .05  | .05   | .12  | .34   |
| 27    | .60   | .81   | .69   | .89   | .96   | .98   | .36   | .23  | .08  | .07   | .11  | .35   |
| 28    | .61   | .81   | .70   | .88   | .96   | .82   | .34   | .17  | .09  | .09   | .12  | .36   |
| 29    | .62   | .90   | .74   | .86   | .96   | .80   | .35   | .16  | .09  | .09   | .13  | .39   |
| 30    | .61   | .96   | .74   | .85   | ---   | .88   | .37   | .14  | .08  | .07   | .14  | .38   |
| 31    | .61   | ---   | .78   | .96   | ---   | .89   | ---   | .14  | ---  | .05   | .13  | ---   |
| TOTAL | 12.18 | 22.48 | 24.53 | 26.32 | 25.37 | 30.05 | 17.12 | 5.32 | 1.54 | 89.46 | 2.60 | 61.88 |
| MEAN  | .39   | .75   | .79   | .85   | .87   | .97   | .57   | .17  | .051 | 2.89  | .084 | 2.06  |
| MAX   | .62   | .96   | .99   | 1.0   | 1.1   | 1.1   | .87   | .34  | .14  | .49   | .14  | .41   |
| MIN   | .17   | .62   | .69   | .69   | .74   | .80   | .34   | .10  | .01  | .00   | .01  | .05   |
| AC-FT | 24    | 45    | 49    | 52    | 50    | 60    | 34    | 11   | 3.1  | 177   | 5.2  | 123   |

## 10263000 MOJAVE RIVER AT AFTON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .78  | .97  | 2.89 | 14.5 | 46.9 | 19.0 | 3.02 | .69  | .43  | .56  | 1.43 | .80  |
| MAX  | 2.97 | 2.29 | 63.9 | 347  | 876  | 415  | 56.4 | 1.80 | 1.58 | 3.13 | 18.0 | 4.30 |
| (WY) | 1993 | 1981 | 1966 | 1969 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1930 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 176.54                 |  |  |  | 318.85              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | .48                    |  |  |  | .87                 |  |  |  | 7.43                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 100                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .22                     |  |  |  |
| HIGHEST DAILY MEAN       | 7.0 Jan 11             |  |  |  | 49 Jul 14           |  |  |  | 10000 Feb 20 1993       |  |  |  |
| LOWEST DAILY MEAN        | .00 Jul 28             |  |  |  | .00 Jul 5           |  |  |  | .00 Jun 28 1961         |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jul 28             |  |  |  | .00 Jul 4           |  |  |  | .00 Jul 14 1961         |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 680 Jul 14          |  |  |  | 18000 Jan 26 1969       |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 4.03 Jul 14         |  |  |  | 12.40 Jan 26 1969       |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 350                    |  |  |  | 632                 |  |  |  | 5380                    |  |  |  |
| 10 PERCENT EXCEEDS       | .92                    |  |  |  | .96                 |  |  |  | 1.6                     |  |  |  |
| 50 PERCENT EXCEEDS       | .43                    |  |  |  | .51                 |  |  |  | .80                     |  |  |  |
| 90 PERCENT EXCEEDS       | .02                    |  |  |  | .05                 |  |  |  | .06                     |  |  |  |

## 10263500 BIG ROCK CREEK NEAR VALYERMO, CA

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

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

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

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,050 ft above sea level, from topographic map. Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mi downstream (below Punchbowl Canyon) at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. 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 or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 21 | 0800 | 413                               | 3.50                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP  |
|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|------|
| 1     | 8.4   | 6.6   | 6.3   | 5.8   | 7.0   | 16   | 16   | 11    | 5.8   | e4.9  | e3.9  | e2.8 |
| 2     | 8.4   | 6.5   | 6.3   | 5.8   | 7.1   | 15   | 17   | 10    | 5.6   | e4.9  | e3.8  | e3.0 |
| 3     | 8.4   | 6.6   | 6.3   | 5.7   | 6.8   | 14   | 17   | 10    | 5.3   | e4.9  | e3.8  | e2.8 |
| 4     | 8.0   | 6.6   | 6.3   | 5.6   | 6.5   | 17   | 17   | 9.9   | 5.3   | e4.9  | 3.8   | 2.8  |
| 5     | 8.0   | 6.3   | 6.3   | 5.7   | 6.5   | 42   | 16   | 9.7   | 5.9   | e4.8  | e3.7  | e2.8 |
| 6     | 7.6   | 6.3   | 6.3   | 5.7   | 6.2   | 32   | 16   | 9.5   | 5.8   | e4.8  | e3.7  | e2.8 |
| 7     | 7.6   | 6.3   | 6.5   | 5.6   | 6.3   | 27   | 15   | 9.4   | 5.6   | e4.8  | e3.6  | e2.7 |
| 8     | 7.6   | 6.3   | 6.8   | 5.7   | 6.3   | 23   | 14   | 9.4   | e5.4  | e4.8  | e3.5  | e2.7 |
| 9     | 7.6   | 6.0   | 6.7   | 5.6   | 6.2   | 21   | 15   | 9.4   | e5.4  | e4.7  | e3.5  | e2.6 |
| 10    | 8.0   | 5.9   | 6.6   | 5.7   | 6.2   | 19   | 15   | 9.2   | e5.4  | e4.7  | 3.4   | 2.6  |
| 11    | 8.0   | 5.9   | 6.4   | 5.7   | 6.4   | 18   | 15   | 8.8   | e5.4  | e4.7  | 3.4   | e2.6 |
| 12    | 7.4   | 5.9   | 6.5   | 5.6   | 6.6   | 21   | 14   | 8.5   | e5.4  | e4.7  | 3.4   | e2.5 |
| 13    | 7.3   | 5.9   | 6.9   | 5.7   | 6.7   | 24   | 14   | 8.1   | e5.3  | 4.8   | 3.1   | e2.5 |
| 14    | 7.3   | 5.9   | 6.2   | 5.6   | 7.1   | 22   | 14   | 8.0   | e5.3  | e4.6  | 3.3   | e2.4 |
| 15    | 7.3   | 5.9   | 5.8   | 5.7   | 7.1   | 22   | 13   | 7.7   | e5.3  | e4.6  | 3.4   | e2.4 |
| 16    | 7.3   | 5.9   | 5.9   | 5.7   | 7.2   | 22   | 13   | 7.6   | e5.3  | 4.6   | 3.3   | e2.3 |
| 17    | 7.0   | 5.9   | 5.9   | 5.7   | 7.3   | 23   | 13   | 7.6   | e5.2  | 4.6   | 3.2   | e2.3 |
| 18    | 6.9   | 5.9   | 5.8   | 5.8   | 6.6   | 24   | 14   | 7.6   | e5.2  | 4.5   | 3.2   | e2.2 |
| 19    | 7.0   | 5.9   | 5.7   | 5.7   | 6.1   | 25   | 14   | 7.3   | e5.2  | 4.5   | 3.2   | e2.2 |
| 20    | 7.3   | 5.9   | 5.7   | 5.7   | 123   | 24   | 14   | 7.2   | e5.2  | 4.4   | 3.1   | e2.2 |
| 21    | 7.3   | 5.9   | 5.8   | 6.0   | 268   | 22   | 13   | 7.2   | e5.1  | 4.4   | e3.1  | e2.1 |
| 22    | 6.9   | 5.9   | 5.8   | 5.7   | 113   | 22   | 13   | 7.2   | e5.1  | 4.3   | e3.1  | e2.1 |
| 23    | 6.9   | 5.9   | 6.0   | 5.4   | 60    | 21   | 12   | 7.1   | e5.1  | 4.2   | e3.0  | e2.1 |
| 24    | 6.9   | 6.2   | 5.8   | 5.4   | 41    | 20   | 12   | 7.4   | e5.1  | e4.2  | e3.0  | e2.0 |
| 25    | 6.8   | 6.3   | 5.9   | 5.3   | 32    | 19   | 11   | 7.3   | e5.1  | e4.1  | e3.0  | e2.0 |
| 26    | 6.6   | 6.3   | 5.9   | 5.2   | 25    | 18   | 11   | 6.9   | e5.0  | e4.1  | e3.0  | e2.0 |
| 27    | 6.9   | 6.3   | 5.9   | 5.2   | 21    | 18   | 11   | 6.9   | e5.0  | e4.0  | e3.0  | e2.0 |
| 28    | 6.9   | 6.3   | 5.9   | 5.1   | 19    | 17   | 11   | 6.8   | e5.0  | e4.0  | e2.9  | e1.9 |
| 29    | 6.9   | 6.3   | 5.9   | 5.1   | 17    | 18   | 11   | 6.2   | e5.0  | e4.0  | e2.9  | e1.9 |
| 30    | 6.9   | 6.3   | 5.9   | 5.1   | ---   | 17   | 11   | 6.1   | e4.9  | e3.9  | e2.9  | 1.9  |
| 31    | 6.8   | ---   | 5.9   | 6.3   | ---   | 16   | ---  | 6.0   | ---   | e3.9  | e2.9  | ---  |
| TOTAL | 228.2 | 184.1 | 189.9 | 173.6 | 845.2 | 659  | 412  | 251.0 | 158.7 | 139.3 | 102.1 | 71.2 |
| MEAN  | 7.36  | 6.14  | 6.13  | 5.60  | 29.1  | 21.3 | 13.7 | 8.10  | 5.29  | 4.49  | 3.29  | 2.37 |
| MAX   | 8.4   | 6.6   | 6.9   | 6.3   | 268   | 42   | 17   | 11    | 5.9   | 4.9   | 3.9   | 3.0  |
| MIN   | 6.6   | 5.9   | 5.7   | 5.1   | 6.1   | 14   | 11   | 6.0   | 4.9   | 3.9   | 2.9   | 1.9  |
| AC-FT | 453   | 365   | 377   | 344   | 1680  | 1310 | 817  | 498   | 315   | 276   | 203   | 141  |

e Estimated.

## 10263500 BIG ROCK CREEK NEAR VALYERMO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.21 | 7.54 | 10.5 | 19.0 | 31.3 | 38.7 | 31.4 | 27.8 | 18.9 | 11.0 | 7.93 | 6.32 |
| 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1923 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 13116.1                |  |  |  | 3414.3              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 35.9                   |  |  |  | 9.33                |  |  |  | 18.0                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 90.9                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 1.91                    |  |  |  |
| HIGHEST DAILY MEAN       | 321                    |  |  |  | 268                 |  |  |  | 3300                    |  |  |  |
| LOWEST DAILY MEAN        | 3.6                    |  |  |  | 1.9                 |  |  |  | .70                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 5.2                    |  |  |  | 2.0                 |  |  |  | .87                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 413                 |  |  |  | 8300                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 3.50                |  |  |  |                         |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 26020                  |  |  |  | 6770                |  |  |  | 13020                   |  |  |  |
| 10 PERCENT EXCEEDS       | 80                     |  |  |  | 17                  |  |  |  | 37                      |  |  |  |
| 50 PERCENT EXCEEDS       | 21                     |  |  |  | 6.0                 |  |  |  | 7.5                     |  |  |  |
| 90 PERCENT EXCEEDS       | 6.0                    |  |  |  | 3.0                 |  |  |  | 2.7                     |  |  |  |

## ANTELOPE VALLEY

10264636 SLED TRACK CANAL AT LANCASTER BOULEVARD, NEAR ROGERS LAKE, CA

LOCATION.--Lat 34°49'19", long 117°52'20", in NE 1/4 NW 1/4 sec.6, T.8 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, on left bank at culvert under Lancaster Blvd., 1.1 mi northeast of intersection of East 120th Ave. and Lancaster Blvd., approximately 0.25 mi south of Rogers Lake.

DRAINAGE AREA.--Not determined.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to September 1996.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,275 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--No flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
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  | .00  |
| 6     | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| 7     | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| 8     | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| 9     | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| 10    | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| 11    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 12    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 13    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 14    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 15    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 16    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 17    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 18    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 19    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 20    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 21    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 22    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 23    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 24    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 25    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 26    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 27    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 28    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 29    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 30    | --- | --- | --- | --- | --- | --- | .00 | .00  | .00  | .00  | .00  | .00  |
| 31    | --- | --- | --- | --- | --- | --- | --- | .00  | ---  | .00  | .00  | ---  |
| TOTAL | --- | --- | --- | --- | --- | --- | --- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | --- | --- | --- | --- | --- | --- | --- | .000 | .000 | .000 | .000 | .000 |
| MAX   | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| MIN   | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |
| AC-FT | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  |



10264636 SLED TRACK CANAL AT LANCASTER BOULEVARD, NEAR ROGERS LAKE, CA--Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.--July to September 1996.

INSTRUMENTATION.--Recording tipping-bucket rain gage since July 1996.

EXTREMES FOR PERIOD OF RECORD.--No precipitation.

EXTREMES FOR CURRENT YEAR.--No precipitation.

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY SUM VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL  | AUG  | SEP  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| 1     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 2     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 3     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 4     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 5     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 6     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 7     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 8     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 9     | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 10    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 11    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 12    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 13    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 14    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 15    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 16    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 17    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 18    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 19    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 20    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 21    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 22    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 23    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 24    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 25    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 26    | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  |
| 27    | --- | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  |
| 28    | --- | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  |
| 29    | --- | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  |
| 30    | --- | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  |
| 31    | --- | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | ---  |
| TOTAL | --- | --- | --- | --- | --- | --- | --- | --- | --- | 0.00 | 0.00 | 0.00 |

10264640 BUCKHORN CREEK AT EAST 120TH AVENUE, NEAR ROGERS LAKE, CA

LOCATION.--Lat 34°50'18", long 117°54'59", in SE 1/4 SW 1/4 sec.27, T.9 N., R.10 W., Kern County, Hydrologic Unit 18090206, on left bank, west side of 120th Ave., 250 ft south of Lancaster Blvd., approximately 0.25 mi southwest of Rogers Lake.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--May to September 1996.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,270 ft above sea level, from topographic map.

REMARKS.--New station. Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--No flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-----|-----|-----|-----|-----|-----|-----|-------|-------|-------|-------|-------|
| 1     | --- | --- | --- | --- | --- | --- | --- | ---   | .00   | .00   | .00   | .00   |
| 2     | --- | --- | --- | --- | --- | --- | --- | ---   | .00   | .00   | .00   | .00   |
| 3     | --- | --- | --- | --- | --- | --- | --- | ---   | .00   | .00   | .00   | .00   |
| 4     | --- | --- | --- | --- | --- | --- | --- | ---   | .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   | .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  | 0.00  |
| MEAN  | --- | --- | --- | --- | --- | --- | --- | .0000 | .0000 | .0000 | .0000 | .0000 |
| MAX   | --- | --- | --- | --- | --- | --- | --- | .00   | .00   | .00   | .00   | .00   |
| MIN   | --- | --- | --- | --- | --- | --- | --- | .00   | .00   | .00   | .00   | .00   |
| AC-FT | --- | --- | --- | --- | --- | --- | --- | .00   | .00   | .00   | .00   | .00   |

10264646 SOUTH DRAINAGE ROSAMOND/BISSELL HILLS NEAR EDWARDS AIR FORCE BASE, CA

LOCATION.--Lat 34°53'18", long 117°58'23", in NE 1/4 NW 1/4 sec.7, T.9 N., R.10 W., Kern County, Hydrologic Unit 18090206, 1.8 mi southwest of intersection of Forbes Ave. and Rosamond Blvd., 2.3 mi southwest of Edwards Air Force Base.

DRAINAGE AREA.--9.25 mi<sup>2</sup>.

PERIOD OF RECORD.--June to September 1996.

INSTRUMENTATION.--Recording tipping-bucket rain gage since June 1996.

EXTREMES FOR PERIOD OF RECORD.--No precipitation.

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY SUM VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN  | JUL  | AUG  | SEP  |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| 1     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 2     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 3     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 4     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 5     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 6     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 7     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 8     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 9     | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 10    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 11    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 12    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 13    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 14    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 15    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 16    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 17    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 18    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 19    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 20    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 21    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 22    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 23    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 24    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 25    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  |
| 26    | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  |
| 27    | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  |
| 28    | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  |
| 29    | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  |
| 30    | --- | --- | --- | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  |
| 31    | --- | --- | --- | --- | --- | --- | --- | --- | ---  | .00  | .00  | ---  |
| TOTAL | --- | --- | --- | --- | --- | --- | --- | --- | 0.00 | 0.00 | 0.00 | 0.00 |

10264658 MOJAVE CREEK AT FORBES AVENUE, AT EDWARDS AIR FORCE BASE, CA

LOCATION.--Lat 34°56'20", long 117°56'25", in NW 1/4 NE 1/4 sec.28, T.10 N., R.10 W., Kern County, Hydrologic Unit 18090206, upstream at intersection of Forbes Ave. and Mojave Blvd., at Edwards Air Force Base.

DRAINAGE AREA.--168.39 mi<sup>2</sup>.

PERIOD OF RECORD.--March to September 1996.

GAGE.--Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,475 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--No flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| 1     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 7     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 8     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 9     | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 10    | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 11    | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 12    | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | --- | --- | --- | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 17    | --- | --- | --- | --- | --- | .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    | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | --- | --- | --- | --- | --- | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | --- | --- | --- | --- | --- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | --- | --- | --- | --- | --- | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| MAX   | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| MIN   | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | --- | --- | --- | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  |

## 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 sea level, from topographic map.

REMARKS.--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.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

## DAILY MEAN VALUES

(NOT PREVIOUSLY PUBLISHED)

| 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  | .00  | .00  | .00  | .00  |
| 3     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | --- | --- | ---  | .32  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 7     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 8     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 9     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 10    | --- | --- | ---  | .14  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 11    | --- | --- | ---  | .00  | .00  | .01  | .00  | .00  | .00  | .00  | .00  | .00  |
| 12    | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | --- | --- | .00  | .00  | .00  | .00  | .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  | .00  | .00  | .00  | .00  | .00  |
| 21    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .05  | .00  |
| 22    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .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    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | --- | --- | .00  | .00  | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | --- | --- | .00  | .00  | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | --- | --- | .00  | .00  | ---  | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | --- | --- | 0.00 | 0.46 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 |
| MEAN  | --- | --- | .000 | .015 | .000 | .000 | .000 | .000 | .000 | .000 | .002 | .000 |
| MAX   | --- | --- | .00  | .32  | .00  | .01  | .00  | .00  | .00  | .00  | .05  | .00  |
| MIN   | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | --- | --- | .00  | .9   | .00  | .02  | .00  | .00  | .00  | .00  | .1   | .00  |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1995, BY WATER YEAR (WY)

|      | MEAN | .001 | .000 | .005 | .010 | .014 | .007 | .003 | .001 | .000 | .000 | .000 | .000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MAX  | .003 | .000 | .028 | .052 | .072 | .029 | .018 | .004 | .001 | .000 | .002 | .000 | .000 |
| (WY) | 1993 | 1989 | 1993 | 1993 | 1992 | 1991 | 1989 | 1991 | 1991 | 1989 | 1995 | 1989 | 1989 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1989 | 1989 | 1989 | 1989 | 1989 | 1989 | 1990 | 1989 | 1989 | 1989 | 1989 | 1989 | 1989 |

## SUMMARY STATISTICS

## FOR 1994 CALENDAR YEAR

## FOR 1995 WATER YEAR

## WATER YEARS 1989 - 1995

|                          |           |            |      |             |
|--------------------------|-----------|------------|------|-------------|
| ANNUAL TOTAL             |           | 0.52       |      |             |
| ANNUAL MEAN              |           | .002       |      |             |
| HIGHEST ANNUAL MEAN      |           |            | .003 |             |
| LOWEST ANNUAL MEAN       |           |            | .009 | 1993        |
| HIGHEST DAILY MEAN       |           |            | .000 | 1990        |
| LOWEST DAILY MEAN        |           |            |      |             |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jan 1 | .32 Jan 4  | 1.0  | Feb 12 1992 |
| INSTANTANEOUS PEAK FLOW  | .00 Jan 1 | .00 Dec 15 | .00  | Oct 1 1988  |
| INSTANTANEOUS PEAK STAGE |           | .00 Dec 15 | .00  | Oct 1 1988  |
| ANNUAL RUNOFF (AC-FT)    |           | 1.6 Jan 4  | 11   | Apr 14 1989 |
| 10 PERCENT EXCEEDS       | .00       | 3.95 Jan 4 | 4.82 | Apr 14 1989 |
| 50 PERCENT EXCEEDS       | .00       | 1.0        | 2.4  |             |
| 90 PERCENT EXCEEDS       | .00       | .00        | .00  |             |

## ANTELOPE VALLEY

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
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  | .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  | .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  | .02  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | .12  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .16  | .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 | 0.16 | 0.00 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .005 | .000 | .005 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .16  | .00  | .12  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .3   | .00  | .3   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .000 | .005 | .009 | .012 | .006 | .002 | .000 | .000 | .000 | .000 | .000 |
| MAX  | .003 | .000 | .028 | .052 | .072 | .029 | .018 | .004 | .001 | .000 | .002 | .000 |
| (WY) | 1993 | 1989 | 1993 | 1993 | 1992 | 1991 | 1989 | 1991 | 1991 | 1989 | 1995 | 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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1989 - 1996

|                          |            |             |                  |
|--------------------------|------------|-------------|------------------|
| ANNUAL TOTAL             | 0.68       | 0.30        |                  |
| ANNUAL MEAN              | .002       | .001        | .003             |
| HIGHEST ANNUAL MEAN      |            |             | .009             |
| LOWEST ANNUAL MEAN       |            |             | .000             |
| HIGHEST DAILY MEAN       | .32 Jan 4  | .16 Dec 23  | 1.0 Feb 12 1992  |
| LOWEST DAILY MEAN        | .00 Jan 1  | .00 Oct 1   | .00 Oct 1 1988   |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jan 11 | .00 Oct 1   | .00 Oct 1 1988   |
| INSTANTANEOUS PEAK FLOW  |            | 2.4 Dec 23  | 11 Apr 14 1989   |
| INSTANTANEOUS PEAK STAGE |            | 4.06 Dec 23 | 4.82 Apr 14 1989 |
| ANNUAL RUNOFF (AC-FT)    | 1.3        | .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.

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

EXTREMES FOR 1995.--Maximum daily rainfall, 0.36 in. Jan. 4; no rainfall for many days.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 0.70 in. Feb. 20; no rainfall for many days.

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995  
 DAILY SUM VALUES  
 (NOT PREVIOUSLY PUBLISHED)

| 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  | .04  | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | --- | --- | ---  | .08  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | --- | --- | ---  | .36  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | --- | --- | ---  | .00  | .00  | .09  | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 7     | --- | --- | ---  | .13  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 8     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 9     | --- | --- | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 10    | --- | --- | ---  | .33  | .00  | .19  | .00  | .00  | .00  | .00  | .00  | .00  |
| 11    | --- | --- | ---  | .06  | .00  | .34  | .00  | .00  | .00  | .00  | .00  | .00  |
| 12    | --- | --- | ---  | .05  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | --- | --- | ---  | .00  | .00  | .00  | .04  | .00  | .00  | .00  | .00  | .00  |
| 14    | --- | --- | ---  | .00  | .06  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | --- | --- | .00  | .00  | .01  | .00  | .01  | .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  | .01  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | --- | --- | .00  | .08  | .00  | .09  | .00  | .00  | .00  | .00  | .06  | .00  |
| 22    | --- | --- | .04  | .02  | .00  | .00  | .00  | .00  | .00  | .00  | .08  | .00  |
| 23    | --- | --- | .00  | .07  | .00  | .26  | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | --- | --- | .00  | .15  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | --- | --- | .16  | .15  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .07  | .00  | .00  | .00  |
| 27    | --- | --- | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | --- | --- | .15  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | --- | --- | .00  | .00  | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | --- | --- | .00  | .00  | ---  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | --- | --- | .00  | .00  | ---  | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | --- | --- | 0.35 | 1.49 | 0.07 | 1.01 | 0.05 | 0.00 | 0.07 | 0.00 | 0.14 | 0.00 |

## ANTELOPE VALLEY

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

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY SUM VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | .01  | .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  | .04  | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00  | .01  | .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  | .01  | .00  | .01  | .02  | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .07  | .00  | .00  | .01  | .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  | .06  | .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  | .70  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .01  | .20  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .27  | .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  | .02  | .00  | .00  | .01  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00  | .04  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | .01  | .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  | .25  | ---  | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.35 | 0.32 | 1.00 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |



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

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

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

PERIOD OF RECORD.--November 1982 to current year. Daily discharges for 1986 published in Water-Resources Investigations Report 89-4033 as "Hot Creek Flume."

SPECIFIC CONDUCTANCE: Water years 1983-88.

WATER TEMPERATURE: Water years 1983-88.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 6,950 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 292 ft<sup>3</sup>/s, July 10, 1995, gage height, 3.50 ft; minimum daily, 29 ft<sup>3</sup>/s, several days in 1992.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft<sup>3</sup>/s or maximum:

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 5 | 1700 | 109                               | 1.92                | June 10 | 1015 | 198                               | 2.76                |
| May 18 | 1200 | 259                               | 3.25                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 76   | 59   | 55   | 54   | 52   | 51   | 54   | 87   | 115  | 104  | 79   | 68   |
| 2     | 75   | 59   | 55   | 54   | 52   | 51   | 58   | 78   | 111  | 105  | 78   | 67   |
| 3     | 74   | 58   | 55   | 55   | 51   | 51   | 55   | 72   | 119  | 109  | 77   | 66   |
| 4     | 73   | 58   | 56   | 55   | 59   | 50   | 54   | 71   | 146  | 119  | 77   | 66   |
| 5     | 73   | 58   | 56   | 53   | 88   | 42   | 54   | 71   | 169  | 124  | 77   | 66   |
| 6     | 72   | 58   | 56   | 52   | 72   | 44   | 55   | 73   | 179  | 115  | 75   | 65   |
| 7     | 71   | 57   | 55   | 52   | 64   | 49   | 56   | 77   | 176  | 111  | 75   | 64   |
| 8     | 71   | 58   | 55   | 51   | 59   | 52   | 57   | 88   | 176  | 110  | 75   | 64   |
| 9     | 70   | 58   | 55   | 52   | 57   | 54   | 59   | 95   | 183  | 109  | 74   | 64   |
| 10    | 69   | 57   | 55   | 53   | 56   | 56   | 59   | 101  | 191  | 110  | 74   | 63   |
| 11    | 69   | 57   | 58   | 53   | 55   | 57   | 58   | 99   | 188  | 114  | 74   | 62   |
| 12    | 69   | 57   | 93   | 53   | 54   | 55   | 59   | 100  | 172  | 115  | 75   | 62   |
| 13    | 67   | 56   | 82   | 53   | 53   | 54   | 59   | 104  | 151  | 122  | 75   | 63   |
| 14    | 67   | 57   | 72   | 53   | 52   | 53   | 60   | 117  | 144  | 118  | 76   | 62   |
| 15    | 67   | 60   | 65   | 53   | 51   | 52   | 61   | 132  | 154  | 111  | 76   | 61   |
| 16    | 67   | 59   | 64   | 53   | 52   | 53   | 65   | 205  | 162  | 92   | 76   | 61   |
| 17    | 67   | 59   | 57   | 53   | 52   | 55   | 66   | 230  | 158  | 87   | 75   | 61   |
| 18    | 66   | 59   | 58   | 53   | 51   | 59   | 66   | 227  | 142  | 88   | 73   | 59   |
| 19    | 66   | 59   | 57   | 53   | 53   | 59   | 62   | 192  | 131  | 88   | 72   | 58   |
| 20    | 66   | 59   | 54   | 54   | 49   | 62   | 60   | 152  | 129  | 83   | 71   | 57   |
| 21    | 65   | 58   | 51   | 54   | 51   | 62   | 59   | 133  | 133  | 82   | 70   | 57   |
| 22    | 65   | 57   | 50   | 51   | 48   | 59   | 59   | 120  | 143  | 81   | 70   | 56   |
| 23    | 65   | 57   | 52   | 51   | 51   | 54   | 60   | 115  | 130  | 81   | 69   | 56   |
| 24    | 66   | 57   | 52   | 50   | 51   | 52   | 62   | 103  | 124  | 82   | 69   | 56   |
| 25    | 66   | 57   | 52   | 46   | 53   | 52   | 65   | 96   | 116  | 83   | 69   | 56   |
| 26    | 65   | 57   | 51   | 50   | 52   | 51   | 68   | 92   | 118  | 82   | 67   | 56   |
| 27    | 64   | 56   | 52   | 52   | 52   | 51   | 68   | 91   | 116  | 82   | 67   | 55   |
| 28    | 63   | 57   | 52   | 49   | 51   | 52   | 59   | 91   | 101  | 84   | 66   | 55   |
| 29    | 62   | 56   | 53   | 51   | 51   | 50   | 63   | 89   | 95   | 83   | 70   | 55   |
| 30    | 61   | 55   | 56   | 53   | ---  | 53   | 71   | 84   | 99   | 83   | 68   | 55   |
| 31    | 60   | ---  | 56   | 53   | ---  | 52   | ---  | 109  | ---  | 81   | 67   | ---  |
| TOTAL | 2097 | 1729 | 1790 | 1622 | 1592 | 1647 | 1811 | 3504 | 4271 | 3038 | 2256 | 1816 |
| MEAN  | 67.6 | 57.6 | 57.7 | 52.3 | 54.9 | 53.1 | 60.4 | 113  | 142  | 98.0 | 72.8 | 60.5 |
| MAX   | 76   | 60   | 93   | 55   | 88   | 62   | 71   | 230  | 191  | 124  | 79   | 68   |
| MIN   | 60   | 55   | 50   | 46   | 48   | 42   | 54   | 71   | 95   | 81   | 66   | 55   |
| AC-FT | 4160 | 3430 | 3550 | 3220 | 3160 | 3270 | 3590 | 6950 | 8470 | 6030 | 4470 | 3600 |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 41.4 | 39.7 | 37.8 | 37.5 | 38.4 | 40.7 | 44.9 | 63.0 | 90.5 | 83.9 | 61.0 | 50.1 |
| MAX  | 67.6 | 57.6 | 57.7 | 52.3 | 54.9 | 53.1 | 60.4 | 113  | 159  | 214  | 135  | 92.7 |
| (WY) | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1995 | 1995 | 1995 | 1995 |
| MIN  | 31.8 | 32.4 | 29.6 | 31.9 | 32.7 | 35.0 | 35.4 | 38.4 | 44.5 | 38.4 | 35.6 | 32.6 |
| (WY) | 1995 | 1995 | 1993 | 1993 | 1993 | 1992 | 1992 | 1991 | 1992 | 1990 | 1994 | 1994 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1990 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 31488                  |  |  | 27173               |  |  |                         |  |  |
| ANNUAL MEAN              | 86.3                   |  |  | 74.2                |  |  | 52.5                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 79.1                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | 37.5                    |  |  |
| HIGHEST DAILY MEAN       | 283                    |  |  | Jul 10              |  |  | 283                     |  |  |
| LOWEST DAILY MEAN        | 34                     |  |  | Jan 1               |  |  | 29                      |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 34                     |  |  | Jan 1               |  |  | 29                      |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 48                  |  |  | May 18                  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 259                 |  |  | 292                     |  |  |
| ANNUAL RUNOFF (AC-FT)    | 62460                  |  |  | 3.25                |  |  | May 18                  |  |  |
| 10 PERCENT EXCEEDS       | 177                    |  |  | 53900               |  |  | 3.50                    |  |  |
| 50 PERCENT EXCEEDS       | 62                     |  |  | 116                 |  |  | 38020                   |  |  |
| 90 PERCENT EXCEEDS       | 37                     |  |  | 62                  |  |  | 88                      |  |  |
|                          |                        |  |  | 52                  |  |  | 39                      |  |  |
|                          |                        |  |  |                     |  |  | 33                      |  |  |

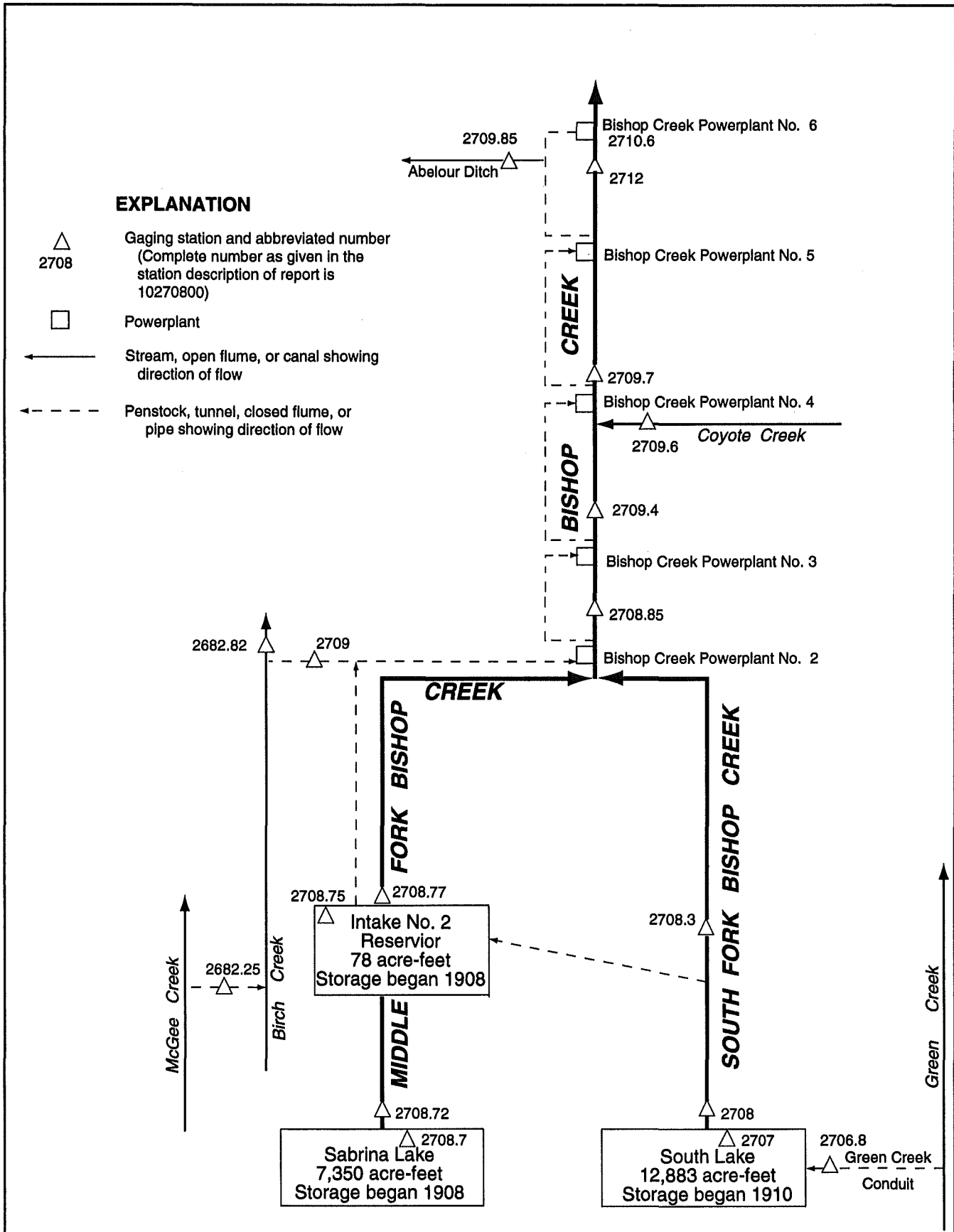


Figure 14. Diversions and storage in Bishop Creek basin.

## 10268225 MCGEE CREEK DIVERSION NEAR BISHOP, CA

LOCATION.--Lat 37°16'32", long 118°37'09", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 5 ft downstream from outlet of diversion pipe, 80 ft upstream from tributary to Birch Creek, and 13.5 mi southwest of Bishop.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Cipolletti weir. Elevation of gage is 8,630 ft above sea level, 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). See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 22 ft<sup>3</sup>/s, July 10, 11, 1995; no discharge Oct. 1, 1994, to June 11, 1995, Nov. 8, 1995, to May 14, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|------|------|------|------|------|------|-------|-------|------|-------|-------|
| 1     | 2.8   | .54  | .00  | .00  | .00  | .00  | .00  | .00   | e5.2  | 13   | 13    | 5.7   |
| 2     | 2.6   | .57  | .00  | .00  | .00  | .00  | .00  | .00   | e6.0  | 15   | 13    | 5.7   |
| 3     | 2.4   | .51  | .00  | .00  | .00  | .00  | .00  | .00   | e6.8  | 16   | 12    | 5.4   |
| 4     | 2.2   | .47  | .00  | .00  | .00  | .00  | .00  | .00   | 8.0   | 16   | 11    | 5.1   |
| 5     | 2.2   | .40  | .00  | .00  | .00  | .00  | .00  | .00   | 10    | 17   | 9.8   | 4.7   |
| 6     | 2.0   | .36  | .00  | .00  | .00  | .00  | .00  | .00   | 13    | 19   | 9.6   | 4.4   |
| 7     | 1.9   | .19  | .00  | .00  | .00  | .00  | .00  | .00   | 15    | 19   | 9.3   | 4.2   |
| 8     | 1.8   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 17    | 19   | 8.9   | 4.1   |
| 9     | 1.7   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 18    | 19   | 8.6   | 3.0   |
| 10    | 1.7   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 18    | 19   | 8.5   | 4.0   |
| 11    | 1.5   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 18    | 19   | 8.1   | 4.0   |
| 12    | 1.4   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 18    | 19   | 8.1   | 3.9   |
| 13    | 1.4   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 18    | 19   | 8.6   | 3.8   |
| 14    | 1.3   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 18    | 18   | 9.0   | 4.0   |
| 15    | 1.3   | .00  | .00  | .00  | .00  | .00  | .00  | e4.4  | 18    | 18   | 9.6   | 3.9   |
| 16    | 1.2   | .00  | .00  | .00  | .00  | .00  | .00  | e6.8  | 18    | 18   | 9.4   | 3.8   |
| 17    | 1.1   | .00  | .00  | .00  | .00  | .00  | .00  | e6.4  | 18    | 16   | 8.9   | 3.8   |
| 18    | 1.1   | .00  | .00  | .00  | .00  | .00  | .00  | e6.2  | 16    | 15   | 8.4   | 3.7   |
| 19    | 1.1   | .00  | .00  | .00  | .00  | .00  | .00  | e5.8  | 18    | 14   | 7.8   | 3.6   |
| 20    | .99   | .00  | .00  | .00  | .00  | .00  | .00  | e5.6  | 18    | 13   | 7.3   | 3.5   |
| 21    | .95   | .00  | .00  | .00  | .00  | .00  | .00  | e5.6  | 18    | 13   | 6.8   | 3.4   |
| 22    | .87   | .00  | .00  | .00  | .00  | .00  | .00  | e5.4  | 17    | 13   | 6.5   | 3.3   |
| 23    | .83   | .00  | .00  | .00  | .00  | .00  | .00  | e5.4  | 16    | 14   | 6.3   | 3.3   |
| 24    | .84   | .00  | .00  | .00  | .00  | .00  | .00  | e5.2  | 16    | 14   | 6.2   | 3.3   |
| 25    | .84   | .00  | .00  | .00  | .00  | .00  | .00  | e5.2  | 16    | 14   | 6.1   | 3.2   |
| 26    | .76   | .00  | .00  | .00  | .00  | .00  | .00  | e5.0  | 14    | 14   | 5.9   | 3.1   |
| 27    | .74   | .00  | .00  | .00  | .00  | .00  | .00  | e4.8  | 12    | 13   | 5.9   | 3.1   |
| 28    | .74   | .00  | .00  | .00  | .00  | .00  | .00  | e4.8  | 10    | 15   | 5.7   | 3.1   |
| 29    | .68   | .00  | .00  | .00  | .00  | .00  | .00  | e4.7  | 9.8   | 14   | 5.6   | 3.0   |
| 30    | .61   | .00  | .00  | .00  | ---  | .00  | .00  | e4.7  | 11    | 13   | 5.6   | 3.0   |
| 31    | .54   | ---  | .00  | .00  | ---  | .00  | ---  | e4.5  | ---   | 13   | 5.6   | ---   |
| TOTAL | 42.09 | 3.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 90.50 | 434.8 | 491  | 255.1 | 116.1 |
| MEAN  | 1.36  | .10  | .000 | .000 | .000 | .000 | .000 | 2.92  | 14.5  | 15.8 | 8.23  | 3.87  |
| MAX   | 2.8   | .57  | .00  | .00  | .00  | .00  | .00  | 6.8   | 18    | 19   | 13    | 5.7   |
| MIN   | .54   | .00  | .00  | .00  | .00  | .00  | .00  | .00   | 5.2   | 13   | 5.6   | 3.0   |
| AC-FT | 83    | 6.0  | .00  | .00  | .00  | .00  | .00  | 180   | 862   | 974  | 506   | 230   |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.03 | .90  | .70  | .53  | .48  | .59  | 1.00 | 3.01 | 8.39 | 11.2 | 7.09 | 4.76 |
| MAX  | 3.94 | 1.51 | 1.20 | .88  | .83  | 1.01 | 1.88 | 5.57 | 14.5 | 17.1 | 11.0 | 7.71 |
| (WY) | 1993 | 1994 | 1994 | 1994 | 1994 | 1994 | 1994 | 1993 | 1996 | 1995 | 1995 | 1993 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | 4.22 | 5.55 | 4.63 | 2.71 |
| (WY) | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1992 | 1992 | 1992 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1991 - 1996

|                          |           |           |                 |
|--------------------------|-----------|-----------|-----------------|
| ANNUAL TOTAL             | 1220.43   | 1432.63   |                 |
| ANNUAL MEAN              | 3.34      | 3.91      | 3.41            |
| HIGHEST ANNUAL MEAN      |           |           | 4.67            |
| LOWEST ANNUAL MEAN       |           |           | 2.58            |
| HIGHEST DAILY MEAN       | 22        | 19        | 22              |
| LOWEST DAILY MEAN        | .00 Jan 1 | .00 Nov 8 | .00 Jul 10 1995 |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jan 1 | .00 Nov 8 | .00 Oct 1 1994  |
| ANNUAL RUNOFF (AC-FT)    | 2420      | 2840      | 2470            |
| 10 PERCENT EXCEEDS       | 15        | 15        | 9.4             |
| 50 PERCENT EXCEEDS       | .00       | .00       | 1.4             |
| 90 PERCENT EXCEEDS       | .00       | .00       | .00             |

e Estimated.

## 10268282 BIRCH CREEK BELOW DIVERSION DAM, NEAR BISHOP, CA

LOCATION.--Lat 37°16'42", long 118°36'40", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank below diversion dam at convergence of Birch Creek and tributary to Birch Creek, and 13.9 mi southwest of Bishop.

PERIOD OF RECORD.--October 1995 to September 1996.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 8,290 ft above sea level, from topographic map.

REMARKS.--Water from McGee Creek enters Birch Creek via McGee Creek Diversion (station 10268225) 0.5 mi upstream from Birch Creek Diversion Dam. Most of the water is diverted 15 ft upstream at Birch Creek Diversion Dam to Bishop Creek Powerplant No. 2 for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14 ft<sup>3</sup>/s, June 10, 1996; minimum daily, 0.36 ft<sup>3</sup>/s, several days in 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL    | AUG   | SEP   |
|-------|-----|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|
| 1     | --- | .67   | .76   | e.82  | .76   | .82   | .75   | .75   | .36    | .38    | 4.7   | .38   |
| 2     | --- | .66   | .76   | e.82  | .76   | .82   | .75   | .79   | .36    | .78    | 4.8   | .38   |
| 3     | --- | .67   | .76   | e.82  | .76   | .82   | .73   | .79   | .37    | 5.4    | 4.9   | .36   |
| 4     | --- | .66   | .76   | e.82  | .76   | .81   | .73   | .80   | .44    | 9.5    | 4.6   | .42   |
| 5     | --- | .65   | .72   | e.82  | .76   | .80   | .73   | .79   | .36    | 7.8    | 4.2   | .80   |
| 6     | --- | .65   | .76   | e.82  | .76   | .79   | .73   | .79   | .37    | 5.9    | 3.9   | 1.7   |
| 7     | --- | .66   | .76   | e.82  | .76   | .77   | .73   | .80   | 1.9    | 7.3    | 3.8   | 2.0   |
| 8     | --- | .68   | .76   | e.82  | .76   | .76   | .74   | .81   | 10     | 8.0    | 3.6   | 1.8   |
| 9     | --- | .85   | .76   | e.82  | .76   | .76   | .73   | .82   | 11     | 7.5    | 2.1   | 1.2   |
| 10    | --- | .86   | .76   | e.82  | .76   | .76   | .73   | .79   | 9.5    | 9.1    | .54   | .38   |
| 11    | --- | .78   | .71   | e.82  | .76   | .76   | .73   | .80   | 9.4    | 10     | .55   | .38   |
| 12    | --- | .77   | 1.2   | e.82  | .81   | .76   | .73   | .81   | 7.7    | 9.3    | .48   | .38   |
| 13    | --- | .76   | .61   | e.82  | .82   | .76   | .73   | .80   | 5.2    | 8.9    | .43   | .38   |
| 14    | --- | .76   | .61   | e.82  | .82   | .76   | .73   | .80   | 4.7    | 9.2    | .42   | .38   |
| 15    | --- | .76   | .73   | .78   | .82   | .76   | .73   | 1.0   | 4.7    | 7.5    | .42   | .43   |
| 16    | --- | .76   | .85   | .79   | .82   | .76   | .73   | 1.2   | 4.7    | 7.4    | .41   | 2.3   |
| 17    | --- | .76   | .85   | .79   | .82   | .76   | .73   | 1.2   | 4.2    | 8.2    | .41   | 3.5   |
| 18    | --- | .76   | .85   | .79   | .82   | .76   | .72   | 1.3   | 2.1    | 8.3    | .40   | 2.7   |
| 19    | --- | .76   | .85   | .79   | .84   | .76   | .71   | 1.3   | 3.7    | 6.3    | .40   | .38   |
| 20    | --- | .76   | .85   | .77   | .85   | .76   | .70   | 1.2   | 4.3    | 5.2    | .39   | .38   |
| 21    | --- | .78   | .85   | .79   | .82   | .76   | .70   | 1.2   | 4.4    | 5.5    | .38   | .38   |
| 22    | --- | .78   | .85   | .76   | .81   | .76   | .70   | 1.2   | 2.9    | 5.6    | .38   | .38   |
| 23    | --- | .73   | .85   | .76   | .82   | .76   | .68   | 1.2   | 2.8    | 6.1    | .38   | .38   |
| 24    | --- | .73   | .84   | .78   | .82   | .76   | .71   | 1.1   | 3.4    | 6.7    | .38   | .38   |
| 25    | .95 | .71   | .83   | .76   | .82   | .76   | .73   | 1.1   | 2.1    | 6.8    | .38   | .38   |
| 26    | .96 | .74   | e.85  | .76   | .82   | .73   | .71   | 1.1   | .38    | 6.8    | .38   | .38   |
| 27    | .80 | .76   | e.85  | .76   | .82   | .73   | .71   | 1.1   | .36    | 6.9    | .38   | .38   |
| 28    | .67 | .76   | e.85  | .76   | .82   | .74   | .70   | 1.2   | .36    | 7.5    | .38   | .38   |
| 29    | .67 | .77   | e.85  | .76   | .82   | .73   | .71   | 3.0   | .36    | 7.7    | .38   | .38   |
| 30    | .67 | .76   | e.85  | .76   | ---   | .73   | .70   | .49   | .36    | 6.1    | .38   | .38   |
| 31    | .67 | ---   | e.85  | .76   | ---   | .74   | ---   | .36   | ---    | 4.5    | .38   | ---   |
| TOTAL | --- | 22.16 | 24.99 | 24.60 | 23.15 | 23.71 | 21.64 | 31.39 | 102.78 | 212.16 | 45.63 | 24.43 |
| MEAN  | --- | .74   | .81   | .79   | .80   | .76   | .72   | 1.01  | 3.43   | 6.84   | 1.47  | .81   |
| MAX   | --- | .86   | 1.2   | .82   | .85   | .82   | .75   | 3.0   | 11     | 10     | 4.9   | 3.5   |
| MIN   | --- | .65   | .61   | .76   | .76   | .73   | .68   | .36   | .36    | .38    | .38   | .36   |
| AC-FT | --- | 44    | 50    | 49    | 46    | 47    | 43    | 62    | 204    | 421    | 91    | 48    |

e Estimated.

## 10270680 GREEN CREEK CONDUIT OUTLET NEAR BISHOP, CA

LOCATION.--Lat 37°10'14", long 118°33'50", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank 75 ft downstream from outlet of diversion pipe, 0.1 mi upstream from South Lake, and 16.2 mi southwest of Bishop.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 9,800 ft above sea level, from topographic map.

REMARKS.--Flow limited by size of diversion pipe from Green Creek. Water is used for power development downstream from South lake. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 6.9 ft<sup>3</sup>/s, June 9, 1996, no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY   | JUN    | JUL  | AUG   | SEP   |
|-------|------|------|------|------|------|------|------|-------|--------|------|-------|-------|
| 1     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.07  | .95    | 2.7  | 2.1   | .82   |
| 2     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.18  | .99    | 3.0  | 2.0   | .80   |
| 3     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.21  | .82    | 3.5  | 1.9   | .72   |
| 4     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.23  | .66    | 3.8  | 1.7   | .62   |
| 5     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.30  | 3.0    | 3.7  | 1.7   | .53   |
| 6     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.33  | 6.2    | 3.6  | 1.6   | .56   |
| 7     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | e.37  | 6.7    | 3.5  | 1.6   | .61   |
| 8     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .49   | 6.8    | 3.4  | 1.4   | .62   |
| 9     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .51   | 6.9    | 3.4  | 1.4   | .62   |
| 10    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .57   | 6.8    | 3.5  | 1.4   | .62   |
| 11    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .77   | 6.4    | 3.3  | 1.4   | .59   |
| 12    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 1.0   | 6.1    | 3.4  | 1.4   | .55   |
| 13    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 1.1   | 6.0    | 3.4  | 1.4   | .51   |
| 14    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 1.1   | 6.1    | 3.4  | 1.4   | .58   |
| 15    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 1.1   | 6.1    | 3.2  | 1.4   | .59   |
| 16    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 1.0   | 5.7    | 3.0  | 1.4   | .52   |
| 17    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .77   | 5.3    | 2.8  | 1.4   | .49   |
| 18    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .81   | 5.0    | 2.5  | 1.4   | .49   |
| 19    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .66   | 4.8    | 2.3  | 1.2   | .51   |
| 20    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .69   | 4.8    | 2.2  | 1.1   | .53   |
| 21    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .73   | 4.7    | 2.1  | 1.1   | .51   |
| 22    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .73   | 4.4    | 2.0  | 1.0   | .45   |
| 23    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .60   | 4.2    | 2.0  | .92   | .43   |
| 24    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .54   | 4.1    | 2.1  | .88   | .41   |
| 25    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .46   | 3.9    | 2.2  | .92   | .41   |
| 26    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .43   | 3.9    | 2.2  | .99   | .41   |
| 27    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .46   | 3.8    | 2.3  | .97   | .41   |
| 28    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .46   | 3.3    | 2.7  | .93   | .41   |
| 29    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .54   | 2.9    | 2.6  | .91   | .41   |
| 30    | .00  | .00  | .00  | .00  | ---  | .00  | .00  | .62   | 2.6    | 2.4  | .86   | .39   |
| 31    | .00  | ---  | .00  | .00  | ---  | .00  | ---  | .72   | ---    | 2.3  | .83   | ---   |
| TOTAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.55 | 133.92 | 88.5 | 40.61 | 16.12 |
| MEAN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .60   | 4.46   | 2.85 | 1.31  | .54   |
| MAX   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 1.1   | 6.9    | 3.8  | 2.1   | .82   |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .07   | .66    | 2.0  | .83   | .39   |
| AC-FT | .00  | .00  | .00  | .00  | .00  | .00  | .00  | 37    | 266    | 176  | 81    | 32    |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | MEAN | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .000 | .000 | .000 | .000 | .000 | .002 | .56  | 2.06 | 1.64 | .57  | .17  |
| MAX  | .000 | .000 | .000 | .000 | .000 | .000 | .015 | .92  | 4.46 | 4.04 | 1.39 | .54  |
| (WY) | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1992 | 1992 | 1996 | 1993 | 1993 | 1996 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .96  | .45  | .083 | .000 |
| (WY) | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1992 | 1995 | 1995 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1991 - 1996

|                          |            |           |                |
|--------------------------|------------|-----------|----------------|
| ANNUAL TOTAL             | 94.27      | 297.70    |                |
| ANNUAL MEAN              | .26        | .81       | .42            |
| HIGHEST ANNUAL MEAN      |            |           | .81            |
| LOWEST ANNUAL MEAN       |            |           | .18            |
| HIGHEST DAILY MEAN       | 2.2 Jun 25 | 6.9 Jun 9 | 6.9 Jun 9 1996 |
| 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)    | 187        | 590       | 304            |
| 10 PERCENT EXCEEDS       | 1.3        | 3.1       | 1.4            |
| 50 PERCENT EXCEEDS       | .00        | .00       | .00            |
| 90 PERCENT EXCEEDS       | .00        | .00       | .00            |

e Estimated.

## 10270700 SOUTH LAKE NEAR BISHOP, CA

LOCATION.--Lat 37°10'21", long 118°33'52", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, near spillway at right abutment of Hillside Dam on South Fork Bishop Creek and 16.0 mi southwest of Bishop.

DRAINAGE AREA.--12.9 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 sea level (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 12,883 acre-ft between elevations 9,621.20 ft, invert of outlet tunnel, and 9,751.31 ft, crest of spillway. Water is received from Green Creek via Green Creek Conduit (station 10270680). Figures given represent usable contents. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 13,038 acre-ft, Aug. 4, 1993, elevation, 9,752.21 ft; minimum, 280 acre-ft, Apr. 18-25, 1993, elevation, unknown.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,971 acre-ft, July 28, elevation, 9,751.82 ft; minimum, 2,445 acre-ft, Apr. 30, elevation, 9,664.96 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 12623   | 12378   | 11912   | 11470   | 9832    | 7785    | 4778    | 2464    | 4367    | 10081   | 12938   | 12921   |
| 2   | 12615   | 12364   | 11895   | 11456   | 9766    | 7680    | 4670    | 2515    | 4475    | 10254   | 12929   | 12917   |
| 3   | 12613   | 12349   | 11876   | 11442   | 9705    | 7580    | 4557    | 2559    | 4613    | 10489   | 12914   | 12910   |
| 4   | 12599   | 12342   | 11866   | 11422   | 9659    | 7476    | 4446    | 2605    | 4799    | 10728   | 12903   | 12888   |
| 5   | 12592   | 12322   | 11843   | 11392   | 9596    | 7382    | 4333    | 2646    | 5038    | 10945   | 12888   | 12889   |
| 6   | 12582   | 12298   | 11818   | 11374   | 9539    | 7275    | 4226    | 2682    | 5321    | 11161   | 12876   | 12881   |
| 7   | 12578   | 12276   | 11803   | 11364   | 9478    | 7184    | 4121    | 2725    | 5625    | 11384   | 12881   | 12870   |
| 8   | 12577   | 12272   | 11783   | 11351   | 9415    | 7078    | 4023    | 2766    | 5938    | 11602   | 12889   | 12851   |
| 9   | 12573   | 12248   | 11756   | 11331   | 9344    | 6981    | 3926    | 2816    | 6253    | 11826   | 12898   | 12824   |
| 10  | 12573   | 12236   | 11737   | 11306   | 9272    | 6872    | 3821    | 2878    | 6533    | 12030   | 12898   | 12803   |
| 11  | 12561   | 12228   | 11729   | 11249   | 9200    | 6772    | 3726    | 2964    | 6775    | 12221   | 12896   | 12777   |
| 12  | 12556   | 12213   | 11752   | 11178   | 9131    | 6672    | 3620    | 3077    | 7000    | 12410   | 12896   | 12744   |
| 13  | 12551   | 12194   | 11749   | 11097   | 9053    | 6581    | 3526    | 3204    | 7236    | 12580   | 12912   | 12711   |
| 14  | 12549   | 12179   | 11754   | 11027   | 8981    | 6488    | 3432    | 3356    | 7485    | 12751   | 12917   | 12699   |
| 15  | 12542   | 12165   | 11734   | 10947   | 8904    | 6390    | 3338    | 3543    | 7721    | 12865   | 12919   | 12658   |
| 16  | 12535   | 12155   | 11729   | 10872   | 8828    | 6301    | 3257    | 3740    | 7947    | 12931   | 12919   | 12623   |
| 17  | 12534   | 12145   | 11716   | 10822   | 8740    | 6205    | 3180    | 3873    | 8138    | 12941   | 12919   | 12606   |
| 18  | 12530   | 12126   | 11706   | 10762   | 8670    | 6109    | 3087    | 4003    | 8333    | 12934   | 12912   | 12542   |
| 19  | 12520   | 12112   | 11686   | 10674   | 8622    | 6015    | 2992    | 4071    | 8527    | 12929   | 12896   | 12446   |
| 20  | 12511   | 12096   | 11664   | 10607   | 8575    | 5925    | 2904    | 4118    | 8725    | 12924   | 12888   | 12345   |
| 21  | 12503   | 12075   | 11642   | 10541   | 8526    | 5824    | 2813    | 4163    | 8904    | 12922   | 12876   | 12241   |
| 22  | 12486   | 12063   | 11634   | 10470   | 8455    | 5724    | 2726    | 4202    | 9079    | 12926   | 12860   | 12138   |
| 23  | 12477   | 12052   | 11607   | 10411   | 8407    | 5623    | 2648    | 4219    | 9250    | 12929   | 12860   | 12035   |
| 24  | 12465   | 12035   | 11599   | 10342   | 8326    | 5537    | 2579    | 4235    | 9404    | 12934   | 12881   | 11932   |
| 25  | 12462   | 12008   | 11589   | 10288   | 8259    | 5438    | 2536    | 4237    | 9542    | 12940   | 12898   | 11829   |
| 26  | 12453   | 11984   | 11572   | 10222   | 8177    | 5354    | 2506    | 4238    | 9648    | 12943   | 12914   | 11727   |
| 27  | 12443   | 11972   | 11566   | 10159   | 8083    | 5255    | 2485    | 4237    | 9724    | 12948   | 12922   | 11621   |
| 28  | 12427   | 11961   | 11543   | 10097   | 7983    | 5156    | 2462    | 4243    | 9798    | 12971   | 12924   | 11521   |
| 29  | 12417   | 11950   | 11533   | 10038   | 7883    | 5067    | 2449    | 4254    | 9868    | 12967   | 12927   | 11422   |
| 30  | 12414   | 11934   | 11514   | 9967    | ---     | 4972    | 2445    | 4272    | 9967    | 12953   | 12924   | 11313   |
| 31  | 12397   | ---     | 11485   | 9900    | ---     | 4878    | ---     | 4300    | ---     | 12941   | 12924   | ---     |
| MAX | 12623   | 12378   | 11912   | 11470   | 9832    | 7785    | 4778    | 4300    | 9967    | 12971   | 12938   | 12921   |
| MIN | 12397   | 11934   | 11485   | 9900    | 7883    | 4878    | 2445    | 2464    | 4367    | 10081   | 12860   | 11313   |
| a   | 9748.49 | 9745.76 | 9743.07 | 9733.26 | 9719.79 | 9693.48 | 9664.96 | 9687.56 | 9733.69 | 9751.65 | 9751.55 | 9742.03 |
| b   | -250    | -463    | -449    | -1585   | -2017   | -3005   | -2433   | +1855   | +5667   | +2974   | -17     | -1611   |

CAL YR 1995 MAX 13002 MIN 989 b +1867  
WTR YR 1996 MAX 12971 MIN 2445 b -1334

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 sea level, from topographic map.

REMARKS.--Flow regulated by South Lake (station 10270700). Green Creek Conduit (station 10270680) diverts water into basin at South Lake. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 142 ft<sup>3</sup>/s, July 31, 1995, gage height, 1.44 ft; minimum daily, 6.7 ft<sup>3</sup>/s, Apr. 4, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 27   | 16   | 13   | 18   | 42   | 58   | 57   | 46   | 42   | 22   | 73   | 28   |
| 2     | 23   | 16   | 13   | 17   | 42   | 57   | 64   | 33   | 42   | 22   | 72   | 27   |
| 3     | 20   | 16   | 14   | 17   | 42   | 56   | 63   | 33   | 42   | 22   | 69   | 27   |
| 4     | 20   | 16   | 15   | 17   | 42   | 56   | 63   | 33   | 42   | 22   | 64   | 26   |
| 5     | 20   | 18   | 16   | 17   | 42   | 56   | 62   | 35   | 37   | 22   | 61   | 25   |
| 6     | 16   | 20   | 16   | 17   | 42   | 57   | 62   | 37   | 35   | 22   | 56   | 29   |
| 7     | 14   | 18   | 16   | 17   | 42   | 57   | 61   | 37   | 35   | 22   | 45   | 28   |
| 8     | 14   | 15   | 17   | 17   | 42   | 56   | 60   | 37   | 36   | 22   | 43   | 28   |
| 9     | 14   | 15   | 17   | 17   | 42   | 56   | 60   | 38   | 36   | 22   | 43   | 28   |
| 10    | 14   | 15   | 17   | 17   | 42   | 56   | 60   | 38   | 34   | 23   | 43   | 28   |
| 11    | 14   | 14   | 17   | 33   | 42   | 56   | 60   | 38   | 30   | 23   | 43   | 27   |
| 12    | 14   | 14   | 18   | 43   | 43   | 55   | 59   | 39   | 27   | 23   | 43   | 28   |
| 13    | 14   | 14   | 18   | 44   | 44   | 56   | 59   | 42   | 27   | 24   | 45   | 33   |
| 14    | 14   | 14   | 19   | 43   | 44   | 59   | 59   | 44   | 27   | 24   | 47   | 29   |
| 15    | 14   | 14   | 18   | 42   | 44   | 57   | 58   | 29   | 27   | 50   | 48   | 29   |
| 16    | 14   | 14   | 18   | 43   | 44   | 56   | 59   | 22   | 28   | 67   | 49   | 29   |
| 17    | 14   | 14   | 18   | 43   | 44   | 55   | 59   | 21   | 28   | 79   | 49   | 29   |
| 18    | 14   | 14   | 18   | 43   | 44   | 55   | 59   | 21   | 23   | 76   | 47   | 42   |
| 19    | 14   | 14   | 18   | 43   | 45   | 55   | 57   | 30   | 22   | 71   | 45   | 60   |
| 20    | 14   | 14   | 18   | 43   | 46   | 54   | 56   | 38   | 22   | 67   | 42   | 62   |
| 21    | 14   | 14   | 18   | 43   | 47   | 53   | 55   | 38   | 22   | 66   | 42   | 62   |
| 22    | 14   | 14   | 19   | 43   | 45   | 54   | 55   | 38   | 22   | 66   | 37   | 62   |
| 23    | 14   | 14   | 19   | 43   | 44   | 55   | 54   | 38   | 22   | 67   | 24   | 62   |
| 24    | 14   | 14   | 19   | 43   | 43   | 54   | 52   | 40   | 23   | 71   | 19   | 62   |
| 25    | 14   | 14   | 19   | 43   | 43   | 54   | 51   | 42   | 22   | 73   | 20   | 61   |
| 26    | 14   | 14   | 19   | 43   | 47   | 54   | 51   | 42   | 22   | 75   | 25   | 60   |
| 27    | 14   | 14   | 19   | 43   | 54   | 53   | 52   | 42   | 22   | 77   | 27   | 60   |
| 28    | 14   | 14   | 18   | 43   | 58   | 53   | 52   | 42   | 22   | 97   | 30   | 60   |
| 29    | 14   | 14   | 18   | 42   | 58   | 55   | 52   | 42   | 22   | 94   | 29   | 59   |
| 30    | 15   | 14   | 18   | 42   | ---  | 54   | 52   | 42   | 22   | 86   | 29   | 59   |
| 31    | 16   | ---  | 18   | 42   | ---  | 53   | ---  | 42   | ---  | 77   | 28   | ---  |
| TOTAL | 479  | 445  | 538  | 1061 | 1299 | 1715 | 1723 | 1139 | 863  | 1574 | 1337 | 1249 |
| MEAN  | 15.5 | 14.8 | 17.4 | 34.2 | 44.8 | 55.3 | 57.4 | 36.7 | 28.8 | 50.8 | 43.1 | 41.6 |
| MAX   | 27   | 20   | 19   | 44   | 58   | 59   | 64   | 46   | 42   | 97   | 73   | 62   |
| MIN   | 14   | 14   | 13   | 17   | 42   | 53   | 51   | 21   | 22   | 22   | 19   | 25   |
| AC-FT | 950  | 883  | 1070 | 2100 | 2580 | 3400 | 3420 | 2260 | 1710 | 3120 | 2650 | 2480 |



## 10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 22.4 | 17.0 | 19.4 | 22.5 | 29.2 | 26.1 | 25.9 | 23.8 | 18.9 | 30.7 | 42.9 | 33.4 |
| MAX  | 41.0 | 24.0 | 32.6 | 35.8 | 54.2 | 55.3 | 57.4 | 36.7 | 28.8 | 61.4 | 87.7 | 41.6 |
| (WY) | 1992 | 1994 | 1994 | 1993 | 1993 | 1996 | 1996 | 1996 | 1996 | 1995 | 1995 | 1996 |
| MIN  | 10.8 | 10.6 | 9.98 | 7.59 | 7.45 | 7.75 | 7.74 | 10.6 | 7.70 | 9.45 | 20.5 | 26.4 |
| (WY) | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1992 | 1994 | 1991 | 1991 | 1991 | 1991 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 14029                  |  |  |  | 13422               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 38.4                   |  |  |  | 36.7                |  |  |  | 26.0                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 38.7                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 12.4                    |  |  |  |
| HIGHEST DAILY MEAN       | 139                    |  |  |  | 97                  |  |  |  | 139                     |  |  |  |
| LOWEST DAILY MEAN        | 13                     |  |  |  | 13                  |  |  |  | 6.7                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 14                     |  |  |  | 14                  |  |  |  | 6.9                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 99                  |  |  |  | 142                     |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 1.14                |  |  |  | 1.44                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 27830                  |  |  |  | 26620               |  |  |  | 18850                   |  |  |  |
| 10 PERCENT EXCEEDS       | 70                     |  |  |  | 60                  |  |  |  | 53                      |  |  |  |
| 50 PERCENT EXCEEDS       | 33                     |  |  |  | 38                  |  |  |  | 20                      |  |  |  |
| 90 PERCENT EXCEEDS       | 14                     |  |  |  | 14                  |  |  |  | 8.7                     |  |  |  |

## 10270830 SOUTH FORK BISHOP CREEK BELOW SOUTH FORK DIVERSION DAM, NEAR BISHOP, CA

LOCATION.--Lat 37°14'27", long 118°33'52", in SE 1/4 NW 1/4 sec.22, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank at diversion dam and aqueduct, and 10.5 mi southwest of Bishop.

DRAINAGE AREA.--27.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year (low flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,130 ft above sea level, from topographic map.

REMARKS.--No records computed above 25 ft<sup>3</sup>/s. Flow regulated by South Lake (station 10270700). Most of the water is diverted by South Fork Diversion Dam to Intake No. 2 Reservoir (station 10270875) for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|------|------|------|------|-------|
| 1     | 12   | 11    | 8.1   | 8.4   | 8.5   | 8.7   | 8.9   | 11   | 12   | 11   | 14   | 13    |
| 2     | 11   | 10    | 8.0   | 8.3   | 8.4   | 8.8   | 9.0   | 11   | 13   | 11   | 14   | 13    |
| 3     | 11   | 9.6   | 8.0   | 8.2   | 8.4   | 8.8   | 9.0   | 11   | 13   | 11   | 14   | 13    |
| 4     | 10   | 9.6   | 8.1   | 8.2   | 8.6   | 8.8   | 9.0   | 11   | 13   | 11   | 14   | 13    |
| 5     | 11   | 9.7   | 8.1   | 8.2   | 8.7   | 8.8   | 9.0   | 11   | 13   | 11   | 14   | 13    |
| 6     | 11   | 9.8   | 8.1   | 8.2   | 8.6   | 8.9   | 9.1   | 11   | 13   | 11   | 13   | 12    |
| 7     | 11   | 8.9   | 8.1   | 8.1   | 8.6   | 9.0   | 9.1   | 11   | 13   | 11   | 13   | 11    |
| 8     | 11   | 8.1   | 8.1   | 8.2   | 8.6   | 9.0   | 9.2   | 11   | 13   | 11   | 13   | 11    |
| 9     | 11   | 8.3   | 8.0   | 8.2   | 8.7   | 8.9   | 9.1   | 11   | 13   | 11   | 12   | 11    |
| 10    | 11   | 8.4   | 8.1   | 8.2   | 8.6   | 8.8   | 9.1   | 11   | 13   | 11   | 12   | 11    |
| 11    | 11   | 8.4   | 8.1   | 8.3   | 8.6   | 8.8   | 9.1   | 11   | 12   | 11   | 11   | 11    |
| 12    | 11   | 8.4   | 8.6   | 7.8   | 8.6   | 8.7   | 9.1   | 12   | 12   | 11   | 11   | 11    |
| 13    | 11   | 8.5   | 8.1   | 7.8   | 8.8   | 8.7   | 9.0   | 12   | 12   | 11   | 12   | 12    |
| 14    | 11   | 8.3   | 8.1   | 7.8   | 8.3   | 8.8   | 9.1   | 12   | 13   | 11   | 12   | 11    |
| 15    | 11   | 8.1   | 8.1   | 7.8   | 7.8   | 8.8   | 9.0   | 11   | 13   | 13   | 12   | 11    |
| 16    | 11   | 8.1   | 8.1   | 7.7   | 7.9   | 8.9   | 9.0   | 11   | 13   | 14   | 12   | 8.0   |
| 17    | 11   | 8.2   | 8.1   | 7.7   | 8.1   | 8.9   | 9.0   | 11   | 13   | 14   | 12   | 5.3   |
| 18    | 11   | 8.1   | 8.1   | 7.8   | 8.2   | 9.0   | 8.9   | 11   | 13   | 14   | 12   | e10   |
| 19    | 11   | 8.1   | 8.2   | 8.0   | 8.2   | 9.0   | 8.8   | 11   | 12   | 14   | 12   | e18   |
| 20    | 11   | 8.1   | 8.1   | 8.3   | 8.3   | 9.0   | 8.8   | 11   | 12   | 14   | 11   | e20   |
| 21    | 11   | 8.0   | 8.0   | 8.4   | 8.2   | 9.0   | 8.8   | 11   | 11   | 14   | 11   | e20   |
| 22    | 11   | 8.1   | 8.0   | e8.4  | 8.2   | 9.0   | 8.9   | 11   | 11   | 14   | 11   | e17   |
| 23    | 11   | 8.1   | 8.0   | e8.4  | 8.2   | 8.8   | 9.0   | 11   | 11   | 14   | 11   | 12    |
| 24    | 11   | 8.0   | 8.2   | e8.4  | 8.2   | 8.8   | 11    | 11   | 11   | 14   | 12   | 12    |
| 25    | 11   | 8.1   | 8.2   | e8.4  | 8.1   | 8.9   | 12    | 11   | 11   | 14   | 12   | 12    |
| 26    | 11   | 8.1   | 8.2   | e8.4  | 8.3   | 8.9   | 11    | 11   | 11   | 14   | 12   | 13    |
| 27    | 11   | 7.9   | 8.1   | 8.5   | 8.5   | 8.9   | 11    | 12   | 11   | 14   | 13   | 13    |
| 28    | 11   | 8.0   | 8.0   | 8.4   | 8.7   | 8.8   | 11    | 12   | 11   | 14   | 13   | 13    |
| 29    | 11   | 8.0   | 8.1   | 8.4   | 8.6   | 8.8   | 11    | 11   | 11   | 14   | 13   | 13    |
| 30    | 11   | 8.0   | 8.4   | 8.5   | ---   | 8.9   | 11    | 11   | 11   | 14   | 13   | 13    |
| 31    | 11   | ---   | 8.4   | 8.5   | ---   | 8.8   | ---   | 11   | ---  | 14   | 13   | ---   |
| TOTAL | 341  | 256.0 | 251.9 | 253.9 | 243.5 | 274.7 | 285.0 | 346  | 364  | 391  | 384  | 376.3 |
| MEAN  | 11.0 | 8.53  | 8.13  | 8.19  | 8.40  | 8.86  | 9.50  | 11.2 | 12.1 | 12.6 | 12.4 | 12.5  |
| MAX   | 12   | 11    | 8.6   | 8.5   | 8.8   | 9.0   | 12    | 12   | 13   | 14   | 14   | 20    |
| MIN   | 10   | 7.9   | 8.0   | 7.7   | 7.8   | 8.7   | 8.8   | 11   | 11   | 11   | 11   | 5.3   |
| AC-FT | 676  | 508   | 500   | 504   | 483   | 545   | 565   | 686  | 722  | 776  | 762  | 746   |

CAL YR 1995 TOTAL 3953.0 MEAN 10.8 MAX 22 MIN 6.6 AC-FT 7840  
WTR YR 1996 TOTAL 3767.3 MEAN 10.3 MAX 20 MIN 5.3 AC-FT 7470

e Estimated.

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

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1908. Usable capacity, 7,350 acre-ft between elevations 9,068.42 ft, invert of outlet, and 9,131.62 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,598 acre-ft, July 10, 1995, elevation, 9,132.89 ft; minimum, no storage Apr. 8-14, 1994.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,498 acre-ft, July 9, elevation, 9,132.38; minimum, 376 acre-ft, Apr. 22, elevation, 9088.37 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 | 7,912 |

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 6945    | 6651    | 6160    | 5858    | 4572    | 3312    | 1808    | 775     | 2035    | 6385    | 7383    | 6762    |
| 2   | 6938    | 6636    | 6127    | 5844    | 4511    | 3265    | 1708    | 832     | 2101    | 6487    | 7371    | 6704    |
| 3   | 6926    | 6621    | 6110    | 5834    | 4455    | 3219    | 1592    | 871     | 2222    | 6642    | 7350    | 6636    |
| 4   | 6911    | 6609    | 6105    | 5816    | 4422    | 3184    | 1478    | 905     | 2394    | 6817    | 7316    | 6577    |
| 5   | 6896    | 6594    | 6086    | 5798    | 4388    | 3141    | 1361    | 938     | 2604    | 6974    | 7285    | 6505    |
| 6   | 6888    | 6581    | 6070    | 5784    | 4338    | 3091    | 1245    | 970     | 2841    | 7132    | 7281    | 6426    |
| 7   | 6886    | 6566    | 6052    | 5768    | 4288    | 3046    | 1142    | 1006    | 3113    | 7291    | 7289    | 6353    |
| 8   | 6882    | 6549    | 6033    | 5751    | 4238    | 2996    | 1047    | 1037    | 3422    | 7428    | 7301    | 6279    |
| 9   | 6876    | 6530    | 6015    | 5735    | 4187    | 2944    | 951     | 1068    | 3724    | 7498    | 7322    | 6201    |
| 10  | 6873    | 6519    | 5996    | 5721    | 4138    | 2893    | 857     | 1109    | 3991    | 7492    | 7342    | 6103    |
| 11  | 6861    | 6502    | 6011    | 5687    | 4086    | 2839    | 767     | 1169    | 4187    | 7475    | 7359    | 6015    |
| 12  | 6854    | 6488    | 6053    | 5633    | 4034    | 2798    | 677     | 1251    | 4351    | 7479    | 7377    | e5929   |
| 13  | 6848    | 6472    | 6052    | 5574    | 3982    | 2755    | 588     | 1356    | 4514    | 7451    | 7395    | e5849   |
| 14  | 6840    | 6456    | 6055    | 5517    | 3927    | 2706    | 504     | 1508    | 4694    | 7426    | 7402    | e5764   |
| 15  | 6831    | 6440    | 6050    | 5455    | 3868    | 2656    | 456     | 1678    | 4878    | 7416    | 7410    | e5692   |
| 16  | 6823    | 6423    | 6044    | 5420    | 3819    | 2604    | 434     | 1855    | 5048    | 7408    | 7404    | e5613   |
| 17  | 6815    | 6408    | 6037    | 5358    | 3763    | 2554    | 413     | 1954    | 5177    | 7379    | 7402    | e5531   |
| 18  | 6808    | 6391    | 6029    | 5305    | 3707    | 2507    | 391     | 2035    | 5308    | 7344    | 7393    | e5478   |
| 19  | 6796    | 6372    | 6020    | 5257    | 3687    | 2457    | 383     | 2059    | 5455    | 7305    | 7379    | e5451   |
| 20  | 6786    | 6355    | 6009    | 5201    | 3673    | 2409    | 383     | 2074    | 5595    | 7279    | 7359    | e5425   |
| 21  | 6771    | 6337    | 5998    | 5163    | 3646    | 2360    | 379     | 2097    | 5732    | 7270    | 7357    | e5407   |
| 22  | 6758    | 6320    | 5987    | e5110   | 3626    | 2309    | 376     | 2098    | 5845    | 7278    | 7334    | e5405   |
| 23  | 6744    | 6305    | 5978    | 5060    | 3599    | 2257    | 380     | 2092    | 5960    | 7303    | 7281    | e5404   |
| 24  | 6733    | 6286    | 5965    | 5005    | 3562    | 2200    | 391     | 2082    | 6077    | 7340    | 7223    | e5402   |
| 25  | 6721    | 6268    | 5954    | 4958    | 3530    | 2142    | 421     | 2067    | 6179    | 7361    | 7169    | e5400   |
| 26  | 6706    | 6224    | 5940    | 4902    | 3489    | 2088    | 469     | 2041    | 6244    | 7375    | 7115    | e5398   |
| 27  | 6701    | 6227    | 5924    | 4856    | 3450    | 2033    | 524     | 2026    | 6275    | 7393    | 7059    | e5397   |
| 28  | 6685    | 6210    | 5913    | 4802    | 3404    | 1975    | 577     | 2006    | 6288    | 7445    | 7005    | e5395   |
| 29  | 6678    | 6188    | 5902    | 4744    | 3360    | 1920    | 631     | 1996    | 6299    | 7440    | 6945    | e5395   |
| 30  | 6672    | 6175    | 5887    | 4684    | ---     | 1869    | 700     | 1990    | 6327    | 7420    | 6886    | 5393    |
| 31  | 6661    | ---     | 5873    | 4631    | ---     | 1833    | ---     | 1999    | ---     | 7399    | 6823    | ---     |
| MAX | 6945    | 6651    | 6160    | 5858    | 4572    | 3312    | 1808    | 2098    | 6327    | 7498    | 7410    | 6762    |
| MIN | 6661    | 6175    | 5873    | 4631    | 3360    | 1833    | 376     | 775     | 2035    | 6385    | 6823    | 5393    |
| a   | 9128.04 | 9125.45 | 9123.80 | 9116.73 | 9109.14 | 9099.38 | 9091.22 | 9100.49 | 9126.27 | 9131.87 | 9128.89 | 9121.12 |
| b   | -300    | -486    | -302    | -1242   | -1271   | -1527   | -1133   | +1299   | +4328   | +1072   | -576    | -1430   |

CAL YR 1995 MAX 7598 MIN 1.5 b +1242  
WTR YR 1996 MAX 7498 MIN 376 b -1568

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 sea level, from topographic map.

REMARKS.--Flow regulated by Lake Sabrina (station 10270870). Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 270 ft<sup>3</sup>/s, July 10, 1995, gage height, 2.15 ft; minimum daily, 6.5 ft<sup>3</sup>/s, Mar. 19-27, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 29   | 17   | 16   | 15   | 40   | 35   | 28   | 20   | 54   | 51   | 94   | 65   |
| 2     | 26   | 17   | 15   | 15   | 40   | 35   | 61   | 29   | 54   | 51   | 90   | 64   |
| 3     | 25   | 17   | 15   | 15   | 40   | 35   | 70   | 33   | 53   | 51   | 86   | 64   |
| 4     | 25   | 17   | 15   | 15   | 38   | 34   | 71   | 33   | 52   | 52   | 83   | 62   |
| 5     | 25   | 17   | 15   | 15   | 33   | 34   | 70   | 34   | 56   | 54   | 79   | 65   |
| 6     | 20   | 17   | 15   | 15   | 38   | 38   | 69   | 35   | 59   | 55   | 63   | 66   |
| 7     | 18   | 17   | 15   | 15   | 37   | 35   | 68   | 37   | 61   | 56   | 53   | 63   |
| 8     | 18   | 17   | 15   | 15   | 37   | 37   | 67   | 39   | 62   | 64   | 49   | 63   |
| 9     | 18   | 16   | 15   | 15   | 37   | 37   | 66   | 40   | 63   | 105  | 44   | 63   |
| 10    | 18   | 16   | 15   | 15   | 37   | 37   | 65   | 40   | 65   | 141  | 44   | 62   |
| 11    | 18   | 16   | 16   | 23   | 37   | 37   | 64   | 42   | 66   | 147  | 44   | 62   |
| 12    | 18   | 16   | 16   | 34   | 36   | 37   | 63   | 43   | 67   | 154  | 47   | 61   |
| 13    | 18   | 16   | 16   | 37   | 36   | 37   | 64   | 42   | 68   | 146  | 55   | 58   |
| 14    | 18   | 16   | 16   | 37   | 37   | 37   | 64   | 29   | 67   | 129  | 61   | 58   |
| 15    | 18   | 16   | 16   | 37   | 38   | 37   | 47   | 32   | 67   | 119  | 63   | 57   |
| 16    | 18   | 16   | 15   | 37   | 36   | 37   | 36   | 39   | 68   | 119  | 65   | 56   |
| 17    | 18   | 16   | 15   | 37   | 37   | 36   | 35   | 39   | 68   | 115  | 65   | 54   |
| 18    | 18   | 16   | 15   | 37   | 36   | 36   | 34   | 43   | 59   | 103  | 60   | 44   |
| 19    | 18   | 16   | 15   | 36   | 33   | 36   | e21  | 50   | 51   | 95   | 55   | 22   |
| 20    | 17   | 16   | 15   | 36   | 32   | 36   | 15   | 54   | 51   | 87   | 50   | 21   |
| 21    | 17   | 16   | 15   | 36   | 35   | 37   | 15   | 54   | 52   | 77   | 46   | 20   |
| 22    | 17   | 16   | 15   | 37   | 32   | 36   | 16   | 54   | 53   | 72   | 50   | 20   |
| 23    | 17   | 16   | 15   | 37   | 32   | 36   | 16   | 54   | 53   | 72   | 64   | 20   |
| 24    | 17   | 16   | 15   | 37   | 35   | 38   | 15   | 54   | 50   | 78   | 68   | 20   |
| 25    | 17   | 16   | 15   | 37   | 36   | 38   | 15   | 54   | 50   | 81   | 68   | 20   |
| 26    | 17   | 15   | 15   | 40   | 36   | 38   | 15   | 54   | 51   | 88   | 67   | 20   |
| 27    | 17   | 16   | 15   | 37   | 36   | 38   | 16   | 54   | 51   | 91   | 67   | 20   |
| 28    | 17   | 16   | 15   | 38   | 36   | 37   | 16   | 54   | 51   | 111  | 67   | 20   |
| 29    | 17   | 16   | 15   | 40   | 36   | 37   | 16   | 54   | 51   | 123  | 67   | 20   |
| 30    | 17   | 16   | 15   | 40   | ---  | 35   | 16   | 53   | 51   | 114  | 66   | 17   |
| 31    | 17   | ---  | 15   | 40   | ---  | 30   | ---  | 53   | ---  | 103  | 66   | ---  |
| TOTAL | 588  | 487  | 471  | 920  | 1049 | 1123 | 1234 | 1345 | 1724 | 2904 | 1946 | 1327 |
| MEAN  | 19.0 | 16.2 | 15.2 | 29.7 | 36.2 | 36.2 | 41.1 | 43.4 | 57.5 | 93.7 | 62.8 | 44.2 |
| MAX   | 29   | 17   | 16   | 40   | 40   | 38   | 71   | 54   | 68   | 154  | 94   | 66   |
| MIN   | 17   | 15   | 15   | 15   | 32   | 30   | 15   | 20   | 50   | 51   | 44   | 17   |
| AC-FT | 1170 | 966  | 934  | 1820 | 2080 | 2230 | 2450 | 2670 | 3420 | 5760 | 3860 | 2630 |

e Estimated.

## 10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 17.3 | 14.9 | 16.0 | 22.6 | 29.4 | 24.9 | 25.5 | 25.5 | 34.1 | 73.2 | 55.9 | 33.6 |
| MAX  | 20.5 | 20.1 | 24.8 | 35.2 | 43.7 | 41.6 | 41.1 | 43.4 | 57.5 | 147  | 107  | 49.4 |
| (WY) | 1994 | 1995 | 1994 | 1994 | 1993 | 1995 | 1996 | 1996 | 1996 | 1995 | 1995 | 1995 |
| MIN  | 11.8 | 8.56 | 10.2 | 7.63 | 7.11 | 6.91 | 10.4 | 9.28 | 9.14 | 30.6 | 33.8 | 22.7 |
| (WY) | 1991 | 1993 | 1993 | 1991 | 1991 | 1991 | 1993 | 1994 | 1994 | 1994 | 1992 | 1994 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 17197                  |  |  |  | 15118               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 47.1                   |  |  |  | 41.3                |  |  |  | 31.1                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 47.8                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 18.4                    |  |  |  |
| HIGHEST DAILY MEAN       | 230                    |  |  |  | 154                 |  |  |  | 230                     |  |  |  |
| LOWEST DAILY MEAN        | 10                     |  |  |  | 15                  |  |  |  | 6.5                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 11                     |  |  |  | 15                  |  |  |  | 6.5                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 171                 |  |  |  | 270                     |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 1.59                |  |  |  | 2.15                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 34110                  |  |  |  | 29990               |  |  |  | 22560                   |  |  |  |
| 10 PERCENT EXCEEDS       | 97                     |  |  |  | 68                  |  |  |  | 63                      |  |  |  |
| 50 PERCENT EXCEEDS       | 32                     |  |  |  | 37                  |  |  |  | 22                      |  |  |  |
| 90 PERCENT EXCEEDS       | 15                     |  |  |  | 15                  |  |  |  | 8.8                     |  |  |  |

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

REMARKS.--Reservoir is formed by rock-fill dam completed in 1908. Capacity, 78 acre-ft between elevations 8,077 ft, invert of outlet, and 8,098.81 ft, crest of spillway, all of which are available for release. Water is received from South Fork Bishop Creek via conduit on right bank. Most of the water is diverted through conduit to Bishop Creek Powerplant No. 2 for power development on Bishop Creek. Figures given represent total contents. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 101 acre-ft, July 9, 1995, elevation, 8,100.67 ft; minimum, 22 acre-ft, Sept. 30, 1996, elevation, 8,092.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 91 acre-ft, July 12, elevation, 8,099.96 ft; minimum, 22 acre-ft, Sept. 30, elevation, 8,092.40 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 47      | 71      | 71      | 71      | 71      | 73      | 70      | 73      | 80      | 80      | 86      | 68      |
| 2   | 45      | 73      | 71      | 72      | 71      | 72      | 78      | 70      | 82      | 83      | 86      | 69      |
| 3   | 46      | 73      | 71      | 71      | 70      | 73      | 78      | 74      | 84      | 84      | 85      | 70      |
| 4   | 45      | 72      | 72      | 72      | 76      | 71      | 77      | 68      | 85      | 83      | 84      | 66      |
| 5   | 46      | 73      | 72      | 71      | 71      | 68      | 77      | 69      | 86      | 84      | 84      | 68      |
| 6   | 45      | 74      | 72      | 72      | 72      | 72      | 76      | 69      | 88      | 84      | 82      | 73      |
| 7   | 46      | 73      | 70      | 72      | 71      | 70      | 77      | 72      | 88      | 84      | 79      | 72      |
| 8   | 46      | 71      | 72      | 71      | 71      | 73      | 77      | 71      | 87      | 86      | 78      | 72      |
| 9   | 46      | 70      | 70      | 72      | 71      | 67      | 77      | 71      | 88      | 88      | 76      | 72      |
| 10  | 46      | 71      | 72      | 71      | 71      | 68      | 74      | 74      | 88      | 90      | 77      | 73      |
| 11  | 45      | 71      | 74      | 70      | 71      | 74      | 73      | 73      | 86      | 90      | 77      | 74      |
| 12  | 45      | 72      | 69      | 72      | 71      | 73      | 68      | 70      | 87      | 91      | 80      | 73      |
| 13  | 46      | 72      | 71      | 74      | 72      | 72      | 68      | 77      | 86      | 90      | 81      | 75      |
| 14  | 46      | 72      | 72      | 71      | 72      | 71      | 73      | 77      | 86      | 88      | 81      | 72      |
| 15  | 46      | 71      | 71      | 72      | 73      | 72      | 75      | 81      | 86      | 90      | 82      | 72      |
| 16  | 47      | 72      | 72      | 71      | 70      | 71      | 75      | 79      | 86      | 90      | 82      | 73      |
| 17  | 46      | 72      | 71      | 71      | 70      | 72      | 73      | 72      | 85      | 88      | 81      | 70      |
| 18  | 47      | 71      | 71      | 71      | 71      | 71      | 72      | 63      | 84      | 87      | 80      | 69      |
| 19  | 51      | 71      | 71      | 71      | 70      | 71      | 74      | 58      | 84      | 86      | 78      | 70      |
| 20  | 55      | 71      | 70      | 70      | 70      | 72      | 74      | 69      | 84      | 86      | 74      | 69      |
| 21  | 58      | 71      | 73      | 70      | 73      | 73      | 73      | 69      | 84      | 84      | 68      | 68      |
| 22  | 60      | 70      | 72      | 71      | 71      | 71      | 74      | 64      | 83      | 84      | 64      | 63      |
| 23  | 62      | 73      | 71      | 72      | 69      | 70      | 75      | 62      | 83      | 85      | 68      | 51      |
| 24  | 64      | 72      | 70      | 70      | 73      | 71      | 72      | 62      | 82      | 86      | 69      | 44      |
| 25  | 65      | 71      | 72      | 69      | 70      | 70      | 71      | 63      | 82      | 86      | 71      | 45      |
| 26  | 66      | 71      | 72      | 74      | 73      | 71      | 67      | 65      | 81      | 86      | 73      | 49      |
| 27  | 67      | 72      | 72      | 73      | 74      | 70      | 67      | 62      | 79      | 87      | 67      | 45      |
| 28  | 68      | 71      | 72      | 71      | 71      | 69      | 67      | 63      | 76      | 89      | 68      | 44      |
| 29  | 67      | 72      | 71      | 73      | 73      | 68      | 66      | 74      | 71      | 89      | 68      | 44      |
| 30  | 69      | 72      | 72      | 71      | ---     | 72      | 70      | 77      | 75      | 88      | 69      | 22      |
| 31  | 71      | ---     | 70      | 69      | ---     | 72      | ---     | 79      | ---     | 87      | 69      | ---     |
| MAX | 71      | 74      | 74      | 74      | 76      | 74      | 78      | 81      | 88      | 91      | 86      | 75      |
| MIN | 45      | 70      | 69      | 69      | 69      | 67      | 66      | 58      | 71      | 80      | 64      | 22      |
| a   | 8098.27 | 8098.34 | 8098.21 | 8098.13 | 8098.46 | 8098.35 | 8098.21 | 8098.96 | 8098.62 | 8099.62 | 8098.12 | 8092.40 |
| b   | +22     | +1      | -2      | -1      | +4      | -1      | -2      | +9      | -4      | +12     | -18     | -47     |

CAL YR 1995 MAX 101 MIN 42 b -5  
WTR YR 1996 MAX 91 MIN 22 b -27

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 sea level, from topographic map.

REMARKS.--No records computed above 30 ft<sup>3</sup>/s. Flow regulated by Intake No. 2 Reservoir (station 10270875), where most of the water is diverted to Bishop Creek Powerplant No. 2. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY | JUN | JUL | AUG | SEP  |
|-------|------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|------|
| 1     | 17   | 11    | 9.1   | 8.1   | 8.1   | 8.1   | 8.5   | 12  | 21  | 20  | --- | 11   |
| 2     | 14   | 11    | 9.1   | 8.1   | 8.1   | 8.1   | 8.5   | 12  | --- | --- | --- | 11   |
| 3     | 12   | 11    | 9.2   | 8.1   | 8.1   | 8.1   | 11    | 12  | --- | --- | --- | 11   |
| 4     | 12   | 11    | 8.8   | 8.1   | 8.3   | 8.3   | 9.0   | 12  | --- | --- | --- | 11   |
| 5     | 12   | 11    | 8.1   | 8.1   | 8.5   | 8.3   | 8.6   | 12  | --- | --- | --- | 11   |
| 6     | 12   | 11    | 8.1   | 8.1   | 8.3   | 8.3   | 8.4   | 12  | --- | --- | --- | 11   |
| 7     | 12   | 10    | 8.1   | 8.1   | 8.2   | 8.1   | 8.4   | 12  | --- | --- | 30  | 11   |
| 8     | 12   | 9.5   | 8.1   | 8.1   | 8.1   | 8.1   | 8.7   | 12  | --- | --- | 17  | 11   |
| 9     | 12   | 9.4   | 8.1   | 8.1   | 8.1   | 8.2   | 9.0   | 12  | --- | --- | 12  | 11   |
| 10    | 12   | 9.3   | 8.1   | 8.1   | 8.1   | 8.1   | 8.4   | 12  | --- | --- | 12  | 11   |
| 11    | 12   | 9.3   | 8.3   | 8.1   | 8.0   | 8.2   | 8.3   | 12  | --- | --- | 12  | 11   |
| 12    | 12   | 9.3   | 8.9   | 8.1   | 8.0   | 8.3   | 8.3   | 12  | --- | --- | 15  | 11   |
| 13    | 12   | 9.3   | 8.4   | 8.1   | 8.0   | 8.3   | 8.3   | 12  | --- | --- | 29  | 11   |
| 14    | 12   | 9.5   | 8.3   | 8.1   | 8.0   | 8.1   | 8.3   | 12  | --- | --- | --- | 11   |
| 15    | 12   | 9.5   | 8.2   | 8.1   | 8.0   | 8.1   | 8.3   | 16  | --- | --- | --- | 11   |
| 16    | 12   | 9.5   | 8.1   | 8.3   | 8.0   | 8.1   | 8.5   | --- | --- | --- | --- | 11   |
| 17    | 12   | 9.5   | e8.1  | 8.2   | 7.9   | 8.1   | 8.5   | 14  | --- | --- | --- | 11   |
| 18    | 12   | 9.5   | 8.1   | 8.1   | 7.8   | 8.1   | 8.5   | 12  | --- | --- | 30  | 11   |
| 19    | 11   | 9.5   | 8.1   | 8.1   | 8.0   | 8.1   | 8.3   | 12  | --- | --- | 19  | 11   |
| 20    | 11   | 9.5   | 8.1   | e8.1  | 8.0   | 8.1   | 8.3   | 12  | --- | --- | 12  | 11   |
| 21    | 11   | 9.4   | e8.1  | 8.1   | 8.0   | 8.1   | 8.3   | 12  | --- | --- | 11  | 11   |
| 22    | 11   | 9.3   | 8.1   | e8.1  | 8.0   | 8.2   | 8.3   | 12  | --- | --- | 11  | 14   |
| 23    | 11   | 9.1   | 8.1   | e8.1  | 7.9   | 8.1   | 8.3   | 12  | --- | --- | 11  | 16   |
| 24    | 11   | 9.3   | 8.1   | 8.1   | 7.9   | 8.1   | 10    | 12  | --- | --- | 11  | 15   |
| 25    | 11   | 9.2   | 8.0   | 8.1   | e7.9  | 8.1   | 12    | 12  | --- | --- | 11  | 15   |
| 26    | 11   | 9.3   | 8.1   | 8.1   | e7.9  | 8.1   | 12    | 12  | --- | --- | 11  | 16   |
| 27    | 11   | 9.3   | 8.1   | 8.2   | e8.0  | 8.1   | 12    | 12  | 26  | --- | 11  | 16   |
| 28    | 11   | 9.3   | 8.1   | 8.1   | e8.1  | 8.3   | 12    | 12  | 15  | --- | 11  | 15   |
| 29    | 11   | 9.3   | 8.1   | 8.1   | 8.1   | 8.3   | 12    | 12  | 12  | --- | 11  | 15   |
| 30    | 11   | 9.1   | 8.1   | 8.1   | ---   | 8.1   | 12    | 13  | 12  | --- | 11  | 14   |
| 31    | 11   | ---   | 8.1   | 8.1   | ---   | 8.3   | ---   | 14  | --- | --- | 11  | ---  |
| TOTAL | 366  | 291.2 | 256.4 | 251.5 | 233.4 | 253.0 | 279.0 | --- | --- | --- | --- | 367  |
| MEAN  | 11.8 | 9.71  | 8.27  | 8.11  | 8.05  | 8.16  | 9.30  | --- | --- | --- | --- | 12.2 |
| MAX   | 17   | 11    | 9.2   | 8.3   | 8.5   | 8.3   | 12    | --- | --- | --- | --- | 16   |
| MIN   | 11   | 9.1   | 8.0   | 8.1   | 7.8   | 8.1   | 8.3   | --- | --- | --- | --- | 11   |
| AC-FT | 726  | 578   | 509   | 499   | 463   | 502   | 553   | --- | --- | --- | --- | 728  |

e Estimated.

## 10270885 BISHOP CREEK BELOW INTAKE NO. 3 DIVERSION DAM, NEAR BISHOP, CA

LOCATION.--Lat 37°16'27", long 118°34'17", in NE 1/4 NE 1/4 sec.9, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 125 ft downstream from dam, 0.7 mi downstream from confluence of South Fork and Middle Fork Bishop Creek, and 9.5 mi southwest of Bishop.

DRAINAGE AREA.--64.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year (low-flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 7,130 ft above sea level, from topographic map.

REMARKS.--No records computed above 20 ft<sup>3</sup>/s. Flow regulated by Intake No. 3 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 3. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC | JAN  | FEB  | MAR  | APR | MAY | JUN | JUL | AUG | SEP  |
|-------|-------|------|-----|------|------|------|-----|-----|-----|-----|-----|------|
| 1     | 14    | 14   | 14  | 14   | 15   | 15   | --- | 14  | 16  | 20  | --- | 15   |
| 2     | 14    | 14   | 14  | 14   | 15   | 15   | --- | 15  | --- | --- | --- | 15   |
| 3     | 14    | 14   | 14  | 14   | 15   | 15   | --- | 14  | --- | --- | --- | 15   |
| 4     | 14    | 14   | 14  | 14   | 15   | 15   | --- | 14  | --- | --- | --- | 15   |
| 5     | 14    | 14   | 14  | 14   | 15   | 15   | --- | 14  | --- | --- | --- | 15   |
| 6     | 14    | 14   | 14  | 14   | 15   | 15   | --- | 14  | --- | --- | --- | 15   |
| 7     | 14    | 14   | 14  | 15   | 15   | 15   | --- | 14  | --- | --- | 18  | 15   |
| 8     | 14    | 14   | 14  | 16   | 15   | 15   | --- | 14  | --- | --- | 16  | 15   |
| 9     | 14    | 14   | 14  | 16   | 15   | 15   | --- | 14  | --- | --- | 15  | 15   |
| 10    | 14    | 14   | 14  | 16   | 15   | 15   | --- | 14  | --- | --- | 16  | 15   |
| 11    | 14    | 14   | 14  | 14   | 15   | 15   | --- | 14  | --- | --- | 15  | 15   |
| 12    | 14    | 14   | 14  | 14   | 15   | 15   | --- | 16  | --- | --- | 15  | 15   |
| 13    | 14    | 14   | --- | 14   | 15   | 15   | 15  | 17  | --- | --- | 16  | 15   |
| 14    | 14    | 14   | 14  | 14   | 15   | 15   | 15  | 17  | --- | --- | 20  | 15   |
| 15    | 14    | 14   | 14  | 14   | 15   | 15   | 15  | 18  | --- | --- | --- | 15   |
| 16    | 14    | 14   | 14  | 14   | 15   | 15   | 15  | --- | --- | --- | --- | 15   |
| 17    | 14    | 14   | 14  | 14   | 14   | 15   | 15  | 15  | --- | --- | --- | 15   |
| 18    | 14    | 14   | 14  | 14   | 14   | 15   | 15  | 19  | --- | --- | 18  | 15   |
| 19    | 14    | 14   | 14  | 14   | 14   | 15   | 15  | --- | --- | --- | 15  | 15   |
| 20    | 14    | 14   | 14  | 14   | 15   | 15   | 15  | --- | --- | --- | 15  | 15   |
| 21    | 14    | 14   | 14  | 14   | 15   | 15   | 15  | --- | --- | --- | 15  | 15   |
| 22    | 14    | 14   | 14  | 14   | 15   | 16   | 15  | 20  | --- | --- | 15  | 15   |
| 23    | 14    | 14   | 14  | 14   | 15   | 15   | 16  | 16  | --- | --- | 15  | 15   |
| 24    | 15    | 14   | 14  | 15   | 15   | 15   | 15  | 16  | --- | --- | 15  | 15   |
| 25    | 14    | 14   | 14  | 15   | 15   | 15   | 14  | 16  | --- | --- | 15  | 15   |
| 26    | 12    | 14   | 14  | 15   | 15   | 15   | 14  | 17  | 17  | --- | 15  | 15   |
| 27    | 9.1   | 14   | 14  | 15   | 15   | 15   | 14  | 17  | 16  | --- | 15  | 15   |
| 28    | 8.8   | 14   | 14  | 15   | 15   | 15   | 14  | 16  | --- | --- | 16  | 15   |
| 29    | 15    | 14   | 14  | 15   | 15   | 15   | 14  | 16  | 16  | --- | 15  | 15   |
| 30    | 16    | 14   | 14  | 15   | ---  | 15   | 14  | 16  | 16  | --- | 15  | 15   |
| 31    | 14    | ---  | 14  | 15   | ---  | 15   | --- | 16  | --- | --- | 15  | ---  |
| TOTAL | 425.9 | 420  | --- | 449  | 432  | 466  | --- | --- | --- | --- | --- | 450  |
| MEAN  | 13.7  | 14.0 | --- | 14.5 | 14.9 | 15.0 | --- | --- | --- | --- | --- | 15.0 |
| MAX   | 16    | 14   | --- | 16   | 15   | 16   | --- | --- | --- | --- | --- | 15   |
| MIN   | 8.8   | 14   | --- | 14   | 14   | 15   | --- | --- | --- | --- | --- | 15   |
| AC-FT | 845   | 833  | --- | 891  | 857  | 924  | --- | --- | --- | --- | --- | 893  |



## 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 sea level, from topographic map.

REMARKS.--Conduit diverts water from Birch Creek and discharges into penstock to Bishop Creek Powerplant No. 2. Birch Creek receives water from McGee Creek via McGee Creek Diversion (station 10268225). See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 45 ft<sup>3</sup>/s, June 18, 1996; minimum daily, no flow Aug. 13-29, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN    | JUL  | AUG    | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|--------|------|--------|-------|
| 1     | e2.3 | e2.8  | e4.0  | e4.0  | 5.5   | 5.0   | 4.9   | 4.9   | 14     | 38   | 29     | 9.4   |
| 2     | e2.3 | e2.8  | e4.0  | e4.0  | 5.5   | 4.9   | 4.9   | 4.8   | 18     | 40   | 27     | 11    |
| 3     | e2.3 | e2.8  | e4.0  | e4.0  | 5.3   | 4.8   | 4.8   | 4.7   | 22     | 37   | 25     | 10    |
| 4     | e2.3 | e2.8  | e4.0  | e4.0  | 6.4   | 5.0   | 4.8   | 4.8   | 19     | 30   | 24     | 8.6   |
| 5     | e2.3 | e2.8  | e4.0  | e4.0  | 6.4   | 5.0   | 4.9   | 4.8   | 10     | 31   | 21     | 9.8   |
| 6     | e2.3 | e2.8  | e4.0  | e4.0  | 5.6   | 5.0   | 5.0   | 4.8   | .99    | 38   | 20     | 7.4   |
| 7     | e2.3 | e2.8  | e4.0  | e4.0  | 5.4   | 4.8   | 5.2   | 4.8   | 1.6    | 38   | 20     | 6.3   |
| 8     | e2.3 | e2.8  | e4.0  | e4.5  | 5.4   | 4.8   | 5.3   | 4.9   | 16     | 36   | 8.7    | 5.1   |
| 9     | e2.8 | e2.8  | e4.0  | e4.5  | 5.3   | 4.8   | 5.1   | 4.9   | 15     | 39   | 1.9    | 6.3   |
| 10    | e2.8 | e2.8  | e4.0  | e4.6  | 5.3   | 4.8   | 4.9   | 5.0   | 6.6    | e35  | 1.9    | 6.5   |
| 11    | e3.0 | e3.0  | e4.0  | e4.6  | 5.3   | 4.8   | 4.7   | 5.2   | 18     | e14  | 1.9    | 6.6   |
| 12    | e3.0 | e3.1  | e4.0  | e4.3  | 5.2   | 4.9   | 4.7   | 5.7   | 13     | e36  | 1.5    | 7.9   |
| 13    | e3.0 | e3.5  | e4.0  | e4.3  | 5.2   | 5.0   | 4.6   | 6.0   | e25    | e35  | .00    | 6.1   |
| 14    | e3.0 | e3.8  | e4.0  | e4.0  | 5.2   | 4.7   | 4.8   | 6.7   | e31    | e37  | .00    | 5.4   |
| 15    | e3.1 | e4.0  | e4.0  | e4.0  | 5.1   | 4.8   | 4.8   | 13    | e38    | e35  | .00    | 5.0   |
| 16    | e3.1 | e4.0  | e4.2  | e4.0  | 5.1   | 4.9   | 4.8   | 18    | e43    | 36   | .00    | 4.1   |
| 17    | e3.1 | e4.0  | e4.3  | e4.0  | 5.0   | 4.9   | 4.8   | 16    | e43    | 25   | .00    | 8.3   |
| 18    | e3.1 | e4.0  | e4.5  | e4.0  | 5.2   | 5.0   | 4.7   | 16    | e45    | 19   | .00    | 6.4   |
| 19    | e3.2 | e4.0  | e4.5  | e4.0  | 5.4   | 5.1   | 4.7   | 15    | e43    | 26   | .00    | 4.1   |
| 20    | e3.2 | e4.0  | e4.5  | e4.3  | 5.2   | 5.1   | 4.6   | 14    | e42    | 29   | .00    | 4.1   |
| 21    | e3.2 | e4.0  | e4.5  | e4.5  | 5.3   | 5.1   | 4.8   | 14    | e43    | 28   | .00    | 4.8   |
| 22    | e3.5 | e4.0  | e4.5  | e4.8  | 5.1   | 4.9   | 4.8   | 14    | e43    | 29   | .00    | 4.3   |
| 23    | e3.9 | e4.0  | e4.5  | e4.9  | 5.3   | 4.8   | 5.1   | 13    | e43    | e29  | .00    | 4.4   |
| 24    | e4.0 | e4.0  | e4.5  | e5.3  | 5.2   | 4.7   | 5.2   | 13    | e43    | e30  | .00    | 3.2   |
| 25    | e2.8 | e4.0  | e4.5  | e5.5  | 5.2   | 4.7   | 5.1   | 12    | e43    | e29  | .00    | 2.9   |
| 26    | e2.8 | e4.0  | e4.2  | e5.5  | 5.0   | 4.8   | 5.1   | 11    | 41     | e30  | .00    | 2.8   |
| 27    | e2.8 | e4.0  | e4.0  | 5.5   | 5.1   | 4.7   | 5.0   | 11    | 36     | e31  | .00    | 2.5   |
| 28    | e2.8 | e4.0  | e4.0  | 5.6   | 5.1   | 4.7   | 4.8   | 11    | 32     | e29  | .00    | 2.7   |
| 29    | e2.8 | e4.0  | e4.0  | 5.4   | 5.1   | 4.7   | 4.8   | 11    | 28     | e30  | .00    | 2.8   |
| 30    | e2.8 | e4.0  | e4.0  | 5.4   | ---   | 4.7   | 4.9   | 12    | 34     | e30  | 3.6    | 3.3   |
| 31    | e2.8 | ---   | e4.0  | 5.4   | ---   | 4.8   | ---   | 13    | ---    | 31   | 9.5    | ---   |
| TOTAL | 89.0 | 105.4 | 128.7 | 140.9 | 154.4 | 150.7 | 146.6 | 299.0 | 850.19 | 980  | 195.00 | 172.1 |
| MEAN  | 2.87 | 3.51  | 4.15  | 4.55  | 5.32  | 4.86  | 4.89  | 9.65  | 28.3   | 31.6 | 6.29   | 5.74  |
| MAX   | 4.0  | 4.0   | 4.5   | 5.6   | 6.4   | 5.1   | 5.3   | 18    | 45     | 40   | 29     | 11    |
| MIN   | 2.3  | 2.8   | 4.0   | 4.0   | 5.0   | 4.7   | 4.6   | 4.7   | .99    | 14   | .00    | 2.5   |
| AC-FT | 177  | 209   | 255   | 279   | 306   | 299   | 291   | 593   | 1690   | 1940 | 387    | 341   |

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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.46 | 5.02 | 4.54 | 4.53 | 4.98 | 5.02 | 5.61 | 6.97 | 14.9 | 18.5 | 10.3 | 8.14 |
| MAX  | 9.95 | 10.9 | 8.71 | 8.60 | 10.9 | 10.8 | 11.5 | 9.65 | 28.3 | 31.7 | 23.5 | 19.7 |
| (WY) | 1994 | 1994 | 1994 | 1994 | 1994 | 1994 | 1994 | 1996 | 1996 | 1993 | 1993 | 1993 |
| MIN  | 2.87 | 2.70 | 2.57 | 2.48 | 2.47 | 2.45 | 2.43 | 2.76 | 4.99 | 6.83 | 4.82 | 2.98 |
| (WY) | 1996 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 1304.0                 |  |  |  | 3411.99             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 3.57                   |  |  |  | 9.32                |  |  |  | 7.85                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 11.2                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 3.37                    |  |  |  |
| HIGHEST DAILY MEAN       | 12                     |  |  |  | 45                  |  |  |  | 45                      |  |  |  |
| LOWEST DAILY MEAN        | 1.3                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 2.0                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 2590                   |  |  |  | 6770                |  |  |  | 5690                    |  |  |  |
| 10 PERCENT EXCEEDS       | 6.0                    |  |  |  | 30                  |  |  |  | 16                      |  |  |  |
| 50 PERCENT EXCEEDS       | 3.0                    |  |  |  | 4.8                 |  |  |  | 5.0                     |  |  |  |
| 90 PERCENT EXCEEDS       | 2.3                    |  |  |  | 2.8                 |  |  |  | 2.7                     |  |  |  |

## 10270940 BISHOP CREEK BELOW INTAKE NO. 4 DIVERSION DAM, NEAR BISHOP, CA

LOCATION.--Lat 37°18'10", long 118°31'45", in NW 1/4 NW 1/4 sec.36, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 300 ft downstream from dam, 1.6 mi upstream from Coyote Creek, and 7.5 mi southwest of Bishop.

DRAINAGE AREA.--72.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year (low-flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 6,310 ft above sea level, from topographic map.

REMARKS.--No records computed above 20 ft<sup>3</sup>/s. Flow regulated by Intake No. 4 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 4. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR | MAY | JUN | JUL | AUG  | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|-----|------|-------|
| 1     | 7.1   | 5.8   | 5.8   | 6.1   | 6.1   | 6.1   | 8.3 | 13  | --- | --- | ---  | 7.8   |
| 2     | 7.1   | 5.8   | 5.8   | 6.1   | 6.1   | 6.1   | 18  | 11  | --- | --- | ---  | 7.8   |
| 3     | 7.1   | 5.7   | 6.0   | 6.1   | 6.1   | 6.1   | --- | 7.9 | --- | --- | ---  | 7.6   |
| 4     | 7.2   | 5.7   | 6.1   | 6.1   | 6.1   | 6.1   | --- | 9.0 | --- | --- | ---  | 7.7   |
| 5     | 7.1   | 5.7   | 6.1   | 6.1   | 6.1   | 6.1   | --- | 8.9 | --- | --- | ---  | 7.6   |
| 6     | 7.2   | 5.7   | 6.0   | 6.1   | 6.1   | 6.1   | --- | 11  | --- | --- | ---  | 7.4   |
| 7     | 7.2   | 5.7   | 6.1   | 6.1   | 6.1   | 6.1   | --- | 11  | --- | --- | ---  | 7.2   |
| 8     | 7.2   | 5.7   | 6.1   | 6.1   | 6.1   | 6.1   | --- | 16  | --- | --- | 20   | 7.2   |
| 9     | 7.2   | 5.7   | 6.0   | 6.1   | 6.1   | 6.1   | --- | 16  | --- | --- | 16   | 7.3   |
| 10    | 7.2   | 5.7   | 6.0   | 6.1   | 6.1   | 6.1   | --- | 16  | --- | --- | 15   | 7.3   |
| 11    | 6.6   | 5.8   | 6.1   | 6.2   | 6.1   | 6.1   | --- | --- | --- | --- | 14   | 7.3   |
| 12    | 5.9   | 5.8   | 11    | 6.1   | 6.1   | 6.1   | --- | --- | --- | --- | 17   | 7.3   |
| 13    | 5.8   | 5.8   | 7.1   | 6.1   | 6.1   | 6.1   | --- | --- | --- | --- | ---  | 7.3   |
| 14    | 5.8   | 5.8   | 6.1   | 6.1   | 6.1   | 6.1   | --- | --- | --- | --- | ---  | 7.2   |
| 15    | 5.8   | 5.8   | 6.1   | 6.1   | 6.1   | 6.1   | 19  | --- | --- | --- | ---  | 7.2   |
| 16    | 5.8   | 5.8   | 6.1   | 6.1   | 6.1   | 6.1   | 8.9 | --- | --- | --- | ---  | 7.2   |
| 17    | 5.8   | 5.9   | 6.1   | 6.0   | 6.1   | 6.1   | 8.8 | --- | --- | --- | ---  | 7.2   |
| 18    | 5.8   | 5.9   | 6.1   | 6.0   | 6.1   | 6.1   | 8.8 | --- | --- | --- | ---  | 8.4   |
| 19    | 5.8   | 5.8   | 6.1   | 6.0   | 6.1   | 6.1   | 8.8 | --- | --- | --- | ---  | 7.2   |
| 20    | 5.7   | 5.8   | 6.1   | 6.0   | 6.1   | 6.1   | 8.7 | --- | --- | --- | ---  | 7.2   |
| 21    | 5.7   | 5.8   | 6.0   | 6.0   | 6.1   | 6.1   | 8.2 | --- | --- | --- | 11   | 7.3   |
| 22    | 5.7   | 5.9   | 6.0   | 6.0   | 6.1   | 5.8   | 8.1 | --- | --- | --- | e9.0 | 7.3   |
| 23    | 5.7   | 5.8   | 6.0   | 6.1   | 6.1   | 6.0   | 8.2 | --- | --- | --- | e8.5 | 7.3   |
| 24    | 5.7   | 5.9   | 6.1   | 6.1   | 6.1   | 6.0   | 8.0 | --- | --- | --- | 8.4  | 7.3   |
| 25    | 5.7   | 5.9   | 6.1   | 6.2   | 6.1   | 6.0   | 8.2 | --- | --- | --- | 9.7  | 7.3   |
| 26    | 5.7   | 5.9   | 6.1   | 6.3   | 6.1   | 6.0   | 8.2 | --- | --- | --- | 12   | 7.3   |
| 27    | 6.0   | 5.8   | 6.1   | 6.1   | 6.1   | 6.0   | 8.1 | --- | --- | --- | 14   | 7.3   |
| 28    | 6.0   | 5.8   | 6.2   | 6.1   | 6.3   | 6.1   | 7.4 | --- | --- | --- | 15   | 7.3   |
| 29    | 6.0   | 5.8   | 6.2   | 6.1   | 6.1   | 6.0   | 8.5 | 18  | --- | --- | 11   | 7.3   |
| 30    | 5.9   | 5.8   | 6.1   | 6.1   | ---   | 6.0   | 12  | --- | --- | --- | 8.9  | 7.3   |
| 31    | 5.7   | ---   | 6.1   | 6.1   | ---   | 6.8   | --- | --- | --- | --- | 8.0  | ---   |
| TOTAL | 194.2 | 173.8 | 193.9 | 188.9 | 177.1 | 188.8 | --- | --- | --- | --- | ---  | 221.4 |
| MEAN  | 6.26  | 5.79  | 6.25  | 6.09  | 6.11  | 6.09  | --- | --- | --- | --- | ---  | 7.38  |
| MAX   | 7.2   | 5.9   | 11    | 6.3   | 6.3   | 6.8   | --- | --- | --- | --- | ---  | 8.4   |
| MIN   | 5.7   | 5.7   | 5.8   | 6.0   | 6.1   | 5.8   | --- | --- | --- | --- | ---  | 7.2   |
| AC-FT | 385   | 345   | 385   | 375   | 351   | 374   | --- | --- | --- | --- | ---  | 439   |

e Estimated.

## 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 September 1996 (discontinued). 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 sea level, from topographic map.

REMARKS.--No storage or diversion upstream from station. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26 ft<sup>3</sup>/s, June 12, 1995, gage height, 1.67 ft; minimum daily, 1.8 ft<sup>3</sup>/s, several days in 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 4.6   | 5.1   | 5.1   | 5.4   | 5.0   | 5.1   | 6.2   | 10    | 5.9   | 4.8   | 4.6   | 4.4   |
| 2     | 4.5   | 5.2   | 5.0   | 5.2   | 4.9   | 5.1   | 6.0   | 9.2   | 5.7   | 4.8   | 4.5   | 4.5   |
| 3     | 4.5   | 5.2   | 5.0   | 5.0   | 4.9   | 5.2   | 5.8   | 8.3   | 5.7   | 4.8   | 4.6   | 4.4   |
| 4     | 4.4   | 5.1   | 5.3   | 5.0   | 5.6   | 5.2   | 5.7   | 7.8   | 5.5   | 4.7   | 4.5   | 4.5   |
| 5     | 4.5   | 5.1   | 5.2   | 5.0   | 6.5   | 5.2   | 5.8   | 7.5   | 5.5   | 4.7   | 4.7   | 4.7   |
| 6     | 4.5   | 5.1   | 5.2   | 5.0   | 5.7   | 5.2   | 6.2   | 7.3   | 5.4   | 4.6   | 4.6   | 4.7   |
| 7     | 4.5   | 5.2   | 5.2   | 5.0   | 5.4   | 5.2   | 6.9   | 7.1   | 5.3   | 4.6   | 4.5   | 4.7   |
| 8     | 4.5   | 5.2   | 5.1   | 5.0   | 5.3   | 5.3   | 7.9   | 7.0   | 5.2   | 4.7   | 4.5   | 4.7   |
| 9     | 4.5   | 5.1   | 5.1   | 5.0   | 5.4   | 5.4   | 8.4   | 7.4   | 5.2   | 4.8   | 4.5   | 4.7   |
| 10    | 4.5   | 5.0   | 5.1   | 5.0   | 5.3   | 5.4   | 7.8   | 7.4   | 5.1   | 4.8   | 4.5   | 4.7   |
| 11    | 4.5   | 5.0   | 5.4   | 4.9   | 5.3   | 5.3   | 7.5   | 7.6   | 5.0   | 4.8   | 4.6   | 4.6   |
| 12    | 4.5   | 5.0   | 8.3   | 5.0   | 5.3   | 5.3   | 7.4   | 7.7   | 5.0   | 4.5   | 4.7   | 4.6   |
| 13    | 4.6   | 5.0   | 5.1   | 5.1   | 5.2   | 5.4   | 6.9   | 7.7   | 5.0   | 3.8   | 5.0   | 4.8   |
| 14    | 4.6   | 5.0   | 5.3   | 5.0   | 5.2   | 5.3   | 7.5   | 8.6   | 5.2   | 4.0   | 4.9   | 5.3   |
| 15    | 4.6   | 5.0   | 5.0   | 5.0   | 5.2   | 5.3   | 8.3   | 8.8   | 5.0   | 4.0   | 4.6   | 5.1   |
| 16    | 4.7   | 5.2   | 5.4   | 5.2   | 5.4   | 5.3   | 8.0   | 10    | 4.9   | 3.5   | 4.7   | 5.0   |
| 17    | 4.8   | 5.2   | 5.6   | 4.8   | 5.4   | 5.5   | 6.9   | 8.1   | 4.8   | 3.8   | 4.7   | 5.1   |
| 18    | 4.7   | 5.2   | 5.4   | 5.2   | 5.2   | 5.8   | 6.5   | 8.0   | 4.8   | 4.4   | 4.5   | 5.2   |
| 19    | 4.7   | 5.1   | 5.3   | 5.1   | 5.4   | 5.9   | 6.5   | 7.0   | 4.8   | 4.5   | 4.6   | 5.2   |
| 20    | 4.7   | 5.0   | 5.2   | 4.9   | 5.9   | 6.1   | 6.2   | 6.8   | 4.7   | 4.5   | 4.5   | 5.1   |
| 21    | 4.7   | 5.0   | 5.1   | 4.9   | 5.7   | 6.2   | 6.2   | 6.7   | 4.8   | 4.3   | 4.5   | 5.0   |
| 22    | 4.8   | 5.0   | 5.2   | 4.7   | 5.5   | 6.2   | 6.6   | 6.6   | 4.9   | 4.3   | 4.4   | 5.0   |
| 23    | 4.9   | 5.2   | 5.2   | 4.9   | 5.4   | 5.8   | 8.5   | 6.6   | 4.8   | 4.5   | 4.4   | 5.0   |
| 24    | 5.0   | 5.2   | 5.3   | 5.0   | 5.4   | 5.6   | 11    | 7.7   | 4.7   | 5.0   | 4.7   | 5.0   |
| 25    | 5.0   | 5.1   | 5.2   | 4.7   | 5.3   | 5.5   | 14    | 9.1   | 4.9   | 4.8   | 4.9   | 5.0   |
| 26    | 5.0   | 5.0   | 5.3   | 5.0   | 5.0   | 5.5   | 14    | 8.5   | 5.3   | 4.9   | 4.8   | 5.1   |
| 27    | 5.0   | 5.0   | 5.2   | 5.0   | 5.2   | 5.5   | 13    | 7.3   | 5.6   | 4.9   | 4.5   | 5.1   |
| 28    | 5.0   | 5.2   | 5.3   | 5.0   | 5.1   | 5.5   | 11    | 6.8   | 5.4   | 5.3   | 4.6   | 5.2   |
| 29    | 5.0   | 5.1   | 5.3   | 4.9   | 5.1   | 5.5   | 11    | 6.3   | 5.0   | 5.3   | 4.5   | 5.1   |
| 30    | 5.0   | 5.1   | 5.6   | 5.0   | ---   | 5.5   | 11    | 6.2   | 4.8   | 5.7   | 4.5   | 5.1   |
| 31    | 5.0   | ---   | 5.5   | 5.0   | ---   | 5.8   | ---   | 6.1   | ---   | 4.8   | 4.5   | ---   |
| TOTAL | 145.8 | 152.9 | 165.5 | 154.9 | 155.2 | 170.1 | 244.7 | 237.2 | 153.9 | 142.9 | 142.6 | 146.6 |
| MEAN  | 4.70  | 5.10  | 5.34  | 5.00  | 5.35  | 5.49  | 8.16  | 7.65  | 5.13  | 4.61  | 4.60  | 4.89  |
| MAX   | 5.0   | 5.2   | 8.3   | 5.4   | 6.5   | 6.2   | 14    | 10    | 5.9   | 5.7   | 5.0   | 5.3   |
| MIN   | 4.4   | 5.0   | 5.0   | 4.7   | 4.9   | 5.1   | 5.7   | 6.1   | 4.7   | 3.5   | 4.4   | 4.4   |
| AC-FT | 289   | 303   | 328   | 307   | 308   | 337   | 485   | 470   | 305   | 283   | 283   | 291   |

## 10270960 COYOTE CREEK NEAR BISHOP, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.28 | 3.55 | 3.55 | 3.60 | 3.80 | 4.07 | 5.29 | 5.99 | 5.05 | 3.32 | 2.92 | 3.11 |
| MAX  | 4.70 | 5.10 | 5.34 | 5.00 | 5.35 | 5.49 | 8.16 | 9.20 | 12.9 | 6.06 | 4.60 | 4.89 |
| (WY) | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1995 | 1995 | 1995 | 1996 | 1996 |
| MIN  | 2.63 | 2.98 | 2.99 | 3.10 | 3.23 | 3.46 | 4.35 | 3.28 | 2.51 | 2.01 | 1.92 | 2.07 |
| (WY) | 1993 | 1995 | 1993 | 1992 | 1993 | 1992 | 1991 | 1992 | 1992 | 1992 | 1992 | 1992 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 2018.5                 |  |  |  | 2012.3              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 5.53                   |  |  |  | 5.50                |  |  |  | 3.96                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 5.50                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 2.97                    |  |  |  |
| HIGHEST DAILY MEAN       | 21 Jun 13              |  |  |  | 14 Apr 25           |  |  |  | 21 Jun 13 1995          |  |  |  |
| LOWEST DAILY MEAN        | 3.1 Jan 1              |  |  |  | 3.5 Jul 16          |  |  |  | 1.8 Jul 20 1992         |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 3.2 Jan 1              |  |  |  | 4.0 Jul 12          |  |  |  | 1.8 Jul 29 1992         |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 21 Apr 26           |  |  |  | 26 Jun 12 1995          |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 1.45 Apr 26         |  |  |  | 1.67 Jun 12 1995        |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 4000                   |  |  |  | 3990                |  |  |  | 2870                    |  |  |  |
| 10 PERCENT EXCEEDS       | 10                     |  |  |  | 7.3                 |  |  |  | 5.6                     |  |  |  |
| 50 PERCENT EXCEEDS       | 4.6                    |  |  |  | 5.1                 |  |  |  | 3.4                     |  |  |  |
| 90 PERCENT EXCEEDS       | 3.4                    |  |  |  | 4.5                 |  |  |  | 2.3                     |  |  |  |

## 10270970 BISHOP CREEK BELOW INTAKE NO. 5 DIVERSION DAM, NEAR BISHOP, CA

LOCATION.--Lat 37°19'27", long 118°29'57", in NE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 400 ft downstream from dam, 1.0 mi downstream from Coyote Creek, and 6.0 mi southwest of Bishop.

DRAINAGE AREA.--100 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year (low-flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder and Parshall flume. Elevation of gage is 5,280 ft above sea level, from topographic map.

REMARKS.--No records computed above 30 ft<sup>3</sup>/s. Flow regulated by Intake No. 5 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 5. Water is used for power development downstream. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC | JAN  | FEB  | MAR  | APR | MAY | JUN | JUL | AUG | SEP  |
|-------|------|------|-----|------|------|------|-----|-----|-----|-----|-----|------|
| 1     | 19   | 19   | 19  | 19   | 19   | 19   | 19  | 19  | 24  | 20  | --- | 19   |
| 2     | 19   | 19   | 19  | 19   | 19   | 20   | 22  | 21  | --- | 29  | --- | 19   |
| 3     | 19   | 19   | 19  | 19   | 19   | 19   | 30  | 19  | --- | --- | --- | 19   |
| 4     | 19   | 19   | 19  | 19   | 19   | 19   | 28  | 19  | --- | --- | --- | 20   |
| 5     | 19   | 19   | 19  | 19   | 19   | 19   | 27  | 19  | --- | --- | --- | 19   |
| 6     | 20   | 19   | 20  | 19   | 19   | 18   | 28  | 19  | --- | --- | --- | 19   |
| 7     | 19   | 19   | 19  | 19   | 19   | 18   | 29  | 19  | --- | --- | 25  | 19   |
| 8     | 19   | 19   | 19  | 20   | 19   | 18   | --- | 19  | --- | --- | 21  | 19   |
| 9     | 19   | 19   | 20  | 19   | 19   | 18   | --- | 19  | --- | --- | 20  | 20   |
| 10    | 19   | 19   | 20  | 21   | 19   | 18   | --- | 19  | --- | --- | 20  | 19   |
| 11    | 19   | 19   | 20  | 20   | 19   | 19   | --- | 19  | --- | --- | 20  | 19   |
| 12    | 19   | 19   | --- | 19   | 19   | 19   | --- | --- | --- | --- | 20  | 19   |
| 13    | 19   | 19   | 20  | 19   | 20   | 19   | 24  | --- | --- | --- | 20  | 19   |
| 14    | 19   | 19   | 20  | 19   | 19   | 19   | 20  | --- | --- | --- | 22  | 20   |
| 15    | 19   | 19   | 19  | 19   | 19   | 19   | 20  | --- | --- | --- | 25  | 20   |
| 16    | 19   | 19   | 19  | 19   | 19   | 19   | 19  | --- | --- | --- | 31  | 19   |
| 17    | 19   | 19   | 19  | 19   | 19   | 19   | 20  | --- | --- | --- | 30  | 19   |
| 18    | 19   | 19   | 19  | 19   | 19   | 19   | 19  | --- | --- | --- | 21  | 19   |
| 19    | 19   | 19   | 19  | 19   | 19   | 19   | 20  | 30  | --- | --- | 20  | 20   |
| 20    | 19   | 19   | 19  | 19   | 19   | 19   | 20  | 26  | --- | --- | 20  | 19   |
| 21    | 19   | 19   | 19  | 19   | 19   | 19   | 20  | --- | --- | --- | 20  | 19   |
| 22    | 19   | 20   | 19  | 19   | 19   | 19   | 20  | --- | --- | --- | 20  | 19   |
| 23    | 19   | 19   | 19  | 19   | 19   | 19   | 20  | 25  | --- | --- | 20  | 20   |
| 24    | 19   | 19   | 19  | 19   | 19   | 19   | --- | 28  | --- | --- | 20  | 19   |
| 25    | 19   | 19   | 20  | 19   | 19   | 19   | 19  | 26  | --- | --- | 20  | 19   |
| 26    | 19   | 19   | 20  | 19   | 19   | 19   | 19  | 21  | --- | --- | 20  | 19   |
| 27    | 19   | 19   | 19  | 19   | 19   | 19   | 19  | 21  | --- | --- | 19  | 20   |
| 28    | 19   | 19   | 19  | 19   | 19   | 19   | 19  | 20  | --- | --- | 25  | 20   |
| 29    | 19   | 19   | 20  | 19   | 19   | 19   | 19  | 19  | 22  | --- | 19  | 20   |
| 30    | 19   | 19   | 19  | 19   | ---  | 19   | 19  | 19  | 20  | --- | 19  | 20   |
| 31    | 19   | ---  | 19  | 19   | ---  | 19   | --- | 19  | --- | --- | 20  | ---  |
| TOTAL | 590  | 571  | --- | 593  | 552  | 585  | --- | --- | --- | --- | --- | 580  |
| MEAN  | 19.0 | 19.0 | --- | 19.1 | 19.0 | 18.9 | --- | --- | --- | --- | --- | 19.3 |
| MAX   | 20   | 20   | --- | 21   | 20   | 20   | --- | --- | --- | --- | --- | 20   |
| MIN   | 19   | 19   | --- | 19   | 19   | 18   | --- | --- | --- | --- | --- | 19   |
| AC-FT | 1170 | 1130 | --- | 1180 | 1090 | 1160 | --- | --- | --- | --- | --- | 1150 |

## 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 sea level, from topographic map.

REMARKS.--Ditch diverts water from Bishop Creek Powerplant No. 6 Penstock for irrigation and domestic use. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3.3 ft<sup>3</sup>/s, May 7, 1995; minimum daily, 1.3 ft<sup>3</sup>/s, Dec. 23, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 2.4  | 1.9  | 1.8  | 1.9  | 2.1  | 1.7  | 1.9  | 2.2  | 2.4  | 2.3  | 2.8  | 2.8  |
| 2     | 2.5  | 1.9  | 1.8  | 1.9  | 2.1  | 1.8  | 2.1  | 2.7  | 2.4  | 2.3  | 2.8  | 2.8  |
| 3     | 2.3  | 1.9  | 1.8  | 1.9  | 2.1  | 1.8  | 2.4  | 2.5  | 2.4  | 2.3  | 2.8  | 2.6  |
| 4     | 1.8  | 1.9  | 1.8  | 1.9  | 2.0  | 1.8  | 2.4  | 2.3  | 2.4  | 2.3  | 2.8  | 2.5  |
| 5     | 1.8  | 1.9  | 1.8  | 1.9  | 2.0  | 2.0  | 2.3  | 2.2  | 2.4  | 2.3  | 2.8  | 2.6  |
| 6     | 1.9  | 1.9  | 1.8  | 1.9  | 2.0  | 2.0  | 2.3  | 2.3  | 2.4  | 2.3  | 2.8  | 2.6  |
| 7     | 1.9  | 1.9  | 1.8  | 1.9  | 2.1  | 2.0  | 2.3  | 2.3  | 2.4  | 2.3  | 2.7  | 2.5  |
| 8     | 1.9  | 1.9  | 1.8  | 2.0  | 2.1  | 1.9  | 2.3  | 2.4  | 2.4  | 2.3  | 2.7  | 2.5  |
| 9     | 1.9  | 1.9  | 1.8  | 2.0  | 2.0  | 1.8  | 2.3  | 2.4  | 2.4  | 2.4  | 2.7  | 2.5  |
| 10    | 1.9  | 1.9  | 1.8  | 1.9  | 2.1  | 1.8  | 2.3  | 2.4  | 2.4  | 2.4  | 2.6  | 2.5  |
| 11    | 1.9  | 1.9  | 1.8  | 1.8  | 2.1  | 1.9  | 2.3  | 2.4  | 2.3  | 2.4  | 2.6  | 2.5  |
| 12    | 1.9  | 2.0  | 1.6  | 1.6  | 2.1  | 1.9  | 2.3  | 2.4  | 2.3  | 2.4  | 2.6  | 2.4  |
| 13    | 1.9  | 2.0  | 1.7  | 1.6  | 2.0  | 1.9  | 2.3  | 2.4  | 2.4  | 2.4  | 2.7  | 2.5  |
| 14    | 1.9  | 1.9  | 1.7  | 1.8  | 2.0  | 1.9  | 2.3  | 2.4  | 2.4  | 2.4  | 2.7  | 2.5  |
| 15    | 1.9  | 1.9  | 1.8  | 2.0  | 1.9  | 1.9  | 2.2  | 2.4  | 2.4  | 2.4  | 2.7  | 2.5  |
| 16    | 1.9  | 1.9  | 1.9  | 2.0  | 1.9  | 1.8  | 2.2  | 2.4  | 2.5  | 2.4  | 2.7  | 2.5  |
| 17    | 2.0  | 1.9  | 1.9  | 2.1  | 2.0  | 1.7  | 2.2  | 2.4  | 2.5  | 2.4  | 2.7  | 2.5  |
| 18    | 2.0  | 2.0  | 2.2  | 2.1  | 2.0  | 1.7  | 2.4  | 2.4  | 2.5  | 2.3  | 2.7  | 2.5  |
| 19    | 2.0  | 2.0  | 2.1  | 2.1  | 1.9  | 1.8  | 3.0  | 2.4  | 2.5  | 2.3  | 2.7  | 2.5  |
| 20    | 2.0  | 2.0  | 1.9  | 2.1  | 2.0  | 2.1  | 3.1  | 2.3  | 2.5  | 2.3  | 2.6  | 2.4  |
| 21    | 2.0  | 2.0  | 1.9  | 2.1  | 1.9  | 2.3  | 3.1  | 2.3  | 2.4  | 2.2  | 2.8  | 2.5  |
| 22    | 2.0  | 2.0  | 1.9  | 2.1  | 2.0  | 2.2  | 3.1  | 2.4  | 2.4  | 2.2  | 2.6  | 2.5  |
| 23    | 2.0  | 2.0  | 1.9  | 2.1  | 2.0  | 1.9  | 3.1  | 2.4  | 2.4  | 2.1  | 2.7  | 2.4  |
| 24    | 2.0  | 2.0  | 1.9  | 2.1  | 2.0  | 1.9  | 2.8  | 2.4  | 2.4  | 2.1  | 2.8  | 2.4  |
| 25    | 1.9  | 1.9  | 1.9  | 2.1  | 1.9  | 1.8  | 2.0  | 2.4  | 2.4  | 2.3  | 2.8  | 2.5  |
| 26    | 1.9  | 1.9  | 1.9  | 2.1  | 2.0  | 1.8  | 2.0  | 2.4  | 2.4  | 2.3  | 2.8  | 2.4  |
| 27    | 1.9  | 1.9  | 1.9  | 2.1  | 1.9  | 1.8  | 2.2  | 2.4  | 2.4  | 2.3  | 2.8  | 2.2  |
| 28    | 1.9  | 1.9  | 1.9  | 2.1  | 1.8  | 1.8  | 2.4  | 2.4  | 2.4  | 2.3  | 2.8  | 2.3  |
| 29    | 1.9  | 1.9  | 1.9  | 2.1  | 1.7  | 1.8  | 2.3  | 2.4  | 2.4  | 1.9  | 2.8  | 2.3  |
| 30    | 1.9  | 1.9  | 1.9  | 2.0  | ---  | 1.9  | 2.3  | 2.3  | 2.4  | 2.4  | 2.8  | 2.2  |
| 31    | 1.9  | ---  | 1.9  | 2.1  | ---  | 1.9  | ---  | 2.3  | ---  | 2.8  | 2.8  | ---  |
| TOTAL | 61.0 | 57.9 | 57.5 | 61.4 | 57.7 | 58.3 | 72.2 | 73.7 | 72.3 | 71.8 | 84.7 | 74.4 |
| MEAN  | 1.97 | 1.93 | 1.85 | 1.98 | 1.99 | 1.88 | 2.41 | 2.38 | 2.41 | 2.32 | 2.73 | 2.48 |
| MAX   | 2.5  | 2.0  | 2.2  | 2.1  | 2.1  | 2.3  | 3.1  | 2.7  | 2.5  | 2.8  | 2.8  | 2.8  |
| MIN   | 1.8  | 1.9  | 1.6  | 1.6  | 1.7  | 1.7  | 1.9  | 2.2  | 2.3  | 1.9  | 2.6  | 2.2  |
| AC-FT | 121  | 115  | 114  | 122  | 114  | 116  | 143  | 146  | 143  | 142  | 168  | 148  |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.00 | 1.92 | 1.85 | 1.88 | 1.89 | 1.92 | 2.00 | 2.14 | 2.20 | 2.24 | 2.31 | 2.24 |
| MAX  | 2.19 | 2.20 | 1.94 | 1.98 | 2.00 | 2.05 | 2.41 | 2.42 | 2.47 | 2.62 | 2.73 | 2.52 |
| (WY) | 1994 | 1994 | 1994 | 1996 | 1992 | 1995 | 1996 | 1995 | 1993 | 1995 | 1996 | 1995 |
| MIN  | 1.87 | 1.76 | 1.77 | 1.75 | 1.70 | 1.70 | 1.86 | 1.88 | 1.90 | 1.91 | 1.85 | 1.89 |
| (WY) | 1991 | 1993 | 1993 | 1992 | 1991 | 1991 | 1991 | 1991 | 1992 | 1992 | 1991 | 1991 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1991 - 1996

|                          |       |       |      |
|--------------------------|-------|-------|------|
| ANNUAL TOTAL             | 794.7 | 802.9 |      |
| ANNUAL MEAN              | 2.18  | 2.19  | 2.05 |
| HIGHEST ANNUAL MEAN      |       |       | 2.19 |
| LOWEST ANNUAL MEAN       |       |       | 1.85 |
| HIGHEST DAILY MEAN       | 3.3   | 3.1   | 3.3  |
| LOWEST DAILY MEAN        | 1.6   | 1.6   | 1.3  |
| ANNUAL SEVEN-DAY MINIMUM | 1.7   | 1.7   | 1.6  |
| ANNUAL RUNOFF (AC-FT)    | 1580  | 1590  | 1480 |
| 10 PERCENT EXCEEDS       | 2.7   | 2.6   | 2.5  |
| 50 PERCENT EXCEEDS       | 2.0   | 2.1   | 2.0  |
| 90 PERCENT EXCEEDS       | 1.9   | 1.8   | 1.8  |

## 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 sea level, from topographic map.

REMARKS.--Flow regulated for power development by South Lake, Lake Sabrina, and Intake No. 2 Reservoir (stations 10270700, 10270870, and 10270875), combined capacity, 20,311 acre-ft, and five powerplants. Water is diverted into basin via Birch-McGee Diversion (station 10270900). Water is diverted out of basin via Abelour Ditch (station 10270985) for irrigation and domestic use. Diversion to Bishop Creek Powerplant No. 6 (station 10271060) bypasses this station and is published as a line item below. See schematic diagram of Bishop Creek basin.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 421 ft<sup>3</sup>/s, July 31, 1995, gage height, 3.71 ft; no flow on many days in July and August 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC    | JAN  | FEB  | MAR   | APR    | MAY   | JUN  | JUL  | AUG   | SEP  |
|-------|------|------|--------|------|------|-------|--------|-------|------|------|-------|------|
| 1     | 2.0  | 2.0  | 1.7    | 2.3  | 1.7  | 1.2   | 1.5    | 20    | 32   | 24   | 104   | 4.8  |
| 2     | 2.0  | 2.0  | 1.7    | 2.1  | 1.6  | 1.2   | 9.9    | 15    | 43   | 31   | 95    | 5.3  |
| 3     | 2.1  | 2.0  | 1.7    | 2.0  | 1.5  | 1.2   | 33     | 9.0   | 59   | 48   | 88    | 3.4  |
| 4     | 1.9  | 2.0  | 1.7    | 2.0  | 1.5  | 1.1   | 33     | 12    | 76   | 52   | 75    | 3.5  |
| 5     | 1.8  | 2.0  | 1.7    | 2.0  | 1.7  | 1.9   | 31     | 7.8   | 94   | 49   | 64    | 3.7  |
| 6     | 2.1  | 2.0  | 1.7    | 2.0  | 1.5  | 1.1   | 29     | 13    | 103  | 58   | 50    | 5.0  |
| 7     | 2.5  | 2.0  | 1.7    | 2.0  | 1.5  | 1.1   | 30     | 12    | 120  | 59   | 29    | 2.5  |
| 8     | 2.0  | 2.0  | 1.7    | 2.0  | 1.5  | 1.1   | 32     | 17    | 117  | 57   | 16    | 2.6  |
| 9     | 2.1  | 2.0  | 1.7    | 2.0  | 1.5  | 1.1   | 34     | 18    | 115  | 94   | 8.6   | 1.6  |
| 10    | 1.8  | 2.0  | 1.7    | 2.0  | 1.5  | .98   | 33     | 18    | 118  | 118  | 7.3   | 1.7  |
| 11    | 2.0  | 2.0  | 1.5    | 2.0  | 1.5  | .93   | 30     | 27    | 105  | 133  | 5.1   | 2.1  |
| 12    | 2.0  | 2.0  | 8.8    | 2.0  | 1.5  | .84   | 32     | 39    | 90   | 149  | 6.5   | 1.6  |
| 13    | 2.0  | 2.0  | 1.1    | 2.0  | 1.5  | .89   | 28     | 46    | 98   | 144  | 21    | 3.0  |
| 14    | 2.0  | 2.0  | .89    | 1.8  | 1.5  | 1.2   | 25     | 51    | 101  | 119  | 28    | 3.1  |
| 15    | 2.0  | 2.0  | 1.3    | 1.7  | 1.5  | .94   | 19     | 49    | 104  | 119  | 31    | 1.6  |
| 16    | 2.0  | 2.0  | 2.6    | 1.7  | 1.5  | .87   | 6.9    | 73    | 101  | 146  | 36    | 1.5  |
| 17    | 2.0  | 2.0  | 4.3    | 1.6  | 1.4  | .77   | 3.4    | 47    | 94   | 144  | 36    | 1.6  |
| 18    | 2.0  | 2.0  | 57     | 1.8  | 1.3  | 1.4   | 2.8    | 44    | 82   | 123  | 28    | 2.2  |
| 19    | 2.0  | 2.0  | 43     | 1.7  | 1.4  | .8    | 1.1    | 38    | 68   | 105  | 16    | 2.8  |
| 20    | 2.0  | 1.7  | 2.7    | 1.7  | 1.7  | 1.1   | .58    | 34    | 67   | 94   | 9.6   | 1.5  |
| 21    | 1.9  | 1.7  | 2.5    | 1.9  | 1.4  | 1.5   | .61    | 39    | 66   | 83   | 9.2   | 1.4  |
| 22    | 1.7  | 1.7  | 2.3    | 1.8  | 1.2  | 2.4   | .56    | 41    | 61   | 73   | 5.0   | 1.9  |
| 23    | 1.7  | 1.7  | 2.3    | 2.0  | 1.1  | 2.1   | .57    | 33    | 59   | 74   | 4.8   | 1.8  |
| 24    | 1.7  | 1.7  | 2.3    | 1.9  | 1.1  | 2.3   | 4.0    | 34    | 56   | 85   | 4.4   | 1.6  |
| 25    | 1.9  | 1.7  | 2.3    | 1.7  | 1.1  | 2.0   | 4.0    | 35    | 53   | 81   | 4.8   | 1.2  |
| 26    | 2.0  | 1.7  | 2.3    | 1.7  | 1.2  | 2.1   | 12     | 29    | 48   | 96   | 6.2   | 1.4  |
| 27    | 2.0  | 1.7  | 2.3    | 1.8  | 1.1  | 1.8   | 9.5    | 29    | 37   | 100  | 10    | 1.3  |
| 28    | 2.0  | 1.7  | 2.3    | 2.0  | 1.3  | 1.5   | 9.4    | 26    | 26   | 135  | 11    | 1.6  |
| 29    | 2.0  | 1.7  | 2.3    | 2.0  | 1.1  | 1.5   | 8.2    | 21    | 23   | 159  | 8.5   | 1.3  |
| 30    | 2.0  | 1.7  | 2.3    | 1.8  | ---  | 1.7   | 14     | 23    | 21   | 140  | 5.7   | 1.2  |
| 31    | 2.0  | ---  | 2.3    | 1.7  | ---  | 1.5   | ---    | 26    | ---  | 121  | 5.2   | ---  |
| TOTAL | 61.2 | 56.7 | 165.69 | 58.7 | 40.9 | 42.12 | 478.02 | 925.8 | 2237 | 3023 | 828.9 | 69.8 |
| MEAN  | 1.97 | 1.89 | 5.34   | 1.89 | 1.41 | 1.36  | 15.9   | 29.9  | 74.6 | 97.5 | 26.7  | 2.33 |
| MAX   | 2.5  | 2.0  | 57     | 2.3  | 1.7  | 2.4   | 34     | 73    | 120  | 159  | 104   | 5.3  |
| MIN   | 1.7  | 1.7  | .89    | 1.6  | 1.1  | .77   | .56    | 7.8   | 21   | 24   | 4.4   | 1.2  |
| AC-FT | 121  | 112  | 329    | 116  | 81   | 84    | 948    | 1840  | 4440 | 6000 | 1640  | 138  |
| a     | 4510 | 3900 | 3890   | 6040 | 6930 | 8310  | 8500   | 9060  | 8710 | 9320 | 9200  | 7860 |

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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.00 | 3.17 | 1.67 | 2.12 | 1.33 | 2.75 | 3.40 | 8.81 | 27.0 | 66.9 | 39.3 | 4.17 |
| MAX  | 1.97 | 14.9 | 5.34 | 8.50 | 2.35 | 7.54 | 15.9 | 29.9 | 74.6 | 240  | 171  | 17.8 |
| (WY) | 1996 | 1994 | 1996 | 1995 | 1992 | 1994 | 1996 | 1996 | 1996 | 1995 | 1995 | 1995 |
| MIN  | .11  | .19  | .19  | .17  | .21  | .19  | .18  | .12  | .064 | .035 | .048 | .082 |
| (WY) | 1993 | 1991 | 1993 | 1993 | 1993 | 1992 | 1992 | 1992 | 1992 | 1992 | 1992 | 1992 |

| SUMMARY STATISTICS         | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|----------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL               | 15889.96               |  |  |  | 7987.83             |  |  |  |                         |  |  |  |
| ANNUAL MEAN                | 43.5                   |  |  |  | 21.8                |  |  |  | 13.6                    |  |  |  |
| HIGHEST ANNUAL MEAN        |                        |  |  |  |                     |  |  |  | 43.2                    |  |  |  |
| LOWEST ANNUAL MEAN         |                        |  |  |  |                     |  |  |  | .34                     |  |  |  |
| HIGHEST DAILY MEAN         | 407                    |  |  |  | 159                 |  |  |  | 407                     |  |  |  |
| LOWEST DAILY MEAN          | .71                    |  |  |  | .56                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM   | .92                    |  |  |  | .92                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW    |                        |  |  |  | 197                 |  |  |  | 421                     |  |  |  |
| INSTANTANEOUS PEAK STAGE   |                        |  |  |  | 2.40                |  |  |  | 3.71                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)      | 31520                  |  |  |  | 15840               |  |  |  | 9850                    |  |  |  |
| ANNUAL DIVERSION (AC-FT) a | 81410                  |  |  |  | 86230               |  |  |  |                         |  |  |  |
| 10 PERCENT EXCEEDS         | 174                    |  |  |  | 84                  |  |  |  | 38                      |  |  |  |
| 50 PERCENT EXCEEDS         | 2.3                    |  |  |  | 2.1                 |  |  |  | 1.5                     |  |  |  |
| 90 PERCENT EXCEEDS         | 1.5                    |  |  |  | 1.3                 |  |  |  | .12                     |  |  |  |

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

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 4,113 acre-ft between elevations 7,766.43 ft, invert of outlet, and 7,807.81 ft, crest of spillway. Figures given represent usable contents. Water is used for power development and irrigation downstream.

COOPERATION.--Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,179 acre-ft, July 12, 1996, elevation, 7,808.31 ft; minimum, 440 acre-ft, Apr. 19, 1993, elevation, 7,773.08 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 4,179 acre-ft, July 12, elevation, 7,808.31 ft; minimum, 960 acre-ft, Apr. 4, elevation, 7,779.25 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY         | OCT      | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1           | 3113     | 2902    | 2785    | 2743    | 2655    | 2478    | 1090    | 1520    | 2183    | 4081    | 3882    | 2955    |
| 2           | 3098     | 2902    | 2778    | 2742    | 2649    | 2458    | 1040    | 1606    | 2219    | 4131    | 3844    | 2956    |
| 3           | 3080     | 2904    | 2770    | 2736    | 2644    | 2438    | 990     | 1679    | 2312    | 4167    | 3796    | 2961    |
| 4           | 3070     | 2904    | 2766    | 2729    | 2677    | 2436    | 960     | 1700    | 2447    | 4161    | 3742    | 2963    |
| 5           | 3056     | 2900    | 2759    | 2727    | 2695    | 2422    | 974     | 1693    | 2597    | 4155    | 3680    | 2955    |
| 6           | 3040     | 2897    | 2752    | 2722    | 2703    | 2401    | 991     | 1684    | 2755    | 4154    | 3616    | 2954    |
| 7           | 3026     | 2898    | 2745    | 2718    | 2708    | 2357    | 1006    | 1682    | 2955    | 4157    | 3571    | 2949    |
| 8           | 3008     | 2899    | 2741    | 2714    | 2714    | 2293    | 1027    | 1681    | 3187    | 4162    | 3532    | 2946    |
| 9           | 2992     | 2889    | 2733    | 2708    | 2720    | 2231    | 1052    | 1675    | 3392    | 4162    | 3495    | 2942    |
| 10          | 2973     | 2886    | 2729    | 2705    | 2724    | 2171    | 1079    | 1666    | 3567    | 4163    | 3457    | 2935    |
| 11          | 2959     | 2884    | 2745    | 2698    | 2721    | 2118    | 1103    | 1669    | 3706    | 4174    | 3421    | 2930    |
| 12          | 2938     | 2880    | 2788    | 2694    | 2705    | 2068    | 1123    | 1709    | 3818    | 4179    | 3384    | 2927    |
| 13          | 2921     | 2880    | 2788    | 2687    | 2690    | 2012    | 1145    | 1777    | 3962    | 4166    | 3360    | 2919    |
| 14          | 2902     | 2877    | 2794    | 2680    | 2677    | 1953    | 1154    | 1871    | 4121    | 4159    | 3348    | 2906    |
| 15          | 2884     | 2872    | 2787    | 2677    | 2663    | 1894    | 1168    | 1990    | 4167    | 4155    | 3333    | 2895    |
| 16          | 2864     | 2868    | 2788    | 2696    | 2649    | 1837    | 1178    | 2157    | 4166    | 4153    | 3321    | 2880    |
| 17          | 2859     | 2863    | 2787    | 2685    | 2641    | 1781    | 1183    | 2260    | 4164    | 4134    | 3306    | 2872    |
| 18          | 2864     | 2859    | 2786    | 2692    | 2623    | 1729    | 1190    | 2345    | 4162    | 4121    | 3284    | 2864    |
| 19          | 2870     | 2854    | 2783    | 2690    | 2638    | 1677    | 1191    | 2379    | 4164    | 4105    | 3258    | 2851    |
| 20          | 2874     | 2850    | 2780    | 2685    | 2630    | 1633    | 1191    | 2395    | 4164    | 4082    | 3230    | 2840    |
| 21          | 2874     | 2842    | 2776    | 2689    | 2627    | 1589    | 1190    | 2401    | 4163    | 4065    | 3200    | 2828    |
| 22          | 2880     | 2837    | 2771    | 2682    | 2615    | 1550    | 1189    | 2400    | 4158    | 4051    | 3165    | 2806    |
| 23          | 2884     | 2832    | 2770    | 2680    | 2597    | 1508    | 1191    | 2394    | 4150    | 4032    | 3136    | 2764    |
| 24          | 2886     | 2828    | 2768    | 2680    | 2585    | 1466    | 1187    | 2370    | 4155    | 4032    | 3105    | 2747    |
| 25          | 2888     | 2823    | 2765    | 2676    | 2570    | 1419    | 1193    | 2344    | 4158    | 4020    | 3071    | 2740    |
| 26          | 2891     | 2818    | 2762    | 2676    | 2551    | 1369    | 1225    | 2312    | 4147    | 4007    | 3034    | 2731    |
| 27          | 2894     | 2812    | 2759    | 2690    | 2534    | 1324    | 1274    | 2286    | 4125    | 3994    | 2996    | 2732    |
| 28          | 2897     | 2807    | 2752    | 2673    | 2515    | 1278    | 1328    | 2257    | 4088    | 3979    | 2959    | 2732    |
| 29          | 2899     | 2797    | 2751    | 2670    | 2497    | 1228    | 1380    | 2231    | 4049    | 3963    | 2943    | 2732    |
| 30          | 2902     | 2793    | 2749    | 2665    | ---     | 1178    | 1443    | 2207    | 4036    | 3946    | 2948    | 2733    |
| 31          | 2901     | ---     | 2748    | 2662    | ---     | 1126    | ---     | 2186    | ---     | 3916    | 2954    | ---     |
| MAX         | 3113     | 2904    | 2794    | 2743    | 2724    | 2478    | 1443    | 2401    | 4167    | 4179    | 3882    | 2963    |
| MIN         | 2859     | 2793    | 2729    | 2662    | 2497    | 1126    | 960     | 1520    | 2183    | 3916    | 2943    | 2731    |
| a           | 7798.10  | 7797.17 | 7796.78 | 7796.03 | 7794.57 | 7781.09 | 7784.46 | 7791.74 | 7807.23 | 7806.31 | 7798.55 | 7796.65 |
| b           | -236     | -108    | -45     | -86     | -165    | -1371   | +317    | +743    | +1850   | -120    | -962    | -221    |
| CAL YR 1995 | MAX 4171 | MIN 627 | b +1226 |         |         |         |         |         |         |         |         |         |
| WTR YR 1996 | MAX 4179 | MIN 960 | b -404  |         |         |         |         |         |         |         |         |         |

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 sea level, 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, 152 ft<sup>3</sup>/s, July 29, 1995, gage height, 2.62 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN  | FEB  | MAR   | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|------|------|------|------|-------|------|-------|-------|-------|-------|-------|
| 1     | 4.3   | 2.8  | 2.4  | 2.0  | 1.5  | 1.4   | .00  | .00   | 1.3   | 8.4   | 7.9   | 3.3   |
| 2     | 4.2   | 2.8  | 2.4  | 2.0  | 1.5  | 1.3   | .00  | .00   | 1.3   | 9.6   | 7.8   | 3.3   |
| 3     | 4.1   | 2.8  | 2.3  | 1.9  | 1.5  | 1.3   | .00  | .00   | 1.3   | 47    | 7.4   | 2.0   |
| 4     | 4.1   | 2.8  | 2.2  | 1.9  | 1.6  | 1.3   | .00  | .00   | 1.3   | 60    | 7.2   | 3.6   |
| 5     | 4.1   | 2.8  | 2.2  | 1.9  | 1.7  | 1.3   | .00  | .00   | 1.4   | 45    | 6.9   | 3.6   |
| 6     | 4.1   | 2.8  | 2.2  | 1.9  | 1.7  | 1.3   | .00  | .04   | 1.6   | 39    | 6.4   | 3.6   |
| 7     | 3.9   | 2.8  | 2.2  | 1.9  | 1.7  | 1.3   | .00  | .11   | 1.9   | 43    | 6.0   | 3.6   |
| 8     | 3.9   | 2.8  | 2.2  | 1.9  | 1.7  | 1.2   | .00  | .14   | 2.4   | 52    | 5.7   | 3.6   |
| 9     | 3.9   | 2.8  | 2.2  | 1.9  | 1.7  | 1.1   | .00  | .14   | 3.2   | 58    | 5.3   | 3.6   |
| 10    | 3.7   | 2.8  | 2.2  | 1.8  | 1.7  | 1.1   | .00  | .19   | 4.1   | 55    | 5.1   | 3.6   |
| 11    | 3.7   | 2.8  | 2.2  | 1.7  | 1.7  | 1.1   | .00  | .19   | 5.1   | 63    | 5.0   | 3.6   |
| 12    | 3.7   | 2.8  | 2.3  | 1.7  | 1.7  | .98   | .00  | .24   | 5.8   | 89    | 4.9   | 3.6   |
| 13    | 3.5   | 2.8  | 2.2  | 1.7  | 1.7  | .93   | .00  | .31   | 6.5   | 63    | 4.8   | 3.6   |
| 14    | 3.5   | 2.7  | 2.2  | 1.7  | 1.7  | .83   | .00  | .36   | 7.5   | 44    | 4.7   | 5.3   |
| 15    | 3.8   | 2.6  | 2.2  | 1.6  | 1.7  | .76   | .00  | .47   | 54    | 41    | 4.5   | 7.0   |
| 16    | 4.3   | 2.6  | 2.2  | 1.7  | 1.7  | .68   | .00  | .61   | 74    | 36    | 4.5   | 5.2   |
| 17    | 4.3   | 2.6  | 2.2  | 1.7  | 1.7  | .60   | .00  | .72   | 64    | 27    | 4.5   | 3.5   |
| 18    | 3.8   | 2.6  | 2.2  | 1.7  | 1.6  | .53   | .00  | .88   | 54    | 15    | 4.4   | 3.3   |
| 19    | 3.1   | 2.6  | 2.2  | 1.6  | 1.6  | .53   | .00  | 1.0   | 56    | 8.9   | 4.3   | 3.3   |
| 20    | 3.0   | 2.5  | 2.2  | 1.6  | 1.6  | .53   | .00  | 1.1   | 60    | 8.7   | 4.3   | 3.3   |
| 21    | 2.9   | 2.6  | 2.1  | 1.6  | 1.6  | .48   | .00  | 1.2   | 59    | 8.7   | 4.3   | 3.3   |
| 22    | 2.8   | 2.6  | 2.1  | 1.6  | 1.6  | .41   | .00  | 1.3   | 42    | 8.7   | 4.2   | 8.1   |
| 23    | 2.8   | 2.6  | 2.1  | 1.6  | 1.6  | .34   | .00  | 1.3   | 42    | 8.5   | 4.1   | 17    |
| 24    | 2.8   | 2.5  | 2.1  | 1.5  | 1.5  | .22   | .00  | 1.4   | 40    | 8.5   | 4.0   | 16    |
| 25    | 2.8   | 2.5  | 2.1  | 1.5  | 1.5  | .14   | .00  | 1.4   | 37    | 8.5   | 3.9   | 16    |
| 26    | 2.8   | 2.5  | 2.1  | 1.5  | 1.5  | .12   | .00  | 1.4   | 24    | 8.4   | 3.8   | 11    |
| 27    | 2.8   | 2.5  | 2.1  | 1.5  | 1.5  | .06   | .00  | 1.4   | 10    | 8.4   | 4.0   | 3.1   |
| 28    | 2.8   | 2.5  | 2.0  | 1.5  | 1.5  | .01   | .00  | 1.4   | 9.0   | 8.3   | 3.5   | 3.0   |
| 29    | 2.8   | 2.5  | 2.0  | 1.5  | 1.4  | .00   | .00  | 1.4   | 8.7   | 8.1   | 3.5   | 2.9   |
| 30    | 2.8   | 2.5  | 2.0  | 1.5  | ---  | .00   | .00  | 1.4   | 8.6   | 8.1   | 3.4   | 2.9   |
| 31    | 2.8   | ---  | 2.0  | 1.5  | ---  | .00   | ---  | 1.3   | ---   | 8.1   | 3.3   | ---   |
| TOTAL | 107.9 | 79.9 | 67.3 | 52.6 | 46.7 | 21.85 | 0.00 | 21.40 | 687.0 | 904.9 | 153.6 | 158.8 |
| MEAN  | 3.48  | 2.66 | 2.17 | 1.70 | 1.61 | .70   | .000 | .69   | 22.9  | 29.2  | 4.95  | 5.29  |
| MAX   | 4.3   | 2.8  | 2.4  | 2.0  | 1.7  | 1.4   | .00  | 1.4   | 74    | 89    | 7.9   | 17    |
| MIN   | 2.8   | 2.5  | 2.0  | 1.5  | 1.4  | .00   | .00  | .00   | 1.3   | 8.1   | 3.3   | 2.0   |
| AC-FT | 214   | 158  | 133  | 104  | 93   | 43    | .00  | 42    | 1360  | 1790  | 305   | 315   |
| a     | 0     | 0    | 0    | 0    | 0    | 0     | 0    | 219   | 538   | 579   | 208   | 0     |
| b     | 1060  | 595  | 610  | 600  | 904  | 2290  | 1260 | 3320  | 3420  | 3600  | 2550  | 785   |

a Diversion, in acre-feet, to Upper Conway Ditch, provided by Southern California Edison Co.

b Diversion, in acre-feet, to Lundy Powerplant Tailrace, provided by Southern California Edison Co.

## 10287069 MILL CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.32 | .68  | .46  | .30  | .27  | .12  | .007 | .12  | 10.1 | 24.9 | 8.02 | 3.20 |
| MAX  | 3.48 | 2.66 | 2.17 | 1.70 | 1.61 | .70  | .044 | .69  | 31.8 | 98.2 | 31.4 | 5.74 |
| (WY) | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1994 | 1996 | 1995 | 1995 | 1995 | 1995 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .61  | 1.72 | .17  | .000 |
| (WY) | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1991 | 1993 | 1994 | 1994 | 1994 |

| SUMMARY STATISTICS         | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|----------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL               | 5398.94                |  |  |  | 2301.95             |  |  |  |                         |  |  |  |
| ANNUAL MEAN                | 14.8                   |  |  |  | 6.29                |  |  |  | 4.16                    |  |  |  |
| HIGHEST ANNUAL MEAN        |                        |  |  |  |                     |  |  |  | 14.1                    |  |  |  |
| LOWEST ANNUAL MEAN         |                        |  |  |  |                     |  |  |  | .69                     |  |  |  |
| HIGHEST DAILY MEAN         | 130                    |  |  |  | 89                  |  |  |  | 130                     |  |  |  |
| LOWEST DAILY MEAN          | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM   | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW    |                        |  |  |  | 96                  |  |  |  | 152                     |  |  |  |
| INSTANTANEOUS PEAK STAGE   |                        |  |  |  | 1.98                |  |  |  | 2.62                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)      | 10710                  |  |  |  | 4570                |  |  |  | 3020                    |  |  |  |
| ANNUAL DIVERSION (AC-FT) a | 1510                   |  |  |  | 1540                |  |  |  |                         |  |  |  |
| ANNUAL DIVERSION (AC-FT) b | 22810                  |  |  |  | 20990               |  |  |  |                         |  |  |  |
| 10 PERCENT EXCEEDS         | 68                     |  |  |  | 8.8                 |  |  |  | 5.3                     |  |  |  |
| 50 PERCENT EXCEEDS         | 2.2                    |  |  |  | 2.2                 |  |  |  | .00                     |  |  |  |
| 90 PERCENT EXCEEDS         | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |

a Diversion, in acre-feet, to Upper Conway Ditch, provided by Southern California Edison Co.

b Diversion, in acre-feet, to Lundy Powerplant Tailrace, provided by Southern California Edison Co.

## 10287260 WAUGH LAKE NEAR JUNE LAKE, CA

LOCATION.--Lat 37°45'04", long 119°10'52", unsurveyed, T.2 S., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near outlet at base of Rush Creek Meadows Dam on Rush Creek and 6.0 mi southwest of town of June Lake.

DRAINAGE AREA.--15.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.--Water-stage recorder. Datum of gage is sea level (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 are 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, 5,696 acre-ft, July 8, 1995, elevation, 9,417.84 ft; minimum, no storage in each year.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 5,469 acre-ft, June 13, elevation, 9,416.64 ft; minimum, no storage for many days.

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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 3478    | .00     | .00     | .00     | .00     | .00     | .00     | 335     | 768     | 4578    | 5325    | 4891    |
| 2   | 3362    | .00     | .00     | .00     | .00     | .00     | .00     | 347     | 1218    | 4707    | 5310    | 4885    |
| 3   | 3247    | .00     | .00     | .00     | .00     | .00     | .00     | 245     | 1765    | 4824    | 5290    | 4873    |
| 4   | 3132    | .00     | .00     | .00     | .00     | .00     | .00     | 148     | 2327    | 4889    | 5271    | 4844    |
| 5   | 2949    | .00     | .00     | .00     | .00     | .00     | .00     | 168     | 2871    | 4932    | 5252    | 4830    |
| 6   | 2704    | .00     | .00     | .00     | .00     | .00     | .00     | 203     | 3428    | 4979    | 5238    | 4808    |
| 7   | 2466    | .00     | .00     | .00     | .00     | .00     | .00     | 239     | 3989    | 5047    | 5216    | 4780    |
| 8   | 2236    | .00     | .00     | .00     | .00     | .00     | .00     | 227     | 4449    | 5120    | 5190    | 4753    |
| 9   | 2015    | .00     | .00     | .00     | .00     | .00     | .00     | 163     | 4826    | 5184    | 5168    | 4725    |
| 10  | 1800    | .00     | .00     | .00     | .00     | .00     | .00     | 225     | 5125    | 5267    | 5146    | 4569    |
| 11  | 1584    | .00     | .00     | .00     | .00     | .00     | .00     | 367     | 5342    | 5349    | 5124    | 4277    |
| 12  | 1394    | .00     | .00     | .00     | .00     | .00     | .00     | 528     | 5448    | 5403    | 5105    | 3984    |
| 13  | 1203    | .00     | .00     | .00     | .00     | .00     | .00     | 676     | 5469    | 5373    | 5094    | 3704    |
| 14  | 1024    | .00     | .00     | .00     | .00     | .00     | .00     | 825     | 5463    | 5358    | 5087    | 3428    |
| 15  | 852     | .00     | .00     | .00     | .00     | .00     | .00     | 1045    | 5446    | 5340    | 5079    | 3159    |
| 16  | 687     | .00     | .00     | .00     | .00     | .00     | .00     | 1182    | 5424    | 5312    | 5063    | 2894    |
| 17  | 531     | .00     | .00     | .00     | .00     | .00     | .00     | 1058    | 5418    | 5264    | 5039    | 2635    |
| 18  | 382     | .00     | .00     | .00     | .00     | .00     | .00     | 897     | 5430    | 5214    | 5005    | 2387    |
| 19  | 239     | .00     | .00     | .00     | .00     | .00     | .00     | 710     | 5430    | 5151    | 4956    | 2043    |
| 20  | 100     | .00     | .00     | .00     | .00     | .00     | .00     | 544     | 5390    | 5090    | 4930    | 1628    |
| 21  | 1.0     | .00     | .00     | .00     | .00     | .00     | .00     | 429     | 5306    | 5036    | 4930    | 1241    |
| 22  | .00     | .00     | .00     | .00     | .00     | .00     | .00     | 332     | 5234    | 5027    | 4929    | 890     |
| 23  | .00     | .00     | .00     | .00     | .00     | .00     | .00     | 183     | 5208    | 5081    | 4927    | 569     |
| 24  | .00     | .00     | .00     | .00     | .00     | .00     | 184     | 21      | 5112    | 5151    | 4925    | 274     |
| 25  | .00     | .00     | .00     | .00     | .00     | .00     | 83      | .00     | 4968    | 5212    | 4925    | 10      |
| 26  | .00     | .00     | .00     | .00     | .00     | .00     | 244     | 25      | 4826    | 5267    | 4929    | .00     |
| 27  | .00     | .00     | .00     | .00     | .00     | .00     | 218     | 7.3     | 4696    | 5306    | 4925    | .00     |
| 28  | .00     | .00     | .00     | .00     | .00     | .00     | 21      | 8.9     | 4569    | 5323    | 4916    | .00     |
| 29  | .00     | .00     | .00     | .00     | .00     | .00     | 265     | 24      | 4499    | 5388    | 4909    | .00     |
| 30  | .00     | .00     | .00     | .00     | ---     | .00     | 320     | 141     | 4508    | 5371    | 4900    | .00     |
| 31  | .00     | ---     | .00     | .00     | ---     | .00     | ---     | 415     | ---     | 5338    | 4894    | ---     |
| MAX | 3478    | .00     | .00     | .00     | .00     | .00     | 320     | 1182    | 5469    | 5403    | 5325    | 4891    |
| MIN | .00     | .00     | .00     | .00     | .00     | .00     | .00     | .00     | 768     | 4578    | 4894    | .00     |
| a   | 9370.19 | 9369.97 | 9371.16 | 9370.96 | 9371.06 | 9371.04 | 9381.71 | 9382.60 | 9411.34 | 9415.84 | 9413.52 | 9370.33 |
| b   | -3593   | 0       | 0       | 0       | 0       | 0       | +320    | +95     | +4093   | +830    | -444    | -4894   |

CAL YR 1995 MAX 5696 MIN .00 b 0  
WTR YR 1996 MAX 5469 MIN .00 b -3593

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

REMARKS.--Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 17,798 acre-ft between elevations 8,964.33 ft, invert of outlet, and 9,053.64 ft, crest of upper spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,553 acre-ft, July 29, 1995, elevation, 9,052.78 ft; minimum, 868 acre-ft, Apr. 22, 1996, elevation, 8,982.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,648 acre-ft, Aug. 1, elevation, 9,049.57 ft; minimum, 868 acre-ft, Apr. 22, elevation, 8,982.40 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 15337   | 14473   | 11434   | 8624    | 6647    | 4985    | 2851    | 2481    | 7600    | 13741   | 16648   | 14502   |
| 2   | 15290   | 14378   | 11328   | 8552    | 6574    | 4922    | 2713    | 2692    | 7628    | 14039   | 16637   | 14389   |
| 3   | 15211   | 14281   | 11220   | 8480    | 6515    | 4864    | 2568    | 2885    | 7698    | 14163   | 16618   | 14284   |
| 4   | 15129   | 14184   | 11118   | 8394    | 6476    | 4830    | 2424    | 3052    | 7778    | 14354   | 16578   | 14173   |
| 5   | 15071   | 14079   | 11018   | 8320    | 6431    | 4750    | 2276    | 3212    | 7853    | 14546   | 16531   | 14052   |
| 6   | 15121   | 13985   | 10909   | 8244    | 6376    | 4669    | 2123    | 3372    | 7934    | 14736   | 16486   | 13948   |
| 7   | 15148   | 13889   | 10817   | 8168    | 6311    | 4583    | 1997    | 3547    | 8108    | 14932   | 16444   | 13832   |
| 8   | 15181   | 13787   | 10705   | 8085    | 6252    | 4564    | 1875    | 3722    | 8339    | 15126   | 16391   | 13725   |
| 9   | 15181   | 13688   | 10614   | 8018    | 6187    | 4592    | 1772    | 3886    | 8562    | 15326   | 16349   | 13613   |
| 10  | 15227   | 13584   | 10513   | 7938    | 6123    | 4618    | 1685    | 4053    | 8759    | 15485   | 16293   | 13613   |
| 11  | 15230   | 13483   | 10462   | 7867    | 6058    | 4650    | 1588    | 4272    | 8931    | 15604   | 16246   | 13749   |
| 12  | 15227   | 13389   | 10427   | 7797    | 5986    | 4687    | 1639    | 4536    | 9231    | 15753   | 16210   | 13881   |
| 13  | 15227   | 13296   | 10342   | 7726    | 5925    | 4730    | 1620    | 4815    | 9698    | 15946   | 16168   | 13996   |
| 14  | 15219   | 13185   | 10251   | 7639    | 5860    | 4754    | 1620    | 5099    | 10219   | 16068   | 16124   | 14114   |
| 15  | 15197   | 13081   | 10166   | 7572    | 5791    | 4783    | 1651    | 5426    | 10700   | 16179   | 16077   | 14230   |
| 16  | 15205   | 12983   | 10088   | 7532    | 5732    | 4806    | 1693    | 5869    | 11130   | 16238   | 16024   | 14321   |
| 17  | 15263   | 12883   | 9996    | 7453    | 5672    | 4830    | 1714    | 6170    | 11508   | 16296   | 15977   | 14410   |
| 18  | 15309   | 12774   | 9907    | 7406    | 5603    | 4810    | 1587    | 6426    | 11886   | 16344   | 15916   | 14497   |
| 19  | 15345   | 12677   | 9822    | 7334    | 5590    | 4680    | 1432    | 6633    | 12285   | 16399   | 15863   | 14668   |
| 20  | 15378   | 12579   | 9728    | 7274    | 5550    | 4536    | 1218    | 6815    | 12540   | 16452   | 15777   | 14913   |
| 21  | 15389   | 12469   | 9641    | 7213    | 5523    | 4402    | 893     | 6990    | 12624   | 16500   | 15667   | 15123   |
| 22  | 15318   | 12367   | 9547    | 7193    | 5463    | 4267    | 868     | 7139    | 12650   | 16520   | 15571   | 15386   |
| 23  | 15225   | 12262   | 9464    | 7183    | 5408    | 4125    | 912     | 7262    | 12682   | 16489   | 15458   | 15513   |
| 24  | 15126   | 12165   | 9363    | 7126    | 5355    | 3986    | 934     | 7364    | 12703   | 16469   | 15356   | 15590   |
| 25  | 15082   | 12055   | 9270    | 7070    | 5298    | 3841    | 1257    | 7378    | 12708   | 16430   | 15249   | 15626   |
| 26  | 15047   | 11949   | 9182    | 7004    | 5242    | 3701    | 1609    | 7392    | 12806   | 16402   | 15143   | 15480   |
| 27  | 14954   | 11839   | 9090    | 6972    | 5176    | 3557    | 1772    | 7486    | 12981   | 16397   | 15033   | 15279   |
| 28  | 14861   | 11738   | 9003    | 6886    | 5112    | 3414    | 1916    | 7537    | 13153   | 16402   | 14926   | 15093   |
| 29  | 14763   | 11640   | 8909    | 6822    | 5053    | 3261    | 2054    | 7630    | 13336   | 16444   | 14820   | 14905   |
| 30  | 14671   | 11534   | 8812    | 6754    | ---     | 3124    | 2270    | 7660    | 13536   | 16575   | 14719   | 14714   |
| 31  | 14573   | ---     | 8723    | 6713    | ---     | 2977    | ---     | 7616    | ---     | 16629   | 14611   | ---     |
| MAX | 15389   | 14473   | 11434   | 8624    | 6647    | 4985    | 2851    | 7660    | 13536   | 16629   | 16648   | 15626   |
| MIN | 14573   | 11534   | 8723    | 6713    | 5053    | 2977    | 868     | 2481    | 7600    | 13741   | 14611   | 13613   |
| a   | 9042.04 | 9030.56 | 9019.30 | 9010.73 | 9003.29 | 8993.42 | 8989.85 | 9014.64 | 9038.18 | 9049.50 | 9042.18 | 9042.56 |
| b   | -846    | -3039   | -2811   | -2010   | -1660   | -2076   | -707    | +5346   | +5920   | +3093   | -2018   | +103    |

CAL YR 1995 MAX 17553 MIN 1881 b +1013  
WTR YR 1996 MAX 16648 MIN 868 b -705

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

REMARKS.--Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 810 acre-ft between elevations 8,470.00 ft, invert of outlet, and 8,495.88 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 871 acre-ft, Aug. 30, 1995, elevation, 8,497.40 ft; minimum, 22 acre-ft, Feb. 28, 1991, elevation, 8,470.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 847 acre-ft, June 21, 24, elevation, 8,496.80 ft; minimum, 29 acre-ft, Nov. 13-20, elevation, 8,471.24 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 815     | 160     | 29      | 30      | 30      | 30      | 30      | 32      | 496     | 818     | 811     | 809     |
| 2   | 815     | 142     | 29      | 30      | 29      | 30      | 29      | 32      | 520     | 817     | 809     | 808     |
| 3   | 812     | 125     | 29      | 30      | 29      | 30      | 30      | 30      | 551     | 819     | 807     | 805     |
| 4   | 813     | 107     | 29      | 30      | 29      | 30      | 30      | 33      | 587     | 818     | 809     | 798     |
| 5   | 814     | 90      | 29      | 30      | 31      | 29      | 31      | 45      | 622     | 819     | 809     | 800     |
| 6   | 812     | 73      | 29      | 30      | 30      | 29      | 32      | 57      | 657     | 818     | 811     | 801     |
| 7   | 811     | 57      | 29      | 30      | 30      | 29      | 33      | 71      | 698     | 816     | 812     | 801     |
| 8   | 812     | 41      | 29      | 30      | 31      | 29      | 33      | 84      | 737     | 817     | 813     | 801     |
| 9   | 813     | 29      | 29      | 30      | 31      | 29      | 33      | 96      | 774     | 817     | 813     | 802     |
| 10  | 812     | 29      | 30      | 30      | 30      | 29      | 32      | 110     | 806     | 817     | 813     | 802     |
| 11  | 808     | 29      | 29      | 30      | 30      | 29      | 33      | 127     | 821     | 817     | 814     | 803     |
| 12  | 808     | 29      | 29      | 30      | 30      | 29      | 32      | 148     | 821     | 816     | 814     | 801     |
| 13  | 809     | 29      | 29      | 30      | 30      | 29      | 32      | 170     | 821     | 817     | 814     | 802     |
| 14  | 811     | 29      | 29      | 30      | 30      | 29      | 32      | 193     | 822     | 816     | 813     | 804     |
| 15  | 810     | 29      | 29      | 30      | 30      | 29      | 32      | 220     | 821     | 814     | 813     | 802     |
| 16  | 770     | 29      | 29      | 30      | 31      | 29      | 31      | 265     | 820     | 813     | 813     | 803     |
| 17  | 686     | 29      | 29      | 30      | 30      | 31      | 30      | 290     | 820     | 814     | 811     | 804     |
| 18  | 604     | 29      | 29      | 30      | 30      | 32      | 30      | 313     | 821     | 812     | 810     | 805     |
| 19  | 523     | 29      | 29      | 30      | 30      | 33      | 30      | 329     | 821     | 815     | 810     | 805     |
| 20  | 443     | 29      | 29      | 30      | 30      | 33      | 30      | 344     | 847     | 815     | 809     | 806     |
| 21  | 364     | 29      | 29      | 29      | 30      | 33      | 30      | 358     | 847     | 815     | 810     | 807     |
| 22  | 317     | 29      | 29      | 29      | 30      | 32      | 31      | 371     | 847     | 815     | 811     | 806     |
| 23  | 320     | 29      | 29      | 30      | 30      | 32      | 32      | 383     | 846     | 815     | 811     | 807     |
| 24  | 314     | 29      | 29      | 30      | 30      | 31      | 34      | 394     | 847     | 815     | 812     | 808     |
| 25  | 296     | 29      | 29      | 30      | 30      | 30      | 34      | 403     | 847     | 815     | 812     | 808     |
| 26  | 275     | 29      | 29      | 30      | 30      | 30      | 33      | 413     | 817     | 815     | 812     | 810     |
| 27  | 255     | 29      | 30      | 30      | 30      | 30      | 33      | 424     | 818     | 815     | 812     | 811     |
| 28  | 235     | 29      | 30      | 30      | 30      | 30      | 33      | 435     | 818     | 815     | 812     | 811     |
| 29  | 216     | 29      | 30      | 30      | 30      | 30      | 32      | 447     | 819     | 815     | 813     | 812     |
| 30  | 197     | 29      | 30      | 30      | ---     | 30      | 32      | 461     | 819     | 814     | 812     | 811     |
| 31  | 178     | ---     | 30      | 30      | ---     | 30      | ---     | 476     | ---     | 813     | 810     | ---     |
| MAX | 815     | 160     | 30      | 30      | 31      | 33      | 34      | 476     | 847     | 819     | 814     | 812     |
| MIN | 178     | 29      | 29      | 29      | 29      | 29      | 29      | 30      | 496     | 812     | 807     | 798     |
| a   | 8477.12 | 8471.25 | 8471.28 | 8471.28 | 8471.28 | 8471.28 | 8471.40 | 8486.83 | 8496.09 | 8495.94 | 8495.88 | 8495.90 |
| b   | -637    | -149    | +1      | 0       | 0       | 0       | +2      | +444    | +343    | -6      | -3      | +1      |

CAL YR 1995 MAX 871 MIN 29 b 0

WTR YR 1996 MAX 847 MIN 29 b -4

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 sea level, 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, 441 ft<sup>3</sup>/s, July 30, 1995, gage height, 4.90 ft; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV    | DEC   | JAN   | FEB   | MAR   | APR  | MAY   | JUN     | JUL  | AUG   | SEP   |
|-------|-------|--------|-------|-------|-------|-------|------|-------|---------|------|-------|-------|
| 1     | e.65  | 11     | .43   | .66   | .80   | .86   | 1.4  | 7.0   | .12     | 6.2  | e2.0  | e1.2  |
| 2     | e.62  | 11     | .43   | .62   | .70   | .84   | 1.6  | 7.7   | .12     | 6.7  | e2.2  | e1.0  |
| 3     | e1.2  | 11     | .41   | .62   | .62   | .84   | 1.5  | 7.8   | .12     | 5.2  | e2.2  | e1.3  |
| 4     | e.56  | 11     | .37   | .55   | 1.4   | .78   | 1.4  | 4.2   | .13     | 5.3  | e1.0  | e1.7  |
| 5     | e.39  | 10     | .40   | .50   | 2.9   | .77   | 1.4  | .09   | .16     | 4.5  | e1.2  | e.70  |
| 6     | e.65  | 10     | .43   | .49   | 2.0   | .71   | 1.4  | .10   | .16     | 4.8  | e.70  | e.50  |
| 7     | e.36  | 10     | .49   | .49   | 1.5   | .69   | 1.7  | .10   | 1.6     | 4.6  | e.71  | e.45  |
| 8     | e.39  | 9.9    | .49   | .49   | 1.2   | .73   | 2.2  | .09   | 1.6     | 4.1  | e.63  | e.40  |
| 9     | e.42  | 9.5    | .49   | .48   | 1.0   | .74   | 2.5  | .09   | 1.6     | 4.1  | e.63  | e.38  |
| 10    | e.72  | 4.8    | .48   | .49   | .96   | .73   | 2.7  | .11   | 1.5     | 3.7  | e.80  | e.35  |
| 11    | e1.3  | 2.0    | .93   | .49   | .92   | .94   | 2.5  | .14   | 6.5     | 3.4  | e.90  | e.36  |
| 12    | e1.1  | 1.3    | 2.1   | .49   | .92   | 1.1   | 2.4  | .10   | 14      | 3.5  | e.90  | e.45  |
| 13    | e.62  | 1.2    | 2.0   | .49   | .92   | 1.5   | 2.3  | .11   | 14      | 3.0  | e.90  | e.70  |
| 14    | e.63  | 1.0    | 2.0   | .49   | .85   | 1.3   | 2.2  | .10   | 14      | 2.9  | e1.0  | e.50  |
| 15    | e.95  | .85    | .66   | .46   | .84   | 1.1   | 2.3  | .17   | 13      | 3.4  | e.80  | e1.0  |
| 16    | e.82  | .70    | 1.5   | 1.1   | .92   | 1.0   | e3.3 | .20   | 12      | 2.8  | e.80  | e.50  |
| 17    | e.86  | .58    | 1.1   | .98   | .93   | 1.0   | 3.2  | .25   | 11      | 2.0  | e1.8  | e.45  |
| 18    | e.85  | .50    | .91   | .73   | .90   | 1.1   | 3.0  | .25   | 11      | 2.7  | e1.6  | e.38  |
| 19    | e.90  | .47    | .83   | 1.0   | 1.8   | 1.2   | 2.3  | .09   | 11      | e1.8 | e1.0  | e.35  |
| 20    | e.90  | .43    | .71   | 1.7   | 2.3   | 1.4   | 1.9  | .12   | 84      | e1.8 | e.80  | e.40  |
| 21    | e.90  | .35    | .69   | .96   | 2.5   | 1.5   | 1.8  | .06   | 159     | e2.0 | e.70  | e.45  |
| 22    | e.90  | .21    | .62   | .90   | 2.0   | 1.6   | 1.7  | .07   | 160     | e1.8 | e.60  | e.80  |
| 23    | e.91  | .23    | .66   | .72   | 1.2   | 1.6   | 1.9  | .08   | 159     | e1.8 | e.54  | e.50  |
| 24    | e.95  | .26    | .69   | .64   | 2.2   | 1.5   | 2.7  | .07   | 157     | e2.1 | e.52  | e.54  |
| 25    | 6.2   | .30    | .63   | .92   | 1.7   | e1.4  | 4.4  | .09   | 158     | e2.1 | e.54  | e.52  |
| 26    | 12    | .26    | .62   | .73   | 1.7   | 1.3   | 6.6  | .11   | 89      | e1.8 | e.80  | e.50  |
| 27    | 12    | .31    | .60   | .85   | 1.0   | 1.2   | 7.7  | .09   | 4.2     | e1.9 | e.60  | e.48  |
| 28    | 12    | .33    | .48   | 1.2   | .92   | e1.2  | 7.0  | .10   | 4.5     | e1.8 | e.54  | e.45  |
| 29    | 12    | .37    | .54   | .73   | .92   | 1.2   | 6.2  | .09   | 4.6     | e1.9 | e.55  | e.51  |
| 30    | 11    | .37    | .76   | .69   | ---   | 1.2   | 6.4  | .09   | 5.4     | e2.1 | e.77  | e1.0  |
| 31    | 11    | ---    | .72   | .73   | ---   | 1.2   | ---  | .10   | ---     | e2.1 | e1.0  | ---   |
| TOTAL | 94.75 | 110.22 | 24.17 | 22.39 | 38.52 | 34.23 | 89.6 | 29.76 | 1098.31 | 97.9 | 29.73 | 18.82 |
| MEAN  | 3.06  | 3.67   | .78   | .72   | 1.33  | 1.10  | 2.99 | .96   | 36.6    | 3.16 | .96   | .63   |
| MAX   | 12    | 11     | 2.1   | 1.7   | 2.9   | 1.6   | 7.7  | 7.8   | 160     | 6.7  | 2.2   | 1.7   |
| MIN   | .36   | .21    | .37   | .46   | .62   | .69   | 1.4  | .06   | .12     | 1.8  | .52   | .35   |
| AC-FT | 188   | 219    | 48    | 44    | 76    | 68    | 178  | 59    | 2180    | 194  | 59    | 37    |
| a     | 5030  | 3030   | 3120  | 2660  | 2560  | 2720  | 3870 | 5890  | 4620    | 4050 | 4300  | 4480  |

e Estimated.

a Diversion, in acre-feet, to Rush Creek Powerplant Tailrace, provided by Southern California Edison Co.



## 10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.65 | 1.47 | .68  | .55  | .63  | .63  | 1.27 | .41  | 21.0 | 49.0 | 15.6 | .51  |
| MAX  | 3.06 | 3.67 | 1.37 | 1.05 | 1.33 | 1.10 | 2.99 | .96  | 81.8 | 218  | 89.8 | 1.41 |
| (WY) | 1996 | 1996 | 1995 | 1995 | 1996 | 1996 | 1996 | 1993 | 1995 | 1995 | 1995 | 1995 |
| MIN  | .085 | .39  | .23  | .27  | .19  | .13  | .040 | .045 | .049 | .031 | .005 | .015 |
| (WY) | 1995 | 1994 | 1991 | 1991 | 1991 | 1995 | 1994 | 1994 | 1992 | 1994 | 1994 | 1994 |

| SUMMARY STATISTICS         | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|----------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL               | 12405.10               |  |  |  | 1688.40             |  |  |  |                         |  |  |  |
| ANNUAL MEAN                | 34.0                   |  |  |  | 4.61                |  |  |  | 7.85                    |  |  |  |
| HIGHEST ANNUAL MEAN        |                        |  |  |  |                     |  |  |  | 33.6                    |  |  |  |
| LOWEST ANNUAL MEAN         |                        |  |  |  |                     |  |  |  | .41                     |  |  |  |
| HIGHEST DAILY MEAN         | 397 Jul 30             |  |  |  | 160 Jun 22          |  |  |  | 397 Jul 30 1995         |  |  |  |
| LOWEST DAILY MEAN          | .06 May 7              |  |  |  | .06 May 21          |  |  |  | .00 Oct 27 1990         |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM   | .12 Feb 26             |  |  |  | .08 May 21          |  |  |  | .00 Mar 12 1991         |  |  |  |
| INSTANTANEOUS PEAK FLOW    |                        |  |  |  | 164 Jun 24          |  |  |  | 441 Jul 30 1995         |  |  |  |
| INSTANTANEOUS PEAK STAGE   |                        |  |  |  | 2.50 Jun 24         |  |  |  | 4.90 Jul 30 1995        |  |  |  |
| ANNUAL RUNOFF (AC-FT)      | 24610                  |  |  |  | 3350                |  |  |  | 5690                    |  |  |  |
| ANNUAL DIVERSION (AC-FT) a | 50210                  |  |  |  | 46340               |  |  |  |                         |  |  |  |
| 10 PERCENT EXCEEDS         | 169                    |  |  |  | 6.6                 |  |  |  | 3.4                     |  |  |  |
| 50 PERCENT EXCEEDS         | .90                    |  |  |  | .92                 |  |  |  | .47                     |  |  |  |
| 90 PERCENT EXCEEDS         | .12                    |  |  |  | .26                 |  |  |  | .03                     |  |  |  |

a Diversion, in acre-feet, to Rush Creek Powerplant Tailrace, provided by Southern California Edison Co.

## 10287650 SADDLEBAG LAKE NEAR LEE VINING, CA

LOCATION.--Lat 37°57'56", long 119°16'18", unsurveyed, T.1 N., R.24 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near left abutment of dam on Lee Vining Creek and 8.2 mi west of Lee Vining.

DRAINAGE AREA.--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 sea level (levels by Southern California Edison Co.).

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1921. Usable capacity, 9,789 acre-ft between elevations 10,048.80 ft, invert of outlet, and 10,090.40 ft, crest of spillway. At times, a cofferdam 600 ft upstream affects the storage below about 800 acre-ft, due to the constriction of flow past the cofferdam. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 9,454 acre-ft, Aug. 24, 25, 1995, elevation, 10,089.26 ft; minimum, 558 acre-ft, Apr. 5, 23, 24, 27, 1995, elevation, 10,051.84 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 9,042 acre-ft, Oct. 1, elevation, 10,087.84 ft; minimum, 1,469 acre-ft, Apr. 15, elevation, 10,056.55 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT      | NOV      | DEC      | JAN      | FEB      | MAR      | APR      | MAY      | JUN      | JUL      | AUG      | SEP      |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1   | 9042     | 8475     | 7430     | 5995     | 4796     | 3556     | 1855     | 1694     | 2918     | 5906     | 7812     | 8147     |
| 2   | 9017     | 8456     | 7387     | 5960     | 4757     | 3502     | 1802     | 1745     | 3001     | 6018     | 7842     | 8147     |
| 3   | 9000     | 8439     | 7326     | 5906     | 4704     | 3454     | 1747     | 1777     | 3106     | 6118     | 7861     | 8150     |
| 4   | 8982     | 8417     | 7286     | 5853     | 4724     | 3463     | 1686     | 1810     | 3221     | 6200     | 7872     | 8122     |
| 5   | 8965     | 8395     | 7232     | 5800     | 4702     | 3430     | 1615     | 1853     | 3341     | 6279     | 7886     | 8147     |
| 6   | 8948     | 8375     | 7168     | 5758     | 4654     | 3379     | 1551     | 1891     | 3475     | 6356     | 7899     | 8147     |
| 7   | 8928     | 8356     | 7118     | 5703     | 4604     | 3325     | 1487     | 1938     | 3626     | 6447     | 7913     | 8145     |
| 8   | 8914     | 8331     | 7065     | 5658     | 4547     | 3263     | 1477     | 1969     | 3786     | 6535     | 7921     | 8139     |
| 9   | 8894     | 8317     | 7006     | 5613     | 4489     | 3192     | 1475     | 1994     | 3934     | 6623     | 7935     | 8134     |
| 10  | 8871     | 8300     | 6961     | 5565     | 4435     | 3122     | 1479     | 2027     | 4062     | 6712     | 7951     | 8134     |
| 11  | 8857     | 8278     | 6946     | 5513     | 4376     | 3071     | 1477     | 2077     | 4181     | 6853     | 7971     | 8131     |
| 12  | 8834     | 8258     | 6996     | 5468     | 4317     | 3012     | 1477     | 2143     | 4296     | 6964     | 7990     | 8128     |
| 13  | 8814     | 8242     | 6967     | 5419     | 4263     | 2960     | 1471     | 2226     | 4432     | 7030     | 8004     | 8131     |
| 14  | 8795     | 8222     | 6895     | 5369     | 4209     | 2892     | 1471     | 2313     | 4566     | 7097     | 8023     | 8128     |
| 15  | 8780     | 8200     | 6869     | 5329     | 4153     | 2821     | 1469     | 2409     | 4692     | 7168     | 8040     | 8128     |
| 16  | 8763     | 8186     | 6819     | 5344     | 4102     | 2751     | 1513     | 2496     | 4812     | 7219     | 8056     | 8125     |
| 17  | 8744     | 8161     | 6762     | 5295     | 4055     | 2682     | 1517     | 2547     | 4909     | 7267     | 8075     | 8114     |
| 18  | 8727     | 8142     | 6712     | 5288     | 4004     | 2618     | 1527     | 2579     | 5011     | 7299     | 8084     | 8111     |
| 19  | 8710     | 8125     | 6657     | 5268     | 4034     | 2556     | 1531     | 2609     | 5119     | 7323     | 8095     | 8100     |
| 20  | 8693     | 8089     | 6610     | 5241     | 4002     | 2488     | 1527     | 2626     | 5229     | 7350     | 8100     | 8089     |
| 21  | 8670     | 8026     | 6558     | 5199     | 3990     | 2429     | 1523     | 2650     | 5325     | 7379     | 8103     | 8081     |
| 22  | 8659     | 7965     | 6506     | 5158     | 3944     | 2380     | 1517     | 2674     | 5396     | 7417     | 8106     | 8073     |
| 23  | 8639     | 7908     | 6460     | 5121     | 3886     | 2323     | 1499     | 2715     | 5496     | 7460     | 8111     | 8064     |
| 24  | 8619     | 7848     | 6410     | 5070     | 3854     | 2258     | 1513     | 2725     | 5578     | 7511     | 8117     | 8059     |
| 25  | 8596     | 7774     | 6359     | 5062     | 3813     | 2208     | 1519     | 2730     | 5645     | 7546     | 8128     | 8053     |
| 26  | 8574     | 7736     | 6305     | 5026     | 3763     | 2137     | 1535     | 2741     | 5678     | 7584     | 8139     | 8045     |
| 27  | 8560     | 7679     | 6271     | 5009     | 3715     | 2083     | 1557     | 2764     | 5705     | 7633     | 8134     | 8040     |
| 28  | 8543     | 7619     | 6200     | 4965     | 3660     | 2052     | 1587     | 2782     | 5730     | 7671     | 8134     | 8031     |
| 29  | 8531     | 7557     | 6148     | 4919     | 3610     | 1988     | 1611     | 2803     | 5765     | 7714     | 8136     | 8026     |
| 30  | 8509     | 7503     | 6108     | 4882     | ---      | 1932     | 1654     | 2831     | 5823     | 7750     | 8136     | 8017     |
| 31  | 8492     | ---      | 6054     | 4844     | ---      | 1865     | ---      | 2864     | ---      | 7780     | 8142     | ---      |
| MAX | 9042     | 8475     | 7430     | 5995     | 4796     | 3556     | 1855     | 2864     | 5823     | 7780     | 8142     | 8150     |
| MIN | 8492     | 7503     | 6054     | 4844     | 3610     | 1865     | 1469     | 1694     | 2918     | 5906     | 7812     | 8017     |
| a   | 10085.90 | 10082.30 | 10076.77 | 10071.89 | 10066.62 | 10058.51 | 10057.47 | 10063.25 | 10075.86 | 10083.32 | 10084.64 | 10084.19 |
| b   | -576     | -989     | -1449    | -1210    | -1234    | -1745    | -211     | +1210    | +2959    | +1957    | +362     | -125     |

CAL YR 1995 MAX 9454 MIN 558 b +2837  
WTR YR 1996 MAX 9042 MIN 1469 b -1051

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

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1928. Usable capacity, 1,254 acre-ft between elevations 9,626.72 ft, invert of outlet, and 9,650.28 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

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

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,284 acre-ft, June 13, elevation, 9,650.68 ft; minimum, 108 acre-ft, Dec. 12, 13, elevation, 9,629.42 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 19, 1981)

|          |     |       |       |
|----------|-----|-------|-------|
| 9,626.72 | 0   | 9,640 | 609   |
| 9,630    | 131 | 9,646 | 962   |
| 9,635    | 356 | 9,652 | 1,383 |

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB  | MAR  | APR  | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|------|------|------|---------|---------|---------|---------|---------|
| 1   | 1249    | 810     | 137     | 114     | 128  | e146 | e149 | e265    | 574     | 1143    | 1258    | 1186    |
| 2   | 1241    | 779     | 131     | 113     | 127  | e150 | e146 | e266    | 638     | 1162    | 1257    | 1180    |
| 3   | 1226    | 752     | 127     | 113     | 127  | e147 | e145 | e268    | 718     | 1176    | 1255    | 1175    |
| 4   | 1213    | 723     | 127     | 113     | 133  | e145 | e144 | e270    | 798     | 1187    | 1256    | 1175    |
| 5   | 1198    | 694     | 125     | 113     | 134  | e145 | e143 | e272    | 877     | 1193    | 1254    | 1172    |
| 6   | 1184    | 666     | 122     | 113     | 132  | e145 | e143 | e275    | 965     | 1200    | 1254    | 1171    |
| 7   | 1169    | 639     | 120     | 113     | 131  | e145 | e143 | e274    | 1072    | 1209    | 1253    | 1168    |
| 8   | 1155    | 612     | 119     | 112     | 129  | e145 | e144 | e274    | 1169    | 1218    | 1251    | 1166    |
| 9   | 1141    | 586     | 117     | 113     | 129  | e145 | e145 | e274    | 1249    | 1230    | 1250    | 1163    |
| 10  | 1127    | 561     | 121     | 113     | 129  | e145 | e146 | e274    | 1280    | 1241    | 1249    | 1162    |
| 11  | 1112    | 535     | 109     | 113     | 128  | e146 | e148 | e274    | 1274    | 1265    | 1247    | 1158    |
| 12  | 1099    | 511     | 108     | 113     | 128  | e149 | e148 | e277    | 1277    | 1269    | 1254    | 1155    |
| 13  | 1085    | 488     | 108     | 113     | 128  | e146 | e147 | e286    | 1284    | 1267    | 1255    | 1156    |
| 14  | 1070    | 463     | 127     | 113     | 128  | e145 | e147 | 299     | 1273    | 1271    | 1254    | 1154    |
| 15  | 1057    | 439     | 134     | 114     | 127  | e145 | e149 | 371     | 1267    | 1267    | 1253    | 1145    |
| 16  | 1044    | 418     | 146     | 121     | 128  | e145 | e149 | 418     | 1262    | 1265    | 1251    | 1120    |
| 17  | 1030    | 395     | 155     | 121     | 128  | e145 | e149 | 433     | 1255    | 1261    | 1249    | 1095    |
| 18  | 1016    | 374     | 149     | 126     | 129  | e145 | e150 | 440     | 1244    | 1260    | 1249    | 1072    |
| 19  | 1003    | 353     | 137     | 126     | 139  | e145 | e149 | 442     | 1238    | 1258    | 1246    | 1048    |
| 20  | 989     | 331     | 128     | 125     | 139  | e145 | e149 | 445     | 1232    | 1257    | 1243    | 1024    |
| 21  | 975     | 308     | 124     | 125     | 141  | e145 | e149 | 452     | 1215    | 1256    | 1241    | 1000    |
| 22  | 963     | 285     | 121     | 124     | 140  | e145 | e149 | 455     | 1189    | 1255    | 1238    | 978     |
| 23  | 949     | 265     | 120     | 125     | 145  | e145 | e150 | 459     | 1164    | 1254    | 1234    | 954     |
| 24  | 935     | 245     | 119     | 127     | e145 | e145 | e160 | 457     | 1139    | 1257    | 1233    | 933     |
| 25  | 922     | 227     | 117     | 127     | e145 | e147 | e170 | 453     | 1114    | 1259    | 1229    | 911     |
| 26  | 908     | 210     | 115     | 125     | e145 | e145 | e177 | 460     | 1110    | 1258    | 1223    | 889     |
| 27  | 896     | 193     | 115     | 129     | e145 | e145 | e185 | 469     | 1112    | 1258    | 1218    | 870     |
| 28  | 884     | 178     | 115     | 129     | e145 | e146 | e190 | 478     | 1113    | 1259    | 1212    | 856     |
| 29  | 871     | 163     | 116     | 128     | e145 | e145 | e195 | 490     | 1118    | 1259    | 1206    | 842     |
| 30  | 859     | 150     | 115     | 128     | ---  | e145 | e201 | 505     | 1128    | 1261    | 1199    | 828     |
| 31  | 839     | ---     | 115     | 128     | ---  | e145 | ---  | 530     | ---     | 1259    | 1193    | ---     |
| MAX | 1249    | 810     | 155     | 129     | 145  | 150  | 201  | 530     | 1284    | 1271    | 1258    | 1186    |
| MIN | 839     | 150     | 108     | 112     | 127  | 145  | 143  | 265     | 574     | 1143    | 1193    | 828     |
| a   | 9644.02 | 9630.45 | 9629.59 | 9629.93 |      |      |      | 9638.51 | 9648.50 | 9650.35 | 9649.42 | 9643.84 |
| b   | -411    | -689    | -35     | +13     | +17  | 0    | +56  | +329    | +598    | +131    | -66     | -365    |

CAL YR 1995 MAX 1265 MIN 106 b +9  
WTR YR 1996 MAX 1284 MIN 108 b -422

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

REMARKS.--Reservoir is formed on natural lake by rock-fill dam completed in 1927. Usable capacity, 493 acre-ft between elevations 9,478.53 ft, invert of outlet, and 9,492.53 ft, crest of spillway. Radial gates are occasionally closed, which increases elevation to 9,496.53 ft and capacity to 749 acre-ft. Lake receives water from Saddlebag and Tioga Lakes (stations 10287650 and 10287700) and releases it via Poole Powerplant Conduit (station 10287762) to Poole Powerplant. Figures given represent usable contents.

COOPERATION.--Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with 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, 195 acre-ft, Aug. 13, 1996, elevation, 9,487.17 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 582 acre-ft, June 13, elevation, 9,493.95 ft; minimum, 195 acre-ft, Aug. 13, elevation, 9,487.17 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 410     | 433     | 421     | 421     | 419     | 521     | 408     | 460     | 480     | 508     | 435     | 433     |
| 2   | 410     | 429     | 416     | 422     | 414     | 514     | 406     | 440     | 527     | 535     | 437     | 434     |
| 3   | 419     | 425     | 413     | 421     | 410     | 507     | 401     | 399     | 552     | 526     | 428     | 433     |
| 4   | 422     | 421     | 416     | 421     | 415     | 482     | 422     | 364     | 556     | 509     | 430     | 434     |
| 5   | 424     | 418     | 419     | 418     | 421     | 457     | 470     | 384     | 556     | 497     | 433     | 434     |
| 6   | 425     | 416     | 421     | 416     | 421     | 465     | 512     | 418     | 561     | 502     | 435     | 439     |
| 7   | 424     | 415     | 421     | 413     | 427     | 486     | 520     | 425     | 577     | 516     | 437     | 442     |
| 8   | 424     | 413     | 420     | 410     | 433     | 467     | 521     | 409     | 572     | 521     | 437     | 437     |
| 9   | 422     | 414     | 418     | 407     | 437     | 450     | 517     | 385     | 563     | 515     | 356     | 436     |
| 10  | 421     | 414     | 444     | 409     | 442     | 437     | 515     | 407     | 566     | 517     | 265     | 437     |
| 11  | 422     | 426     | 429     | 413     | 447     | 424     | 515     | 467     | 554     | 563     | 225     | 437     |
| 12  | 423     | 435     | 433     | 420     | 451     | 413     | 513     | 507     | 565     | 524     | 209     | 435     |
| 13  | 427     | 441     | 430     | 428     | 455     | 418     | 514     | 533     | 582     | 506     | 195     | 438     |
| 14  | 431     | 442     | 424     | 434     | 459     | 418     | 515     | 525     | 569     | 512     | 223     | 441     |
| 15  | 434     | 444     | 422     | 435     | 464     | 416     | 515     | 536     | 558     | 512     | 238     | 438     |
| 16  | 434     | 443     | 416     | 437     | 468     | 414     | 514     | 511     | 559     | 488     | 260     | 440     |
| 17  | 435     | 441     | 409     | 437     | 473     | 411     | 517     | 469     | 548     | 463     | 282     | 442     |
| 18  | 434     | 440     | 404     | 437     | 476     | 410     | 515     | 440     | 545     | 461     | 296     | 437     |
| 19  | 431     | 437     | 404     | 436     | 480     | 410     | 516     | 428     | 546     | 468     | 307     | 432     |
| 20  | 428     | 449     | 412     | 441     | 482     | 411     | 515     | 449     | 561     | 473     | 313     | 436     |
| 21  | 424     | 462     | 416     | 437     | 496     | 413     | 512     | 433     | 528     | 485     | 346     | 441     |
| 22  | 420     | 459     | 416     | 434     | 503     | 414     | 512     | 419     | 519     | 482     | 369     | 437     |
| 23  | 415     | 459     | 415     | 438     | 518     | 411     | 511     | 419     | 525     | 467     | 380     | 445     |
| 24  | 410     | 458     | 410     | 433     | 527     | 406     | 519     | 413     | 513     | 466     | 389     | 443     |
| 25  | 404     | 461     | 409     | 427     | 536     | 403     | 491     | 397     | 491     | 477     | 396     | 438     |
| 26  | 398     | 451     | 409     | 427     | 540     | 403     | 486     | 410     | 426     | 483     | 404     | 432     |
| 27  | 394     | 444     | 413     | 424     | 540     | 402     | 487     | 437     | 451     | 484     | 407     | 427     |
| 28  | 396     | 436     | 413     | 417     | 538     | 402     | 467     | 454     | 455     | 485     | 409     | 429     |
| 29  | 404     | 428     | 418     | 418     | 531     | 406     | 443     | 465     | 488     | 492     | 413     | 433     |
| 30  | 412     | 427     | 422     | 417     | ---     | 404     | 446     | 459     | 480     | 460     | 420     | 436     |
| 31  | 423     | ---     | 422     | 420     | ---     | 404     | ---     | 459     | ---     | 431     | 427     | ---     |
| MAX | 435     | 462     | 444     | 441     | 540     | 521     | 521     | 536     | 582     | 563     | 437     | 445     |
| MIN | 394     | 413     | 404     | 407     | 410     | 402     | 401     | 364     | 426     | 431     | 195     | 427     |
| a   | 9491.35 | 9491.41 | 9491.34 | 9491.30 | 9493.14 | 9491.04 | 9491.75 | 9491.97 | 9492.30 | 9491.49 | 9491.42 | 9491.57 |
| b   | +15     | +4      | -5      | -2      | +111    | -127    | +42     | +13     | +21     | -49     | -4      | +9      |

CAL YR 1995 MAX 620 MIN 337 b -19

WTR YR 1996 MAX 582 MIN 195 b +28

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 sea level, 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 (station 10287762). 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, 310 ft<sup>3</sup>/s, July 9, 1995, gage height, 4.63 ft; maximum gage height, 5.52 ft, Mar. 22, 1993, (backwater from snow); no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR   | APR    | MAY    | JUN     | JUL    | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|-------|--------|--------|---------|--------|-------|-------|
| 1     | .00   | .00   | .00   | .00   | .00    | e19   | .00    | .00    | .00     | 1.2    | .00   | .00   |
| 2     | .00   | .00   | .00   | .00   | .00    | e14   | .00    | .00    | 8.1     | 21     | .00   | .00   |
| 3     | .00   | .00   | .00   | .00   | .00    | e11   | .00    | .00    | 58      | 40     | .00   | .00   |
| 4     | .00   | .00   | .00   | .00   | .00    | e7.0  | .00    | .00    | 77      | 18     | .00   | .00   |
| 5     | .00   | .00   | .00   | .00   | .00    | .00   | .00    | .00    | 81      | 5.7    | .00   | .00   |
| 6     | .00   | .00   | .00   | .00   | .00    | .00   | e15    | .00    | 83      | 2.3    | .00   | .00   |
| 7     | .00   | .00   | .00   | .00   | .00    | .00   | e29    | .00    | 104     | 10     | .00   | .00   |
| 8     | .00   | .00   | .00   | .00   | .00    | .00   | e27    | .00    | 119     | 22     | .00   | .00   |
| 9     | .00   | .00   | .00   | .00   | .00    | .00   | .26    | .00    | 99      | 22     | .00   | .00   |
| 10    | .00   | .00   | .00   | .00   | .00    | .00   | 24     | .00    | 90      | 17     | .00   | .00   |
| 11    | .00   | .00   | .00   | .00   | .00    | .00   | 22     | .00    | 93      | 34     | .00   | .00   |
| 12    | .00   | .00   | .00   | .00   | .00    | .00   | 21     | 1.9    | 82      | 68     | .00   | .00   |
| 13    | .00   | .00   | .00   | .00   | .00    | .00   | 20     | 31     | 108     | 15     | .00   | .00   |
| 14    | .00   | .00   | .00   | .00   | .00    | .00   | 20     | 44     | 120     | 8.2    | .00   | .00   |
| 15    | .00   | .00   | .00   | .00   | .00    | .00   | 25     | 36     | 92      | 16     | .00   | .00   |
| 16    | .00   | .00   | .00   | .00   | .00    | .00   | 25     | 52     | 83      | 8.7    | .00   | .00   |
| 17    | .00   | .00   | .00   | .00   | .00    | .00   | 20     | 4.7    | 82      | .73    | .00   | .00   |
| 18    | .00   | .00   | .00   | .00   | .00    | .00   | 20     | .00    | 58      | .34    | .00   | .00   |
| 19    | .00   | .00   | .00   | .00   | .00    | .00   | 18     | .00    | 62      | .08    | .00   | .00   |
| 20    | .00   | .00   | .00   | .00   | .00    | .00   | 17     | .00    | 86      | .00    | .00   | .00   |
| 21    | .00   | .00   | .00   | .00   | .00    | .00   | 17     | .00    | 60      | .00    | .00   | .00   |
| 22    | .00   | .00   | .00   | .00   | e.13   | .00   | 17     | .00    | 28      | .00    | .00   | .00   |
| 23    | .00   | .00   | .00   | .00   | e3.5   | .00   | 18     | .00    | 28      | .00    | .00   | .00   |
| 24    | .00   | .00   | .00   | .00   | e11    | .00   | 22     | .00    | 31      | .00    | .00   | .00   |
| 25    | .00   | .00   | .00   | .00   | e17    | .00   | e20    | .00    | 9.3     | .00    | .00   | .00   |
| 26    | .00   | .00   | .00   | .00   | e20    | .00   | .00    | .00    | .00     | .00    | .00   | .00   |
| 27    | .00   | .00   | .00   | .00   | e40    | .00   | .00    | .00    | .00     | .00    | .00   | .00   |
| 28    | .00   | .00   | .00   | .00   | e40    | .00   | .00    | .00    | .00     | .00    | .00   | .00   |
| 29    | .00   | .00   | .00   | .00   | e25    | .00   | .00    | .00    | .00     | .00    | .00   | .00   |
| 30    | .00   | .00   | .00   | .00   | ---    | .00   | .00    | .00    | .00     | .17    | .00   | .00   |
| 31    | .00   | ---   | .00   | .00   | ---    | .00   | ---    | .00    | ---     | .00    | .00   | ---   |
| TOTAL | 0.00  | 0.00  | 0.00  | 0.00  | 156.63 | 51.00 | 423.00 | 169.60 | 1741.40 | 310.42 | 0.00  | 0.00  |
| MEAN  | .0000 | .0000 | .0000 | .0000 | 5.40   | 1.65  | 14.1   | 5.47   | 58.0    | 10.0   | .0000 | .0000 |
| MAX   | .00   | .00   | .00   | .00   | 40     | 19    | 29     | 52     | 120     | 68     | .00   | .00   |
| MIN   | .00   | .00   | .00   | .00   | .00    | .00   | .00    | .00    | .00     | .00    | .00   | .00   |
| AC-FT | .00   | .00   | .00   | .00   | 311    | 101   | 839    | 336    | 3450    | 616    | .00   | .00   |
| a     | 1530  | 2050  | 2340  | 2040  | 2000   | 2770  | 1280   | 4440   | 6150    | 5690   | 2510  | 1030  |

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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.30 | .19  | .000 | .000 | .99  | .85  | 2.46 | 2.25 | 24.5 | 25.7 | 1.71 | .16  |
| MAX  | 5.65 | 1.17 | .000 | .000 | 5.40 | 2.62 | 14.1 | 6.75 | 58.1 | 130  | 9.89 | .94  |
| (WY) | 1995 | 1995 | 1991 | 1991 | 1996 | 1992 | 1996 | 1993 | 1995 | 1995 | 1995 | 1992 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1992 | 1991 | 1991 | 1991 | 1992 | 1991 | 1991 | 1994 | 1992 | 1991 | 1991 | 1991 |

| SUMMARY STATISTICS         | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1991 - 1996 |  |  |  |
|----------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL               | 6116.75                |  |  |  | 2852.05             |  |  |  |                         |  |  |  |
| ANNUAL MEAN                | 16.8                   |  |  |  | 7.79                |  |  |  | 5.10                    |  |  |  |
| HIGHEST ANNUAL MEAN        |                        |  |  |  |                     |  |  |  | 17.3                    |  |  |  |
| LOWEST ANNUAL MEAN         |                        |  |  |  |                     |  |  |  | .27                     |  |  |  |
| HIGHEST DAILY MEAN         | 271                    |  |  |  | 120                 |  |  |  | 271                     |  |  |  |
| LOWEST DAILY MEAN          | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM   | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW    |                        |  |  |  | 156                 |  |  |  | 310                     |  |  |  |
| INSTANTANEOUS PEAK STAGE   |                        |  |  |  | 5.28                |  |  |  | 5.52                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)      | 12130                  |  |  |  | 5660                |  |  |  | 3690                    |  |  |  |
| ANNUAL DIVERSION (AC-FT) a | 36890                  |  |  |  | 33830               |  |  |  |                         |  |  |  |
| 10 PERCENT EXCEEDS         | 70                     |  |  |  | 25                  |  |  |  | 8.3                     |  |  |  |
| 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

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 sea level (levels by International Boundary and Water Commission).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Morena Reservoir, capacity, 50,210 acre-ft, and Barrett Lake (station 11011000), capacity, 44,760 acre-ft. Water diverted from Barrett Lake through San Diego and Dulzura Conduits to Lower Otay Lake (station 11014550).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,700 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 11.15 ft, from rating curve extended above 8,700 ft<sup>3</sup>/s; no flow for part of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB  | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|------|-------|-------|------|------|------|------|------|
| 1     | .00  | .20  | .06  | .37   | e9.0 | 2.4   | 2.4   | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .23  | .07  | .35   | e6.0 | 2.1   | 2.3   | .01  | .00  | .00  | .00  | .00  |
| 3     | .00  | .14  | .12  | .30   | e3.0 | 2.0   | 2.2   | .05  | .00  | .00  | .00  | .00  |
| 4     | .00  | .12  | .13  | .35   | e2.0 | 2.0   | 2.0   | .08  | .00  | .00  | .00  | .00  |
| 5     | .00  | .09  | .13  | e.35  | e1.8 | 2.4   | 1.6   | .06  | .00  | .00  | .00  | .00  |
| 6     | .00  | .07  | e.15 | e.37  | e1.7 | 2.2   | 1.3   | .00  | .00  | .00  | .00  | .00  |
| 7     | .00  | .06  | e.14 | e.35  | e1.6 | 1.9   | 1.1   | .00  | .00  | .00  | .00  | .00  |
| 8     | .00  | .02  | .16  | e.35  | e1.6 | 1.8   | 1.1   | .00  | .00  | .00  | .00  | .00  |
| 9     | .00  | .01  | .14  | e.36  | 1.6  | 1.6   | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 10    | .00  | .06  | .12  | e.38  | 1.6  | 1.6   | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 11    | .00  | .12  | .10  | e.36  | 1.6  | 1.6   | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 12    | .00  | .10  | .12  | e.35  | 1.9  | 2.8   | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .09  | .23  | e.37  | 1.8  | 28    | .94   | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .09  | .25  | e.45  | 1.9  | 24    | .91   | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .12  | .18  | e.55  | 2.0  | 13    | .72   | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .13  | .16  | e.60  | 2.1  | 8.8   | .69   | .00  | .00  | .00  | .00  | .00  |
| 17    | .00  | .12  | .16  | e1.0  | 2.2  | 6.5   | .68   | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .10  | .16  | e1.0  | 2.2  | 5.6   | 1.1   | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .08  | .16  | e1.0  | 2.2  | 4.8   | .92   | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .06  | .24  | e.90  | 2.2  | 4.3   | .78   | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .07  | .27  | e.90  | 2.2  | 3.9   | .73   | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .09  | .22  | e7.0  | 2.4  | 3.6   | .65   | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .09  | .28  | e5.0  | 2.0  | 3.5   | .53   | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .08  | .29  | e3.0  | 2.0  | 3.1   | .39   | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .06  | .24  | e2.0  | 2.8  | 3.0   | .35   | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .07  | .24  | e2.5  | 14   | 2.8   | .28   | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .09  | .25  | e2.0  | 6.4  | 2.7   | .26   | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .05  | .26  | e1.9  | 4.3  | 2.7   | .24   | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .05  | .29  | e1.8  | 3.3  | 2.9   | .15   | .00  | .00  | .00  | .00  | .00  |
| 30    | .05  | .06  | .37  | e1.9  | ---  | 2.7   | .02   | .00  | .00  | .00  | .00  | .00  |
| 31    | .09  | ---  | .39  | e2.3  | ---  | 2.5   | ---   | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.14 | 2.72 | 6.08 | 40.41 | 89.4 | 152.8 | 28.34 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .005 | .091 | .20  | 1.30  | 3.08 | 4.93  | .94   | .006 | .000 | .000 | .000 | .000 |
| MAX   | .09  | .23  | .39  | 7.0   | 14   | 28    | 2.4   | .08  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .01  | .06  | .30   | 1.6  | 1.6   | .02   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .3   | 5.4  | 12   | 80    | 177  | 303   | 56    | .4   | .00  | .00  | .00  | .00  |

e Estimated.

## PACIFIC SLOPE BASINS IN CALIFORNIA

## TIJUANA RIVER BASIN

11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.22 | .80  | 2.57 | 19.8 | 53.7 | 73.8 | 36.4 | 13.1 | 4.76 | 1.49 | 1.16 | 1.17 |
| MAX  | 66.0 | 18.8 | 40.5 | 605  | 1200 | 1443 | 676  | 296  | 99.5 | 47.5 | 24.4 | 57.4 |
| (WY) | 1994 | 1984 | 1984 | 1993 | 1980 | 1983 | 1941 | 1983 | 1980 | 1980 | 1980 | 1993 |
| MIN  | .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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1937 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 42727.82               |  |  | 320.09              |  |  |                         |  |  |
| ANNUAL MEAN              | 117                    |  |  | .87                 |  |  | 17.3                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 243                     |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 5910                   |  |  | 28                  |  |  | 8430                    |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 47                  |  |  | 11700                   |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 2.84                |  |  | 11.15                   |  |  |
| ANNUAL RUNOFF (AC-FT)    | 84750                  |  |  | 635                 |  |  | 12520                   |  |  |
| 10 PERCENT EXCEEDS       | 215                    |  |  | 2.3                 |  |  | 11                      |  |  |
| 50 PERCENT EXCEEDS       | 9.5                    |  |  | .05                 |  |  | .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 sea level. Prior to Dec. 1, 1954, at datum 1 ft higher.

REMARKS.--Records poor through Mar. 4 and fair thereafter. Peaks are attenuated by small conservation reservoir 1 mi upstream since August 1956. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,580 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 6.86 ft, from rating curve extended above 340 ft<sup>3</sup>/s; no flow for part of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 1     | .54   | 3.1   | 4.6   | 6.0   | 21    | e12   | 8.4   | 1.8   | .47  | .32  | .02  | .00  |
| 2     | .52   | 3.4   | 4.6   | 5.6   | 14    | e11   | 8.3   | 1.7   | .36  | .20  | .03  | .00  |
| 3     | .54   | 3.5   | 4.7   | 5.7   | 8.5   | e10   | 8.3   | 1.7   | .32  | .27  | .04  | .01  |
| 4     | .57   | 3.5   | 4.7   | 6.0   | 7.6   | e9.8  | 8.2   | 1.7   | .32  | .22  | .06  | .02  |
| 5     | .58   | 3.5   | 4.8   | 6.2   | 7.6   | 12    | 8.2   | 1.6   | .33  | .18  | .08  | .02  |
| 6     | .62   | 3.6   | 5.2   | 6.1   | 7.7   | 12    | 6.9   | 1.5   | .30  | .17  | .07  | .02  |
| 7     | .67   | 3.6   | 5.2   | 5.7   | 7.6   | 11    | 6.4   | 1.4   | .29  | .19  | .08  | .02  |
| 8     | .75   | 3.5   | 5.2   | 5.8   | 7.6   | 9.2   | 6.0   | 1.4   | .28  | .19  | .07  | .02  |
| 9     | .82   | 3.6   | 5.0   | 5.9   | 7.5   | 8.2   | 5.7   | 1.3   | .25  | .17  | .04  | .02  |
| 10    | .81   | 3.8   | 4.9   | 6.0   | 7.6   | 8.2   | 6.0   | 1.3   | .25  | .24  | .02  | .01  |
| 11    | .88   | 3.7   | 5.0   | 5.8   | 7.6   | 7.9   | 6.4   | 1.0   | .24  | .24  | .03  | .01  |
| 12    | .96   | 3.7   | 5.0   | 5.6   | 7.4   | 8.9   | 6.0   | .72   | .28  | .20  | .02  | .01  |
| 13    | .94   | 3.7   | 5.4   | 5.6   | 7.7   | 55    | 5.5   | .57   | .27  | .19  | .02  | .04  |
| 14    | .98   | 3.7   | 6.5   | 5.9   | 7.3   | 79    | 4.9   | .51   | .28  | .18  | .01  | .06  |
| 15    | 1.0   | 3.8   | 6.1   | 5.9   | 7.1   | 33    | 4.4   | .48   | .29  | .16  | .01  | .07  |
| 16    | 1.2   | 3.8   | 6.0   | 6.1   | 6.9   | 21    | 4.2   | .46   | .26  | .17  | .02  | .08  |
| 17    | 1.3   | 3.7   | 5.8   | 6.6   | 6.8   | 16    | 4.2   | .59   | .24  | .19  | .03  | .08  |
| 18    | 1.3   | 3.7   | 5.7   | 6.4   | 6.8   | 13    | 5.6   | .58   | .23  | .17  | .03  | .08  |
| 19    | 1.4   | 3.8   | 5.8   | 6.3   | 6.9   | 11    | 5.7   | .50   | .22  | .13  | .03  | .07  |
| 20    | 1.5   | 3.8   | 6.2   | 6.7   | 6.9   | 10    | 4.6   | .46   | .23  | .11  | .03  | .07  |
| 21    | 1.6   | 3.9   | 6.2   | 6.6   | 6.9   | 9.7   | 4.2   | .48   | .26  | .09  | .02  | .06  |
| 22    | 1.7   | 4.1   | 6.0   | 13    | 7.7   | 9.6   | 3.9   | .48   | .27  | .07  | .01  | .07  |
| 23    | 1.7   | 4.2   | 6.2   | 13    | 6.7   | 9.4   | 3.6   | .51   | .27  | .10  | .01  | .08  |
| 24    | 1.8   | 4.2   | 6.9   | 8.5   | 6.3   | 9.2   | 3.2   | .61   | .27  | .10  | .04  | .07  |
| 25    | 1.9   | 4.1   | 6.5   | 8.0   | 15    | 9.0   | 3.0   | .67   | .28  | .09  | .05  | .10  |
| 26    | 2.1   | 4.3   | 6.2   | 9.5   | 65    | 8.9   | 2.8   | .49   | .33  | .07  | .02  | .13  |
| 27    | 2.1   | 4.6   | 6.0   | 7.9   | e25   | 8.6   | 2.5   | .50   | .38  | .06  | .01  | .09  |
| 28    | 2.3   | 4.5   | 5.9   | 7.2   | e15   | 8.8   | 2.4   | .50   | .36  | .06  | .01  | .08  |
| 29    | 2.4   | 4.5   | 6.0   | 7.4   | e13   | 11    | 2.0   | .51   | .30  | .06  | .01  | .07  |
| 30    | 2.6   | 4.6   | 6.1   | 7.1   | ---   | 9.8   | 1.8   | .50   | .24  | .04  | .00  | .03  |
| 31    | 2.8   | ---   | 6.2   | 8.2   | ---   | 8.8   | ---   | .54   | ---  | .03  | .00  | ---  |
| TOTAL | 40.88 | 115.5 | 174.6 | 216.3 | 328.7 | 461.0 | 153.3 | 27.06 | 8.67 | 4.66 | 0.92 | 1.49 |
| MEAN  | 1.32  | 3.85  | 5.63  | 6.98  | 11.3  | 14.9  | 5.11  | .87   | .29  | .15  | .030 | .050 |
| MAX   | 2.8   | 4.6   | 6.9   | 13    | 65    | 79    | 8.4   | 1.8   | .47  | .32  | .08  | .13  |
| MIN   | .52   | 3.1   | 4.6   | 5.6   | 6.3   | 7.9   | 1.8   | .46   | .22  | .03  | .00  | .00  |
| AC-FT | 81    | 229   | 346   | 429   | 652   | 914   | 304   | 54    | 17   | 9.2  | 1.8  | 3.0  |

e Estimated.

## TIJUANA RIVER BASIN

11012500 CAMPO CREEK NEAR CAMPO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .83  | 1.52 | 2.67 | 5.79 | 7.99 | 12.0 | 7.47 | 3.53 | 1.82 | .97  | .90  | .69  |
| MAX  | 14.3 | 20.7 | 25.7 | 140  | 74.5 | 153  | 121  | 52.2 | 30.4 | 20.1 | 26.5 | 16.5 |
| (WY) | 1984 | 1984 | 1984 | 1993 | 1980 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 |
| MIN  | .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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1937 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 5398.77                |  |  | 1533.08             |  |  |                         |  |  |
| ANNUAL MEAN              | 14.8                   |  |  | 4.19                |  |  | 3.83                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 39.6                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 282                    |  |  | Mar 6               |  |  | 79                      |  |  |
| LOWEST DAILY MEAN        | .51                    |  |  | Aug 30              |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .54                    |  |  | Aug 25              |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     |  |  | 131                     |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |                     |  |  | 3.92                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 10710                  |  |  |                     |  |  | Feb 1                   |  |  |
| 10 PERCENT EXCEEDS       | 28                     |  |  |                     |  |  | 3040                    |  |  |
| 50 PERCENT EXCEEDS       | 6.0                    |  |  |                     |  |  | 2780                    |  |  |
| 90 PERCENT EXCEEDS       | .63                    |  |  |                     |  |  | 9.1                     |  |  |
|                          |                        |  |  |                     |  |  | .10                     |  |  |
|                          |                        |  |  |                     |  |  | .00                     |  |  |

## 11014000 JAMUL CREEK NEAR JAMUL, CA

LOCATION.--Lat 32°38'15", long 116°53'00", in NW 1/4 NE 1/4 sec.4, T.18 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on right bank 300 ft upstream from Otay Road crossing at upper end of Lower Otay Lake, 1.4 mi downstream from Dulzura Creek, and 5.5 mi south of Jamul.

DRAINAGE AREA.--70.1 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1940 to December 1940, April 1941 to September 1978, October 1985 to current year.

REVISED RECORDS.--WSP 1565: 1952, 1954. WSP 1715: 1944, 1946. WDR CA-93-1: Drainage area. WDR CA-94-1: Datum of gage.

GAGE.--Water-stage recorder and broad-crested weir control with low-water venturi-type flume. Datum of gage is 511.89 ft above sea level, revised. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

REMARKS.--Records good. No regulation upstream from station. Water is diverted from Cottonwood Creek at Barrett Lake (station 11011000) via San Diego and Dulzura Conduit into Dulzura Creek, a tributary to Jamul Creek, and is included in discharge for this station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,870 ft<sup>3</sup>/s, Mar. 5, 1995, gage height, 7.59 ft, present datum, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of critical-depth computations; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of critical-depth computations:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Dec. 20 | 1745 | 46                                | 2.41                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV    | DEC  | JAN    | FEB  | MAR   | APR  | MAY    | JUN  | JUL  | AUG  | SEP  |
|-------|------|--------|------|--------|------|-------|------|--------|------|------|------|------|
| 1     | .06  | 7.0    | 37   | 36     | 15   | 2.4   | 32   | 32     | .58  | .00  | .00  | .00  |
| 2     | .03  | 28     | 37   | 36     | 6.2  | 2.1   | 33   | 32     | .58  | .00  | .00  | .00  |
| 3     | .00  | 31     | 37   | 36     | 4.4  | 1.9   | 33   | 33     | .39  | .00  | .00  | .00  |
| 4     | .00  | 33     | 37   | 36     | 3.5  | 1.7   | 33   | 32     | .32  | .00  | .00  | .00  |
| 5     | .00  | 34     | 37   | 36     | 3.0  | 1.8   | 33   | 32     | .28  | .00  | .00  | .00  |
| 6     | .00  | 35     | 37   | 36     | 2.7  | 1.7   | 33   | 32     | .25  | .00  | .00  | .00  |
| 7     | .00  | 35     | 37   | 36     | 2.5  | 1.5   | 33   | 32     | .25  | .00  | .00  | .00  |
| 8     | .00  | 34     | 37   | 35     | 2.1  | 1.4   | 33   | 32     | .19  | .00  | .00  | .00  |
| 9     | .00  | 35     | 37   | 35     | 1.9  | 1.4   | 33   | 32     | .19  | .00  | .00  | .00  |
| 10    | .00  | 35     | 36   | 35     | 1.8  | 1.5   | 34   | 31     | .18  | .00  | .00  | .00  |
| 11    | .00  | 35     | 37   | 34     | 1.7  | 1.4   | 34   | 31     | .15  | .00  | .00  | .00  |
| 12    | .00  | 35     | 37   | 35     | 1.8  | 1.7   | 34   | 31     | .15  | .00  | .00  | .00  |
| 13    | .00  | 35     | 38   | 35     | 1.8  | 9.7   | 34   | 31     | .14  | .00  | .00  | .00  |
| 14    | .00  | 36     | 38   | 35     | 1.7  | 6.1   | 33   | 31     | .11  | .00  | .00  | .00  |
| 15    | .00  | 36     | 37   | 35     | 1.6  | 3.2   | 33   | 31     | .11  | .00  | .00  | .00  |
| 16    | .00  | 36     | 37   | 36     | 1.5  | 2.5   | 33   | 31     | .08  | .00  | .00  | .00  |
| 17    | .00  | 36     | 37   | 36     | 1.5  | 2.1   | 34   | 31     | .08  | .00  | .00  | .00  |
| 18    | .00  | 36     | 37   | 35     | 1.5  | 1.9   | 36   | 31     | .05  | .00  | .00  | .00  |
| 19    | .00  | 36     | 37   | 35     | 1.5  | 1.7   | 34   | 31     | .03  | .00  | .00  | .00  |
| 20    | .00  | 36     | 39   | 35     | 1.4  | 1.6   | 34   | 31     | .02  | .00  | .00  | .00  |
| 21    | .00  | 36     | 38   | 36     | 1.5  | 1.6   | 34   | 31     | .00  | .00  | .00  | .00  |
| 22    | .00  | 36     | 38   | 39     | 1.7  | 1.5   | 33   | 31     | .00  | .00  | .00  | .00  |
| 23    | .00  | 36     | 38   | 36     | 1.6  | 1.5   | 33   | 31     | .00  | .00  | .00  | .00  |
| 24    | .00  | 36     | 37   | 36     | 1.6  | 1.4   | 32   | 28     | .00  | .00  | .00  | .00  |
| 25    | .00  | 36     | 37   | 36     | 2.8  | 1.4   | 33   | 6.4    | .00  | .00  | .00  | .00  |
| 26    | .00  | 37     | 37   | 36     | 8.7  | 1.4   | 33   | 2.9    | .00  | .00  | .00  | .00  |
| 27    | .00  | 36     | 37   | 35     | 4.4  | 6.6   | 33   | 1.9    | .00  | .00  | .00  | .00  |
| 28    | .00  | 36     | 37   | 35     | 3.3  | 27    | 32   | 1.3    | .00  | .00  | .00  | .00  |
| 29    | .00  | 37     | 37   | 35     | 2.7  | 30    | 32   | 1.0    | .00  | .00  | .00  | .00  |
| 30    | .00  | 37     | 37   | 32     | ---  | 31    | 32   | .84    | .00  | .00  | .00  | .00  |
| 31    | .00  | ---    | 37   | 8.6    | ---  | 32    | ---  | .67    | ---  | .00  | .00  | ---  |
| TOTAL | 0.09 | 1027.0 | 1153 | 1072.6 | 87.4 | 184.7 | 996  | 766.01 | 4.13 | 0.00 | 0.00 | 0.00 |
| MEAN  | .003 | 34.2   | 37.2 | 34.6   | 3.01 | 5.96  | 33.2 | 24.7   | .14  | .000 | .000 | .000 |
| MAX   | .06  | 37     | 39   | 39     | 15   | 32    | 36   | 33     | .58  | .00  | .00  | .00  |
| MIN   | .00  | 7.0    | 36   | 8.6    | 1.4  | 1.4   | 32   | .67    | .00  | .00  | .00  | .00  |
| AC-FT | .2   | 2040   | 2290 | 2130   | 173  | 366   | 1980 | 1520   | 8.2  | .00  | .00  | .00  |

## 11014000 JAMUL CREEK NEAR JAMUL, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.78 | 8.04 | 9.48 | 17.4 | 16.6 | 28.9 | 17.4 | 13.8 | 14.0 | 11.6 | 9.87 | 7.88 |
| MAX  | 40.2 | 45.6 | 62.5 | 415  | 130  | 254  | 101  | 49.1 | 49.6 | 51.7 | 44.4 | 37.4 |
| (WY) | 1948 | 1946 | 1946 | 1993 | 1993 | 1995 | 1958 | 1954 | 1952 | 1995 | 1995 | 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1940 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 22329.67               |  |  | 5290.93             |  |  |                         |  |  |
| ANNUAL MEAN              | 61.2                   |  |  | 14.5                |  |  | 13.2                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 55.2                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 2150                   |  |  | Mar 6               |  |  | 2320                    |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | Jan 1               |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | Oct 3               |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     |  |  | 46                      |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |                     |  |  | Dec 20                  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 44290                  |  |  | 10490               |  |  | 2.41                    |  |  |
| 10 PERCENT EXCEEDS       | 103                    |  |  | 36                  |  |  | 7.59                    |  |  |
| 50 PERCENT EXCEEDS       | 38                     |  |  | 1.7                 |  |  | 9540                    |  |  |
| 90 PERCENT EXCEEDS       | .11                    |  |  | .00                 |  |  | 37                      |  |  |
|                          |                        |  |  |                     |  |  | .20                     |  |  |
|                          |                        |  |  |                     |  |  | .00                     |  |  |

## 11015000 SWEETWATER RIVER NEAR DESCANSO, CA

LOCATION.--Lat 32°50'05", long 116°37'20", in NW 1/4 SE 1/4 sec.25, T.15 S., R.3 E., San Diego County, Hydrologic Unit 18070304, near right bank at Los Terrenitos Road bridge, 0.7 mi downstream from unnamed tributary, and 1.3 mi south of Descanso.

DRAINAGE AREA.--45.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1905 to September 1927 (monthly discharge only for some months, published in WSP 1315-B), October 1956 to current year. Prior to October 1927, records unadjusted for diversion. October 1956 to September 1977, both unadjusted records and combined records of river plus diversion (station 11015001) were published. No diversion since November 1976.

REVISED RECORD.--WSP 1315-B: 1922(M). WDR CA-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,269.24 ft above sea level. Prior to June 25, 1927, nonrecording gages at several sites and datums, upstream about 0.1 mi. Diversion gage at site 0.3 mi upstream, October 1956 to September 1984, at different datum.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 13.2 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; no flow many days in most years.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Mar. 13 | 1515 | 73                                | 5.89                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR   | APR  | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|------|-------|-------|------|-------|------|------|------|------|
| 1     | .38   | .76   | .72   | 1.5  | 30    | 7.0   | 5.1  | 1.7   | .37  | .00  | .00  | .00  |
| 2     | .34   | .85   | .83   | 1.5  | 16    | 6.6   | 5.1  | 1.6   | .30  | .00  | .00  | .00  |
| 3     | .35   | .76   | .94   | 1.4  | 10    | 6.3   | 4.8  | 1.6   | .25  | .00  | .00  | .00  |
| 4     | .36   | .74   | .94   | 1.4  | 6.8   | 5.9   | 4.5  | 1.5   | .23  | .00  | .00  | .00  |
| 5     | .36   | .93   | 1.0   | 1.5  | 5.2   | 10    | 4.2  | 1.4   | .19  | .00  | .00  | .00  |
| 6     | .40   | .88   | 1.0   | 1.7  | 4.6   | 11    | 3.9  | 1.4   | .16  | .00  | .00  | .00  |
| 7     | .40   | .53   | .93   | 1.6  | 4.1   | 7.8   | 3.6  | 1.4   | .15  | .00  | .00  | .00  |
| 8     | .44   | .52   | .96   | 1.6  | 3.6   | 6.5   | 3.4  | 1.3   | .12  | .00  | .00  | .00  |
| 9     | .43   | .48   | .97   | 1.6  | 3.3   | 5.8   | 3.3  | 1.3   | .09  | .00  | .00  | .00  |
| 10    | .37   | .53   | .97   | 1.5  | 3.1   | 5.3   | 3.4  | 1.2   | .08  | .00  | .00  | .00  |
| 11    | .36   | .51   | .97   | 1.5  | 3.0   | 5.1   | 3.4  | 1.1   | .08  | .00  | .00  | .00  |
| 12    | .41   | .51   | 1.0   | 1.4  | 3.0   | 5.6   | 3.2  | 1.0   | .08  | .00  | .00  | .00  |
| 13    | .34   | .51   | 1.3   | 1.3  | 3.1   | 37    | 3.1  | .90   | .07  | .00  | .00  | .00  |
| 14    | .36   | .52   | 1.3   | 1.3  | 3.0   | 30    | 2.9  | .85   | .06  | .00  | .00  | .00  |
| 15    | .37   | .64   | 1.3   | 1.3  | 3.0   | 18    | 2.8  | .84   | .06  | .00  | .00  | .00  |
| 16    | .41   | .68   | 1.3   | 1.4  | 2.9   | 14    | 2.6  | .87   | .05  | .00  | .00  | .00  |
| 17    | .42   | .74   | 1.2   | 1.8  | 2.9   | 11    | 2.9  | .84   | .04  | .00  | .00  | .00  |
| 18    | .43   | .75   | 1.0   | 1.8  | 2.9   | 9.7   | 4.8  | .73   | .03  | .00  | .00  | .00  |
| 19    | .49   | .81   | 1.0   | 2.1  | 3.0   | 8.6   | 4.5  | .69   | .03  | .00  | .00  | .00  |
| 20    | .46   | .71   | 1.1   | 2.1  | 3.0   | 7.7   | 3.7  | .66   | .02  | .00  | .00  | .00  |
| 21    | .52   | .68   | 1.1   | 2.5  | 3.3   | 6.9   | 3.4  | .62   | .02  | .00  | .00  | .00  |
| 22    | .55   | .77   | 1.2   | 4.8  | 3.7   | 6.4   | 3.2  | .65   | .03  | .00  | .00  | .00  |
| 23    | .47   | .67   | 1.3   | 4.0  | 3.1   | 6.0   | 2.9  | .72   | .04  | .00  | .00  | .00  |
| 24    | .44   | .79   | 1.5   | 3.0  | 2.8   | 5.7   | 2.6  | .83   | .04  | .00  | .00  | .00  |
| 25    | .47   | .78   | 1.4   | 3.1  | 5.9   | 5.9   | 2.5  | .91   | e.05 | .00  | .00  | .00  |
| 26    | .52   | .85   | 1.4   | 3.2  | 9.7   | 5.7   | 2.3  | .86   | .06  | .00  | .00  | .00  |
| 27    | .55   | .91   | 1.3   | 2.9  | 8.1   | 5.5   | 2.2  | .72   | .06  | .00  | .00  | .00  |
| 28    | .58   | .94   | 1.3   | 3.0  | 9.3   | 6.0   | 2.1  | .59   | .04  | .00  | .00  | .00  |
| 29    | .57   | .79   | 1.2   | 2.9  | 7.9   | 6.5   | 1.7  | .54   | .01  | .00  | .00  | .00  |
| 30    | .58   | .70   | 1.8   | 2.6  | ---   | 5.7   | 1.7  | .50   | e.00 | .00  | .00  | .00  |
| 31    | .62   | ---   | 1.4   | 4.1  | ---   | 5.3   | ---  | .49   | ---  | .00  | .00  | ---  |
| TOTAL | 13.75 | 21.24 | 35.63 | 67.4 | 170.3 | 284.5 | 99.8 | 30.31 | 2.81 | 0.00 | 0.00 | 0.00 |
| MEAN  | .44   | .71   | 1.15  | 2.17 | 5.87  | 9.18  | 3.33 | .98   | .094 | .000 | .000 | .000 |
| MAX   | .62   | .94   | 1.8   | 4.8  | 30    | 37    | 5.1  | 1.7   | .37  | .00  | .00  | .00  |
| MIN   | .34   | .48   | .72   | 1.3  | 2.8   | 5.1   | 1.7  | .49   | .00  | .00  | .00  | .00  |
| AC-FT | 27    | 42    | 71    | 134  | 338   | 564   | 198  | 60    | 5.6  | .00  | .00  | .00  |

e Estimated.

## 11015000 SWEETWATER RIVER NEAR DESCANSO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .21  | 1.57 | 5.00 | 13.7 | 29.0 | 40.1 | 18.5 | 7.51 | 2.85 | .80  | .46  | .33  |
| MAX  | 3.53 | 24.0 | 83.5 | 304  | 336  | 382  | 138  | 68.5 | 25.5 | 8.68 | 8.45 | 6.16 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1980 | 1983 | 1983 | 1983 | 1983 | 1980 | 1983 | 1978 |
| MIN  | .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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1957 - 1996

|                          |          |        |      |
|--------------------------|----------|--------|------|
| ANNUAL TOTAL             | 15508.53 | 725.74 |      |
| ANNUAL MEAN              | 42.5     | 1.98   | 9.90 |
| HIGHEST ANNUAL MEAN      |          |        | 71.2 |
| LOWEST ANNUAL MEAN       |          |        | .004 |
| HIGHEST DAILY MEAN       | 2460     | Mar 5  | 37   |
| LOWEST DAILY MEAN        | .34      | Oct 2  | .00  |
| ANNUAL SEVEN-DAY MINIMUM | .36      | Sep 19 | .00  |
| INSTANTANEOUS PEAK FLOW  |          |        | 73   |
| INSTANTANEOUS PEAK STAGE |          |        | 5.89 |
| ANNUAL RUNOFF (AC-FT)    | 30760    | 1440   | 7170 |
| 10 PERCENT EXCEEDS       | 67       | 5.5    | 13   |
| 50 PERCENT EXCEEDS       | 6.9      | .76    | .31  |
| 90 PERCENT EXCEEDS       | .46      | .00    | .00  |

## 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 sea level (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, 76,540 acre-ft, Nov. 15, elevation, 636.79 ft; minimum, 61,600 acre-ft, Sept. 26, elevation, 621.11 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 74930  | 75380  | 74910  | e73910 | 73100  | 72090  | 71120  | 71010  | 69820  | 69900  | 65850  | 63530  |
| 2   | 74840  | 75460  | 74750  | e73930 | 73160  | 72010  | 71120  | 71010  | 69910  | 69760  | 65780  | 63420  |
| 3   | 74750  | 75580  | 74590  | 73940  | 73170  | 71950  | 71110  | 71020  | 69960  | 69640  | 65720  | 63310  |
| 4   | 74630  | 75650  | 74450  | 73960  | 73140  | 71900  | 71110  | 71010  | 70010  | 69490  | 65660  | 63240  |
| 5   | 74560  | 75720  | 74320  | 73980  | 73120  | 71890  | 71110  | 70990  | 70080  | 69360  | 65580  | 63160  |
| 6   | 74470  | 75800  | 74200  | 74010  | 73100  | 71920  | 71090  | 70980  | 70150  | 69220  | 65480  | 63090  |
| 7   | 74360  | 75890  | 74080  | 74020  | 73060  | 71920  | 71090  | 70970  | 70140  | 69090  | 65430  | 63040  |
| 8   | 74240  | 75970  | 73960  | 74040  | 73010  | 71820  | 71080  | 70970  | 70100  | 68940  | 65370  | 62990  |
| 9   | 74140  | 76050  | 73850  | 73960  | 72980  | 71720  | 71070  | 70960  | 70080  | 68810  | 65280  | 62880  |
| 10  | 74020  | 76170  | 73740  | 73860  | 72960  | 71650  | 71070  | 70960  | 70070  | 68670  | 65240  | 62790  |
| 11  | 74010  | 76260  | 73640  | 73760  | 72930  | 71540  | 71080  | 70960  | 70140  | 68560  | 65210  | 62680  |
| 12  | 74150  | 76330  | 73580  | 73640  | 72880  | 71480  | 71070  | 70940  | 70200  | 68430  | 65110  | 62600  |
| 13  | 74270  | 76420  | 73570  | 73470  | 72840  | 71630  | 71070  | 70920  | 70260  | 68290  | 65070  | 62510  |
| 14  | 74390  | 76510  | 73550  | 73330  | 72790  | 71620  | 71070  | 70920  | 70240  | 68150  | 64980  | 62400  |
| 15  | 74510  | 76460  | e73540 | 73180  | 72760  | 71550  | 71070  | 70900  | 70150  | 68010  | 64910  | 62290  |
| 16  | 74610  | 76380  | e73520 | 73080  | 72720  | 71490  | 71050  | 70820  | 70070  | 67870  | 64810  | 62180  |
| 17  | 74700  | 76340  | e73490 | 72960  | 72650  | 71420  | 71050  | 70700  | 69970  | 67740  | 64760  | 62090  |
| 18  | 74800  | 76290  | e73450 | 72820  | 72630  | 71320  | 71110  | 70600  | 69900  | 67610  | 64700  | 62060  |
| 19  | 74910  | 76250  | e73440 | 72680  | 72580  | 71210  | 71110  | 70550  | 69900  | 67480  | 64620  | 62040  |
| 20  | 75020  | 76170  | e73430 | 72600  | 72510  | 71170  | 71090  | 70480  | 69910  | 67340  | 64530  | 62020  |
| 21  | 75120  | 76080  | e73490 | 72630  | 72460  | 71160  | 71080  | 70400  | 69960  | 67210  | 64450  | 61990  |
| 22  | 75220  | 75940  | e73530 | 72610  | 72380  | 71170  | 71080  | 70290  | 70010  | 67080  | 64360  | 61920  |
| 23  | 75300  | 75810  | e73610 | 72560  | 72310  | 71160  | 71070  | 70190  | 70080  | 66950  | 64300  | 61830  |
| 24  | 75380  | 75700  | e73680 | 72580  | 72250  | 71160  | 71060  | 70070  | 70140  | 66820  | 64290  | 61750  |
| 25  | 75470  | 75600  | e73730 | 72630  | 72270  | 71150  | 71050  | 69960  | 70180  | 66690  | 64250  | 61670  |
| 26  | 75520  | 75490  | e73770 | 72650  | 72250  | 71150  | 71050  | 69850  | 70230  | 66570  | 64160  | 61650  |
| 27  | 75480  | 75370  | e73790 | 72690  | 72230  | 71140  | 71040  | 69760  | 70300  | 66450  | 64070  | 61740  |
| 28  | 75400  | 75340  | e73820 | 72750  | 72250  | 71130  | 71030  | 69640  | 70270  | 66330  | 63980  | 61780  |
| 29  | 75330  | 75240  | e73850 | 72770  | 72170  | 71140  | 71030  | 69610  | 70160  | 66200  | 63870  | 61750  |
| 30  | 75260  | 75070  | e73870 | 72790  | ---    | 71130  | 71030  | 69680  | 70020  | 66070  | 63760  | 61670  |
| 31  | 75260  | ---    | e73890 | 72890  | ---    | 71120  | ---    | 69760  | ---    | 65950  | 63640  | ---    |
| MAX | 75520  | 76510  | 74910  | 74040  | 73170  | 72090  | 71120  | 71020  | 70300  | 69900  | 65850  | 63530  |
| MIN | 74010  | 75070  | 73430  | 72560  | 72170  | 71120  | 71030  | 69610  | 69820  | 65950  | 63640  | 61650  |
| a   | 635.49 | 635.30 | 634.11 | 633.09 | 632.35 | 631.26 | 631.17 | 629.83 | 630.11 | 625.81 | 623.34 | 621.18 |
| b   | +260   | -190   | -1180  | -1000  | -720   | -1050  | -90    | -1270  | +260   | -4070  | -2310  | -1970  |

CAL YR 1995 MAX 90910 MIN 72280 b +1600  
WTR YR 1996 MAX 76510 MIN 61650 b -13330

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## SAN DIEGO RIVER BASIN

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 sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft<sup>3</sup>/s, Mar. 5, 1995, gage height, 9.74 ft; minimum daily, 0.06 ft<sup>3</sup>/s, Aug. 25-26, Aug. 30-Sept. 1, and Sept. 10, 1996.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s, or maximum, from rating curve extended above 209 ft<sup>3</sup>/s on basis of critical-depth computations:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2300 | 331                               | 6.55                | Mar. 5  | 0030 | 77                                | 4.01                |
| Feb. 25 | 1130 | 114                               | 4.50                | Mar. 13 | 0600 | 372                               | 6.81                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|--------|-------|-------|-------|------|------|------|------|
| 1     | .39   | 1.7   | .62   | e.93  | 35     | 1.8   | 2.2   | .49   | .25  | .10  | .08  | .06  |
| 2     | .38   | 1.1   | .62   | e.90  | 4.0    | 1.7   | 1.9   | .47   | .24  | .10  | .09  | .07  |
| 3     | .35   | .72   | .66   | e.90  | 2.2    | 1.7   | 1.5   | .47   | .19  | .11  | .09  | .07  |
| 4     | .34   | .62   | .66   | e.88  | 1.7    | 1.6   | 1.5   | .48   | .20  | .10  | .09  | .07  |
| 5     | .33   | .61   | .64   | e1.0  | 1.5    | 13    | 1.3   | .46   | .19  | .11  | .09  | .07  |
| 6     | .30   | .56   | .68   | 1.1   | 1.4    | 2.7   | 1.1   | .42   | .15  | .09  | .09  | .07  |
| 7     | .30   | .55   | .68   | 1.0   | 1.3    | 2.2   | 1.1   | .43   | .18  | .10  | .09  | .07  |
| 8     | .30   | .52   | .69   | 1.0   | 1.2    | 2.0   | 1.1   | .47   | .15  | .10  | .09  | .08  |
| 9     | .32   | .51   | .68   | 1.0   | 1.1    | 1.8   | 1.2   | .45   | .12  | .09  | .09  | .07  |
| 10    | .33   | .53   | .64   | 1.0   | 1.1    | 1.7   | 1.2   | .43   | .16  | .11  | .09  | .06  |
| 11    | .33   | .54   | .64   | 1.0   | 1.0    | 1.5   | 1.2   | .41   | .17  | .12  | .09  | .07  |
| 12    | .34   | .53   | .64   | 1.0   | 1.3    | 11    | 1.2   | .37   | .17  | .12  | .08  | .07  |
| 13    | .35   | .52   | .84   | 1.0   | 1.0    | 96    | 1.2   | .38   | .17  | .10  | .08  | .08  |
| 14    | .38   | .54   | 1.1   | .97   | .91    | 11    | 1.1   | .38   | .16  | .10  | .07  | .09  |
| 15    | .38   | .57   | .91   | 1.0   | .88    | 4.6   | 1.0   | .36   | .16  | .10  | .07  | .09  |
| 16    | .38   | .56   | .94   | 2.0   | .87    | 3.7   | 1.2   | .36   | .17  | .10  | .07  | .09  |
| 17    | .38   | .58   | .86   | 3.7   | .90    | 3.4   | 1.6   | .38   | .15  | .10  | .08  | .08  |
| 18    | .38   | .57   | .89   | 1.1   | .92    | 3.1   | 9.8   | .38   | .15  | .09  | .10  | .08  |
| 19    | .39   | .55   | .95   | 1.4   | .87    | 2.7   | 1.6   | .36   | .14  | .09  | .09  | .08  |
| 20    | .41   | .53   | 4.1   | 1.1   | .86    | 2.3   | 1.1   | .36   | .15  | .09  | .09  | .07  |
| 21    | .42   | .51   | 1.4   | 5.8   | 2.3    | 2.3   | .96   | .34   | .15  | .10  | .08  | .08  |
| 22    | .46   | .55   | 1.1   | 11    | 2.5    | 2.2   | .87   | .34   | .15  | .08  | .07  | .08  |
| 23    | .46   | .58   | 3.6   | 2.5   | 1.3    | 2.2   | .75   | .36   | .16  | .08  | .07  | .07  |
| 24    | .41   | .57   | 1.5   | 1.8   | 1.3    | 2.6   | .64   | .38   | .16  | .08  | .07  | .08  |
| 25    | .38   | .56   | e1.4  | 2.3   | 22     | 2.4   | .61   | .37   | .12  | .10  | .06  | .08  |
| 26    | .38   | .55   | e1.2  | 2.0   | 11     | 2.5   | .55   | .40   | .12  | .09  | .06  | .10  |
| 27    | .38   | .59   | e1.1  | 1.4   | 4.0    | 2.4   | .55   | .31   | .11  | .09  | .07  | .10  |
| 28    | .38   | .54   | e1.1  | 1.7   | 7.6    | 3.7   | .53   | .25   | .12  | .09  | .07  | .08  |
| 29    | .41   | .56   | e1.0  | 1.4   | 2.0    | 2.8   | .51   | .25   | .12  | .08  | .07  | .07  |
| 30    | .43   | .62   | e1.0  | 1.4   | ---    | 2.1   | .51   | .26   | .11  | .08  | .06  | .08  |
| 31    | .48   | ---   | e.96  | 27    | ---    | 2.2   | ---   | .26   | ---  | .08  | .06  | ---  |
| TOTAL | 11.65 | 18.54 | 33.80 | 82.28 | 114.01 | 196.9 | 41.58 | 11.83 | 4.74 | 2.97 | 2.45 | 2.31 |
| MEAN  | .38   | .62   | 1.09  | 2.65  | 3.93   | 6.35  | 1.39  | .38   | .16  | .096 | .079 | .077 |
| MAX   | .48   | 1.7   | 4.1   | 27    | 35     | 96    | 9.8   | .49   | .25  | .12  | .10  | .10  |
| MIN   | .30   | .51   | .62   | .88   | .86    | 1.5   | .51   | .25   | .11  | .08  | .06  | .06  |
| AC-FT | 23    | 37    | 67    | 163   | 226    | 391   | 82    | 23    | 9.4  | 5.9  | 4.9  | 4.6  |

e Estimated.



11022200 LOS COCHES CREEK NEAR LAKESIDE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .49  | 1.25 | 1.95 | 5.44 | 5.15 | 6.55 | 2.40 | 1.25 | .72  | .37  | .25  | .26  |
| MAX  | 1.37 | 4.58 | 6.09 | 40.2 | 25.7 | 31.1 | 10.2 | 5.86 | 3.67 | 1.31 | .54  | .49  |
| (WY) | 1988 | 1984 | 1985 | 1993 | 1993 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1986 |
| MIN  | .14  | .16  | .32  | .66  | 1.09 | .78  | .45  | .25  | .16  | .096 | .079 | .077 |
| (WY) | 1995 | 1993 | 1990 | 1989 | 1989 | 1989 | 1989 | 1984 | 1996 | 1996 | 1996 | 1996 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1984 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 2334.22                |  |  | 523.06              |  |  |                         |  |  |
| ANNUAL MEAN              | 6.40                   |  |  | 1.43                |  |  | 2.16                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 6.77                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .50                     |  |  |
| HIGHEST DAILY MEAN       | 248                    |  |  | 96                  |  |  | 248                     |  |  |
| LOWEST DAILY MEAN        | .30                    |  |  | .06                 |  |  | .06                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .32                    |  |  | .06                 |  |  | .06                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 372                 |  |  | 1090                    |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 6.81                |  |  | 9.74                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 4630                   |  |  | 1040                |  |  | 1570                    |  |  |
| 10 PERCENT EXCEEDS       | 14                     |  |  | 2.2                 |  |  | 3.2                     |  |  |
| 50 PERCENT EXCEEDS       | 1.9                    |  |  | .49                 |  |  | .54                     |  |  |
| 90 PERCENT EXCEEDS       | .43                    |  |  | .08                 |  |  | .18                     |  |  |

## 11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA

LOCATION.--Lat 32°50'25", long 117°01'30", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, near right bank at Mast Road Bridge, 0.7 mi upstream from Old Mission Dam 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" (station 11022500).

REVISED RECORDS.--WSP 1565: 1955-56. WSP 1635: 1922, 1926(M), 1927. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 300 ft above sea level, from topographic map. Prior to Nov. 10, 1920, nonrecording gage at site 0.7 mi downstream at different datum. Nov. 10, 1920, to Jan. 19, 1982, at site 2.6 mi downstream at different datum.

REMARKS.--Records 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, 45,400 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 18.1 ft, site and datum then in use, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 70,200 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 25.1 ft, site and datum in use prior to Nov. 10, 1920, from floodmarks, based on slope-conveyance computation of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR  | APR   | MAY   | JUN  | JUL   | AUG   | SEP   |
|-------|------|-------|-------|-------|-------|------|-------|-------|------|-------|-------|-------|
| 1     | 2.5  | 18    | 6.4   | 5.2   | 193   | 17   | 12    | 3.2   | 3.2  | 1.4   | .95   | 1.3   |
| 2     | 2.4  | 8.8   | 6.5   | 4.8   | 30    | 15   | 13    | 3.2   | 2.9  | 1.3   | .93   | 1.3   |
| 3     | 2.4  | 6.3   | 6.7   | 4.3   | 24    | 14   | 11    | 3.3   | 2.8  | 1.3   | .92   | 1.2   |
| 4     | 2.5  | 6.1   | 6.6   | 4.0   | 23    | 13   | 10    | 3.2   | 2.6  | 1.4   | .90   | 1.2   |
| 5     | 2.7  | 5.7   | 6.4   | 4.3   | 21    | 87   | 8.8   | 3.1   | 2.6  | 1.4   | .97   | 1.2   |
| 6     | 2.5  | 5.8   | 6.4   | 4.9   | 19    | 19   | 8.2   | 3.0   | 2.3  | 1.5   | .96   | 1.2   |
| 7     | 2.5  | 5.0   | 6.4   | 4.9   | 18    | 18   | 8.2   | 3.0   | 2.0  | 1.4   | 1.0   | 1.1   |
| 8     | 2.5  | 4.4   | 6.5   | 5.2   | 23    | 17   | 7.9   | 2.7   | 1.9  | 1.4   | 1.0   | 1.1   |
| 9     | 2.5  | 5.4   | 5.9   | 5.3   | 14    | 15   | 7.6   | 2.6   | 1.8  | 1.4   | 1.0   | 1.0   |
| 10    | 2.9  | 4.9   | 5.1   | 4.7   | 11    | 13   | 8.2   | 2.4   | 1.7  | 3.5   | 1.0   | .97   |
| 11    | 3.2  | 5.0   | 5.0   | 4.6   | 16    | 12   | 8.2   | 2.3   | 1.7  | 5.0   | .94   | .94   |
| 12    | 3.0  | 5.3   | 5.0   | 4.4   | 21    | 47   | 8.0   | 2.4   | 1.6  | 2.2   | .84   | .88   |
| 13    | 3.3  | 5.7   | 6.0   | 4.7   | 16    | 361  | 7.5   | 2.2   | 1.6  | 1.8   | .83   | .91   |
| 14    | 3.0  | 6.1   | 6.8   | 5.0   | 13    | 111  | 7.3   | 2.3   | 1.5  | 1.8   | .83   | 1.0   |
| 15    | 2.5  | 5.9   | 6.2   | 4.9   | 12    | 46   | 7.2   | 2.2   | 1.4  | 1.8   | .75   | 1.0   |
| 16    | 3.0  | 6.1   | 6.0   | 7.7   | 11    | 35   | 7.0   | 2.4   | 1.4  | 1.8   | .77   | .93   |
| 17    | 4.0  | 6.1   | 5.6   | 29    | 11    | 30   | 11    | 3.3   | 1.3  | 1.8   | .81   | .91   |
| 18    | 3.8  | 6.2   | 5.7   | 6.5   | 10    | 26   | 49    | 5.1   | 1.5  | 1.7   | .80   | .90   |
| 19    | 3.2  | 6.5   | 5.0   | 6.3   | 10    | 22   | 11    | 4.6   | 1.7  | 1.6   | .83   | 1.0   |
| 20    | 3.1  | 6.9   | 15    | 5.8   | 9.5   | 19   | 9.4   | 4.0   | 1.8  | 2.2   | .86   | .93   |
| 21    | 3.0  | 7.0   | 6.8   | 55    | 17    | 18   | 8.6   | 3.4   | 1.7  | 1.6   | .94   | .88   |
| 22    | 2.9  | 6.5   | 4.9   | 95    | 19    | 16   | 7.7   | 3.2   | 1.7  | 1.3   | .89   | .88   |
| 23    | 3.0  | 5.5   | 42    | 18    | 11    | 15   | 6.7   | 3.0   | 1.7  | 1.4   | .88   | .87   |
| 24    | 2.8  | 5.9   | 9.6   | 13    | 11    | 14   | 7.6   | 4.8   | 1.6  | 1.0   | .88   | .87   |
| 25    | 2.6  | 5.6   | 6.9   | 17    | 122   | 14   | 5.7   | 5.0   | 1.7  | .91   | .86   | .91   |
| 26    | 2.7  | 6.0   | 6.5   | 14    | 54    | 14   | 5.6   | 4.0   | 1.8  | 1.1   | .96   | 1.8   |
| 27    | 3.1  | 6.3   | 6.0   | 10    | 22    | 14   | 5.4   | 3.8   | 1.8  | 1.2   | 1.1   | 2.1   |
| 28    | 3.2  | 6.0   | 5.8   | 14    | 55    | 14   | 4.5   | 3.4   | 1.7  | 1.0   | 1.0   | 1.4   |
| 29    | 3.0  | 6.0   | 5.6   | 10    | 20    | 14   | 3.8   | 3.1   | 1.7  | .85   | 1.0   | 1.2   |
| 30    | 3.2  | 6.2   | 5.5   | 15    | ---   | 14   | 3.5   | 3.4   | 1.6  | .84   | 1.0   | 1.1   |
| 31    | 2.9  | ---   | 5.4   | 133   | ---   | 12   | ---   | 3.6   | ---  | 1.0   | 1.1   | ---   |
| TOTAL | 89.9 | 191.2 | 234.2 | 520.5 | 836.5 | 1096 | 279.6 | 101.2 | 56.3 | 49.90 | 28.50 | 32.98 |
| MEAN  | 2.90 | 6.37  | 7.55  | 16.8  | 28.8  | 35.4 | 9.32  | 3.26  | 1.88 | 1.61  | .92   | 1.10  |
| MAX   | 4.0  | 18    | 42    | 133   | 193   | 361  | 49    | 5.1   | 3.2  | 5.0   | 1.1   | 2.1   |
| MIN   | 2.4  | 4.4   | 4.9   | 4.0   | 9.5   | 12   | 3.5   | 2.2   | 1.3  | .84   | .75   | .87   |
| AC-FT | 178  | 379   | 465   | 1030  | 1660  | 2170 | 555   | 201   | 112  | 99    | 57    | 65    |

## 11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.06 | 5.55 | 21.2 | 32.5 | 92.6 | 82.9 | 49.0 | 18.3 | 4.83 | 3.04 | 2.75 | 1.81 |
| MAX  | 20.8 | 78.8 | 728  | 410  | 1871 | 683  | 1324 | 379  | 181  | 156  | 139  | 38.3 |
| (WY) | 1988 | 1986 | 1922 | 1993 | 1927 | 1941 | 1941 | 1915 | 1980 | 1980 | 1980 | 1980 |
| MIN  | .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 1995 CALENDAR YEAR                      FOR 1996 WATER YEAR                      WATER YEARS 1912 - 1996

|                          |         |         |       |
|--------------------------|---------|---------|-------|
| ANNUAL TOTAL             | 18112.3 | 3516.78 |       |
| ANNUAL MEAN              | 49.6    | 9.61    | 25.9  |
| HIGHEST ANNUAL MEAN      |         |         | 219   |
| LOWEST ANNUAL MEAN       |         |         | .002  |
| HIGHEST DAILY MEAN       | 1470    | Mar 5   | 27300 |
| LOWEST DAILY MEAN        | 2.4     | Oct 2   | .00   |
| ANNUAL SEVEN-DAY MINIMUM | 2.5     | Oct 1   | .00   |
| INSTANTANEOUS PEAK FLOW  |         |         | 1070  |
| INSTANTANEOUS PEAK STAGE |         |         | 8.58  |
| ANNUAL RUNOFF (AC-FT)    | 35930   | 6980    | 18800 |
| 10 PERCENT EXCEEDS       | 91      | 17      | 28    |
| 50 PERCENT EXCEEDS       | 9.6     | 4.3     | 1.4   |
| 90 PERCENT EXCEEDS       | 2.9     | .97     | .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. Records for October 1, 1981 to January 17, 1982, published in WDR CA-82-1, are in error and should not be used.

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above sea level, from topographic map. See WSP 1315-B for history of changes for period October 1912 to January 1916.

REMARKS.--Records poor through December and good thereafter. 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 some years. Maximum discharge recorded since storage began in El Capitan Lake and San Vicente Reservoir, 9,430 ft<sup>3</sup>/s, Mar. 6, 1995, gage height, 13.47 ft, from rating curve extended above 5,800 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB  | MAR  | APR   | MAY  | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|
| 1     | 1.2   | 15    | e7.4  | 10    | 422  | 35   | 17    | 6.7  | 1.8   | .84   | .69   | .54   |
| 2     | 1.1   | 30    | e7.5  | 9.3   | 115  | 27   | 17    | 6.4  | 1.9   | .79   | .69   | .61   |
| 3     | 1.4   | 11    | e7.7  | 8.5   | 50   | 23   | 16    | 5.7  | 1.8   | .69   | .81   | .55   |
| 4     | 1.3   | 8.7   | e7.8  | 8.0   | 37   | 21   | 15    | 5.1  | 1.7   | .65   | .85   | .59   |
| 5     | 1.2   | 6.8   | e7.6  | 7.9   | 32   | 114  | 14    | 4.3  | 1.6   | .71   | .80   | .73   |
| 6     | 1.3   | e6.9  | e7.6  | 7.5   | 29   | 82   | 13    | 3.7  | 1.5   | .74   | .62   | .72   |
| 7     | 1.7   | e6.2  | e7.6  | 7.2   | 27   | 35   | 11    | 3.5  | 1.4   | .80   | .47   | .73   |
| 8     | 1.7   | e5.7  | e7.7  | 7.1   | 24   | 25   | 9.9   | 3.2  | 1.4   | .88   | .38   | .79   |
| 9     | 1.5   | e6.8  | e7.4  | 7.8   | 24   | 22   | 8.9   | 3.0  | 1.5   | .70   | .35   | .79   |
| 10    | 1.3   | e6.4  | e6.8  | 7.5   | 25   | 20   | 8.4   | 2.1  | 1.4   | 1.3   | .40   | .79   |
| 11    | 1.5   | e6.5  | e6.7  | 7.3   | 21   | 18   | 8.3   | 1.6  | 1.4   | 1.6   | .56   | .63   |
| 12    | .96   | e6.9  | e6.8  | 7.3   | 20   | 43   | 8.6   | 1.6  | 2.3   | 1.5   | .58   | .57   |
| 13    | .66   | e7.4  | e7.4  | 7.4   | 24   | 507  | 9.8   | 1.6  | 2.0   | 1.3   | .48   | .55   |
| 14    | 1.1   | e7.8  | e8.2  | 7.2   | 24   | 328  | 9.6   | 1.5  | 1.7   | 1.3   | .45   | .63   |
| 15    | 1.7   | e7.7  | e7.5  | 7.0   | 21   | 121  | 9.7   | 1.3  | 1.7   | 1.3   | .45   | .63   |
| 16    | 1.6   | e8.0  | e7.3  | 8.1   | 19   | 71   | 9.8   | 1.2  | 1.7   | 1.1   | .45   | .66   |
| 17    | 1.5   | e8.0  | e7.0  | 30    | 18   | 53   | 12    | 1.2  | 1.7   | .98   | .45   | .61   |
| 18    | 1.6   | e8.2  | e7.1  | 20    | 18   | 44   | 74    | 1.5  | 1.5   | .79   | .50   | .57   |
| 19    | 1.4   | e8.6  | e6.8  | 19    | 17   | 38   | 53    | 1.5  | 1.5   | .64   | .70   | .50   |
| 20    | 1.1   | e9.0  | e25   | 16    | 17   | 33   | 30    | 1.4  | 1.5   | .58   | .80   | .41   |
| 21    | 1.3   | e9.2  | e15   | 18    | 18   | 29   | 19    | 1.2  | 1.2   | .70   | .57   | .40   |
| 22    | 1.3   | e8.8  | e10   | 106   | 35   | 25   | 15    | 1.3  | 1.3   | .79   | .49   | .55   |
| 23    | 1.0   | 7.9   | e70   | 99    | 26   | 23   | 12    | 1.2  | 1.5   | .71   | .47   | .70   |
| 24    | .95   | 7.7   | e40   | 39    | 22   | 22   | 11    | 1.2  | 1.4   | .71   | .52   | .78   |
| 25    | .85   | 7.3   | e20   | 27    | 92   | 20   | 9.9   | 1.5  | 1.5   | .68   | .59   | .73   |
| 26    | .59   | 6.9   | e15   | 28    | 181  | 19   | 9.9   | 2.1  | 1.4   | .67   | .55   | 1.2   |
| 27    | .57   | 6.9   | e12   | 21    | 81   | 18   | 9.3   | 1.9  | 1.2   | .61   | .47   | 1.2   |
| 28    | .74   | 6.8   | e11   | 23    | 105  | 19   | 8.3   | 1.7  | 1.0   | .59   | .44   | 1.2   |
| 29    | .46   | e6.8  | e11   | 20    | 65   | 20   | 7.4   | 2.0  | .82   | .70   | .46   | 1.2   |
| 30    | .66   | e7.0  | 10    | 17    | ---  | 18   | 6.9   | 2.0  | .83   | .73   | .49   | 1.2   |
| 31    | .74   | ---   | 10    | 68    | ---  | 18   | ---   | 1.9  | ---   | .68   | .45   | ---   |
| TOTAL | 35.98 | 256.9 | 388.9 | 676.1 | 1609 | 1891 | 463.7 | 76.1 | 45.15 | 26.76 | 16.98 | 21.76 |
| MEAN  | 1.16  | 8.56  | 12.5  | 21.8  | 55.5 | 61.0 | 15.5  | 2.45 | 1.50  | .86   | .55   | .73   |
| MAX   | 1.7   | 30    | 70    | 106   | 422  | 507  | 74    | 6.7  | 2.3   | 1.6   | .85   | 1.2   |
| MIN   | .46   | 5.7   | 6.7   | 7.0   | 17   | 18   | 6.9   | 1.2  | .82   | .58   | .35   | .40   |
| AC-FT | 71    | 510   | 771   | 1340  | 3190 | 3750 | 920   | 151  | 90    | 53    | 34    | 43    |

e Estimated.

## 11023000 SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 6.42 | 28.9 | 47.5 | 111  | 98.3 | 171  | 47.7 | 18.8 | 7.32 | 3.02 | 2.51 | 3.20 |
| MAX  | 31.2 | 144  | 143  | 683  | 458  | 777  | 242  | 135  | 21.3 | 8.93 | 9.47 | 20.0 |
| (WY) | 1987 | 1986 | 1985 | 1993 | 1993 | 1983 | 1983 | 1983 | 1983 | 1983 | 1983 | 1986 |
| MIN  | .62  | .87  | 5.09 | 14.5 | 20.5 | 8.38 | 7.69 | 2.45 | 1.30 | .25  | .54  | .033 |
| (WY) | 1990 | 1990 | 1990 | 1989 | 1989 | 1984 | 1989 | 1996 | 1985 | 1985 | 1985 | 1984 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1982 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 30540.43               |  |  |  | 5508.33             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 83.7                   |  |  |  | 15.1                |  |  |  | 45.2                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 125                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 11.5                    |  |  |  |
| HIGHEST DAILY MEAN       | 3920                   |  |  |  | 507                 |  |  |  | 4760                    |  |  |  |
| LOWEST DAILY MEAN        | .46                    |  |  |  | .35                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .66                    |  |  |  | .46                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 766                 |  |  |  | 9430                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 7.48                |  |  |  | 13.47                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 60580                  |  |  |  | 10930               |  |  |  | 32780                   |  |  |  |
| 10 PERCENT EXCEEDS       | 155                    |  |  |  | 29                  |  |  |  | 87                      |  |  |  |
| 50 PERCENT EXCEEDS       | 14                     |  |  |  | 5.9                 |  |  |  | 7.3                     |  |  |  |
| 90 PERCENT EXCEEDS       | 1.5                    |  |  |  | .59                 |  |  |  | .70                     |  |  |  |

## 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 sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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, or maximum, from rating curve extended above 2,130 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 1  | 0430 | 446                               | 4.79                | Mar. 13 | 1100 | 958                               | 6.21                |
| Feb. 28 | 0300 | 476                               | 4.90                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC  | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|------|-------|------|-------|-------|-------|-------|-------|------|------|------|------|
| 1     | 2.9  | 37    | 2.1  | e2.0  | 155   | 6.3   | 3.1   | 2.1   | 2.8  | 2.1  | 2.1  | 1.3  |
| 2     | 2.7  | 17    | 2.4  | e2.0  | 13    | 6.0   | 3.9   | 2.1   | 2.4  | 2.2  | 2.2  | 1.6  |
| 3     | 2.6  | 3.4   | 2.4  | 2.0   | 7.1   | 4.4   | 3.3   | 2.4   | 2.7  | 2.2  | 2.9  | 1.7  |
| 4     | 2.3  | 2.6   | 2.4  | 2.1   | 6.1   | 7.2   | 3.2   | 2.5   | 2.7  | 1.4  | 2.3  | 2.3  |
| 5     | 2.6  | 2.1   | 2.2  | 2.4   | 4.2   | 90    | 3.2   | 2.6   | 2.7  | 1.4  | 1.7  | 1.5  |
| 6     | 2.6  | 2.0   | 2.7  | 2.9   | 3.8   | 8.0   | 3.0   | 2.5   | 2.1  | 1.8  | 1.7  | 1.4  |
| 7     | 2.7  | 1.8   | 3.1  | 2.1   | 3.7   | 4.9   | 2.9   | 2.4   | 2.6  | 1.9  | 1.5  | 1.9  |
| 8     | 2.6  | 1.8   | 3.2  | 2.0   | 3.2   | 4.2   | 3.2   | 2.5   | 2.4  | 2.3  | 1.4  | 1.5  |
| 9     | 2.7  | 1.9   | 2.9  | 2.2   | 3.2   | 4.2   | 3.4   | 2.9   | 2.0  | 2.6  | 1.4  | 1.2  |
| 10    | 2.5  | 1.9   | 2.5  | 2.4   | 3.3   | 4.2   | 3.6   | 3.0   | 2.5  | 5.0  | 1.7  | 1.6  |
| 11    | 2.7  | 2.1   | 2.3  | 2.3   | 3.0   | 4.3   | 3.4   | 2.4   | 3.1  | 3.4  | 1.6  | 1.8  |
| 12    | 2.8  | 2.0   | 2.3  | 2.1   | 10    | 39    | 3.5   | 2.2   | 2.9  | 2.6  | 1.4  | 1.7  |
| 13    | 3.3  | 2.1   | 5.5  | 2.1   | 6.4   | 315   | 3.9   | 2.2   | 2.6  | 2.4  | 2.0  | 1.7  |
| 14    | 2.7  | 1.9   | 6.5  | 2.1   | 3.2   | 74    | 3.7   | 2.5   | 2.7  | 2.2  | 2.0  | 1.8  |
| 15    | 2.7  | 2.1   | e3.2 | 2.3   | 3.0   | 13    | 3.9   | 2.9   | 2.7  | 2.2  | 1.9  | 1.6  |
| 16    | 2.6  | 2.4   | e2.6 | 10    | 2.8   | 7.4   | 4.1   | 2.9   | 2.7  | 2.4  | 1.9  | 1.5  |
| 17    | 3.3  | 2.6   | e2.5 | 54    | 2.9   | 5.7   | 5.4   | 2.9   | 2.6  | 2.5  | 1.7  | 1.7  |
| 18    | 4.7  | 2.6   | e2.4 | 4.0   | 2.9   | 5.0   | 97    | 2.4   | 2.7  | 2.3  | 1.7  | 1.6  |
| 19    | 2.8  | 2.1   | e2.5 | 4.2   | 2.9   | 4.7   | 7.3   | 2.2   | 2.6  | 2.3  | 1.8  | 1.6  |
| 20    | 2.9  | 1.9   | e8.1 | 3.2   | 2.9   | 4.5   | 3.8   | 2.7   | 2.4  | 2.1  | 1.8  | 1.6  |
| 21    | 2.8  | 2.0   | e6.5 | 28    | 21    | 4.6   | 3.4   | 3.0   | 2.5  | 2.1  | 1.4  | 1.6  |
| 22    | 2.7  | 2.2   | e2.7 | 86    | 37    | 4.3   | 3.2   | 3.0   | 2.3  | 2.1  | 1.5  | 1.6  |
| 23    | 2.5  | 2.3   | e6.0 | 8.3   | 4.4   | 4.2   | 2.9   | 2.7   | 2.2  | 2.4  | 1.7  | 1.7  |
| 24    | 2.3  | 2.6   | e3.9 | 3.5   | 3.0   | 3.8   | 2.7   | 59    | 2.5  | 2.5  | 1.6  | 1.8  |
| 25    | 2.3  | 2.1   | e3.1 | 9.6   | 123   | 3.7   | 2.7   | 16    | 2.7  | 2.5  | 1.6  | 1.7  |
| 26    | 2.3  | 2.2   | e2.6 | 8.5   | 142   | 3.8   | 3.4   | 3.4   | 2.5  | 2.5  | 1.6  | 3.3  |
| 27    | 2.6  | 2.4   | e2.4 | 3.3   | 30    | 3.5   | 3.1   | 2.6   | 1.8  | 2.4  | 1.4  | 2.2  |
| 28    | 2.6  | 2.7   | e2.3 | 9.7   | 147   | 11    | 2.6   | 2.7   | 2.3  | 2.0  | 1.5  | 1.6  |
| 29    | 2.7  | 2.5   | e2.1 | 4.2   | 11    | 10    | 2.4   | 3.2   | 2.5  | 1.9  | 1.3  | 1.5  |
| 30    | 2.9  | 2.5   | e2.1 | 3.1   | ---   | 3.8   | 2.1   | 2.4   | 2.0  | 3.0  | 1.3  | 1.5  |
| 31    | 3.1  | ---   | e2.0 | 50    | ---   | 3.4   | ---   | 3.4   | ---  | 2.1  | 1.2  | ---  |
| TOTAL | 85.5 | 116.8 | 99.5 | 322.6 | 761.0 | 668.1 | 197.3 | 151.7 | 75.2 | 72.8 | 52.8 | 51.1 |
| MEAN  | 2.76 | 3.89  | 3.21 | 10.4  | 26.2  | 21.6  | 6.58  | 4.89  | 2.51 | 2.35 | 1.70 | 1.70 |
| MAX   | 4.7  | 37    | 8.1  | 86    | 155   | 315   | 97    | 59    | 3.1  | 5.0  | 2.9  | 3.3  |
| MIN   | 2.3  | 1.8   | 2.0  | 2.0   | 2.8   | 3.4   | 2.1   | 2.1   | 1.8  | 1.4  | 1.2  | 1.2  |
| AC-FT | 170  | 232   | 197  | 640   | 1510  | 1330  | 391   | 301   | 149  | 144  | 105  | 101  |

e Estimated.

## 11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.34 | 5.06 | 8.88 | 24.0 | 27.9 | 35.5 | 8.13 | 2.67 | 1.36 | .95  | .87  | 1.09 |
| MAX  | 4.97 | 28.7 | 51.6 | 233  | 215  | 213  | 27.5 | 12.5 | 5.89 | 2.85 | 3.01 | 4.10 |
| (WY) | 1988 | 1986 | 1966 | 1993 | 1980 | 1983 | 1995 | 1983 | 1995 | 1995 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1965 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 10854.8                |  |  |  | 2654.4              |  |  |  | 9.74                    |  |  |  |
| ANNUAL MEAN              | 29.7                   |  |  |  | 7.25                |  |  |  | 35.9                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | .80                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 1400                    |  |  |  |
| HIGHEST DAILY MEAN       | 1150                   |  |  |  | 315                 |  |  |  | Mar 13                  |  |  |  |
| LOWEST DAILY MEAN        | 1.8                    |  |  |  | 1.2                 |  |  |  | Aug 31                  |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 1.9                    |  |  |  | 1.4                 |  |  |  | Aug 26                  |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 958                 |  |  |  | Mar 13                  |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 6.21                |  |  |  | Mar 13                  |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 21530                  |  |  |  | 5270                |  |  |  | 7060                    |  |  |  |
| 10 PERCENT EXCEEDS       | 47                     |  |  |  | 7.1                 |  |  |  | 10                      |  |  |  |
| 50 PERCENT EXCEEDS       | 3.9                    |  |  |  | 2.6                 |  |  |  | 1.3                     |  |  |  |
| 90 PERCENT EXCEEDS       | 2.4                    |  |  |  | 1.7                 |  |  |  | .23                     |  |  |  |

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 sea level (levels by city of San Diego Water Department). See WSP 1315-B for history of changes prior to Feb. 3, 1923.

REMARKS.--Records 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|------|------|-------|-------|-------|-------|-------|------|------|------|------|
| 1     | 1.1   | 5.1  | 2.1  | 2.8   | 84    | 10    | 6.2   | 1.6   | .39  | .02  | .00  | .00  |
| 2     | 1.2   | 4.0  | 2.1  | 2.5   | 26    | 9.1   | 6.8   | 1.5   | .20  | .03  | .00  | .00  |
| 3     | .60   | 2.7  | 2.2  | 2.9   | 15    | 8.0   | 6.5   | 1.5   | .16  | .02  | .00  | .00  |
| 4     | .57   | 2.6  | 2.3  | 3.0   | 11    | 8.2   | 5.6   | 1.2   | .06  | .01  | .00  | .00  |
| 5     | .62   | 2.8  | 2.5  | 3.4   | 8.9   | 19    | 4.6   | 1.2   | .05  | .00  | .00  | .00  |
| 6     | .72   | 2.6  | 2.2  | 3.3   | 8.1   | 15    | 3.9   | 1.6   | .06  | .01  | .00  | .00  |
| 7     | .77   | 3.0  | 2.5  | 3.2   | 7.4   | 8.1   | 3.2   | 1.6   | .05  | .01  | .01  | .00  |
| 8     | .93   | 2.0  | 2.7  | 3.0   | 7.0   | 6.6   | 3.0   | 1.7   | .05  | .01  | .01  | .00  |
| 9     | 1.4   | 2.1  | 2.7  | 3.1   | 6.9   | 5.7   | 3.9   | 1.6   | .04  | .01  | .00  | .00  |
| 10    | 1.8   | 2.3  | 2.4  | 3.2   | 6.7   | 5.2   | 4.8   | 1.1   | .06  | .01  | .00  | .00  |
| 11    | 1.6   | 2.4  | 2.2  | 2.9   | 6.5   | 5.4   | 4.9   | 1.0   | .06  | .01  | .00  | .00  |
| 12    | 2.4   | 2.5  | 1.9  | 2.9   | 6.3   | 7.2   | 5.3   | .90   | .05  | .01  | .00  | .00  |
| 13    | 3.1   | 2.8  | 3.4  | 2.9   | 6.0   | 51    | 5.2   | .94   | .05  | .01  | .00  | .00  |
| 14    | 2.7   | 2.2  | 4.7  | 3.0   | 6.1   | 48    | 4.7   | .82   | .05  | .00  | .00  | .00  |
| 15    | 2.8   | 2.5  | 3.6  | 3.0   | 6.2   | 23    | 4.3   | .82   | .05  | .00  | .00  | .00  |
| 16    | 2.7   | 2.8  | 3.0  | 3.3   | 6.3   | 15    | 2.9   | .76   | .05  | .01  | .00  | .00  |
| 17    | 3.0   | 2.6  | 2.7  | 4.3   | 5.7   | 12    | 4.4   | .57   | .04  | .01  | .00  | .00  |
| 18    | 3.7   | 2.2  | 2.4  | 4.0   | 6.1   | 11    | 13    | .24   | .05  | .01  | .00  | .00  |
| 19    | 3.8   | 2.7  | 3.0  | 4.1   | 5.7   | 9.5   | 8.7   | .25   | .05  | .01  | .00  | .00  |
| 20    | 3.9   | 2.6  | 2.3  | 4.0   | 6.6   | 8.4   | 4.9   | .23   | .05  | .01  | .00  | .00  |
| 21    | 3.8   | 1.7  | 2.4  | 4.8   | 7.8   | 8.4   | 4.6   | .22   | .04  | .01  | .00  | .00  |
| 22    | 4.0   | 2.2  | 3.2  | 20    | 9.2   | 7.9   | 3.8   | .23   | .06  | .01  | .00  | .00  |
| 23    | 2.9   | 1.8  | 4.4  | 7.1   | 6.7   | 7.9   | 3.4   | .24   | .07  | .01  | .00  | .00  |
| 24    | 2.4   | 2.2  | 3.9  | 4.5   | 5.5   | 7.7   | 2.9   | 1.6   | .05  | .01  | .00  | .00  |
| 25    | 2.3   | 2.4  | 2.8  | 4.3   | 11    | 7.0   | 2.4   | 2.7   | .05  | .01  | .00  | .00  |
| 26    | 2.4   | 2.7  | 3.0  | 4.4   | 23    | 7.0   | 2.9   | 2.3   | .05  | .01  | .00  | .00  |
| 27    | 2.5   | 3.0  | 3.4  | 4.1   | 13    | 6.6   | 2.9   | 1.5   | .05  | .00  | .00  | .00  |
| 28    | 2.1   | 1.9  | 2.6  | 4.2   | 19    | 7.9   | 2.2   | 1.5   | .03  | .00  | .00  | .00  |
| 29    | 2.7   | 2.3  | 3.5  | 3.5   | 13    | 9.6   | 1.8   | .97   | .03  | .00  | .00  | .00  |
| 30    | 3.2   | 2.0  | 3.5  | 3.5   | ---   | 7.8   | 1.8   | .73   | .01  | .00  | .00  | .00  |
| 31    | 2.7   | ---  | 3.8  | 18    | ---   | 7.1   | ---   | .82   | ---  | .00  | .00  | ---  |
| TOTAL | 70.41 | 76.7 | 89.4 | 143.2 | 350.7 | 370.3 | 135.5 | 33.94 | 2.06 | 0.27 | 0.02 | 0.00 |
| MEAN  | 2.27  | 2.56 | 2.88 | 4.62  | 12.1  | 11.9  | 4.52  | 1.09  | .069 | .009 | .001 | .000 |
| MAX   | 4.0   | 5.1  | 4.7  | 20    | 84    | 51    | 13    | 2.7   | .39  | .03  | .01  | .00  |
| MIN   | .57   | 1.7  | 1.9  | 2.5   | 5.5   | 5.2   | 1.8   | .22   | .01  | .00  | .00  | .00  |
| AC-FT | 140   | 152  | 177  | 284   | 696   | 734   | 269   | 67    | 4.1  | .5   | .04  | .00  |



## 11025500 SANTA YSABEL CREEK NEAR RAMONA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1954, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.76 | 4.16 | 28.3 | 106  | 70.6 | 72.7 | 38.9 | 27.8 | 9.07 | 2.83 | 1.53 | .98  |
| MAX  | 16.9 | 17.3 | 330  | 1690 | 345  | 249  | 153  | 221  | 47.0 | 15.6 | 10.5 | 8.63 |
| (WY) | 1917 | 1947 | 1922 | 1916 | 1916 | 1922 | 1922 | 1915 | 1915 | 1915 | 1916 | 1916 |
| MIN  | .000 | .000 | .000 | 1.70 | 3.54 | 6.37 | 4.75 | 1.10 | .037 | .000 | .000 | .000 |
| (WY) | 1948 | 1949 | 1951 | 1948 | 1912 | 1951 | 1951 | 1947 | 1951 | 1946 | 1921 | 1921 |

## SUMMARY STATISTICS

## WATER YEARS 1912 - 1954

|                          |       |
|--------------------------|-------|
| ANNUAL MEAN              | 30.7  |
| HIGHEST ANNUAL MEAN      | 206   |
| LOWEST ANNUAL MEAN       | 1.77  |
| HIGHEST DAILY MEAN       | 14100 |
| LOWEST DAILY MEAN        | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00   |
| INSTANTANEOUS PEAK FLOW  | 28400 |
| INSTANTANEOUS PEAK STAGE | 14.00 |
| ANNUAL RUNOFF (AC-FT)    | 22250 |
| 10 PERCENT EXCEEDS       | 50    |
| 50 PERCENT EXCEEDS       | 4.1   |
| 90 PERCENT EXCEEDS       | .00   |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .52  | 2.19 | 5.57 | 15.9 | 42.3 | 45.2 | 19.7 | 8.07 | 3.37 | 1.05 | .71  | .41  |
| MAX  | 6.30 | 43.5 | 124  | 220  | 795  | 425  | 207  | 110  | 42.2 | 13.8 | 11.9 | 7.07 |
| (WY) | 1981 | 1966 | 1967 | 1993 | 1980 | 1980 | 1983 | 1983 | 1983 | 1980 | 1983 | 1980 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1955 | 1955 | 1955 | 1958 | 1961 | 1961 | 1961 | 1959 | 1956 | 1955 | 1955 | 1955 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1955 - 1996

|                          |          |         |      |
|--------------------------|----------|---------|------|
| ANNUAL TOTAL             | 15358.88 | 1272.50 |      |
| ANNUAL MEAN              | 42.1     | 3.48    | 11.9 |
| HIGHEST ANNUAL MEAN      |          |         | 131  |
| LOWEST ANNUAL MEAN       |          |         | .000 |
| HIGHEST DAILY MEAN       | 2570     | Mar 5   | 84   |
| LOWEST DAILY MEAN        | .14      | Sep 8   | .00  |
| ANNUAL SEVEN-DAY MINIMUM | .30      | Sep 7   | .00  |
| INSTANTANEOUS PEAK FLOW  |          |         | 229  |
| INSTANTANEOUS PEAK STAGE |          |         | 3.62 |
| ANNUAL RUNOFF (AC-FT)    | 30460    | 2520    | 8640 |
| 10 PERCENT EXCEEDS       | 89       | 7.8     | 13   |
| 50 PERCENT EXCEEDS       | 9.4      | 2.3     | .10  |
| 90 PERCENT EXCEEDS       | .87      | .00     | .00  |

11028500 SANTA MARIA CREEK NEAR RAMONA, CA

LOCATION.--Lat 33°03'08", long 116°56'41", in SE 1/4 SE 1/4 sec.11, T.13 S., R.1 W., San Diego County, Hydrologic Unit 18070304, on left bank 3.8 mi northwest of Ramona, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--57.6 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1912 to September 1920, October 1946 to current year.

REVISED RECORDS.--WSP 1285: 1952. WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft above sea level. Prior to Oct. 1, 1946, at same site, at datum 1.78 ft lower.

REMARKS.--Records good except for discharges below 1 ft<sup>3</sup>/s and estimated daily discharges, which are 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 166 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, or maximum, from rating curve extended as explained above:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Mar. 13 | 1330 | 139                               | 2.35                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR    | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|-------|--------|-------|------|------|------|------|------|
| 1     | .01  | .02  | .01  | .08  | 6.0   | .80    | .74   | .01  | .21  | .00  | .00  | .00  |
| 2     | .00  | .01  | .01  | .07  | .86   | .50    | .74   | .01  | .52  | .00  | .00  | .00  |
| 3     | .00  | .01  | .01  | .08  | .41   | .47    | .76   | .01  | .04  | .00  | .00  | .00  |
| 4     | .00  | .01  | .01  | .09  | .26   | .51    | e4.0  | .06  | .02  | .00  | .00  | .00  |
| 5     | .00  | .01  | .01  | .11  | .19   | 3.0    | e.75  | .81  | .03  | .00  | .00  | .00  |
| 6     | .00  | .01  | .01  | .11  | .42   | .97    | .37   | .59  | .03  | .00  | .00  | .00  |
| 7     | .00  | .01  | .02  | .10  | .20   | .81    | .26   | .01  | .03  | .03  | .00  | .00  |
| 8     | .00  | .01  | .01  | .10  | .15   | .77    | .25   | .00  | .02  | .02  | .01  | .00  |
| 9     | .01  | .02  | .01  | .10  | .36   | .90    | .27   | .01  | .01  | .00  | .04  | .00  |
| 10    | .01  | .03  | .01  | .10  | .40   | .30    | .82   | .00  | .01  | .00  | .03  | .00  |
| 11    | .02  | .02  | .01  | .08  | .86   | .27    | 1.1   | e.00 | .00  | .00  | .02  | .00  |
| 12    | .02  | .01  | .02  | .08  | .62   | .50    | .72   | e.00 | .00  | .00  | .00  | .00  |
| 13    | .01  | .02  | .03  | .10  | .26   | 50     | .23   | e.00 | .00  | .00  | .00  | .00  |
| 14    | .00  | .02  | .02  | .13  | .19   | 23     | .12   | e.00 | .00  | .00  | .00  | .00  |
| 15    | .00  | .02  | .02  | .13  | .21   | 7.0    | .09   | e.00 | .09  | .00  | .00  | .00  |
| 16    | .00  | .02  | .02  | .17  | .19   | 3.7    | .16   | .00  | .15  | .00  | .00  | .00  |
| 17    | .00  | .02  | .02  | .26  | .15   | 2.8    | .36   | .01  | .15  | .00  | .00  | .00  |
| 18    | .00  | .01  | .02  | .19  | .17   | 2.4    | 1.1   | .48  | .03  | .00  | .00  | .00  |
| 19    | .01  | .00  | .03  | .22  | .16   | 3.0    | .74   | .13  | .02  | .00  | .00  | .00  |
| 20    | .01  | .00  | .13  | .41  | .64   | 1.6    | .31   | .02  | .00  | .00  | .00  | .00  |
| 21    | .00  | .01  | .12  | .41  | .37   | 1.4    | .20   | .19  | .00  | .00  | .00  | .00  |
| 22    | .00  | .01  | .09  | 1.2  | .38   | 1.4    | .73   | .02  | .00  | .00  | .00  | .00  |
| 23    | .00  | .01  | .14  | .33  | .19   | 2.0    | .49   | .03  | .00  | .01  | .00  | .00  |
| 24    | .00  | .01  | .11  | .44  | .16   | 1.7    | .40   | .11  | .00  | .02  | .00  | .00  |
| 25    | .00  | .02  | .09  | .48  | 1.6   | 1.7    | .67   | .16  | .00  | .03  | .00  | .00  |
| 26    | .00  | .02  | .08  | .30  | 8.1   | .94    | .15   | .13  | .00  | .01  | .00  | .00  |
| 27    | .00  | .02  | .07  | .22  | 2.1   | .78    | .11   | .31  | .00  | .02  | .00  | .00  |
| 28    | .00  | .00  | .08  | .23  | 5.6   | 1.4    | .08   | .51  | .00  | .00  | .00  | .00  |
| 29    | .01  | .00  | .10  | .21  | 1.5   | 2.0    | .02   | .09  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .10  | .30  | ---   | 1.1    | .02   | .07  | .00  | .00  | .00  | .00  |
| 31    | .01  | ---  | .11  | .73  | ---   | .86    | ---   | .03  | ---  | .00  | .00  | ---  |
| TOTAL | 0.12 | 0.38 | 1.52 | 7.56 | 32.70 | 118.58 | 16.76 | 3.80 | 1.36 | 0.14 | 0.10 | 0.00 |
| MEAN  | .004 | .013 | .049 | .24  | 1.13  | 3.83   | .56   | .12  | .045 | .005 | .003 | .000 |
| MAX   | .02  | .03  | .14  | 1.2  | 8.1   | 50     | 4.0   | .81  | .52  | .03  | .04  | .00  |
| MIN   | .00  | .00  | .01  | .07  | .15   | .27    | .02   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .2   | .8   | 3.0  | 15   | 65    | 235    | 33    | 7.5  | 2.7  | .3   | .2   | .00  |

e Estimated.

## 11028500 SANTA MARIA CREEK NEAR RAMONA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .053 | .45  | 1.41 | 24.8 | 25.0 | 26.9 | 5.92 | 2.07 | .49  | .068 | .10  | .034 |
| MAX  | .45  | 10.9 | 26.5 | 545  | 443  | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1913 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 11917.66               |  |  |  | 183.02              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 32.7                   |  |  |  | .50                 |  |  |  | 7.33                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 78.2                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 1920 Mar 6             |  |  |  | 50 Mar 13           |  |  |  | 4960 Jan 27 1916        |  |  |  |
| LOWEST DAILY MEAN        | .00 Sep 14             |  |  |  | .00 Oct 2           |  |  |  | .00 Dec 17 1912         |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00 Oct 2              |  |  |  | .00 Oct 2           |  |  |  | .00 Dec 17 1912         |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 139 Mar 13          |  |  |  | 15200 Feb 21 1980       |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 2.35 Mar 13         |  |  |  | 14.39 Feb 21 1980       |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 23640                  |  |  |  | 363                 |  |  |  | 5310                    |  |  |  |
| 10 PERCENT EXCEEDS       | 41                     |  |  |  | .80                 |  |  |  | 2.9                     |  |  |  |
| 50 PERCENT EXCEEDS       | .90                    |  |  |  | .02                 |  |  |  | .00                     |  |  |  |
| 90 PERCENT EXCEEDS       | .01                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |

## 11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA

LOCATION.--Lat 33°13'05", long 117°21'34", in SE 1/4 SW 1/4 sec.13, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070303, on 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>.

PERIOD OF RECORD.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year. Discharge measurements only Oct. 1, 1992, to Aug. 16, 1993.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 20 ft above sea level, from topographic map. April 1912 to September 1914, nonrecording gage at site 0.4 mi downstream at different datum. January 1916, nonrecording gage 1.4 mi downstream at different datum. October 1929 to Nov. 9, 1981, at site 0.8 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft since 1923. Several diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 95,600 ft<sup>3</sup>/s, Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years. Since regulation by Lake Henshaw, maximum discharge, 25,700 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 21.70 ft, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB  | MAR  | APR   | MAY   | JUN   | JUL   | AUG  | SEP  |
|-------|-------|-------|-------|------|------|------|-------|-------|-------|-------|------|------|
| 1     | 9.1   | 9.0   | 9.6   | 17   | 116  | 61   | 34    | 8.6   | 9.5   | e1.8  | 1.1  | .00  |
| 2     | 8.7   | 10    | 9.8   | 17   | 107  | 52   | 33    | 7.6   | 8.5   | e1.6  | .69  | .00  |
| 3     | 7.9   | 11    | 9.7   | 16   | 68   | 47   | 31    | 7.5   | 7.3   | e1.5  | .42  | .00  |
| 4     | 7.6   | 12    | 10    | 16   | 57   | 46   | 29    | 7.3   | 6.8   | e1.3  | .27  | .00  |
| 5     | 7.0   | 13    | 11    | 16   | 49   | 52   | 27    | 6.9   | 6.5   | e1.2  | .21  | .00  |
| 6     | 6.9   | 13    | 13    | 16   | 44   | 63   | 24    | 6.1   | 6.0   | e1.1  | .13  | .00  |
| 7     | 7.1   | 12    | 13    | 16   | 42   | 58   | 22    | 5.6   | 5.4   | e1.0  | .08  | .00  |
| 8     | 6.6   | 11    | 13    | 15   | 40   | 53   | 21    | 5.6   | 5.1   | e1.0  | .04  | .00  |
| 9     | 6.8   | 11    | 13    | 15   | 37   | 48   | 20    | 5.6   | 5.0   | e.95  | .00  | .00  |
| 10    | 7.1   | 11    | 12    | 16   | 36   | 43   | 21    | 5.4   | 4.7   | e.90  | .00  | .00  |
| 11    | 7.4   | 8.1   | 12    | 16   | 35   | 40   | 20    | 4.9   | 4.4   | e.82  | .00  | .00  |
| 12    | 7.8   | 7.8   | 12    | 15   | 37   | 40   | 18    | 4.7   | 4.4   | .67   | .00  | .00  |
| 13    | 7.6   | 8.4   | 13    | 15   | 41   | 71   | 18    | 4.4   | 4.2   | .62   | .00  | .00  |
| 14    | 6.8   | 8.8   | 16    | 16   | 46   | 136  | 17    | 4.3   | 4.0   | .55   | .00  | .00  |
| 15    | 6.2   | 9.2   | 20    | 17   | 40   | 116  | 16    | 4.2   | 4.0   | .49   | .00  | .00  |
| 16    | 7.3   | 9.3   | 17    | 19   | 38   | 89   | 15    | 4.2   | 4.1   | .45   | .00  | .00  |
| 17    | 7.8   | 9.4   | 15    | 28   | 36   | 75   | 15    | 4.1   | 4.0   | .40   | .00  | .00  |
| 18    | 7.1   | 9.7   | 15    | 33   | 35   | 67   | 25    | 3.8   | 4.1   | .30   | .00  | .00  |
| 19    | 7.3   | 10    | 14    | 28   | 35   | 64   | 30    | 3.9   | 4.1   | .28   | .00  | .00  |
| 20    | 7.5   | 9.6   | 14    | 25   | 36   | 59   | 27    | 4.1   | 4.0   | .24   | .00  | .00  |
| 21    | 8.1   | 9.6   | 15    | 26   | 52   | 53   | 21    | 4.1   | 3.9   | .18   | .00  | .00  |
| 22    | 8.9   | 9.7   | 15    | 39   | 70   | 50   | 18    | 4.0   | 3.8   | .13   | .00  | .00  |
| 23    | 8.1   | 10    | 17    | 53   | 64   | 46   | 16    | 3.8   | e3.5  | .05   | .00  | .00  |
| 24    | 7.3   | 10    | 19    | 46   | 54   | 43   | 14    | 3.9   | e3.3  | .07   | .00  | .00  |
| 25    | 7.3   | 10    | 19    | 42   | 54   | 41   | 13    | 25    | e3.0  | .13   | .00  | .00  |
| 26    | 7.6   | 10    | 18    | 44   | 77   | 39   | 12    | 24    | e2.8  | .22   | .00  | .00  |
| 27    | 7.3   | 11    | 18    | 41   | 92   | 37   | 12    | 17    | e2.6  | .36   | .00  | .00  |
| 28    | 7.2   | 10    | 17    | 42   | 90   | 35   | 11    | 14    | e2.4  | .44   | .00  | .00  |
| 29    | 7.3   | 10    | 17    | 40   | 84   | 34   | 11    | 12    | e2.2  | .69   | .00  | .00  |
| 30    | 7.7   | 9.6   | 17    | 38   | ---  | 34   | 9.7   | 11    | e2.0  | 1.8   | .00  | .00  |
| 31    | 7.6   | ---   | 17    | 56   | ---  | 34   | ---   | 10    | ---   | 1.8   | .00  | ---  |
| TOTAL | 232.0 | 303.2 | 451.1 | 839  | 1612 | 1726 | 600.7 | 237.6 | 135.6 | 23.04 | 2.94 | 0.00 |
| MEAN  | 7.48  | 10.1  | 14.6  | 27.1 | 55.6 | 55.7 | 20.0  | 7.66  | 4.52  | .74   | .095 | .000 |
| MAX   | 9.1   | 13    | 20    | 56   | 116  | 136  | 34    | 25    | 9.5   | 1.8   | 1.1  | .00  |
| MIN   | 6.2   | 7.8   | 9.6   | 15   | 35   | 34   | 9.7   | 3.8   | 2.0   | .05   | .00  | .00  |
| AC-FT | 460   | 601   | 895   | 1660 | 3200 | 3420 | 1190  | 471   | 269   | 46    | 5.8  | .00  |

e Estimated.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.83 | 8.80 | 20.3 | 44.7 | 102  | 141  | 56.1 | 27.8 | 14.3 | 7.45 | 5.78 | 3.44 |
| MAX  | 54.6 | 144  | 196  | 451  | 1858 | 1211 | 432  | 346  | 293  | 207  | 213  | 85.9 |
| (WY) | 1984 | 1984 | 1979 | 1980 | 1980 | 1995 | 1980 | 1980 | 1980 | 1980 | 1980 | 1980 |
| MIN  | .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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1930 - 1996

|                          |         |        |         |        |       |             |
|--------------------------|---------|--------|---------|--------|-------|-------------|
| ANNUAL TOTAL             | 68518.3 |        | 6163.18 |        | 35.8  |             |
| ANNUAL MEAN              | 188     |        | 16.8    |        | 415   | 1980        |
| HIGHEST ANNUAL MEAN      |         |        |         |        | .000  | 1931        |
| LOWEST ANNUAL MEAN       |         |        |         |        | 11300 | Mar 3 1938  |
| HIGHEST DAILY MEAN       | 7990    | Mar 6  | 136     | Mar 14 | .00   | Oct 1 1929  |
| LOWEST DAILY MEAN        | 6.1     | Sep 10 | .00     | Aug 9  | .00   | Oct 1 1929  |
| ANNUAL SEVEN-DAY MINIMUM | 6.6     | Sep 9  | .00     | Aug 9  | .00   | Oct 1 1929  |
| INSTANTANEOUS PEAK FLOW  |         |        | 168     | Feb 1  | 25700 | Jan 16 1993 |
| INSTANTANEOUS PEAK STAGE |         |        | 7.54    | Mar 14 | 21.70 | Jan 16 1993 |
| ANNUAL RUNOFF (AC-FT)    | 135900  |        | 12220   |        | 25960 |             |
| 10 PERCENT EXCEEDS       | 366     |        | 46      |        | 56    |             |
| 50 PERCENT EXCEEDS       | 29      |        | 9.3     |        | 1.2   |             |
| 90 PERCENT EXCEEDS       | 7.6     |        | .00     |        | .00   |             |

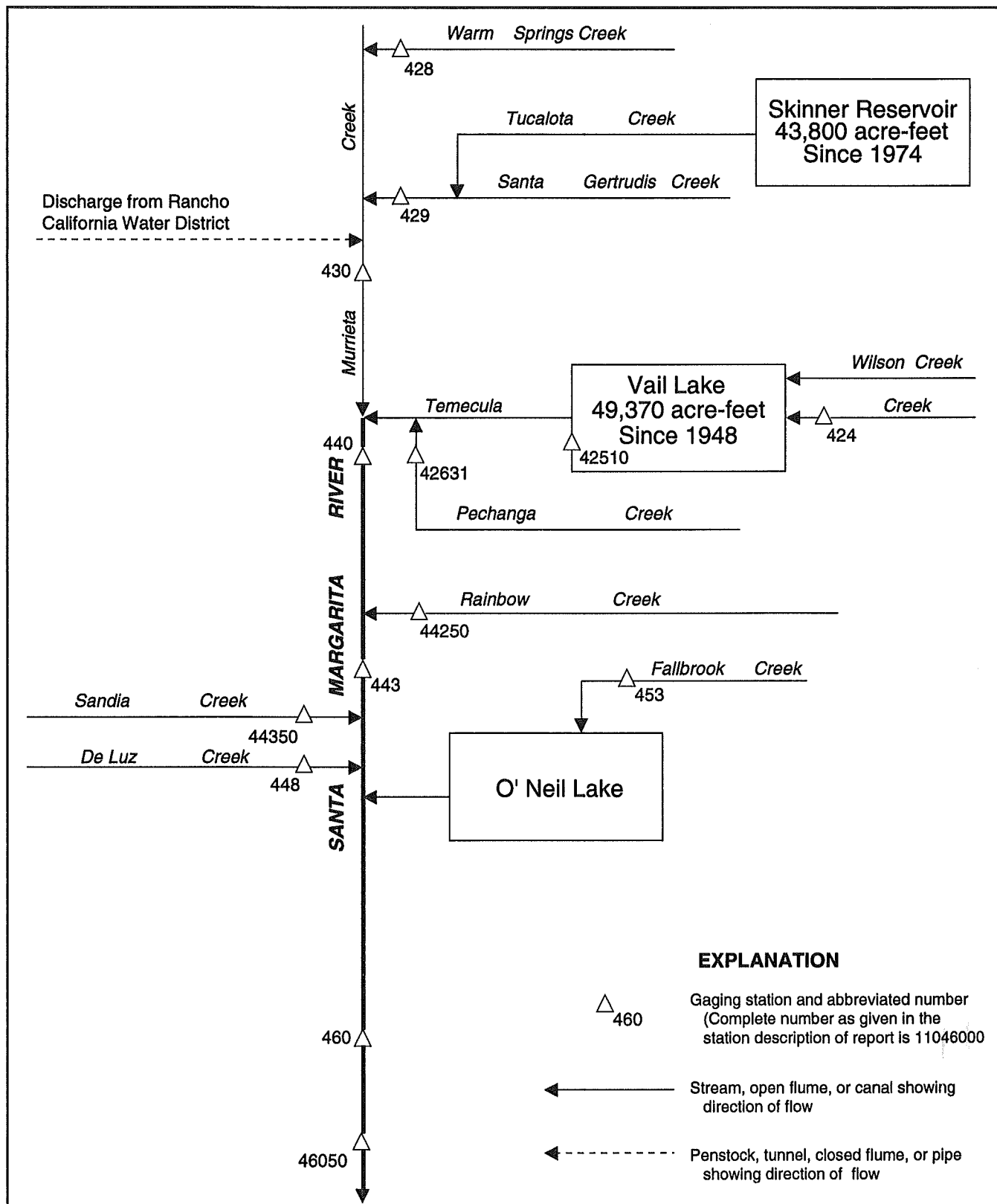


Figure 15. Diversions and storage in Santa Margarita River basin.

11042400 TEMECULA CREEK NEAR AGUANGA, CA

LOCATION.--Lat 33°27'33", long 116°55'22", in SW 1/4 SW 1/4 sec.19, T.8 S., R.1 E., Riverside County, Hydrologic Unit 18070302, on right bank 1.6 mi downstream from Long Canyon and 3.5 mi northwest of Aguanga.

DRAINAGE AREA.--131 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1957 to current year.

REVISED RECORDS.--WDR CA-89-1: 1958(P), 1966(M), 1979(M), 1980(M), 1986(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,590 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No regulation upstream from station. Pumping upstream from station for irrigation of less than 1,000 acres. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 14.6 ft, from flood mark, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of critical depth computation; no flow for several days in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 1 | 0630 | 110                               | 2.71                | Mar. 13 | 1045 | 124                               | 2.73                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1     | 5.4   | 6.4   | 5.6   | 6.2   | 49    | 8.2   | 8.0   | 5.0   | 4.4   | 2.8  | 2.6  | 2.3  |
| 2     | 5.1   | 6.4   | 5.8   | 5.8   | 16    | 8.4   | 8.3   | 5.1   | 4.0   | 2.9  | 2.7  | 2.4  |
| 3     | 4.8   | 6.0   | 6.1   | 6.3   | 11    | 9.1   | 8.3   | 5.3   | 3.7   | 3.3  | 2.8  | 2.5  |
| 4     | 4.7   | 5.6   | 6.2   | 6.1   | 9.4   | 10    | 8.1   | 5.2   | 3.2   | 3.3  | 2.8  | 2.4  |
| 5     | 4.3   | 5.4   | 6.2   | 6.3   | 8.2   | 24    | 7.4   | 5.1   | 2.9   | 3.1  | 3.0  | 2.5  |
| 6     | 4.5   | 5.5   | 5.9   | 6.4   | 7.5   | 21    | 6.9   | 4.9   | 3.5   | 3.0  | 3.1  | 2.5  |
| 7     | 4.8   | 5.1   | 6.1   | 6.6   | e7.2  | 14    | 6.7   | 4.8   | 3.7   | 2.8  | 2.9  | 2.4  |
| 8     | 5.1   | 4.4   | 6.3   | 6.5   | e7.1  | 11    | 6.3   | 4.9   | 3.4   | 2.6  | 2.8  | 2.4  |
| 9     | 5.2   | 4.8   | 6.0   | 6.3   | e7.1  | 9.3   | 6.3   | 5.0   | 2.8   | 2.2  | 2.7  | 2.4  |
| 10    | 4.7   | 5.1   | 5.8   | 6.5   | e7.0  | 8.2   | 6.9   | 4.8   | 2.5   | 2.2  | 2.7  | 2.3  |
| 11    | 4.7   | 5.0   | 5.8   | 6.3   | e7.0  | 8.0   | 7.2   | 4.5   | 2.5   | 2.4  | 2.6  | 2.2  |
| 12    | 5.1   | 5.0   | 5.8   | 6.7   | e6.8  | 9.9   | 7.1   | 4.0   | 3.3   | 2.4  | 2.6  | 2.4  |
| 13    | 5.0   | 4.5   | 6.2   | 6.7   | e6.8  | 66    | 6.8   | 4.1   | 4.3   | 2.4  | 2.5  | 2.6  |
| 14    | 4.9   | 4.9   | 8.3   | 6.4   | e6.9  | 47    | 6.3   | 4.1   | 4.3   | 2.3  | 2.5  | 2.8  |
| 15    | 4.7   | 4.9   | 6.9   | 6.3   | e6.9  | 30    | 5.9   | 4.0   | 4.3   | 2.5  | 2.6  | 2.9  |
| 16    | 4.9   | 5.1   | 6.8   | 6.4   | e6.8  | 22    | 5.9   | 4.2   | 4.2   | 2.5  | 2.7  | 2.9  |
| 17    | 5.1   | 5.1   | 6.7   | 6.8   | e6.7  | 18    | 6.6   | 4.3   | 4.2   | 2.5  | 2.7  | 2.9  |
| 18    | 4.8   | 4.9   | 7.1   | 7.2   | e6.5  | 15    | 11    | 4.0   | 3.8   | 2.5  | 2.7  | 2.8  |
| 19    | 4.7   | 4.8   | 8.6   | 7.4   | e6.2  | 13    | 9.7   | 3.7   | 3.2   | 2.5  | 2.6  | 2.9  |
| 20    | 4.6   | 4.8   | 8.4   | 7.4   | e7.0  | 11    | 8.1   | 3.9   | 2.4   | 2.5  | 2.5  | 2.8  |
| 21    | 4.7   | 5.0   | 6.8   | 10    | 10    | 10    | 7.5   | 4.1   | 2.5   | 2.5  | 2.4  | 2.8  |
| 22    | 5.0   | 5.1   | 6.0   | 22    | 11    | 10    | 6.7   | 3.9   | 2.6   | 2.3  | 2.4  | 2.9  |
| 23    | 4.8   | 5.1   | 7.7   | 16    | 6.7   | 10    | 6.5   | 4.2   | 4.9   | 2.2  | 2.9  | 3.0  |
| 24    | 4.9   | 5.1   | 9.7   | 12    | 6.1   | 9.7   | 6.2   | 4.5   | 2.8   | 2.3  | 3.0  | 3.0  |
| 25    | 4.9   | 5.1   | 7.4   | 8.5   | 12    | 9.3   | 5.9   | 5.0   | 2.7   | 2.5  | 2.6  | 3.1  |
| 26    | 5.0   | 5.5   | 5.8   | 6.9   | 17    | 8.9   | 5.9   | 5.0   | 2.8   | 2.5  | 2.3  | 3.5  |
| 27    | 5.0   | 5.6   | 6.0   | 6.5   | 11    | 8.5   | 5.9   | 5.0   | 3.0   | 2.6  | 2.3  | 3.4  |
| 28    | 5.2   | 5.8   | 6.3   | 6.2   | 13    | 8.6   | 5.8   | 4.8   | 3.1   | 2.6  | 2.2  | 3.0  |
| 29    | 5.5   | 5.6   | 6.3   | 6.4   | 10    | 9.4   | 5.0   | 4.7   | 3.1   | 2.5  | 2.4  | 2.8  |
| 30    | 5.6   | 5.5   | 6.6   | 7.1   | ---   | 8.5   | 5.2   | 4.8   | 2.8   | 2.5  | 2.3  | 2.8  |
| 31    | 5.9   | ---   | 6.8   | 11    | ---   | 8.1   | ---   | 4.8   | ---   | 2.4  | 2.2  | ---  |
| TOTAL | 153.6 | 157.1 | 206.0 | 243.2 | 293.9 | 464.1 | 208.4 | 141.7 | 100.9 | 79.6 | 81.1 | 81.6 |
| MEAN  | 4.95  | 5.24  | 6.65  | 7.85  | 10.1  | 15.0  | 6.95  | 4.57  | 3.36  | 2.57 | 2.62 | 2.72 |
| MAX   | 5.9   | 6.4   | 9.7   | 22    | 49    | 66    | 11    | 5.3   | 4.9   | 3.3  | 3.1  | 3.5  |
| MIN   | 4.3   | 4.4   | 5.6   | 5.8   | 6.1   | 8.0   | 5.0   | 3.7   | 2.4   | 2.2  | 2.2  | 2.2  |
| AC-FT | 305   | 312   | 409   | 482   | 583   | 921   | 413   | 281   | 200   | 158  | 161  | 162  |

e Estimated.

## SANTA MARGARITA RIVER BASIN

11042400 TEMECULA CREEK NEAR AGUANGA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.47 | 3.44 | 5.84 | 18.3 | 28.0 | 22.7 | 11.4 | 4.88 | 2.58 | 1.55 | 1.35 | 1.30 |
| MAX  | 7.94 | 47.9 | 66.0 | 361  | 266  | 105  | 87.3 | 21.6 | 13.1 | 8.19 | 9.40 | 6.93 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1980 | 1991 | 1958 | 1980 | 1980 | 1980 | 1983 | 1980 |
| MIN  | .000 | .000 | .000 | .084 | .70  | .41  | .34  | .16  | .067 | .000 | .000 | .000 |
| (WY) | 1958 | 1963 | 1963 | 1963 | 1965 | 1965 | 1961 | 1961 | 1966 | 1964 | 1957 | 1957 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1957 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 8938.7                 |  |  | 2211.2              |  |  |                         |  |  |
| ANNUAL MEAN              | 24.5                   |  |  | 6.04                |  |  | 8.47                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 56.1                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .28                     |  |  |
| HIGHEST DAILY MEAN       | 1150                   |  |  | Mar 5               |  |  | 3600                    |  |  |
| LOWEST DAILY MEAN        | 2.7                    |  |  | Sep 6               |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 3.0                    |  |  | Sep 6               |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 124                 |  |  | 8100                    |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 2.73                |  |  | 14.60                   |  |  |
| ANNUAL RUNOFF (AC-FT)    | 17730                  |  |  | 4390                |  |  | 6140                    |  |  |
| 10 PERCENT EXCEEDS       | 32                     |  |  | 9.5                 |  |  | 12                      |  |  |
| 50 PERCENT EXCEEDS       | 8.3                    |  |  | 5.1                 |  |  | 1.6                     |  |  |
| 90 PERCENT EXCEEDS       | 4.0                    |  |  | 2.5                 |  |  | .00                     |  |  |



## 11042510 VAIL LAKE NEAR TEMECULA, CA

LOCATION.--Lat 33°29'44", long 116°58'33", in Pauba Grant, Riverside County, Hydrologic Unit 18070302, near center of Vail Dam on Temecula Creek, 0.2 mi downstream from Arroyo Seco, and 10 mi east of Temecula.

DRAINAGE AREA.--320 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1960 to September 1985 (monthend contents only). Prior to October 1977, published with Temecula Creek at Vail Dam. October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by the U.S. Bureau of Reclamation). June 4, 1969, to September 1985, nonrecording gage.

REMARKS.--Reservoir is formed by concrete arch-type dam, completed in June 1949. Total capacity, 49,370 acre-ft between elevations 1,352.5 ft, bottom of lowest outlet, and 1,470 ft, crest of spillway, all of which is available for release. There had been no spill from Nov. 13, 1948, date of closure, to Feb. 20, 1980, when a peak spill of about 8,000 ft<sup>3</sup>/s occurred (from theoretical discharge curve). Water is released down Temecula Creek for diversion about 1 mi downstream. See schematic diagram of Santa Margarita River basin.

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, 28,630 acre-ft, Oct. 1, elevation, 1,447.80 ft; minimum, 19,770 acre-ft, Sept. 30, elevation, 1,435.55 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | e28550  | 26770   | 25330   | 24010   | 23240   | 22730   | 22860   | 22480   | 21860   | 21140   | 20640   | 20110   |
| 2   | e28470  | 26710   | 25270   | 23970   | 23240   | 22700   | 22850   | 22460   | 21830   | 21130   | 20610   | 20090   |
| 3   | e28390  | 26660   | 25210   | 23940   | 23230   | 22690   | 22850   | 22440   | 21800   | 21120   | 20590   | 20080   |
| 4   | e28360  | 26600   | 25160   | 23910   | 23210   | 22670   | 22840   | 22420   | 21770   | 21110   | 20580   | 20080   |
| 5   | 28290   | 26540   | 25070   | 23890   | 23190   | 22660   | 22830   | 22410   | 21740   | 21090   | 20550   | 20060   |
| 6   | e28240  | 26500   | 25010   | 23850   | 23170   | 22670   | 22810   | 22390   | 21720   | 21080   | 20530   | 20050   |
| 7   | e28200  | 26440   | 24950   | 23820   | 23150   | 22640   | 22800   | 22370   | 21710   | 21060   | 20510   | 20040   |
| 8   | e28150  | 26380   | 24900   | 23780   | 23120   | e22630  | 22790   | 22350   | 21690   | 21060   | 20500   | 20030   |
| 9   | 28070   | e26320  | 24850   | 23750   | 23110   | e22610  | 22790   | 22340   | 21660   | 21040   | 20480   | 20010   |
| 10  | 28020   | e26260  | 24790   | 23710   | 23090   | e22580  | 22780   | 22310   | 21630   | 21020   | 20460   | 20000   |
| 11  | 27970   | e26200  | 24740   | 23690   | 23050   | 22560   | 22770   | 22290   | 21630   | 21000   | 20440   | 19980   |
| 12  | 27920   | e26160  | 24690   | 23660   | 23030   | 22580   | 22770   | 22270   | 21590   | 20980   | 20430   | 19970   |
| 13  | 27870   | 26110   | 24640   | 23620   | 23000   | 22700   | 22760   | 22260   | 21560   | 20970   | 20410   | 19960   |
| 14  | 27820   | 26050   | 24600   | 23590   | 22970   | 22810   | 22740   | 22240   | 21540   | 20960   | 20400   | 19940   |
| 15  | 27770   | 26000   | 24560   | 23560   | 22940   | 22850   | 22730   | 22210   | 21520   | 20940   | 20390   | 19930   |
| 16  | 27720   | 25950   | 24530   | 23540   | 22920   | 22880   | 22720   | 22190   | 21500   | 20930   | e20370  | 19920   |
| 17  | 27660   | 25900   | 24480   | 23510   | 22890   | 22880   | 22700   | 22160   | 21460   | 20900   | e20360  | 19910   |
| 18  | 27600   | 25900   | 24450   | 23490   | 22870   | 22910   | 22710   | 22150   | 21440   | 20890   | e20350  | 19900   |
| 19  | 27540   | 25910   | 24420   | 23460   | 22840   | 22910   | 22700   | 22140   | 21410   | 20860   | 20330   | 19890   |
| 20  | 27460   | e25870  | 24390   | 23430   | 22810   | 22910   | 22680   | 22120   | 21380   | 20840   | 20310   | 19880   |
| 21  | 27420   | e25830  | 24350   | 23420   | 22850   | 22910   | 22670   | 22090   | 21350   | 20820   | 20290   | 19880   |
| 22  | 27360   | e25790  | 24320   | 23420   | 22830   | 22920   | 22660   | 22070   | 21320   | 20800   | 20270   | 19870   |
| 23  | 27290   | e25750  | 24290   | 23400   | 22800   | 22910   | 22630   | 22040   | 21290   | 20780   | 20270   | 19860   |
| 24  | 27220   | e25710  | 24260   | 23370   | 22770   | 22900   | 22610   | 22020   | 21270   | 20770   | 20250   | 19840   |
| 25  | 27150   | e25670  | 24230   | 23340   | 22790   | 22900   | 22610   | 21990   | 21250   | 20750   | 20230   | 19840   |
| 26  | 27090   | e25630  | 24200   | 23320   | 22790   | 22890   | 22600   | 21950   | 21230   | 20730   | 20230   | 19830   |
| 27  | 27020   | 25570   | 24170   | 23290   | 22790   | 22870   | 22580   | 21930   | 21220   | 20720   | 20200   | 19820   |
| 28  | 26980   | 25510   | 24130   | 23260   | 22770   | 22870   | 22560   | 21910   | 21200   | 20700   | 20190   | 19810   |
| 29  | 26920   | 25460   | 24100   | 23230   | 22750   | 22870   | 22540   | 21910   | 21160   | 20690   | 20170   | 19800   |
| 30  | 26870   | 25400   | 24070   | 23210   | ---     | 22860   | 22510   | 21900   | 21160   | 20660   | 20140   | 19790   |
| 31  | 26820   | ---     | 24050   | 23210   | ---     | 22850   | ---     | 21880   | ---     | 20640   | 20130   | ---     |
| MAX | 28550   | 26770   | 25330   | 24010   | 23240   | 22920   | 22860   | 22480   | 21860   | 21140   | 20640   | 20110   |
| MIN | 26820   | 25400   | 24050   | 23210   | 22750   | 22560   | 22510   | 21880   | 21160   | 20640   | 20130   | 19790   |
| a   | 1445.48 | 1443.62 | 1441.78 | 1440.61 | 1439.96 | 1440.10 | 1439.62 | 1438.71 | 1437.65 | 1436.88 | 1436.10 | 1435.58 |
| b   | -1810   | -1420   | -1350   | -840    | -460    | +100    | -340    | -630    | -720    | -520    | -510    | -340    |

CAL YR 1995 MAX 34890 MIN 21040 b +2990  
WTR YR 1996 MAX 28550 MIN 19790 b -8840

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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 sea level, from topographic map.

REMARKS.--Records fair. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,120 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 8.12 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of step-backwater analysis; no flow for many days each year.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Mar. 13 | 1230 | 8.3                               | 2.85                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | .06  | .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  | .00  | 1.7  | .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  | e.00 | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | .00  | e.00 | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | .00  | e.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  | .20  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | .09  | .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  | .60  | ---  | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.00 | 0.60 | 0.35 | 1.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .019 | .012 | .055 | .000 | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .00  | .60  | .20  | 1.7  | .00  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | 1.2  | .7   | 3.4  | .00  | .00  | .00  | .00  | .00  | .00  |

e Estimated.

## 11042631 PECHANGA CREEK NEAR TEMECULA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .004 | .035 | 7.63 | 3.32 | 3.26 | .26  | .15  | .062 | .027 | .020 | .001 |
| MAX  | .003 | .033 | .15  | 63.4 | 24.4 | 16.5 | 1.70 | .95  | .51  | .23  | .18  | .006 |
| (WY) | 1988 | 1988 | 1993 | 1993 | 1993 | 1995 | 1995 | 1993 | 1993 | 1993 | 1993 | 1993 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1989 | 1989 | 1990 | 1991 | 1992 | 1989 | 1989 | 1988 | 1988 | 1988 | 1988 | 1988 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1988 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 861.67                 | 2.65                |                         |
| ANNUAL MEAN              | 2.36                   | .007                | 1.23                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 8.27 1993               |
| LOWEST ANNUAL MEAN       |                        |                     | .000 1992               |
| HIGHEST DAILY MEAN       | 121 Mar 5              | 1.7 Mar 13          | 900 Jan 16 1993         |
| LOWEST DAILY MEAN        | .00 Jan 1              | .00 Oct 1           | .00 Oct 1 1987          |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jul 26             | .00 Oct 1           | .00 Oct 1 1987          |
| INSTANTANEOUS PEAK FLOW  |                        | 8.3 Mar 13          | 3120 Jan 16 1993        |
| INSTANTANEOUS PEAK STAGE |                        | 2.85 Mar 13         | 8.12 Jan 16 1993        |
| ANNUAL RUNOFF (AC-FT)    | 1710                   | 5.3                 | 890                     |
| 10 PERCENT EXCEEDS       | 4.0                    | .00                 | .35                     |
| 50 PERCENT EXCEEDS       | .02                    | .00                 | .00                     |
| 90 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |

## 11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA

LOCATION.--Lat 33°31'56", long 117°10'34", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upstream end of Jefferson Road Bridge, 0.6 mi upstream from mouth, and 2.8 mi southeast of Murrieta.

DRAINAGE AREA.--55.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,040 ft above sea level, from topographic map.

REMARKS.--Records fair. 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. See schematic diagram for Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,570 ft<sup>3</sup>/s, Jan. 17, 1993, gage height, 8.59 ft, from rating curve extended above 2,190 ft<sup>3</sup>/s; no flow for many days each year.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2045 | 504                               | 5.22                | Mar. 13 | 1600 | 152                               | 4.60                |
| Feb. 27 | 2145 | 52                                | 4.31                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00   | 18    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00   | .22   | .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   | .05   | .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   | 4.7   | .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   | .18  | .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  | .42   | 11    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .18   | 1.6   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .21  | .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   | 3.1   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00   | 2.4   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00   | 4.9   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00   | 3.2   | .00   | .22  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00  | .00   | .00   | .00   | .06  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00  | .00   | ---   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00  | 34    | ---   | .00   | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.21 | 34.60 | 44.42 | 23.75 | 0.46 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .007 | 1.12  | 1.53  | .77   | .015 | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .21  | 34    | 18    | 19    | .22  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .4   | 69    | 88    | 47    | .9   | .00  | .00  | .00  | .00  | .00  |

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA --Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .095 | .086 | .47  | 31.8 | 14.6 | 15.0 | .36  | .27  | .000 | .007 | .000 | .000 |
| MAX  | .46  | .31  | 2.27 | 226  | 95.0 | 74.0 | 1.66 | 1.89 | .000 | .063 | .000 | .000 |
| (WY) | 1993 | 1988 | 1993 | 1993 | 1993 | 1991 | 1995 | 1993 | 1988 | 1988 | 1988 | 1988 |
| MIN  | .000 | .000 | .000 | .036 | .004 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1989 | 1989 | 1990 | 1994 | 1989 | 1988 | 1989 | 1989 | 1988 | 1989 | 1988 | 1988 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1988 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 2281.27                |  |  | 103.44              |  |  |                         |  |  |
| ANNUAL MEAN              | 6.25                   |  |  | .28                 |  |  | 5.21                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 27.6                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .063                    |  |  |
| HIGHEST DAILY MEAN       | 618                    |  |  | 34                  |  |  | 2070                    |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 504                 |  |  | 5570                    |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 5.22                |  |  | 8.59                    |  |  |
| ANNUAL RUNOFF (AC-FT)    | 4520                   |  |  | 205                 |  |  | 3770                    |  |  |
| 10 PERCENT EXCEEDS       | 7.1                    |  |  | .00                 |  |  | .82                     |  |  |
| 50 PERCENT EXCEEDS       | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| 90 PERCENT EXCEEDS       | .00                    |  |  | .00                 |  |  | .00                     |  |  |

## 11042900 SANTA GERTRUDIS CREEK NEAR TEMECULA, CA

LOCATION.--Lat 33°31'28", long 117°09'50", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank 0.85 mi upstream from Murrieta Creek, 1.65 mi downstream from Tualota Creek, and 2.2 mi northeast of Temecula.

DRAINAGE AREA.--90.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

REVISED RECORDS.--WDR CA-94-1: Drainage area. WDR CA-96-1: 1993(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,045 ft above sea level, from topographic map. Prior to Oct. 11, 1994, at site 800 ft upstream at different datum.

REMARKS.--Records good. Flow partly regulated by Skinner Reservoir, capacity, 43,800 acre-ft. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft<sup>3</sup>/s, estimated (revised), Jan. 16, 1993, gage height, 8.47 ft, site and datum then in use, based on critical depth computation; no flow for most of each year.

REVISIONS.--The maximum discharge for the 1993 water year has been revised to 7,200 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 8.47 ft, site and datum then in use.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB   | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00   | .00   | 27    | .00   | .00  | .00  | .00  | .42  | .00  | .00  |
| 2     | .00  | .00  | .00   | .00   | .26   | .00   | .00  | .00  | .00  | .21  | .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   | .79   | .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  | .87   | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 9     | .00  | .00  | 1.3   | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 10    | .00  | .00  | 1.4   | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .95   | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | 1.6   | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | 2.5   | .00   | .00   | 11    | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | 1.6   | .00   | .00   | 1.2   | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | 1.1   | .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   | .47   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00   | 1.5   | 25    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00   | .87   | 1.1   | .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   | 7.1   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00   | .00   | 4.0   | .00   | .00  | .00  | .59  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00   | .00   | 13    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00   | .00   | 4.8   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00   | .00   | .06   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00   | .00   | ---   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00   | 69    | ---   | .00   | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 11.32 | 71.37 | 82.79 | 12.99 | 0.00 | 0.00 | 0.59 | 0.63 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .37   | 2.30  | 2.85  | .42   | .000 | .000 | .020 | .020 | .000 | .000 |
| MAX   | .00  | .00  | 2.5   | 69    | 27    | 11    | .00  | .00  | .59  | .42  | .00  | .00  |
| MIN   | .00  | .00  | .00   | .00   | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | 22    | 142   | 164   | 26    | .00  | .00  | 1.2  | 1.2  | .00  | .00  |

## 11042900 SANTA GERTRUDIS CREEK NEAR TEMECULA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .017 | .017 | .22  | 19.3 | 11.2 | 15.1 | 8.53 | 4.15 | .008 | .010 | .000 | .002 |
| MAX  | .12  | .11  | .85  | 108  | 54.6 | 50.7 | 46.7 | 28.3 | .044 | .035 | .000 | .017 |
| (WY) | 1994 | 1994 | 1993 | 1993 | 1993 | 1995 | 1993 | 1993 | 1993 | 1995 | 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       | FOR 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1988 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 4199.70                | 179.69              |                         |
| ANNUAL MEAN              | 11.5                   | .49                 | 4.86                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 23.2                    |
| LOWEST ANNUAL MEAN       |                        |                     | .006                    |
| HIGHEST DAILY MEAN       | 392                    | 69                  | 1340                    |
| LOWEST DAILY MEAN        | .00                    | .00                 | .00                     |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | .00                 | .00                     |
| INSTANTANEOUS PEAK FLOW  |                        | 1080                | 7200                    |
| INSTANTANEOUS PEAK STAGE |                        | 3.29                | 8.47                    |
| ANNUAL RUNOFF (AC-FT)    | 8330                   | 356                 | 3520                    |
| 10 PERCENT EXCEEDS       | 37                     | .00                 | 6.0                     |
| 50 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |
| 90 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |

## 11043000 MURRIETA CREEK AT TEMECULA, CA

LOCATION.--Lat 33°28'47", long 117°08'35", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on right bank 0.4 mi upstream from confluence with Temecula Creek, 1.0 mi south of Temecula, and 12 mi downstream from Skinner Reservoir on Tualota Creek.

DRAINAGE AREA.--222 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1924 to current year. Prior to September 1930 monthly discharges only, published in WSP 1315-B.

REVISED RECORDS.--WSP 1345: 1952. WSP 1635: 1932, 1937. WSP 1928: Drainage area. WDR CA-93-1: 1991 (P), 1992 (M).

GAGE.--Water-stage recorder. Concrete control since Aug. 30, 1981. Elevation of gage is 970 ft above sea level, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.--Records fair through January and poor thereafter. 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 at times during low flow periods. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 17.24 ft, on basis of slope-area measurement of peak flow; no flow for many days 1989-93.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum, from rating curve extended above 6,430 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2245 | 1,440                             | 4.90                | Feb. 27 | 2345 | 246                               | 2.79                |
| Feb. 21 | 1500 | 210                               | 2.76                | Mar. 13 | 0600 | 192                               | 2.57                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN    | FEB    | MAR    | APR  | MAY  | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|--------|--------|--------|------|------|-------|------|------|------|
| 1     | 2.1   | 2.6   | .23   | .22    | 154    | .87    | .15  | 1.4  | e1.5  | 2.2  | 1.8  | e2.5 |
| 2     | .87   | .77   | .21   | .21    | 7.9    | .51    | .17  | 1.5  | e1.5  | 1.8  | 1.7  | e2.5 |
| 3     | .80   | .35   | .22   | .21    | 1.5    | .83    | .20  | 1.6  | e1.0  | 2.0  | 2.0  | e2.5 |
| 4     | .97   | .25   | 10    | .24    | .60    | 1.4    | .20  | 1.9  | e1.2  | 2.1  | 2.1  | e2.5 |
| 5     | 3.0   | .23   | .22   | .22    | .62    | 18     | .20  | 1.9  | 3.1   | 1.7  | e2.1 | 2.5  |
| 6     | .96   | .23   | .19   | .22    | .39    | .76    | .20  | 1.2  | 3.7   | 1.4  | e2.1 | 3.1  |
| 7     | 2.6   | .24   | .17   | .23    | .24    | 1.2    | .20  | 1.0  | 3.5   | 1.4  | e2.1 | 2.8  |
| 8     | 1.3   | .31   | .16   | .26    | .15    | 1.7    | .20  | 2.5  | 3.4   | 1.1  | e2.1 | 2.4  |
| 9     | 3.9   | .34   | .15   | .30    | e.22   | 1.9    | .20  | 2.8  | 3.4   | 1.1  | e2.5 | 2.5  |
| 10    | 1.3   | .24   | .15   | .30    | e.24   | 1.7    | .25  | 3.1  | 3.6   | 1.3  | e2.5 | 2.7  |
| 11    | 2.0   | .22   | .17   | .28    | e.28   | 1.2    | .25  | 3.0  | 3.5   | 1.5  | e2.5 | 2.7  |
| 12    | 1.2   | .22   | .17   | .21    | e.30   | 4.3    | .25  | 2.8  | 3.7   | 1.7  | e4.0 | 2.4  |
| 13    | 1.1   | .22   | 1.9   | .25    | e.26   | 63     | .25  | 2.8  | 3.1   | 1.6  | e4.0 | 2.5  |
| 14    | 2.4   | .22   | .72   | .25    | e.25   | 24     | .25  | 3.0  | 3.6   | 1.5  | e2.1 | 2.5  |
| 15    | 2.4   | .22   | .21   | .25    | e.30   | 2.0    | .25  | 3.1  | 3.7   | 1.6  | e2.1 | 2.8  |
| 16    | 1.0   | .22   | .19   | .33    | e.35   | 1.0    | .25  | 2.9  | 3.6   | 1.4  | e2.0 | 2.9  |
| 17    | 3.5   | .21   | .18   | .43    | e.40   | .95    | .25  | 2.8  | 3.7   | 1.4  | e1.8 | 2.5  |
| 18    | 1.2   | .22   | .18   | .25    | .56    | .33    | 1.6  | 2.1  | 3.6   | 1.6  | 1.3  | 2.7  |
| 19    | .86   | .22   | .17   | .33    | .38    | .25    | e.50 | 1.4  | 4.1   | 1.7  | 2.1  | 2.7  |
| 20    | 2.8   | .21   | .18   | .25    | 7.8    | .16    | e.40 | 1.3  | 3.8   | 1.8  | 1.6  | 2.7  |
| 21    | 3.0   | .23   | .21   | 1.4    | 88     | .13    | e.30 | 1.3  | 4.7   | 1.9  | 2.0  | 2.8  |
| 22    | 3.1   | .26   | .21   | 6.0    | 11     | .14    | e.20 | 1.3  | 4.7   | 1.9  | 1.5  | 2.9  |
| 23    | 2.8   | .24   | .50   | .37    | .20    | .13    | e.20 | 1.1  | 5.1   | 2.2  | e1.5 | 2.7  |
| 24    | 2.8   | .25   | .25   | .21    | .27    | .17    | e.20 | 1.3  | e4.0  | 2.5  | e1.5 | 2.8  |
| 25    | 1.2   | .25   | .22   | .19    | 20     | .19    | e.20 | e3.2 | e4.0  | 2.5  | 1.2  | 3.1  |
| 26    | .99   | .26   | .22   | .17    | 19     | .22    | e.20 | e1.2 | 4.2   | 2.2  | 1.6  | 3.1  |
| 27    | .85   | .20   | .23   | .17    | 14     | .28    | e.20 | e1.3 | 5.3   | 1.9  | 2.1  | 2.7  |
| 28    | .86   | .19   | .24   | .18    | 60     | .48    | e.20 | e1.4 | 3.4   | 1.7  | 2.8  | 2.8  |
| 29    | .89   | .25   | .25   | .20    | 3.0    | .42    | e.20 | e1.5 | 3.4   | 1.6  | e2.8 | 2.9  |
| 30    | .65   | .24   | .23   | .17    | ---    | .42    | e.80 | e1.5 | 3.5   | 1.6  | e2.8 | 2.8  |
| 31    | 2.7   | ---   | .23   | 137    | ---    | .21    | ---  | e1.5 | ---   | 1.6  | e2.5 | ---  |
| TOTAL | 56.10 | 10.11 | 18.56 | 151.30 | 392.21 | 128.85 | 8.92 | 60.7 | 104.6 | 53.5 | 66.8 | 81.0 |
| MEAN  | 1.81  | .34   | .60   | 4.88   | 13.5   | 4.16   | .30  | 1.96 | 3.49  | 1.73 | 2.15 | 2.70 |
| MAX   | 3.9   | 2.6   | 10    | 137    | 154    | 63     | 1.6  | 3.2  | 5.3   | 2.5  | 4.0  | 3.1  |
| MIN   | .65   | .19   | .15   | .17    | .15    | .13    | .15  | 1.0  | 1.0   | 1.1  | 1.2  | 2.4  |
| AC-FT | 111   | 20    | 37    | 300    | 778    | 256    | 18   | 120  | 207   | 106  | 132  | 161  |

e Estimated.



## 11043000 MURRIETA CREEK AT TEMECULA, CA--Continued

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

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

## SUMMARY STATISTICS

## WATER YEARS 1931 - 1973

|                          |                   |
|--------------------------|-------------------|
| ANNUAL TOTAL             |                   |
| ANNUAL MEAN              | 8.86              |
| HIGHEST ANNUAL MEAN      | 56.9 1969         |
| LOWEST ANNUAL MEAN       | .39 1964          |
| HIGHEST DAILY MEAN       | 7200 Mar 2 1938   |
| LOWEST DAILY MEAN        | .02 Jun 10 1969   |
| ANNUAL SEVEN-DAY MINIMUM | .03 Nov 16 1969   |
| 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.33 | 1.30 | 2.87 | 72.1 | 86.6 | 74.2 | 10.5 | 4.91 | 1.47 | 1.11 | 1.13 | 1.92 |
| MAX  | 3.28 | 6.48 | 11.7 | 818  | 838  | 420  | 85.4 | 44.2 | 4.96 | 2.48 | 3.05 | 10.6 |
| (WY) | 1988 | 1983 | 1985 | 1993 | 1980 | 1978 | 1980 | 1980 | 1978 | 1985 | 1985 | 1976 |
| MIN  | .18  | .000 | .000 | .39  | .55  | .093 | .073 | .19  | .13  | .13  | .15  | .17  |
| (WY) | 1984 | 1990 | 1990 | 1975 | 1977 | 1990 | 1989 | 1988 | 1994 | 1994 | 1993 | 1977 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1974 - 1996

|                          |             |             |                   |
|--------------------------|-------------|-------------|-------------------|
| ANNUAL TOTAL             | 16718.31    | 1132.65     |                   |
| ANNUAL MEAN              | 45.8        | 3.09        | 21.3              |
| HIGHEST ANNUAL MEAN      |             |             | 121 1993          |
| LOWEST ANNUAL MEAN       |             |             | 1.02 1977         |
| HIGHEST DAILY MEAN       | 2970 Mar 11 | 154 Feb 1   | 7790 Jan 16 1993  |
| LOWEST DAILY MEAN        | .08 Aug 28  | .13 Mar 21  | .00 Dec 11 1976   |
| ANNUAL SEVEN-DAY MINIMUM | .17 Dec 6   | .16 Mar 20  | .00 Nov 28 1988   |
| INSTANTANEOUS PEAK FLOW  |             | 1440 Jan 31 | 25000 Jan 16 1993 |
| INSTANTANEOUS PEAK STAGE |             | 4.90 Jan 31 | 17.24 Jan 16 1993 |
| ANNUAL RUNOFF (AC-FT)    | 33160       | 2250        | 15460             |
| 10 PERCENT EXCEEDS       | 65          | 3.5         | 8.6               |
| 50 PERCENT EXCEEDS       | 1.7         | 1.3         | .85               |
| 90 PERCENT EXCEEDS       | .22         | .20         | .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 sea level, from topographic map. Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. 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. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 22.5 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 0.16 ft<sup>3</sup>/s, Mar. 31, Apr. 1, 11, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN   | FEB   | MAR   | APR  | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|------|------|-------|-------|-------|------|-------|-------|------|-------|-------|
| 1     | 3.5   | 5.4  | 2.4  | 2.2   | 223   | 4.3   | 2.6  | 3.5   | 5.3   | 4.0  | 3.0   | 3.5   |
| 2     | 1.9   | 2.6  | 2.4  | 2.1   | 17    | 3.4   | 2.6  | 4.0   | 5.1   | 3.3  | 2.9   | 3.9   |
| 3     | 1.8   | 2.4  | 2.4  | 2.1   | 5.3   | 3.2   | 2.6  | 4.2   | 3.5   | 3.8  | 2.8   | 4.3   |
| 4     | 1.9   | 2.3  | 9.9  | 2.2   | 3.9   | 4.3   | 2.6  | 4.8   | 3.7   | 3.6  | 2.7   | 5.1   |
| 5     | 5.0   | 2.2  | 2.3  | 2.2   | 3.2   | 40    | 2.6  | 4.5   | 5.2   | 3.7  | 2.7   | 4.3   |
| 6     | 1.9   | 2.3  | 2.2  | 2.2   | 3.1   | 5.2   | 2.5  | 4.0   | 5.5   | 3.4  | 2.7   | 3.8   |
| 7     | 3.4   | 2.2  | 2.2  | 2.2   | 2.9   | 4.6   | 2.2  | 3.4   | 5.4   | 3.2  | 2.7   | 3.7   |
| 8     | 2.0   | 2.2  | 2.2  | 2.1   | 2.8   | 4.0   | 2.5  | 6.3   | 6.0   | 3.2  | 2.8   | 3.7   |
| 9     | 5.2   | 2.3  | 2.2  | 2.1   | 2.8   | 3.6   | 2.4  | 5.8   | 5.6   | 3.2  | 3.4   | 3.6   |
| 10    | e2.0  | 2.2  | 2.2  | 2.1   | 2.8   | 3.0   | 2.6  | 5.8   | 6.0   | 3.0  | 3.3   | 3.4   |
| 11    | e3.0  | 2.2  | 2.2  | 2.0   | 2.6   | 3.0   | 2.7  | 4.9   | 5.4   | 3.1  | 3.9   | 3.3   |
| 12    | e2.0  | 2.2  | 2.3  | 2.0   | 2.6   | 7.7   | 2.8  | 4.0   | 5.2   | 3.1  | 5.9   | 3.3   |
| 13    | e2.0  | 2.2  | 5.0  | 2.1   | 2.6   | 144   | 2.7  | 4.4   | 4.8   | 3.0  | 5.1   | 3.3   |
| 14    | e3.5  | 2.2  | 3.6  | 1.9   | 2.6   | 40    | 2.4  | 4.5   | 4.9   | 3.1  | 2.9   | 3.4   |
| 15    | e3.5  | 2.2  | 2.5  | 2.1   | 2.5   | 5.7   | 2.4  | 5.1   | 5.2   | 3.3  | 2.8   | 3.4   |
| 16    | e1.7  | 2.2  | 2.5  | 2.2   | 2.7   | 3.7   | 2.6  | 5.0   | 5.1   | 3.1  | 3.5   | 3.5   |
| 17    | e6.0  | 2.2  | 2.4  | 2.3   | 2.6   | 3.4   | 2.8  | 5.6   | 4.7   | 3.0  | 3.3   | 3.5   |
| 18    | 3.0   | 2.2  | 2.3  | 2.1   | 2.6   | 3.3   | 5.8  | 6.2   | 4.5   | 3.0  | 3.3   | 3.6   |
| 19    | 2.4   | 2.3  | 2.4  | 2.1   | 2.6   | 3.1   | 3.5  | 5.4   | 5.8   | 3.0  | 3.5   | 3.4   |
| 20    | 5.0   | 2.3  | 2.3  | 2.1   | 7.5   | 3.0   | 2.7  | 4.6   | 7.0   | 3.1  | 3.5   | 3.6   |
| 21    | 5.7   | 2.3  | 2.3  | 5.6   | 131   | 3.2   | 2.5  | 4.9   | 7.5   | 3.0  | 3.5   | 3.8   |
| 22    | 6.1   | 2.4  | 2.3  | 13    | 32    | 3.0   | 2.4  | 4.7   | 7.3   | 2.9  | 3.6   | 3.5   |
| 23    | 5.7   | 2.3  | 2.7  | 2.9   | 5.0   | 2.7   | 2.4  | 4.3   | 6.5   | 3.0  | 3.5   | 3.5   |
| 24    | 5.7   | 2.3  | 2.4  | 2.4   | 3.2   | 2.7   | 2.6  | 4.9   | 5.1   | 3.0  | 3.4   | 3.4   |
| 25    | 2.7   | 2.3  | 2.3  | 2.3   | 43    | 2.6   | 2.5  | 6.5   | 4.9   | 2.9  | 3.4   | 3.6   |
| 26    | 2.3   | 2.4  | 2.2  | 2.4   | 45    | 2.6   | 2.4  | 5.0   | 6.0   | 3.0  | 3.4   | 3.7   |
| 27    | 2.2   | 2.3  | 2.2  | 2.2   | 31    | 2.6   | 2.4  | 4.7   | 7.3   | 3.2  | 3.8   | 3.5   |
| 28    | 2.3   | 2.6  | 2.3  | 2.3   | 100   | 2.6   | 2.2  | 4.8   | 5.5   | 3.1  | 4.1   | 3.6   |
| 29    | 2.5   | 2.3  | 2.2  | 2.3   | 9.1   | 2.6   | 2.0  | 5.1   | 5.6   | 3.1  | 3.8   | 3.7   |
| 30    | 2.5   | 2.4  | 2.2  | 2.3   | ---   | 2.5   | 2.3  | 4.9   | 4.9   | 2.9  | 3.9   | 4.1   |
| 31    | 5.4   | ---  | 2.3  | 214   | ---   | 2.6   | ---  | 5.0   | ---   | 2.9  | 3.5   | ---   |
| TOTAL | 103.8 | 71.9 | 83.3 | 294.1 | 697.0 | 322.2 | 79.3 | 150.8 | 164.5 | 98.2 | 106.6 | 110.0 |
| MEAN  | 3.35  | 2.40 | 2.69 | 9.49  | 24.0  | 10.4  | 2.64 | 4.86  | 5.48  | 3.17 | 3.44  | 3.67  |
| MAX   | 6.1   | 5.4  | 9.9  | 214   | 223   | 144   | 5.8  | 6.5   | 7.5   | 4.0  | 5.9   | 5.1   |
| MIN   | 1.7   | 2.2  | 2.2  | 1.9   | 2.5   | 2.5   | 2.0  | 3.4   | 3.5   | 2.9  | 2.7   | 3.3   |
| AC-FT | 206   | 143  | 165  | 583   | 1380  | 639   | 157  | 299   | 326   | 195  | 211   | 218   |

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 | 98.9 | 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.03 | 4.04 | 5.55 | 98.8 | 118  | 95.1 | 14.2 | 7.54 | 3.15 | 2.39 | 2.62 | 3.29 |
| MAX  | 10.8 | 32.8 | 21.9 | 1255 | 1105 | 438  | 85.6 | 46.6 | 6.87 | 4.55 | 9.99 | 13.9 |
| (WY) | 1994 | 1986 | 1985 | 1993 | 1980 | 1978 | 1980 | 1980 | 1978 | 1980 | 1993 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1974 - 1996

|                          |         |        |       |
|--------------------------|---------|--------|-------|
| ANNUAL TOTAL             | 20990.4 | 2281.7 |       |
| ANNUAL MEAN              | 57.5    | 6.23   | 29.4  |
| HIGHEST ANNUAL MEAN      |         |        | 183   |
| LOWEST ANNUAL MEAN       |         |        | 2.17  |
| HIGHEST DAILY MEAN       | 3040    | Mar 11 | 223   |
| LOWEST DAILY MEAN        | 1.7     | Oct 16 | 1.7   |
| ANNUAL SEVEN-DAY MINIMUM | 2.1     | Sep 23 | 2.0   |
| INSTANTANEOUS PEAK FLOW  |         |        | 2030  |
| INSTANTANEOUS PEAK STAGE |         |        | 5.03  |
| ANNUAL RUNOFF (AC-FT)    | 41630   | 4530   | 21290 |
| 10 PERCENT EXCEEDS       | 73      | 5.7    | 14    |
| 50 PERCENT EXCEEDS       | 4.8     | 3.1    | 2.5   |
| 90 PERCENT EXCEEDS       | 2.2     | 2.2    | 1.0   |

## SANTA MARGARITA RIVER BASIN

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 sea level, from topographic map.

REMARKS.--Records fair. No regulation upstream from station. Undetermined amount of water upstream from station used for irrigation by a local nursery. Water is imported for domestic use and irrigation. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft<sup>3</sup>/s (estimated), Jan. 16, 1993, gage height, unknown, on basis of slope-area measurement of peak flow; maximum recorded gage height, 8.24 ft, Jan. 4, 1995; minimum daily, 0.04 ft<sup>3</sup>/s, July 23, 24, July 27 to Aug. 1, and Aug. 3, 1996.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 712 ft<sup>3</sup>/s:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2045 | 144                               | 4.37                | Mar. 13 | 0430 | 220                               | 4.78                |
| Feb. 27 | 2300 | 115                               | 4.18                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR    | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|--------|-------|------|------|------|------|------|
| 1     | .97   | .58   | .46   | .73   | 11    | 1.4    | 1.2   | .43  | .17  | .12  | .04  | .10  |
| 2     | .96   | .57   | .47   | 1.3   | 2.4   | 1.3    | 1.4   | .43  | .15  | .11  | .05  | .10  |
| 3     | .76   | .57   | .49   | 1.6   | 1.6   | 1.3    | 1.1   | .40  | .14  | .11  | .04  | .10  |
| 4     | .87   | .53   | .46   | 1.2   | 1.4   | 3.7    | .98   | .35  | .14  | .10  | .05  | .11  |
| 5     | .91   | .50   | .45   | .94   | 1.3   | 12     | .90   | .30  | .21  | .08  | .06  | .12  |
| 6     | 1.0   | .53   | .46   | .89   | 1.1   | 1.8    | .95   | .28  | .53  | .08  | .21  | .11  |
| 7     | .94   | .53   | .47   | .80   | 1.1   | 1.2    | .99   | .28  | .68  | .08  | .22  | .11  |
| 8     | 1.0   | .50   | .47   | .78   | .99   | .99    | .83   | .28  | .75  | .08  | .25  | .11  |
| 9     | 1.1   | .53   | .46   | 1.0   | 1.3   | 1.1    | 1.0   | .27  | .73  | .07  | .27  | .11  |
| 10    | .70   | .54   | .46   | .85   | 1.0   | 1.4    | 1.1   | .27  | .71  | .06  | .28  | .10  |
| 11    | .65   | .55   | .46   | 1.1   | 1.1   | 1.3    | .97   | .26  | .23  | .07  | .27  | .12  |
| 12    | .60   | .55   | .46   | .98   | 1.4   | 6.0    | 1.1   | .24  | .19  | .06  | .26  | .11  |
| 13    | .60   | .55   | 2.1   | .98   | 1.2   | 41     | .88   | .23  | .18  | .06  | .16  | .11  |
| 14    | .64   | .55   | 1.6   | .92   | 1.1   | 5.2    | .80   | .22  | .17  | .06  | .14  | .13  |
| 15    | .85   | .56   | .91   | .87   | .96   | 2.5    | .77   | .21  | .18  | .06  | .13  | .14  |
| 16    | .65   | .58   | .93   | .84   | .98   | 2.1    | .78   | .21  | .18  | .06  | .13  | .15  |
| 17    | .62   | .55   | .97   | 1.9   | 1.1   | 2.1    | 1.1   | .21  | .17  | .06  | .13  | .15  |
| 18    | .61   | .54   | 1.1   | .98   | 1.1   | 2.0    | 7.0   | .19  | .17  | .07  | .12  | .15  |
| 19    | .58   | .55   | .88   | 1.0   | 1.3   | 2.6    | .97   | .20  | .16  | .08  | .14  | .15  |
| 20    | .56   | .52   | .83   | .95   | 1.7   | 1.8    | 1.7   | .20  | .17  | .06  | .14  | .15  |
| 21    | .59   | .52   | .82   | 2.3   | 15    | 2.0    | .93   | .19  | .19  | .06  | .14  | .14  |
| 22    | .59   | .52   | .82   | 3.1   | 4.8   | 1.6    | .74   | .19  | .20  | .07  | .14  | .15  |
| 23    | .54   | .51   | 1.3   | 1.1   | 1.6   | 1.9    | .68   | .19  | .21  | .04  | .18  | .15  |
| 24    | .51   | .47   | 1.2   | .79   | 1.2   | 1.4    | .54   | .20  | .21  | .04  | .14  | .16  |
| 25    | .57   | .47   | .87   | 1.0   | 8.0   | 1.4    | .47   | .20  | .18  | .05  | .12  | .16  |
| 26    | .58   | .48   | .81   | .96   | 6.0   | 1.5    | .47   | .21  | .17  | .05  | .12  | .17  |
| 27    | .55   | .48   | .79   | .89   | 6.8   | 1.3    | .47   | .20  | .17  | .04  | .11  | .17  |
| 28    | .57   | .46   | .75   | .89   | 6.2   | 1.5    | .48   | .18  | .16  | .04  | .11  | .16  |
| 29    | .62   | .47   | .74   | .84   | 1.7   | 1.4    | .38   | .17  | .16  | .04  | .10  | .16  |
| 30    | .59   | .47   | .74   | .92   | ---   | 1.0    | .40   | .17  | .13  | .04  | .10  | .16  |
| 31    | .57   | ---   | .74   | 27    | ---   | 1.0    | ---   | .17  | ---  | .04  | .10  | ---  |
| TOTAL | 21.85 | 15.73 | 24.47 | 60.40 | 86.43 | 108.79 | 32.08 | 7.53 | 7.79 | 2.04 | 4.45 | 4.01 |
| MEAN  | .70   | .52   | .79   | 1.95  | 2.98  | 3.51   | 1.07  | .24  | .26  | .066 | .14  | .13  |
| MAX   | 1.1   | .58   | 2.1   | .27   | 15    | 41     | 7.0   | .43  | .75  | .12  | .28  | .17  |
| MIN   | .51   | .46   | .45   | .73   | .96   | .99    | .38   | .17  | .13  | .04  | .04  | .10  |
| AC-FT | 43    | 31    | 49    | 120   | 171   | 216    | 64    | 15   | 15   | 4.0  | 8.8  | 8.0  |

## 11044250 RAINBOW CREEK NEAR FALLBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .52  | .52  | .91  | 19.3 | 13.0 | 14.4 | 3.05 | 1.19 | .78  | .46  | .44  | .48  |
| MAX  | .70  | .69  | 1.83 | 97.3 | 55.3 | 55.4 | 6.70 | 2.28 | 1.53 | .90  | .75  | 1.25 |
| (WY) | 1996 | 1990 | 1993 | 1993 | 1993 | 1995 | 1995 | 1995 | 1990 | 1990 | 1995 | 1995 |
| MIN  | .35  | .26  | .46  | .65  | 2.16 | 1.35 | 1.07 | .24  | .26  | .066 | .14  | .13  |
| (WY) | 1992 | 1993 | 1991 | 1991 | 1990 | 1990 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1990 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 3521.08                |  |  |  | 375.57              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 9.65                   |  |  |  | 1.03                |  |  |  | 5.13                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 14.4                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 1.03                    |  |  |  |
| HIGHEST DAILY MEAN       | 442                    |  |  |  | 41                  |  |  |  | 800                     |  |  |  |
| LOWEST DAILY MEAN        | .45                    |  |  |  | .04                 |  |  |  | .04                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .46                    |  |  |  | .04                 |  |  |  | .04                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 220                 |  |  |  | 8000                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 4.78                |  |  |  | 8.24                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 6980                   |  |  |  | 745                 |  |  |  | 3710                    |  |  |  |
| 10 PERCENT EXCEEDS       | 19                     |  |  |  | 1.5                 |  |  |  | 5.7                     |  |  |  |
| 50 PERCENT EXCEEDS       | 1.1                    |  |  |  | .53                 |  |  |  | .66                     |  |  |  |
| 90 PERCENT EXCEEDS       | .53                    |  |  |  | .10                 |  |  |  | .22                     |  |  |  |

## 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 sea level, from topographic map.

REMARKS.--Records fair. Flow partly regulated since November 1948 by Vail Lake (station 11042510) and since 1974 by Skinner Reservoir. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft<sup>3</sup>/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 15.89 ft; no flow several days in 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------|-------|-------|
| 1     | 6.4   | 10    | 11    | 7.6   | 415    | 15    | 8.0   | 5.4   | 4.0   | 4.6  | 2.6   | 2.6   |
| 2     | 5.9   | 10    | 11    | 7.7   | 48     | 11    | 8.4   | 6.7   | 4.8   | 4.0  | 2.8   | 2.7   |
| 3     | 5.7   | 9.4   | 11    | 8.0   | 26     | 9.8   | 7.8   | 8.1   | 4.9   | 3.3  | 3.1   | 3.5   |
| 4     | 5.6   | 9.4   | 11    | 8.0   | 19     | 11    | 7.2   | 9.7   | 3.6   | 3.1  | 3.1   | 3.9   |
| 5     | 5.5   | 9.1   | 14    | 8.0   | 15     | 52    | 6.5   | 8.9   | 4.4   | 3.0  | 3.3   | 3.7   |
| 6     | 6.4   | 9.2   | 8.6   | 7.8   | 13     | 20    | 6.1   | 8.0   | 5.9   | 2.5  | 3.4   | 3.7   |
| 7     | 6.3   | 9.8   | 9.0   | 7.6   | 12     | 12    | 6.2   | 7.9   | 6.3   | 3.2  | 3.4   | 3.4   |
| 8     | 6.9   | 9.1   | 9.4   | 7.3   | 11     | 9.3   | 5.9   | 6.5   | 6.7   | 3.4  | 3.1   | 3.1   |
| 9     | 7.8   | 10    | 9.4   | 6.7   | 11     | 8.8   | 6.2   | 9.0   | 5.0   | 4.4  | 3.1   | 3.0   |
| 10    | 8.8   | 12    | 9.4   | 6.9   | 11     | 8.5   | 6.6   | 8.0   | 4.5   | 3.3  | 2.8   | 3.2   |
| 11    | 7.9   | 12    | 9.4   | 6.9   | 11     | 8.0   | 6.8   | 6.4   | 3.9   | 3.4  | 3.2   | 3.2   |
| 12    | 8.0   | 12    | 9.4   | 6.7   | 12     | 11    | 6.8   | 5.9   | 3.6   | 2.7  | 3.4   | 3.1   |
| 13    | 7.6   | 12    | 12    | 6.7   | 10     | 164   | 7.1   | 5.3   | 4.2   | 2.7  | 3.5   | 3.3   |
| 14    | 7.6   | 13    | 15    | 6.7   | 9.8    | 71    | 6.4   | 5.3   | 4.1   | 3.4  | 4.9   | 3.7   |
| 15    | 8.0   | 14    | 13    | 6.7   | 9.4    | 24    | 6.7   | 6.2   | 4.5   | 3.4  | 3.8   | 4.0   |
| 16    | 8.0   | 14    | 11    | 7.7   | 9.0    | 15    | 7.7   | 9.0   | 5.0   | 2.9  | 3.4   | 4.0   |
| 17    | 7.7   | 14    | 11    | 10    | 9.4    | 13    | 9.5   | 10    | 5.4   | 3.1  | 3.7   | 4.1   |
| 18    | 8.3   | 14    | 11    | 9.4   | 9.4    | 12    | 20    | 9.2   | 6.3   | 2.4  | 3.9   | 4.2   |
| 19    | 7.8   | 13    | 11    | 8.8   | 9.4    | 12    | 15    | 11    | 6.2   | 3.0  | 3.6   | 3.4   |
| 20    | 7.5   | 13    | 9.1   | 8.0   | 11     | 11    | 14    | 10    | 5.0   | 2.7  | 3.6   | 3.2   |
| 21    | 8.0   | 13    | 9.4   | 9.3   | 118    | 11    | 12    | 10    | 4.5   | 2.7  | 4.1   | 3.3   |
| 22    | 8.8   | 13    | 8.9   | 27    | 75     | 11    | 11    | 11    | 5.0   | 2.8  | 3.9   | 3.4   |
| 23    | 8.6   | 13    | 9.6   | 20    | 22     | 11    | 11    | 9.5   | 5.3   | 2.9  | 4.2   | 3.7   |
| 24    | 8.0   | 13    | 10    | 9.2   | 13     | 9.5   | 11    | 10    | 5.5   | 2.8  | 4.2   | 4.4   |
| 25    | 8.9   | 13    | 9.4   | 8.8   | 32     | 9.4   | 8.8   | 11    | 5.3   | 2.1  | 4.1   | 4.2   |
| 26    | 8.9   | 13    | 8.7   | 8.7   | 75     | 9.7   | 7.9   | 7.8   | 5.1   | 2.1  | 3.5   | 4.1   |
| 27    | 8.8   | 13    | 8.0   | 8.0   | 25     | 8.8   | 8.1   | 6.0   | 4.6   | 2.5  | 3.3   | 4.1   |
| 28    | 9.0   | 13    | 8.0   | 8.0   | 120    | 8.8   | 8.0   | 4.7   | 6.2   | 2.8  | 3.4   | 4.1   |
| 29    | 9.3   | 13    | 8.0   | 8.0   | 26     | 10    | 7.5   | 4.5   | 4.1   | 3.0  | 3.1   | 4.2   |
| 30    | 9.3   | 11    | 8.0   | 8.0   | ---    | 8.3   | 6.3   | 5.0   | 3.9   | 2.8  | 2.8   | 4.4   |
| 31    | 9.4   | ---   | 8.0   | 38    | ---    | 8.0   | ---   | 4.2   | ---   | 3.2  | 2.5   | ---   |
| TOTAL | 240.7 | 357.0 | 311.7 | 306.2 | 1187.4 | 603.9 | 260.5 | 240.2 | 147.8 | 94.2 | 106.8 | 108.9 |
| MEAN  | 7.76  | 11.9  | 10.1  | 9.88  | 40.9   | 19.5  | 8.68  | 7.75  | 4.93  | 3.04 | 3.45  | 3.63  |
| MAX   | 9.4   | 14    | 15    | 38    | 415    | 164   | 20    | 11    | 6.7   | 4.6  | 4.9   | 4.4   |
| MIN   | 5.5   | 9.1   | 8.0   | 6.7   | 9.0    | 8.0   | 5.9   | 4.2   | 3.6   | 2.1  | 2.5   | 2.6   |
| AC-FT | 477   | 708   | 618   | 607   | 2360   | 1200  | 517   | 476   | 293   | 187  | 212   | 216   |

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

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 7.15 | 5.05 | 10.7 | 265  | 194  | 157  | 25.8 | 16.9 | 9.79 | 5.40 | 5.26 | 5.40 |
| MAX  | 15.7 | 11.9 | 31.1 | 1462 | 860  | 490  | 70.4 | 54.5 | 25.1 | 11.4 | 10.1 | 9.03 |
| (WY) | 1994 | 1996 | 1993 | 1993 | 1993 | 1991 | 1993 | 1993 | 1993 | 1993 | 1993 | 1993 |
| MIN  | 4.31 | 1.48 | 1.66 | 4.65 | 22.8 | 2.50 | 4.51 | 6.28 | 4.93 | 2.11 | 1.00 | 1.22 |
| (WY) | 1991 | 1992 | 1990 | 1991 | 1990 | 1990 | 1990 | 1990 | 1996 | 1990 | 1990 | 1990 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1990 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 29152.7                |  |  |  | 3965.3              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 79.9                   |  |  |  | 10.8                |  |  |  | 58.6                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 220                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 5.99                    |  |  |  |
| HIGHEST DAILY MEAN       | 3580                   |  |  |  | 415                 |  |  |  | 14300                   |  |  |  |
| LOWEST DAILY MEAN        | 3.7                    |  |  |  | 2.1                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 6.0                    |  |  |  | 2.6                 |  |  |  | .05                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 2190                |  |  |  | 34000                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 4.75                |  |  |  | 15.89                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 57820                  |  |  |  | 7870                |  |  |  | 42420                   |  |  |  |
| 10 PERCENT EXCEEDS       | 112                    |  |  |  | 13                  |  |  |  | 59                      |  |  |  |
| 50 PERCENT EXCEEDS       | 12                     |  |  |  | 8.0                 |  |  |  | 6.6                     |  |  |  |
| 90 PERCENT EXCEEDS       | 6.9                    |  |  |  | 3.2                 |  |  |  | 2.1                     |  |  |  |

## SANTA MARGARITA RIVER BASIN

11044350 SANDIA CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°25'28", long 117°14'54", in SW 1/4 NE 1/4 sec.1, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 1.05 mi north of intersection of Sandia and Rock Mountain Roads, 0.8 mi upstream from mouth, and 3.8 mi north of Fallbrook.

DRAINAGE AREA.--21.1 mi<sup>2</sup>.

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

REVISED RECORDS.--WDR CA-91-1: 1990(M).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 380 ft above sea level, from topographic map. Prior to Sept. 30, 1993, at site 0.65 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,100 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 17.60 ft, site and datum then in use, from floodmarks (may have been affected by backwater from the Santa Margarita River); no flow for many days in summer of 1996.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 536 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Dec. 12 | 2345 | 67                                | 2.64                | Feb. 21 | 1115 | 73                                | 2.67                |
| Jan. 31 | 2200 | 315                               | 3.44                | Feb. 27 | 2345 | 73                                | 2.67                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN   | JUL  | AUG  | SEP  |
|-------|-------|------|-------|-------|-------|-------|-------|------|-------|------|------|------|
| 1     | 1.1   | 3.0  | 1.6   | 2.3   | 23    | 8.8   | 5.7   | 2.0  | 1.4   | .49  | .07  | .00  |
| 2     | 1.2   | 2.9  | 1.4   | 2.3   | 8.9   | 7.9   | 6.0   | 2.6  | 2.0   | .54  | .00  | .00  |
| 3     | 1.2   | 2.9  | .77   | 2.7   | 7.5   | 7.4   | 5.4   | 3.2  | 1.6   | .78  | .00  | .00  |
| 4     | 1.0   | 2.8  | 1.4   | 2.6   | 6.5   | 8.7   | 4.9   | 2.1  | 1.4   | .58  | .00  | .00  |
| 5     | .97   | 2.7  | 2.4   | 2.2   | 5.8   | 24    | 3.2   | 2.4  | 1.6   | e.39 | .00  | .00  |
| 6     | .82   | 2.5  | 2.2   | 2.4   | 5.7   | 11    | 3.1   | 2.7  | 1.7   | e.14 | .03  | .00  |
| 7     | .85   | 1.8  | 2.2   | 2.4   | 5.1   | 9.2   | 5.8   | 2.5  | .75   | e.16 | .07  | .00  |
| 8     | .91   | 1.4  | 2.7   | 2.7   | 4.2   | 8.5   | 5.6   | 2.1  | .62   | e.29 | .16  | .00  |
| 9     | 1.1   | 1.3  | 2.5   | 2.7   | 3.6   | 7.6   | 3.7   | 2.0  | .47   | .39  | .21  | .00  |
| 10    | 1.6   | 1.7  | 2.3   | 2.5   | 3.7   | 7.1   | 3.9   | 2.3  | .92   | .64  | .22  | .00  |
| 11    | 1.4   | 1.9  | 2.6   | 2.4   | 3.4   | 6.9   | 3.9   | 2.2  | 1.3   | .59  | .15  | .00  |
| 12    | 1.4   | 2.3  | 3.8   | 2.2   | 4.3   | 8.9   | 3.5   | 1.4  | 1.1   | .32  | .00  | .00  |
| 13    | 1.6   | 2.2  | 6.3   | 2.2   | 3.9   | 23    | 2.4   | 2.7  | .83   | .29  | .01  | .00  |
| 14    | 1.6   | 2.1  | 4.8   | 2.2   | 2.8   | 13    | 5.1   | 2.6  | .73   | .44  | .00  | .00  |
| 15    | 1.3   | 2.4  | 3.2   | 2.6   | 2.8   | 10    | 3.0   | 2.3  | .69   | .58  | .00  | .00  |
| 16    | 1.3   | 2.2  | 3.1   | 2.7   | 2.8   | 9.2   | 1.8   | 2.2  | .67   | .64  | .00  | .00  |
| 17    | 1.4   | 2.2  | 3.0   | 3.5   | 3.4   | 8.7   | 2.4   | 1.4  | 1.7   | .72  | .00  | .00  |
| 18    | 1.8   | 2.1  | 2.9   | 2.9   | 3.9   | 8.3   | 5.1   | 1.2  | 1.5   | .55  | .00  | .00  |
| 19    | 2.3   | 1.7  | 2.9   | 3.0   | 4.4   | 7.4   | 4.3   | 1.5  | .99   | .42  | .00  | .00  |
| 20    | 1.7   | 1.9  | 2.9   | 2.6   | 8.3   | 6.9   | 3.8   | 2.0  | .94   | e.26 | .00  | .00  |
| 21    | 1.6   | 2.0  | 2.9   | 3.3   | 28    | 6.6   | 3.7   | 3.2  | .74   | e.21 | .00  | .00  |
| 22    | 2.9   | 2.0  | 2.9   | 6.0   | 16    | 6.9   | 3.7   | 2.5  | .64   | e.09 | .00  | .00  |
| 23    | 1.7   | 2.1  | 3.2   | 4.5   | 9.1   | 5.6   | 4.2   | 2.2  | .69   | e.05 | .00  | .00  |
| 24    | 1.2   | 2.1  | 3.2   | 4.1   | 7.5   | 5.2   | 2.9   | 1.7  | 1.0   | e.07 | .00  | .20  |
| 25    | 1.9   | 1.7  | 3.0   | 4.6   | 13    | 6.2   | 2.6   | 1.8  | 1.0   | e.10 | .00  | .13  |
| 26    | 2.0   | 1.9  | 2.9   | 4.0   | 14    | 6.2   | 3.1   | 1.5  | .97   | e.00 | .00  | .25  |
| 27    | 1.5   | 2.5  | 2.8   | 3.7   | 13    | 5.6   | 2.6   | 2.1  | .98   | .02  | .00  | .22  |
| 28    | 1.7   | 2.5  | 2.9   | 3.8   | 21    | 5.5   | 2.0   | 2.5  | .72   | .00  | .00  | .66  |
| 29    | 1.8   | 2.0  | 2.6   | 3.7   | 11    | 5.4   | 2.2   | 2.3  | .40   | .00  | .00  | .23  |
| 30    | 1.9   | 1.5  | 2.5   | 4.2   | ---   | 5.1   | 2.3   | 2.3  | .61   | .00  | .00  | .17  |
| 31    | 2.4   | ---  | 2.4   | 30    | ---   | 5.2   | ---   | 2.1  | ---   | .00  | .00  | ---  |
| TOTAL | 47.15 | 64.3 | 86.27 | 123.0 | 246.6 | 266.0 | 111.9 | 67.6 | 30.66 | 9.75 | 0.92 | 1.86 |
| MEAN  | 1.52  | 2.14 | 2.78  | 3.97  | 8.50  | 8.58  | 3.73  | 2.18 | 1.02  | .31  | .030 | .062 |
| MAX   | 2.9   | 3.0  | 6.3   | 30    | 28    | 24    | 6.0   | 3.2  | 2.0   | .78  | .22  | .66  |
| MIN   | .82   | 1.3  | .77   | 2.2   | 2.8   | 5.1   | 1.8   | 1.2  | .40   | .00  | .00  | .00  |
| AC-FT | 94    | 128  | 171   | 244   | 489   | 528   | 222   | 134  | 61    | 19   | 1.8  | 3.7  |

e Estimated.



## SANTA MARGARITA RIVER BASIN

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11044350 SANDIA CREEK NEAR FALLBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.52 | 1.95 | 2.62 | 47.5 | 31.0 | 31.6 | 11.8 | 6.48 | 4.33 | 2.01 | 1.20 | .86  |
| MAX  | 2.27 | 2.84 | 3.31 | 237  | 128  | 79.8 | 28.0 | 11.0 | 8.04 | 4.12 | 2.41 | 1.30 |
| (WY) | 1994 | 1994 | 1993 | 1993 | 1993 | 1995 | 1995 | 1995 | 1993 | 1995 | 1992 | 1992 |
| MIN  | 1.09 | 1.34 | 1.88 | 2.77 | 5.34 | 4.28 | 3.73 | 2.18 | 1.02 | .31  | .030 | .062 |
| (WY) | 1990 | 1992 | 1990 | 1991 | 1991 | 1990 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1990 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 7706.86                |  |  |  | 1056.01             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 21.1                   |  |  |  | 2.89                |  |  |  | 11.8                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 36.8                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 2.65                    |  |  |  |
| HIGHEST DAILY MEAN       | 553                    |  |  |  | 30                  |  |  |  | 2000                    |  |  |  |
| LOWEST DAILY MEAN        | .63                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .88                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 315                 |  |  |  | 5100                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 3.44                |  |  |  | 17.60                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 15290                  |  |  |  | 2090                |  |  |  | 8580                    |  |  |  |
| 10 PERCENT EXCEEDS       | 40                     |  |  |  | 6.5                 |  |  |  | 17                      |  |  |  |
| 50 PERCENT EXCEEDS       | 6.0                    |  |  |  | 2.1                 |  |  |  | 2.6                     |  |  |  |
| 90 PERCENT EXCEEDS       | 1.3                    |  |  |  | .00                 |  |  |  | .71                     |  |  |  |

## SANTA MARGARITA RIVER BASIN

11044800 DE LUZ CREEK NEAR DE LUZ, CA

LOCATION.--Lat 33°25'11", long 117°19'15", in SW 1/4 SE 1/4 sec. 5, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 4.85 mi upstream from mouth and 1.2 mi south of De Luz.

DRAINAGE AREA.--33.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 270 ft above sea level, from topographic map. February 1951 to September 1965 and October 1989 to September 1991, at site 4.2 mi downstream (published as 11044900, De Luz Creek near Fallbrook).

REMARKS.--Records fair. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,700 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 15.13 ft, on basis of flow-over-road computation; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 385 ft<sup>3</sup>/s on basis of flow-over-road computation:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2230 | 461                               | 6.10                | Feb. 21 | 1145 | 200                               | 5.38                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR  | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|------|-------|------|------|------|------|
| 1     | .14   | 1.2   | e1.1  | 1.6   | 56    | 8.3   | 3.9  | 1.4   | .75  | .00  | .00  | .00  |
| 2     | .10   | 1.3   | .96   | 1.6   | 12    | 7.4   | 3.3  | 1.5   | .69  | .00  | .00  | .00  |
| 3     | .10   | 1.1   | .98   | 1.5   | 8.5   | 7.5   | 3.4  | 1.6   | .62  | .00  | .00  | .00  |
| 4     | .11   | .96   | 1.1   | 1.6   | 6.6   | 8.7   | 3.3  | 1.6   | .58  | .00  | .00  | .00  |
| 5     | .12   | .94   | 1.2   | 1.5   | 5.6   | 32    | 2.9  | 1.6   | .56  | .00  | .00  | .00  |
| 6     | .16   | .96   | 1.2   | 1.5   | 4.5   | 14    | 2.7  | 1.6   | .54  | .00  | .00  | .00  |
| 7     | .25   | 1.1   | 1.3   | 1.4   | 4.0   | 8.4   | 2.4  | 1.5   | .45  | .00  | .00  | .00  |
| 8     | .31   | .97   | 1.4   | 1.4   | 4.0   | 7.6   | 2.3  | 1.4   | .47  | .00  | .00  | .00  |
| 9     | .37   | .97   | 1.4   | 1.5   | 4.0   | 6.5   | 2.2  | 1.3   | .44  | .00  | .00  | .00  |
| 10    | .42   | .88   | 1.3   | 1.5   | 3.8   | 6.4   | 1.9  | 1.4   | .45  | .00  | .00  | .00  |
| 11    | .46   | 1.1   | 1.3   | 1.3   | 3.8   | 6.9   | 1.7  | 1.2   | .37  | .00  | .00  | .00  |
| 12    | .50   | 1.1   | 1.4   | 1.3   | 3.6   | 8.8   | 2.4  | 1.2   | .37  | .00  | .00  | .00  |
| 13    | .56   | .96   | 2.1   | 1.3   | 3.7   | 20    | 2.3  | 1.2   | .39  | .00  | .00  | .00  |
| 14    | .60   | .91   | 2.9   | 1.4   | 3.7   | 12    | 2.2  | 1.1   | .35  | .00  | .00  | .00  |
| 15    | .63   | .93   | 2.4   | 1.3   | 3.5   | 9.1   | 2.1  | 1.1   | .36  | .00  | .00  | .00  |
| 16    | .71   | 1.0   | 2.1   | 1.4   | 4.0   | 8.9   | 2.3  | 1.1   | .37  | .00  | .00  | .00  |
| 17    | .72   | .87   | 2.1   | 1.5   | 4.5   | 8.8   | 2.4  | 1.0   | .36  | .00  | .00  | .00  |
| 18    | .80   | 1.0   | 2.1   | 1.6   | 4.6   | 8.2   | 4.4  | 1.1   | .32  | .00  | .00  | .00  |
| 19    | .82   | 1.2   | 2.2   | 1.5   | 4.4   | 6.9   | 2.7  | 1.1   | .18  | .00  | .00  | .00  |
| 20    | .89   | 1.1   | 2.1   | 1.6   | 7.5   | 7.0   | 2.3  | 1.1   | .03  | .00  | .00  | .00  |
| 21    | .87   | 1.0   | 1.9   | 1.8   | 89    | 7.5   | 2.2  | 1.1   | .03  | .00  | .00  | .00  |
| 22    | .93   | 1.1   | 1.8   | 2.0   | 31    | 7.6   | 2.1  | .91   | .05  | .00  | .00  | .00  |
| 23    | 1.1   | .99   | 1.9   | 2.0   | 13    | 6.1   | 1.8  | .82   | .05  | .00  | .00  | .00  |
| 24    | .84   | .99   | 2.2   | 1.7   | 11    | 6.4   | 1.8  | .95   | .05  | .00  | .00  | .00  |
| 25    | .69   | 1.0   | 2.0   | 1.5   | 18    | 6.2   | 1.7  | 1.1   | .04  | .00  | .00  | .00  |
| 26    | .68   | 1.1   | 1.8   | 1.6   | 24    | 5.6   | 1.6  | 1.0   | .03  | .00  | .00  | .00  |
| 27    | .72   | 1.0   | 1.8   | 1.6   | 17    | 4.8   | 1.6  | .94   | .02  | .00  | .00  | .00  |
| 28    | .76   | .93   | 1.8   | 1.5   | 28    | 4.8   | 1.5  | .97   | .00  | .00  | .00  | .00  |
| 29    | .87   | e1.0  | 1.8   | 1.6   | 12    | 4.4   | 1.5  | .82   | .00  | .00  | .00  | .00  |
| 30    | 1.0   | e1.1  | 1.7   | 1.9   | ---   | 4.0   | 1.4  | .77   | .00  | .00  | .00  | .00  |
| 31    | 1.1   | ---   | 1.8   | 59    | ---   | 3.9   | ---  | .82   | ---  | .00  | .00  | ---  |
| TOTAL | 18.33 | 30.76 | 53.14 | 105.5 | 395.3 | 264.7 | 70.3 | 36.30 | 8.92 | 0.00 | 0.00 | 0.00 |
| MEAN  | .59   | 1.03  | 1.71  | 3.40  | 13.6  | 8.54  | 2.34 | 1.17  | .30  | .000 | .000 | .000 |
| MAX   | 1.1   | 1.3   | 2.9   | 59    | 89    | 32    | 4.4  | 1.6   | .75  | .00  | .00  | .00  |
| MIN   | .10   | .87   | .96   | 1.3   | 3.5   | 3.9   | 1.4  | .77   | .00  | .00  | .00  | .00  |
| AC-FT | 36    | 61    | 105   | 209   | 784   | 525   | 139  | 72    | 18   | .00  | .00  | .00  |

e Estimated.

## 11044800 DE LUZ CREEK NEAR DE LUZ, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .51  | .79  | 1.66 | 125  | 78.4 | 63.0 | 14.3 | 6.01 | 3.62 | 1.09 | .35  | .17  |
| MAX  | 1.07 | 1.31 | 2.65 | 365  | 200  | 189  | 32.7 | 10.6 | 7.33 | 2.30 | .73  | .40  |
| (WY) | 1993 | 1993 | 1993 | 1993 | 1993 | 1995 | 1995 | 1995 | 1993 | 1993 | 1995 | 1993 |
| MIN  | .000 | .000 | .33  | 1.56 | 13.6 | 7.84 | 2.34 | 1.17 | .30  | .000 | .000 | .000 |
| (WY) | 1995 | 1995 | 1995 | 1994 | 1996 | 1994 | 1996 | 1996 | 1996 | 1996 | 1994 | 1994 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1993 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 14010.49               |        | 983.25              |        |                         |             |
| ANNUAL MEAN              | 38.4                   |        | 2.69                |        | 24.4                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 53.9                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 2.69                    |             |
| HIGHEST DAILY MEAN       | 879                    | Mar 5  | 89                  | Feb 21 | 3220                    | Jan 16 1993 |
| LOWEST DAILY MEAN        | .10                    | Sep 21 | .00                 | Jun 28 | .00                     | Aug 1 1994  |
| ANNUAL SEVEN-DAY MINIMUM | .13                    | Sep 30 | .00                 | Jun 28 | .00                     | Aug 1 1994  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 461                 | Jan 31 | 9700                    | Jan 16 1993 |
| INSTANTANEOUS PEAK STAGE |                        |        | 6.10                | Jan 31 | 15.13                   | Jan 16 1993 |
| ANNUAL RUNOFF (AC-FT)    | 27790                  |        | 1950                |        | 17690                   |             |
| 10 PERCENT EXCEEDS       | 98                     |        | 6.4                 |        | 41                      |             |
| 50 PERCENT EXCEEDS       | 2.9                    |        | 1.1                 |        | 1.4                     |             |
| 90 PERCENT EXCEEDS       | .37                    |        | .00                 |        | .00                     |             |

11045300 FALLBROOK CREEK NEAR FALLBROOK, CA

LOCATION.--Lat 33°20'49", long 117°19'01", in SE 1/4 SE 1/4 sec.32, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank at culvert on DeLuz Road, 0.75 mi upstream from O'Neill Lake, and 4.5 mi southwest of Fallbrook.

DRAINAGE AREA.--6.97 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year. Discharge records for October 1964 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

GAGE.--Water-stage recorder and concrete control with low water Parshall flume. Elevation of gage is 190 ft above sea level, from topographic map.

REMARKS.--Records good. Slight regulation by two small storage reservoirs upstream from station. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 782 ft<sup>3</sup>/s, Jan. 4, 1995, gage height, 8.92 ft, from rating curve extended above 140 ft<sup>3</sup>/s on basis of culvert computation; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| May 24 | 1600 | 114                               | 2.58                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|------|-------|-------|-------|--------|-------|-------|-------|-------|------|------|------|
| 1     | .31  | .46   | .50   | .66   | 20     | 1.4   | .69   | .50   | .65   | .27  | .03  | .00  |
| 2     | .29  | .42   | .51   | .66   | 2.6    | 1.2   | .87   | .51   | .59   | .24  | .04  | .01  |
| 3     | .26  | .42   | .51   | .69   | 1.7    | 1.1   | .79   | .50   | .54   | .21  | .04  | .01  |
| 4     | .22  | .45   | .48   | .70   | 1.7    | 1.4   | .69   | .50   | .58   | .17  | .03  | .02  |
| 5     | .21  | .47   | .45   | .82   | 1.2    | 11    | .64   | .49   | .60   | .13  | .03  | .02  |
| 6     | .21  | .46   | .45   | .82   | 1.1    | 2.0   | .56   | .48   | .54   | .08  | .03  | .01  |
| 7     | .22  | .45   | .50   | .82   | 1.1    | 1.3   | .56   | .49   | .50   | .06  | .03  | .01  |
| 8     | .23  | .45   | .51   | .82   | .97    | 1.1   | .47   | .49   | .52   | .06  | .04  | .01  |
| 9     | .24  | .45   | .51   | .82   | .96    | .96   | .45   | .48   | .52   | .07  | .04  | .01  |
| 10    | .26  | .45   | .48   | .82   | .96    | .96   | .50   | .48   | .50   | .07  | .03  | .01  |
| 11    | .26  | .45   | .47   | .82   | .96    | .92   | .58   | .49   | .50   | .07  | .03  | .01  |
| 12    | .26  | .42   | .51   | .82   | 1.0    | 1.8   | .59   | .44   | .37   | .06  | .03  | .01  |
| 13    | .26  | .44   | .76   | .82   | 1.6    | 19    | .66   | .44   | .40   | .06  | .03  | .01  |
| 14    | .27  | .45   | 2.8   | .82   | 1.1    | 5.0   | .82   | .44   | .30   | .06  | .02  | .01  |
| 15    | .27  | .51   | 1.2   | .75   | 1.4    | 2.0   | .82   | .43   | .41   | .06  | .02  | .01  |
| 16    | .27  | .51   | .95   | .82   | 1.5    | 1.5   | .82   | .41   | .54   | .06  | .02  | .01  |
| 17    | .28  | .51   | .80   | 4.8   | 1.0    | 1.4   | .95   | .38   | .60   | .06  | .02  | .01  |
| 18    | .30  | .51   | .69   | 1.3   | .96    | 1.2   | 5.7   | .34   | .64   | .05  | .03  | .01  |
| 19    | .31  | .51   | .59   | .94   | .96    | 1.2   | 1.5   | .34   | .56   | .04  | .03  | .01  |
| 20    | .28  | .51   | .59   | 1.0   | 1.9    | 1.2   | .76   | .31   | .51   | .04  | .02  | .01  |
| 21    | .28  | .52   | .66   | 1.2   | 18     | 1.0   | .66   | .30   | .51   | .04  | .02  | .01  |
| 22    | .27  | .48   | .69   | 7.7   | 6.1    | .97   | .56   | .30   | .50   | .04  | .02  | .01  |
| 23    | .25  | .49   | .90   | 1.9   | 1.7    | .96   | .48   | .28   | .50   | .04  | .02  | .02  |
| 24    | .25  | .48   | 1.8   | 1.1   | 1.4    | .96   | .45   | 19    | .49   | .04  | .02  | .02  |
| 25    | .26  | .48   | .92   | 1.6   | 6.5    | .96   | .45   | 4.7   | .47   | .04  | .02  | .02  |
| 26    | .33  | .51   | .76   | 2.4   | 8.0    | .85   | .47   | 1.4   | .46   | .03  | .01  | .02  |
| 27    | .38  | .50   | .66   | 1.2   | 2.4    | .74   | .51   | .90   | .42   | .03  | .01  | .01  |
| 28    | .39  | .50   | .67   | 1.4   | 17     | .76   | .57   | .70   | .40   | .03  | .01  | .01  |
| 29    | .42  | .50   | .67   | 1.4   | 2.0    | 1.5   | .55   | .60   | .36   | .03  | .01  | .01  |
| 30    | .41  | .51   | .59   | 1.0   | ---    | .90   | .53   | .64   | .31   | .03  | .01  | .01  |
| 31    | .42  | ---   | .59   | 9.2   | ---    | .79   | ---   | .66   | ---   | .03  | .00  | ---  |
| TOTAL | 8.87 | 14.27 | 23.17 | 50.62 | 107.77 | 68.03 | 24.65 | 38.42 | 14.79 | 2.30 | 0.74 | 0.35 |
| MEAN  | .29  | .48   | .75   | 1.63  | 3.72   | 2.19  | .82   | 1.24  | .49   | .074 | .024 | .012 |
| MAX   | .42  | .52   | 2.8   | 9.2   | 20     | 19    | 5.7   | .19   | .65   | .27  | .04  | .02  |
| MIN   | .21  | .42   | .45   | .66   | .96    | .74   | .45   | .28   | .30   | .03  | .00  | .00  |
| AC-FT | 18   | 28    | 46    | 100   | 214    | 135   | 49    | 76    | 29    | 4.6  | 1.5  | .7   |

## 11045300 FALLBROOK CREEK NEAR FALLBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .18  | .39  | .56  | 7.00 | 4.24 | 9.71 | 2.16 | 1.25 | .78  | .30  | .16  | .070 |
| MAX  | .29  | .55  | .75  | 18.5 | 5.39 | 23.8 | 3.73 | 1.74 | 1.50 | .73  | .41  | .20  |
| (WY) | 1996 | 1994 | 1996 | 1995 | 1994 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 |
| MIN  | .015 | .13  | .33  | .87  | 3.62 | 2.19 | .82  | .78  | .34  | .074 | .024 | .001 |
| (WY) | 1995 | 1995 | 1995 | 1994 | 1995 | 1996 | 1996 | 1994 | 1994 | 1996 | 1996 | 1994 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |     |   | FOR 1996 WATER YEAR |     |    | WATER YEARS 1994 - 1996 |     |        |
|--------------------------|------------------------|-----|---|---------------------|-----|----|-------------------------|-----|--------|
| ANNUAL TOTAL             | 1711.58                |     |   | 353.98              |     |    | 2.23                    |     |        |
| ANNUAL MEAN              | 4.69                   |     |   | .97                 |     |    | 4.60                    |     |        |
| HIGHEST ANNUAL MEAN      |                        |     |   |                     |     |    | 1995                    |     |        |
| LOWEST ANNUAL MEAN       |                        |     |   |                     |     |    | 1996                    |     |        |
| HIGHEST DAILY MEAN       | 256                    | Mar | 5 | 20                  | Feb | 1  | 256                     | Mar | 5 1995 |
| LOWEST DAILY MEAN        | .09                    | Sep | 9 | .00                 | Aug | 31 | .00                     | Sep | 5 1994 |
| ANNUAL SEVEN-DAY MINIMUM | .11                    | Sep | 6 | .01                 | Aug | 26 | .00                     | Sep | 5 1994 |
| INSTANTANEOUS PEAK FLOW  |                        |     |   | 114                 | May | 24 | 782                     | Jan | 4 1995 |
| INSTANTANEOUS PEAK STAGE |                        |     |   | 2.58                | May | 24 | 8.92                    | Jan | 4 1995 |
| ANNUAL RUNOFF (AC-FT)    | 3390                   |     |   | 702                 |     |    | 1620                    |     |        |
| 10 PERCENT EXCEEDS       | 5.9                    |     |   | 1.4                 |     |    | 2.8                     |     |        |
| 50 PERCENT EXCEEDS       | .90                    |     |   | .50                 |     |    | .54                     |     |        |
| 90 PERCENT EXCEEDS       | .26                    |     |   | .02                 |     |    | .02                     |     |        |

## 11046000 SANTA MARGARITA RIVER AT YSIDORA, CA

LOCATION.--Lat 33°18'40", long 117°20'47", in NW 1/4 NW 1/4 sec.18, T.10 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, 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 and crest-stage gage. Elevation of gage is 75 ft above sea level, from topographic map. February 1923 to Feb. 16, 1927, at site 4.4 mi downstream at different datum (destroyed by flood). Feb. 17, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Feb. 24, 1970, at site 5.4 mi downstream at different datum; Feb. 25, 1970, to Dec. 10, 1980, at site 6.2 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow partly regulated by Vail Lake (station 11042510) since November 1948 and by Skinner Reservoir since 1974. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,000 ft<sup>3</sup>/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 20.47 ft; no flow for all or part of most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB  | MAR  | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|------|
| 1     | .00   | 7.4   | 2.9   | 11    | 547  | e91  | 24    | 4.5   | 4.4   | .00  | .00  | .00  |
| 2     | .00   | 6.7   | 2.7   | 11    | 85   | e57  | 24    | 3.2   | 3.6   | .00  | .00  | .00  |
| 3     | .00   | 6.8   | 3.9   | 9.0   | 54   | e38  | 22    | 5.1   | 2.9   | .00  | .00  | .00  |
| 4     | .00   | 3.9   | 5.2   | 12    | 43   | e40  | 20    | 5.4   | 2.4   | .00  | .00  | .00  |
| 5     | .00   | 2.9   | 8.0   | 12    | 39   | 126  | 20    | 6.3   | 1.9   | .00  | .00  | .00  |
| 6     | .00   | 1.8   | 11    | 11    | 31   | 131  | 17    | 5.6   | 1.3   | .00  | .00  | .00  |
| 7     | .00   | 2.1   | 8.0   | 10    | 25   | 63   | 15    | 5.2   | 2.5   | .00  | .00  | .00  |
| 8     | .00   | 1.3   | 7.9   | 9.8   | 21   | 44   | 13    | 4.3   | 2.6   | .00  | .00  | .00  |
| 9     | .00   | 1.5   | 8.3   | 8.8   | 14   | 24   | 11    | 3.9   | 2.1   | .00  | .00  | .00  |
| 10    | .00   | 2.9   | 7.8   | 9.0   | 14   | 21   | 12    | 4.4   | 1.3   | .00  | .00  | .00  |
| 11    | .34   | 2.6   | 10    | 9.6   | 11   | 19   | 12    | 4.3   | .96   | .00  | .00  | .00  |
| 12    | .42   | 2.5   | 10    | 9.4   | 12   | 19   | 12    | 3.5   | 1.1   | .00  | .00  | .00  |
| 13    | .45   | 2.4   | 15    | 9.6   | 13   | 259  | 11    | 3.4   | .09   | .00  | .00  | .00  |
| 14    | .45   | 4.1   | 16    | 9.6   | 12   | e353 | 10    | 3.4   | .00   | .00  | .00  | .00  |
| 15    | .40   | 2.7   | 12    | 9.3   | 13   | 135  | 9.1   | 3.6   | .00   | .00  | .00  | .00  |
| 16    | .80   | 2.4   | 9.8   | 12    | 13   | 64   | 7.9   | 3.9   | .00   | .00  | .00  | .00  |
| 17    | .68   | 2.6   | 9.8   | 11    | 12   | 45   | 7.8   | 3.8   | .00   | .00  | .00  | .00  |
| 18    | .61   | 3.6   | 11    | 13    | 11   | 46   | 11    | 3.2   | .00   | .00  | .00  | .00  |
| 19    | .00   | 4.1   | 7.4   | 15    | 11   | 48   | 14    | 2.9   | .00   | .00  | .00  | .00  |
| 20    | .40   | 5.7   | 8.4   | 11    | 19   | 45   | 13    | 3.2   | .00   | .00  | .00  | .00  |
| 21    | .90   | 6.4   | 12    | 12    | 135  | 33   | 11    | 3.1   | .00   | .00  | .00  | .00  |
| 22    | 3.8   | 6.1   | 12    | 16    | 388  | 32   | 9.3   | 3.6   | .00   | .00  | .00  | .00  |
| 23    | 7.0   | 6.5   | 13    | 19    | 76   | 30   | 10    | 3.7   | .00   | .00  | .00  | .00  |
| 24    | 8.1   | 4.9   | 15    | 15    | 24   | 27   | 9.5   | 5.0   | .00   | .00  | .00  | .00  |
| 25    | 5.3   | 4.1   | 15    | 14    | 19   | 29   | 8.7   | 5.5   | .00   | .00  | .00  | .00  |
| 26    | 6.8   | 4.8   | 14    | 14    | 100  | 26   | 8.7   | 3.9   | .00   | .00  | .00  | .00  |
| 27    | 7.2   | 4.9   | 14    | 15    | 62   | 22   | 8.7   | 5.7   | .00   | .00  | .00  | .00  |
| 28    | 5.1   | 4.0   | 13    | 16    | e272 | 23   | 7.9   | 3.9   | .00   | .00  | .00  | .00  |
| 29    | 5.2   | 3.7   | 11    | 15    | e188 | 25   | 7.3   | 4.6   | .00   | .00  | .00  | .00  |
| 30    | 5.7   | 3.2   | 9.4   | 14    | ---  | 25   | 4.5   | 3.3   | .00   | .00  | .00  | .00  |
| 31    | 6.6   | ---   | 11    | 19    | ---  | 23   | ---   | 4.9   | ---   | .00  | .00  | ---  |
| TOTAL | 66.25 | 118.6 | 314.5 | 382.1 | 2264 | 1963 | 371.4 | 130.3 | 27.15 | 0.00 | 0.00 | 0.00 |
| MEAN  | 2.14  | 3.95  | 10.1  | 12.3  | 78.1 | 63.3 | 12.4  | 4.20  | .90   | .000 | .000 | .000 |
| MAX   | 8.1   | 7.4   | 16    | 19    | 547  | 353  | 24    | 6.3   | 4.4   | .00  | .00  | .00  |
| MIN   | .00   | 1.3   | 2.7   | 8.8   | 11   | 19   | 4.5   | 2.9   | .00   | .00  | .00  | .00  |
| AC-FT | 131   | 235   | 624   | 758   | 4490 | 3890 | 737   | 258   | 54    | .00  | .00  | .00  |

e Estimated.

## 11046000 SANTA MARGARITA RIVER AT YSIDORA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.31 | 6.31 | 30.9 | 58.5 | 152  | 190  | 58.9 | 11.8 | 3.21 | .54  | .29  | .88  |
| MAX  | 13.3 | 65.8 | 141  | 532  | 1002 | 1730 | 465  | 101  | 28.7 | 3.15 | 2.30 | 13.5 |
| (WY) | 1942 | 1945 | 1941 | 1943 | 1937 | 1938 | 1941 | 1941 | 1941 | 1936 | 1935 | 1939 |
| MIN  | .000 | .000 | .000 | .000 | 1.32 | 1.18 | 1.33 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1924 | 1924 | 1948 | 1948 | 1925 | 1925 | 1925 | 1948 | 1923 | 1923 | 1923 | 1923 |

## SUMMARY STATISTICS

## WATER YEARS 1923 - 1948

|                          |       |
|--------------------------|-------|
| ANNUAL MEAN              | 43.3  |
| HIGHEST ANNUAL MEAN      | 169   |
| LOWEST ANNUAL MEAN       | .77   |
| HIGHEST DAILY MEAN       | 15500 |
| LOWEST DAILY MEAN        | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00   |
| INSTANTANEOUS PEAK FLOW  | 33600 |
| INSTANTANEOUS PEAK STAGE | 18.00 |
| 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   |
| LOWEST ANNUAL MEAN       | .000  |
| HIGHEST DAILY MEAN       | 18000 |
| LOWEST DAILY MEAN        | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00   |
| INSTANTANEOUS PEAK FLOW  | 24000 |
| INSTANTANEOUS PEAK STAGE | 18.80 |
| 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.79 | 15.2 | 29.3 | 212  | 162  | 204  | 49.0 | 22.3 | 9.82 | 3.05 | 3.10 | 1.40 |
| MAX  | 39.3 | 62.0 | 124  | 2261 | 1296 | 896  | 202  | 89.1 | 31.5 | 9.69 | 31.6 | 5.19 |
| (WY) | 1984 | 1984 | 1984 | 1993 | 1993 | 1995 | 1983 | 1983 | 1995 | 1983 | 1983 | 1993 |
| 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1981 - 1996

|                          |          |         |       |
|--------------------------|----------|---------|-------|
| ANNUAL TOTAL             | 67218.89 | 5637.30 |       |
| ANNUAL MEAN              | 184      | 15.4    | 59.4  |
| HIGHEST ANNUAL MEAN      |          |         | 337   |
| LOWEST ANNUAL MEAN       |          |         | 4.59  |
| HIGHEST DAILY MEAN       | 5650     | Mar 11  | 22000 |
| LOWEST DAILY MEAN        | .00      | Aug 29  | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00      | Sep 25  | .00   |
| INSTANTANEOUS PEAK FLOW  |          |         | 44000 |
| INSTANTANEOUS PEAK STAGE |          |         | 20.47 |
| ANNUAL RUNOFF (AC-FT)    | 133300   | 11180   | 43030 |
| 10 PERCENT EXCEEDS       | 323      | 25      | 71    |
| 50 PERCENT EXCEEDS       | 16       | 4.2     | 7.2   |
| 90 PERCENT EXCEEDS       | .65      | .00     | .00   |

## SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA

LOCATION.--Lat 33°14'08", long 117°24'27", in SW 1/4 NE 1/4 sec.9, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank 300 ft downstream from bridge on Interstate Highway 5, 0.5 mi upstream from mouth, and 3.5 mi northwest of Oceanside.

DRAINAGE AREA.--744 mi<sup>2</sup>.

## GAGE-HEIGHT RECORDS

PERIOD OF RECORD.--October 1989 to current year. Unpublished records for water year 1989 available in files of the U.S. Geological Survey.

GAGE.--Water-stage recorder. Datum of gage is 2.78 ft below sea level.

REMARKS.--Gage height generally affected by tide. See schematic diagram of Santa Margarita River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.10 ft, from floodmarks and hydrographers' notes, Jan. 16, 1993; minimum recorded gage height, 2.64 ft, but known to have been lower than elevation of sensor at times on several days during Spring 1993.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.76 ft, July 1; minimum gage height, 3.34 ft, Dec. 23.

## GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
| 1     | 5.92    | 4.47 | 5.13     | 4.02 | 5.89     | 3.82 | 6.34    | 3.79 | 6.93     | 4.18 | 5.28  | 4.02 |
| 2     | 5.80    | 4.58 | 5.48     | 4.06 | 6.05     | 3.80 | 6.40    | 3.85 | 6.38     | 4.10 | 5.57  | 4.02 |
| 3     | 5.95    | 4.61 | 5.88     | 4.13 | 6.22     | 3.81 | 6.21    | 3.81 | 6.07     | 3.98 | 5.99  | 3.96 |
| 4     | 6.35    | 4.64 | 6.18     | 4.21 | 6.32     | 3.83 | 6.43    | 3.82 | 6.15     | 3.92 | 5.83  | 4.10 |
| 5     | 6.25    | 4.79 | 6.27     | 4.21 | 6.54     | 3.88 | 6.49    | 3.93 | 5.78     | 3.89 | 5.83  | 4.12 |
| 6     | 6.19    | 4.70 | 6.30     | 4.20 | 6.48     | 3.88 | 6.26    | 3.94 | 6.10     | 3.98 | 5.68  | 4.35 |
| 7     | 6.43    | 4.80 | 6.28     | 4.17 | ---      | ---  | 6.07    | 3.89 | 5.92     | 4.13 | 5.41  | 4.19 |
| 8     | 6.44    | 4.68 | 6.19     | 4.14 | ---      | ---  | 5.85    | 3.84 | 5.47     | 4.04 | 5.49  | 4.14 |
| 9     | 6.39    | 4.56 | 6.14     | 4.13 | ---      | ---  | 5.34    | 3.82 | 5.26     | 3.99 | 5.56  | 4.14 |
| 10    | 6.37    | 4.49 | 5.95     | 4.12 | ---      | ---  | 5.06    | 3.85 | 5.27     | 4.05 | 5.34  | 4.13 |
| 11    | 6.06    | 4.44 | 5.41     | 4.10 | ---      | ---  | 4.47    | 3.82 | 5.26     | 4.02 | 5.31  | 4.11 |
| 12    | 5.88    | 4.37 | 4.98     | 4.07 | ---      | ---  | 4.43    | 3.77 | 5.45     | 4.01 | 5.32  | 4.18 |
| 13    | 5.44    | 4.41 | 4.60     | 4.07 | ---      | ---  | 4.63    | 3.68 | 5.72     | 3.97 | 5.90  | 4.49 |
| 14    | 5.04    | 4.45 | 4.28     | 4.06 | ---      | ---  | 5.25    | 3.68 | 6.04     | 3.98 | 5.95  | 4.61 |
| 15    | 4.65    | 4.42 | 4.41     | 4.06 | 6.13     | 5.93 | 5.48    | 3.73 | 6.39     | 3.90 | 5.78  | 4.41 |
| 16    | 4.47    | 4.39 | 4.62     | 4.02 | 6.21     | 6.01 | 5.97    | 3.77 | 6.88     | 3.91 | 6.20  | 4.33 |
| 17    | 4.43    | 4.37 | 5.06     | 4.05 | 6.18     | 6.02 | 7.02    | 3.86 | 7.49     | 3.89 | 6.16  | 4.35 |
| 18    | 4.46    | 4.38 | 5.60     | 4.06 | 6.36     | 6.10 | 6.92    | 3.90 | 7.44     | 3.93 | 6.03  | 4.39 |
| 19    | 4.49    | 4.39 | 6.16     | 4.08 | ---      | ---  | 7.12    | 3.79 | 7.28     | 3.86 | 5.95  | 4.38 |
| 20    | 4.68    | 4.39 | 6.59     | 4.22 | 7.13     | 3.72 | 7.25    | 3.93 | 6.70     | 3.88 | 5.96  | 4.43 |
| 21    | 5.08    | 4.46 | 6.91     | 4.18 | 7.65     | 3.64 | 7.08    | 3.90 | 6.04     | 4.01 | 5.87  | 4.31 |
| 22    | 5.90    | 4.53 | 7.24     | 4.11 | 7.50     | 3.44 | 6.90    | 3.88 | 5.89     | 4.41 | 5.76  | 4.32 |
| 23    | 6.50    | 4.65 | 7.52     | 4.14 | 7.60     | 3.34 | 5.85    | 3.86 | 5.87     | 4.05 | 5.69  | 4.39 |
| 24    | 6.72    | 4.50 | 7.28     | 4.09 | 6.88     | 3.39 | 4.78    | 3.83 | 5.54     | 3.89 | 5.50  | 4.35 |
| 25    | 6.93    | 4.39 | 7.05     | 4.04 | 6.27     | 3.39 | 4.77    | 3.81 | 5.47     | 3.96 | 4.96  | 4.34 |
| 26    | 6.98    | 4.32 | 6.46     | 4.03 | 5.62     | 3.44 | 4.98    | 3.82 | 5.81     | 4.15 | 4.82  | 4.34 |
| 27    | 6.81    | 4.36 | 6.00     | 4.00 | 5.21     | 3.37 | 4.85    | 3.82 | 5.45     | 4.04 | 4.53  | 4.35 |
| 28    | 6.34    | 4.26 | 4.88     | 3.93 | 5.74     | 3.47 | 4.89    | 3.82 | 5.55     | 4.06 | 4.60  | 4.35 |
| 29    | 5.79    | 4.15 | 4.94     | 3.85 | 5.67     | 3.57 | 5.12    | 3.80 | 5.50     | 4.09 | 4.90  | 4.45 |
| 30    | 5.23    | 4.11 | 5.47     | 3.83 | 5.89     | 3.52 | 5.50    | 3.78 | ---      | ---  | ---   | ---  |
| 31    | 4.85    | 4.05 | ---      | ---  | 6.07     | 3.68 | 6.01    | 3.79 | ---      | ---  | ---   | ---  |
| MONTH | 6.98    | 4.05 | 7.52     | 3.83 | ---      | ---  | 7.25    | 3.68 | 7.49     | 3.86 | ---   | ---  |



11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
| 1     | ---   | ---  | 6.29 | 4.29 | 6.96 | 4.11 | 7.76 | 4.29 | 6.60   | 3.93 | 6.08      | 4.45 |
| 2     | ---   | ---  | 6.50 | 4.33 | 6.87 | 4.07 | 7.49 | 4.26 | 6.45   | 3.87 | 5.92      | 4.33 |
| 3     | ---   | ---  | 6.75 | 4.25 | 6.74 | 4.06 | 7.07 | 4.19 | 5.77   | 3.83 | 5.59      | 4.42 |
| 4     | 5.83  | 5.07 | 6.83 | 4.33 | 6.70 | 4.06 | 6.75 | 4.15 | 5.86   | 3.81 | 5.34      | 4.61 |
| 5     | 5.87  | 5.08 | 6.70 | 4.31 | 6.35 | 4.09 | 5.88 | 4.12 | 5.79   | 3.78 | 5.22      | 4.83 |
| 6     | 6.00  | 5.11 | 6.70 | 4.25 | 5.84 | 4.08 | 5.30 | 4.08 | 5.76   | 3.72 | 5.33      | 5.13 |
| 7     | 6.00  | 4.94 | 6.35 | 4.24 | 5.01 | 4.08 | 5.53 | 4.05 | 5.87   | 3.74 | 5.48      | 5.33 |
| 8     | 5.97  | 4.66 | 6.00 | 4.27 | 4.97 | 4.05 | 5.66 | 4.01 | 6.08   | 3.75 | 5.60      | 5.48 |
| 9     | 5.41  | 4.56 | 5.48 | 4.26 | 5.33 | 4.05 | 5.73 | 3.99 | 6.41   | 3.75 | 5.80      | 5.60 |
| 10    | 5.23  | 4.57 | 4.79 | 4.07 | 5.70 | 4.05 | 5.86 | 3.95 | 6.55   | 3.81 | 5.80      | 5.61 |
| 11    | 5.36  | 4.70 | 5.17 | 4.16 | 5.97 | 4.03 | 6.07 | 3.96 | 6.52   | 3.87 | 5.80      | 5.52 |
| 12    | 5.39  | 4.77 | 5.53 | 4.17 | 6.11 | 4.10 | 6.27 | 3.97 | 6.42   | 3.89 | 5.72      | 5.49 |
| 13    | 5.42  | 5.01 | 5.84 | 4.09 | 6.09 | 4.15 | 6.37 | 3.96 | 6.26   | 3.85 | 5.67      | 5.51 |
| 14    | 5.48  | 5.09 | 6.21 | 4.13 | 6.04 | 4.12 | 6.31 | 3.96 | 6.07   | 3.83 | 5.65      | 5.54 |
| 15    | 6.01  | 5.03 | 6.42 | 4.23 | 6.11 | 4.15 | 6.29 | 3.96 | 5.84   | 3.84 | 5.72      | 5.60 |
| 16    | 6.27  | 4.79 | 6.70 | 4.29 | 5.91 | 4.18 | 6.22 | 3.97 | 5.73   | 3.82 | 5.75      | 5.66 |
| 17    | 6.47  | 4.42 | 6.55 | 4.28 | 5.81 | 4.18 | 5.89 | 4.00 | 5.33   | 3.91 | 5.81      | 5.71 |
| 18    | 6.39  | 4.31 | 6.19 | 4.10 | 5.77 | 4.24 | 5.80 | 3.99 | 5.20   | 4.00 | 5.86      | 5.79 |
| 19    | 6.07  | 4.21 | 6.03 | 4.06 | 5.70 | 4.22 | 5.42 | 3.97 | 5.06   | 4.09 | 5.89      | 5.80 |
| 20    | 6.00  | 4.18 | 6.01 | 4.03 | 5.30 | 4.21 | 4.92 | 3.97 | 5.06   | 4.07 | 5.92      | 5.83 |
| 21    | 6.01  | 4.16 | 5.56 | 3.97 | 4.81 | 4.21 | 4.42 | 3.97 | 5.19   | 4.18 | 5.96      | 5.86 |
| 22    | 5.56  | 4.06 | 5.18 | 4.04 | 4.48 | 4.17 | 4.68 | 3.90 | 5.50   | 4.59 | 5.98      | 5.89 |
| 23    | 4.94  | 3.70 | 4.91 | 4.08 | 4.39 | 4.09 | 5.25 | 3.90 | 5.49   | 4.67 | 6.14      | 5.98 |
| 24    | 4.38  | 3.71 | 4.85 | 4.33 | 4.69 | 4.05 | 6.55 | 4.41 | 6.09   | 5.08 | 6.25      | 6.14 |
| 25    | 4.51  | 3.96 | 4.90 | 4.69 | ---  | ---  | 6.56 | 4.87 | 6.57   | 5.06 | 6.31      | 6.25 |
| 26    | 4.60  | 4.18 | 5.02 | 4.74 | ---  | ---  | 6.73 | 4.37 | 6.84   | 4.48 | 6.38      | 6.28 |
| 27    | 5.07  | 4.32 | 5.56 | 4.82 | 6.27 | 4.20 | 7.02 | 4.06 | 6.98   | 4.36 | 6.42      | 6.32 |
| 28    | 5.23  | 4.40 | 5.70 | 5.32 | 6.75 | 4.19 | 7.40 | 4.02 | 6.77   | 4.41 | 6.43      | 6.36 |
| 29    | 5.45  | 4.44 | 5.84 | 4.76 | 7.31 | 4.21 | 7.60 | 4.06 | 6.46   | 4.46 | 6.45      | 6.38 |
| 30    | 5.91  | 4.38 | 6.26 | 4.50 | 7.70 | 4.26 | 7.56 | 4.07 | 6.36   | 4.51 | 6.49      | 6.40 |
| 31    | ---   | ---  | 6.75 | 4.21 | ---  | ---  | 7.12 | 3.93 | 6.24   | 4.54 | ---       | ---  |
| MONTH | ---   | ---  | 6.83 | 3.97 | ---  | ---  | 7.76 | 3.90 | 6.98   | 3.72 | 6.49      | 4.33 |

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1993 to current year.

pH: October 1993 to current year.

WATER TEMPERATURE: October 1993 to current year.

DISSOLVED OXYGEN: October 1993 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1993.

REMARKS.--Interruptions in record at times due to malfunction of recording equipment.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 53,700 microsiemens, Oct. 5, 1995; minimum recorded, 234 microsiemens, Mar. 5, 1995.

pH: Maximum recorded, 9.1 standard units, Apr. 16, 1995; minimum recorded, 6.2 standard units, Nov. 26, 1993.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 29, 1995, June 9, and Aug. 14, 16, 1996; minimum recorded, 5.0°C, Nov. 21, 1994.

DISSOLVED OXYGEN: Maximum recorded, 20.9 mg/L, May 1, 1996; minimum recorded, 0.0 mg/L, May 19, Aug. 29, 1994.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 53,700 microsiemens, Oct. 5; minimum recorded, 760 microsiemens, Feb. 29, Mar. 14.

pH: Maximum recorded, 9.0 standard units, Mar. 12, 18-24; minimum recorded, 6.9 standard units, Nov. 28.

WATER TEMPERATURE: Maximum recorded, 32.0°C, June 9, Aug. 14, 16; minimum recorded, 6.0°C, Jan. 24.

DISSOLVED OXYGEN: Maximum recorded, 21.4 mg/L, May 2; minimum recorded, 0.1 mg/L, Oct. 30, June 6, 17-19.

## SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN   | MAX      | MIN   | MAX      | MIN   | MAX     | MIN   | MAX      | MIN  | MAX   | MIN  |
|-------|---------|-------|----------|-------|----------|-------|---------|-------|----------|------|-------|------|
|       | OCTOBER |       | NOVEMBER |       | DECEMBER |       | JANUARY |       | FEBRUARY |      | MARCH |      |
| 1     | 52000   | 47100 | 47300    | 34000 | 43700    | 26500 | 49900   | 36700 | 11700    | 1020 | 23300 | 1090 |
| 2     | 52600   | 47300 | 49300    | 31700 | 45700    | 26500 | 50300   | 33200 | 42500    | 1060 | 46200 | 1000 |
| 3     | 53100   | 47600 | 49700    | 35200 | 46700    | 27700 | 50200   | 28700 | 46600    | 1510 | 40900 | 1470 |
| 4     | 53300   | 48700 | 49600    | 37900 | 50100    | 27000 | 50000   | 32000 | 43400    | 1690 | 37100 | 1680 |
| 5     | 53700   | 51100 | 47200    | 31800 | 50500    | 26200 | 49400   | 24100 | 36200    | 2050 | 3450  | 1330 |
| 6     | 53200   | 49900 | 46100    | 32700 | 50000    | 32000 | 46800   | 25000 | 45600    | 2590 | 16500 | 1070 |
| 7     | 53000   | 48400 | 45100    | 32500 | 49800    | 26100 | 47300   | 22500 | 45600    | 4980 | 37500 | 1250 |
| 8     | 52300   | 47600 | 44400    | 34600 | 47200    | 24900 | 48000   | 24600 | 45100    | 3360 | 44700 | 1450 |
| 9     | 51000   | 44400 | 47700    | 28000 | 45500    | 30000 | 42200   | 23900 | 42900    | 2690 | 45500 | 1540 |
| 10    | 51000   | 46000 | 48900    | 25800 | 42900    | 24000 | 43100   | 24800 | 44800    | 3310 | 45500 | 1750 |
| 11    | 49700   | 45600 | 42900    | 31000 | 40600    | 24000 | 36600   | 23500 | ---      | ---  | 29000 | 1720 |
| 12    | 47600   | 44000 | 42100    | 30400 | 45100    | 23800 | 36400   | ---   | ---      | ---  | 43100 | 1530 |
| 13    | 46600   | 35900 | 40400    | 26400 | 49600    | 31700 | 40100   | ---   | ---      | ---  | 4140  | 1060 |
| 14    | 47600   | 40000 | 35700    | 20500 | 48800    | 43000 | 45300   | ---   | ---      | ---  | 1060  | 760  |
| 15    | 46700   | 35700 | 36800    | 22700 | 47800    | 44600 | 45800   | 26000 | ---      | ---  | 13400 | 930  |
| 16    | 46500   | 40800 | 38300    | 24900 | 46100    | 44100 | 46300   | 24000 | ---      | ---  | 45800 | 1180 |
| 17    | 43200   | 38100 | 41800    | 26600 | 45200    | 43100 | 49800   | 26000 | ---      | ---  | 47000 | 2430 |
| 18    | 42100   | 37200 | 44600    | 25500 | 44500    | 42000 | 49300   | 26500 | ---      | ---  | 42700 | 2140 |
| 19    | 41300   | 35900 | 48100    | 30000 | 43700    | 42200 | 50300   | 22100 | ---      | ---  | 44000 | 1990 |
| 20    | 40000   | 35200 | 49300    | 34700 | 43300    | 27100 | 50300   | 24500 | ---      | ---  | 44900 | 2590 |
| 21    | 43200   | 36900 | 50300    | 33200 | 50600    | 20000 | 48400   | 29700 | ---      | ---  | 46700 | 2510 |
| 22    | 44100   | 37700 | 50400    | 33600 | 50600    | ---   | 47800   | 18600 | ---      | ---  | 46700 | 1870 |
| 23    | 49000   | 41800 | 49700    | 32300 | 50400    | 34000 | 48600   | 8080  | ---      | ---  | 42800 | 1670 |
| 24    | 47900   | 41700 | 46900    | 33500 | 49400    | 29000 | 36200   | 5710  | 2460     | 1210 | 42600 | 1920 |
| 25    | 46800   | 37500 | 49000    | 33700 | 50400    | 35000 | ---     | ---   | 26100    | 1290 | 24600 | 1710 |
| 26    | 50000   | 38500 | 50000    | 35700 | 49500    | 37000 | 31000   | ---   | 43100    | 1070 | ---   | ---  |
| 27    | 50200   | 38400 | 47700    | 33500 | 46800    | 27000 | 47500   | ---   | 1160     | 980  | ---   | ---  |
| 28    | 44200   | 37200 | 45700    | 30500 | 49400    | 24000 | 44900   | ---   | 1280     | 810  | ---   | ---  |
| 29    | 44600   | 32600 | 44800    | 26400 | 49300    | 27000 | 34400   | ---   | 1090     | 760  | ---   | ---  |
| 30    | 46300   | 28900 | 44000    | 28900 | 48300    | 23000 | 47700   | ---   | ---      | ---  | ---   | ---  |
| 31    | 45000   | 30300 | ---      | ---   | 48900    | 24000 | 49200   | ---   | ---      | ---  | ---   | ---  |
| MONTH | 53700   | 28900 | 50400    | 20500 | 50600    | ---   | ---     | ---   | ---      | ---  | ---   | ---  |

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN   | MAX   | MIN   | MAX   | MIN   | MAX   | MIN   | MAX    | MIN   | MAX       | MIN   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-----------|-------|
|       | APRIL |       | MAY   |       | JUNE  |       | JULY  |       | AUGUST |       | SEPTEMBER |       |
| 1     | 23800 | 1840  | 48000 | 16200 | 51000 | 27500 | 51200 | 37500 | 50400  | 30800 | 49300     | 42700 |
| 2     | 41600 | 2200  | 47700 | 16600 | 50800 | 23100 | 50800 | 37600 | 50300  | 30300 | 48200     | 43800 |
| 3     | 41600 | 4810  | 47200 | 17400 | 51100 | 22200 | 51200 | 32300 | 50800  | 31000 | 49000     | 44700 |
| 4     | 41600 | 6870  | 46300 | 18600 | 51900 | 20600 | 51200 | 36500 | 49000  | 36300 | 48800     | 37600 |
| 5     | 40400 | 11500 | 46700 | 18900 | 52200 | 20800 | 51400 | 34500 | 50300  | 37000 | 49400     | 41200 |
| 6     | 43300 | 10200 | 46900 | 17100 | 50400 | 25400 | 49700 | 30900 | 50800  | 31100 | 49500     | 43700 |
| 7     | 42000 | 15100 | 48200 | 18500 | 48300 | 28800 | 50500 | 20900 | 50700  | 22500 | 49300     | 44600 |
| 8     | 44300 | 12000 | 47900 | 20500 | 46100 | 31100 | 49800 | 22600 | 49900  | 22800 | 48700     | 45000 |
| 9     | 43100 | ---   | 43400 | 20900 | 48400 | 27600 | 47900 | 28600 | 50400  | 27400 | 48400     | 43600 |
| 10    | 40200 | ---   | 41300 | 19700 | 51400 | 31900 | 50300 | 25000 | 50700  | 31000 | 48200     | 43400 |
| 11    | 43500 | 9700  | 43600 | 22800 | 50500 | 32000 | 50800 | 20000 | 50700  | 22300 | 48800     | 43500 |
| 12    | 36700 | 9430  | 47900 | 16800 | 51800 | 19300 | 51800 | 22000 | 50300  | 23000 | 48200     | 44200 |
| 13    | 38300 | 14200 | 47900 | 20800 | 51600 | 27500 | 51700 | 21700 | 50000  | 25400 | 47700     | 42200 |
| 14    | 37600 | 13800 | 47800 | 29800 | 51300 | 28500 | 51100 | 20800 | 48800  | 24700 | 46900     | 42200 |
| 15    | 41300 | 17300 | 49000 | 31000 | 50700 | 30200 | 50200 | 20600 | 49200  | 26500 | 45500     | 41000 |
| 16    | 47700 | 17100 | 49100 | 39700 | 50300 | 23800 | 48500 | 23400 | 49900  | 24100 | 44400     | 41500 |
| 17    | 37600 | 21000 | 49100 | 37500 | 50400 | 28700 | 50700 | 24300 | 50300  | 27200 | 44900     | 41700 |
| 18    | 38000 | ---   | 48900 | 29900 | 51200 | 31300 | 51100 | 28100 | 50100  | 38100 | 42400     | 37700 |
| 19    | 43900 | ---   | 49100 | 28800 | 51300 | 27800 | 50900 | 26400 | 48200  | 42700 | 43400     | 41000 |
| 20    | 47100 | ---   | 50100 | 29000 | 51100 | 20500 | 49400 | 25700 | 48400  | 42600 | 42300     | 39200 |
| 21    | 48300 | ---   | 49200 | 29000 | 47200 | 27300 | 40100 | 21600 | 48900  | 43000 | 41900     | 39000 |
| 22    | 48800 | ---   | 48100 | 29000 | 41800 | 19700 | 40100 | 19500 | 47300  | 37100 | 40700     | 36500 |
| 23    | 44800 | ---   | 49500 | 31600 | 37800 | 24200 | 49700 | 19100 | 48000  | 37600 | 41200     | 37000 |
| 24    | 16400 | ---   | 49100 | 38600 | 35000 | 22800 | 50700 | 46600 | 49200  | 40300 | 41900     | 39600 |
| 25    | 22300 | ---   | 48200 | 43400 | 46500 | ---   | 51200 | 40900 | 50000  | 36800 | 41200     | 36500 |
| 26    | 17500 | ---   | 45800 | 42000 | 50200 | ---   | 50600 | 33800 | 50200  | 32200 | 41100     | 35700 |
| 27    | 44500 | 12000 | 45500 | 42300 | 51400 | 24100 | 51000 | 25000 | 49400  | 32600 | 41700     | 38300 |
| 28    | 46300 | 13000 | 47900 | 42600 | 51300 | 25200 | 51500 | 21100 | 48200  | 33400 | 41000     | 39500 |
| 29    | 46900 | 12900 | 49100 | 35600 | 51600 | 25700 | 51400 | 22700 | 47100  | 36500 | 40100     | 38300 |
| 30    | 47900 | 22800 | 50700 | 31400 | 51100 | 32900 | 51100 | 30200 | 49600  | 40500 | 39600     | 38400 |
| 31    | ---   | ---   | 50900 | 34600 | ---   | ---   | 50100 | 31600 | 49300  | 41600 | ---       | ---   |
| MONTH | 48800 | ---   | 50900 | 16200 | 52200 | ---   | 51800 | 19100 | 50800  | 22300 | 49500     | 35700 |

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
| 1     | 8.0     | 7.6 | 8.0      | 7.7 | 7.9      | 7.6 | 8.0     | 7.4 | 8.2      | 7.8 | 8.3   | 8.0 |
| 2     | 8.0     | 7.5 | 8.0      | 7.8 | 7.9      | 7.3 | 8.1     | 7.8 | 8.1      | 7.9 | 8.5   | 8.0 |
| 3     | 8.0     | 7.6 | 8.1      | 7.8 | 8.0      | 7.3 | 8.1     | 7.6 | 8.3      | 8.0 | 8.6   | 8.0 |
| 4     | 8.0     | 7.7 | 8.1      | 7.8 | 8.0      | 7.6 | 8.2     | 7.7 | 8.2      | 8.0 | 8.6   | 8.0 |
| 5     | 8.1     | 7.7 | 8.2      | 7.8 | 8.0      | 7.5 | 8.3     | 7.6 | 8.8      | 7.8 | 8.8   | 8.0 |
| 6     | 8.2     | 7.7 | 8.2      | 7.7 | 8.1      | 7.5 | 8.2     | 7.7 | 8.4      | 7.7 | 8.7   | 8.1 |
| 7     | 8.2     | 7.7 | 8.2      | 7.8 | 8.0      | 7.6 | 8.2     | 7.7 | 8.5      | 7.8 | 8.8   | 8.1 |
| 8     | 8.2     | 7.7 | 8.2      | 7.7 | 8.0      | 7.6 | 8.1     | 7.7 | 8.6      | 7.7 | 8.8   | 8.1 |
| 9     | 8.2     | 7.7 | 8.2      | 7.6 | 8.1      | 7.4 | 8.2     | 7.6 | 8.8      | 7.7 | 8.9   | 8.1 |
| 10    | 8.1     | 7.7 | 8.0      | 7.5 | 8.1      | 7.4 | 8.3     | 7.7 | 8.7      | 7.9 | 8.7   | 8.1 |
| 11    | 8.0     | 7.6 | 8.1      | 7.6 | 8.0      | 7.4 | 7.8     | --- | ---      | --- | 8.8   | 8.1 |
| 12    | 8.0     | 7.6 | 8.1      | 7.7 | 7.9      | 7.5 | 7.6     | 7.3 | ---      | --- | 9.0   | 8.1 |
| 13    | 8.3     | 7.6 | 8.0      | 7.6 | 7.8      | 7.5 | 7.9     | 7.3 | ---      | --- | 8.7   | 8.0 |
| 14    | 8.3     | 7.9 | 8.0      | 7.4 | 8.2      | 7.6 | 8.1     | 7.6 | ---      | --- | 8.2   | 7.9 |
| 15    | 8.4     | 7.8 | 8.0      | 7.2 | 8.2      | 8.2 | 8.2     | 7.4 | ---      | --- | 8.8   | 8.0 |
| 16    | 8.1     | 7.9 | 7.8      | 7.6 | 8.2      | 8.1 | 8.2     | 7.7 | ---      | --- | 8.9   | 8.0 |
| 17    | 8.2     | 7.9 | 7.8      | 7.6 | 8.3      | 8.2 | 8.1     | 7.8 | ---      | --- | 8.9   | 8.1 |
| 18    | 8.2     | 7.9 | 8.0      | 7.7 | 8.3      | 8.2 | 8.1     | 7.6 | ---      | --- | 9.0   | 8.0 |
| 19    | 8.3     | 7.9 | 8.0      | 7.6 | 8.4      | 8.2 | 8.2     | 7.6 | ---      | --- | 9.0   | 8.0 |
| 20    | 8.3     | 8.0 | 8.1      | 7.7 | 8.7      | 8.2 | 8.2     | 7.7 | ---      | --- | 9.0   | 8.1 |
| 21    | 8.4     | 8.0 | 8.2      | 7.8 | 8.6      | 7.9 | 8.1     | 7.8 | ---      | --- | 9.0   | 8.1 |
| 22    | 8.5     | 8.1 | 8.3      | 7.8 | 8.3      | 8.1 | 8.2     | 7.8 | ---      | --- | 9.0   | 8.0 |
| 23    | 8.5     | 8.1 | 8.2      | 7.8 | 8.4      | 8.1 | 8.4     | 7.9 | ---      | --- | 9.0   | 8.1 |
| 24    | 8.5     | 8.1 | 8.1      | 7.8 | 8.4      | 8.0 | 8.3     | 7.2 | 8.2      | 7.6 | 9.0   | 8.1 |
| 25    | 8.5     | 8.1 | 8.2      | 7.8 | 8.3      | 7.9 | 8.2     | 7.7 | 8.4      | 8.0 | 8.9   | 8.3 |
| 26    | 8.5     | 7.9 | 8.2      | 7.7 | 8.6      | 7.6 | 8.9     | 8.0 | 8.2      | 7.9 | 8.9   | 8.3 |
| 27    | 8.4     | 7.9 | 8.1      | 7.6 | 8.6      | 7.1 | 8.9     | 8.0 | 8.2      | 7.6 | 8.8   | 8.2 |
| 28    | 8.4     | 7.8 | 8.0      | 6.9 | 8.6      | 7.5 | 8.7     | 7.9 | 8.1      | 7.9 | 8.6   | 8.0 |
| 29    | 8.3     | 7.7 | 7.9      | 7.6 | 8.8      | 7.3 | 8.7     | 7.9 | 8.1      | 7.7 | 8.7   | 8.0 |
| 30    | 8.4     | 7.6 | 7.9      | 7.0 | 8.8      | 7.6 | 8.6     | 7.8 | ---      | --- | 8.6   | 8.0 |
| 31    | 8.2     | 7.8 | ---      | --- | 8.2      | 7.7 | 8.6     | 7.8 | ---      | --- | 8.6   | 7.9 |
| MONTH | 8.5     | 7.5 | 8.3      | 6.9 | 8.8      | 7.1 | 8.9     | --- | ---      | --- | 9.0   | 7.9 |

## SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
| 1     | 8.7   | 8.1 | 8.8 | 7.9 | 8.7  | 8.0 | 8.3  | 7.8 | 8.2    | 7.8 | 8.4       | 7.9 |
| 2     | 8.7   | 7.9 | 8.7 | 7.8 | 8.5  | 7.9 | 8.1  | 7.8 | 8.3    | 7.7 | 8.3       | 7.8 |
| 3     | 8.7   | 7.9 | 8.7 | 7.9 | 8.6  | 7.9 | 8.1  | 7.8 | 8.4    | 7.7 | 8.2       | 7.8 |
| 4     | 8.7   | 7.9 | 8.7 | 7.9 | 8.7  | 7.9 | 8.1  | 7.8 | 8.3    | 7.7 | 8.1       | 7.8 |
| 5     | 8.6   | 7.8 | 8.7 | 7.9 | 8.5  | 7.9 | 8.0  | 7.6 | 8.2    | 7.6 | 8.3       | 7.8 |
| 6     | 8.5   | 7.7 | 8.7 | 7.9 | 8.6  | 7.9 | 8.0  | 7.6 | 8.1    | 7.6 | 8.4       | 7.8 |
| 7     | 8.5   | 7.6 | 8.6 | 7.9 | 8.5  | 7.8 | 7.9  | 7.7 | 8.1    | 7.6 | 8.4       | 7.9 |
| 8     | 8.5   | 7.4 | 8.5 | 8.0 | 8.5  | 7.8 | 8.0  | 7.7 | 8.1    | 7.7 | 8.4       | 8.0 |
| 9     | 8.5   | 7.6 | 8.5 | 8.1 | 8.4  | 7.9 | 8.0  | 7.6 | 8.1    | 7.7 | 8.4       | 8.0 |
| 10    | 8.6   | 7.7 | 8.7 | 8.2 | 8.4  | 7.8 | 8.1  | 7.6 | 8.1    | 7.8 | 8.5       | 8.0 |
| 11    | 8.5   | 7.7 | 8.8 | 8.3 | 8.6  | 7.9 | 8.8  | 7.6 | 8.6    | 7.7 | 8.3       | 8.0 |
| 12    | 8.4   | 7.9 | 8.7 | 8.0 | 8.7  | 8.0 | 8.7  | 7.8 | 8.6    | 7.8 | 8.3       | 8.0 |
| 13    | 8.6   | 7.8 | 8.6 | 8.0 | 8.6  | 7.9 | 8.7  | 7.9 | 8.6    | 7.8 | 8.2       | 8.0 |
| 14    | 8.5   | 7.9 | 8.5 | 8.1 | 8.8  | 7.9 | 8.5  | 7.9 | 8.5    | 7.8 | 8.2       | 8.0 |
| 15    | 8.5   | 7.9 | 8.5 | 7.9 | 8.8  | 8.1 | 8.6  | 7.9 | 8.5    | 7.8 | 8.2       | 8.0 |
| 16    | 8.6   | 7.7 | 8.5 | 7.9 | 8.7  | 8.0 | 8.4  | 7.8 | 8.5    | 7.7 | 8.2       | 8.0 |
| 17    | 8.5   | 7.7 | 8.7 | 8.0 | 8.8  | 8.0 | 8.7  | 7.9 | 8.4    | 7.8 | 8.3       | 8.0 |
| 18    | 8.6   | 7.8 | 8.9 | 8.1 | 8.8  | 7.9 | 8.6  | 7.9 | 8.3    | 7.8 | 8.5       | 8.0 |
| 19    | 8.5   | 7.9 | 8.8 | 8.0 | 8.7  | 8.0 | 8.4  | 7.9 | 8.4    | 7.8 | 8.6       | 8.3 |
| 20    | 8.6   | 7.9 | 8.6 | 7.8 | 8.6  | 8.0 | 8.5  | 7.9 | 8.3    | 7.8 | 8.6       | 8.3 |
| 21    | 8.6   | 7.9 | 8.5 | 7.9 | 8.3  | 7.8 | 8.0  | 7.9 | 8.3    | 7.8 | 8.6       | 8.3 |
| 22    | 8.5   | 7.2 | 8.3 | 7.9 | 8.4  | 7.8 | 8.2  | 7.8 | 8.3    | 7.9 | 8.5       | 8.3 |
| 23    | 8.5   | 7.3 | 8.3 | 7.9 | 8.2  | 7.8 | 8.2  | 7.8 | 8.4    | 7.9 | 8.4       | 8.3 |
| 24    | 8.4   | 7.3 | 8.2 | 7.8 | 8.3  | 7.8 | 8.3  | 7.8 | 8.4    | 7.9 | 8.5       | 8.3 |
| 25    | 8.6   | 7.7 | 8.1 | 7.8 | 8.4  | 8.1 | 8.3  | 7.9 | 8.5    | 7.8 | 8.4       | 8.3 |
| 26    | 8.4   | 7.7 | 8.4 | 7.9 | 8.5  | 8.0 | 8.3  | 7.8 | 8.8    | 7.8 | 8.4       | 8.3 |
| 27    | 8.5   | 7.8 | 8.3 | 8.1 | 8.7  | 7.9 | 8.5  | 7.9 | 8.8    | 7.9 | 8.5       | 8.3 |
| 28    | 8.6   | 7.9 | 8.3 | 8.0 | 8.7  | 7.9 | 8.5  | 7.9 | 8.7    | 8.0 | 8.5       | 8.3 |
| 29    | 8.6   | 7.9 | 8.4 | 8.0 | 8.6  | 7.9 | 8.7  | 7.8 | 8.6    | 7.8 | 8.5       | 8.3 |
| 30    | 8.6   | 7.8 | 8.5 | 8.1 | 8.5  | 7.8 | 8.7  | 7.9 | 8.5    | 7.9 | 8.5       | 8.3 |
| 31    | ---   | --- | 8.7 | 8.0 | ---  | --- | 8.7  | 7.9 | 8.4    | 7.9 | ---       | --- |
| MONTH | 8.7   | 7.2 | 8.9 | 7.8 | 8.8  | 7.8 | 8.8  | 7.6 | 8.8    | 7.6 | 8.6       | 7.8 |

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
| 1     | 25.5    | 21.5 | 19.5     | 17.5 | 18.5     | 14.0 | 16.0    | 13.0 | 16.5     | 13.5 | 20.0  | 11.0 |
| 2     | 26.0    | 22.0 | 21.0     | 17.0 | 18.0     | 15.0 | 16.5    | 13.0 | 17.5     | 14.0 | 20.0  | 11.5 |
| 3     | 25.5    | 21.5 | 21.0     | 17.0 | 18.0     | 14.0 | 15.5    | 11.0 | 15.0     | 12.5 | 16.5  | 13.0 |
| 4     | 24.5    | 20.5 | 21.0     | 18.0 | 18.0     | 14.0 | 15.5    | 11.0 | 19.0     | 12.5 | 15.5  | 13.0 |
| 5     | 25.5    | 21.5 | 21.0     | 17.5 | 18.5     | 14.5 | 17.0    | 13.5 | 20.0     | 14.0 | 22.0  | 14.0 |
| 6     | 24.5    | 21.0 | 21.0     | 17.0 | 18.0     | 15.5 | 15.5    | 12.5 | 18.0     | 15.0 | 21.0  | 13.0 |
| 7     | 24.0    | 21.0 | 20.0     | 16.5 | 17.5     | 15.5 | 17.0    | 11.5 | 20.0     | 13.0 | 21.0  | 11.0 |
| 8     | 23.0    | 20.5 | 20.0     | 16.5 | 17.5     | 14.0 | 16.5    | 11.5 | 19.5     | 11.5 | 21.5  | 10.5 |
| 9     | 23.5    | 20.5 | 20.0     | 17.0 | 17.5     | 14.5 | 16.5    | 11.5 | 16.5     | 14.0 | 22.0  | 12.5 |
| 10    | 23.0    | 20.5 | 20.0     | 17.0 | 18.0     | 15.0 | 16.5    | 12.0 | 19.0     | 14.5 | 22.0  | 12.0 |
| 11    | 22.0    | 20.0 | 20.5     | 14.5 | 17.5     | 13.5 | 17.0    | 11.5 | ---      | ---  | 22.5  | 13.5 |
| 12    | 23.0    | 21.0 | 20.0     | 16.0 | 16.0     | 14.5 | 18.0    | 11.5 | ---      | ---  | 20.0  | 14.5 |
| 13    | 23.5    | 21.0 | 19.5     | 16.0 | 16.5     | 15.0 | 18.0    | 11.0 | ---      | ---  | 21.5  | 13.5 |
| 14    | 23.5    | 22.0 | 20.5     | 17.0 | 17.0     | 14.0 | 18.5    | 14.5 | ---      | ---  | 20.5  | 13.5 |
| 15    | 23.5    | 22.0 | 20.0     | 18.0 | 17.0     | 16.0 | 18.0    | 15.0 | ---      | ---  | 22.5  | 13.5 |
| 16    | 24.0    | 20.5 | 18.5     | 17.0 | 16.0     | 14.5 | 19.0    | 15.5 | ---      | ---  | 23.0  | 15.5 |
| 17    | 24.0    | 20.0 | 20.0     | 16.5 | 14.5     | 13.0 | 19.0    | 15.0 | ---      | ---  | 20.5  | 16.0 |
| 18    | 23.0    | 21.5 | 19.0     | 17.5 | 13.5     | 12.0 | 17.0    | 13.5 | ---      | ---  | 22.5  | 16.5 |
| 19    | 22.0    | 20.5 | 19.5     | 16.5 | 13.5     | 12.0 | 17.0    | 14.0 | ---      | ---  | 21.5  | 17.0 |
| 20    | 22.5    | 19.5 | 19.0     | 16.0 | 15.5     | 12.0 | 16.0    | 12.0 | ---      | ---  | 22.5  | 17.0 |
| 21    | 22.0    | 20.5 | 18.5     | 17.0 | 15.5     | 9.0  | 15.5    | 10.5 | ---      | ---  | 22.0  | 16.5 |
| 22    | 22.5    | 19.0 | 18.5     | 16.0 | 15.0     | 9.0  | 14.5    | 11.0 | ---      | ---  | 24.0  | 16.5 |
| 23    | 21.5    | 18.5 | 18.5     | 15.5 | 15.0     | 9.5  | 15.0    | 7.0  | ---      | ---  | 23.0  | 15.0 |
| 24    | 21.0    | 16.5 | 18.0     | 15.0 | 13.0     | 9.0  | 14.5    | 6.0  | 18.0     | 9.0  | 22.5  | 13.0 |
| 25    | 20.0    | 16.0 | 18.0     | 15.0 | 14.5     | 8.5  | 13.5    | 10.0 | 14.5     | 11.0 | 23.0  | 12.0 |
| 26    | 20.0    | 15.5 | 17.5     | 15.0 | 15.0     | 8.0  | 16.5    | 9.5  | 14.0     | 9.0  | 23.5  | 13.0 |
| 27    | 21.0    | 16.0 | 19.0     | 14.0 | 16.0     | 8.5  | 14.5    | 8.5  | 15.5     | 8.0  | 24.5  | 12.0 |
| 28    | 20.5    | 17.5 | 18.0     | 12.5 | 16.5     | 8.5  | 18.0    | 11.5 | 17.5     | 10.0 | 20.0  | 14.5 |
| 29    | 21.0    | 18.0 | 18.5     | 14.0 | 17.0     | 11.5 | 16.0    | 11.0 | 17.0     | 9.0  | 23.5  | 13.5 |
| 30    | 22.5    | 19.5 | 19.0     | 13.5 | 17.0     | 12.0 | 14.0    | 11.0 | ---      | ---  | 23.0  | 12.5 |
| 31    | 21.0    | 19.5 | ---      | ---  | 16.0     | 13.5 | 16.5    | 11.5 | ---      | ---  | 23.5  | 13.5 |
| MONTH | 26.0    | 15.5 | 21.0     | 12.5 | 18.5     | 8.0  | 19.0    | 6.0  | ---      | ---  | 24.5  | 10.5 |

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
| 1     | 25.0  | 15.5 | 29.0 | 20.0 | 30.5 | 20.0 | 29.0 | 20.0 | 27.5   | 22.5 | 28.5      | 24.0 |
| 2     | 25.5  | 16.5 | 29.0 | 20.5 | 28.5 | 20.5 | 28.5 | 21.0 | 27.5   | 22.0 | 27.5      | 25.0 |
| 3     | 23.0  | 17.5 | 28.0 | 20.0 | 30.5 | 20.0 | 26.5 | 20.5 | 28.0   | 22.5 | 27.0      | 25.0 |
| 4     | 23.5  | 18.0 | 29.5 | 20.0 | 30.0 | 21.0 | 25.0 | 18.5 | 27.0   | 22.0 | 28.0      | 25.0 |
| 5     | 23.5  | 18.5 | 29.0 | 18.5 | 28.0 | 21.5 | 27.5 | 17.0 | 27.0   | 23.5 | 29.5      | 25.0 |
| 6     | 23.5  | 18.0 | 29.0 | 19.0 | 29.0 | 22.0 | 27.5 | 22.0 | 25.5   | 22.5 | 28.5      | 26.0 |
| 7     | 24.5  | 17.5 | 29.0 | 20.5 | 30.0 | 23.0 | 25.5 | 22.0 | 25.5   | 23.0 | 29.0      | 26.0 |
| 8     | 26.5  | 18.5 | 27.0 | 19.5 | 30.5 | 22.5 | 25.5 | 21.5 | 26.0   | 23.5 | 29.0      | 26.5 |
| 9     | 25.5  | 18.5 | 27.0 | 20.0 | 32.0 | 23.5 | 29.5 | 22.0 | 26.0   | 22.0 | 28.5      | 26.0 |
| 10    | 25.5  | 18.0 | 28.5 | 21.0 | 30.5 | 23.0 | 25.5 | 21.5 | 25.5   | 22.0 | 28.0      | 26.0 |
| 11    | 24.5  | 18.0 | 30.0 | 22.0 | 29.0 | 23.5 | 28.5 | 20.5 | 30.0   | 22.5 | 28.0      | 25.5 |
| 12    | 24.5  | 20.0 | 31.5 | 21.5 | 31.5 | 23.0 | 28.5 | 19.5 | 31.0   | 22.5 | 27.0      | 24.0 |
| 13    | 24.5  | 20.5 | 30.0 | 21.0 | 30.5 | 23.0 | 28.5 | 19.0 | 31.5   | 22.0 | 26.5      | 24.0 |
| 14    | 25.0  | 20.0 | 29.5 | 22.5 | 29.5 | 23.0 | 27.5 | 20.5 | 32.0   | 22.5 | 25.5      | 23.5 |
| 15    | 25.0  | 20.0 | 29.5 | 22.5 | 29.0 | 21.5 | 28.5 | 21.0 | 30.5   | 24.0 | 26.0      | 24.5 |
| 16    | 25.0  | 19.5 | 28.5 | 22.5 | 27.5 | 22.0 | 26.0 | 21.0 | 32.0   | 23.5 | 26.5      | 24.0 |
| 17    | 27.5  | 19.0 | 28.5 | 22.0 | 29.0 | 22.0 | 28.5 | 20.5 | 30.0   | 23.5 | 26.5      | 25.0 |
| 18    | 27.0  | 18.0 | 28.5 | 20.5 | 30.5 | 22.0 | 28.0 | 20.0 | 28.5   | 25.0 | 26.0      | 24.5 |
| 19    | 26.0  | 13.5 | 28.5 | 20.0 | 29.0 | 22.0 | 27.5 | 20.5 | 29.0   | 24.5 | 26.5      | 25.0 |
| 20    | 25.0  | 13.0 | 28.0 | 19.5 | 27.0 | 22.5 | 27.5 | 21.5 | 29.5   | 25.5 | 27.0      | 25.0 |
| 21    | 26.0  | 14.0 | 29.0 | 20.0 | 25.5 | 21.5 | 28.0 | 23.0 | 29.0   | 26.0 | 27.0      | 26.0 |
| 22    | 24.5  | 14.0 | 24.5 | 21.0 | 27.5 | 21.0 | 30.0 | 23.0 | 29.5   | 25.5 | 26.0      | 25.0 |
| 23    | 23.5  | 15.5 | 27.0 | 19.0 | 26.5 | 23.0 | 26.5 | 22.5 | 29.0   | 25.5 | 25.5      | 25.0 |
| 24    | 22.5  | 15.0 | 24.0 | 20.5 | 27.5 | 22.0 | 26.5 | 23.5 | 28.0   | 25.0 | 26.0      | 24.0 |
| 25    | 26.5  | 17.0 | 25.0 | 19.0 | 28.5 | 21.0 | 28.0 | 23.0 | 28.0   | 23.5 | 25.0      | 23.5 |
| 26    | 24.0  | 21.5 | 26.5 | 20.5 | 27.0 | 20.0 | 28.0 | 22.0 | 28.5   | 21.5 | 24.0      | 23.0 |
| 27    | 26.0  | 19.5 | 25.5 | 22.5 | 27.0 | 20.0 | 29.5 | 23.0 | 29.0   | 20.5 | 24.5      | 23.0 |
| 28    | 27.5  | 20.5 | 26.0 | 22.5 | 29.0 | 18.5 | 30.5 | 21.5 | 28.0   | 20.0 | 24.5      | 23.5 |
| 29    | 28.0  | 20.5 | 27.0 | 22.5 | 30.5 | 17.5 | 31.0 | 21.5 | 27.5   | 20.0 | 24.5      | 23.5 |
| 30    | 29.5  | 18.5 | 27.0 | 22.5 | 31.0 | 19.0 | 31.0 | 22.5 | 27.5   | 21.0 | 25.5      | 23.5 |
| 31    | ---   | ---  | 28.5 | 20.0 | ---  | ---  | 31.0 | 22.0 | 28.0   | 23.0 | ---       | ---  |
| MONTH | 29.5  | 13.0 | 31.5 | 18.5 | 32.0 | 17.5 | 31.0 | 17.0 | 32.0   | 20.0 | 29.5      | 23.0 |

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
| 1     | 8.6     | 2.2 | 7.5      | .2  | 14.1     | 2.3 | 13.0    | 1.6 | 7.9      | 6.0 | 11.6  | 8.2 |
| 2     | 10.0    | 2.2 | 11.7     | .7  | 13.6     | 2.3 | 16.5    | 2.5 | 8.2      | 6.5 | 11.7  | 7.9 |
| 3     | 6.3     | 2.2 | 11.2     | .3  | 14.4     | 2.1 | 12.0    | 2.0 | 9.5      | 7.3 | 11.0  | 8.0 |
| 4     | 7.8     | 2.2 | 9.2      | .4  | 14.5     | 1.3 | 14.6    | 3.2 | 9.1      | 6.5 | 11.4  | 8.1 |
| 5     | 10.8    | 2.2 | 9.5      | .8  | 13.6     | 2.0 | 15.8    | 1.0 | 9.6      | 5.5 | 12.1  | 8.0 |
| 6     | 11.7    | 2.2 | 7.5      | .9  | 14.4     | 1.4 | 14.2    | 1.6 | 9.2      | 5.2 | 12.0  | 7.9 |
| 7     | 12.5    | 2.5 | 8.1      | 1.7 | 13.4     | 1.7 | 13.1    | 1.0 | 10.9     | 5.1 | 12.3  | 7.2 |
| 8     | 11.5    | 2.5 | 8.8      | .7  | 15.5     | 2.2 | 11.0    | .8  | 8.6      | 4.7 | 12.4  | 7.2 |
| 9     | 10.9    | 2.2 | 8.5      | .4  | 14.8     | 1.6 | 12.5    | .8  | 10.5     | 4.1 | 13.0  | 7.4 |
| 10    | 9.5     | 2.2 | 6.8      | .4  | 14.7     | 1.1 | 12.5    | 1.1 | 13.4     | 3.5 | 13.1  | 7.4 |
| 11    | 9.2     | 2.2 | 6.9      | .5  | 12.2     | 1.1 | 9.3     | 2.2 | ---      | --- | 12.9  | 6.8 |
| 12    | 10.4    | 2.2 | 6.8      | .3  | 10.0     | 2.3 | 11.3    | .6  | ---      | --- | 13.0  | 6.2 |
| 13    | 9.8     | 2.2 | 5.4      | .3  | 7.4      | 2.7 | 11.4    | .8  | ---      | --- | 12.7  | 6.6 |
| 14    | 8.8     | 1.2 | 5.6      | .3  | 10.8     | 4.4 | 12.6    | .3  | ---      | --- | 10.3  | 7.9 |
| 15    | 7.6     | .6  | 4.4      | .3  | 7.1      | 5.3 | 8.7     | .3  | ---      | --- | 13.2  | 6.6 |
| 16    | 8.4     | 1.1 | 4.9      | .5  | 7.4      | 5.1 | 8.4     | .4  | ---      | --- | 13.1  | 6.6 |
| 17    | 10.6    | 1.0 | 9.9      | .5  | 8.6      | 6.3 | 8.4     | .3  | ---      | --- | 13.9  | 6.8 |
| 18    | 6.8     | 1.5 | 7.8      | .3  | 9.4      | 7.1 | 7.2     | .3  | ---      | --- | 13.4  | 4.8 |
| 19    | 10.3    | 2.1 | 8.2      | .3  | 10.4     | 7.8 | 9.0     | .2  | ---      | --- | 12.4  | 5.5 |
| 20    | 11.4    | 2.9 | 11.0     | .6  | 18.9     | 8.3 | 8.8     | .2  | ---      | --- | 13.3  | 6.2 |
| 21    | 10.0    | 1.7 | 10.9     | 3.0 | 13.4     | 6.9 | 8.8     | .4  | ---      | --- | 13.9  | 5.3 |
| 22    | 13.6    | 2.9 | 9.9      | 3.3 | 13.0     | 6.0 | 10.8    | 3.8 | ---      | --- | 13.8  | 5.8 |
| 23    | 13.8    | 2.4 | 10.0     | 3.2 | 12.3     | 4.4 | 9.9     | 2.0 | ---      | --- | 13.6  | 6.7 |
| 24    | 13.0    | 3.2 | 9.8      | 3.1 | 12.2     | 7.0 | 11.3    | 2.8 | 10.7     | 8.9 | 14.0  | 2.7 |
| 25    | 12.7    | 1.6 | 10.4     | 2.8 | 9.7      | 5.4 | 8.2     | 3.5 | 11.1     | 8.0 | 14.3  | 3.4 |
| 26    | 12.6    | 2.2 | 8.5      | 2.9 | 8.6      | 5.3 | 12.4    | 4.0 | 11.6     | 8.1 | 15.0  | 2.8 |
| 27    | 12.0    | 1.1 | 8.9      | 2.0 | 9.3      | 3.8 | 12.5    | 3.5 | 11.2     | 9.0 | 15.1  | 6.6 |
| 28    | 9.6     | .4  | 9.1      | 2.9 | 9.7      | 4.5 | 12.3    | 2.2 | 11.4     | 9.0 | 14.5  | 6.0 |
| 29    | 8.2     | .2  | 8.4      | 2.1 | 13.0     | 3.8 | 13.5    | 3.0 | 11.4     | 8.8 | 15.4  | 7.7 |
| 30    | 8.4     | .1  | 10.8     | 2.1 | 14.8     | 2.4 | 12.9    | 2.8 | ---      | --- | 15.8  | 6.2 |
| 31    | 3.9     | .4  | ---      | --- | 7.4      | 1.6 | 9.4     | 3.9 | ---      | --- | 15.4  | 5.9 |
| MONTH | 13.8    | .1  | 11.7     | .2  | 18.9     | 1.1 | 16.5    | .2  | ---      | --- | 15.8  | 2.7 |

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN | MAX  | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
|-------|-------|-----|------|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | APRIL |     | MAY  |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
| 1     | 15.9  | 4.2 | 20.9 | 1.6 | 18.0 | .4  | 11.7 | 1.7 | ---    | 1.9 | 9.9       | .3  |
| 2     | 15.3  | 5.3 | 21.4 | 1.6 | 16.5 | .3  | ---  | 1.8 | 11.8   | 1.9 | 9.2       | .3  |
| 3     | 18.4  | 3.8 | 19.8 | 1.7 | 18.6 | .3  | ---  | 1.9 | 11.6   | 1.9 | ---       | .2  |
| 4     | 17.9  | 2.9 | 10.6 | 1.7 | ---  | .2  | ---  | 2.1 | 10.8   | 2.0 | ---       | .2  |
| 5     | 15.2  | 2.6 | 13.8 | 1.7 | 12.9 | .2  | ---  | 2.1 | ---    | 2.0 | 10.9      | .2  |
| 6     | 19.1  | 2.8 | 18.0 | 1.8 | 11.2 | .1  | ---  | 2.2 | ---    | 1.9 | 12.3      | .3  |
| 7     | 17.7  | 3.5 | 15.5 | 1.8 | ---  | --- | ---  | 2.3 | ---    | 1.9 | 11.0      | .4  |
| 8     | 15.1  | 2.1 | 17.3 | 1.8 | 16.8 | --- | ---  | 2.4 | 11.7   | 1.9 | 10.9      | .2  |
| 9     | 18.3  | 2.4 | 17.4 | 1.8 | 12.6 | --- | 10.4 | 2.6 | ---    | 2.0 | 12.1      | .5  |
| 10    | 13.6  | 2.3 | 19.1 | 1.9 | 14.5 | --- | ---  | 2.7 | 10.4   | 2.0 | 12.9      | .5  |
| 11    | 16.4  | 4.1 | 17.9 | 1.9 | 16.5 | --- | 14.2 | 2.9 | 18.7   | 2.0 | 10.9      | 1.2 |
| 12    | 17.0  | 3.5 | 14.2 | 1.9 | ---  | --- | 14.1 | 1.7 | 17.6   | 2.1 | 8.5       | .5  |
| 13    | 20.7  | 3.2 | ---  | 1.9 | 19.1 | --- | 14.9 | 1.7 | 18.4   | 2.1 | 7.6       | .5  |
| 14    | 17.4  | 2.6 | 16.9 | 1.9 | 16.3 | --- | 11.7 | 1.7 | 17.0   | 2.1 | 8.8       | 1.1 |
| 15    | 16.7  | 2.4 | 15.7 | 2.1 | 16.5 | .2  | 12.9 | 1.8 | 16.7   | 2.1 | 8.5       | .4  |
| 16    | 17.7  | 2.3 | 16.3 | 2.0 | 15.2 | .2  | 11.1 | 1.7 | 17.0   | 2.1 | 8.5       | 2.1 |
| 17    | 13.6  | 1.4 | 17.3 | 1.9 | 16.0 | .1  | 15.7 | 1.7 | 15.5   | 2.1 | 9.2       | .9  |
| 18    | 11.5  | 5.5 | 13.2 | 1.7 | 15.5 | .1  | 14.8 | 1.7 | 12.8   | 2.2 | 10.3      | .2  |
| 19    | 12.4  | 1.7 | 12.0 | 1.6 | 13.0 | .1  | 11.5 | 1.7 | 13.9   | 2.2 | 11.0      | 2.1 |
| 20    | 12.1  | 2.5 | 19.5 | 1.5 | ---  | .3  | 11.7 | 1.7 | 11.2   | 2.2 | 8.3       | .3  |
| 21    | 12.3  | 3.4 | 17.7 | 1.3 | ---  | .4  | ---  | 1.7 | ---    | 2.1 | 8.3       | .3  |
| 22    | 14.1  | 3.8 | ---  | 1.2 | ---  | .5  | ---  | 1.7 | 9.2    | .8  | 7.1       | .2  |
| 23    | 15.5  | 3.4 | ---  | 1.2 | ---  | .6  | ---  | 1.8 | 10.2   | .6  | 7.7       | 1.2 |
| 24    | 16.8  | 3.1 | ---  | 1.0 | 10.3 | .7  | ---  | 1.8 | 10.6   | 1.2 | 10.5      | 1.1 |
| 25    | 15.9  | 3.6 | ---  | 1.0 | 11.3 | .9  | 10.2 | 1.8 | 13.7   | .7  | 7.1       | 2.1 |
| 26    | 12.3  | 2.1 | 12.3 | .9  | 13.0 | 1.0 | 10.0 | 1.8 | ---    | 1.6 | 9.0       | 2.9 |
| 27    | 13.3  | 2.4 | ---  | .8  | 15.8 | 1.1 | 12.8 | 1.8 | ---    | 1.6 | 8.4       | 3.0 |
| 28    | 14.7  | 1.8 | 10.2 | .7  | 13.9 | 1.2 | 11.6 | 1.8 | 16.8   | 1.7 | 8.2       | 2.9 |
| 29    | 17.9  | 1.6 | 10.0 | .6  | 12.7 | 1.4 | 15.8 | 1.9 | 15.7   | 2.1 | 8.8       | 3.3 |
| 30    | 20.1  | 1.7 | 10.9 | .6  | 13.4 | 1.5 | 18.2 | 1.9 | 13.2   | 1.4 | 9.7       | 3.3 |
| 31    | ---   | --- | 19.0 | .5  | ---  | --- | 19.1 | 1.9 | 11.8   | .9  | ---       | --- |
| MONTH | 20.7  | 1.4 | ---  | .5  | ---  | --- | ---  | 1.7 | ---    | .6  | ---       | .2  |

## 331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA

LOCATION.--Lat 33°13'46", long 117°24'34", in SE 1/4 SW 1/4 sec.9, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070302, on tidal flat of the Santa Margarita River on Camp Joseph H. Pendleton Naval Reservation, 0.6 mi west of Interstate Highway 5, and 3.0 miles northwest of Oceanside.

DRAINAGE AREA.--Not determined.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1993 to current year.

pH: November 1993 to current year.

WATER TEMPERATURE: November 1993 to current year.

DISSOLVED OXYGEN: November 1993 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1993.

REMARKS.--Interruptions in record at times due to malfunction of recording equipment.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 56,000 microsiemens, July 2, 1996; minimum recorded, 1,320 microsiemens, Apr. 18, 1994.

pH: Maximum recorded, 9.0 standard units, July 20, 1994; minimum recorded, 6.0 standard units, Nov. 23, 1994, Apr. 24, 1995.

WATER TEMPERATURE: Maximum recorded, 35.0°C, Aug. 14, 1996; minimum recorded, 2.0°C, Nov. 19, 21, 1994.

DISSOLVED OXYGEN: Maximum recorded, 19.0 mg/l, July 28, 1995; minimum recorded, 0.0 mg/l, Aug. 2, 3, 16, 19, 1994, and July 26, 1995.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 56,000 microsiemens, July 2; minimum recorded, 7,000 microsiemens, Feb. 29.

pH: Maximum recorded, 8.8 standard units, Mar. 7; minimum recorded, 6.8 standard units, June 23, Aug. 5.

WATER TEMPERATURE: Maximum recorded, 35.0°C, Aug. 14; minimum recorded, 4.5°C, Jan. 24.

DISSOLVED OXYGEN: Maximum recorded, 18.3 mg/l, Feb. 24; minimum recorded, 0.1 mg/l, Sept. 11, 12.

## SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN   | MAX      | MIN   | MAX      | MIN   | MAX     | MIN   | MAX      | MIN   | MAX   | MIN   |
|-------|---------|-------|----------|-------|----------|-------|---------|-------|----------|-------|-------|-------|
|       | OCTOBER |       | NOVEMBER |       | DECEMBER |       | JANUARY |       | FEBRUARY |       | MARCH |       |
| 1     | 52200   | 50800 | 50100    | 49600 | 51400    | 50000 | 51000   | 18000 | 48800    | 15000 | 32100 | 19000 |
| 2     | 52200   | 51100 | 50400    | 49100 | 51400    | 50100 | 51200   | 51000 | 45900    | 22000 | 41400 | 18000 |
| 3     | 52300   | 51100 | 51300    | 49400 | 51300    | 50200 | 51600   | 51000 | 44800    | 22000 | 46700 | 39000 |
| 4     | 52400   | 50800 | 51100    | 50500 | 51300    | 51000 | 51100   | ---   | 44700    | ---   | 46900 | 15000 |
| 5     | 52600   | 51500 | 50900    | 50400 | 50900    | 50000 | 51100   | 50000 | 42300    | ---   | 46600 | 8190  |
| 6     | 52700   | 51600 | 51300    | 50700 | 51000    | 51000 | 50900   | 50000 | 43400    | 37000 | 46500 | 24700 |
| 7     | 52700   | 51600 | 51400    | 51000 | 51100    | 51000 | 50900   | 50000 | 47300    | 40700 | 47300 | 35500 |
| 8     | 52900   | 51800 | 51300    | 50600 | 51100    | 51000 | 50700   | 50000 | 48000    | 42400 | 47300 | 34500 |
| 9     | 52500   | 50700 | 51100    | 49900 | 51000    | 50000 | 50900   | 49000 | 47400    | 21800 | 46700 | 12400 |
| 10    | 51800   | 51100 | 51100    | 50700 | 50200    | ---   | 50500   | ---   | 48200    | 32800 | 48300 | 13800 |
| 11    | 51900   | 51300 | 51100    | 48600 | 50500    | ---   | 49600   | 49000 | 47400    | 25800 | 45600 | 13000 |
| 12    | 51800   | 49700 | 50200    | 48000 | 50400    | 50000 | 49400   | ---   | 44000    | 29700 | 46100 | 18600 |
| 13    | 50900   | 48800 | 48000    | ---   | 50200    | 46800 | 49100   | ---   | 47600    | 37500 | 47400 | 18600 |
| 14    | 50700   | 46900 | 48800    | ---   | 49800    | 47300 | 50300   | ---   | 48600    | ---   | 28500 | 12200 |
| 15    | 50100   | 46800 | 47200    | 38000 | 49100    | 46600 | 49900   | ---   | ---      | ---   | 38900 | 9770  |
| 16    | 49300   | 46700 | 46600    | 46000 | 46600    | 45500 | 50100   | 43000 | ---      | ---   | 48100 | 26700 |
| 17    | 48300   | 46400 | 47900    | 47000 | 46500    | 45600 | 49700   | 47000 | ---      | ---   | 48300 | 27700 |
| 18    | 47500   | 47000 | 48900    | 47800 | 46300    | 45700 | 49800   | 49000 | ---      | ---   | 48000 | 31400 |
| 19    | 47700   | 46400 | 49400    | 47500 | 46300    | 45100 | 50100   | 48000 | ---      | ---   | 48600 | 33900 |
| 20    | 47200   | 46500 | 50400    | 49400 | 46000    | 45000 | 50300   | ---   | ---      | ---   | 49800 | 30400 |
| 21    | 46600   | 44000 | 50700    | 50400 | 51200    | ---   | 50400   | ---   | ---      | ---   | 49800 | 25100 |
| 22    | 48800   | 43800 | 50800    | ---   | 52400    | ---   | 49300   | ---   | ---      | ---   | 49200 | 21500 |
| 23    | 49900   | 48800 | 51500    | 51000 | 52000    | ---   | 49400   | ---   | ---      | ---   | 47000 | 17200 |
| 24    | 50500   | 49700 | 51500    | 50700 | 52000    | ---   | 46100   | ---   | 43100    | ---   | 46800 | 29400 |
| 25    | 51100   | 49700 | 51500    | 50600 | 51300    | 51000 | 45800   | ---   | 44700    | ---   | 45200 | 15600 |
| 26    | 51500   | 50900 | 51400    | 50600 | 50900    | 50000 | 46000   | ---   | 41300    | 11000 | 39100 | 15600 |
| 27    | 51600   | 51100 | 51200    | 49900 | 50800    | ---   | 46100   | ---   | 28300    | 8000  | 25700 | 16000 |
| 28    | 51600   | 50800 | 51000    | 50000 | 50500    | 48000 | 45100   | ---   | 34000    | 9000  | 23200 | 15800 |
| 29    | 51000   | 48700 | 50900    | 50000 | 50600    | 48000 | 45300   | ---   | 24500    | 7000  | 22300 | 15800 |
| 30    | 50600   | 48500 | 50800    | 48000 | 50600    | 50000 | 47100   | ---   | ---      | ---   | 21700 | 17800 |
| 31    | 50600   | 48900 | ---      | ---   | 50800    | 50000 | 45600   | 20000 | ---      | ---   | 21900 | 18200 |
| MONTH | 52900   | 43800 | 51500    | ---   | 52400    | ---   | 51600   | ---   | ---      | ---   | 49800 | 8190  |

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

PH. WATER. WHOLE. FIELD. STANDARD UNITS. WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996[illegible]



## 331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN | MAX | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
|-------|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | APRIL |     | MAY |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
| 1     | 8.4   | 8.0 | 8.2 | 7.5 | 7.9  | 7.3 | 8.0  | 7.4 | 8.0    | 7.7 | 8.1       | 7.7 |
| 2     | 8.3   | 7.9 | 8.3 | 7.6 | 8.4  | 8.0 | 8.0  | 7.4 | 8.0    | 7.7 | 8.1       | 7.7 |
| 3     | 8.5   | 7.9 | 8.4 | 7.7 | 8.7  | 7.7 | 8.0  | 7.4 | 8.0    | 7.6 | 8.1       | 7.7 |
| 4     | 8.5   | 7.7 | 8.3 | 7.6 | 8.6  | 7.6 | 7.9  | 7.4 | 8.0    | 7.4 | 8.1       | 7.7 |
| 5     | 8.4   | 7.8 | 8.1 | 7.5 | 8.3  | 7.6 | 8.1  | 7.5 | 7.9    | 6.8 | 8.2       | 7.8 |
| 6     | 8.3   | 7.9 | 8.1 | 7.6 | 8.6  | 7.6 | 8.0  | 7.6 | 8.0    | 6.9 | 8.2       | 7.8 |
| 7     | 8.3   | 7.9 | 8.1 | 7.6 | 8.0  | 7.7 | 8.0  | 7.6 | 7.9    | 7.3 | 8.3       | 7.9 |
| 8     | 8.3   | 7.9 | 8.0 | 7.7 | 8.4  | 7.3 | 8.0  | 7.6 | 8.0    | 7.7 | 8.2       | 7.9 |
| 9     | 8.2   | 7.8 | 7.9 | 7.6 | 8.3  | 7.4 | 8.1  | 7.7 | 7.9    | 7.6 | 8.2       | 7.8 |
| 10    | 8.2   | 7.8 | 8.0 | 7.7 | 8.6  | 7.4 | 7.9  | 7.7 | 8.2    | 7.7 | 8.2       | 7.9 |
| 11    | 8.2   | 7.8 | 8.0 | 7.3 | 8.0  | 7.3 | 7.9  | 7.5 | 8.3    | 7.7 | 8.3       | 7.9 |
| 12    | 8.3   | 7.8 | 8.1 | 7.3 | 8.7  | 7.4 | 8.1  | 7.6 | 8.2    | 7.7 | 8.3       | 8.0 |
| 13    | 8.3   | 7.8 | 8.1 | 7.5 | 7.8  | 7.2 | 8.0  | 7.5 | 8.2    | 7.7 | 8.2       | 7.9 |
| 14    | 8.3   | 7.8 | 8.2 | 7.6 | 7.8  | 7.1 | 8.0  | 7.5 | 8.2    | 7.8 | 8.2       | 8.0 |
| 15    | 8.2   | 7.7 | 8.2 | 7.7 | 7.7  | 7.2 | 7.9  | 7.5 | 8.3    | 7.8 | 8.1       | 7.8 |
| 16    | 8.1   | 7.7 | 8.2 | 7.5 | 7.6  | 7.2 | 8.0  | 7.5 | 8.3    | 7.8 | 8.1       | 7.8 |
| 17    | 8.0   | 7.7 | 8.1 | 7.6 | 7.6  | 7.1 | 8.1  | 7.5 | 8.3    | 7.9 | 8.3       | 7.7 |
| 18    | 8.1   | 7.6 | 8.1 | 7.5 | 7.6  | 7.1 | 7.9  | 7.5 | 8.3    | 7.8 | 8.2       | 8.0 |
| 19    | 8.0   | 7.7 | 8.0 | 7.5 | 7.8  | 7.2 | 7.9  | 7.6 | 8.2    | 7.9 | 8.3       | 7.8 |
| 20    | 8.1   | 7.7 | 8.1 | 7.5 | 7.8  | 7.2 | 7.9  | 7.5 | 8.2    | 7.9 | 8.3       | 8.0 |
| 21    | 8.1   | 7.8 | 8.1 | 7.1 | 7.7  | 7.2 | 7.9  | 7.5 | 8.2    | 8.0 | 8.3       | 8.0 |
| 22    | 8.0   | 7.4 | 7.9 | 7.6 | 7.7  | 7.2 | 8.3  | 7.7 | 8.2    | 7.9 | 8.2       | 7.9 |
| 23    | 8.0   | 7.1 | 7.8 | 7.4 | 7.7  | 6.8 | 8.0  | 7.3 | 8.3    | 7.9 | 8.2       | 7.9 |
| 24    | 7.8   | 7.0 | 7.7 | 7.4 | 7.8  | 7.2 | 8.1  | 7.8 | 8.3    | 8.0 | 8.2       | 8.0 |
| 25    | 8.0   | 7.5 | 7.9 | 7.5 | 7.8  | 7.5 | 8.1  | 7.8 | 8.3    | 8.0 | 8.2       | 8.1 |
| 26    | 7.7   | 7.5 | 8.0 | 7.5 | 7.9  | 7.4 | 8.0  | 7.7 | 8.3    | 7.9 | 8.2       | 8.0 |
| 27    | 7.7   | 7.5 | 8.1 | 7.7 | 7.9  | 7.5 | 8.0  | 7.6 | 8.3    | 7.9 | 8.2       | 8.0 |
| 28    | 8.1   | 7.4 | 7.9 | 7.7 | 7.8  | 7.5 | 8.2  | 7.5 | 8.3    | 7.9 | 8.2       | 8.0 |
| 29    | 8.1   | 7.5 | 7.8 | 7.5 | 7.9  | 7.4 | 8.1  | 7.5 | 8.2    | 7.8 | 8.2       | 8.0 |
| 30    | 8.1   | 7.5 | 7.7 | 7.5 | 8.1  | 7.3 | 8.1  | 7.6 | 8.2    | 7.8 | 8.2       | 7.9 |
| 31    | ---   | --- | 7.9 | 7.3 | ---  | --- | 8.1  | 7.7 | 8.2    | 7.7 | ---       | --- |
| MONTH | 8.5   | 7.0 | 8.4 | 7.1 | 8.7  | 6.8 | 8.3  | 7.3 | 8.3    | 6.8 | 8.3       | 7.7 |

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX   | MIN  |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-------|------|
|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH |      |
| 1     | 27.0    | 20.5 | 19.5     | 18.0 | 19.5     | 13.5 | 16.5    | 11.5 | 19.5     | 14.0 | 19.5  | 10.5 |
| 2     | 27.5    | 21.0 | 22.0     | 16.5 | 19.0     | 14.5 | 16.5    | 9.0  | 17.5     | 12.5 | 19.5  | 9.0  |
| 3     | 27.0    | 21.0 | 21.0     | 17.0 | 19.0     | 14.0 | 16.0    | 9.0  | 14.5     | 10.0 | 17.5  | 10.0 |
| 4     | 27.0    | 20.5 | 22.0     | 17.0 | 19.0     | 14.0 | 15.0    | 6.0  | 19.0     | 10.0 | 16.5  | 12.0 |
| 5     | 27.0    | 21.0 | 21.5     | 16.5 | 19.5     | 12.5 | 17.0    | 10.5 | 18.0     | 11.5 | 22.0  | 15.0 |
| 6     | 26.0    | 21.0 | 22.5     | 17.0 | 18.0     | 12.5 | 15.0    | 7.0  | 17.5     | 14.0 | 21.0  | 13.5 |
| 7     | 25.5    | 20.5 | 21.0     | 16.0 | 18.5     | 14.0 | 17.0    | 7.5  | 20.0     | 14.5 | 21.5  | 16.0 |
| 8     | 24.0    | 20.0 | 20.5     | 16.0 | 18.0     | 10.5 | 16.0    | 6.5  | 21.5     | 14.5 | 22.0  | 14.0 |
| 9     | 24.0    | 21.0 | 21.0     | 17.0 | 17.0     | 12.0 | 16.0    | 8.0  | 18.0     | 15.5 | 22.0  | 15.5 |
| 10    | 23.0    | 20.0 | 21.0     | 17.5 | 18.0     | 13.0 | 16.5    | 9.5  | 18.5     | 15.5 | 23.5  | 15.5 |
| 11    | 22.5    | 20.5 | 21.5     | 16.5 | 17.5     | 12.0 | 17.5    | 11.0 | 19.5     | 16.0 | 23.5  | 17.5 |
| 12    | 24.0    | 21.0 | 20.5     | 16.5 | 16.0     | 14.5 | 18.5    | 8.0  | 17.0     | 15.5 | 21.5  | 15.0 |
| 13    | 24.5    | 20.5 | 20.5     | 15.0 | 16.5     | 15.0 | 18.5    | 8.0  | 21.5     | 15.5 | 22.0  | 15.0 |
| 14    | 24.0    | 21.0 | 21.0     | 16.0 | 17.5     | 15.0 | 17.0    | 12.5 | 18.0     | 16.0 | 22.5  | 16.5 |
| 15    | 24.0    | 21.0 | 21.0     | 16.0 | 16.5     | 14.5 | 17.0    | 13.0 | ---      | ---  | 24.5  | 16.0 |
| 16    | 25.0    | 19.5 | 19.0     | 15.5 | 15.0     | 13.5 | 19.0    | 14.0 | 25.0     | 22.0 | 24.0  | 17.5 |
| 17    | 25.0    | 20.0 | 21.0     | 15.5 | 14.0     | 12.0 | 18.0    | 12.0 | 23.5     | 21.0 | 22.0  | 18.5 |
| 18    | 22.5    | 21.0 | 19.5     | 17.5 | 13.0     | 11.0 | 17.0    | 11.0 | 23.0     | 21.5 | 22.5  | 18.5 |
| 19    | 22.0    | 20.0 | 21.5     | 17.0 | 13.5     | 11.0 | 16.0    | 10.5 | 23.0     | 21.5 | 21.5  | 18.5 |
| 20    | 23.5    | 19.5 | 20.0     | 16.0 | 14.5     | 9.0  | 16.0    | 6.5  | 22.5     | 21.5 | 22.0  | 18.0 |
| 21    | 22.5    | 20.0 | 19.5     | 16.5 | 16.0     | 6.0  | 14.5    | 5.0  | ---      | ---  | 22.5  | 18.0 |
| 22    | 23.5    | 19.5 | 19.5     | 15.0 | 15.5     | 6.5  | 14.0    | 7.5  | ---      | ---  | 24.5  | 17.5 |
| 23    | 21.5    | 17.5 | 19.5     | 10.0 | 14.0     | 8.5  | 15.0    | 5.5  | 19.5     | 14.0 | 23.0  | 17.5 |
| 24    | 20.0    | 15.0 | 18.5     | 15.0 | 12.0     | 7.0  | 14.5    | 4.5  | 18.5     | 10.5 | 22.5  | 18.0 |
| 25    | 20.0    | 15.0 | 18.0     | 15.0 | 12.5     | 6.5  | 15.0    | 9.0  | 15.5     | 10.0 | 22.5  | 16.5 |
| 26    | 20.0    | 15.5 | 17.0     | 15.0 | 15.0     | 5.5  | 15.5    | 7.0  | 16.5     | 10.0 | 24.0  | 16.5 |
| 27    | 20.5    | 16.0 | 18.5     | 14.5 | 16.5     | 6.5  | 15.0    | 7.0  | 15.0     | 7.0  | 21.5  | 15.0 |
| 28    | 19.5    | 17.0 | 18.5     | 12.5 | 15.0     | 7.0  | 18.0    | 9.0  | 16.5     | 10.5 | 20.0  | 16.0 |
| 29    | 21.0    | 17.5 | 18.5     | 11.5 | 15.0     | 10.0 | 15.5    | 9.0  | 17.0     | 10.5 | 23.0  | 14.5 |
| 30    | 22.0    | 19.0 | 18.5     | 12.0 | 16.5     | 10.5 | 14.0    | 9.5  | ---      | ---  | 22.5  | 18.0 |
| 31    | 20.0    | 18.5 | ---      | ---  | 15.0     | 11.5 | 18.5    | 10.5 | ---      | ---  | 23.5  | 16.0 |
| MONTH | 27.5    | 15.0 | 22.5     | 10.0 | 19.5     | 5.5  | 19.0    | 4.5  | ---      | ---  | 24.5  | 9.0  |

## 331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA--Continued

## WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN  | MAX  | MIN  | MAX  | MIN  | MAX  | MIN  | MAX    | MIN  | MAX       | MIN  |
|-------|-------|------|------|------|------|------|------|------|--------|------|-----------|------|
|       | APRIL |      | MAY  |      | JUNE |      | JULY |      | AUGUST |      | SEPTEMBER |      |
| 1     | 25.0  | 17.5 | 30.5 | 19.5 | 30.5 | 18.5 | 29.0 | 20.0 | 28.5   | 21.0 | 28.5      | 23.0 |
| 2     | 25.5  | 18.5 | 30.5 | 21.0 | 28.5 | 19.0 | 29.0 | 19.5 | 28.5   | 21.0 | 27.0      | 24.0 |
| 3     | 23.5  | 18.5 | 30.0 | 19.5 | 30.0 | 18.5 | 28.5 | 20.0 | 28.5   | 20.0 | 26.5      | 22.5 |
| 4     | 25.0  | 18.0 | 30.5 | 19.5 | 31.5 | 20.5 | 27.0 | 19.5 | 27.0   | 19.0 | 27.5      | 23.5 |
| 5     | 26.0  | 19.0 | 26.0 | 18.0 | 28.5 | 20.5 | 29.5 | 21.0 | 28.0   | 19.5 | 29.5      | 24.0 |
| 6     | 25.0  | 19.5 | 29.5 | 18.5 | 27.5 | 20.5 | 28.0 | 21.5 | 26.5   | 18.5 | 29.5      | 24.0 |
| 7     | 26.5  | 19.0 | 28.0 | 19.5 | 27.5 | 20.5 | 26.0 | 20.5 | 27.5   | 19.0 | 29.5      | 25.0 |
| 8     | 26.5  | 20.5 | 28.0 | 18.5 | 27.5 | 21.5 | 25.0 | 19.0 | 27.5   | 21.0 | 29.0      | 25.5 |
| 9     | 25.5  | 20.5 | 27.5 | 19.5 | 29.5 | 22.0 | 28.5 | 20.0 | 26.5   | 20.5 | 28.5      | 24.5 |
| 10    | 24.5  | 19.5 | 29.0 | 18.5 | 28.5 | 22.5 | 25.0 | 21.5 | 27.0   | 21.5 | 28.0      | 25.0 |
| 11    | 25.0  | 19.5 | 25.5 | 21.5 | 28.5 | 22.0 | 24.0 | 20.5 | 32.5   | 22.5 | 27.5      | 24.0 |
| 12    | 24.0  | 19.5 | 25.5 | 18.5 | 28.0 | 21.5 | 24.0 | 20.0 | 33.5   | 23.5 | 27.5      | 23.0 |
| 13    | 25.5  | 19.5 | 27.0 | 21.5 | 27.5 | 22.0 | 25.5 | 19.5 | 34.0   | 22.5 | 26.5      | 22.5 |
| 14    | 25.5  | 19.5 | 30.0 | 22.0 | 27.5 | 22.0 | 24.5 | 20.0 | 35.0   | 23.5 | 25.5      | 21.5 |
| 15    | 25.5  | 20.5 | 31.0 | 22.0 | 28.5 | 21.0 | 25.5 | 20.0 | 33.5   | 24.5 | 26.5      | 22.5 |
| 16    | 26.5  | 19.0 | 29.5 | 21.5 | 27.0 | 22.0 | 24.5 | 21.0 | 34.5   | 23.5 | 26.5      | 22.5 |
| 17    | 27.0  | 19.5 | 28.5 | 21.0 | 28.5 | 21.5 | 31.0 | 21.0 | 32.5   | 23.5 | 27.0      | 23.0 |
| 18    | 27.0  | 19.0 | 28.5 | 19.0 | 31.5 | 21.5 | 30.5 | 21.5 | 29.5   | 25.0 | 27.0      | 23.0 |
| 19    | 22.5  | 15.5 | 29.5 | 19.5 | 30.5 | 21.5 | 30.0 | 22.0 | 30.0   | 24.5 | 26.5      | 23.0 |
| 20    | 21.0  | 14.0 | 28.5 | 19.0 | 27.0 | 22.0 | 29.0 | 22.0 | 29.0   | 24.5 | 27.5      | 24.5 |
| 21    | 21.5  | 15.0 | 29.5 | 19.5 | 25.5 | 20.5 | 29.0 | 20.5 | 29.0   | 23.5 | 27.0      | 24.5 |
| 22    | 22.0  | 15.0 | 24.0 | 19.5 | 28.0 | 21.0 | 29.0 | 19.5 | 30.0   | 24.5 | 26.5      | 24.0 |
| 23    | 23.0  | 16.5 | 26.5 | 18.0 | 26.5 | 19.0 | 28.0 | 21.0 | 30.0   | 24.5 | 25.5      | 23.5 |
| 24    | 23.5  | 17.5 | 23.0 | 19.5 | 27.5 | 18.5 | 26.5 | 23.5 | 29.0   | 24.5 | 26.0      | 24.5 |
| 25    | 27.0  | 20.5 | 24.5 | 18.0 | 28.5 | 19.0 | 28.5 | 24.0 | 30.0   | 25.0 | 24.5      | 23.5 |
| 26    | 24.5  | 21.5 | 26.5 | 19.0 | 27.5 | 20.0 | 29.5 | 24.0 | 30.0   | 23.0 | 24.0      | 22.0 |
| 27    | 25.5  | 20.0 | 25.0 | 20.0 | 27.0 | 20.5 | 31.0 | 22.5 | 29.5   | 21.0 | 24.5      | 22.5 |
| 28    | 28.5  | 20.0 | 26.5 | 21.0 | 25.0 | 18.5 | 27.5 | 23.0 | 28.5   | 20.5 | 24.5      | 23.0 |
| 29    | 29.0  | 21.5 | 27.0 | 21.5 | 32.5 | 20.0 | 27.0 | 22.5 | 29.0   | 22.0 | 24.0      | 23.0 |
| 30    | 29.5  | 19.0 | 26.0 | 20.5 | 33.5 | 20.0 | 30.5 | 21.0 | 28.5   | 21.5 | 25.0      | 22.5 |
| 31    | ---   | ---  | 28.5 | 18.0 | ---  | ---  | 32.5 | 21.0 | 28.5   | 22.0 | ---       | ---  |
| MONTH | 29.5  | 14.0 | 31.0 | 18.0 | 33.5 | 18.5 | 32.5 | 19.0 | 35.0   | 18.5 | 29.5      | 21.5 |

## OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN | MAX      | MIN | MAX      | MIN | MAX     | MIN | MAX      | MIN | MAX   | MIN |
|-------|---------|-----|----------|-----|----------|-----|---------|-----|----------|-----|-------|-----|
|       | OCTOBER |     | NOVEMBER |     | DECEMBER |     | JANUARY |     | FEBRUARY |     | MARCH |     |
| 1     | 6.4     | 2.3 | 8.2      | 2.9 | 9.5      | 4.9 | 14.7    | 5.3 | 12.7     | 5.5 | 12.7  | 6.1 |
| 2     | 7.3     | 2.2 | 10.5     | 2.9 | 9.0      | 4.9 | 13.8    | 6.9 | 11.1     | 4.6 | 13.9  | 6.1 |
| 3     | 8.6     | 2.5 | 10.6     | 2.5 | 9.4      | 5.8 | 14.9    | 7.7 | 12.5     | 4.6 | 13.6  | 7.5 |
| 4     | 10.8    | 1.9 | 10.4     | 1.6 | 9.6      | 5.3 | 14.6    | 7.6 | 12.5     | 6.7 | 13.1  | 7.6 |
| 5     | 10.7    | 2.3 | 9.1      | 2.3 | 9.2      | 5.1 | 12.5    | 6.5 | 12.8     | 6.4 | 13.0  | 7.1 |
| 6     | 10.4    | 1.9 | 10.9     | 3.4 | 8.8      | 5.1 | 13.6    | 6.5 | 15.5     | 6.1 | 13.5  | 6.3 |
| 7     | 9.7     | 2.6 | 11.2     | 3.2 | 11.5     | 5.2 | 13.5    | 7.6 | 17.8     | 5.3 | 12.7  | 6.5 |
| 8     | 9.4     | 2.6 | 10.2     | 3.4 | 11.6     | 5.4 | 13.7    | 7.5 | 16.5     | 5.7 | 12.6  | 6.0 |
| 9     | 8.8     | 3.0 | 10.7     | 3.5 | 11.9     | 5.9 | 12.4    | 7.3 | 17.5     | 2.6 | 13.0  | 5.5 |
| 10    | 9.3     | 2.3 | 8.7      | 4.2 | 11.6     | 5.6 | 12.8    | 6.1 | 16.1     | 2.4 | 11.6  | 5.8 |
| 11    | 8.0     | 2.0 | 8.3      | 2.9 | 11.9     | 5.3 | 12.4    | 7.7 | 13.3     | 4.0 | 11.6  | 6.0 |
| 12    | 10.0    | 2.7 | 8.4      | 2.3 | 11.4     | 5.6 | 13.4    | 6.7 | 10.9     | 4.7 | 10.8  | 5.8 |
| 13    | 8.2     | 3.3 | 7.6      | 2.5 | 8.1      | 6.0 | 13.4    | 7.1 | 15.7     | 4.1 | 11.8  | 6.2 |
| 14    | 7.5     | 2.7 | 8.2      | 3.7 | 9.2      | 6.0 | 13.8    | 5.9 | 11.6     | 5.8 | 12.9  | 5.3 |
| 15    | 7.0     | 2.9 | 8.6      | 3.6 | 9.9      | 6.1 | 12.2    | 6.3 | ---      | --- | 13.2  | 6.4 |
| 16    | 8.2     | 2.5 | 7.4      | 4.2 | 10.0     | 5.6 | 11.7    | 5.7 | ---      | --- | 12.2  | 6.0 |
| 17    | 9.2     | 3.1 | 8.9      | 4.0 | 10.8     | 5.9 | 16.4    | 5.7 | 9.0      | 7.4 | 12.9  | 6.6 |
| 18    | 6.3     | 3.1 | 7.0      | 4.2 | 13.2     | 6.7 | 18.2    | 7.4 | 8.1      | 7.0 | 12.0  | 4.9 |
| 19    | 8.3     | 3.3 | 9.1      | 3.7 | 14.4     | 7.5 | 15.4    | 5.9 | 8.2      | 6.8 | 10.8  | 5.2 |
| 20    | 7.9     | 3.4 | 9.7      | 4.4 | 14.7     | 6.7 | 16.0    | 5.9 | ---      | --- | 11.6  | 4.0 |
| 21    | 9.9     | 3.8 | 9.6      | 4.7 | 14.0     | 6.7 | 16.8    | 7.8 | ---      | --- | 12.5  | 4.6 |
| 22    | 9.5     | 3.0 | 10.6     | 3.5 | 13.9     | 6.0 | 13.7    | 8.4 | ---      | --- | 10.5  | 4.8 |
| 23    | 10.3    | 3.3 | 12.3     | 4.2 | 13.1     | 6.0 | 16.7    | 7.7 | ---      | --- | 12.0  | 5.4 |
| 24    | 10.5    | 4.6 | 8.3      | 3.8 | 13.5     | 7.2 | 16.3    | 9.2 | 18.3     | 7.9 | 13.8  | 6.5 |
| 25    | 11.9    | 5.2 | 8.0      | 4.5 | 13.0     | 7.6 | 13.3    | 7.8 | 14.6     | 7.6 | 13.6  | 6.3 |
| 26    | 11.5    | 4.4 | 8.1      | 4.2 | 14.4     | 7.0 | 13.8    | 7.5 | 13.1     | 6.5 | 13.3  | 5.7 |
| 27    | 11.8    | 4.0 | 8.7      | 4.1 | 16.0     | 7.2 | 13.8    | 7.0 | 15.5     | 8.8 | 13.8  | 8.2 |
| 28    | 11.3    | 3.3 | 8.1      | 4.7 | 16.0     | 6.3 | 13.2    | 5.5 | 14.7     | 7.3 | 13.0  | 7.6 |
| 29    | 10.4    | 1.9 | 7.9      | 3.8 | 12.3     | 6.5 | 13.2    | 6.5 | 15.1     | 7.9 | 14.6  | 6.1 |
| 30    | 9.5     | 1.5 | 8.9      | 3.8 | 14.1     | 6.7 | 13.7    | 7.0 | ---      | --- | 12.5  | 4.6 |
| 31    | 7.3     | 1.5 | ---      | --- | 10.2     | 5.3 | 12.9    | 7.2 | ---      | --- | 12.8  | 4.6 |
| MONTH | 11.9    | 1.5 | 12.3     | 1.6 | 16.0     | 4.9 | 18.2    | 5.3 | ---      | --- | 14.6  | 4.0 |

331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX   | MIN | MAX  | MIN | MAX  | MIN | MAX  | MIN | MAX    | MIN | MAX       | MIN |
|-------|-------|-----|------|-----|------|-----|------|-----|--------|-----|-----------|-----|
|       | APRIL |     | MAY  |     | JUNE |     | JULY |     | AUGUST |     | SEPTEMBER |     |
| 1     | 13.1  | 6.9 | 13.3 | 1.3 | 8.2  | 1.5 | 8.2  | 1.4 | 11.1   | 3.0 | 6.8       | 1.5 |
| 2     | 12.3  | 4.1 | 14.0 | 1.0 | 8.3  | 1.4 | 8.0  | 1.3 | 11.3   | 3.4 | 6.7       | .9  |
| 3     | 12.6  | 3.8 | 15.0 | 1.1 | 9.3  | 1.9 | 7.8  | 1.6 | 11.5   | 3.7 | 5.2       | 1.0 |
| 4     | 12.2  | 2.7 | 13.9 | 1.2 | 11.4 | 2.0 | 7.8  | 1.7 | 11.7   | 4.3 | 5.7       | .6  |
| 5     | 11.4  | 2.4 | 12.9 | 1.6 | 8.4  | 2.1 | 7.4  | 1.5 | 11.7   | 3.9 | 6.7       | 1.0 |
| 6     | 7.5   | 2.7 | 10.4 | 1.2 | 10.4 | 2.4 | 7.1  | 2.4 | 11.9   | 5.7 | 6.6       | .8  |
| 7     | 8.1   | 3.0 | 11.2 | 1.7 | 7.5  | 2.8 | 7.2  | 3.0 | 12.0   | 3.9 | 6.9       | 1.0 |
| 8     | 7.3   | 1.5 | 13.9 | 2.0 | 11.0 | 2.0 | 11.4 | 2.9 | 11.6   | 3.0 | 5.7       | .4  |
| 9     | 9.7   | 1.6 | 9.2  | 1.6 | 12.7 | 2.4 | 11.3 | 2.2 | 11.6   | 2.9 | 6.1       | .3  |
| 10    | 8.6   | 2.0 | 11.1 | 2.3 | 9.3  | 2.2 | 6.7  | 2.7 | 11.3   | 1.8 | 6.5       | .4  |
| 11    | 9.0   | 2.7 | 11.5 | 1.8 | 10.6 | 2.3 | 13.8 | 1.7 | 13.3   | 2.6 | 7.2       | .1  |
| 12    | 9.8   | 3.4 | 10.3 | 1.6 | 13.3 | 2.8 | 10.5 | 2.1 | 10.0   | 2.4 | 8.4       | .1  |
| 13    | 11.0  | 2.8 | 12.1 | 2.0 | 13.4 | 1.9 | 10.6 | 1.6 | 12.3   | 2.4 | 6.5       | .8  |
| 14    | 8.9   | 2.7 | 9.5  | 1.6 | 10.4 | 1.4 | 10.6 | 1.8 | 11.0   | 1.8 | 6.3       | 1.7 |
| 15    | 8.8   | 1.5 | 8.9  | 1.0 | 8.9  | 1.5 | 14.3 | 2.0 | 11.8   | 2.0 | 5.9       | .4  |
| 16    | 8.3   | 2.3 | 7.8  | 1.2 | 9.1  | 2.0 | 12.5 | 1.8 | 12.2   | 2.6 | 6.1       | .9  |
| 17    | 8.0   | 1.6 | 7.9  | .9  | 10.7 | 1.6 | 10.3 | 2.0 | 12.1   | 2.3 | 8.6       | .3  |
| 18    | 8.4   | 3.3 | 6.4  | 1.0 | 7.8  | 1.8 | 8.9  | 1.8 | 9.6    | 2.8 | 6.9       | 2.6 |
| 19    | 8.1   | 3.1 | 6.0  | 1.8 | 7.1  | 2.0 | 9.3  | 2.6 | 8.6    | 4.3 | 7.9       | .8  |
| 20    | 9.2   | 2.8 | 6.8  | 1.5 | 7.2  | 2.0 | 7.8  | 2.2 | 7.6    | 4.2 | 7.8       | 1.3 |
| 21    | 8.8   | 3.5 | 9.1  | 1.6 | 6.0  | 1.7 | 8.9  | 3.0 | 8.0    | 3.7 | 7.4       | 1.7 |
| 22    | 9.7   | 2.3 | 9.5  | 2.5 | 9.9  | 2.6 | 11.5 | 2.7 | 9.0    | 3.5 | 5.9       | .7  |
| 23    | 10.6  | 1.4 | 8.5  | 2.9 | 11.1 | 2.4 | 9.8  | 3.5 | 8.7    | 3.4 | 4.8       | .8  |
| 24    | 10.5  | 1.7 | 6.3  | 3.2 | 11.4 | 3.2 | 9.5  | 2.4 | 8.9    | 3.4 | 7.1       | .4  |
| 25    | 7.5   | 1.7 | 8.9  | 4.0 | 11.1 | 4.6 | 9.5  | 2.5 | 9.8    | 2.2 | 5.0       | 1.7 |
| 26    | 4.4   | 1.0 | 10.0 | 4.3 | 14.2 | 4.2 | 8.1  | 1.3 | 9.0    | 2.9 | 6.6       | 1.6 |
| 27    | 5.2   | 1.6 | 10.3 | 2.8 | 10.4 | 2.3 | 6.7  | 1.3 | 11.6   | 2.8 | 5.8       | 1.8 |
| 28    | 10.9  | 1.7 | 9.1  | 2.3 | 11.7 | 2.8 | 7.7  | 1.3 | 11.5   | 2.7 | 6.4       | 1.8 |
| 29    | 7.3   | .7  | 8.5  | 1.1 | 10.1 | 2.1 | 10.6 | 1.5 | 9.9    | 2.4 | 5.9       | 1.8 |
| 30    | 10.8  | 1.2 | 7.8  | 2.6 | 11.8 | 1.6 | 9.0  | 1.5 | 9.4    | 2.2 | 6.4       | 1.9 |
| 31    | ---   | --- | 8.4  | 1.8 | ---  | --- | 10.6 | 2.6 | 7.8    | 2.3 | ---       | --- |
| MONTH | 13.1  | .7  | 15.0 | .9  | 14.2 | 1.4 | 14.3 | 1.3 | 13.3   | 1.8 | 8.6       | .1  |

## LAS FLORES CREEK BASIN

11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA

LOCATION.--Lat 33°17'32", long 117°27'21", NW 1/4 SE 1/4 sec.24, T.10 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on upstream side and at center of the Southern Pacific Railroad bridge, 0.5 mi upstream from mouth, and 8.5 mi northwest of Oceanside.

DRAINAGE AREA.--26.6 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1951 to September 1967, October 1969 to September 1979, and October 1993 to current year.

REVISED RECORDS.--WDR CA-72-1: 1971(M).

GAGE.--Water-stage recorder and multiple concrete culvert control. Elevation of gage is 35 ft above sea level, from topographic map.

REMARKS.--Records good. No regulation upstream from station. Some pumping upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 13.67 ft, estimated, from floodmarks, based on culvert computation of peak flow; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1969, reached a stage of 7.25 ft, from floodmarks, discharge, 4,200 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|-------|
| 1     | .48   | .43   | .49   | .49   | 3.7   | .30   | .94   | .33  | .26  | .26  | .09  | .27   |
| 2     | .49   | .38   | .49   | .49   | .26   | .28   | .94   | .30  | .27  | .26  | .07  | .50   |
| 3     | .51   | .38   | .49   | .49   | .51   | .27   | .94   | .30  | .27  | .27  | .06  | .55   |
| 4     | .51   | .38   | .49   | .49   | .22   | .28   | .92   | .30  | .27  | .30  | .05  | .47   |
| 5     | .45   | .38   | .49   | .49   | .40   | 1.1   | .83   | .34  | .27  | .28  | .06  | .43   |
| 6     | .42   | .40   | .49   | .49   | .30   | .32   | .79   | .34  | .27  | .26  | .06  | .43   |
| 7     | .41   | .43   | .49   | .49   | .24   | .56   | .83   | .34  | .29  | .27  | .08  | .38   |
| 8     | .38   | .43   | .49   | .49   | .19   | .83   | .78   | .37  | .32  | .27  | .08  | .43   |
| 9     | .38   | .42   | .49   | .49   | .19   | .97   | .86   | .38  | .34  | .26  | .08  | .44   |
| 10    | .47   | .43   | .49   | .49   | .20   | 1.1   | .82   | .37  | .34  | .30  | .08  | .60   |
| 11    | .67   | .42   | .54   | .49   | .26   | 1.0   | .74   | .29  | .34  | .30  | .08  | .55   |
| 12    | .64   | .43   | .56   | .49   | .30   | 1.0   | .80   | .20  | .24  | .28  | .07  | .43   |
| 13    | .57   | .43   | .65   | .49   | .28   | 8.5   | .72   | .17  | .23  | .28  | .07  | .41   |
| 14    | .56   | .43   | .56   | .49   | .31   | 6.6   | .65   | .15  | .22  | .30  | .08  | .43   |
| 15    | .51   | .43   | .51   | .49   | .30   | .73   | .58   | .18  | .24  | .29  | .08  | .48   |
| 16    | .49   | .43   | .56   | .50   | .30   | .94   | .56   | .19  | .30  | .29  | .07  | .49   |
| 17    | .43   | .43   | .56   | .48   | .30   | 1.0   | .55   | .19  | .29  | .25  | .08  | .49   |
| 18    | .43   | .41   | .56   | .49   | .30   | .94   | .66   | .19  | .21  | .25  | .08  | .44   |
| 19    | .43   | .43   | .56   | .49   | .30   | .94   | .64   | .20  | .20  | .29  | .09  | .43   |
| 20    | .43   | .43   | .54   | .49   | .30   | .94   | .64   | .21  | .19  | .27  | .09  | .38   |
| 21    | .43   | .43   | .52   | .50   | 8.2   | .95   | .53   | .21  | .18  | .27  | .09  | .34   |
| 22    | .43   | .43   | .56   | .55   | 4.7   | 1.0   | .51   | .23  | .18  | .27  | .09  | .34   |
| 23    | .42   | .45   | .57   | .54   | .37   | .94   | .44   | .11  | .18  | .23  | .08  | .34   |
| 24    | .38   | .49   | .56   | .53   | .28   | .94   | .47   | .12  | .18  | .16  | .09  | .31   |
| 25    | .39   | .49   | .56   | .55   | .32   | .87   | .49   | .17  | .20  | .08  | .09  | .30   |
| 26    | .39   | .49   | .56   | .55   | 2.4   | .84   | .49   | .20  | .18  | .07  | .09  | .30   |
| 27    | .42   | .49   | .56   | .55   | .57   | .89   | .49   | .21  | .21  | .07  | .09  | .30   |
| 28    | .42   | .49   | .54   | .56   | 7.1   | .94   | .46   | .22  | .24  | .06  | .08  | .30   |
| 29    | .38   | .49   | .54   | .45   | .32   | .94   | .37   | .21  | .26  | .08  | .09  | .30   |
| 30    | .38   | .49   | .53   | .43   | ---   | .94   | .35   | .20  | .24  | .08  | .10  | .30   |
| 31    | .42   | ---   | .52   | .48   | ---   | .94   | ---   | .25  | ---  | .08  | .09  | ---   |
| TOTAL | 14.12 | 13.07 | 16.52 | 15.49 | 33.42 | 38.79 | 19.79 | 7.47 | 7.41 | 6.98 | 2.48 | 12.16 |
| MEAN  | .46   | .44   | .53   | .50   | 1.15  | 1.25  | .66   | .24  | .25  | .23  | .080 | .41   |
| MAX   | .67   | .49   | .65   | .56   | 8.2   | 8.5   | .94   | .38  | .34  | .30  | .10  | .60   |
| MIN   | .38   | .38   | .49   | .43   | .19   | .27   | .35   | .11  | .18  | .06  | .05  | .27   |
| AC-FT | 28    | 26    | 33    | 31    | 66    | 77    | 39    | 15   | 15   | 14   | 4.9  | 24    |

## 11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .019 | .23  | .78  | 3.83 | 2.50 | 9.34 | 1.76 | .11  | .035 | .041 | .035 | .060 |
| MAX  | .46  | 4.81 | 12.9 | 35.6 | 36.3 | 143  | 29.3 | 1.56 | .58  | .56  | .49  | .64  |
| (WY) | 1996 | 1966 | 1967 | 1995 | 1978 | 1978 | 1958 | 1995 | 1995 | 1995 | 1995 | 1979 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1952 | 1954 | 1954 | 1963 | 1961 | 1955 | 1953 | 1953 | 1952 | 1952 | 1952 | 1952 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1952 - 1996 |            |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL             | 4395.85                |        | 187.70              |        | 1.57                    |            |
| ANNUAL MEAN              | 12.0                   |        | .51                 |        | 17.9                    |            |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | .006                    |            |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 927                     |            |
| HIGHEST DAILY MEAN       | 677                    | Mar 11 | 8.5                 | Mar 13 | .00                     | Mar 1 1978 |
| LOWEST DAILY MEAN        | .01                    | Jan 1  | .05                 | Aug 4  | .00                     | Oct 1 1951 |
| ANNUAL SEVEN-DAY MINIMUM | .33                    | Feb 6  | .07                 | Aug 2  | .00                     | Oct 1 1951 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 23                  | Feb 21 | 7300                    | Mar 4 1978 |
| INSTANTANEOUS PEAK STAGE |                        |        | .77                 | Feb 21 | 13.67                   | Mar 4 1978 |
| ANNUAL RUNOFF (AC-FT)    | 8720                   |        | 372                 |        | 1130                    |            |
| 10 PERCENT EXCEEDS       | 17                     |        | .82                 |        | .38                     |            |
| 50 PERCENT EXCEEDS       | .56                    |        | .42                 |        | .00                     |            |
| 90 PERCENT EXCEEDS       | .38                    |        | .09                 |        | .00                     |            |

11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA

LOCATION.--Lat 33°28'15", long 117°28'20", in SE 1/4 NE 1/4 sec.23, T.8 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on left bank 0.4 mi downstream from mouth of Devil Canyon and 8.6 miles northeast of San Clemente.

DRAINAGE AREA.--80.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1952 to September 1967, October 1993 to current year. Discharge records for October 1967 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 405 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft<sup>3</sup>/s, Dec. 6, 1966, gage height, 10.45 ft, from rating curve extended above 1,800 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 10.14 ft; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge 9,240 ft<sup>3</sup>/s, gage height 11.12 ft, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 21 | 1030 | 237                               | 4.83                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|------|------|-------|-------|-------|-------|-------|------|------|------|------|
| 1     | .89   | 2.1  | 1.2  | 2.2   | 53    | 17    | 7.0   | 1.9   | .52  | .00  | .00  | .00  |
| 2     | .79   | 2.2  | 1.2  | 2.1   | 16    | 14    | 7.0   | 1.8   | .45  | .00  | .00  | .00  |
| 3     | .69   | 2.2  | 1.3  | 2.1   | 10    | 12    | 6.7   | 1.8   | .40  | .00  | .00  | .00  |
| 4     | .65   | 2.2  | 1.5  | 2.1   | 8.4   | 12    | 6.7   | 1.8   | .35  | .00  | .00  | .00  |
| 5     | .65   | 2.0  | 1.5  | 2.1   | 7.1   | 75    | 6.4   | 1.8   | .31  | .00  | .00  | .00  |
| 6     | .66   | 2.0  | 1.5  | 2.2   | 6.3   | 37    | 5.9   | 1.8   | .29  | .00  | .00  | .00  |
| 7     | .69   | 2.0  | 1.5  | 2.2   | 5.8   | 22    | 5.8   | 1.6   | .27  | .00  | .00  | .00  |
| 8     | .73   | 1.8  | 1.5  | 2.1   | 5.2   | 17    | 5.8   | 1.6   | .27  | .00  | .00  | .00  |
| 9     | .79   | 1.7  | 1.5  | 2.1   | 5.0   | 14    | 5.5   | 1.4   | .24  | .00  | .00  | .00  |
| 10    | .92   | 1.8  | 1.6  | 2.1   | 4.9   | 11    | 5.5   | 1.2   | .22  | .00  | .00  | .00  |
| 11    | .98   | 1.9  | 1.6  | 2.1   | 4.6   | 11    | 5.8   | 1.1   | .21  | .00  | .00  | .00  |
| 12    | .98   | 1.8  | 1.6  | 2.0   | 4.4   | 11    | 5.6   | .98   | .20  | .00  | .00  | .00  |
| 13    | .98   | 1.7  | 2.1  | 2.0   | 5.0   | 22    | 5.0   | .85   | .20  | .00  | .00  | .00  |
| 14    | 1.0   | 1.7  | 2.9  | 2.0   | 4.6   | 19    | 4.2   | .84   | .18  | .00  | .00  | .00  |
| 15    | 1.1   | 1.7  | 2.6  | 2.0   | 3.7   | 15    | 3.8   | .73   | .16  | .00  | .00  | .00  |
| 16    | 1.0   | 1.8  | 2.3  | 2.3   | 3.3   | 13    | 3.6   | .69   | .16  | .00  | .00  | .00  |
| 17    | 1.0   | 1.7  | 2.1  | 4.9   | 3.2   | 12    | 3.7   | .73   | .17  | .00  | .00  | .00  |
| 18    | 1.0   | 1.7  | 2.0  | 4.0   | 3.2   | 11    | 9.3   | .73   | .18  | .00  | .00  | .00  |
| 19    | 1.2   | 1.7  | 2.0  | 3.0   | 3.0   | 10    | 7.7   | .65   | .18  | .00  | .00  | .00  |
| 20    | 1.3   | 1.5  | 2.0  | 2.8   | 7.5   | 9.6   | 6.2   | .62   | .17  | .00  | .00  | .00  |
| 21    | 1.3   | 1.5  | 2.1  | 3.7   | 125   | 8.9   | 5.5   | .57   | .15  | .00  | .00  | .00  |
| 22    | 1.2   | 1.5  | 2.1  | 8.4   | 53    | 8.7   | 4.3   | .57   | .11  | .00  | .00  | .00  |
| 23    | 1.3   | 1.5  | 2.3  | 6.7   | 22    | 8.7   | 3.8   | .58   | .07  | .00  | .00  | .00  |
| 24    | 1.2   | 1.4  | 2.5  | 5.0   | 14    | 8.3   | 3.4   | .63   | .02  | .00  | .00  | .00  |
| 25    | 1.1   | 1.3  | 2.5  | 4.6   | 19    | 8.0   | 3.2   | .91   | .00  | .00  | .00  | .00  |
| 26    | 1.1   | 1.2  | 2.2  | 4.7   | 40    | 8.0   | 3.0   | .78   | .00  | .00  | .00  | .00  |
| 27    | 1.2   | 1.3  | 2.1  | 4.7   | 27    | 7.8   | 3.0   | .69   | .01  | .00  | .00  | .00  |
| 28    | 1.3   | 1.2  | 2.1  | 4.6   | 41    | 7.9   | 2.7   | .68   | .00  | .00  | .00  | .00  |
| 29    | 1.4   | 1.1  | 2.1  | 4.6   | 24    | 8.4   | 2.5   | .63   | .00  | .00  | .00  | .00  |
| 30    | 1.5   | 1.2  | 2.2  | 3.9   | ---   | 7.7   | 2.2   | .61   | .00  | .00  | .00  | .00  |
| 31    | 1.8   | ---  | 2.2  | 10    | ---   | 7.4   | ---   | .59   | ---  | .00  | .00  | ---  |
| TOTAL | 32.40 | 50.4 | 59.9 | 109.3 | 529.2 | 454.4 | 150.8 | 31.86 | 5.49 | 0.00 | 0.00 | 0.00 |
| MEAN  | 1.05  | 1.68 | 1.93 | 3.53  | 18.2  | 14.7  | 5.03  | 1.03  | .18  | .000 | .000 | .000 |
| MAX   | 1.8   | 2.2  | 2.9  | 10    | 125   | 75    | 9.3   | 1.9   | .52  | .00  | .00  | .00  |
| MIN   | .65   | 1.1  | 1.2  | 2.0   | 3.0   | 7.4   | 2.2   | .57   | .00  | .00  | .00  | .00  |
| AC-FT | 64    | 100  | 119  | 217   | 1050  | 901   | 299   | 63    | 11   | .00  | .00  | .00  |

## 11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .087 | 4.10 | 12.4 | 18.0 | 19.1 | 34.9 | 23.6 | 4.29 | 1.47 | .40  | .072 | .035 |
| MAX  | 1.05 | 69.4 | 164  | 131  | 99.6 | 371  | 270  | 25.6 | 13.0 | 4.80 | 1.28 | .64  |
| (WY) | 1996 | 1966 | 1967 | 1995 | 1995 | 1995 | 1958 | 1995 | 1995 | 1995 | 1995 | 1995 |
| MIN  | .000 | .000 | .000 | .000 | .089 | .035 | .007 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1953 | 1954 | 1954 | 1963 | 1961 | 1961 | 1961 | 1961 | 1960 | 1953 | 1953 | 1953 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1953 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 21749.22               |  |  |  | 1423.75             |  |  |  | 9.83                    |  |  |  |
| ANNUAL MEAN              | 59.6                   |  |  |  | 3.89                |  |  |  | 59.2                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | .019                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  |                         |  |  |  |
| HIGHEST DAILY MEAN       | 2160 Mar 5             |  |  |  | 125 Feb 21          |  |  |  | 2570 Dec 6 1966         |  |  |  |
| LOWEST DAILY MEAN        | .37 Jan 2              |  |  |  | .00 Jun 25          |  |  |  | .00 Oct 1 1952          |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .49 Sep 6              |  |  |  | .00 Jun 28          |  |  |  | .00 Oct 1 1952          |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 237 Feb 21          |  |  |  | 7300 Dec 6 1966         |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 4.83 Feb 21         |  |  |  | 10.45 Dec 6 1966        |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 43140                  |  |  |  | 2820                |  |  |  | 7120                    |  |  |  |
| 10 PERCENT EXCEEDS       | 141                    |  |  |  | 8.7                 |  |  |  | 12                      |  |  |  |
| 50 PERCENT EXCEEDS       | 7.3                    |  |  |  | 1.4                 |  |  |  | .10                     |  |  |  |
| 90 PERCENT EXCEEDS       | .73                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |

## 11046360 CHRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE, CA

LOCATION.--Lat 33°25'35", long 117°34'10", in SW 1/4 SW 1/4 sec.36, T.8 S., R.7 W., San Diego County, Hydrologic Unit 18070301, on each of two major channels of Christianitos Creek, at San Mateo Creek Road crossing, 0.5 mi upstream from confluence with San Mateo Creek, and 2.3 mi east of San Clemente.

DRAINAGE AREA.--31.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Two water-stage recorders (one on each of two channels) and culvert controls. Elevation of gage is 90 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,730 ft<sup>3</sup>/s, estimated, Mar. 5, 1995, from rating curves extended on basis of culvert computations; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 16, 1952, reached a discharge of 1,800 ft<sup>3</sup>/s, gage height of 8.86 ft, datum then in use, at site 1.8 mi upstream (station 11046350), on basis of slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curves extended on basis of culvert computations:

| Date    | Time | Combined Discharge<br>(north and south channels)<br>(ft <sup>3</sup> /s) | Date | Time | Combined Discharge<br>(north and south channels)<br>(ft <sup>3</sup> /s) |
|---------|------|--|------|------|--|
| Feb. 21 | 0945 | 101  |      |      |  |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|-------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | e1.3  | e.00 | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00  | .00   | e.00 | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00  | .00   | e.00 | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .00  | .00   | e.00 | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00  | .00   | e8.3 | .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  | .00   | .38  | .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  | .09  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .00  | .00   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .00  | 1.7   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | 23    | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | e1.8  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .00  | .00  | e.00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .00  | e.00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .00  | e4.1  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00  | e4.1  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00  | 8.5   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | e3.7  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00  | .00  | e.00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00  | .00  | ---   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00  | 5.7  | ---   | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.00 | 5.70 | 48.20 | 8.68 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .18  | 1.66  | .28  | .003 | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .00  | 5.7  | 23    | 8.3  | .08  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | 11   | 96    | 17   | .2   | .00  | .00  | .00  | .00  | .00  |

e Estimated.



11046360 CHRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .000 | .000 | 8.27 | 9.28 | 42.9 | 3.75 | 1.21 | .19  | .000 | .000 | .000 |
| MAX  | .000 | .000 | .001 | 24.6 | 26.0 | 128  | 11.2 | 3.63 | .58  | .000 | .000 | .000 |
| (WY) | 1994 | 1994 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1994 | 1994 | 1994 |
| MIN  | .000 | .000 | .000 | .000 | .42  | .28  | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1994 | 1994 | 1994 | 1994 | 1994 | 1996 | 1994 | 1994 | 1994 | 1994 | 1994 | 1994 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1994 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 5926.37                | 62.67               |                         |
| ANNUAL MEAN              | 16.2                   | .17                 | 5.49                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 16.2                    |
| LOWEST ANNUAL MEAN       |                        |                     | .066                    |
| HIGHEST DAILY MEAN       | 827 Mar 6              | 23 Feb 21           | 827 Mar 6 1995          |
| LOWEST DAILY MEAN        | .00 Jan 1              | .00 Oct 1           | .00 Oct 1 1993          |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jun 21             | .00 Oct 1           | .00 Oct 1 1993          |
| INSTANTANEOUS PEAK FLOW  |                        | 101 Feb 21          | 1730 Mar 5 1995         |
| ANNUAL RUNOFF (AC-FT)    | 11750                  | 124                 | 3970                    |
| 10 PERCENT EXCEEDS       | 25                     | .00                 | 4.1                     |
| 50 PERCENT EXCEEDS       | .00                    | .00                 | .00                     |
| 90 PERCENT EXCEEDS       | .00                    | .00                 | .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>.

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 and crest-stage gage. Elevation of gage is 100 ft above sea level, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Capistrano Water Co. diverts water 2.0 mi upstream. Various amounts of diverted water reach station as irrigation return flow. October 1928 to September 1969 and October 1969 to September 1985, data published as San Juan Creek near San Juan Capistrano (Station 11046500) and San Juan Creek at San Juan Capistrano (station 11046550), which are located approximately 1.9 mi upstream and 1.0 mi downstream, respectively. Data for these sites are roughly equivalent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft<sup>3</sup>/s, estimated, Mar. 5, 1995, gage height, 20.66 ft, from rating curve extended above 3,420 ft<sup>3</sup>/s; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, or maximum, from rating curve extended as noted above:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2230 | 248                               | 11.52               | Feb. 21 | 1000 | 245                               | 11.32               |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1     | 1.7  | 2.7  | 2.0  | 4.1   | 64    | 13    | 8.1   | 10    | 1.6   | .33  | .00  | .00  |
| 2     | 1.2  | 3.4  | 1.8  | 3.6   | e11   | 12    | 11    | 9.6   | 1.6   | .29  | .00  | .00  |
| 3     | 1.2  | 3.7  | 1.8  | 3.1   | e13   | 12    | 11    | 10    | 1.8   | .17  | .00  | .00  |
| 4     | 1.2  | 3.8  | 2.0  | 2.1   | e9.0  | 13    | 11    | 8.7   | 1.9   | .17  | .00  | .00  |
| 5     | 1.4  | 3.2  | 2.0  | 2.2   | e7.7  | 24    | 11    | 7.9   | 1.7   | .10  | .00  | .00  |
| 6     | 1.1  | 2.5  | 1.8  | 2.3   | 7.4   | 16    | 11    | 8.0   | 1.7   | .00  | .00  | .00  |
| 7     | 1.1  | 2.5  | 1.8  | 1.9   | 7.1   | 13    | 10    | 7.7   | 1.9   | .00  | .00  | .00  |
| 8     | 1.3  | 2.7  | 2.0  | 1.8   | 6.5   | 12    | 10    | 6.8   | 2.0   | .00  | .00  | .00  |
| 9     | 1.6  | 3.0  | 2.0  | 2.0   | 6.2   | 11    | 8.6   | 5.8   | 1.8   | .00  | .00  | .00  |
| 10    | 2.3  | 3.0  | 1.6  | 2.5   | 5.6   | 9.9   | 8.3   | 6.3   | 1.8   | .00  | .00  | .00  |
| 11    | 2.3  | 3.0  | 1.8  | 2.7   | 4.8   | 9.8   | 7.7   | 5.1   | 1.8   | .00  | .00  | .00  |
| 12    | 2.3  | 2.5  | 2.1  | 2.8   | 4.8   | 12    | 6.9   | 4.6   | 1.7   | .00  | .00  | .00  |
| 13    | 2.5  | 3.2  | 5.9  | 3.2   | 4.8   | 24    | 6.9   | 3.8   | 1.4   | .00  | .00  | .00  |
| 14    | 2.5  | 2.5  | 4.4  | 2.6   | 4.5   | 15    | 6.9   | 2.9   | 1.1   | .00  | .00  | .00  |
| 15    | 2.3  | 2.0  | 3.0  | 2.5   | 4.2   | 13    | 7.3   | 3.8   | e1.1  | .00  | .00  | .00  |
| 16    | 2.5  | 1.8  | 4.7  | 4.3   | 6.4   | 13    | 7.7   | 2.1   | e1.0  | .00  | .00  | .00  |
| 17    | 2.7  | 2.0  | 3.6  | 6.0   | 8.5   | 11    | 9.0   | 2.0   | e1.0  | .00  | .00  | .00  |
| 18    | 3.3  | 2.0  | 2.7  | 2.8   | 6.8   | 11    | 18    | 2.2   | e1.0  | .00  | .00  | .00  |
| 19    | 3.6  | 1.8  | 2.7  | 2.1   | 6.5   | 10    | 16    | 2.9   | e.97  | .00  | .00  | .00  |
| 20    | 3.6  | 2.0  | 2.0  | 1.7   | 88    | 10    | 18    | 3.0   | e.97  | .00  | .00  | .00  |
| 21    | 3.3  | 2.5  | 5.8  | 13    | 167   | 9.4   | 17    | 2.6   | e.94  | .00  | .00  | .00  |
| 22    | 3.0  | 2.7  | 6.2  | 20    | e54   | 9.0   | 17    | 1.9   | e.91  | .00  | .00  | .00  |
| 23    | 3.0  | 2.7  | 7.1  | 14    | e27   | 9.9   | 14    | 2.6   | e.88  | .00  | .00  | .00  |
| 24    | 3.0  | 2.7  | 3.3  | 12    | e22   | 11    | 13    | 5.2   | e.85  | .00  | .00  | .00  |
| 25    | 3.3  | 3.3  | 1.8  | 12    | e56   | 11    | 12    | 3.9   | e.80  | .00  | .00  | .00  |
| 26    | 3.0  | 2.6  | 2.4  | 11    | e24   | 10    | 12    | 2.3   | e.76  | .00  | .00  | .00  |
| 27    | 2.7  | 2.4  | 1.6  | 11    | e27   | 9.4   | 11    | 1.7   | e.73  | .00  | .00  | .00  |
| 28    | 3.0  | 2.2  | 2.0  | 11    | 22    | 8.5   | 11    | 1.5   | e.70  | .00  | .00  | .00  |
| 29    | 2.7  | 2.0  | 2.2  | 11    | 14    | 8.1   | 11    | 1.5   | e.65  | .00  | .00  | .00  |
| 30    | 3.0  | 1.8  | 2.4  | 12    | ---   | 7.3   | 11    | 1.5   | .60   | .00  | .00  | .00  |
| 31    | 3.0  | ---  | 2.6  | 45    | ---   | 7.3   | ---   | 1.5   | ---   | .00  | .00  | ---  |
| TOTAL | 74.7 | 78.2 | 89.1 | 228.3 | 689.8 | 365.6 | 333.4 | 139.4 | 37.66 | 1.06 | 0.00 | 0.00 |
| MEAN  | 2.41 | 2.61 | 2.87 | 7.36  | 23.8  | 11.8  | 11.1  | 4.50  | 1.26  | .034 | .000 | .000 |
| MAX   | 3.6  | 3.8  | 7.1  | 45    | 167   | 24    | 18    | 10    | 2.0   | .33  | .00  | .00  |
| MIN   | 1.1  | 1.8  | 1.6  | 1.7   | 4.2   | 7.3   | 6.9   | 1.5   | .60   | .00  | .00  | .00  |
| AC-FT | 148  | 155  | 177  | 453   | 1370  | 725   | 661   | 276   | 75    | 2.1  | .00  | .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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .47  | 1.33 | 3.27 | 76.1 | 70.0 | 90.6 | 15.8 | 6.70 | 2.71 | .96  | .46  | .36  |
| MAX  | 2.41 | 6.29 | 9.29 | 590  | 502  | 663  | 75.0 | 35.5 | 15.9 | 6.78 | 2.86 | 1.98 |
| (WY) | 1996 | 1994 | 1993 | 1993 | 1993 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1993 |
| 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1986 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 34842.30               |  |  |  | 2037.22             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 95.5                   |  |  |  | 5.57                |  |  |  | 22.2                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 106                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .61                     |  |  |  |
| HIGHEST DAILY MEAN       | 5700                   |  |  |  | 167                 |  |  |  | 5700                    |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 1.2                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 248                 |  |  |  | 25600                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 11.52               |  |  |  | 20.66                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 69110                  |  |  |  | 4040                |  |  |  | 16110                   |  |  |  |
| 10 PERCENT EXCEEDS       | 179                    |  |  |  | 12                  |  |  |  | 22                      |  |  |  |
| 50 PERCENT EXCEEDS       | 8.7                    |  |  |  | 2.5                 |  |  |  | .79                     |  |  |  |
| 90 PERCENT EXCEEDS       | 1.7                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |

## SAN JUAN CREEK BASIN

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA

LOCATION.--Lat 33°29'54", long 117°39'54", on line between secs.1 and 12, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on left bank 30 ft downstream from Del Obispo Street Bridge in San Juan Capistrano.

DRAINAGE AREA.--54.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1972 to September 1977, October 1983 to September 1989, October 1995 to September 1996.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 80 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,020 ft<sup>3</sup>/s, Feb. 15, 1986, gage height, 15.35 ft, from rating curve extended above 220 ft<sup>3</sup>/s; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft<sup>3</sup>/s, or maximum, from rating curve extended above 396 ft<sup>3</sup>/s on basis of critical-depth computations:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 21 | 1745 | 900                               | 12.80               | Feb. 27 | 2015 | 843                               | 12.71               |
| Jan. 31 | 2345 | 761                               | 12.58               | Mar. 12 | 1645 | 560                               | 12.24               |
| Feb. 20 | 2115 | 1,420                             | 13.51               |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 4.6   | 9.5   | 3.2   | 4.6   | 176    | 23    | 11    | 6.0   | 3.0   | .93   | .85   | .51   |
| 2     | 5.0   | 5.4   | 2.9   | 4.6   | 19     | 17    | 17    | 5.0   | 2.7   | .75   | .91   | .55   |
| 3     | 5.5   | 3.8   | 3.6   | 4.5   | 36     | 15    | 10    | 5.7   | 2.3   | 1.0   | .78   | .57   |
| 4     | 5.6   | 4.5   | 3.8   | 4.6   | 13     | 78    | 9.1   | 6.1   | 1.5   | 1.4   | .81   | .64   |
| 5     | 4.7   | 4.2   | 4.1   | 4.4   | 8.9    | 118   | 8.7   | 7.4   | 2.3   | .96   | .78   | .50   |
| 6     | 4.8   | 4.1   | 3.8   | 4.1   | 7.3    | 27    | 8.8   | 7.4   | 2.3   | .93   | 2.0   | .52   |
| 7     | 4.9   | 3.2   | 3.7   | 5.0   | 6.3    | 22    | 8.2   | 5.5   | 2.1   | 1.6   | 2.2   | .47   |
| 8     | 4.9   | 3.0   | 3.8   | 5.0   | 5.8    | 17    | 7.7   | 4.0   | 1.4   | 1.2   | 2.2   | .56   |
| 9     | 5.3   | 3.0   | 4.4   | 4.4   | 5.6    | 15    | 7.7   | 4.6   | 2.0   | 1.0   | 1.3   | .57   |
| 10    | 5.5   | 3.1   | 3.5   | 4.4   | 5.7    | 13    | 6.7   | 4.7   | 1.8   | 1.1   | .67   | .51   |
| 11    | 5.0   | 3.1   | 3.8   | 4.1   | 5.7    | 11    | 5.3   | 4.0   | 1.3   | .88   | .58   | .48   |
| 12    | 7.7   | 4.2   | 4.2   | 4.3   | 6.2    | 102   | 4.9   | 3.5   | 1.0   | .85   | .63   | .54   |
| 13    | 6.3   | 3.9   | 65    | 4.9   | 6.4    | 167   | 6.1   | 4.2   | .99   | .75   | .58   | .85   |
| 14    | 8.1   | 3.7   | 18    | 8.1   | 5.0    | 38    | 5.3   | 4.7   | 1.1   | .68   | .68   | .66   |
| 15    | 7.6   | 4.4   | 6.6   | 4.9   | 5.2    | 35    | 4.7   | 4.4   | 1.0   | 1.2   | .53   | .45   |
| 16    | 7.3   | 3.2   | 5.8   | 50    | 5.1    | 19    | 5.4   | 3.8   | 1.6   | 1.0   | .66   | .56   |
| 17    | 6.5   | 3.2   | 5.1   | 45    | 5.4    | 19    | 12    | 4.6   | 2.0   | 1.1   | .62   | .56   |
| 18    | 6.9   | 3.4   | 4.9   | 6.8   | 5.1    | 17    | 88    | 3.5   | 1.9   | 1.1   | .60   | 1.0   |
| 19    | 7.6   | 3.5   | 5.1   | 13    | 5.4    | 16    | 9.7   | 4.2   | 1.1   | 1.2   | .70   | 2.9   |
| 20    | 7.3   | 3.4   | 4.7   | 5.3   | 470    | 14    | 6.6   | 3.9   | 1.1   | 1.7   | .73   | 2.9   |
| 21    | 6.4   | 2.9   | 4.9   | 113   | 588    | 9.9   | 5.8   | 3.6   | 1.0   | 4.1   | .60   | .50   |
| 22    | 7.5   | 2.9   | 4.8   | 53    | 156    | 10    | 5.9   | 3.5   | 1.1   | 1.5   | 1.1   | .44   |
| 23    | 5.9   | 3.7   | 47    | 7.6   | 35     | 11    | 5.5   | 3.7   | 1.8   | 1.2   | 1.2   | .49   |
| 24    | 4.6   | 3.7   | 6.6   | 4.8   | 19     | 9.7   | 5.1   | 24    | 1.8   | 1.0   | .67   | .50   |
| 25    | 4.4   | 3.7   | 5.1   | 6.4   | 121    | 9.7   | 6.5   | 11    | 1.0   | 1.0   | .51   | .52   |
| 26    | 4.3   | 3.9   | 4.9   | 4.9   | 84     | 9.7   | 5.7   | 6.3   | 1.3   | 18    | .52   | .52   |
| 27    | 4.4   | 3.8   | 4.6   | 3.8   | 114    | 10    | 5.1   | 4.8   | 1.7   | 9.9   | .50   | .53   |
| 28    | 4.3   | 3.2   | 4.4   | 6.2   | 78     | 12    | 7.6   | 4.5   | 1.3   | 2.1   | .52   | .57   |
| 29    | 5.3   | 3.6   | 4.6   | 3.7   | 28     | 15    | 6.1   | 4.0   | .93   | 1.7   | .59   | .54   |
| 30    | 4.8   | 3.2   | 4.8   | 3.7   | ---    | 12    | 5.1   | 3.6   | .88   | 1.4   | .50   | .52   |
| 31    | 3.9   | ---   | 4.7   | 198   | ---    | 12    | ---   | 3.3   | ---   | 1.2   | .49   | ---   |
| TOTAL | 176.9 | 114.4 | 256.4 | 597.1 | 2026.1 | 904.0 | 301.3 | 169.5 | 47.30 | 64.43 | 26.01 | 21.43 |
| MEAN  | 5.71  | 3.81  | 8.27  | 19.3  | 69.9   | 29.2  | 10.0  | 5.47  | 1.58  | 2.08  | .84   | .71   |
| MAX   | 8.1   | 9.5   | 65    | 198   | 588    | 167   | 88    | 24    | 3.0   | 18    | 2.2   | 2.9   |
| MIN   | 3.9   | 2.9   | 2.9   | 3.7   | 5.0    | 9.7   | 4.7   | 3.3   | .88   | .68   | .49   | .44   |
| AC-FT | 351   | 227   | 509   | 1180  | 4020   | 1790  | 598   | 336   | 94    | 128   | 52    | 43    |

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1996, BY WATER YEAR (WY)

|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.08 | 8.69 | 14.6 | 10.7 | 19.4 | 16.1 | 7.17 | 2.61 | 1.36 | .98  | 1.36 | 2.00 |
| MAX  | 12.7 | 26.0 | 56.6 | 19.6 | 69.9 | 60.1 | 19.4 | 5.83 | 2.54 | 2.08 | 8.90 | 7.81 |
| (WY) | 1988 | 1986 | 1985 | 1974 | 1996 | 1986 | 1986 | 1977 | 1989 | 1996 | 1977 | 1986 |
| MIN  | .052 | .81  | 1.73 | .85  | 2.84 | 3.74 | .92  | .71  | .007 | .055 | .019 | .000 |
| (WY) | 1974 | 1975 | 1973 | 1976 | 1977 | 1988 | 1977 | 1988 | 1973 | 1973 | 1973 | 1973 |

## SUMMARY STATISTICS

## FOR 1996 WATER YEAR

## WATER YEARS 1973 - 1996

|                          |         |        |  |  |  |  |  |  |  |       |        |      |
|--------------------------|---------|--------|--|--|--|--|--|--|--|-------|--------|------|
| ANNUAL TOTAL             | 4704.87 |        |  |  |  |  |  |  |  |       |        |      |
| ANNUAL MEAN              | 12.9    |        |  |  |  |  |  |  |  | 7.28  |        |      |
| HIGHEST ANNUAL MEAN      |         |        |  |  |  |  |  |  |  | 13.8  |        | 1986 |
| LOWEST ANNUAL MEAN       |         |        |  |  |  |  |  |  |  | 3.17  |        | 1976 |
| HIGHEST DAILY MEAN       | 588     | Feb 21 |  |  |  |  |  |  |  | 588   | Feb 21 | 1996 |
| LOWEST DAILY MEAN        | .44     | Sep 22 |  |  |  |  |  |  |  | .00   | Oct 1  | 1972 |
| ANNUAL SEVEN-DAY MINIMUM | .50     | Sep 21 |  |  |  |  |  |  |  | .00   | Oct 1  | 1972 |
| INSTANTANEOUS PEAK FLOW  | 1420    | Feb 20 |  |  |  |  |  |  |  | 2020  | Feb 15 | 1986 |
| INSTANTANEOUS PEAK STAGE | 13.51   | Feb 20 |  |  |  |  |  |  |  | 15.35 | Feb 15 | 1986 |
| ANNUAL RUNOFF (AC-FT)    | 9330    |        |  |  |  |  |  |  |  | 5280  |        |      |
| 10 PERCENT EXCEEDS       | 17      |        |  |  |  |  |  |  |  | 10    |        |      |
| 50 PERCENT EXCEEDS       | 4.4     |        |  |  |  |  |  |  |  | 1.7   |        |      |
| 90 PERCENT EXCEEDS       | .61     |        |  |  |  |  |  |  |  | .10   |        |      |

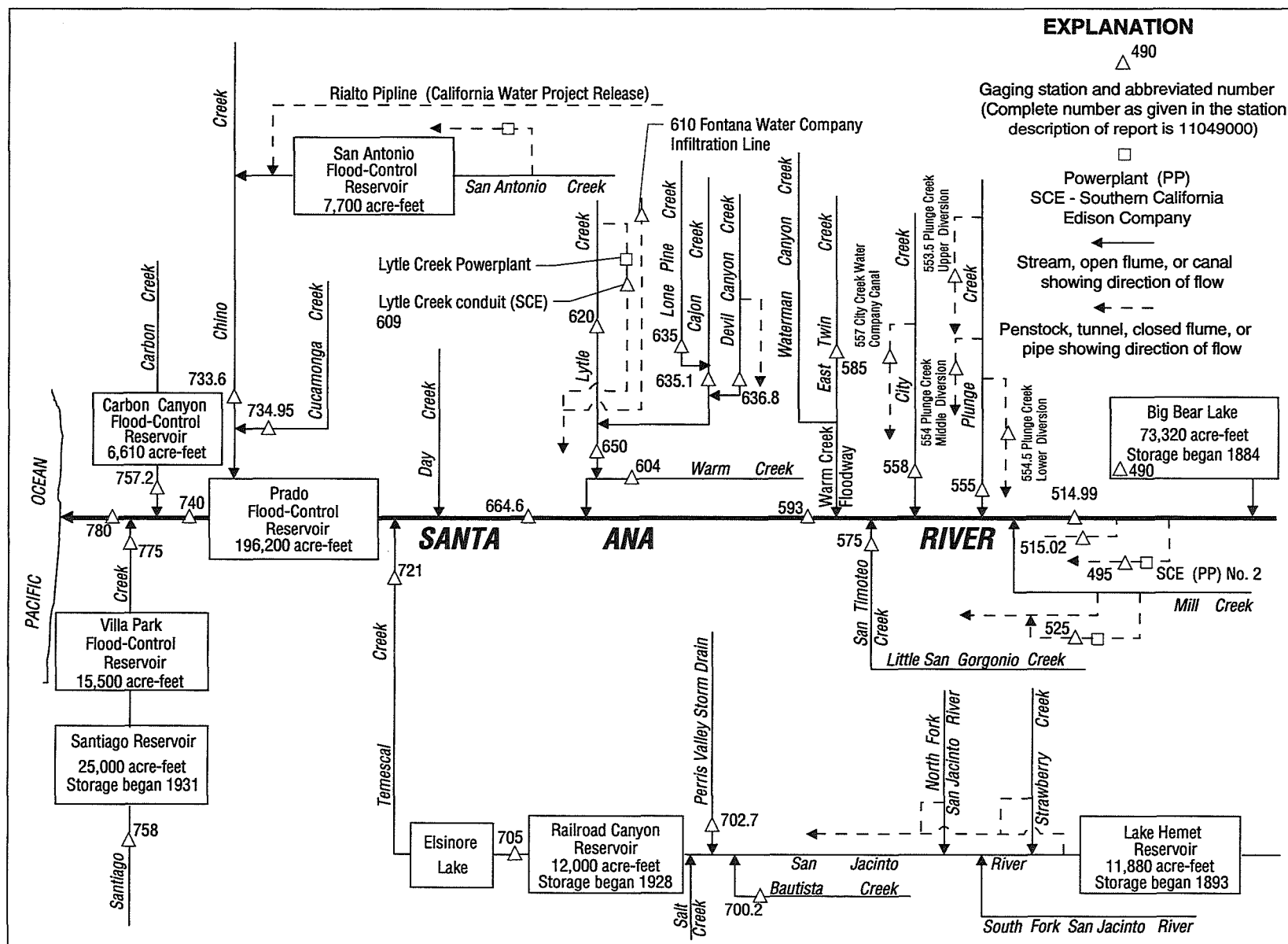


Figure 16. Diversions and storage in Santa Ana River basin.

## 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 6,670.9 ft above sea level (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. During the year, 3,460 acre-ft was released. Between December 1995 and March 1996, 663 acre-ft was pumped from the lake for snowmaking. See schematic diagram of Santa Ana River basin.

COOPERATION.--Record of contents provided by Big Bear Municipal Water District; not reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents unknown, lake spilled in 1969, 1970, 1980, 1983; minimum contents observed, 530 acre-ft, Nov. 24, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939; lake dry October, November 1898, August to November 1899, October, November 1904.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 71,630 acre-ft, Apr. 22; minimum contents observed, 60,920 acre-ft, Sept. 30.

## MONTHEND CONTENTS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| Date             | Contents<br>(acre-feet) | Change in Contents<br>(acre-feet) |
|------------------|-------------------------|-----------------------------------|
| Sept. 30.....    | 67,990                  | --                                |
| Oct. 31.....     | 66,400                  | -1,590                            |
| Nov. 30.....     | 65,660                  | -740                              |
| Dec. 31.....     | 65,060                  | -600                              |
| CAL YR 1995..... | --                      | +2,190                            |
| Jan. 31.....     | 65,270                  | +210                              |
| Feb. 29.....     | 69,140                  | +3,870                            |
| Mar. 31.....     | 71,330                  | +2,190                            |
| Apr. 30.....     | 71,480                  | +150                              |
| May 31.....      | 70,160                  | -1,320                            |
| June 30.....     | 67,840                  | -2,320                            |
| July 31.....     | 65,200                  | -2,640                            |
| Aug. 31.....     | 62,380                  | -2,820                            |
| Sept. 30.....    | 60,920                  | -1,460                            |
| WTR YR 1996..... | --                      | -7,070                            |

## 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 (station 11051499), canal gage on powerhouse diversion (station 11049500), and since 1970, supplementary gage on left bank of river (station 11051502). Elevation of the main and supplementary gages is 1,950 ft above sea level, from topographic map. Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 mi upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mi upstream at different datum. Canal gage at different datum.

REMARKS.--Records fair. Flow partly regulated by Big Bear Lake (station 11049000). The supplementary gage (station 11051502) measures water that is occasionally diverted out of the main channel 250 upstream for water distribution. Flow measured by the supplementary gage is included with the river record to maintain equivalence with records prior to 1970. For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below Powerplant No. 2 (station 11049500), which diverts upstream from station, see station 11051501. Prior to Oct. 1, 1952, and since Apr. 26, 1976, Bear Valley Mutual Water Co. pumps water into channel above canal gage. See schematic diagram of Santa Ana River basin.

COOPERATION.--Records for Southern California Edison Co.'s Canal near Mentone (station 11049500) were provided 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.--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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR    | APR   | MAY   | JUN   | JUL    | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|--------|-------|-------|
| 1     | 5.7   | 5.3   | 7.6   | 17    | 220    | 19     | 8.7   | 7.7   | 5.2   | 3.9    | .74   | .53   |
| 2     | 5.7   | 5.5   | 7.6   | 14    | 80     | 17     | 11    | 8.0   | 4.9   | 4.0    | .82   | .58   |
| 3     | 5.7   | 5.7   | 7.6   | 14    | 49     | 16     | 9.8   | 8.1   | 5.2   | 4.4    | .90   | 5.3   |
| 4     | 5.9   | 5.6   | 7.6   | 12    | 43     | 20     | 10    | 8.1   | 4.6   | 4.8    | .97   | 15    |
| 5     | 6.1   | 5.7   | 7.6   | 11    | 37     | 405    | 9.8   | 8.1   | 3.5   | 4.6    | 1.0   | 9.7   |
| 6     | 6.1   | 5.7   | 7.6   | 10    | 31     | 203    | 9.8   | 8.1   | 3.5   | 4.5    | 1.0   | 1.1   |
| 7     | 6.1   | 5.7   | 7.6   | 10    | 24     | 132    | 9.7   | 8.0   | 3.3   | 4.5    | 1.0   | .90   |
| 8     | 6.1   | 5.7   | 7.6   | 10    | 17     | 54     | 9.4   | 7.9   | 3.1   | 4.5    | 1.1   | .91   |
| 9     | 6.1   | 5.7   | 8.7   | 9.9   | 8.7    | 38     | 9.3   | 8.0   | 2.9   | 4.8    | 1.1   | .88   |
| 10    | 6.0   | 5.3   | 9.3   | 8.6   | 8.9    | 35     | 9.4   | 7.0   | 2.8   | 13     | 1.1   | .86   |
| 11    | 5.3   | 4.9   | 10    | 7.9   | 8.2    | 30     | 9.8   | 6.3   | 2.8   | 4.9    | 1.1   | .81   |
| 12    | 4.5   | 4.9   | 12    | 5.8   | 7.3    | 27     | 9.8   | 6.0   | 2.7   | 4.6    | 1.3   | .76   |
| 13    | 4.9   | 4.9   | 15    | 5.6   | 7.1    | 61     | 9.8   | 5.9   | 2.7   | 4.6    | 1.5   | .79   |
| 14    | 4.9   | 4.9   | 18    | 5.6   | 7.0    | 46     | 9.7   | 6.2   | 2.6   | 4.5    | .95   | .77   |
| 15    | 4.9   | 4.9   | 15    | 5.6   | 6.1    | 35     | 9.0   | 5.7   | 2.6   | 4.4    | .90   | .72   |
| 16    | 4.9   | 5.3   | 14    | 6.0   | 6.1    | 30     | 8.9   | 5.3   | 2.5   | 4.3    | .81   | .68   |
| 17    | 4.7   | 8.0   | 15    | 7.0   | 5.7    | 26     | 8.5   | 5.3   | 2.5   | 4.4    | .77   | .64   |
| 18    | 4.1   | 7.6   | 15    | 6.5   | 5.7    | 23     | 11    | 5.2   | 11    | 4.3    | .72   | .64   |
| 19    | 4.3   | 7.6   | 15    | 6.6   | 6.7    | 19     | 9.6   | 5.2   | 23    | 4.3    | .72   | .52   |
| 20    | 4.1   | 7.6   | 15    | 6.4   | 490    | 14     | 9.0   | 5.3   | 4.6   | 4.1    | .71   | .40   |
| 21    | 4.3   | 6.9   | 15    | 8.5   | 905    | 13     | 8.1   | 5.3   | 3.4   | 3.7    | .67   | .37   |
| 22    | 4.7   | 6.6   | 15    | 18    | 350    | 12     | 8.1   | 5.3   | 2.9   | 3.7    | .65   | .35   |
| 23    | 4.9   | 6.6   | 15    | 11    | 169    | 12     | 7.9   | 5.4   | 2.7   | 3.7    | .66   | .31   |
| 24    | 5.3   | 6.6   | 15    | 9.6   | 107    | 11     | 7.6   | 5.6   | 3.0   | 3.5    | .63   | .36   |
| 25    | 5.7   | 6.3   | 15    | 7.8   | 50     | 11     | 7.6   | 5.7   | 3.6   | 3.4    | .59   | .36   |
| 26    | 6.1   | 6.1   | 15    | 7.5   | 35     | 9.8    | 8.0   | 5.7   | 3.6   | 2.9    | .59   | .36   |
| 27    | 6.3   | 6.1   | 15    | 7.0   | 22     | 9.3    | 9.1   | 5.4   | 3.4   | 2.1    | .59   | .34   |
| 28    | 5.4   | 6.8   | 14    | 6.9   | 22     | 9.1    | 8.6   | 5.4   | 3.2   | 1.8    | .58   | .34   |
| 29    | 5.3   | 8.0   | 12    | 6.6   | 21     | 9.7    | 8.0   | 5.3   | 3.7   | 1.5    | .56   | .37   |
| 30    | 5.6   | 7.7   | 13    | 6.9   | ---    | 9.2    | 7.6   | 5.2   | 3.8   | 1.3    | .53   | .38   |
| 31    | 5.4   | ---   | 14    | 118   | ---    | 8.1    | ---   | 5.2   | ---   | .83    | .51   | ---   |
| TOTAL | 165.1 | 184.2 | 380.8 | 387.3 | 2749.5 | 1364.2 | 272.6 | 194.9 | 129.3 | 125.83 | 25.77 | 46.03 |
| MEAN  | 5.33  | 6.14  | 12.3  | 12.5  | 94.8   | 44.0   | 9.09  | 6.29  | 4.31  | 4.06   | .83   | 1.53  |
| MAX   | 6.3   | 8.0   | 18    | 118   | 905    | 405    | 11    | 8.1   | 23    | 13     | 1.5   | 15    |
| MIN   | 4.1   | 4.9   | 7.6   | 5.6   | 5.7    | 8.1    | 7.6   | 5.2   | 2.5   | .83    | .51   | .31   |
| AC-FT | 327   | 365   | 755   | 768   | 5450   | 2710   | 541   | 387   | 256   | 250    | 51    | 91    |



## 11051500 SANTA ANA RIVER NEAR MENTONE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 4.82 | 8.43 | 25.4 | 41.7 | 82.4 | 97.4 | 64.0 | 45.7 | 21.4 | 11.2 | 6.14 | 6.21 |
| MAX  | 77.8 | 206  | 536  | 646  | 1052 | 1405 | 413  | 411  | 277  | 174  | 124  | 134  |
| (WY) | 1970 | 1966 | 1967 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1915 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 43153.1                |  |  |  | 6025.53             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 118                    |  |  |  | 16.5                |  |  |  |                         |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 33.1                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 283                     |  |  |  |
| HIGHEST DAILY MEAN       | 1840                   |  |  |  | 905                 |  |  |  | 15500                   |  |  |  |
| LOWEST DAILY MEAN        | 3.1                    |  |  |  | .31                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 4.4                    |  |  |  | .35                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 1350                |  |  |  | 52300                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  |                     |  |  |  | 14.30                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 85590                  |  |  |  | 11950               |  |  |  | 23980                   |  |  |  |
| 10 PERCENT EXCEEDS       | 240                    |  |  |  | 18                  |  |  |  | 74                      |  |  |  |
| 50 PERCENT EXCEEDS       | 26                     |  |  |  | 6.1                 |  |  |  | 1.8                     |  |  |  |
| 90 PERCENT EXCEEDS       | 5.3                    |  |  |  | .78                 |  |  |  | .00                     |  |  |  |

## SANTA ANA RIVER BASIN

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  
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 57   | 56   | 49   | 45   | 221  | 121  | 82   | 55   | 41   | 50   | 60   | 51   |
| 2     | 56   | 55   | 49   | 46   | 97   | 115  | 91   | 55   | 39   | 51   | 59   | 36   |
| 3     | 55   | 55   | 48   | 48   | 73   | 109  | 80   | 55   | 38   | 58   | 59   | 35   |
| 4     | 55   | 55   | 49   | 50   | 64   | 111  | 77   | 55   | 39   | 60   | 60   | 44   |
| 5     | 55   | 54   | 49   | 49   | 60   | 406  | 75   | 54   | 38   | 59   | 49   | 38   |
| 6     | 55   | 54   | 49   | 47   | 62   | 204  | 74   | 54   | 39   | 57   | 47   | 29   |
| 7     | 55   | 53   | 49   | 46   | 56   | 164  | 72   | 53   | 38   | 57   | 46   | 29   |
| 8     | 55   | 52   | 43   | 46   | 55   | 149  | 69   | 53   | 38   | 57   | 44   | 29   |
| 9     | 54   | 52   | 45   | 45   | 53   | 137  | 68   | 53   | 38   | 55   | 42   | 29   |
| 10    | 54   | 51   | 46   | 44   | 53   | 126  | 69   | 51   | 38   | 65   | 40   | 28   |
| 11    | 52   | 50   | 45   | 47   | 51   | 122  | 69   | 48   | 48   | 55   | 43   | 28   |
| 12    | 51   | 49   | 45   | 48   | 49   | 121  | 68   | 47   | 51   | 54   | 42   | 28   |
| 13    | 50   | 48   | 53   | 47   | 51   | 153  | 67   | 47   | 53   | 53   | 40   | 30   |
| 14    | 50   | 48   | 59   | 47   | 50   | 137  | 65   | 47   | 53   | 51   | 40   | 31   |
| 15    | 50   | 47   | 53   | 46   | 49   | 129  | 64   | 47   | 53   | 48   | 45   | 30   |
| 16    | 51   | 46   | 51   | 47   | 49   | 125  | 63   | 47   | 52   | 52   | 47   | 31   |
| 17    | 50   | 50   | 49   | 49   | 49   | 120  | 64   | 46   | 52   | 51   | 50   | 30   |
| 18    | 49   | 50   | 50   | 47   | 48   | 117  | 88   | 45   | 31   | 44   | 50   | 29   |
| 19    | 49   | 49   | 51   | 47   | 53   | 116  | 73   | 45   | 42   | 42   | 50   | 28   |
| 20    | 48   | 50   | 52   | 46   | 503  | 115  | 69   | 45   | 54   | 43   | 49   | 27   |
| 21    | 49   | 50   | 51   | 50   | 906  | 112  | 66   | 45   | 52   | 42   | 49   | 26   |
| 22    | 50   | 50   | 51   | 65   | 351  | 110  | 63   | 45   | 52   | 43   | 45   | 26   |
| 23    | 45   | 49   | 54   | 52   | 176  | 107  | 61   | 45   | 49   | 48   | 47   | 26   |
| 24    | 48   | 48   | 53   | 51   | 176  | 101  | 59   | 48   | 49   | 49   | 48   | 25   |
| 25    | 50   | 47   | 53   | 50   | 140  | 98   | 59   | 50   | 52   | 49   | 46   | 21   |
| 26    | 53   | 47   | 52   | 49   | 129  | 94   | 58   | 48   | 59   | 55   | 43   | 29   |
| 27    | 52   | 44   | 52   | 49   | 119  | 90   | 59   | 45   | 60   | 60   | 42   | 27   |
| 28    | 53   | 43   | 50   | 49   | 118  | 90   | 58   | 44   | 56   | 59   | 44   | 26   |
| 29    | 58   | 49   | 48   | 49   | 118  | 89   | 57   | 43   | 52   | 61   | 51   | 26   |
| 30    | 63   | 49   | 50   | 48   | ---  | 85   | 56   | 44   | 51   | 69   | 51   | 25   |
| 31    | 57   | ---  | 50   | 144  | ---  | 82   | ---  | 43   | ---  | 68   | 51   | ---  |
| TOTAL | 1629 | 1500 | 1548 | 1593 | 3979 | 3955 | 2043 | 1502 | 1407 | 1665 | 1479 | 897  |
| MEAN  | 52.5 | 50.0 | 49.9 | 51.4 | 137  | 128  | 68.1 | 48.5 | 46.9 | 53.7 | 47.7 | 28.9 |
| MAX   | 63   | 56   | 59   | 144  | 906  | 406  | 91   | 55   | 60   | 69   | 60   | 51   |
| MIN   | 45   | 43   | 43   | 44   | 48   | 82   | 56   | 43   | 31   | 42   | 40   | 21   |
| AC-FT | 3230 | 2980 | 3070 | 3160 | 7890 | 7840 | 4050 | 2980 | 2790 | 3300 | 2930 | 1780 |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 49.3 | 45.6 | 58.8 | 91.8 | 124  | 138  | 117  | 99.8 | 74.1 | 63.4 | 57.3 | 54.6 |
| 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1912 - 1996

|                          |        |       |       |
|--------------------------|--------|-------|-------|
| ANNUAL TOTAL             | 62694  | 23197 |       |
| ANNUAL MEAN              | 172    | 63.4  | 81.0  |
| HIGHEST ANNUAL MEAN      |        |       | 366   |
| LOWEST ANNUAL MEAN       |        |       | 18.6  |
| HIGHEST DAILY MEAN       | 1870   | Mar 5 | 16000 |
| LOWEST DAILY MEAN        | 37     | Jan 2 | 5.3   |
| ANNUAL SEVEN-DAY MINIMUM | 46     | Dec 6 | 8.1   |
| INSTANTANEOUS PEAK FLOW  |        |       | 1350  |
| ANNUAL RUNOFF (AC-FT)    | 124400 | 46010 | 52300 |
| 10 PERCENT EXCEEDS       | 272    | 99    | 58660 |
| 50 PERCENT EXCEEDS       | 107    | 51    | 137   |
| 90 PERCENT EXCEEDS       | 49     | 39    | 49    |
|                          |        |       | 24    |

## 11052500 MILL CREEK POWER CANALS NOS. 2 AND 3 NEAR YUCAIPA, CA

LOCATION.--Lat 34°05'23", long 117°00'49", in NW 1/4 NW 1/4 sec.17, T.1 S., R.1 W., San Bernardino County, Hydrologic Unit 18070203, on penstock 100 ft downstream from Mill Creek Nos. 2 and 3 forebay, and 4.2 mi northeast of Yucaipa.

PERIOD OF RECORD.--October 1973 to September 1986, October 1993 to current year. Records for January 1919 to September 1973 available in files of the U.S. Geological Survey.

GAGE.--Acoustic-velocity meter and water stage recorder. Elevation of gage is 4,840 ft above sea level, from topographic map.

REMARKS.--Mill Creek Power Canals Nos. 2 and 3 divert from points 3 mi and 6 mi upstream from station, respectively. Canal No. 2, damaged during earthquake in 1992, was not used during the 1996 Water Year. Prior to October 1993, records collected at powerhouse at terminus of penstock. October 1993 to September 1995, records collected at auxiliary gage at Canal No. 3 intake. See schematic diagram of Santa Ana River basin.

COOPERATION.--Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 41 ft<sup>3</sup>/s, May 6, 1995; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV    | DEC   | JAN   | FEB    | MAR  | APR   | MAY  | JUN  | JUL  | AUG   | SEP  |
|-------|------|--------|-------|-------|--------|------|-------|------|------|------|-------|------|
| 1     | 20   | 18     | e6.4  | e14   | e.00   | e19  | 21    | 17   | 15   | 14   | 13    | 11   |
| 2     | 20   | 17     | e16   | e13   | e8.5   | e19  | 21    | 17   | 15   | 14   | 14    | 11   |
| 3     | 20   | 17     | e16   | e13   | e13    | e20  | 21    | 17   | 14   | 13   | 13    | 10   |
| 4     | 19   | 17     | e15   | e13   | e15    | e20  | 21    | 17   | 15   | 13   | 13    | 11   |
| 5     | 19   | 17     | e15   | e13   | e13    | e20  | 13    | 15   | 16   | 13   | 13    | 11   |
| 6     | 19   | 17     | e14   | e13   | e13    | e20  | 20    | 18   | 16   | 13   | 13    | 11   |
| 7     | 19   | 17     | e14   | e13   | e13    | e20  | 20    | 18   | 16   | 13   | 13    | 11   |
| 8     | 19   | 16     | e14   | e13   | e13    | e21  | 20    | 18   | 16   | 13   | 13    | 11   |
| 9     | 19   | 17     | e14   | e13   | e13    | e21  | 20    | 18   | 16   | 13   | 13    | 11   |
| 10    | 19   | 17     | e14   | e13   | e13    | e21  | 19    | 18   | 15   | 13   | 13    | 11   |
| 11    | 19   | 16     | e14   | e13   | e13    | e21  | 19    | 18   | 15   | 13   | 14    | 11   |
| 12    | 19   | 16     | e14   | e13   | e13    | e21  | 19    | 17   | 15   | 13   | 13    | 11   |
| 13    | 18   | 16     | e14   | e13   | e13    | e21  | 19    | 17   | 15   | 13   | 13    | 11   |
| 14    | 18   | 16     | e13   | e13   | e13    | e21  | 19    | 18   | 15   | 12   | 13    | 11   |
| 15    | 18   | 16     | e13   | e13   | e13    | e22  | 17    | 18   | 15   | 13   | 13    | 11   |
| 16    | 18   | 16     | e14   | e13   | e13    | e22  | 19    | 18   | 15   | 15   | 8.1   | 11   |
| 17    | 17   | 16     | e14   | e13   | e13    | e22  | 19    | 17   | 15   | 15   | 6.8   | 11   |
| 18    | 18   | 15     | e14   | e13   | e13    | e22  | 5.7   | 17   | 15   | 16   | 13    | 11   |
| 19    | 17   | 15     | e14   | e13   | e13    | e22  | 7.0   | 17   | 14   | 16   | 13    | 11   |
| 20    | 17   | 15     | e13   | e13   | e2.4   | e17  | 16    | 17   | 14   | 16   | 13    | 11   |
| 21    | 17   | 15     | e13   | e13   | e.00   | e22  | 15    | 16   | 14   | 15   | 11    | 11   |
| 22    | 17   | 15     | e13   | e13   | e.00   | e21  | 16    | 16   | 14   | 14   | 9.2   | 11   |
| 23    | 17   | 15     | e13   | e11   | e6.5   | 21   | 19    | 16   | 14   | 14   | 9.0   | 11   |
| 24    | 17   | 15     | e13   | e13   | e16    | 21   | 19    | 17   | 13   | 13   | 9.2   | 11   |
| 25    | 17   | 15     | e13   | e13   | e19    | 21   | 20    | 17   | 14   | 13   | 9.2   | 11   |
| 26    | 17   | 15     | e13   | e13   | e19    | 21   | 17    | 16   | 14   | 13   | 9.2   | 11   |
| 27    | 17   | 15     | e13   | e13   | e19    | 21   | 16    | 16   | 14   | 12   | 9.2   | 11   |
| 28    | 17   | 14     | e13   | e13   | e19    | 21   | 15    | 16   | 14   | 13   | 9.2   | 11   |
| 29    | 18   | e6.9   | e13   | e12   | e19    | 21   | 16    | 16   | 14   | 13   | 10    | 11   |
| 30    | 17   | e.00   | e14   | e12   | ---    | 21   | 17    | 16   | 13   | 13   | 11    | 11   |
| 31    | 17   | ---    | e14   | e4.9  | ---    | 21   | ---   | 15   | ---  | 13   | 11    | ---  |
| TOTAL | 560  | 452.90 | 420.4 | 391.9 | 351.40 | 644  | 525.7 | 524  | 440  | 420  | 358.1 | 329  |
| MEAN  | 18.1 | 15.1   | 13.6  | 12.6  | 12.1   | 20.8 | 17.5  | 16.9 | 14.7 | 13.5 | 11.6  | 11.0 |
| MAX   | 20   | 18     | 16    | 14    | 19     | 22   | 21    | 18   | 16   | 16   | 14    | 11   |
| MIN   | 17   | .00    | 6.4   | 4.9   | .00    | 17   | 5.7   | 15   | 13   | 12   | 6.8   | 10   |
| AC-FT | 1110 | 898    | 834   | 777   | 697    | 1280 | 1040  | 1040 | 873  | 833  | 710   | 653  |

e Estimated.

## 11052500 MILL CREEK POWER CANALS NOS. 2 AND 3 NEAR YUCAIPA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 17.4 | 16.6 | 16.0 | 16.2 | 17.0 | 19.6 | 22.3 | 23.0 | 21.7 | 19.0 | 17.9 | 17.5 |
| MAX  | 26.8 | 23.5 | 23.9 | 26.6 | 27.8 | 30.1 | 33.3 | 31.8 | 28.7 | 29.2 | 30.2 | 27.9 |
| (WY) | 1981 | 1979 | 1979 | 1979 | 1979 | 1979 | 1995 | 1995 | 1979 | 1980 | 1980 | 1978 |
| MIN  | 9.77 | 8.43 | 9.86 | 7.90 | 12.1 | 13.7 | 15.6 | 15.9 | 12.4 | 11.5 | 9.10 | 10.4 |
| (WY) | 1988 | 1989 | 1989 | 1995 | 1996 | 1976 | 1977 | 1989 | 1989 | 1989 | 1989 | 1988 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1974 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 7583.48                |  |  |  | 5417.40             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 20.8                   |  |  |  | 14.8                |  |  |  | 18.7                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 26.2                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 12.6                    |  |  |  |
| HIGHEST DAILY MEAN       | 41                     |  |  |  | 22                  |  |  |  | 41                      |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .22                    |  |  |  | 6.8                 |  |  |  | .12                     |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 15040                  |  |  |  | 10750               |  |  |  | 13540                   |  |  |  |
| 10 PERCENT EXCEEDS       | 30                     |  |  |  | 20                  |  |  |  | 28                      |  |  |  |
| 50 PERCENT EXCEEDS       | 22                     |  |  |  | 14                  |  |  |  | 18                      |  |  |  |
| 90 PERCENT EXCEEDS       | 9.5                    |  |  |  | 11                  |  |  |  | 12                      |  |  |  |

## 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, reactivated July 27, 1993; water-stage recorder and concrete-lined canal on middle diversion; crest-stage gage and sharp-crested weir on lower diversion. Elevation of creek gage is 1,590 ft above sea level, from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft higher. Diversions all at different datums.

REMARKS.--Records fair above 10 ft<sup>3</sup>/s and poor below. 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 (station 11055450), 1.0 (station 11055400), and 2.5 mi (station 11055350) upstream from streamflow station. Water has been diverted upstream from station for irrigation during entire period of record. Combined discharge of Plunge Creek and diversions is given on following page. 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, or maximum:

| Date    | Time | Creek only                        |                     | Combined creek and diversions     |
|---------|------|-----------------------------------|---------------------|-----------------------------------|
|         |      | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Discharge<br>(ft <sup>3</sup> /s) |
| Feb. 21 | 1100 | 189                               | 4.23                | 189                               |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|------|------|------|
| 1     | 1.9   | 1.4   | .97   | 2.1  | 27    | 8.6   | 7.4   | 2.3   | .95   | .09  | .00  | .00  |
| 2     | 1.5   | 1.0   | .83   | 2.3  | 6.5   | 8.0   | 8.1   | 2.0   | .86   | .06  | .00  | .00  |
| 3     | .80   | .80   | .95   | 2.2  | 5.1   | 7.8   | 7.3   | 2.2   | .78   | .08  | .00  | .00  |
| 4     | .70   | .58   | 1.0   | 1.5  | 4.5   | 21    | 7.1   | 2.2   | .70   | .09  | .00  | .00  |
| 5     | 1.3   | .47   | 1.0   | 1.4  | 4.3   | 108   | 6.7   | 2.1   | .72   | .05  | .00  | .00  |
| 6     | 1.6   | .73   | 1.1   | 1.5  | 4.1   | 35    | 6.4   | 1.9   | .69   | .04  | .00  | .00  |
| 7     | 1.2   | .97   | 1.1   | 1.4  | 4.0   | 21    | 6.6   | 1.8   | .64   | .03  | .00  | .00  |
| 8     | .61   | .89   | 1.2   | 1.4  | 3.8   | 15    | 6.0   | 1.8   | .42   | .03  | .00  | .00  |
| 9     | .55   | 1.0   | 1.1   | 1.4  | 3.8   | 11    | 5.7   | 1.8   | .34   | .04  | .00  | .00  |
| 10    | .46   | 1.3   | 1.1   | 1.4  | 3.8   | 9.2   | 5.4   | 1.6   | .29   | .03  | .00  | .00  |
| 11    | .47   | 1.5   | 1.1   | 1.4  | 3.8   | 7.9   | 4.9   | 1.2   | .30   | .03  | .00  | .00  |
| 12    | .52   | 1.4   | 1.1   | 1.4  | 3.6   | 9.1   | 4.9   | .99   | .31   | .02  | .00  | .00  |
| 13    | .49   | 1.5   | 2.3   | 1.4  | 3.6   | 16    | 4.5   | .87   | .31   | .01  | .00  | .00  |
| 14    | .41   | 1.4   | 2.6   | 1.5  | 3.6   | 11    | 4.1   | .90   | .30   | .00  | .00  | .00  |
| 15    | .41   | 1.0   | 2.0   | 1.5  | 3.6   | 9.1   | 3.7   | .94   | .31   | .00  | .00  | .00  |
| 16    | .50   | .88   | 1.8   | 1.7  | 3.5   | 8.2   | 3.1   | 1.0   | .28   | .00  | .00  | .00  |
| 17    | .60   | .82   | 1.9   | 2.6  | 3.5   | 7.8   | 3.6   | 1.0   | .24   | .00  | .00  | .00  |
| 18    | .50   | .78   | 1.9   | 1.9  | 3.5   | 7.7   | 6.4   | .80   | .20   | .00  | .00  | .00  |
| 19    | .50   | .81   | 1.9   | 2.1  | 3.6   | 7.6   | 4.7   | .78   | .16   | .00  | .00  | .00  |
| 20    | .47   | .83   | 2.2   | 2.5  | 101   | 7.6   | 3.9   | .81   | .13   | .00  | .00  | .00  |
| 21    | .49   | .88   | 2.5   | 2.2  | 136   | 7.5   | 3.8   | .80   | .17   | .00  | .00  | .00  |
| 22    | .60   | .76   | 1.9   | 5.0  | 59    | 7.5   | 3.6   | .82   | .25   | .00  | .00  | .00  |
| 23    | .55   | .51   | 2.2   | 3.4  | 21    | 7.6   | 3.2   | .72   | .29   | .00  | .00  | .00  |
| 24    | .53   | .49   | 2.2   | 3.2  | 13    | 7.6   | 2.9   | .46   | .27   | .00  | .00  | .06  |
| 25    | .54   | .47   | 2.1   | 3.1  | 13    | 7.6   | 2.9   | .49   | .31   | .00  | .00  | .08  |
| 26    | .57   | .54   | 2.0   | 3.1  | 11    | 7.5   | 2.7   | .69   | .35   | .00  | .00  | .13  |
| 27    | .56   | .67   | 2.0   | 3.1  | 9.4   | 7.3   | 2.6   | 1.1   | .43   | .00  | .00  | .18  |
| 28    | .58   | .71   | 2.0   | 3.1  | 11    | 7.3   | 2.5   | 1.1   | .34   | .00  | .00  | .09  |
| 29    | .64   | .81   | 2.1   | 2.8  | 9.8   | 7.3   | 2.3   | 1.0   | .22   | .00  | .00  | .04  |
| 30    | .74   | .89   | 1.9   | 2.1  | ---   | 7.3   | 2.3   | 1.0   | .11   | .00  | .00  | .02  |
| 31    | .79   | ---   | 1.9   | 9.9  | ---   | 7.3   | ---   | 1.0   | ---   | .00  | .00  | ---  |
| TOTAL | 22.08 | 26.79 | 51.95 | 75.6 | 483.4 | 418.4 | 139.3 | 38.17 | 11.67 | 0.60 | 0.00 | 0.60 |
| MEAN  | .71   | .89   | 1.68  | 2.44 | 16.7  | 13.5  | 4.64  | 1.23  | .39   | .019 | .000 | .020 |
| MAX   | 1.9   | 1.5   | 2.6   | 9.9  | 136   | 108   | 8.1   | 2.3   | .95   | .09  | .00  | .18  |
| MIN   | .41   | .47   | .83   | 1.4  | 3.5   | 7.3   | 2.3   | .46   | .11   | .00  | .00  | .00  |
| AC-FT | 44    | 53    | 103   | 150  | 959   | 830   | 276   | 76    | 23    | 1.2  | .00  | 1.2  |

## 11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .26  | 1.90 | 6.57 | 12.5 | 21.7 | 23.0 | 12.7 | 3.70 | .94  | .26  | .14  | .33  |
| MAX  | 3.47 | 44.7 | 106  | 170  | 224  | 176  | 74.2 | 30.2 | 9.96 | 3.87 | 4.87 | 10.9 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1919 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 7258.87                |  |  | 1268.56             |  |  |                         |  |  |
| ANNUAL MEAN              | 19.9                   |  |  | 3.47                |  |  | 6.96                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 42.5                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .050                    |  |  |
| HIGHEST DAILY MEAN       | 536                    |  |  | 136                 |  |  | 1840                    |  |  |
| LOWEST DAILY MEAN        | .05                    |  |  | .00                 |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .06                    |  |  | .00                 |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 189                 |  |  | 5340                    |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 4.23                |  |  |                         |  |  |
| ANNUAL RUNOFF (AC-FT)    | 14400                  |  |  | 2520                |  |  | 5040                    |  |  |
| 10 PERCENT EXCEEDS       | 45                     |  |  | 7.5                 |  |  | 14                      |  |  |
| 50 PERCENT EXCEEDS       | 3.3                    |  |  | .97                 |  |  | .12                     |  |  |
| 90 PERCENT EXCEEDS       | .23                    |  |  | .00                 |  |  | .00                     |  |  |

## 11055501 PLUNGE CREEK NEAR EAST HIGHLANDS, CA--Continued

PLUNGE CREEK AND DIVERSIONS NEAR EAST HIGHLAND, CA,  
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR   | APR   | MAY  | JUN  | JUL   | AUG   | SEP   |
|-------|------|------|------|------|-------|-------|-------|------|------|-------|-------|-------|
| 1     | 1.9  | 2.4  | 1.9  | 2.7  | 27    | 8.6   | 7.4   | 3.5  | 2.2  | .96   | .71   | .68   |
| 2     | 1.8  | 2.0  | 1.8  | 2.5  | 6.5   | 8.0   | e8.1  | 3.2  | 2.0  | .93   | .75   | .72   |
| 3     | 1.6  | 1.8  | 1.9  | 2.6  | 5.1   | 7.8   | e7.3  | 3.5  | 1.8  | 1.0   | .79   | .72   |
| 4     | 1.1  | 1.6  | 2.0  | 2.3  | 4.5   | 21    | e7.1  | 3.5  | 1.7  | 1.0   | .84   | .72   |
| 5     | 1.3  | 1.5  | 2.0  | 2.2  | 4.3   | 108   | e6.7  | 3.3  | 1.7  | .93   | .83   | .72   |
| 6     | 1.6  | 1.7  | 2.1  | 2.3  | 4.1   | 35    | e6.4  | 3.1  | 1.6  | .89   | .85   | .73   |
| 7     | 1.8  | 2.0  | 2.1  | 2.2  | 4.0   | 21    | e6.6  | 3.0  | 1.6  | .88   | .65   | .71   |
| 8     | 1.7  | 1.9  | 2.2  | 2.2  | 3.8   | 15    | e6.9  | 3.0  | 1.5  | .84   | .59   | .70   |
| 9     | 1.6  | 2.0  | 2.0  | 2.2  | 3.8   | 11    | e6.4  | 3.0  | 1.4  | 1.0   | .72   | .67   |
| 10    | 1.6  | 2.3  | 2.0  | 2.3  | 3.8   | 9.2   | e6.2  | 2.8  | 1.4  | 1.1   | .71   | .65   |
| 11    | 1.6  | 2.5  | 2.0  | 2.3  | 3.8   | 7.9   | 5.7   | 2.3  | 1.4  | 1.0   | .73   | .63   |
| 12    | 1.6  | 2.3  | 2.0  | 2.3  | 3.6   | 9.1   | 5.7   | 2.1  | 1.4  | 1.0   | .71   | .63   |
| 13    | 1.5  | 2.5  | 3.2  | 2.3  | 3.6   | 16    | 5.2   | 2.1  | 1.4  | 1.0   | .75   | .73   |
| 14    | 1.4  | 2.4  | 3.5  | 2.4  | 3.6   | 11    | 4.8   | 2.0  | 1.4  | 1.0   | .79   | .77   |
| 15    | 1.4  | 2.0  | 2.8  | 2.4  | 3.6   | 9.1   | 5.0   | 2.1  | 1.4  | .98   | .82   | .76   |
| 16    | 1.6  | 1.9  | 2.6  | 2.6  | 3.5   | 8.2   | 4.7   | 2.2  | 1.4  | 1.0   | .82   | .79   |
| 17    | 1.6  | 1.8  | 2.7  | 3.5  | 3.5   | 7.8   | 5.3   | 2.2  | 1.3  | 1.0   | .84   | .73   |
| 18    | 1.5  | 1.8  | 2.6  | 2.8  | 3.5   | 7.7   | 8.4   | 1.9  | 1.2  | .95   | .83   | .75   |
| 19    | 1.5  | 1.8  | 2.6  | 2.6  | 4.0   | 7.6   | 6.5   | 1.9  | 1.1  | .90   | .82   | .73   |
| 20    | 1.5  | 1.8  | 2.5  | 2.9  | 101   | 7.6   | 5.7   | 2.0  | 1.1  | .89   | .80   | .70   |
| 21    | 1.5  | 1.9  | 3.0  | 3.1  | 136   | 7.5   | 5.4   | 2.0  | 1.3  | .86   | .78   | .67   |
| 22    | 1.6  | 1.7  | 2.7  | 5.2  | 59    | 7.5   | 5.1   | 2.0  | 1.3  | .86   | .75   | .65   |
| 23    | 1.5  | 1.5  | 3.1  | 3.5  | 21    | 7.6   | 4.5   | 2.0  | 1.4  | .84   | .79   | .67   |
| 24    | 1.5  | 1.5  | 3.1  | 3.3  | 13    | 7.6   | 4.4   | 2.0  | 1.4  | .84   | .75   | .71   |
| 25    | 1.5  | 1.5  | 3.0  | 3.2  | 13    | 7.6   | 4.3   | 2.2  | 1.4  | .81   | .72   | .77   |
| 26    | 1.5  | 1.5  | 2.8  | 3.2  | 11    | 7.5   | 4.1   | 2.3  | 1.4  | .81   | .72   | .89   |
| 27    | 1.5  | 1.6  | 2.8  | 3.2  | 9.4   | 7.3   | 4.0   | 2.6  | 1.5  | .84   | .70   | .92   |
| 28    | 1.6  | 1.7  | 2.8  | 3.2  | 11    | 7.3   | 3.8   | 2.7  | 1.4  | .78   | .70   | .75   |
| 29    | 1.6  | 1.7  | 2.9  | 3.5  | 9.8   | 7.3   | 3.6   | 2.5  | 1.2  | .76   | .69   | .67   |
| 30    | 1.7  | 1.8  | 2.8  | 3.1  | ---   | 7.3   | 3.5   | 2.5  | 1.0  | .75   | .68   | .64   |
| 31    | 1.9  | ---  | 2.8  | 11   | ---   | 7.3   | ---   | 2.5  | ---  | .72   | .67   | ---   |
| TOTAL | 48.6 | 56.4 | 78.3 | 95.1 | 483.8 | 418.4 | 168.8 | 78.0 | 43.3 | 28.12 | 23.30 | 21.58 |
| MEAN  | 1.57 | 1.88 | 2.53 | 3.07 | 16.7  | 13.5  | 5.63  | 2.52 | 1.44 | .91   | .75   | .72   |
| MAX   | 1.9  | 2.5  | 3.5  | 11   | 136   | 108   | 8.4   | 3.5  | 2.2  | 1.1   | .85   | .92   |
| MIN   | 1.1  | 1.5  | 1.8  | 2.2  | 3.5   | 7.3   | 3.5   | 1.9  | 1.0  | .72   | .59   | .63   |
| AC-FT | 96   | 112  | 155  | 189  | 960   | 830   | 335   | 155  | 86   | 56    | 46    | 43    |

e Estimated.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.40 | 3.46 | 7.73 | 17.4 | 23.3 | 25.2 | 14.0 | 6.87 | 3.48 | 1.80 | 1.30 | 1.45 |
| MAX  | 7.23 | 45.2 | 106  | 170  | 224  | 126  | 79.0 | 31.9 | 14.2 | 7.44 | 7.43 | 14.1 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1969 | 1978 | 1958 | 1983 | 1980 | 1980 | 1983 | 1978 |
| MIN  | .033 | .003 | .77  | 1.00 | 1.50 | 1.62 | 1.33 | .97  | .63  | .26  | .028 | .011 |
| (WY) | 1992 | 1992 | 1963 | 1963 | 1961 | 1961 | 1961 | 1961 | 1961 | 1992 | 1992 | 1992 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1951 - 1996

|                          |        |         |      |
|--------------------------|--------|---------|------|
| ANNUAL TOTAL             | 7669.5 | 1543.70 |      |
| ANNUAL MEAN              | 21.0   | 4.22    | 8.91 |
| HIGHEST ANNUAL MEAN      |        |         | 44.4 |
| LOWEST ANNUAL MEAN       |        |         | 1.00 |
| HIGHEST DAILY MEAN       | 536    | Mar 5   | 1840 |
| LOWEST DAILY MEAN        | 1.1    | Oct 4   | .00  |
| ANNUAL SEVEN-DAY MINIMUM | 1.5    | Sep 13  | .00  |
| INSTANTANEOUS PEAK FLOW  |        |         | 4770 |
| ANNUAL RUNOFF (AC-FT)    | 15210  | 3060    | 6460 |
| 10 PERCENT EXCEEDS       | 45     | 7.6     | 15   |
| 50 PERCENT EXCEEDS       | 5.2    | 2.0     | 2.3  |
| 90 PERCENT EXCEEDS       | 1.5    | .73     | .60  |

## 11055800 CITY CREEK NEAR HIGHLAND, CA

LOCATION.--Lat 34°08'38", long 117°11'16", in SW 1/4 NW 1/4 sec.27, T.1 N., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 0.6 mi upstream from Highland Avenue and 1.5 mi northeast of Highland.

DRAINAGE AREA.--19.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1919 to current year; combined records of creek and City Creek Water Co.'s canal, June 1924 to September 1986, October 1988 to current year.

REVISED RECORDS.--WSP 1635: 1920(M), 1923(M), 1937(M), 1939(M), 1946. WSP 1928: Drainage area. WDR CA-93-1: Peak base discharge.

GAGE.--Water-stage recorder on creek; water-stage recorder on canal. Elevation of creek gage is 1,580 ft above sea level, from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi downstream at different datum. Canal gage at different datum.

REMARKS.--Records fair. No regulation upstream from station. City Creek Water Co.'s canal (station 11055700) diverted from a site 0.5 mi upstream from station for irrigation throughout period of record until Sept. 30, 1986, and resumed diversion on Mar. 31, 1989. Diversion canal damaged by storms of January 1993, with no flow in canal from January 14, 1993 to April 5, 1995. See schematic diagram of Santa Ana River basin. For combined discharge of City Creek and canal see station 11055801.

EXTREMES FOR PERIOD OF RECORD.--Creek only: Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 9.39 ft, from rating curve extended above 580 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.82 ft; no flow for many days in some years.  
Combined creek and canal: Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Creek only                        |                     | Combined creek and canal          |  |
|---------|------|-----------------------------------|---------------------|-----------------------------------|--|
|         |      | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Discharge<br>(ft <sup>3</sup> /s) |  |
| Feb. 1  | 0200 | 251                               | 5.20                | 251                               |  |
| Feb. 20 | 2200 | 445                               | 5.74                | 449                               |  |
| Mar. 5  | 0245 | 288                               | 5.32                | 292                               |  |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL   | AUG  | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| 1     | 2.8  | 4.6   | 4.2   | 5.3   | 70    | 16    | 11    | 4.3   | 3.6  | 1.1   | .23  | .14   |
| 2     | 2.6  | 4.2   | 4.3   | 5.2   | 18    | 15    | 16    | 4.4   | 3.1  | .95   | .22  | .15   |
| 3     | 2.4  | 3.6   | 4.5   | 5.2   | 12    | 14    | 11    | 4.3   | 2.9  | 1.0   | .23  | .17   |
| 4     | 2.4  | 3.3   | 4.5   | 5.2   | 10    | 27    | 10    | 4.2   | 2.7  | 1.2   | .25  | .18   |
| 5     | 2.1  | 3.2   | 4.4   | 5.2   | 9.0   | 144   | 9.4   | 4.3   | 2.6  | .98   | .39  | .18   |
| 6     | 2.1  | 3.4   | 4.5   | 5.2   | 8.2   | 48    | 9.0   | 4.3   | 2.6  | .90   | .52  | .18   |
| 7     | 2.3  | 3.6   | 4.5   | 5.2   | 7.6   | 32    | 8.7   | 4.3   | 2.5  | .80   | .61  | .18   |
| 8     | 2.5  | 3.3   | 4.7   | 5.0   | 7.0   | 25    | 8.4   | 4.3   | 2.4  | .76   | .53  | .18   |
| 9     | 2.5  | 3.4   | 4.7   | 5.0   | 6.7   | 21    | 8.4   | 4.3   | 2.3  | .76   | .36  | .18   |
| 10    | 2.3  | 3.7   | 4.6   | 5.0   | 6.5   | 18    | 8.5   | 4.2   | 2.2  | .77   | .25  | .18   |
| 11    | 2.3  | 3.6   | 4.7   | 4.8   | 6.5   | 17    | 8.6   | 4.0   | 2.2  | .85   | .21  | .18   |
| 12    | 2.6  | 3.4   | 4.7   | 4.8   | 6.3   | 19    | 8.4   | 3.9   | 2.3  | .82   | .20  | .19   |
| 13    | 2.4  | 3.3   | 8.5   | 4.8   | 6.3   | 34    | 8.2   | 3.7   | 2.2  | .83   | .19  | .24   |
| 14    | 2.1  | 3.4   | 9.0   | 4.8   | 6.0   | 26    | 8.0   | 3.8   | 2.2  | .86   | .18  | .31   |
| 15    | 2.2  | 3.5   | 6.2   | 4.8   | 6.0   | 22    | 7.7   | 3.9   | 2.2  | .88   | .18  | .45   |
| 16    | 2.6  | 3.5   | 5.8   | 5.0   | 6.0   | 20    | 7.8   | 4.0   | 2.1  | .79   | .18  | .51   |
| 17    | 2.9  | 3.5   | 5.7   | 8.3   | 6.0   | 17    | 9.7   | 4.1   | 2.0  | .91   | .18  | .55   |
| 18    | 2.5  | 3.5   | 5.6   | 6.2   | 5.8   | 16    | 12    | 4.0   | 1.8  | .87   | .19  | .46   |
| 19    | 2.5  | 3.6   | 5.4   | 5.8   | 7.9   | 15    | 9.7   | 3.9   | 1.7  | .69   | .20  | .42   |
| 20    | 2.4  | 3.6   | 5.4   | 5.8   | 208   | 13    | 8.7   | 4.0   | 1.6  | .57   | .17  | .37   |
| 21    | 2.5  | 3.6   | 5.4   | 7.1   | 222   | 13    | 8.5   | 4.0   | 1.8  | .53   | .16  | .33   |
| 22    | 2.7  | 3.8   | 5.5   | 11    | 73    | 12    | 6.7   | 4.1   | 2.1  | .48   | .16  | .35   |
| 23    | 2.5  | 3.8   | 6.2   | 7.5   | 35    | 13    | 5.0   | 4.1   | 2.1  | .46   | .17  | .41   |
| 24    | 2.6  | 3.7   | 5.9   | 6.9   | 25    | 12    | 4.9   | 4.1   | 2.0  | .40   | .19  | .49   |
| 25    | 2.6  | 3.7   | 5.7   | 6.6   | 23    | 12    | 4.8   | 4.3   | 2.0  | .39   | .17  | .49   |
| 26    | 2.6  | 3.8   | 5.6   | 6.5   | 19    | 11    | 4.7   | 4.1   | 1.9  | .34   | .16  | .56   |
| 27    | 2.6  | 3.9   | 5.6   | 6.3   | 17    | 11    | 4.6   | 4.1   | 2.0  | .39   | .16  | .78   |
| 28    | 2.6  | 4.0   | 5.5   | 6.5   | 18    | 11    | 4.6   | 4.1   | 1.9  | .40   | .16  | .54   |
| 29    | 2.9  | 4.0   | 5.4   | 6.4   | 17    | 10    | 4.3   | 4.0   | 1.6  | .35   | .16  | .38   |
| 30    | 3.2  | 4.1   | 5.4   | 6.2   | ---   | 10    | 4.3   | 4.0   | 1.2  | .30   | .14  | .34   |
| 31    | 3.4  | ---   | 5.4   | 25    | ---   | 9.5   | ---   | 4.0   | ---  | .27   | .14  | ---   |
| TOTAL | 78.7 | 109.6 | 167.5 | 202.6 | 868.8 | 683.5 | 241.6 | 127.1 | 65.8 | 21.60 | 7.24 | 10.07 |
| MEAN  | 2.54 | 3.65  | 5.40  | 6.54  | 30.0  | 22.0  | 8.05  | 4.10  | 2.19 | .70   | .23  | .34   |
| MAX   | 3.4  | 4.6   | 9.0   | 25    | 222   | 144   | 16    | 4.4   | 3.6  | 1.2   | .61  | .78   |
| MIN   | 2.1  | 3.2   | 4.2   | 4.8   | 5.8   | 9.5   | 4.3   | 3.7   | 1.2  | .27   | .14  | .14   |
| AC-FT | 156  | 217   | 332   | 402   | 1720  | 1360  | 479   | 252   | 131  | 43    | 14   | 20    |



## 11055800 CITY CREEK NEAR HIGHLAND, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.05 | 3.39 | 8.71 | 16.5 | 30.8 | 30.1 | 17.9 | 7.14 | 2.65 | 1.00 | .57  | .61  |
| MAX  | 8.48 | 43.4 | 89.5 | 199  | 451  | 219  | 148  | 44.6 | 21.7 | 11.7 | 9.56 | 5.70 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1920 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 9885.7                 |  |  |  | 2584.11             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 27.1                   |  |  |  | 7.06                |  |  |  | 9.92                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 75.3                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .46                     |  |  |  |
| HIGHEST DAILY MEAN       | 719                    |  |  |  | 222                 |  |  |  | 3360                    |  |  |  |
| LOWEST DAILY MEAN        | 2.1                    |  |  |  | .14                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 2.3                    |  |  |  | .15                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 445                 |  |  |  | 7000                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 5.74                |  |  |  | 9.39                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 19610                  |  |  |  | 5130                |  |  |  | 7190                    |  |  |  |
| 10 PERCENT EXCEEDS       | 66                     |  |  |  | 12                  |  |  |  | 19                      |  |  |  |
| 50 PERCENT EXCEEDS       | 8.2                    |  |  |  | 3.9                 |  |  |  | 1.2                     |  |  |  |
| 90 PERCENT EXCEEDS       | 2.7                    |  |  |  | .24                 |  |  |  | .00                     |  |  |  |

## SANTA ANA RIVER BASIN

## 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 1995 TO SEPTEMBER 1996

## DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN  | JUL   | AUG  | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|-------|
| 1     | 2.8  | 4.6   | 4.2   | 5.3   | 70    | 16    | 11    | 5.8   | 3.9  | 1.1   | .26  | .14   |
| 2     | 2.6  | 4.2   | 4.3   | 5.2   | 18    | 15    | 16    | 5.8   | 3.3  | .95   | .25  | .15   |
| 3     | 2.4  | 3.6   | 4.5   | 5.2   | 12    | 14    | 11    | 5.9   | 3.0  | 1.0   | .27  | .18   |
| 4     | 2.4  | 3.3   | 4.5   | 5.2   | 10    | 27    | 10    | 5.7   | 2.8  | 1.2   | .30  | .19   |
| 5     | 2.1  | 3.2   | 4.4   | 5.2   | 9.0   | 147   | 9.4   | 5.7   | 2.7  | .98   | .47  | .19   |
| 6     | 2.1  | 3.4   | 4.5   | 5.2   | 8.2   | 51    | 9.0   | 5.5   | 2.7  | .90   | .66  | .19   |
| 7     | 2.3  | 3.6   | 4.5   | 5.2   | 7.6   | 33    | 8.7   | 5.5   | 2.6  | .80   | .77  | .19   |
| 8     | 2.5  | 3.3   | 4.7   | 5.0   | 7.0   | 25    | 8.4   | 5.5   | 2.5  | .79   | .66  | .19   |
| 9     | 2.5  | 3.4   | 4.7   | 5.0   | 6.7   | 21    | 8.4   | 5.5   | 2.4  | .78   | .45  | .19   |
| 10    | 2.3  | 3.7   | 4.6   | 5.0   | 6.5   | 18    | 8.5   | 5.1   | 2.2  | .77   | .31  | .18   |
| 11    | 2.3  | 3.6   | 4.7   | 4.8   | 6.5   | 17    | 8.6   | 4.6   | 2.2  | .86   | .25  | .18   |
| 12    | 2.6  | 3.4   | 4.7   | 4.8   | 6.3   | 19    | 8.4   | 4.3   | 2.4  | .82   | .22  | .19   |
| 13    | 2.4  | 3.3   | 8.5   | 4.8   | 6.3   | 34    | 8.2   | 4.1   | 2.3  | .83   | .20  | .24   |
| 14    | 2.1  | 3.4   | 9.0   | 4.8   | 6.0   | 26    | 8.0   | 4.3   | 2.3  | .86   | .19  | .31   |
| 15    | 2.2  | 3.5   | 6.2   | 4.8   | 6.0   | 22    | 7.7   | 4.6   | 2.3  | .88   | .18  | .52   |
| 16    | 2.6  | 3.5   | 5.8   | 5.0   | 6.0   | 20    | 7.8   | 4.8   | 2.2  | .79   | .18  | .63   |
| 17    | 2.9  | 3.5   | 5.7   | 8.3   | 6.0   | 17    | 10    | 5.1   | 2.0  | .94   | .18  | .63   |
| 18    | 2.5  | 3.5   | 5.6   | 6.2   | 5.8   | 16    | 13    | 4.7   | 1.8  | .92   | .19  | .51   |
| 19    | 2.5  | 3.6   | 5.4   | 5.8   | 7.9   | 15    | 9.8   | 4.6   | 1.7  | .70   | .20  | .45   |
| 20    | 2.4  | 3.6   | 5.4   | 5.8   | 213   | 13    | 8.7   | 4.7   | 1.6  | .57   | .17  | .39   |
| 21    | 2.5  | 3.6   | 5.4   | 7.1   | 224   | 13    | 8.5   | 4.7   | 1.8  | .53   | .16  | .34   |
| 22    | 2.7  | 3.8   | 5.5   | 11    | 73    | 12    | 8.4   | 4.8   | 2.2  | .48   | .16  | .37   |
| 23    | 2.5  | 3.8   | 6.2   | 7.5   | 35    | 13    | 8.2   | 4.9   | 2.2  | .46   | .17  | .41   |
| 24    | 2.6  | 3.7   | 5.9   | 6.9   | 25    | 12    | 7.6   | 5.0   | 2.1  | .40   | .20  | .52   |
| 25    | 2.6  | 3.7   | 5.7   | 6.6   | 23    | 12    | 7.3   | 5.6   | 2.1  | .39   | .17  | .53   |
| 26    | 2.6  | 3.8   | 5.6   | 6.5   | 19    | 11    | 6.9   | 5.2   | 2.3  | .34   | .16  | .62   |
| 27    | 2.6  | 3.9   | 5.6   | 6.3   | 17    | 11    | 6.7   | 5.1   | 2.7  | .42   | .16  | .90   |
| 28    | 2.6  | 4.0   | 5.5   | 6.5   | 18    | 11    | 6.5   | 5.0   | 2.5  | .42   | .16  | .61   |
| 29    | 2.9  | 4.0   | 5.4   | 6.4   | 17    | 10    | 6.0   | 4.8   | 1.8  | .37   | .16  | .39   |
| 30    | 3.2  | 4.1   | 5.4   | 6.2   | ---   | 10    | 5.9   | 4.8   | 1.2  | .31   | .14  | .34   |
| 31    | 3.4  | ---   | 5.4   | 25    | ---   | 9.5   | ---   | 4.7   | ---  | .29   | .14  | ---   |
| TOTAL | 78.7 | 109.6 | 167.5 | 202.6 | 875.8 | 690.5 | 262.6 | 156.4 | 69.8 | 21.85 | 8.14 | 10.87 |
| MEAN  | 2.54 | 3.65  | 5.40  | 6.54  | 30.2  | 22.3  | 8.75  | 5.05  | 2.33 | .70   | .26  | .36   |
| MAX   | 3.4  | 4.6   | 9.0   | 25    | 224   | 147   | 16    | 5.9   | 3.9  | 1.2   | .77  | .90   |
| MIN   | 2.1  | 3.2   | 4.2   | 4.8   | 5.8   | 9.5   | 5.9   | 4.1   | 1.2  | .29   | .14  | .14   |
| AC-FT | 156  | 217   | 332   | 402   | 1740  | 1370  | 521   | 310   | 138  | 43    | 16   | 22    |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.19 | 4.71 | 9.16 | 17.5 | 31.9 | 31.4 | 19.6 | 9.84 | 5.32 | 2.58 | 1.63 | 1.57 |
| MAX  | 10.2 | 44.1 | 89.9 | 199  | 451  | 221  | 148  | 44.6 | 21.7 | 12.6 | 11.0 | 7.05 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1924 - 1996

|                          |         |         |             |
|--------------------------|---------|---------|-------------|
| ANNUAL TOTAL             | 10135.4 | 2654.36 |             |
| ANNUAL MEAN              | 27.8    | 7.25    | 11.3        |
| HIGHEST ANNUAL MEAN      |         |         | 77.8        |
| LOWEST ANNUAL MEAN       |         |         | 2.04        |
| HIGHEST DAILY MEAN       | 719     | Mar 5   | 224         |
| LOWEST DAILY MEAN        | 2.1     | Oct 5   | .14         |
| ANNUAL SEVEN-DAY MINIMUM | 2.3     | Oct 5   | .15         |
| INSTANTANEOUS PEAK FLOW  |         |         | 449         |
| ANNUAL RUNOFF (AC-FT)    | 20100   |         | 5260        |
| 10 PERCENT EXCEEDS       | 66      |         | 13          |
| 50 PERCENT EXCEEDS       | 9.6     |         | 4.2         |
| 90 PERCENT EXCEEDS       | 2.7     |         | .27         |
|                          |         |         | 7000        |
|                          |         |         | 8220        |
|                          |         |         | 19          |
|                          |         |         | 3.7         |
|                          |         |         | .40         |
|                          |         |         | 1969        |
|                          |         |         | 1961        |
|                          |         |         | Feb 25 1969 |
|                          |         |         | Nov 8 1924  |
|                          |         |         | Aug 12 1951 |
|                          |         |         | Feb 25 1969 |

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 18070203, 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 sea level, from topographic map. Prior to April 1979, water-stage recorder at site 0.2 mi downstream at different datum.

REMARKS.--Records fair except for discharges below 10 ft<sup>3</sup>/s, which are 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, or maximum, from rating curve extended above 1,500 ft<sup>3</sup>/s:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2130 | 614                               | 4.36                | Mar. 14 | 1830 | 221                               | 3.62                |
| Feb. 21 | 1245 | 264                               | 3.73                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC  | JAN   | FEB    | MAR   | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|------|-------|--------|-------|------|-------|-------|-------|-------|-------|
| 1     | .00   | .00   | .00  | .00   | 54     | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 2     | .00   | .00   | .24  | .00   | .00    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 3     | .00   | .00   | .00  | .01   | .00    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 4     | .00   | .00   | .00  | .00   | .00    | 3.2   | .00  | .00   | .00   | .00   | .00   | .00   |
| 5     | .00   | .00   | .00  | .00   | .00    | 8.7   | .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    | 1.8   | .00  | .00   | .00   | .00   | .00   | .00   |
| 13    | .00   | .00   | 3.8  | .00   | .00    | 30    | .00  | .00   | .00   | .00   | .00   | .00   |
| 14    | .00   | .00   | .00  | .00   | .00    | 13    | .00  | .00   | .00   | .00   | .00   | .00   |
| 15    | .00   | .00   | .00  | .00   | .00    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 16    | .00   | .00   | .00  | 1.2   | .00    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 17    | .00   | .00   | .00  | .26   | .00    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 18    | .00   | .00   | .00  | .00   | .00    | .00   | .88  | .00   | .00   | .00   | .00   | .00   |
| 19    | .00   | .00   | .00  | .00   | .84    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 20    | .00   | .00   | .00  | .00   | 58     | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 21    | .00   | .00   | .00  | 6.5   | 102    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 22    | .00   | .00   | .00  | .00   | 1.9    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 23    | .00   | .00   | 1.0  | .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   | 6.5    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 26    | .00   | .00   | .00  | .00   | .28    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 27    | .00   | .00   | .00  | .00   | 3.5    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| 28    | .00   | .00   | .00  | .00   | 3.3    | .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  | 75    | ---    | .00   | ---  | .00   | ---   | .00   | .00   | ---   |
| TOTAL | 0.00  | 0.00  | 5.04 | 82.97 | 230.32 | 56.70 | 0.68 | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| MEAN  | .0000 | .0000 | .16  | 2.68  | 7.94   | 1.83  | .023 | .0000 | .0000 | .0000 | .0000 | .0000 |
| MAX   | .00   | .00   | 3.8  | 75    | 102    | 30    | .68  | .00   | .00   | .00   | .00   | .00   |
| MIN   | .00   | .00   | .00  | .00   | .00    | .00   | .00  | .00   | .00   | .00   | .00   | .00   |
| AC-FT | .00   | .00   | 10   | 165   | 457    | 112   | 1.3  | .00   | .00   | .00   | .00   | .00   |

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .87  | 1.48 | 2.12 | 9.57 | 12.6 | 7.29 | 1.46 | .88  | .80  | .64  | .85  | .78  |
| MAX  | 2.27 | 11.6 | 11.6 | 113  | 186  | 53.7 | 16.8 | 3.65 | 2.20 | 3.65 | 1.76 | 3.03 |
| (WY) | 1988 | 1983 | 1985 | 1993 | 1969 | 1991 | 1958 | 1969 | 1989 | 1968 | 1965 | 1965 |
| MIN  | .000 | .000 | .16  | .079 | .17  | .14  | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1996 | 1996 | 1996 | 1972 | 1968 | 1987 | 1979 | 1996 | 1996 | 1995 | 1995 | 1995 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |      |  | WATER YEARS 1955 - 1996 |        |       |
|--------------------------|------------------------|--|--|---------------------|------|--|-------------------------|--------|-------|
| ANNUAL TOTAL             | 3583.33                |  |  | 375.71              |      |  |                         |        |       |
| ANNUAL MEAN              | 9.82                   |  |  | 1.03                |      |  | 3.25                    |        |       |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |      |  | 21.7                    |        |       |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |      |  | .74                     |        |       |
| HIGHEST DAILY MEAN       | 627                    |  |  | Mar 5               | 102  |  |                         | Feb 21 | 3500  |
| LOWEST DAILY MEAN        | .00                    |  |  | Jan 6               | .00  |  |                         | Oct 1  | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | Feb 1               | .00  |  |                         | Oct 1  | .00   |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |                     | 614  |  |                         | Jan 31 | 15000 |
| INSTANTANEOUS PEAK STAGE |                        |  |  |                     | 4.36 |  |                         | Jan 31 | 8.20  |
| ANNUAL RUNOFF (AC-FT)    | 7110                   |  |  |                     | 745  |  |                         |        | 2350  |
| 10 PERCENT EXCEEDS       | 3.0                    |  |  |                     | .00  |  |                         |        | 1.9   |
| 50 PERCENT EXCEEDS       | .00                    |  |  |                     | .00  |  |                         |        | .60   |
| 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 sea level, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are 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, or 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<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|---------|-----------------------------------|---------------------|---------|---------|-----------------------------------|---------------------|
| Feb. 1  | unknown | 98                                | 3.06                | Mar. 5  | unknown | unknown                           | unknown             |
| Feb. 20 | 1845    | unknown                           | 5.47                | Mar. 12 | 1800    | 44                                | 2.69                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR   | APR   | MAY   | JUN  | JUL   | AUG   | SEP   |
|-------|------|------|------|------|-------|-------|-------|-------|------|-------|-------|-------|
| 1     | 2.0  | 2.6  | 2.7  | 2.7  | e35   | e8.4  | 8.6   | 3.4   | 2.9  | 1.5   | 1.1   | .88   |
| 2     | 1.8  | 2.7  | 2.6  | 2.6  | e8.0  | e8.0  | 8.1   | 3.5   | 2.8  | 1.3   | 1.0   | .92   |
| 3     | 1.8  | 2.7  | 2.6  | 2.6  | 4.8   | e7.8  | 6.7   | 3.6   | 2.6  | 1.2   | 1.1   | .98   |
| 4     | 1.9  | 2.6  | 2.7  | 2.6  | 4.1   | e14   | 6.4   | 3.9   | 2.5  | 1.1   | 1.3   | .94   |
| 5     | 2.5  | 2.7  | 2.7  | 2.7  | 3.7   | e75   | 6.2   | 4.2   | 2.5  | .86   | 1.2   | 1.0   |
| 6     | 2.6  | 2.7  | 2.8  | 2.7  | 3.4   | e24   | 6.2   | 4.4   | 2.5  | 1.0   | 1.4   | .98   |
| 7     | 2.7  | 2.6  | 2.7  | 2.5  | 3.1   | e18   | 6.0   | 4.4   | 2.4  | 1.2   | 1.2   | .99   |
| 8     | 2.7  | 2.6  | 2.7  | 2.3  | 3.1   | 16    | 5.7   | 4.6   | 2.4  | 1.0   | 1.2   | 1.2   |
| 9     | 2.6  | 2.6  | 2.8  | 2.5  | 3.3   | 14    | 5.8   | 4.7   | 2.4  | 1.1   | .99   | 1.0   |
| 10    | 2.4  | 2.5  | 2.8  | 2.4  | 3.4   | 12    | 6.1   | 4.4   | 2.2  | 1.1   | .97   | 1.0   |
| 11    | 2.5  | 2.5  | 2.7  | 2.3  | 3.3   | 10    | 6.0   | 4.3   | 2.3  | 1.1   | 1.1   | .94   |
| 12    | 2.6  | 2.5  | 2.8  | 2.0  | 3.3   | 14    | 6.1   | 4.1   | 2.3  | 1.1   | 1.1   | .91   |
| 13    | 2.4  | 2.4  | 6.3  | 1.9  | 3.3   | 23    | 6.2   | 3.9   | 2.3  | 1.2   | 1.1   | 1.1   |
| 14    | 2.3  | 2.4  | 4.6  | 1.9  | 3.3   | 17    | 6.3   | 4.1   | 2.2  | 1.4   | .93   | 1.3   |
| 15    | 2.3  | 2.4  | 3.3  | 1.9  | 3.3   | 14    | 5.9   | 4.1   | 2.3  | 1.1   | .98   | 1.3   |
| 16    | 2.4  | 2.4  | 3.4  | 2.3  | 3.3   | 12    | 6.7   | 3.8   | 2.3  | 1.3   | 1.0   | 1.4   |
| 17    | 2.3  | 2.3  | 3.2  | 3.1  | 3.5   | 10    | 8.6   | 3.6   | 2.1  | 1.4   | 1.0   | 1.3   |
| 18    | 2.2  | 2.3  | 3.0  | 2.3  | 3.6   | 10    | 12    | 3.9   | 2.1  | 1.4   | 1.2   | 1.2   |
| 19    | 2.2  | 2.3  | 2.8  | 2.2  | 9.1   | 10    | 7.6   | 4.0   | 2.0  | 1.3   | 1.0   | 1.1   |
| 20    | 2.2  | 2.2  | 2.7  | 2.3  | e110  | 9.3   | 7.1   | 4.0   | 1.9  | 1.3   | .99   | 1.1   |
| 21    | 2.2  | 2.2  | 2.6  | 3.3  | e120  | 8.8   | 6.7   | 4.1   | 2.0  | 1.3   | .93   | 1.1   |
| 22    | 2.3  | 2.2  | 2.7  | 3.3  | e30   | 9.0   | 6.1   | 3.9   | 2.2  | 1.3   | .97   | 1.2   |
| 23    | 2.5  | 2.2  | 3.5  | 2.6  | e19   | 8.9   | 5.6   | 3.8   | 2.2  | 1.3   | .90   | 1.2   |
| 24    | 2.5  | 2.2  | 3.1  | 2.4  | e12   | 8.1   | 5.1   | 3.7   | 2.1  | 1.2   | .99   | 1.0   |
| 25    | 2.5  | 2.3  | 3.2  | 2.4  | e11   | 7.6   | 4.9   | 3.7   | 2.0  | 1.2   | .93   | 1.0   |
| 26    | 2.5  | 2.3  | 3.0  | 2.4  | e10   | 6.9   | 4.3   | 3.4   | 1.8  | 1.1   | .96   | 1.4   |
| 27    | 2.5  | 2.7  | 2.7  | e2.3 | e9.5  | 6.6   | 4.3   | 3.4   | 1.9  | 1.3   | .97   | 1.3   |
| 28    | 2.5  | 2.7  | 2.6  | e2.3 | e10   | 6.7   | 4.0   | 3.1   | 1.8  | 1.2   | .95   | .96   |
| 29    | 2.6  | 2.7  | 2.5  | e2.2 | e9.0  | 6.4   | 3.4   | 3.3   | 1.8  | 1.1   | .91   | 1.0   |
| 30    | 2.6  | 2.7  | 2.6  | e2.2 | ---   | 6.4   | 3.4   | 3.2   | 1.8  | 1.0   | .91   | 1.1   |
| 31    | 2.7  | ---  | 2.6  | e15  | ---   | 6.1   | ---   | 3.1   | ---  | 1.0   | .86   | ---   |
| TOTAL | 73.8 | 74.2 | 93.0 | 88.2 | 448.4 | 408.0 | 186.1 | 119.6 | 66.6 | 36.96 | 32.14 | 32.80 |
| MEAN  | 2.38 | 2.47 | 3.00 | 2.85 | 15.5  | 13.2  | 6.20  | 3.86  | 2.22 | 1.19  | 1.04  | 1.09  |
| MAX   | 2.7  | 2.7  | 6.3  | 15   | 120   | 75    | 12    | 4.7   | 2.9  | 1.5   | 1.4   | 1.4   |
| MIN   | 1.8  | 2.2  | 2.5  | 1.9  | 3.1   | 6.1   | 3.4   | 3.1   | 1.8  | .86   | .86   | .88   |
| AC-FT | 146  | 147  | 184  | 175  | 889   | 809   | 369   | 237   | 132  | 73    | 64    | 65    |

e Estimated.

## 11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.50 | 2.51 | 4.88 | 7.69 | 12.3 | 13.8 | 8.11 | 4.75 | 2.81 | 1.62 | 1.24 | 1.14 |
| MAX  | 11.4 | 20.3 | 43.6 | 95.7 | 102  | 101  | 38.3 | 19.3 | 11.6 | 9.40 | 11.9 | 4.94 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1921 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 4779.9                 |  |  |  | 1659.80             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 13.1                   |  |  |  | 4.53                |  |  |  | 5.16                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 23.1                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .85                     |  |  |  |
| HIGHEST DAILY MEAN       | 351                    |  |  |  | 120                 |  |  |  | 795                     |  |  |  |
| LOWEST DAILY MEAN        | 1.1                    |  |  |  | .86                 |  |  |  | .10                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 1.4                    |  |  |  | .91                 |  |  |  | .11                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | (a)                 |  |  |  | 3710                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 5.47                |  |  |  | 8.35                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 9480                   |  |  |  | 3290                |  |  |  | 3740                    |  |  |  |
| 10 PERCENT EXCEEDS       | 31                     |  |  |  | 8.5                 |  |  |  | 9.1                     |  |  |  |
| 50 PERCENT EXCEEDS       | 4.7                    |  |  |  | 2.6                 |  |  |  | 2.0                     |  |  |  |
| 90 PERCENT EXCEEDS       | 2.2                    |  |  |  | 1.0                 |  |  |  | .50                     |  |  |  |

(a) Peak discharge is unknown due to buried control.

## 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 sea level, from topographic map. Prior to Nov. 10, 1950, water-stage recorder on right bank 0.4 mi upstream at datum 964.50 ft above sea level. Nov. 11, 1950, to Sept. 30, 1954, water-stage recorder on both banks 0.4 mi upstream at datum 964.50 ft above sea level. Oct. 1, 1966, to Sept. 30, 1976, water-stage recorder on right bank 0.4 mi upstream at datum 954.50 ft above sea level. 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 sea level, from topographic map.

REMARKS.--Records fair through January and poor thereafter. 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 caused sustained flow past gage from 1967 to Mar. 21, 1996. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 11.9 ft, site and datum then in use; no flow for many days many years prior to 1967 and since Mar. 21, 1996.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s, or maximum, from rating curve extended above 5,930 ft<sup>3</sup>/s on basis of critical-depth computations:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 21 | 1945 | 1,840                             | 4.94                | Feb. 27 | 2200 | 1,460                             | 4.70                |
| Jan. 31 | 2130 | 3,990                             | 5.52                | Mar. 4  | 2115 | 2,000                             | 4.93                |
| Feb. 20 | 2030 | 4,510                             | 5.51                | Mar. 14 | 1915 | 1,720                             | 4.81                |
| Feb. 25 | 1145 | 1,280                             | 4.62                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR     | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|-------|---------|------|------|------|------|------|------|
| 1     | 42   | 52   | 40   | 31   | 904   | e52     | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | 39   | 57   | 35   | 32   | 69    | e50     | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | 34   | 49   | 34   | 32   | 44    | e49     | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | 37   | 45   | 32   | 32   | 42    | 237     | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | 37   | 43   | 32   | 31   | 46    | 691     | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | 37   | 44   | 36   | 32   | 49    | 161     | .00  | .00  | .00  | .00  | .00  | .00  |
| 7     | 35   | 40   | 39   | 34   | 43    | 67      | .00  | .00  | .00  | .00  | .00  | .00  |
| 8     | 34   | 40   | 36   | 34   | 41    | e50     | .00  | .00  | .00  | .00  | .00  | .00  |
| 9     | 37   | 39   | 34   | 33   | 45    | e47     | .00  | .00  | .00  | .00  | .00  | .00  |
| 10    | 37   | 40   | 35   | 36   | 43    | e45     | .00  | .00  | .00  | .00  | .00  | .00  |
| 11    | 35   | 38   | 26   | 33   | 44    | e45     | .00  | .00  | .00  | .00  | .00  | .00  |
| 12    | 34   | 39   | 26   | 33   | 46    | e50     | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | 35   | 39   | 45   | 32   | 54    | 254     | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | 38   | 38   | 33   | 32   | 53    | 162     | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | 34   | 38   | 33   | 40   | 56    | 39      | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | 35   | 38   | 32   | 34   | 53    | e38     | .00  | .00  | .00  | .00  | .00  | .00  |
| 17    | 40   | 38   | 28   | 49   | 52    | e38     | .00  | .00  | .00  | .00  | .00  | .00  |
| 18    | 36   | 38   | 30   | 35   | 53    | e37     | .39  | .00  | .00  | .00  | .00  | .00  |
| 19    | 35   | 38   | 29   | 32   | 96    | e38     | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | 41   | 38   | 29   | 37   | 2370  | e37     | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | 40   | 39   | 30   | 311  | 1990  | 2.8     | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | 40   | 38   | 29   | 74   | 436   | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | 42   | 38   | 33   | 35   | 104   | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | 40   | 35   | 31   | 32   | 48    | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | 40   | 36   | 27   | 30   | 186   | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | 39   | 37   | 32   | 32   | 48    | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | 39   | 36   | 32   | 32   | 124   | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | 39   | 38   | 32   | 33   | 72    | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | 39   | 35   | 31   | 31   | e55   | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | 43   | 35   | 31   | 37   | ---   | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | 48   | ---  | 32   | 839  | ---   | .00     | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 1181 | 1198 | 1004 | 2170 | 7266  | 2189.80 | 0.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | 38.1 | 39.9 | 32.4 | 70.0 | 251   | 70.6    | .013 | .000 | .000 | .000 | .000 | .000 |
| MAX   | 48   | 57   | 45   | 839  | 2370  | 691     | .39  | .00  | .00  | .00  | .00  | .00  |
| MIN   | 34   | 35   | 26   | 30   | 41    | .00     | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | 2340 | 2380 | 1990 | 4300 | 14410 | 4340    | .8   | .00  | .00  | .00  | .00  | .00  |

e Estimated.

## 11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1954, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .88  | 3.47 | 20.9 | 23.7 | 20.6 | 37.4 | 27.2 | 11.3 | 2.39 | .93  | .87  | .63  |
| MAX  | 3.35 | 21.3 | 117  | 109  | 72.2 | 183  | 237  | 145  | 31.2 | 9.87 | 8.37 | 6.32 |
| (WY) | 1942 | 1945 | 1946 | 1943 | 1945 | 1943 | 1941 | 1941 | 1941 | 1940 | 1940 | 1939 |
| MIN  | .000 | .007 | .000 | 1.90 | 2.41 | 1.70 | 1.14 | .14  | .000 | .000 | .000 | .000 |
| (WY) | 1951 | 1952 | 1951 | 1948 | 1942 | 1951 | 1951 | 1942 | 1950 | 1950 | 1942 | 1948 |

## SUMMARY STATISTICS

## WATER YEARS 1939 - 1954

|                          |      |
|--------------------------|------|
| ANNUAL MEAN              | 12.7 |
| HIGHEST ANNUAL MEAN      | 56.6 |
| LOWEST ANNUAL MEAN       | .78  |
| HIGHEST DAILY MEAN       | 2350 |
| LOWEST DAILY MEAN        | .00  |
| ANNUAL SEVEN-DAY MINIMUM | .00  |
| ANNUAL RUNOFF (AC-FT)    | 9190 |
| 10 PERCENT EXCEEDS       | 16   |
| 50 PERCENT EXCEEDS       | 1.0  |
| 90 PERCENT EXCEEDS       | .00  |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 33.9 | 43.3 | 77.4 | 158  | 232  | 253  | 132  | 103  | 63.9 | 40.8 | 36.8 | 34.6 |
| MAX  | 117  | 191  | 469  | 1327 | 2096 | 1279 | 742  | 707  | 339  | 162  | 160  | 75.0 |
| (WY) | 1984 | 1984 | 1967 | 1993 | 1980 | 1980 | 1980 | 1983 | 1983 | 1969 | 1983 | 1983 |
| MIN  | 12.4 | 13.2 | 14.8 | 13.2 | 11.6 | 10.6 | 12.5 | 9.35 | 13.0 | 9.08 | 9.97 | 9.93 |
| (WY) | 1968 | 1972 | 1970 | 1972 | 1968 | 1972 | 1972 | 1967 | 1971 | 1967 | 1967 | 1967 |

## SUMMARY STATISTICS

## WATER YEARS 1967 - 1995

|                          |       |
|--------------------------|-------|
| ANNUAL MEAN              | 100   |
| HIGHEST ANNUAL MEAN      | 441   |
| LOWEST ANNUAL MEAN       | 17.2  |
| HIGHEST DAILY MEAN       | 14800 |
| LOWEST DAILY MEAN        | 6.4   |
| ANNUAL SEVEN-DAY MINIMUM | 8.1   |
| INSTANTANEOUS PEAK FLOW  | 28000 |
| INSTANTANEOUS PEAK STAGE | 11.90 |
| ANNUAL RUNOFF (AC-FT)    | 72490 |
| 10 PERCENT EXCEEDS       | 165   |
| 50 PERCENT EXCEEDS       | 35    |
| 90 PERCENT EXCEEDS       | 14    |

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

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 38.1 | 39.9 | 32.4 | 70.0 | 251  | 70.6 | .013 | .000 | .000 | .000 | .000 | .000 |
| MAX  | 38.1 | 39.9 | 32.4 | 70.0 | 251  | 70.6 | .013 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 |
| MIN  | 38.1 | 39.9 | 32.4 | 70.0 | 251  | 70.6 | .013 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 | 1996 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

|                          |        |          |
|--------------------------|--------|----------|
| ANNUAL TOTAL             | 77336  | 15009.19 |
| ANNUAL MEAN              | 212    | 41.0     |
| HIGHEST DAILY MEAN       | 5100   | Mar 5    |
| LOWEST DAILY MEAN        | 26     | Dec 11   |
| ANNUAL SEVEN-DAY MINIMUM | 30     | Dec 16   |
| INSTANTANEOUS PEAK FLOW  |        | 4510     |
| INSTANTANEOUS PEAK STAGE |        | 5.52     |
| ANNUAL RUNOFF (AC-FT)    | 153400 | 29770    |
| 10 PERCENT EXCEEDS       | 450    | 48       |
| 50 PERCENT EXCEEDS       | 46     | .00      |
| 90 PERCENT EXCEEDS       | 34     | .00      |



11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1983-86, 1988 to current year.

WATER TEMPERATURE: November 1982 to September 1983.

SEDIMENT DATA: Water years 1983-86, 1988 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: November 1982 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: October 1982 to September 1983.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE  | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | SEDI-<br>MENT,<br>SUS-<br>PENDE<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDE<br>(T/DAY) | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM |
|-------|------|--|--------------------------------------|---|---|--|--|--|--|
| OCT   |      |  |                                      |   |   |  |  |  |  |
| 12... | 1400 | 44   | 27.0                                 | 10  | 1.2   | --   | --   | --   | --   |
| NOV   |      |  |                                      |   |   |  |  |  |  |
| 03... | 0810 | 28   | 22.0                                 | 10  | 0.76  | --   | --   | --   | --   |
| DEC   |      |  |                                      |   |   |  |  |  |  |
| 05... | 1345 | 44   | 24.0                                 | 12  | 1.4   | --   | --   | --   | --   |
| JAN   |      |  |                                      |   |   |  |  |  |  |
| 05... | 1210 | 40   | 23.0                                 | 11  | 1.2   | --   | --   | --   | --   |
| 31... | 1130 | 64   | 16.0                                 | 135                                       | 23  | --   | --   | --   | --   |
| FEB   |      |  |                                      |   |   |  |  |  |  |
| 21... | 0955 | 1780   | 12.5                                 | 6590                                      | 31700   | 6  | 8  | 8  | 12   |
| MAR   |      |  |                                      |   |   |  |  |  |  |
| 05... | 1705 | 425  | 14.0                                 | 1410                                      | 1620  | --   | --   | --   | --   |

| DATE  | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>1.00 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>2.00 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>4.00 MM |
|-------|--|---|---|---|---|---|---|---|
| OCT   |  |   |   |   |   |   |   |   |
| 12... | --   | 70  | --  | --  | --  | --  | --  | --  |
| NOV   |  |   |   |   |   |   |   |   |
| 03... | --   | 67  | --  | --  | --  | --  | --  | --  |
| DEC   |  |   |   |   |   |   |   |   |
| 05... | --   | 63  | --  | --  | --  | --  | --  | --  |
| JAN   |  |   |   |   |   |   |   |   |
| 05... | --   | 69  | --  | --  | --  | --  | --  | --  |
| 31... | --   | 22  | --  | --  | --  | --  | --  | --  |
| FEB   |  |   |   |   |   |   |   |   |
| 21... | 19   | 24  | 34  | 52  | 76  | 93  | 99  | 100   |
| MAR   |  |   |   |   |   |   |   |   |
| 05... | --   | 36  | 50  | 84  | 99  | 100   | --  | --  |

## SANTA ANA RIVER BASIN

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 sea level, from topographic map. Prior to Oct. 1, 1974, at site 0.1 mi upstream at different datum.

REMARKS.--Records fair except for discharges below 20 ft<sup>3</sup>/s, which are poor. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN    | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG  | SEP  |
|-------|------|------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|
| 1     | .05  | .14  | .12   | .22    | 40    | 3.0   | 8.2   | 2.0   | .64   | .47   | .35  | .06  |
| 2     | .05  | .04  | .21   | .23    | 6.6   | 3.2   | 7.9   | 3.1   | .68   | .89   | .30  | .08  |
| 3     | .41  | .01  | .12   | .28    | 4.9   | 2.6   | 3.8   | 2.6   | .64   | .45   | .24  | .09  |
| 4     | .10  | .03  | .25   | .23    | 2.7   | 67    | 2.8   | 1.4   | 1.6   | .41   | .20  | .24  |
| 5     | .33  | .05  | .42   | .30    | 1.9   | 82    | 1.9   | .75   | 1.4   | .35   | .23  | .39  |
| 6     | .04  | .09  | .33   | .32    | 1.7   | 19    | 2.7   | .62   | 1.3   | .36   | .22  | .06  |
| 7     | .07  | .07  | .17   | .32    | 1.7   | 9.3   | 2.4   | .71   | .42   | .36   | .21  | .10  |
| 8     | .07  | .08  | .16   | .32    | 1.6   | 4.5   | 2.2   | 1.1   | .31   | .37   | .22  | .08  |
| 9     | .10  | .06  | .16   | .44    | 2.5   | 2.9   | 2.3   | 1.0   | .48   | .37   | .22  | .09  |
| 10    | .12  | .06  | .17   | .28    | 1.6   | 3.2   | 2.7   | .95   | .46   | .36   | .21  | .55  |
| 11    | .13  | .07  | .38   | .32    | 1.6   | 5.5   | 2.8   | .60   | .56   | .41   | .19  | .22  |
| 12    | .52  | .08  | .13   | .32    | 1.6   | 41    | 3.4   | .75   | .43   | .57   | .23  | .06  |
| 13    | .18  | .08  | 29    | .32    | 1.6   | 79    | 3.8   | .58   | .43   | .36   | .20  | .06  |
| 14    | .10  | .07  | .39   | .32    | 1.8   | 14    | 2.9   | .56   | .43   | .34   | .23  | .06  |
| 15    | .10  | .06  | .17   | .32    | 1.6   | 6.9   | 2.5   | .77   | .43   | .33   | .25  | .09  |
| 16    | .15  | .09  | .14   | 5.3    | 1.6   | 4.7   | 3.2   | .32   | .43   | .33   | .18  | .16  |
| 17    | .15  | .08  | .13   | 5.7    | 1.6   | 3.1   | 6.4   | .35   | .43   | .72   | .20  | .09  |
| 18    | .29  | .09  | .12   | .32    | 1.8   | 2.9   | 35    | .36   | .48   | .35   | .19  | .10  |
| 19    | .52  | .10  | .35   | .55    | 34    | 2.6   | 2.1   | .33   | .68   | .35   | .30  | .17  |
| 20    | .14  | .10  | .43   | .39    | 276   | 2.6   | 1.8   | .39   | .34   | .29   | .16  | .14  |
| 21    | .15  | .13  | .38   | 115    | 96    | 2.6   | 1.2   | .35   | .45   | .27   | .15  | .17  |
| 22    | .09  | .12  | .11   | 6.0    | 7.2   | 2.3   | 1.3   | .38   | .43   | .25   | .18  | .27  |
| 23    | .24  | .15  | 2.8   | 1.0    | 2.8   | 2.6   | 1.3   | .49   | .46   | .66   | .17  | .51  |
| 24    | .07  | .13  | .13   | 1.0    | 2.4   | 2.5   | 1.6   | .56   | .43   | .25   | .16  | .11  |
| 25    | .05  | .13  | .12   | 1.0    | 30    | 2.4   | 1.9   | .51   | .49   | .26   | .17  | .11  |
| 26    | .09  | .12  | .20   | 1.1    | 4.2   | 2.6   | 2.2   | .49   | .46   | .39   | .56  | .15  |
| 27    | .05  | .07  | .13   | 1.0    | 20    | 2.7   | 2.6   | .57   | .46   | .19   | .10  | .14  |
| 28    | .03  | .07  | .16   | 12     | 4.1   | 3.4   | 2.6   | .58   | .47   | .21   | .47  | .12  |
| 29    | .02  | .11  | .18   | 1.3    | 2.8   | 3.1   | 2.6   | .65   | .41   | .16   | .14  | .17  |
| 30    | .04  | .13  | .29   | 1.3    | ---   | 3.5   | 2.3   | 1.1   | .37   | .34   | .06  | .17  |
| 31    | .17  | ---  | .16   | 148    | ---   | 3.4   | ---   | .58   | ---   | .34   | .07  | ---  |
| TOTAL | 4.62 | 2.61 | 38.01 | 305.50 | 557.9 | 390.1 | 120.4 | 25.50 | 17.00 | 11.76 | 6.76 | 4.81 |
| MEAN  | .15  | .087 | 1.23  | 9.85   | 19.2  | 12.6  | 4.01  | .82   | .57   | .38   | .22  | .16  |
| MAX   | .52  | .15  | .29   | 148    | 276   | 82    | 35    | 3.1   | 1.6   | .89   | .56  | .55  |
| MIN   | .02  | .01  | .11   | .22    | 1.6   | 2.3   | 1.2   | .32   | .31   | .16   | .06  | .06  |
| AC-FT | 9.2  | 5.2  | 75    | 606    | 1110  | 774   | 239   | 51    | 34    | 23    | 13   | 9.5  |

## 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 |
| LOWEST ANNUAL MEAN       | .33  |
| HIGHEST DAILY MEAN       | 488  |
| LOWEST DAILY MEAN        | .00  |
| ANNUAL SEVEN-DAY MINIMUM | .00  |
| INSTANTANEOUS PEAK FLOW  | 2200 |
| INSTANTANEOUS PEAK STAGE | 5.55 |
| 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 8.55 | 10.3 | 12.6 | 18.9 | 40.5 | 38.6 | 14.4 | 12.8 | 9.96 | 9.14 | 8.98 | 8.30 |
| MAX  | 32.4 | 33.1 | 41.6 | 41.2 | 418  | 376  | 44.2 | 86.7 | 43.6 | 34.5 | 50.6 | 30.3 |
| (WY) | 1984 | 1986 | 1985 | 1993 | 1978 | 1978 | 1986 | 1980 | 1980 | 1980 | 1983 | 1983 |
| MIN  | .12  | .087 | .40  | .11  | .85  | 2.51 | .17  | .37  | .067 | .11  | .061 | .023 |
| (WY) | 1978 | 1996 | 1980 | 1976 | 1977 | 1977 | 1977 | 1978 | 1978 | 1979 | 1979 | 1979 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1975 - 1996

|                          |         |         |       |
|--------------------------|---------|---------|-------|
| ANNUAL TOTAL             | 3440.68 | 1484.97 |       |
| ANNUAL MEAN              | 9.43    | 4.06    | 16.0  |
| HIGHEST ANNUAL MEAN      |         |         | 70.5  |
| LOWEST ANNUAL MEAN       |         |         | 1.91  |
| HIGHEST DAILY MEAN       | 332     | Mar 5   | 3400  |
| LOWEST DAILY MEAN        | .00     | Jun 10  | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .05     | Oct 24  | .00   |
| INSTANTANEOUS PEAK FLOW  |         |         | 1500  |
| INSTANTANEOUS PEAK STAGE |         |         | 2.68  |
| ANNUAL RUNOFF (AC-FT)    | 6820    | 2950    | 11580 |
| 10 PERCENT EXCEEDS       | 21      | 3.4     | 28    |
| 50 PERCENT EXCEEDS       | .58     | .37     | 6.8   |
| 90 PERCENT EXCEEDS       | .07     | .09     | .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 25 ft upstream from highway culvert crossing, 0.7 mi upstream from right tributary, 2.3 mi downstream from Lytle Creek Conduit, and 8 mi north of Fontana.

DRAINAGE AREA.--46.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898-99, as "near San Bernardino" 1904-18, and as Lytle Creek and Fontana pipeline near Fontana 1919-31). Monthly discharge only for some periods published in WSP 1315-B.

REVISED RECORDS.--WSP 1011: 1943. WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder on creek. Elevation of gage is 2,380 ft above sea level, from topographic map. October 1918 to Mar. 21, 1938, at site 1 mi downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft downstream at datum 4.58 ft lower. Water-stage recorder and sharp-crested weir on conduit since June 3, 1949. Water-stage recorder and sharp-crested weir on infiltration line from Oct. 1, 1971 to September 30, 1992; non-recording flow meter on diversion pipe since October 1, 1992.

REMARKS.--Records poor. No regulation upstream from station. Southern California Edison Co.'s Lytle Creek conduit (station 11060900) diverts 2.3 mi upstream for power development and Fontana Water Co. collects water from an infiltration line (station 11061000) upstream for irrigation and domestic use. Spill can occur from Southern California Edison Co.'s Lytle Creek forebay during unusually high flows. Water can be pumped from channel by two pumps at Miller Narrows at a point approximately 2 miles upstream. No water has been pumped out of channel since 1971. For records of combined discharge of Lytle Creek and diversions, see station 11062001. Records pertaining to distribution of flows diverted from Lytle Creek are available in the files of the U.S. Geological Survey. See schematic diagram of Santa Ana River basin.

COOPERATION.--Records for Lytle Creek conduit were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Records for Fontana Water Company's infiltration line were provided by Fontana Water Company.

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/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, 2.6 ft<sup>3</sup>/s, Nov. 28, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Creek only                        |                     | Combined creek and diversions     |                     |
|---------|------|-----------------------------------|---------------------|-----------------------------------|---------------------|
|         |      | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
| Jan. 31 | 1630 | 780                               | 4.75                | 788                               |                     |
| Feb. 20 | 2215 | 741                               | 4.21                | 744                               |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB    | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|------|------|-------|--------|------|------|-------|-------|-------|-------|-------|
| 1     | 23   | 19   | 15   | 9.9   | 74     | 31   | 27   | 12    | 7.4   | 6.8   | 3.8   | 6.0   |
| 2     | 22   | 18   | 14   | 9.8   | 26     | 29   | 27   | 10    | 6.7   | 5.9   | 3.7   | 7.4   |
| 3     | 21   | 18   | 13   | 9.9   | 16     | 28   | 26   | 6.7   | 7.1   | 4.7   | 3.7   | 4.2   |
| 4     | 20   | 17   | 12   | 9.9   | 12     | 47   | 25   | 9.7   | 6.9   | e4.5  | 3.8   | 2.1   |
| 5     | 20   | 17   | 12   | 10    | 9.6    | 101  | 24   | 9.2   | 6.6   | e3.8  | 3.7   | 2.0   |
| 6     | 20   | 17   | 12   | 9.9   | 8.1    | 58   | 23   | 9.1   | 6.3   | e3.7  | 3.6   | 2.5   |
| 7     | 20   | 17   | 12   | 9.3   | 6.7    | 41   | 22   | 10    | 6.3   | e3.7  | 3.5   | .26   |
| 8     | 20   | 16   | 12   | 8.9   | 5.4    | 36   | 23   | 10    | 6.3   | e3.6  | 3.6   | .00   |
| 9     | 21   | 16   | 11   | 8.8   | 5.3    | 33   | 23   | 11    | e6.3  | e3.6  | 3.5   | .00   |
| 10    | 20   | 16   | 12   | 8.8   | 5.9    | 31   | 24   | 10    | 6.4   | e3.4  | 3.5   | .00   |
| 11    | 20   | 16   | 12   | 9.3   | 6.7    | 31   | 24   | 9.5   | 6.4   | e3.3  | 3.9   | .00   |
| 12    | 19   | 15   | 13   | 9.4   | 5.9    | 46   | 24   | 9.1   | 6.4   | 3.2   | 5.0   | .00   |
| 13    | 19   | 15   | 15   | 9.4   | 5.6    | 103  | 25   | 8.7   | 6.2   | 3.0   | 4.0   | .00   |
| 14    | 19   | 15   | 13   | 9.2   | 5.1    | 65   | 25   | 8.7   | 5.9   | 2.6   | 4.1   | .02   |
| 15    | 19   | 15   | 12   | 8.8   | 5.3    | 51   | 24   | 8.6   | 5.6   | 2.6   | 3.8   | .03   |
| 16    | 19   | 15   | 12   | 9.1   | 6.4    | 48   | 18   | 8.6   | 5.7   | 2.4   | 5.3   | .01   |
| 17    | 19   | 15   | 12   | 9.3   | 6.1    | 44   | 19   | 8.1   | 5.9   | 2.3   | 4.9   | .02   |
| 18    | 19   | 14   | 12   | 8.6   | 5.8    | 41   | 22   | 7.8   | 5.6   | 2.4   | 4.3   | .02   |
| 19    | 20   | 15   | 12   | 8.3   | 12     | 51   | 19   | 8.0   | 5.4   | 2.4   | 3.7   | .00   |
| 20    | 19   | 14   | 12   | 8.3   | 356    | 47   | 18   | 8.3   | 5.6   | 2.4   | 3.5   | .00   |
| 21    | 18   | 15   | 12   | 8.8   | 327    | 38   | 16   | 8.3   | 5.9   | 2.5   | 3.6   | .01   |
| 22    | 18   | 15   | 13   | 9.3   | 242    | 37   | 15   | 8.0   | 6.8   | 2.7   | 3.5   | .03   |
| 23    | 18   | 14   | 14   | 8.8   | 113    | 37   | 14   | 7.7   | 7.5   | 2.4   | 3.5   | .03   |
| 24    | 18   | 14   | 13   | 8.8   | 74     | 36   | 13   | 8.0   | 7.8   | e2.5  | 3.5   | .00   |
| 25    | 18   | 14   | 12   | 8.8   | 60     | 35   | 12   | 8.2   | 6.6   | e2.8  | 5.2   | .05   |
| 26    | 18   | 14   | 11   | 8.6   | 49     | 33   | 11   | 7.8   | 5.2   | e3.0  | 3.6   | .01   |
| 27    | 17   | 14   | 12   | 8.2   | 44     | 31   | 11   | 9.0   | 5.2   | e3.6  | 3.7   | .08   |
| 28    | 17   | 14   | 11   | 8.3   | 40     | 33   | 12   | 9.2   | 5.1   | 3.9   | 3.6   | .04   |
| 29    | 17   | 13   | 11   | 8.1   | 35     | 31   | 13   | 8.4   | 4.7   | 3.9   | 3.4   | .00   |
| 30    | 18   | 13   | 11   | 7.8   | ---    | 29   | 13   | 8.1   | 4.5   | 4.0   | 3.6   | .00   |
| 31    | 18   | ---  | 10   | 104   | ---    | 28   | ---  | 7.8   | ---   | 3.9   | 3.7   | ---   |
| TOTAL | 594  | 460  | 380  | 374.5 | 1567.9 | 1330 | 592  | 273.6 | 184.3 | 105.5 | 119.8 | 24.81 |
| MEAN  | 19.2 | 15.3 | 12.3 | 12.1  | 54.1   | 42.9 | 19.7 | 8.83  | 6.14  | 3.40  | 3.86  | .83   |
| MAX   | 23   | 19   | 15   | 104   | 356    | 103  | 27   | 12    | 7.8   | 6.8   | 5.3   | 7.4   |
| MIN   | 17   | 13   | 10   | 7.8   | 5.1    | 28   | 11   | 6.7   | 4.5   | 2.3   | 3.4   | .00   |
| AC-FT | 1180 | 912  | 754  | 743   | 3110   | 2640 | 1170 | 543   | 366   | 209   | 238   | 49    |

e Estimated.

## 11062000 LYTLE CREEK NEAR FONTANA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 4.00 | 7.57 | 9.82 | 26.8 | 42.4 | 53.9 | 29.9 | 20.1 | 14.5 | 10.4 | 7.17 | 5.65 |
| MAX  | 48.2 | 275  | 151  | 552  | 633  | 752  | 254  | 189  | 157  | 131  | 80.5 | 65.7 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1980 | 1938 | 1978 | 1993 | 1983 | 1983 | 1969 | 1983 |
| MIN  | .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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1919 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 26151.6                |  |  |  | 6006.41             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 71.6                   |  |  |  | 16.4                |  |  |  | 19.5                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 177                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 864                    |  |  |  | Feb 14              |  |  |  | 8950                    |  |  |  |
| LOWEST DAILY MEAN        | 1.1                    |  |  |  | Jan 1               |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 11                     |  |  |  | Dec 25              |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 780                 |  |  |  | 35900                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 4.75                |  |  |  | 15.00                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 51870                  |  |  |  | 11910               |  |  |  | 14100                   |  |  |  |
| 10 PERCENT EXCEEDS       | 135                    |  |  |  | 31                  |  |  |  | 43                      |  |  |  |
| 50 PERCENT EXCEEDS       | 53                     |  |  |  | 9.5                 |  |  |  | .00                     |  |  |  |
| 90 PERCENT EXCEEDS       | 14                     |  |  |  | 2.6                 |  |  |  | .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 DIVERSION  
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 42   | 37   | 33   | 28   | 74   | 50   | 46   | 30   | 25   | 21   | 18   | 23   |
| 2     | 40   | 36   | 32   | 28   | 34   | 48   | 46   | 28   | 25   | 22   | 19   | 24   |
| 3     | 39   | 36   | 31   | 28   | 34   | 47   | 45   | 27   | 24   | 22   | 19   | 22   |
| 4     | 38   | 35   | 30   | 28   | 30   | 65   | 44   | 28   | 24   | e20  | 20   | 20   |
| 5     | 38   | 35   | 30   | 28   | 28   | 101  | 43   | 28   | 24   | e20  | 20   | 21   |
| 6     | 38   | 35   | 30   | 28   | 26   | 66   | 42   | 28   | 23   | e19  | 20   | 18   |
| 7     | 38   | 35   | 30   | 27   | 25   | 60   | 41   | 28   | 23   | e20  | 19   | 20   |
| 8     | 38   | 34   | 30   | 27   | 23   | 55   | 42   | 28   | 23   | e19  | 20   | 23   |
| 9     | 39   | 34   | 29   | 27   | 23   | 52   | 42   | 29   | e23  | e20  | 19   | 24   |
| 10    | 38   | 34   | 30   | 27   | 25   | 50   | 43   | 28   | 22   | e18  | 19   | 23   |
| 11    | 38   | 34   | 30   | 27   | 26   | 50   | 43   | 27   | 23   | e18  | 20   | 25   |
| 12    | 37   | 33   | 31   | 27   | 25   | 61   | 43   | 27   | 23   | 19   | 21   | 24   |
| 13    | 37   | 33   | 33   | 27   | 25   | 105  | 44   | 27   | 23   | 19   | 20   | 24   |
| 14    | 38   | 33   | 31   | 27   | 24   | 78   | 44   | 27   | 23   | 19   | 20   | 24   |
| 15    | 38   | 33   | 30   | 27   | 24   | 70   | 43   | 27   | 23   | 19   | 19   | 25   |
| 16    | 37   | 33   | 30   | 27   | 27   | 67   | 37   | 27   | 21   | 18   | 17   | 24   |
| 17    | 37   | 33   | 30   | 27   | 25   | 63   | 38   | 26   | 21   | 18   | 19   | 25   |
| 18    | 37   | 32   | 30   | 27   | 27   | 54   | 41   | 26   | 22   | 18   | 20   | 24   |
| 19    | 38   | 33   | 30   | 26   | 33   | 54   | 38   | 26   | 21   | 17   | 21   | 24   |
| 20    | 37   | 32   | 30   | 26   | 363  | 48   | 37   | 26   | 22   | 17   | 20   | 24   |
| 21    | 36   | 33   | 30   | 27   | 329  | 55   | 35   | 26   | 22   | 17   | 21   | 24   |
| 22    | 36   | 33   | 31   | 27   | 244  | 50   | 34   | 26   | 23   | 19   | 20   | 25   |
| 23    | 36   | 32   | 32   | 27   | 113  | 55   | 33   | 26   | 23   | 17   | 20   | 24   |
| 24    | 36   | 32   | 31   | 27   | 81   | 54   | 31   | 26   | 24   | e17  | 20   | 24   |
| 25    | 36   | 32   | 30   | 27   | 79   | 54   | 30   | 26   | 23   | e18  | 21   | 24   |
| 26    | 36   | 32   | 29   | 27   | 68   | 52   | 29   | 26   | 21   | e18  | 21   | 24   |
| 27    | 35   | 32   | 30   | 26   | 63   | 50   | 29   | 27   | 21   | e19  | 21   | 24   |
| 28    | 35   | 32   | 29   | 26   | 59   | 52   | 30   | 27   | 21   | 19   | 21   | 24   |
| 29    | 35   | 31   | 29   | 26   | 54   | 50   | 31   | 26   | 21   | 19   | 20   | 25   |
| 30    | 36   | 31   | 29   | 26   | ---  | 48   | 31   | 26   | 19   | 19   | 21   | 23   |
| 31    | 36   | ---  | 28   | 117  | ---  | 47   | ---  | 26   | ---  | 19   | 21   | ---  |
| TOTAL | 1155 | 1000 | 938  | 927  | 2011 | 1811 | 1155 | 836  | 676  | 584  | 617  | 702  |
| MEAN  | 37.3 | 33.3 | 30.3 | 29.9 | 69.3 | 58.4 | 38.5 | 27.0 | 22.5 | 18.8 | 19.9 | 23.4 |
| MAX   | 42   | 37   | 33   | 117  | 363  | 105  | 46   | 30   | 25   | 22   | 21   | 25   |
| MIN   | 35   | 31   | 28   | 26   | 23   | 47   | 29   | 26   | 19   | 17   | 17   | 18   |
| AC-FT | 2290 | 1980 | 1860 | 1840 | 3990 | 3590 | 2290 | 1660 | 1340 | 1160 | 1220 | 1390 |

e Estimated.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 26.6 | 28.6 | 31.0 | 57.2 | 68.8 | 80.0 | 57.2 | 47.2 | 39.3 | 33.0 | 30.0 | 27.7 |
| MAX  | 71.9 | 285  | 188  | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1899 - 1996

|                          |       |        |       |
|--------------------------|-------|--------|-------|
| ANNUAL TOTAL             | 32735 | 12412  |       |
| ANNUAL MEAN              | 89.7  | 33.9   | 44.1  |
| HIGHEST ANNUAL MEAN      |       |        | 194   |
| LOWEST ANNUAL MEAN       |       |        | 10.7  |
| HIGHEST DAILY MEAN       | 867   | Feb 14 | 363   |
| LOWEST DAILY MEAN        | 17    | Jan 1  | 17    |
| ANNUAL SEVEN-DAY MINIMUM | 29    | Dec 25 | 17    |
| INSTANTANEOUS PEAK FLOW  |       |        | 788   |
| ANNUAL RUNOFF (AC-FT)    | 64930 |        | 24620 |
| 10 PERCENT EXCEEDS       | 144   |        | 50    |
| 50 PERCENT EXCEEDS       | 73    |        | 28    |
| 90 PERCENT EXCEEDS       | 32    |        | 20    |

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 sea level. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood), and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft higher.

REMARKS.--Records good. 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, or maximum, from rating curve extended above 322 ft<sup>3</sup>/s on basis of slope-conveyance measurement at gage height 9.07 ft:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Jan. 31 | 1600 | 479                               | 5.11                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| 1     | 2.6  | 2.8  | 2.4  | 2.8   | 3.2   | 3.4   | 2.7  | 2.2  | 2.1  | 2.0  | 1.5  | 1.1  |
| 2     | 2.5  | 2.8  | 2.3  | 2.7   | 2.2   | 3.4   | 2.7  | 2.2  | 2.1  | 2.0  | 1.5  | 1.1  |
| 3     | 2.4  | 2.7  | 2.4  | 2.6   | 2.1   | 3.5   | 2.8  | 2.2  | 2.1  | 2.0  | 1.5  | 1.0  |
| 4     | 2.3  | 2.7  | 2.4  | 2.8   | 2.1   | 4.1   | 2.7  | 2.2  | 2.1  | 1.9  | 1.5  | 1.0  |
| 5     | 2.3  | 2.7  | 2.3  | 2.9   | 2.1   | 4.0   | 2.7  | 2.2  | 2.0  | 1.9  | 1.5  | 1.0  |
| 6     | 2.4  | 2.6  | 2.3  | 3.0   | 2.1   | 3.6   | 2.7  | 2.2  | 2.0  | 1.9  | 1.6  | 1.0  |
| 7     | 2.6  | 2.6  | 2.3  | 3.1   | 2.0   | 3.4   | 2.7  | 2.2  | 2.0  | 1.9  | 1.5  | 1.0  |
| 8     | 2.7  | 2.4  | 2.2  | 3.1   | 2.0   | 3.3   | 2.9  | 2.3  | 1.9  | 1.9  | 1.5  | 1.0  |
| 9     | 2.5  | 2.4  | 2.1  | 3.1   | 2.0   | 3.2   | 2.9  | 2.3  | 1.9  | 1.9  | 1.5  | 1.0  |
| 10    | 2.5  | 2.4  | 2.1  | 3.1   | 2.0   | 3.1   | 2.9  | 2.2  | 1.9  | 1.8  | 1.5  | 1.0  |
| 11    | 2.5  | 2.4  | 2.1  | 3.1   | 2.0   | 3.1   | 2.9  | 2.2  | 1.9  | 1.8  | 1.4  | 1.0  |
| 12    | 2.6  | 2.4  | 2.2  | 3.1   | 2.0   | 3.4   | 2.8  | 2.1  | 1.9  | 1.8  | 1.4  | 1.0  |
| 13    | 2.5  | 2.4  | 2.7  | 3.1   | 2.0   | 6.5   | 2.5  | 2.0  | 1.9  | 1.7  | 1.2  | 1.0  |
| 14    | 2.5  | 2.3  | 2.5  | 3.0   | 2.0   | 4.0   | 2.7  | 2.1  | 2.0  | 1.4  | 1.2  | 1.0  |
| 15    | 2.5  | 2.3  | 2.4  | 2.9   | 2.0   | 3.5   | 2.9  | 2.2  | 2.0  | 1.5  | 1.2  | 1.0  |
| 16    | 2.5  | 2.3  | 2.4  | 3.0   | 2.0   | 3.2   | 3.1  | 2.4  | 1.9  | 1.5  | 1.2  | 1.0  |
| 17    | 2.5  | 2.3  | 2.4  | 3.1   | 2.1   | 2.8   | 3.3  | 2.3  | 1.8  | 1.5  | 1.2  | 1.0  |
| 18    | 2.5  | 2.2  | 2.4  | 3.1   | 2.1   | 2.8   | 3.3  | 2.3  | 1.8  | 1.5  | 1.2  | 1.1  |
| 19    | 2.5  | 2.2  | 2.4  | 3.1   | 2.4   | 2.8   | 3.0  | 2.3  | 1.8  | 1.5  | 1.2  | 1.2  |
| 20    | 2.5  | 2.2  | 2.4  | 3.0   | 2.0   | 2.8   | 2.9  | 2.3  | 1.8  | 1.5  | 1.2  | 1.2  |
| 21    | 2.5  | 2.3  | 2.6  | 3.1   | 2.3   | 2.9   | 2.9  | 2.4  | 1.8  | 1.4  | 1.2  | 1.2  |
| 22    | 2.6  | 2.3  | 2.7  | 3.2   | 5.7   | 2.9   | 2.8  | 2.4  | 1.8  | 1.4  | 1.1  | 1.2  |
| 23    | 2.8  | 2.1  | 3.1  | 3.1   | 4.1   | 2.9   | 2.7  | 2.4  | 1.9  | 1.4  | 1.0  | 1.2  |
| 24    | 2.8  | 2.1  | 2.9  | 3.0   | 3.9   | 2.9   | 2.6  | 2.4  | 2.0  | 1.4  | 1.0  | 1.2  |
| 25    | 2.8  | 2.3  | 2.8  | 2.9   | 4.0   | 2.9   | 2.6  | 2.4  | 2.0  | 1.4  | 1.0  | 1.2  |
| 26    | 2.8  | 2.6  | 2.8  | 2.9   | 3.9   | 2.9   | 2.4  | 2.3  | 2.0  | 1.4  | 1.0  | 1.2  |
| 27    | 2.8  | 2.5  | 2.8  | 2.9   | 3.8   | 2.8   | 2.4  | 2.1  | 2.0  | 1.5  | 1.1  | 1.2  |
| 28    | 2.7  | 2.4  | 2.8  | 2.9   | 3.7   | 2.8   | 2.3  | 2.1  | 1.9  | 1.5  | 1.3  | 1.2  |
| 29    | 2.6  | 2.4  | 2.7  | 2.9   | 3.6   | 2.8   | 2.3  | 2.1  | 1.8  | 1.5  | 1.4  | 1.2  |
| 30    | 2.7  | 2.4  | 2.6  | 2.8   | ---   | 2.8   | 2.2  | 2.1  | 1.8  | 1.4  | 1.3  | 1.2  |
| 31    | 2.8  | ---  | 2.6  | 2.1   | ---   | 2.7   | ---  | 2.1  | ---  | 1.4  | 1.2  | ---  |
| TOTAL | 79.8 | 72.5 | 77.1 | 110.4 | 116.1 | 101.2 | 82.3 | 69.2 | 57.9 | 50.6 | 40.1 | 32.7 |
| MEAN  | 2.57 | 2.42 | 2.49 | 3.56  | 4.00  | 3.26  | 2.74 | 2.23 | 1.93 | 1.63 | 1.29 | 1.09 |
| MAX   | 2.8  | 2.8  | 3.1  | 2.1   | 23    | 6.5   | 3.3  | 2.4  | 2.1  | 2.0  | 1.6  | 1.2  |
| MIN   | 2.3  | 2.1  | 2.1  | 2.6   | 2.0   | 2.7   | 2.2  | 2.0  | 1.8  | 1.4  | 1.0  | 1.0  |
| AC-FT | 158  | 144  | 153  | 219   | 230   | 201   | 163  | 137  | 115  | 100  | 80   | 65   |

## 11063500 LONE PINE CREEK NEAR KEENBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.00 | 1.20 | 1.91 | 2.40 | 4.11 | 4.68 | 2.08 | 1.66 | 1.35 | 1.13 | 1.09 | 1.06 |
| MAX  | 5.35 | 6.51 | 15.0 | 24.1 | 40.6 | 98.1 | 11.0 | 8.91 | 7.41 | 5.95 | 6.61 | 6.09 |
| (WY) | 1984 | 1966 | 1923 | 1969 | 1969 | 1938 | 1980 | 1980 | 1980 | 1993 | 1993 | 1993 |
| MIN  | .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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1920 - 1996

|                          |        |        |  |  |  |       |        |  |      |      |       |      |
|--------------------------|--------|--------|--|--|--|-------|--------|--|------|------|-------|------|
| ANNUAL TOTAL             | 1547.7 |        |  |  |  | 889.9 |        |  |      |      |       |      |
| ANNUAL MEAN              | 4.24   |        |  |  |  | 2.43  |        |  |      | 1.98 |       |      |
| HIGHEST ANNUAL MEAN      |        |        |  |  |  |       |        |  |      | 11.4 |       | 1938 |
| LOWEST ANNUAL MEAN       |        |        |  |  |  |       |        |  |      | .11  |       | 1964 |
| HIGHEST DAILY MEAN       | 64     | Jan 10 |  |  |  | 23    | Feb 21 |  | 1480 |      | Mar 2 | 1938 |
| LOWEST DAILY MEAN        | 2.0    | Jan 1  |  |  |  | 1.0   | Aug 23 |  | .00  |      | Aug 6 | 1965 |
| ANNUAL SEVEN-DAY MINIMUM | 2.2    | Dec 6  |  |  |  | 1.0   | Sep 3  |  | .06  |      | Aug 2 | 1965 |
| INSTANTANEOUS PEAK FLOW  |        |        |  |  |  | 479   | Jan 31 |  | 6180 |      | Mar 2 | 1938 |
| INSTANTANEOUS PEAK STAGE |        |        |  |  |  | 5.11  | Jan 31 |  |      |      |       |      |
| ANNUAL RUNOFF (AC-FT)    | 3070   |        |  |  |  | 1770  |        |  | 1430 |      |       |      |
| 10 PERCENT EXCEEDS       | 5.7    |        |  |  |  | 3.1   |        |  | 4.2  |      |       |      |
| 50 PERCENT EXCEEDS       | 3.1    |        |  |  |  | 2.3   |        |  | .60  |      |       |      |
| 90 PERCENT EXCEEDS       | 2.4    |        |  |  |  | 1.2   |        |  | .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 sea level, from topographic map. Oct. 1, 1971, to Sept. 30, 1977, at site 0.25 mi upstream at abandoned diversion dam at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Concrete control installed Oct. 1, 1987. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,700 ft<sup>3</sup>/s, Feb. 8, 1993, gage height, 8.48 ft, from rating curve extended above 180 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.48 ft; minimum daily, 1.7 ft<sup>3</sup>/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s, or maximum, from rating curve extended above 180 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 8.48 ft:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|---------|-----------------------------------|---------------------|
| Jan. 31 | 1615 | 5,150                             | 7.93                | Mar. 13 | unknown | 266                               | 5.25                |
| Feb. 20 | 1700 | 561                               | 5.61                |         |         |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR  | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 7.8   | e6.9  | 7.0   | e8.2  | 33    | 12   | 11    | 7.8   | 7.4   | 5.9   | 5.2   | 6.0   |
| 2     | 7.6   | e6.8  | 7.1   | e8.0  | 16    | 11   | 10    | 7.9   | 7.2   | 5.7   | 5.3   | 5.9   |
| 3     | 7.3   | e6.8  | 7.2   | e8.0  | 13    | 10   | 11    | 8.1   | 7.0   | 6.3   | 5.5   | 5.5   |
| 4     | 6.7   | e6.8  | 7.2   | e8.0  | 12    | 13   | 11    | 8.0   | 6.8   | 5.9   | 5.7   | 5.5   |
| 5     | 6.7   | e6.7  | 7.3   | e7.9  | 11    | 14   | 11    | 7.8   | 6.7   | 5.8   | 5.7   | 5.7   |
| 6     | 6.9   | e6.7  | 7.3   | 8.4   | 11    | 12   | 11    | 7.7   | 7.1   | 5.7   | 6.0   | 5.6   |
| 7     | 6.9   | e6.8  | 7.4   | 8.1   | 10    | 11   | 11    | 7.8   | 7.2   | 5.5   | 6.2   | 5.5   |
| 8     | 7.0   | 6.6   | 7.3   | 7.8   | 9.9   | e11  | 11    | 8.0   | 7.1   | 5.4   | 5.9   | 5.4   |
| 9     | 7.1   | 7.0   | 6.9   | 7.7   | 9.9   | e10  | 11    | 8.1   | 7.0   | 5.6   | 5.7   | 5.1   |
| 10    | 7.0   | 7.2   | 6.9   | 7.6   | 9.8   | e10  | 12    | 7.6   | 7.0   | 5.7   | 5.8   | 5.2   |
| 11    | 7.0   | 6.8   | 6.9   | 7.6   | 10    | e11  | 11    | 7.1   | 7.1   | 5.6   | 5.7   | 5.1   |
| 12    | 7.1   | 6.8   | 7.0   | 7.6   | 10    | e11  | 11    | 7.1   | 7.1   | 5.4   | 5.8   | 5.1   |
| 13    | 6.9   | 6.7   | 10    | 7.6   | 10    | e35  | 11    | 7.2   | 7.2   | 5.8   | 5.6   | 5.8   |
| 14    | 6.7   | 6.7   | 8.1   | 7.8   | 9.9   | 16   | 11    | 6.6   | 7.1   | 5.8   | 5.7   | 6.0   |
| 15    | 6.9   | 6.6   | 7.6   | 7.6   | 9.9   | 14   | 11    | 6.8   | 7.1   | 5.7   | 5.7   | 6.0   |
| 16    | 7.4   | 6.7   | 7.6   | 7.8   | 9.8   | 13   | 11    | 7.1   | 6.8   | 5.9   | 5.7   | 6.0   |
| 17    | 7.1   | 6.8   | 7.6   | 8.4   | 9.6   | 13   | 11    | 6.9   | 6.7   | 6.1   | 5.8   | 5.7   |
| 18    | 7.0   | 6.7   | 7.6   | 8.4   | 9.4   | 13   | 13    | 7.0   | 6.6   | 5.8   | 5.7   | 5.7   |
| 19    | 6.9   | 6.7   | 7.6   | 8.4   | 10    | 12   | 11    | 6.7   | 6.5   | 5.8   | 5.4   | 5.7   |
| 20    | 7.0   | 6.7   | 7.6   | 8.4   | 198   | 11   | 11    | 6.6   | 6.5   | 5.6   | 5.6   | 5.6   |
| 21    | 7.3   | 6.7   | 8.2   | 9.1   | 214   | 12   | 10    | 7.0   | 7.0   | 5.5   | 5.4   | 5.6   |
| 22    | 7.3   | 6.7   | 8.4   | 9.0   | 38    | 12   | 10    | 7.6   | 7.1   | 5.6   | 5.3   | 5.8   |
| 23    | 7.3   | 6.6   | 11    | 8.4   | 20    | 11   | 9.5   | 7.5   | 6.8   | 5.6   | 5.4   | 5.9   |
| 24    | 7.1   | 6.6   | 9.5   | 8.4   | 16    | 11   | 9.2   | 8.1   | 7.0   | 5.6   | 5.0   | 5.7   |
| 25    | 7.2   | 6.7   | 9.2   | 8.4   | 15    | 11   | 9.0   | 8.1   | 7.1   | 5.5   | 5.1   | 5.9   |
| 26    | 7.1   | 6.9   | e8.8  | 8.4   | 14    | 11   | 8.8   | 7.4   | 7.2   | 5.5   | 5.3   | 5.6   |
| 27    | e7.1  | 6.9   | e8.8  | 8.4   | 13    | 10   | 8.7   | 7.6   | 7.1   | 5.5   | 5.3   | 5.2   |
| 28    | e7.0  | 6.9   | e8.7  | 8.4   | 13    | 10   | 8.2   | 7.6   | 6.9   | 5.5   | 5.3   | 5.2   |
| 29    | e7.0  | 6.9   | e8.7  | 8.4   | 12    | 11   | 8.1   | 7.6   | 6.4   | 5.2   | 5.4   | 5.1   |
| 30    | e7.0  | 7.0   | e8.6  | 8.4   | ---   | 10   | 7.8   | 7.8   | 6.2   | 5.0   | 5.5   | 5.1   |
| 31    | e6.9  | ---   | e8.5  | 189   | ---   | 10   | ---   | 7.6   | ---   | 5.0   | 5.6   | ---   |
| TOTAL | 219.3 | 203.4 | 247.6 | 433.6 | 777.2 | 382  | 311.3 | 231.8 | 208.0 | 174.5 | 172.3 | 167.2 |
| MEAN  | 7.07  | 6.78  | 7.99  | 14.0  | 26.8  | 12.3 | 10.4  | 7.48  | 6.93  | 5.63  | 5.56  | 5.57  |
| MAX   | 7.8   | 7.2   | 11    | 189   | 214   | 35   | 13    | 8.1   | 7.4   | 6.3   | 6.2   | 6.0   |
| MIN   | 6.7   | 6.6   | 6.9   | 7.6   | 9.4   | 10   | 7.8   | 6.6   | 6.2   | 5.0   | 5.0   | 5.1   |
| AC-FT | 435   | 403   | 491   | 860   | 1540  | 758  | 617   | 460   | 413   | 346   | 342   | 332   |

e Estimated.

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.60 | 5.98 | 9.49 | 21.7 | 22.3 | 17.3 | 10.2 | 8.10 | 6.19 | 5.26 | 4.95 | 6.00 |
| MAX  | 14.8 | 13.2 | 26.5 | 134  | 121  | 51.5 | 27.7 | 17.4 | 15.8 | 16.0 | 15.1 | 24.5 |
| (WY) | 1984 | 1984 | 1972 | 1993 | 1993 | 1995 | 1993 | 1993 | 1993 | 1993 | 1993 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1972 - 1996 |            |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL             | 8286.1                 |        | 3528.2              |        |                         |            |
| ANNUAL MEAN              | 22.7                   |        | 9.64                |        | 10.2                    |            |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 35.5                    | 1993       |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 3.80                    | 1990       |
| HIGHEST DAILY MEAN       | 554                    | Jan 10 | 214                 | Feb 21 | 850                     | Feb 8 1993 |
| LOWEST DAILY MEAN        | 6.6                    | Nov 8  | 5.0                 | Jul 30 | 1.7                     | Sep 5 1989 |
| ANNUAL SEVEN-DAY MINIMUM | 6.7                    | Nov 18 | 5.2                 | Jul 27 | 1.8                     | Sep 2 1989 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 5150                | Jan 31 | 6700                    | Feb 8 1993 |
| INSTANTANEOUS PEAK STAGE |                        |        | 7.93                | Jan 31 | 8.48                    | Feb 8 1993 |
| ANNUAL RUNOFF (AC-FT)    | 16440                  |        | 7000                |        | 7390                    |            |
| 10 PERCENT EXCEEDS       | 34                     |        | 11                  |        | 15                      |            |
| 50 PERCENT EXCEEDS       | 10                     |        | 7.1                 |        | 5.9                     |            |
| 90 PERCENT EXCEEDS       | 6.9                    |        | 5.5                 |        | 2.8                     |            |

## 11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA

LOCATION.--Lat 34°12'30", long 117°19'50", in Muscupiabe Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.6 mi downstream from confluence of East and West Forks and 7.5 mi northwest of San Bernardino.  
DRAINAGE AREA.--5.49 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.  
REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder on creek; flowmeter on diversion. Elevation of gage is 2,080 ft above sea level, from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi downstream at different datum. December 1919 to July 1969, at site 0.4 mi downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi downstream at different datum.

REMARKS.--Records fair. No regulation upstream from station. City of San Bernardino diverts upstream from station at times for municipal supply. No diversion since June 1993. 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, or maximum, from rating curve extended above 158 ft<sup>3</sup>/s:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|--------|------|-----------------------------------|---------------------|
| Jan. 31 | 2215 | 67                                | 5.71                | Mar. 5 | 0145 | 88                                | 5.76                |
| Feb. 20 | 1900 | 370                               | 6.52                |        |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC  | JAN  | FEB   | MAR   | APR   | MAY  | JUN   | JUL   | AUG  | SEP  |
|-------|------|-------|------|------|-------|-------|-------|------|-------|-------|------|------|
| 1     | 1.7  | 1.8   | 1.1  | 1.4  | 11    | 9.7   | 6.0   | 3.6  | 1.1   | .57   | .18  | .00  |
| 2     | 1.8  | 1.8   | 1.2  | 1.5  | 5.4   | 9.2   | 6.3   | 3.5  | .92   | .45   | .20  | .00  |
| 3     | 1.9  | 1.7   | 1.2  | 1.5  | 4.5   | 8.7   | 5.7   | 3.4  | 1.0   | .37   | .20  | .00  |
| 4     | 1.9  | 1.5   | 1.2  | 1.6  | 4.1   | 21    | 5.5   | 3.3  | 1.2   | .41   | .24  | .00  |
| 5     | 2.2  | 1.5   | 1.2  | 1.8  | 3.9   | 32    | 5.0   | 3.3  | 1.1   | .35   | .32  | .00  |
| 6     | 2.3  | 1.4   | 1.1  | 1.7  | 3.9   | 14    | 4.7   | 3.2  | 1.1   | .36   | .36  | .00  |
| 7     | 2.4  | 1.2   | 1.2  | 1.7  | 3.6   | 11    | 4.7   | 2.7  | 1.0   | .37   | .36  | .00  |
| 8     | 2.6  | 1.1   | 1.1  | 1.6  | 3.2   | 9.4   | 3.8   | 2.9  | .98   | .38   | .34  | .00  |
| 9     | 2.3  | 1.1   | 1.1  | 1.7  | 2.8   | 8.6   | 3.2   | 3.1  | .87   | .38   | .24  | .00  |
| 10    | 1.5  | 1.3   | 1.1  | 1.8  | 2.8   | 8.1   | 3.5   | 2.9  | .84   | .38   | .22  | .00  |
| 11    | 1.2  | 1.1   | 1.2  | 1.8  | 2.7   | 7.9   | 3.7   | 2.2  | .78   | .38   | .22  | .00  |
| 12    | 1.4  | .98   | 1.3  | 1.8  | 2.6   | 11    | 3.6   | 2.1  | .80   | .38   | .23  | .00  |
| 13    | 1.4  | .93   | 3.4  | 1.8  | 2.7   | 17    | 4.3   | 2.1  | .79   | .38   | .22  | .00  |
| 14    | 1.6  | .89   | 2.3  | 1.8  | 2.8   | 13    | 4.0   | 2.1  | .81   | .37   | .22  | .00  |
| 15    | 1.7  | .90   | 1.7  | 2.4  | 2.8   | 11    | 3.3   | 2.0  | .91   | .35   | .22  | .00  |
| 16    | 1.8  | .82   | 1.6  | 3.4  | 2.8   | 10    | 3.2   | 1.9  | .93   | .41   | .22  | .00  |
| 17    | 1.6  | .81   | 1.5  | 4.9  | 2.8   | 9.4   | 4.1   | 1.9  | .97   | 1.1   | .22  | .00  |
| 18    | 1.5  | .81   | 1.5  | 4.5  | 2.8   | 8.8   | 9.4   | 1.8  | .93   | 1.5   | .12  | .00  |
| 19    | 1.5  | .81   | 1.5  | 3.8  | 8.4   | 8.2   | 5.3   | 1.7  | .88   | 1.1   | .11  | .00  |
| 20    | 1.4  | .81   | 1.5  | 3.2  | 107   | 8.1   | 4.5   | 1.6  | .77   | .21   | .09  | .00  |
| 21    | 1.6  | .83   | 1.5  | 4.0  | 50    | 7.7   | 4.5   | 1.6  | .96   | .22   | .07  | .00  |
| 22    | 1.6  | .81   | 1.5  | 3.6  | 23    | 7.8   | 4.0   | 1.7  | 1.1   | .25   | .06  | .00  |
| 23    | 1.7  | .74   | 1.7  | 2.7  | 20    | 7.6   | 3.3   | 1.7  | 1.1   | .20   | .04  | .00  |
| 24    | 1.7  | .73   | 1.6  | 2.3  | 15    | 7.4   | 3.2   | 1.5  | 1.1   | .19   | .03  | .00  |
| 25    | 1.7  | .82   | 1.6  | 2.3  | 14    | 7.2   | 3.1   | 1.5  | 1.1   | .19   | .01  | .00  |
| 26    | 1.4  | .98   | 1.5  | 2.3  | 12    | 6.9   | 2.9   | 1.5  | 1.3   | .19   | .00  | .00  |
| 27    | 1.4  | 1.2   | 1.5  | 2.3  | 11    | 6.3   | 2.9   | 1.5  | 1.3   | .19   | .00  | .00  |
| 28    | 1.5  | 1.2   | 1.5  | 2.4  | 11    | 5.9   | 2.9   | 1.3  | 1.2   | .21   | .00  | .00  |
| 29    | 1.6  | 1.0   | 1.5  | 2.3  | 10    | 5.5   | 2.9   | 1.2  | .68   | .20   | .00  | .00  |
| 30    | 1.6  | 1.0   | 1.5  | 2.3  | ---   | 5.4   | 3.1   | 1.2  | .62   | .19   | .00  | .00  |
| 31    | 1.8  | ---   | 1.5  | 13   | ---   | 5.1   | ---   | 1.2  | ---   | .20   | .00  | ---  |
| TOTAL | 53.3 | 32.57 | 45.9 | 85.2 | 348.6 | 308.9 | 126.6 | 67.2 | 29.14 | 12.43 | 4.74 | 0.00 |
| MEAN  | 1.72 | 1.09  | 1.48 | 2.75 | 12.0  | 9.96  | 4.22  | 2.17 | .97   | .40   | .15  | .000 |
| MAX   | 2.6  | 1.8   | 3.4  | 13   | 107   | 32    | 9.4   | 3.6  | 1.3   | 1.5   | .36  | .00  |
| MIN   | 1.2  | .73   | 1.1  | 1.4  | 2.6   | 5.1   | 2.9   | 1.2  | .62   | .19   | .00  | .00  |
| AC-FT | 106  | 65    | 91   | 169  | 691   | 613   | 251   | 133  | 58    | 25    | 9.4  | .00  |
| a     | 106  | 65    | 91   | 169  | 691   | 613   | 251   | 133  | 58    | 25    | 9.4  | .00  |

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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .34  | .94  | 1.72 | 3.52 | 6.71 | 7.54 | 4.38 | 2.14 | .93  | .51  | .34  | .32  |
| MAX  | 3.36 | 12.9 | 14.0 | 44.4 | 108  | 72.9 | 28.3 | 15.2 | 7.35 | 4.66 | 3.83 | 3.33 |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1980 | 1938 | 1978 | 1983 | 1995 | 1993 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1920 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 3386.67                |  |  |  | 1114.58             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 9.28                   |  |  |  | 3.05                |  |  |  | 2.40                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 16.1                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 83                     |  |  |  | 107                 |  |  |  | 556                     |  |  |  |
| LOWEST DAILY MEAN        | .73                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .79                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 370                 |  |  |  | 3720                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 6.52                |  |  |  | 6.70                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 6720                   |  |  |  | 2210                |  |  |  | 1740                    |  |  |  |
| 10 PERCENT EXCEEDS       | 22                     |  |  |  | 7.6                 |  |  |  | 5.1                     |  |  |  |
| 50 PERCENT EXCEEDS       | 5.2                    |  |  |  | 1.5                 |  |  |  | .10                     |  |  |  |
| 90 PERCENT EXCEEDS       | 1.3                    |  |  |  | .01                 |  |  |  | .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 sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except for discharges below 10 ft<sup>3</sup>/s, which are poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 mi upstream. Diversions upstream from station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,500 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 14.8 ft, from rating curve extended above 4,200 ft<sup>3</sup>/s on basis of discharge for design flood at gage height 21.4 ft; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN    | FEB     | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-------|------|------|--------|---------|-------|------|------|------|------|------|------|
| 1     | .00   | .00  | .00  | .00    | 60      | .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     | 8.4   | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | .00   | .00  | .00  | .00    | .00     | 47    | .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     | 10    | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00   | .00  | 6.3  | .00    | .00     | 14    | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00   | .00  | .00  | .00    | .00     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | 33    | .00  | .00  | .00    | .00     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | .00   | .00  | .00  | 3.7    | .00     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 17    | .00   | .00  | .00  | .09    | .00     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 18    | .00   | .00  | .00  | .00    | .00     | .00   | 1.6  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00   | .00  | .00  | .00    | 1.2     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00   | .00  | .00  | .00    | 675     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00   | .00  | .00  | 32     | 541     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00   | .00  | .00  | .00    | 67      | .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  | 110    | ---     | .00   | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 33.00 | 0.00 | 6.30 | 145.79 | 1344.20 | 79.40 | 1.60 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | 1.06  | .000 | .20  | 4.70   | 46.4    | 2.56  | .053 | .000 | .000 | .000 | .000 | .000 |
| MAX   | 33    | .00  | 6.3  | 110    | 675     | 47    | 1.6  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00   | .00  | .00  | .00    | .00     | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | 65    | .00  | 12   | 289    | 2670    | 157   | 3.2  | .00  | .00  | .00  | .00  | .00  |

## SANTA ANA RIVER BASIN

11065000 LITTLE CREEK AT COLTON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .82  | 4.87 | 8.16 | 21.2 | 30.7 | 21.7 | 4.66 | 4.48 | 2.52 | 1.23 | .80  | .82  |
| 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1958 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 4001.07                |        | 1610.29             |        |                         |             |
| ANNUAL MEAN              | 11.0                   |        | 4.40                |        | 8.40                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 65.4                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .008                    |             |
| HIGHEST DAILY MEAN       | 742                    | Mar 11 | 675                 | Feb 20 | 5040                    | Jan 25 1969 |
| LOWEST DAILY MEAN        | .00                    | Jan 1  | .00                 | Oct 1  | .00                     | Oct 1 1957  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Jan 28 | .00                 | Oct 1  | .00                     | Oct 1 1957  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 2110                | Feb 20 | 17500                   | Mar 4 1978  |
| INSTANTANEOUS PEAK STAGE |                        |        | 4.16                | Feb 20 | 14.80                   | Mar 4 1978  |
| ANNUAL RUNOFF (AC-FT)    | 7940                   |        | 3190                |        | 6090                    |             |
| 10 PERCENT EXCEEDS       | .13                    |        | .00                 |        | 4.0                     |             |
| 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 left bank at MWD pipeline crossing, 0.8 mi downstream from Union Pacific Railroad Bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.

DRAINAGE AREA.--852 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1970 to current year.

REVISED RECORDS.--WDR CA-83-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 685 ft above sea level, from topographic map. Gage moved to left bank at present datum on June 17, 1993 (formerly on right bank). Prior to Oct. 1, 1984, water-stage recorder at site 300 ft upstream on left bank at different datum.

REMARKS.--Records fair below 900 ft<sup>3</sup>/s and poor above. 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. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,700 ft<sup>3</sup>/s, Mar. 6, 1995, gage height, 14.47 ft, 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, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 22 | 0045 | 2,440                             | 8.27                | Feb. 27 | 2330 | 1,520                             | 7.68                |
| Jan. 31 | 2345 | 4,820                             | 9.94                | Mar. 5  | 0630 | 2,290                             | 8.14                |
| Feb. 20 | 2200 | 4,950                             | 10.02               |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| 1     | 57   | 62   | 59   | 57   | 1380  | 118   | 117  | 94   | 100  | 84   | 79   | 70   |
| 2     | 56   | 62   | 56   | 53   | 197   | 95    | 115  | 101  | 90   | 86   | 80   | 73   |
| 3     | 56   | 64   | 58   | 59   | 112   | 87    | 118  | 99   | 95   | 88   | 80   | 73   |
| 4     | 55   | 61   | 73   | 59   | 98    | 242   | 105  | 104  | 92   | 87   | 83   | 69   |
| 5     | 53   | 62   | 64   | 62   | 91    | 971   | 97   | 100  | 79   | 82   | 80   | 72   |
| 6     | 54   | 61   | 67   | 62   | 80    | 521   | 101  | 100  | 77   | 81   | 77   | 71   |
| 7     | 54   | 59   | 66   | 64   | 67    | 253   | 109  | 100  | 102  | 82   | 83   | 67   |
| 8     | 54   | 63   | 65   | 67   | 57    | 144   | 109  | 106  | 102  | 81   | 74   | 68   |
| 9     | 56   | 55   | 63   | 69   | 56    | 97    | 111  | 102  | 90   | 81   | 69   | 69   |
| 10    | 52   | 58   | 61   | 71   | 66    | 110   | 102  | 99   | 94   | 80   | 67   | 72   |
| 11    | 50   | 54   | 58   | 62   | 59    | 145   | 97   | 92   | 100  | 84   | 67   | 69   |
| 12    | 58   | 57   | 58   | 66   | 57    | 209   | 106  | 99   | 92   | 80   | 65   | 77   |
| 13    | 56   | 56   | 63   | 68   | 59    | 555   | 98   | 91   | 92   | 77   | 54   | 82   |
| 14    | 52   | 59   | 81   | 69   | 58    | 227   | 103  | 90   | 91   | 78   | 64   | 84   |
| 15    | 56   | 59   | 59   | 75   | 56    | 154   | 101  | 87   | 90   | 75   | 68   | 81   |
| 16    | 60   | 53   | 60   | 79   | 59    | 110   | 100  | 86   | 92   | 79   | 60   | 83   |
| 17    | 62   | 58   | 58   | 96   | 57    | 107   | 102  | 90   | 93   | 81   | 64   | 82   |
| 18    | 61   | 56   | 58   | 87   | 55    | 104   | 107  | 92   | 99   | 80   | 64   | 81   |
| 19    | 57   | 56   | 58   | 85   | 57    | 100   | 102  | 89   | 89   | 82   | 64   | 78   |
| 20    | 55   | 57   | 55   | 82   | 2720  | 105   | 94   | 92   | 85   | 75   | 67   | 81   |
| 21    | 58   | 56   | 53   | 424  | 2970  | 105   | 96   | 92   | 88   | 78   | 70   | 82   |
| 22    | 56   | 62   | 58   | 547  | 973   | 117   | 86   | 95   | 89   | 82   | 70   | 80   |
| 23    | 54   | 58   | 64   | 101  | 292   | 116   | 89   | 91   | 87   | 74   | 69   | 85   |
| 24    | 59   | 60   | 63   | 105  | 176   | 107   | 86   | 90   | 89   | 76   | 73   | 91   |
| 25    | 56   | 63   | 62   | 109  | 401   | 106   | 89   | 88   | 95   | 76   | 67   | 83   |
| 26    | 58   | 61   | 61   | 109  | 157   | 105   | 87   | 92   | 87   | 76   | 70   | 87   |
| 27    | 62   | 62   | 62   | 102  | 236   | 107   | 92   | 91   | 93   | 74   | 71   | 83   |
| 28    | 62   | 67   | 63   | 111  | 357   | 116   | 85   | 83   | 95   | 81   | 69   | 86   |
| 29    | 62   | 65   | 57   | 117  | 125   | 122   | 88   | 106  | 91   | 69   | 72   | 88   |
| 30    | 60   | 58   | 62   | 117  | ---   | 121   | 93   | 105  | 82   | 87   | 71   | 91   |
| 31    | 61   | ---  | 64   | 775  | ---   | 117   | ---  | 98   | ---  | 87   | 69   | ---  |
| TOTAL | 1762 | 1784 | 1909 | 4009 | 11128 | 5693  | 2985 | 2944 | 2740 | 2483 | 2180 | 2358 |
| MEAN  | 56.8 | 59.5 | 61.6 | 129  | 384   | 184   | 99.5 | 95.0 | 91.3 | 80.1 | 70.3 | 78.6 |
| MAX   | 62   | 67   | 81   | 775  | 2970  | 971   | 118  | 106  | 102  | 88   | 83   | 91   |
| MIN   | 50   | 53   | 53   | 53   | 55    | 87    | 85   | 83   | 77   | 69   | 54   | 67   |
| AC-FT | 3490 | 3540 | 3790 | 7950 | 22070 | 11290 | 5920 | 5840 | 5430 | 4930 | 4320 | 4680 |

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 55.3 | 71.5 | 97.8 | 231  | 266  | 345  | 143  | 107  | 73.0 | 48.8 | 47.7 | 48.7 |
| MAX  | 194  | 259  | 292  | 1839 | 1411 | 1806 | 604  | 666  | 351  | 145  | 233  | 129  |
| (WY) | 1988 | 1984 | 1984 | 1993 | 1980 | 1995 | 1983 | 1983 | 1983 | 1983 | 1983 | 1976 |
| MIN  | 20.5 | 21.2 | 23.3 | 24.7 | 23.1 | 23.7 | 23.1 | 22.3 | 20.2 | 16.8 | 17.9 | 18.0 |
| (WY) | 1974 | 1975 | 1974 | 1972 | 1972 | 1972 | 1971 | 1972 | 1981 | 1981 | 1981 | 1974 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1970 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 121527                 |  |  |  | 41975               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 333                    |  |  |  | 115                 |  |  |  | 128                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 416                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 29.0                    |  |  |  |
| HIGHEST DAILY MEAN       | 9540                   |  |  |  | 2970                |  |  |  | 11500                   |  |  |  |
| LOWEST DAILY MEAN        | 37                     |  |  |  | 50                  |  |  |  | 15                      |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 40                     |  |  |  | 53                  |  |  |  | 16                      |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 4950                |  |  |  | 30700                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 10.02               |  |  |  | 20.23                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 241000                 |  |  |  | 83260               |  |  |  | 93040                   |  |  |  |
| 10 PERCENT EXCEEDS       | 769                    |  |  |  | 115                 |  |  |  | 190                     |  |  |  |
| 50 PERCENT EXCEEDS       | 69                     |  |  |  | 81                  |  |  |  | 54                      |  |  |  |
| 90 PERCENT EXCEEDS       | 48                     |  |  |  | 57                  |  |  |  | 22                      |  |  |  |



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 1995 TO SEPTEMBER 1996

| DATE  | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) |
|-------|------|--|---|--------------------------------------|--|
| OCT   |      |  |   |                                      |  |
| 04... | 0815 | 57   | 893   | 15.5                                 | 574  |
| 18... | 1000 | 59   | 958   | 18.0                                 | 610  |
| NOV   |      |  |   |                                      |  |
| 03... | 0815 | 62   | 984   | 15.5                                 | 662  |
| 21... | 1000 | 57   | 1020  | 15.0                                 | 624  |
| DEC   |      |  |   |                                      |  |
| 05... | 0920 | 62   | 938   | 15.0                                 | 598  |
| JAN   |      |  |   |                                      |  |
| 03... | 0800 | 59   | 998   | 10.0                                 | 624  |
| 19... | 0815 | 89   | 962   | 13.5                                 | 594  |
| 22... | 1300 | 135  | 736   | 15.0                                 | 446  |
| FEB   |      |  |   |                                      |  |
| 01... | 1315 | 733  | 367   | 15.0                                 | 216  |
| 16... | 0745 | 61   | 878   | 13.5                                 | 552  |
| MAR   |      |  |   |                                      |  |
| 04... | 1530 | 81   | 921   | 16.5                                 | 556  |
| 13... | 1545 | 294  | 494   | 16.5                                 | 312  |
| APR   |      |  |   |                                      |  |
| 03... | 0815 | 115  | 814   | 15.0                                 | 520  |
| 12... | 1215 | 106  | 856   | 23.5                                 | 532  |
| MAY   |      |  |   |                                      |  |
| 01... | 0830 | 93   | 846   | 17.5                                 | 544  |
| 22... | 1445 | 97   | 988   | 24.5                                 | 634  |
| JUN   |      |  |   |                                      |  |
| 04... | 0745 | 95   | 903   | 19.0                                 | 564  |
| 19... | 0745 | 89   | 1030  | 19.0                                 | 642  |
| JUL   |      |  |   |                                      |  |
| 02... | 0815 | 87   | 1030  | 20.5                                 | 636  |
| 15... | 0945 | 77   | 916   | 24.0                                 | 558  |
| AUG   |      |  |   |                                      |  |
| 01... | 0830 | 81   | 949   | 23.0                                 | 552  |
| 13... | 1015 | 45   | 1010  | 27.5                                 | --   |
| SEP   |      |  |   |                                      |  |
| 03... | 1115 | 75   | 906   | 22.5                                 | 552  |
| 12... | 0815 | 81   | 881   | 17.5                                 | 532  |

## 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 sea level, from topographic map. Prior to October 1988 at datum 10.00 ft lower.

REMARKS.--Records fair. No regulation upstream from station. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Minor diversion upstream from station for irrigation. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,310 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 3.53 ft, from rating curve developed on basis of critical-depth computations at concrete control; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve developed on basis of critical-depth computations at concrete control:

| Date   | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|--------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 1 | 0045 | 196                               | 1.74                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00   | 24    | .00  | .70  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00   | .06   | .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   | .08  | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | .00   | .00   | 3.0  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00   | .00   | .08  | .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  | 1.2  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .00   | 2.0   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | 4.9   | 8.0   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | 4.7   | 1.8   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .44  | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .00   | .06   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .00   | 4.4   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00   | .62   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00   | 1.3   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00   | .00   | .00  | .00  | .00  | .00  | .31  | .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  | 7.3   | ---   | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.44 | 16.90 | 42.24 | 3.16 | 1.90 | 0.00 | 0.00 | 0.31 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .014 | .55   | 1.46  | .10  | .063 | .000 | .000 | .010 | .000 | .000 |
| MAX   | .00  | .00  | .44  | 7.3   | 24    | 3.0  | 1.2  | .00  | .00  | .31  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00   | .00   | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .9   | 34    | 84    | 6.3  | 3.8  | .00  | .00  | .6   | .00  | .00  |

11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .001 | .015 | 4.47 | 3.14 | 4.30 | .27  | .026 | .001 | .001 | .081 | .056 |
| MAX  | .004 | .007 | .12  | 31.1 | 22.3 | 26.4 | 2.01 | .23  | .011 | .010 | .55  | .50  |
| (WY) | 1995 | 1994 | 1988 | 1993 | 1993 | 1995 | 1995 | 1995 | 1995 | 1996 | 1994 | 1995 |
| 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 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1988 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 1263.34                | 64.95               |                         |
| ANNUAL MEAN              | 3.46                   | .18                 | 1.02                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 4.35                    |
| LOWEST ANNUAL MEAN       |                        |                     | .000                    |
| HIGHEST DAILY MEAN       | 208 Mar 11             | 24 Feb 1            | 298 Jan 16 1993         |
| LOWEST DAILY MEAN        | .00 Jan 1              | .00 Oct 1           | .00 Oct 1 1987          |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jan 28             | .00 Oct 1           | .00 Oct 1 1987          |
| INSTANTANEOUS PEAK FLOW  |                        | 196 Feb 1           | 1310 Jan 16 1993        |
| INSTANTANEOUS PEAK STAGE |                        | 1.74 Feb 1          | 3.53 Jan 16 1993        |
| ANNUAL RUNOFF (AC-FT)    | 2510                   | 129                 | 743                     |
| 10 PERCENT EXCEEDS       | 1.2                    | .00                 | .00                     |
| 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.

REVISED RECORDS.--WDR CA-92-1: 1991(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 1,410 ft above sea level, from topographic map. October 1969 to September 1975, at same site at different datum.

REMARKS.--Records good. Some regulation by percolation basins upstream from station. Some pumping for irrigation upstream from station. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 7.81 ft, from rating curve extended above 2,120 ft<sup>3</sup>/s on basis of slope area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 21 | 1145 | 685                               | 3.95                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN    | FEB    | MAR    | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|--------|--------|--------|------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00    | 85     | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00    | .69    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00    | .02    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .00    | .16    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00    | .08    | 41     | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .00  | .00    | .00    | .60    | .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    | .99    | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | .00    | .00    | 110    | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00    | .00    | 34     | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .00    | .00    | .45    | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00  | .00    | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00  | 2.1    | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00  | .00    | .00    | .00    | .87  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .00    | .00    | .00    | .06  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .00    | 148    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | 36     | 366    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | 39     | 37     | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .63  | 9.6    | .30    | .00    | .00  | .00  | .00  | .00  | 2.1  | .00  |
| 24    | .00  | .00  | .54  | .28    | .00    | .00    | .00  | .00  | .00  | .00  | .76  | .00  |
| 25    | .00  | .00  | .00  | .00    | 39     | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00    | 29     | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00    | 7.3    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .22    | 39     | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00  | .00    | .22    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00  | .00    | ---    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00  | 81     | ---    | .00    | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 1.17 | 188.20 | 751.77 | 187.04 | 0.93 | 0.00 | 0.00 | 0.00 | 2.86 | 0.00 |
| MEAN  | .000 | .000 | .038 | 5.43   | 25.9   | 6.03   | .031 | .000 | .000 | .000 | .092 | .000 |
| MAX   | .00  | .00  | .63  | 81     | 366    | 110    | .87  | .00  | .00  | .00  | 2.1  | .00  |
| MIN   | .00  | .00  | .00  | .00    | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | 2.3  | 334    | 1490   | 371    | 1.8  | .00  | .00  | .00  | 5.7  | .00  |

## 11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .11  | .69  | 4.10 | 24.2 | 21.9 | 14.7 | .68  | .18  | .17  | .010 | .008 | .007 |
| MAX  | .99  | 3.78 | 35.1 | 167  | 87.5 | 70.7 | 4.87 | 1.06 | 1.73 | .089 | .092 | .094 |
| (WY) | 1993 | 1973 | 1993 | 1993 | 1993 | 1991 | 1994 | 1990 | 1995 | 1992 | 1996 | 1995 |
| 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1970 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 5137.73                |        | 1111.97             |        |                         |             |
| ANNUAL MEAN              | 14.1                   |        | 3.04                |        | 5.49                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 24.4                    | 1993        |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .30                     | 1971        |
| HIGHEST DAILY MEAN       | 814                    | Jan 10 | 366                 | Feb 21 | 1270                    | Jan 16 1993 |
| LOWEST DAILY MEAN        | .00                    | Jan 1  | .00                 | Oct 1  | .00                     | Oct 1 1969  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Jan 14 | .00                 | Oct 1  | .00                     | Oct 1 1969  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 685                 | Feb 21 | 4400                    | Feb 12 1992 |
| INSTANTANEOUS PEAK STAGE |                        |        | 3.95                | Feb 21 | 7.81                    | Feb 12 1992 |
| ANNUAL RUNOFF (AC-FT)    | 10190                  |        | 2210                |        | 3980                    |             |
| 10 PERCENT EXCEEDS       | .84                    |        | .00                 |        | .12                     |             |
| 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall, 2.81 in, Dec. 7, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 0.78 in, Mar. 13; no rainfall for many days.

PRECIPITATION, TOTAL (INCHES), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY SUM VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | .00  | .07  | .00  | .00  | .02  | .00  | .07  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .02  | .00  | .00  | .00  | .00  | .02  | .00  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00  | .05  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .01  | .00  | .01  | .09  | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .01  | .00  | .00  | .00  | .12  | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .00  | .06  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .01  | .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  | .19  | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .07  | .00  | .00  | .78  | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .01  | .00  | .00  | .01  | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .02  | .09  | .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  | .01  | .00  | .00  | .07  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .01  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .01  | .68  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .59  | .34  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .02  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .19  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .00  | .00  | .04  | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .07  | .49  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .01  | .07  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00  | .26  | .00  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .10  | .03  | .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  | .62  | ---  | .00  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.10 | 0.31 | 1.59 | 1.95 | 1.23 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

11070500 SAN JACINTO RIVER NEAR ELSINORE, CA

LOCATION.--Lat 33°39'51", long 117°17'35", in SE 1/4 NE 1/4 sec.9, T.6 S., R.4 W., Riverside County, Hydrologic Unit 18070203, on right bank 2.0 mi east of Elsinore, 2.1 mi downstream from Railroad Canyon Dam, and 36 mi downstream from Lake Hemet.

DRAINAGE AREA.--723 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 sea level, from topographic map. Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mi downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site, at different datum.

REMARKS.--Records fair. Flow partly regulated by Lake Hemet, capacity 13,500 acre-ft, and since 1928 by Railroad Canyon Reservoir, capacity, 12,000 acre-ft, 2.1 mi upstream from station. Diversions for irrigation and domestic use upstream from Railroad Canyon Reservoir. Elsinore Valley Municipal Water District made no diversions during the current year from Railroad Canyon Reservoir for irrigation. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft<sup>3</sup>/s, Feb. 17, 1927, gage height, 11.8 ft, from rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB  | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|------|------|
| 1     | .39   | .91   | .93   | .93   | 8.1  | 1.5   | .96   | .83   | .44   | .85  | .24  | .00  |
| 2     | .37   | .86   | .92   | .96   | 2.2  | 1.4   | .96   | .81   | .38   | .92  | .18  | .00  |
| 3     | .35   | .83   | .89   | .98   | 1.7  | 1.4   | .96   | .74   | .30   | .91  | .06  | .00  |
| 4     | .36   | .85   | 1.0   | .98   | 1.6  | 1.4   | .98   | .69   | .28   | .31  | .04  | .00  |
| 5     | .36   | .80   | 1.0   | .98   | 1.5  | 1.8   | .98   | .62   | .29   | .16  | .15  | .00  |
| 6     | .37   | .83   | .99   | .98   | 1.7  | 1.5   | .98   | .61   | .28   | .10  | .24  | .06  |
| 7     | .44   | .83   | .98   | .98   | 1.6  | 1.3   | .97   | .60   | .32   | .03  | .31  | .25  |
| 8     | .48   | .81   | 1.0   | .98   | 1.4  | 1.3   | .93   | .64   | .78   | .03  | .25  | .35  |
| 9     | .51   | .82   | 1.0   | .98   | 1.4  | 1.2   | .90   | .62   | 1.5   | .07  | .19  | .49  |
| 10    | .49   | .83   | .98   | 1.0   | 1.4  | 1.2   | .91   | .56   | 2.0   | .09  | .07  | .65  |
| 11    | .55   | .83   | .98   | 1.0   | 1.4  | 1.2   | .93   | .51   | .75   | .15  | .02  | .52  |
| 12    | .60   | .82   | .98   | 1.0   | 1.4  | 1.2   | .93   | .48   | .48   | .09  | .00  | .19  |
| 13    | .58   | .80   | 1.1   | 1.0   | 1.3  | 2.5   | .93   | .46   | .94   | .04  | .00  | .09  |
| 14    | .55   | .82   | 1.1   | 1.0   | 1.3  | 2.6   | .90   | .53   | 1.1   | .08  | .00  | .13  |
| 15    | .59   | .87   | 1.0   | 1.0   | 1.4  | 1.5   | .85   | .56   | .51   | .16  | .00  | .14  |
| 16    | .61   | .83   | 1.0   | 1.0   | 1.4  | 1.3   | .89   | .52   | .65   | .21  | .00  | .14  |
| 17    | .64   | .85   | .99   | 1.0   | 1.4  | 1.3   | .91   | .51   | .39   | .20  | .00  | .13  |
| 18    | .65   | .83   | .98   | 1.0   | 1.4  | 1.2   | .98   | .51   | .33   | .19  | .00  | .10  |
| 19    | .67   | .83   | .98   | .98   | 1.4  | 1.2   | .90   | .47   | .30   | .16  | .53  | .08  |
| 20    | .64   | .83   | .97   | .98   | 3.4  | 1.1   | .83   | .48   | .22   | .09  | .30  | .09  |
| 21    | .70   | .83   | .94   | 1.1   | 14   | 1.1   | .85   | .48   | .23   | .01  | .17  | .08  |
| 22    | .73   | .87   | .98   | 1.5   | 3.5  | 1.1   | .83   | .49   | .22   | .00  | .18  | .07  |
| 23    | .78   | .87   | 1.1   | 1.1   | 2.0  | 1.1   | .84   | .49   | .22   | .00  | .17  | .11  |
| 24    | .76   | .83   | 1.1   | 1.1   | 1.7  | 1.1   | .80   | .50   | .21   | .00  | .12  | .11  |
| 25    | .72   | .83   | 1.0   | 1.1   | 3.5  | 1.1   | .76   | .54   | .24   | .06  | .06  | .08  |
| 26    | .73   | .86   | 1.0   | 1.1   | 3.7  | 1.1   | .75   | .50   | .28   | .02  | .00  | .08  |
| 27    | .76   | .90   | 1.0   | 1.1   | 2.0  | 1.1   | .72   | .47   | .26   | .09  | .00  | .08  |
| 28    | .77   | .88   | .98   | 1.1   | 4.2  | 1.1   | .71   | .47   | .21   | .10  | .00  | .07  |
| 29    | .82   | .92   | .98   | 1.0   | 1.8  | 1.1   | .68   | .46   | .26   | .02  | .00  | .02  |
| 30    | .90   | .93   | .98   | 1.0   | ---  | 1.0   | .66   | .47   | .74   | .00  | .00  | .00  |
| 31    | .93   | ---   | .97   | 1.9   | ---  | .98   | ---   | .47   | ---   | .14  | .00  | ---  |
| TOTAL | 18.80 | 25.40 | 30.80 | 32.81 | 74.8 | 40.98 | 26.18 | 17.09 | 15.11 | 5.28 | 3.28 | 4.11 |
| MEAN  | .61   | .85   | .99   | 1.06  | 2.58 | 1.32  | .87   | .55   | .50   | .17  | .11  | .14  |
| MAX   | .93   | .93   | 1.1   | 1.9   | 14   | 2.6   | .98   | .83   | 2.0   | .92  | .53  | .65  |
| MIN   | .35   | .80   | .89   | .93   | 1.3  | .98   | .66   | .46   | .21   | .00  | .00  | .00  |
| AC-FT | 37    | 50    | 61    | 65    | 148  | 81    | 52    | 34    | 30    | 10   | 6.5  | 8.2  |

## 11070500 SAN JACINTO RIVER NEAR ELSINORE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .60  | .77  | 5.19 | 36.4 | 89.3 | 74.9 | 24.2 | 5.70 | .81  | .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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1916 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 18144.50               |  |  |  | 294.64              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 49.7                   |  |  |  | .81                 |  |  |  | 17.6                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 232                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 1680                   |  |  |  | 14                  |  |  |  | 14000                   |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .05                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 32                  |  |  |  | 16000                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 3.16                |  |  |  | 11.80                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 35990                  |  |  |  | 584                 |  |  |  | 12730                   |  |  |  |
| 10 PERCENT EXCEEDS       | 127                    |  |  |  | 1.4                 |  |  |  | 4.0                     |  |  |  |
| 50 PERCENT EXCEEDS       | 1.0                    |  |  |  | .81                 |  |  |  | .08                     |  |  |  |
| 90 PERCENT EXCEEDS       | .21                    |  |  |  | .07                 |  |  |  | .00                     |  |  |  |



## 11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA

LOCATION.--Lat 33°53'21", long 117°33'43", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on right bank 500 ft upstream from Main Street Bridge in Corona and 1.5 mi upstream from topographic boundary of Prado Flood Control basin.

DRAINAGE AREA.--224 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

PERIOD OF RECORD.--October 1980 to July 1983, February 1984 to current year. December 1967 to September 1974, water-stage recorder at site 1.2 mi downstream at different datum (published as Station 11072200, Temescal Creek at Corona, CA).

GAGE.--Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 600 ft above sea level, from topographic map. October 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by several small storage reservoirs. Many diversions upstream from station for irrigation. Water discharged to channel from Arlington Desalter at times since September 1990; records for water years 1981 to 1990 and 1991 to current year are not equivalent. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,720 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.67 ft, site and datum then in use, on basis of slope-conveyance study; minimum daily, 0.27 ft<sup>3</sup>/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 8,850 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site (Station 11072200) 1.2 mi downstream on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB  | MAR  | APR  | MAY  | JUN  | JUL   | AUG   | SEP  |
|-------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|------|
| 1     | 8.7   | 5.4   | 5.1   | 15    | 54   | 22   | e46  | 14   | 12   | 8.5   | 12    | 11   |
| 2     | 9.8   | 5.5   | 5.8   | 16    | 24   | 24   | e41  | 14   | 12   | 25    | 14    | 12   |
| 3     | 8.8   | 5.8   | 6.5   | 16    | 27   | 25   | e36  | 14   | 13   | 25    | 14    | 13   |
| 4     | 7.4   | 6.6   | 7.4   | 17    | 20   | 42   | e31  | 14   | 13   | 27    | 14    | 14   |
| 5     | 5.6   | 5.7   | 11    | 11    | 19   | 52   | e29  | 14   | 13   | 24    | 14    | 14   |
| 6     | 6.2   | 5.3   | 8.5   | 4.3   | 19   | 27   | e28  | 14   | 13   | 21    | 15    | 14   |
| 7     | 6.4   | 5.4   | 7.1   | 5.1   | 18   | 27   | e25  | 14   | 13   | 20    | 15    | 14   |
| 8     | 5.6   | 4.8   | 7.5   | 9.2   | 21   | 26   | e24  | 13   | 14   | 17    | 16    | 14   |
| 9     | 5.2   | 5.6   | 8.2   | 13    | 23   | 26   | e22  | 13   | 13   | 13    | 15    | 13   |
| 10    | 5.0   | 5.1   | 8.2   | 11    | 24   | 26   | e20  | 13   | 13   | 14    | 12    | 13   |
| 11    | 5.7   | 5.3   | 7.9   | 18    | 26   | 24   | e19  | 13   | 13   | 14    | 4.7   | 13   |
| 12    | 5.6   | 4.5   | 6.9   | 16    | 26   | 32   | e19  | 13   | 14   | 13    | 14    | 12   |
| 13    | 5.8   | 5.0   | 42    | 17    | 14   | 188  | e17  | 13   | 13   | 13    | 7.6   | 13   |
| 14    | 5.9   | 5.3   | 21    | 19    | 16   | 43   | e16  | 13   | 13   | 13    | 2.5   | 13   |
| 15    | 5.8   | 5.8   | 14    | 18    | 25   | 32   | e15  | 15   | 14   | 13    | 2.9   | 13   |
| 16    | 6.3   | 6.1   | 14    | 43    | 40   | 29   | e15  | 17   | 14   | 11    | 3.3   | 13   |
| 17    | 6.0   | 6.8   | 14    | 22    | 36   | 27   | e22  | 15   | 14   | 13    | 3.6   | 13   |
| 18    | 5.8   | 5.6   | 14    | 21    | 32   | 26   | e50  | 16   | 14   | 12    | 4.0   | 13   |
| 19    | 6.6   | 5.8   | 14    | 26    | 30   | 24   | e31  | 16   | 15   | 13    | 8.7   | 13   |
| 20    | 6.3   | 6.1   | 13    | 23    | 409  | 24   | e29  | 12   | 17   | 13    | 15    | 14   |
| 21    | 7.2   | 6.6   | 14    | 126   | 223  | 24   | e26  | 13   | 18   | 14    | 15    | 16   |
| 22    | 7.6   | 5.8   | 15    | 24    | 57   | 24   | e24  | 13   | 18   | 13    | 15    | 14   |
| 23    | 4.5   | 4.5   | 38    | 20    | 33   | 25   | e23  | 13   | 21   | 14    | 23    | 14   |
| 24    | 3.9   | 5.2   | 15    | 19    | 25   | 25   | e21  | 13   | 23   | 14    | 5.7   | 15   |
| 25    | 6.7   | 5.6   | 14    | 23    | 104  | 25   | e20  | 13   | 25   | 13    | 11    | 15   |
| 26    | 7.4   | 5.6   | 14    | 19    | 33   | 25   | e20  | 14   | 26   | 14    | 11    | 16   |
| 27    | 6.3   | 6.1   | 14    | 20    | 59   | 32   | e19  | 13   | 26   | 13    | 11    | 16   |
| 28    | 5.3   | 5.3   | 15    | 26    | 29   | 47   | e17  | 12   | 26   | 13    | 11    | 17   |
| 29    | 5.0   | 4.9   | 16    | 22    | 22   | 47   | 17   | 12   | 26   | 13    | 12    | 18   |
| 30    | 5.4   | 5.3   | 15    | 24    | ---  | 48   | 16   | 13   | 18   | 13    | 12    | 19   |
| 31    | 4.9   | ---   | 15    | 196   | ---  | 47   | ---  | 13   | ---  | 12    | 11    | ---  |
| TOTAL | 192.7 | 166.4 | 421.1 | 859.6 | 1488 | 1115 | 738  | 422  | 497  | 468.5 | 345.0 | 422  |
| MEAN  | 6.22  | 5.55  | 13.6  | 27.7  | 51.3 | 36.0 | 24.6 | 13.6 | 16.6 | 15.1  | 11.1  | 14.1 |
| MAX   | 9.8   | 6.8   | 42    | 196   | 409  | 188  | 50   | 17   | 26   | 27    | 23    | 19   |
| MIN   | 3.9   | 4.5   | 5.1   | 4.3   | 14   | 22   | 15   | 12   | 12   | 8.5   | 2.5   | 11   |
| AC-FT | 382   | 330   | 835   | 1710  | 2950 | 2210 | 1460 | 837  | 986  | 929   | 684   | 837  |

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  |
| LOWEST ANNUAL MEAN       | 6.10  |
| HIGHEST DAILY MEAN       | 1720  |
| LOWEST DAILY MEAN        | .27   |
| ANNUAL SEVEN-DAY MINIMUM | .56   |
| INSTANTANEOUS PEAK FLOW  | 4720  |
| INSTANTANEOUS PEAK STAGE | 11.67 |
| 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 12.1 | 13.7 | 16.5 | 64.1 | 104  | 106  | 49.3 | 28.8 | 16.6 | 13.8 | 12.5 | 12.3 |
| MAX  | 16.0 | 24.3 | 26.4 | 161  | 351  | 349  | 189  | 100  | 34.3 | 24.9 | 20.1 | 15.1 |
| (WY) | 1993 | 1994 | 1993 | 1995 | 1993 | 1995 | 1995 | 1995 | 1995 | 1993 | 1993 | 1994 |
| MIN  | 6.22 | 5.55 | 10.4 | 13.0 | 37.4 | 29.3 | 2.89 | 3.24 | 7.33 | 3.56 | 6.98 | 7.08 |
| (WY) | 1996 | 1996 | 1995 | 1994 | 1992 | 1992 | 1991 | 1992 | 1992 | 1994 | 1994 | 1995 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1991 - 1996

|                          |         |        |       |
|--------------------------|---------|--------|-------|
| ANNUAL TOTAL             | 29546.3 | 7135.3 |       |
| ANNUAL MEAN              | 80.9    | 19.5   | 37.2  |
| HIGHEST ANNUAL MEAN      |         |        | 81.8  |
| LOWEST ANNUAL MEAN       |         |        | 14.2  |
| HIGHEST DAILY MEAN       | 889     | Mar 11 | 1660  |
| LOWEST DAILY MEAN        | 3.9     | Oct 24 | .34   |
| ANNUAL SEVEN-DAY MINIMUM | 5.1     | Nov 8  | .89   |
| INSTANTANEOUS PEAK FLOW  |         |        | 1060  |
| INSTANTANEOUS PEAK STAGE |         |        | 4.73  |
| ANNUAL RUNOFF (AC-FT)    | 58610   | 14150  | 26930 |
| 10 PERCENT EXCEEDS       | 277     | 29     | 69    |
| 50 PERCENT EXCEEDS       | 22      | 14     | 14    |
| 90 PERCENT EXCEEDS       | 5.6     | 5.6    | 3.9   |

## 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). WDR CA-95-1: 1992, 1993.

GAGE.--Water-stage recorder. Concrete dikes formed low-water control from October 1975 to Apr. 16, 1991. Elevation of gage is 685 ft above sea level, from topographic map.

REMARKS.--Records good above 10 ft<sup>3</sup>/s and fair below. 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 releases of 21,230 acre-ft 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC    | JAN    | FEB     | MAR   | APR    | MAY  | JUN    | JUL  | AUG   | SEP   |
|-------|-------|-------|--------|--------|---------|-------|--------|------|--------|------|-------|-------|
| 1     | 1.2   | 1.3   | .85    | 1.1    | 19      | 1.7   | 7.5    | 95   | 94     | 42   | .99   | 1.2   |
| 2     | 1.4   | 1.1   | .92    | 1.1    | 1.2     | 1.7   | 2.2    | 95   | 95     | 73   | .95   | 1.2   |
| 3     | 1.3   | 1.0   | .75    | 1.0    | 3.9     | 1.7   | 1.5    | 92   | 95     | 73   | .92   | 1.8   |
| 4     | 1.2   | .98   | .86    | 1.0    | 1.2     | 65    | 1.4    | 94   | 93     | 83   | .89   | 1.2   |
| 5     | 1.2   | .93   | .93    | .91    | 1.2     | 139   | 1.4    | 92   | 91     | 88   | .84   | 1.1   |
| 6     | 1.3   | 1.2   | .74    | .90    | 1.1     | 1.6   | 1.5    | 94   | 90     | 91   | .93   | 1.5   |
| 7     | 1.3   | .92   | .86    | .92    | .97     | 1.5   | 1.6    | 96   | 90     | 89   | 1.2   | 1.2   |
| 8     | 1.2   | .54   | .95    | 1.1    | .95     | 1.4   | 1.5    | 98   | 90     | 86   | 1.1   | 1.3   |
| 9     | 1.5   | .77   | .80    | 1.0    | .87     | 1.3   | 1.5    | 97   | 87     | 92   | 1.0   | 1.3   |
| 10    | 1.1   | .75   | .74    | 1.0    | 1.0     | 1.2   | 1.4    | 97   | 75     | 85   | 1.0   | 1.1   |
| 11    | 1.1   | .81   | .72    | 1.1    | .88     | 1.3   | 34     | 95   | 77     | 74   | 1.1   | 1.2   |
| 12    | 1.1   | .80   | 5.9    | 1.0    | 1.1     | 43    | 73     | 97   | 82     | 71   | 1.0   | .98   |
| 13    | 1.2   | .86   | 56     | 1.0    | 1.1     | 225   | 72     | 94   | 89     | 67   | 1.0   | .93   |
| 14    | 1.1   | .79   | 1.9    | 1.1    | .97     | 6.7   | 73     | 94   | 87     | 62   | 1.1   | 1.1   |
| 15    | 1.1   | .75   | .95    | 1.1    | .99     | 1.8   | 75     | 93   | 89     | 70   | 1.0   | 1.0   |
| 16    | 1.1   | .78   | .83    | 46     | .91     | 1.5   | 81     | 93   | 89     | 82   | 1.4   | 1.1   |
| 17    | .94   | .80   | .79    | 2.9    | .84     | 1.4   | 63     | 94   | 90     | 87   | 1.5   | 1.1   |
| 18    | .97   | .72   | .93    | .94    | .88     | 1.6   | 91     | 97   | 92     | 88   | 1.4   | .88   |
| 19    | 1.1   | .74   | .89    | 5.3    | 19      | 1.6   | 78     | 94   | 89     | 87   | 1.6   | .99   |
| 20    | .98   | 1.0   | .87    | .95    | 1000    | 1.5   | 100    | 92   | 89     | 92   | 1.4   | 1.1   |
| 21    | 1.1   | .90   | 1.0    | 113    | 196     | 1.5   | 105    | 94   | 89     | 92   | 1.1   | 1.0   |
| 22    | 1.4   | .79   | 1.0    | 1.9    | 6.2     | 1.4   | 107    | 94   | 92     | 92   | 1.2   | .96   |
| 23    | 1.2   | .77   | 23     | 1.2    | 2.1     | 2.9   | 116    | 94   | 92     | 89   | 1.2   | .98   |
| 24    | .98   | .79   | 1.1    | 1.0    | 2.1     | 1.2   | 111    | 96   | 90     | 92   | 1.3   | 1.2   |
| 25    | .95   | .83   | 1.0    | .93    | 34      | 1.6   | 93     | 93   | 92     | 93   | 1.2   | 1.1   |
| 26    | .92   | .82   | 1.1    | .90    | 1.8     | 1.4   | 94     | 91   | 85     | 91   | 1.1   | 1.1   |
| 27    | .88   | .83   | 1.0    | .73    | 48      | 1.3   | 95     | 89   | 82     | 88   | 1.2   | 1.2   |
| 28    | .89   | 1.1   | .92    | 2.6    | 2.4     | 1.7   | 95     | 93   | 45     | 91   | 1.3   | 1.1   |
| 29    | .93   | .67   | .93    | 1.0    | 1.9     | 1.4   | 94     | 89   | 1.5    | 92   | 1.2   | 1.1   |
| 30    | 1.1   | .78   | .88    | .91    | ---     | 1.3   | 95     | 93   | 1.3    | 93   | 1.2   | 1.0   |
| 31    | 1.1   | ---   | 1.1    | 282    | ---     | 1.3   | ---    | 92   | ---    | 31   | 1.2   | ---   |
| TOTAL | 34.84 | 25.82 | 111.21 | 477.59 | 1352.56 | 518.5 | 1766.5 | 2911 | 2442.8 | 2526 | 35.52 | 34.02 |
| MEAN  | 1.12  | .86   | 3.59   | 15.4   | 46.6    | 16.7  | 58.9   | 93.9 | 81.4   | 81.5 | 1.15  | 1.13  |
| MAX   | 1.5   | 1.3   | 56     | 282    | 1000    | 225   | 116    | 98   | 95     | 93   | 1.6   | 1.8   |
| MIN   | .88   | .54   | .72    | .73    | .84     | 1.2   | 1.4    | 89   | 1.3    | 31   | .84   | .88   |
| AC-FT | 69    | 51    | 221    | 947    | 2680    | 1030  | 3500   | 5770 | 4850   | 5010 | 70    | 67    |

## 11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 13.2 | 16.3 | 28.3 | 34.9 | 37.0 | 32.9 | 9.57 | 10.1 | 18.2 | 18.9 | 11.7 | 9.27 |
| MAX  | 126  | 113  | 189  | 186  | 193  | 257  | 88.6 | 93.9 | 184  | 176  | 191  | 96.9 |
| (WY) | 1979 | 1976 | 1976 | 1976 | 1980 | 1978 | 1974 | 1996 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1970 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 5061.14                |  |  |  | 12236.36            |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 13.9                   |  |  |  | 33.4                |  |  |  | 20.0                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 92.4                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 3.24                    |  |  |  |
| HIGHEST DAILY MEAN       | 814                    |  |  |  | 1000                |  |  |  | 2060                    |  |  |  |
| LOWEST DAILY MEAN        | .43                    |  |  |  | .54                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .76                    |  |  |  | .76                 |  |  |  | .02                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 4260                |  |  |  | 12700                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 7.43                |  |  |  | 10.32                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 10040                  |  |  |  | 24270               |  |  |  | 14470                   |  |  |  |
| 10 PERCENT EXCEEDS       | 4.5                    |  |  |  | 94                  |  |  |  | 73                      |  |  |  |
| 50 PERCENT EXCEEDS       | 1.3                    |  |  |  | 1.3                 |  |  |  | 1.0                     |  |  |  |
| 90 PERCENT EXCEEDS       | .87                    |  |  |  | .88                 |  |  |  | .31                     |  |  |  |

## 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 sea level, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 23   | 24   | 22   | e28  | 147  | 29   | 45   | 39   | 46   | 32   | 45   | 43   |
| 2     | 25   | 26   | 22   | e31  | 42   | 37   | 37   | 40   | 41   | 35   | 48   | 43   |
| 3     | 24   | 23   | 24   | e29  | 52   | 41   | 33   | 39   | 39   | 31   | 45   | 55   |
| 4     | 22   | 23   | 26   | e30  | 47   | 122  | 37   | 39   | 41   | 32   | 47   | 41   |
| 5     | 24   | 24   | 26   | 28   | 42   | 334  | 40   | 40   | 39   | 30   | 46   | 38   |
| 6     | 27   | 27   | 27   | 30   | 40   | 46   | 33   | 43   | 35   | 31   | 44   | 40   |
| 7     | 24   | 25   | e30  | 32   | 38   | 43   | 37   | 41   | 36   | 38   | 43   | 37   |
| 8     | 23   | 26   | e30  | 36   | 39   | 37   | 36   | 34   | 34   | 39   | 43   | 35   |
| 9     | 26   | 29   | e30  | 34   | 38   | 36   | 38   | 30   | 35   | 37   | 42   | 33   |
| 10    | 25   | 25   | e29  | 35   | 42   | 39   | 37   | 41   | 35   | 36   | 40   | 35   |
| 11    | 22   | 27   | e30  | 35   | 46   | 55   | 38   | 46   | 34   | 38   | 41   | 33   |
| 12    | 23   | 26   | e42  | 36   | 48   | 114  | 36   | 38   | 33   | 39   | 45   | 36   |
| 13    | 28   | 28   | e115 | 36   | 48   | 288  | 40   | 34   | 34   | 37   | 44   | 36   |
| 14    | 26   | 24   | e35  | 40   | 47   | 72   | 41   | 35   | 32   | 41   | 44   | 34   |
| 15    | 28   | 24   | e29  | 40   | 47   | 49   | 43   | 32   | 37   | 37   | 44   | 33   |
| 16    | 33   | 23   | e32  | 76   | 47   | 46   | 42   | 32   | 34   | 43   | 46   | 39   |
| 17    | 28   | 23   | e30  | 46   | 49   | 48   | 46   | 35   | 31   | 36   | 43   | 36   |
| 18    | 28   | 24   | e31  | 48   | 52   | 47   | 122  | 39   | 35   | 36   | 43   | 36   |
| 19    | 25   | 25   | e31  | 67   | 163  | 46   | 51   | 41   | 30   | 27   | 41   | 36   |
| 20    | 25   | 26   | e30  | 50   | 2490 | 42   | 42   | 44   | 32   | 49   | 45   | 32   |
| 21    | 22   | 24   | e31  | 228  | 594  | 41   | 36   | 40   | 34   | 56   | 45   | 36   |
| 22    | 23   | 24   | e29  | 101  | 141  | 40   | 42   | 40   | 30   | 45   | 39   | 37   |
| 23    | 28   | 26   | e50  | 70   | 63   | 44   | 41   | 43   | 32   | 50   | 44   | 35   |
| 24    | 25   | 22   | e34  | 54   | 35   | 42   | 38   | 45   | 33   | 49   | 45   | 33   |
| 25    | 25   | 23   | e29  | 53   | 60   | 42   | 37   | 43   | 30   | 47   | 44   | 35   |
| 26    | 27   | 23   | e31  | 53   | 32   | 40   | 37   | 47   | 29   | 42   | 44   | 32   |
| 27    | 25   | 29   | e33  | 54   | 73   | 38   | 38   | 43   | 29   | 39   | 42   | 31   |
| 28    | 24   | 25   | e32  | 60   | 30   | 38   | 41   | 39   | 29   | 40   | 41   | 30   |
| 29    | 25   | 22   | e30  | 59   | 26   | 37   | 39   | 39   | 31   | 42   | 41   | 36   |
| 30    | 29   | 21   | e31  | 70   | ---  | 38   | 44   | 43   | 31   | 41   | 41   | 33   |
| 31    | 28   | ---  | e30  | 615  | ---  | 37   | ---  | 48   | ---  | 42   | 44   | ---  |
| TOTAL | 790  | 741  | 1031 | 2204 | 4618 | 2008 | 1267 | 1232 | 1021 | 1217 | 1349 | 1089 |
| MEAN  | 25.5 | 24.7 | 33.3 | 71.1 | 159  | 64.8 | 42.2 | 39.7 | 34.0 | 39.3 | 43.5 | 36.3 |
| MAX   | 33   | 29   | 115  | 615  | 2490 | 334  | 122  | 48   | 46   | 56   | 48   | 55   |
| MIN   | 22   | 21   | 22   | 28   | 26   | 29   | 33   | 30   | 29   | 27   | 39   | 30   |
| AC-FT | 1570 | 1470 | 2040 | 4370 | 9160 | 3980 | 2510 | 2440 | 2030 | 2410 | 2680 | 2160 |

e Estimated.

## 11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1977, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .021 | 1.15 | 1.55 | 18.2 | 4.65 | 1.91 | 1.35 | .065 | .001 | .000 | .000 | .11  |
| MAX  | .19  | 6.07 | 7.91 | 149  | 30.7 | 7.94 | 13.1 | .54  | .007 | .000 | .000 | 1.03 |
| (WY) | 1972 | 1971 | 1972 | 1969 | 1969 | 1969 | 1969 | 1977 | 1969 | 1968 | 1968 | 1976 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1969 | 1969 | 1970 | 1975 | 1972 | 1972 | 1968 | 1968 | 1968 | 1968 | 1968 | 1968 |

## SUMMARY STATISTICS

## WATER YEARS 1968 - 1977

|                          |                  |
|--------------------------|------------------|
| ANNUAL TOTAL             |                  |
| ANNUAL MEAN              | 2.73             |
| HIGHEST ANNUAL MEAN      | 16.8 1969        |
| LOWEST ANNUAL MEAN       | .16 1976         |
| HIGHEST DAILY MEAN       | 2600 Jan 25 1969 |
| LOWEST DAILY MEAN        | .00 Feb 1 1968   |
| ANNUAL SEVEN-DAY MINIMUM | .00 Feb 1 1968   |
| 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 TOTAL             |                   |
| ANNUAL MEAN              | 17.5              |
| HIGHEST ANNUAL MEAN      | 53.4 1983         |
| LOWEST ANNUAL MEAN       | 1.51 1981         |
| HIGHEST DAILY MEAN       | 2530 Mar 1 1983   |
| LOWEST DAILY MEAN        | .00 Feb 6 1979    |
| ANNUAL SEVEN-DAY MINIMUM | .00 Feb 6 1979    |
| 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 35.2 | 34.0 | 42.0 | 80.0 | 83.1 | 68.9 | 33.9 | 27.9 | 30.7 | 28.3 | 29.5 | 34.9 |
| MAX  | 52.9 | 55.1 | 83.0 | 265  | 197  | 198  | 54.2 | 44.9 | 57.1 | 46.2 | 51.8 | 52.0 |
| (WY) | 1988 | 1986 | 1993 | 1993 | 1993 | 1995 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1986 - 1996

|                          |             |             |                  |
|--------------------------|-------------|-------------|------------------|
| ANNUAL TOTAL             | 21372       | 18567       |                  |
| ANNUAL MEAN              | 58.6        | 50.7        | 43.9             |
| HIGHEST ANNUAL MEAN      |             |             | 71.4 1993        |
| LOWEST ANNUAL MEAN       |             |             | 26.6 1987        |
| HIGHEST DAILY MEAN       | 1550 Mar 11 | 2490 Feb 20 | 2490 Feb 20 1996 |
| LOWEST DAILY MEAN        | 16 Jan 22   | 21 Nov 30   | 2.5 Jun 6 1987   |
| ANNUAL SEVEN-DAY MINIMUM | 18 May 4    | 23 Nov 28   | 12 Aug 25 1988   |
| INSTANTANEOUS PEAK FLOW  |             | 8280 Feb 20 | 10400 Jan 7 1993 |
| INSTANTANEOUS PEAK STAGE |             | 4.96 Feb 20 | 5.40 Jan 7 1993  |
| ANNUAL RUNOFF (AC-FT)    | 42390       | 36830       | 31770            |
| 10 PERCENT EXCEEDS       | 65          | 50          | 54               |
| 50 PERCENT EXCEEDS       | 26          | 37          | 29               |
| 90 PERCENT EXCEEDS       | 20          | 25          | 19               |

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA

LOCATION.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona.

DRAINAGE AREA.--1,490 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.--Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.--Records excellent. 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, the California Water Project released 21,230 acre-ft to the basin. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,440 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 6.88 ft; minimum daily, 2.4 ft<sup>3</sup>/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 100,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 153  | 176   | 181   | 208   | 505   | 431   | 444   | 282   | 308   | 177   | 170   | 161   |
| 2     | 153  | 179   | 181   | 210   | 577   | 423   | 447   | 294   | 308   | 244   | 166   | 161   |
| 3     | 152  | 179   | 187   | 212   | 552   | 423   | 443   | 296   | 303   | 248   | 169   | 175   |
| 4     | 144  | 177   | 199   | 205   | 545   | 367   | 439   | 300   | 234   | 251   | 174   | 171   |
| 5     | 136  | 179   | 200   | 190   | 591   | 341   | 428   | 303   | 312   | 242   | 174   | 173   |
| 6     | 142  | 181   | 200   | 201   | 610   | 419   | 420   | 304   | 308   | 249   | 176   | 169   |
| 7     | 145  | 180   | 203   | 196   | 653   | 443   | 412   | 306   | 310   | 262   | 175   | 169   |
| 8     | 138  | 178   | 205   | 202   | 533   | 450   | 407   | 313   | 311   | 267   | 179   | 168   |
| 9     | 144  | 180   | 202   | 208   | 324   | 449   | 392   | 318   | 307   | 264   | 173   | 220   |
| 10    | 146  | 177   | 202   | 211   | 223   | 446   | 369   | 316   | 299   | 254   | 170   | 183   |
| 11    | 146  | 175   | 203   | 208   | 224   | 447   | 333   | 314   | 291   | 256   | 163   | 175   |
| 12    | 146  | 174   | 199   | 187   | 231   | 419   | 330   | 312   | 288   | 257   | 167   | 165   |
| 13    | 153  | 178   | 321   | 186   | 231   | 381   | 346   | 308   | 290   | 256   | 158   | 167   |
| 14    | 155  | 177   | 374   | 198   | 223   | 467   | 348   | 303   | 289   | 258   | 158   | 163   |
| 15    | 157  | 180   | 281   | 205   | 215   | 509   | 358   | 305   | 285   | 260   | 168   | 164   |
| 16    | 167  | 182   | 246   | 216   | 216   | 506   | 356   | 307   | 286   | 261   | 166   | 174   |
| 17    | 167  | 185   | 236   | 344   | 223   | 504   | 348   | 306   | 287   | 264   | 157   | 171   |
| 18    | 172  | 184   | 227   | 280   | 226   | 487   | 383   | 310   | 288   | 263   | 165   | 163   |
| 19    | 171  | 187   | 219   | 270   | 227   | 475   | 380   | 313   | 280   | 261   | 170   | 163   |
| 20    | 172  | 186   | 205   | 250   | 1010  | 472   | 345   | 314   | 280   | 265   | 167   | 166   |
| 21    | 170  | 187   | 213   | 263   | 5800  | 469   | 344   | 320   | 280   | 259   | 161   | 171   |
| 22    | 170  | 187   | 219   | 462   | 5140  | 466   | 347   | 321   | 277   | 256   | 162   | 179   |
| 23    | 165  | 189   | 277   | 465   | 1120  | 463   | 345   | 317   | 277   | 259   | 167   | 183   |
| 24    | 163  | 190   | 286   | 442   | 632   | 460   | 345   | 315   | 279   | 276   | 172   | 184   |
| 25    | 161  | 189   | 223   | 377   | 565   | 457   | 344   | 315   | 281   | 250   | 170   | 185   |
| 26    | 165  | 187   | 209   | 258   | 525   | 450   | 342   | 313   | 275   | 248   | 165   | 185   |
| 27    | 165  | 187   | 201   | 230   | 461   | 446   | 332   | 306   | 271   | 242   | 167   | 180   |
| 28    | 167  | 183   | 200   | 235   | 403   | 443   | 318   | 304   | 269   | 243   | 177   | 180   |
| 29    | 172  | 180   | 207   | 239   | 440   | 441   | 308   | 304   | 186   | 240   | 162   | 179   |
| 30    | 175  | 177   | 203   | 243   | ---   | 443   | 268   | 308   | 176   | 242   | 161   | 185   |
| 31    | 179  | ---   | 211   | 300   | ---   | 439   | ---   | 309   | ---   | 234   | 161   | ---   |
| TOTAL | 4911 | 5450  | 6920  | 7901  | 23225 | 13836 | 11021 | 9556  | 8435  | 7808  | 5190  | 5232  |
| MEAN  | 158  | 182   | 223   | 255   | 801   | 446   | 367   | 308   | 281   | 252   | 167   | 174   |
| MAX   | 179  | 190   | 374   | 465   | 5800  | 509   | 447   | 321   | 312   | 276   | 179   | 220   |
| MIN   | 136  | 174   | 181   | 186   | 215   | 341   | 268   | 282   | 176   | 177   | 157   | 161   |
| AC-FT | 9740 | 10810 | 13730 | 15670 | 46070 | 27440 | 21860 | 18950 | 16730 | 15490 | 10290 | 10380 |

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 97.5 | 125  | 190  | 307  | 362  | 390  | 238  | 159  | 133  | 108  | 85.6 | 80.4 |
| MAX  | 344  | 312  | 709  | 3543 | 2681 | 2556 | 1101 | 843  | 736  | 393  | 352  | 187  |
| (WY) | 1984 | 1966 | 1967 | 1993 | 1980 | 1980 | 1980 | 1983 | 1983 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1941 - 1996

|                          |        |        |        |
|--------------------------|--------|--------|--------|
| ANNUAL TOTAL             | 214576 | 109485 |        |
| ANNUAL MEAN              | 588    | 299    |        |
| HIGHEST ANNUAL MEAN      |        |        | 189    |
| LOWEST ANNUAL MEAN       |        |        | 789    |
| HIGHEST DAILY MEAN       | 5690   | Mar 8  | 5800   |
| LOWEST DAILY MEAN        | 128    | Sep 4  | 136    |
| ANNUAL SEVEN-DAY MINIMUM | 132    | Aug 26 | 142    |
| INSTANTANEOUS PEAK FLOW  |        |        | 6950   |
| INSTANTANEOUS PEAK STAGE |        |        | 6.98   |
| ANNUAL RUNOFF (AC-FT)    | 425600 | 217200 | 136800 |
| 10 PERCENT EXCEEDS       | 1080   | 446    | 320    |
| 50 PERCENT EXCEEDS       | 389    | 242    | 108    |
| 90 PERCENT EXCEEDS       | 143    | 165    | 37     |



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 1974-84.

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.--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, 1,190 microsiemens, Jan. 21; minimum recorded, 266 microsiemens, Feb. 20.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 29, 30; minimum recorded, 11.5°C, Dec. 18, 24-28.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE  | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) |
|-------|------|--|---|--------------------------------------|--|
| OCT   |      |  |   |                                      |  |
| 04... | 0820 | 151  | 970   | 19.5                                 | 588  |
| 18... | 1320 | 174  | 985   | 21.0                                 | 610  |
| NOV   |      |  |   |                                      |  |
| 02... | 0800 | 181  | 1000  | 17.0                                 | 644  |
| 29... | 1250 | 177  | 1030  | 15.0                                 | 614  |
| DEC   |      |  |   |                                      |  |
| 07... | 0904 | 208  | 993   | 15.5                                 | 614  |
| JAN   |      |  |   |                                      |  |
| 04... | 1400 | 210  | 1020  | 13.0                                 | 650  |
| 24... | 1345 | 438  | 1020  | 12.0                                 | 634  |
| FEB   |      |  |   |                                      |  |
| 06... | 1051 | 609  | 780   | 16.0                                 | 470  |
| 28... | 1145 | 383  | 753   | 13.5                                 | 456  |
| MAR   |      |  |   |                                      |  |
| 14... | 1545 | 505  | 640   | 15.5                                 | 390  |
| 26... | 1150 | 452  | 833   | 17.5                                 | 506  |
| APR   |      |  |   |                                      |  |
| 04... | 0950 | 438  | 1000  | 18.5                                 | 600  |
| 22... | 1230 | 349  | 845   | 18.0                                 | 516  |
| MAY   |      |  |   |                                      |  |
| 22... | 1130 | 324  | 840   | 20.5                                 | 510  |
| 31... | 1330 | 307  | 834   | 19.5                                 | 508  |
| JUN   |      |  |   |                                      |  |
| 14... | 1450 | 290  | 811   | 23.0                                 | 498  |
| JUL   |      |  |   |                                      |  |
| 02... | 1250 | 251  | 800   | 23.5                                 | 472  |
| 17... | 1620 | 269  | 776   | 24.5                                 | 478  |
| AUG   |      |  |   |                                      |  |
| 01... | 0920 | 175  | 941   | 24.0                                 | 550  |
| 16... | 1350 | 164  | 949   | 26.5                                 | 554  |
| SEP   |      |  |   |                                      |  |
| 05... | 0950 | 165  | 958   | 22.0                                 | 580  |
| 19... | 1520 | 161  | 966   | 23.0                                 | 588  |

## SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX       | MIN |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|-----|
|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH     |     |
| 1     | 992     | 948  | 1020     | 987  | 1090     | 1000 | 1060    | 928  | 570      | 442  | 758       | 708 |
| 2     | 998     | 966  | 1090     | 989  | 1040     | 991  | 1060    | 942  | 626      | 453  | 771       | 729 |
| 3     | 1000    | 971  | 1090     | 991  | 1100     | 991  | 1010    | 986  | 630      | 537  | 772       | 742 |
| 4     | 1000    | 950  | 1090     | 992  | 1090     | 992  | 1040    | 1010 | 744      | 630  | 816       | 734 |
| 5     | 1100    | 950  | 1090     | 982  | 1090     | 992  | 1060    | 1030 | 737      | 675  | 888       | 786 |
| 6     | 1000    | 951  | 1080     | 983  | 1100     | 993  | 1070    | 1020 | 939      | 708  | 809       | 720 |
| 7     | 1100    | 951  | 1000     | 983  | 1030     | 993  | 1100    | 972  | 978      | 869  | 793       | 742 |
| 8     | 1010    | 962  | 1000     | 974  | 1030     | 996  | 983     | 948  | 1090     | 957  | 776       | 735 |
| 9     | 992     | 952  | 995      | 975  | 1030     | 1000 | 1010    | 935  | 1080     | 1010 | 758       | 699 |
| 10    | 992     | 952  | 1100     | 986  | 1030     | 995  | 1010    | 929  | 1070     | 1010 | 791       | 689 |
| 11    | 993     | 972  | 1090     | 996  | 1090     | 987  | 997     | 962  | 1060     | 1020 | 793       | 672 |
| 12    | 993     | 963  | 1090     | 977  | 1080     | 999  | 995     | 970  | 1130     | 1020 | 766       | 674 |
| 13    | 983     | 943  | 999      | 988  | 1020     | 675  | 1030    | 995  | 1050     | 1010 | 808       | 726 |
| 14    | 974     | 953  | 1090     | 989  | 796      | 716  | 1050    | 1000 | 1040     | 986  | 729       | 611 |
| 15    | 994     | 954  | 1000     | 989  | 792      | 749  | 1030    | 1000 | 1040     | 986  | 714       | 621 |
| 16    | 964     | 954  | 1100     | 1000 | 785      | 766  | 1150    | 1000 | 1020     | 984  | 716       | 695 |
| 17    | 985     | 954  | 1090     | 1000 | 799      | 766  | 1010    | 762  | 1020     | 951  | 719       | 687 |
| 18    | 995     | 956  | 1030     | 1000 | 801      | 769  | 1010    | 927  | 1030     | 940  | 732       | 680 |
| 19    | 997     | 956  | 1100     | 992  | 806      | 773  | 1050    | 958  | 968      | 757  | 814       | 702 |
| 20    | 1000    | 969  | 1100     | 983  | 839      | 796  | 1060    | 1000 | 757      | 266  | 827       | 716 |
| 21    | 1010    | 963  | 1100     | 994  | 842      | 810  | 1190    | 543  | 324      | 274  | 828       | 719 |
| 22    | 995     | 955  | 1100     | 995  | 915      | 813  | 750     | 596  | 412      | 324  | 783       | 721 |
| 23    | 987     | 955  | 1110     | 1000 | 858      | 650  | 1010    | 750  | 521      | 401  | 925       | 764 |
| 24    | 1010    | 958  | 1100     | 996  | 863      | 700  | 1040    | 1000 | 579      | 460  | 939       | 797 |
| 25    | 1000    | 971  | 1110     | 1010 | 934      | 854  | 1070    | 1030 | 668      | 528  | 881       | 829 |
| 26    | 1000    | 973  | 1110     | 998  | 950      | 877  | 1070    | 1030 | 716      | 607  | 894       | 832 |
| 27    | 1020    | 975  | 1100     | 988  | 933      | 910  | 1070    | 1010 | 804      | 625  | 998       | 856 |
| 28    | 1020    | 978  | 1100     | 1010 | 995      | 914  | 1010    | 947  | 813      | 684  | 953       | 891 |
| 29    | 1030    | 960  | 1040     | 990  | 959      | 930  | 1000    | 947  | 774      | 665  | 997       | 915 |
| 30    | 1010    | 982  | 1100     | 990  | 964      | 931  | 1010    | 963  | ---      | ---  | 1020      | 949 |
| 31    | 1010    | 975  | ---      | ---  | 957      | 928  | 1020    | 429  | ---      | ---  | 1020      | 972 |
| MONTH | 1100    | 943  | 1110     | 974  | 1100     | 650  | 1190    | 429  | 1130     | 266  | 1020      | 611 |
|       | APRIL   |      | MAY      |      | JUNE     |      | JULY    |      | AUGUST   |      | SEPTEMBER |     |
| 1     | 1040    | 976  | 885      | 796  | 865      | 814  | 969     | 819  | 1010     | 911  | 1000      | 910 |
| 2     | 1030    | 980  | 896      | 796  | 865      | 815  | 819     | 789  | 1000     | 952  | 1000      | 909 |
| 3     | 1070    | 985  | 858      | 797  | 845      | 795  | 800     | 780  | 984      | 944  | 999       | 819 |
| 4     | 1110    | 990  | 899      | 808  | 856      | 766  | 800     | 769  | 985      | 935  | 968       | 919 |
| 5     | 1050    | 970  | 881      | 801  | 877      | 766  | 799     | 759  | 996      | 935  | 978       | 928 |
| 6     | 1110    | 970  | 881      | 801  | 847      | 777  | 809     | 759  | 977      | 938  | 969       | 919 |
| 7     | 1080    | 989  | 882      | 792  | 877      | 797  | 809     | 779  | 979      | 938  | 939       | 919 |
| 8     | 1090    | 999  | 904      | 803  | 888      | 808  | 798     | 778  | 970      | 939  | 940       | 900 |
| 9     | 1110    | 1010 | 885      | 804  | 858      | 798  | 798     | 768  | 990      | 951  | 990       | 870 |
| 10    | 1120    | 1010 | 916      | 796  | 849      | 809  | 808     | 778  | 972      | 941  | 991       | 881 |
| 11    | 1110    | 998  | 877      | 807  | 879      | 809  | 798     | 768  | 983      | 952  | 911       | 871 |
| 12    | 998     | 898  | 888      | 808  | 890      | 800  | 887     | 777  | 984      | 925  | 912       | 892 |
| 13    | 927     | 858  | 879      | 809  | 890      | 801  | 797     | 777  | 975      | 925  | 993       | 892 |
| 14    | 897     | 837  | 881      | 810  | 841      | 801  | 827     | 767  | 1010     | 927  | 993       | 903 |
| 15    | 917     | 837  | 922      | 831  | 822      | 793  | 807     | 767  | 1010     | 927  | 954       | 913 |
| 16    | 887     | 827  | 924      | 832  | 864      | 753  | 886     | 766  | 949      | 928  | 944       | 924 |
| 17    | 916     | 826  | 895      | 824  | 796      | 766  | 886     | 776  | 959      | 929  | 965       | 935 |
| 18    | 916     | 676  | 915      | 826  | 788      | 757  | 886     | 786  | 998      | 918  | 975       | 945 |
| 19    | 946     | 756  | 876      | 816  | 869      | 768  | 897     | 786  | 1010     | 917  | 966       | 946 |
| 20    | 916     | 845  | 868      | 807  | 801      | 760  | 897     | 787  | 1010     | 917  | 966       | 946 |
| 21    | 895     | 825  | 929      | 809  | 803      | 772  | 887     | 777  | 956      | 926  | 956       | 926 |
| 22    | 915     | 795  | 870      | 809  | 794      | 763  | 888     | 777  | 946      | 925  | 937       | 917 |
| 23    | 866     | 806  | 879      | 829  | 796      | 765  | 888     | 768  | 1000     | 925  | 947       | 917 |
| 24    | 887     | 797  | 877      | 827  | 807      | 758  | 828     | 768  | 965      | 924  | 987       | 937 |
| 25    | 879     | 828  | 884      | 824  | 789      | 758  | 809     | 769  | 964      | 914  | 947       | 927 |
| 26    | 860     | 810  | 873      | 822  | 791      | 770  | 889     | 769  | 1000     | 923  | 947       | 927 |
| 27    | 861     | 810  | 922      | 821  | 802      | 761  | 809     | 769  | 1000     | 923  | 937       | 917 |
| 28    | 862     | 831  | 909      | 809  | 844      | 763  | 830     | 780  | 1000     | 922  | 938       | 917 |
| 29    | 853     | 813  | 878      | 827  | 946      | 844  | 890     | 740  | 952      | 922  | 938       | 918 |
| 30    | 905     | 805  | 866      | 815  | 957      | 926  | 890     | 710  | 1000     | 911  | 998       | 908 |
| 31    | ---     | ---  | 844      | 804  | ---      | ---  | 921     | 791  | 1000     | 910  | ---       | --- |
| MONTH | 1120    | 676  | 929      | 792  | 957      | 753  | 969     | 710  | 1010     | 910  | 1000      | 870 |

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX       | MIN  |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH     |      |
| 1     | 22.5    | 19.5 | 18.5     | 17.5 | 16.0     | 14.0 | 15.0    | 13.5 | 14.5     | 14.0 | 14.0      | 13.0 |
| 2     | 22.5    | 19.5 | 19.0     | 17.0 | 16.0     | 15.0 | 14.5    | 12.5 | 14.5     | 14.0 | 14.0      | 13.0 |
| 3     | 22.5    | 19.5 | 19.0     | 17.0 | 16.0     | 15.0 | 14.5    | 12.0 | 14.5     | 14.0 | 14.0      | 13.0 |
| 4     | 22.0    | 19.5 | 19.0     | 17.5 | 16.0     | 14.5 | 14.0    | 12.0 | 17.0     | 14.5 | 14.0      | 13.5 |
| 5     | 22.0    | 20.0 | 18.5     | 16.5 | 16.5     | 14.5 | 15.0    | 13.5 | 17.0     | 15.0 | 14.5      | 13.5 |
| 6     | 21.0    | 19.0 | 18.5     | 17.0 | 16.5     | 15.0 | 15.0    | 12.5 | 17.0     | 15.5 | 15.0      | 14.0 |
| 7     | 22.0    | 19.5 | 18.5     | 16.5 | 16.5     | 15.5 | 16.0    | 13.0 | 17.5     | 16.5 | 15.0      | 14.5 |
| 8     | 22.0    | 20.0 | 18.0     | 16.5 | 16.5     | 15.0 | 15.5    | 13.0 | 18.5     | 17.5 | 15.0      | 14.5 |
| 9     | 22.0    | 20.0 | 18.0     | 16.0 | 16.0     | 14.5 | 15.5    | 13.0 | 18.5     | 16.0 | 15.0      | 14.5 |
| 10    | 21.5    | 19.0 | 19.0     | 17.5 | 16.0     | 14.5 | 15.0    | 13.0 | 18.0     | 16.5 | 15.5      | 14.5 |
| 11    | 22.0    | 20.0 | 18.5     | 16.5 | 16.0     | 15.0 | 15.5    | 13.5 | 18.5     | 16.5 | 16.0      | 15.0 |
| 12    | 22.0    | 20.5 | 18.0     | 16.5 | 16.0     | 15.0 | 16.0    | 13.5 | 18.0     | 17.0 | 15.5      | 15.5 |
| 13    | 21.5    | 19.5 | 18.5     | 16.5 | 16.5     | 15.5 | 15.5    | 13.0 | 18.0     | 15.5 | 16.5      | 15.5 |
| 14    | 22.0    | 20.0 | 18.0     | 16.5 | 16.0     | 14.5 | 16.0    | 13.5 | 18.5     | 15.5 | 16.0      | 15.0 |
| 15    | 21.5    | 20.0 | 18.0     | 17.0 | 17.5     | 14.0 | 16.0    | 14.0 | 18.0     | 16.0 | 15.5      | 15.0 |
| 16    | 21.0    | 19.0 | 17.5     | 16.5 | 17.0     | 13.5 | 16.0    | 15.0 | 19.0     | 16.0 | 16.5      | 15.5 |
| 17    | 21.0    | 19.0 | 18.0     | 16.5 | 14.0     | 12.0 | 16.5    | 14.5 | 18.5     | 17.0 | 16.0      | 16.0 |
| 18    | 21.5    | 19.5 | 18.0     | 16.0 | 14.5     | 11.5 | 16.0    | 13.5 | 19.0     | 17.0 | 16.5      | 16.0 |
| 19    | 21.0    | 20.0 | 17.5     | 16.0 | 16.5     | 13.0 | 16.0    | 14.5 | 19.0     | 17.0 | 17.0      | 16.0 |
| 20    | 21.0    | 19.0 | 17.5     | 15.5 | 14.5     | 13.0 | 15.5    | 12.5 | 18.0     | 15.0 | 16.5      | 16.5 |
| 21    | 20.5    | 19.5 | 17.0     | 16.0 | 14.5     | 12.0 | 15.5    | 12.5 | 15.5     | 14.5 | 17.0      | 16.5 |
| 22    | 21.0    | 19.0 | 17.0     | 15.0 | 15.0     | 12.5 | 13.5    | 12.0 | 14.5     | 14.0 | 17.5      | 17.0 |
| 23    | 19.5    | 17.5 | 17.0     | 15.0 | 15.0     | 12.0 | 12.5    | 12.0 | 14.5     | 14.0 | 17.5      | 17.0 |
| 24    | 18.5    | 16.5 | 17.5     | 15.5 | 13.0     | 11.5 | 13.0    | 12.0 | 14.0     | 13.5 | 17.5      | 17.0 |
| 25    | 18.5    | 16.0 | 17.0     | 15.5 | 13.5     | 11.5 | 14.5    | 12.5 | 14.0     | 14.0 | 18.0      | 17.0 |
| 26    | 18.5    | 16.0 | 16.5     | 15.5 | 14.0     | 11.5 | 17.0    | 13.5 | 14.0     | 13.5 | 17.5      | 17.0 |
| 27    | 19.0    | 17.0 | 16.0     | 14.0 | 14.0     | 11.5 | 16.0    | 13.0 | 14.0     | 13.0 | 17.5      | 17.0 |
| 28    | 19.0    | 17.5 | 15.0     | 13.0 | 14.0     | 11.5 | 16.5    | 15.0 | 13.5     | 13.0 | 17.5      | 17.0 |
| 29    | 19.5    | 18.0 | 15.5     | 13.5 | 14.5     | 12.5 | 16.5    | 14.0 | 13.5     | 12.5 | 17.0      | 16.5 |
| 30    | 21.0    | 19.0 | 16.0     | 14.0 | 15.0     | 13.0 | 16.0    | 14.5 | ---      | ---  | 17.5      | 16.5 |
| 31    | 19.5    | 18.5 | ---      | ---  | 15.0     | 13.5 | 15.5    | 14.0 | ---      | ---  | 17.5      | 16.5 |
| MONTH | 22.5    | 16.0 | 19.0     | 13.0 | 17.5     | 11.5 | 17.0    | 12.0 | 19.0     | 12.5 | 18.0      | 13.0 |
|       | APRIL   |      | MAY      |      | JUNE     |      | JULY    |      | AUGUST   |      | SEPTEMBER |      |
| 1     | 17.5    | 17.0 | 23.5     | 20.0 | 24.5     | 21.0 | 27.0    | 22.5 | 27.0     | 24.0 | 27.5      | 24.0 |
| 2     | 18.0    | 17.0 | 24.0     | 20.5 | 25.0     | 22.5 | 27.0    | 22.5 | 26.5     | 23.5 | 27.5      | 24.0 |
| 3     | 18.5    | 17.5 | 23.5     | 20.5 | 25.0     | 22.0 | 27.0    | 23.0 | 26.0     | 22.5 | 27.0      | 24.0 |
| 4     | 19.0    | 18.0 | 23.5     | 20.5 | 25.0     | 22.5 | 26.5    | 22.0 | 25.0     | 22.5 | 27.0      | 24.0 |
| 5     | 19.5    | 18.5 | 23.0     | 20.5 | 25.0     | 23.5 | 27.5    | 22.5 | 24.5     | 21.5 | 27.5      | 23.0 |
| 6     | 19.0    | 18.5 | 23.0     | 20.5 | 25.0     | 23.0 | 27.5    | 22.5 | 24.5     | 21.5 | 28.0      | 23.0 |
| 7     | 19.5    | 18.5 | 23.5     | 20.5 | 25.0     | 23.0 | 27.0    | 22.5 | 25.0     | 21.5 | 28.0      | 24.5 |
| 8     | 20.0    | 19.0 | 23.0     | 20.5 | 25.5     | 22.5 | 26.0    | 22.0 | 25.0     | 21.5 | 28.0      | 24.5 |
| 9     | 20.0    | 19.0 | 23.0     | 20.5 | 26.0     | 22.5 | 26.0    | 21.5 | 25.5     | 22.0 | 28.0      | 24.5 |
| 10    | 19.5    | 18.0 | 24.0     | 21.0 | 26.0     | 22.5 | 26.0    | 22.0 | 25.5     | 22.5 | 27.5      | 23.5 |
| 11    | 21.0    | 17.5 | 24.5     | 21.5 | 26.0     | 22.0 | 26.0    | 22.0 | 25.5     | 22.5 | 26.5      | 22.5 |
| 12    | 20.5    | 17.5 | 24.5     | 22.0 | 25.5     | 22.5 | 27.5    | 22.0 | 29.5     | 22.5 | 25.0      | 21.5 |
| 13    | 20.5    | 17.5 | 24.0     | 21.0 | 25.5     | 22.0 | 28.0    | 22.5 | 29.0     | 23.5 | 24.5      | 21.0 |
| 14    | 21.0    | 18.0 | 24.0     | 21.5 | 25.5     | 22.0 | 28.0    | 22.5 | 29.5     | 23.0 | 24.0      | 21.0 |
| 15    | 21.0    | 18.5 | 24.0     | 22.0 | 25.5     | 22.0 | 26.0    | 22.0 | 29.0     | 25.5 | 24.5      | 22.0 |
| 16    | 20.5    | 18.0 | 23.5     | 21.5 | 25.5     | 22.0 | 26.0    | 22.5 | 29.0     | 25.5 | 24.5      | 22.5 |
| 17    | 21.0    | 18.5 | 23.5     | 21.0 | 26.5     | 21.5 | 25.5    | 22.0 | 28.5     | 25.5 | 24.0      | 21.0 |
| 18    | 21.0    | 18.5 | 23.5     | 21.0 | 26.5     | 21.5 | 26.0    | 21.5 | 28.0     | 25.0 | 24.5      | 19.0 |
| 19    | 20.5    | 18.0 | 23.5     | 21.0 | 26.5     | 22.5 | 26.0    | 21.5 | 27.5     | 24.5 | 25.0      | 21.0 |
| 20    | 20.0    | 17.5 | 23.0     | 20.5 | 26.0     | 22.0 | 26.5    | 21.5 | 27.5     | 24.0 | 25.5      | 22.0 |
| 21    | 20.0    | 18.0 | 23.0     | 21.0 | 26.0     | 22.0 | 26.5    | 21.5 | 27.5     | 23.5 | 25.5      | 22.5 |
| 22    | 21.0    | 18.0 | 23.0     | 20.5 | 25.0     | 21.5 | 26.5    | 22.0 | 28.0     | 23.5 | 25.0      | 22.0 |
| 23    | 22.0    | 19.0 | 22.5     | 20.5 | 25.0     | 21.5 | 27.0    | 21.5 | 29.0     | 24.0 | 24.5      | 22.0 |
| 24    | 22.5    | 20.0 | 22.5     | 19.5 | 25.0     | 21.5 | 26.5    | 22.0 | 29.0     | 25.0 | 24.5      | 20.5 |
| 25    | 23.0    | 20.5 | 21.0     | 18.0 | 24.5     | 21.5 | 27.0    | 22.5 | 28.5     | 24.5 | 24.0      | 22.5 |
| 26    | 23.5    | 20.5 | 22.5     | 19.0 | 24.0     | 21.0 | 27.5    | 23.0 | 28.0     | 23.5 | 24.0      | 22.5 |
| 27    | 23.5    | 21.5 | 22.5     | 19.0 | 24.0     | 20.0 | 27.5    | 24.0 | 27.0     | 23.0 | 24.5      | 21.5 |
| 28    | 23.5    | 20.5 | 22.5     | 19.5 | 25.0     | 20.0 | 27.5    | 23.5 | 27.5     | 22.5 | 25.0      | 21.5 |
| 29    | 23.0    | 18.5 | 23.0     | 20.5 | 26.5     | 21.0 | 31.0    | 23.0 | 28.0     | 24.0 | 24.5      | 21.0 |
| 30    | 23.5    | 19.0 | 23.0     | 20.5 | 26.5     | 22.0 | 31.0    | 23.0 | 28.0     | 24.5 | 24.5      | 22.0 |
| 31    | ---     | ---  | 23.0     | 20.0 | ---      | ---  | 28.0    | 22.0 | 28.0     | 24.0 | ---       | ---  |
| MONTH | 23.5    | 17.0 | 24.5     | 18.0 | 26.5     | 20.0 | 31.0    | 21.5 | 29.5     | 21.5 | 28.0      | 19.0 |

## 11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA

LOCATION.--Lat 33°54'48", long 117°50'30", in SW 1/4 NE 1/4 sec.17, T.3 S., R.9 W., Orange County, Hydrologic Unit 18070106, on right wall of outlet channel 250 ft downstream from toe of Carbon Canyon Dam and 2.4 mi northwest of Yorba Linda.

DRAINAGE AREA.--19.5 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC   | JAN   | FEB    | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-------|------|-------|-------|--------|-------|-------|------|------|------|------|------|
| 1     | .05   | e.03 | .15   | .37   | 4.6    | 1.5   | .84   | .18  | .40  | .00  | .00  | .00  |
| 2     | .02   | e.00 | .14   | .37   | 1.4    | 1.4   | .63   | .20  | .30  | .00  | .00  | .00  |
| 3     | .00   | e.00 | .13   | .37   | 1.2    | 1.4   | .58   | .25  | .22  | .00  | .00  | .00  |
| 4     | .03   | e.00 | .15   | .30   | .73    | 2.1   | .59   | .34  | .21  | .00  | .00  | .00  |
| 5     | .07   | e.00 | .15   | .28   | .58    | 22    | .56   | .24  | .14  | .00  | .00  | .00  |
| 6     | .02   | e.00 | .19   | .28   | .58    | 3.0   | .50   | .25  | .00  | .00  | .00  | .00  |
| 7     | .00   | e.07 | .18   | .28   | .58    | 1.7   | .54   | .23  | .00  | .00  | .00  | .00  |
| 8     | .00   | e.12 | .18   | .28   | .69    | 1.5   | .58   | .16  | .00  | .00  | .00  | .00  |
| 9     | .00   | .17  | .15   | .28   | .84    | 1.3   | .58   | .09  | .00  | .00  | .00  | .00  |
| 10    | .13   | .15  | .15   | .28   | .57    | 1.2   | .54   | .02  | .00  | .00  | .00  | .00  |
| 11    | .21   | .15  | .15   | .28   | .47    | 2.5   | .47   | .02  | .00  | .00  | .00  | .00  |
| 12    | .33   | .15  | .73   | .28   | .47    | 11    | .47   | .27  | .00  | .00  | .00  | .00  |
| 13    | .55   | .21  | 2.9   | .28   | .47    | 13    | .47   | .57  | .00  | .00  | .00  | .00  |
| 14    | .42   | .23  | 2.1   | .28   | .47    | 2.7   | .47   | .54  | .00  | .00  | .00  | .00  |
| 15    | .42   | .24  | .69   | .28   | .47    | 2.1   | .48   | .21  | .00  | .00  | .00  | .00  |
| 16    | .40   | .19  | .58   | 1.0   | .47    | 1.8   | .53   | .10  | .00  | .00  | .00  | .00  |
| 17    | .38   | .19  | .50   | 2.0   | .47    | 1.6   | 2.6   | .10  | .00  | .00  | .00  | .00  |
| 18    | .43   | .22  | .47   | 1.0   | .47    | 1.5   | .48   | .10  | .00  | .00  | .00  | .01  |
| 19    | .41   | .21  | .47   | .58   | .68    | 1.7   | .47   | .10  | .00  | .00  | .00  | .00  |
| 20    | .43   | .21  | .47   | .41   | 80     | 1.0   | .47   | .13  | .00  | .00  | .00  | .00  |
| 21    | .47   | .32  | .38   | 1.8   | 59     | .91   | .47   | .13  | .00  | .00  | .00  | .00  |
| 22    | .47   | .24  | .37   | 1.5   | 8.1    | .84   | .47   | .10  | .00  | .00  | .00  | .00  |
| 23    | 14    | .29  | 1.1   | .37   | 3.9    | .84   | .54   | .10  | .00  | .00  | .00  | .00  |
| 24    | e1.0  | .21  | .44   | .30   | 2.9    | .84   | .34   | .10  | .00  | .00  | .00  | .00  |
| 25    | e.72  | .22  | .37   | .28   | 4.6    | 1.5   | .28   | .08  | .00  | .00  | .00  | .00  |
| 26    | e.48  | .22  | .41   | .21   | 2.9    | .90   | .25   | .07  | .00  | .00  | .00  | .00  |
| 27    | e.41  | .27  | .47   | .21   | 3.2    | 1.1   | .23   | .04  | .00  | .00  | .00  | .00  |
| 28    | e.30  | .13  | .47   | .15   | 5.7    | .82   | .17   | .04  | .00  | .00  | .00  | .00  |
| 29    | e.22  | .10  | .38   | .14   | 3.4    | .71   | .14   | .49  | .00  | .00  | .00  | .00  |
| 30    | e.17  | .20  | .37   | .10   | ---    | .71   | .18   | .50  | .00  | .00  | .00  | .00  |
| 31    | e.12  | ---  | .37   | 2.9   | ---    | .77   | ---   | .51  | ---  | .00  | .00  | ---  |
| TOTAL | 22.66 | 4.74 | 15.76 | 17.44 | 189.91 | 85.94 | 15.92 | 6.26 | 1.27 | 0.00 | 0.00 | 0.01 |
| MEAN  | .73   | .16  | .51   | .56   | 6.55   | 2.77  | .53   | .20  | .042 | .000 | .000 | .000 |
| MAX   | 14    | .32  | 2.9   | 2.9   | 80     | 22    | 2.6   | .57  | .40  | .00  | .00  | .01  |
| MIN   | .00   | .00  | .13   | .10   | .47    | .71   | .14   | .02  | .00  | .00  | .00  | .00  |
| AC-FT | 45    | 9.4  | 31    | 35    | 377    | 170   | 32    | 12   | 2.5  | .00  | .00  | .02  |

e Estimated.

## 11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .057 | .17  | .47  | 2.58 | 4.78 | 4.96 | .66  | .23  | .11  | .049 | .018 | .013 |
| MAX  | .73  | 1.87 | 6.36 | 32.4 | 46.9 | 36.2 | 5.76 | 3.44 | 1.82 | .67  | .29  | .22  |
| (WY) | 1996 | 1968 | 1967 | 1993 | 1980 | 1983 | 1995 | 1980 | 1995 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1962 - 1996 |            |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL             | 1677.95                |        | 359.91              |        | 1.16                    |            |
| ANNUAL MEAN              | 4.60                   |        | .98                 |        | 7.27                    |            |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | .004                    |            |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 1980                    |            |
| HIGHEST DAILY MEAN       | 176                    | Mar 11 | 80                  | Feb 20 | 322                     | Mar 2 1983 |
| LOWEST DAILY MEAN        | .00                    | Jan 1  | .00                 | Oct 3  | .00                     | Oct 1 1961 |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Sep 7  | .00                 | Jun 6  | .00                     | Oct 1 1961 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 223                 | Feb 20 | 796                     | Mar 1 1983 |
| INSTANTANEOUS PEAK STAGE |                        |        | 3.38                | Feb 20 | 5.11                    | Mar 1 1983 |
| ANNUAL RUNOFF (AC-FT)    | 3330                   |        | 714                 |        | 840                     |            |
| 10 PERCENT EXCEEDS       | 8.4                    |        | 1.4                 |        | .48                     |            |
| 50 PERCENT EXCEEDS       | .69                    |        | .20                 |        | .00                     |            |
| 90 PERCENT EXCEEDS       | .00                    |        | .00                 |        | .00                     |            |

## SANTA ANA RIVER BASIN

11075800 SANTIAGO CREEK AT MODJESKA, CA

LOCATION.--Lat 33°42'46", long 117°38'39", in NE 1/4 NE 1/4 sec.30, T.5 S., R.7 W., Orange County, Hydrologic Unit 18070203, on right bank at Santiago Canyon Road Bridge, 0.9 mi northwest of Modjeska, 1.0 mi downstream from Harding Creek, and 1.5 mi downstream from Modjeska Reservoir.

DRAINAGE AREA.--13.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WDR CA-73-1: 1969. WDR CA-86-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,210 ft above sea level, 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, or maximum, from rating curve extended above 870 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 21 | 1100 | 77                                | 5.56                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB    | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|--------|-------|-------|------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | 11     | 3.4   | e2.0  | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00  | 3.9    | 3.1   | e2.5  | .00  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00  | 2.4    | 2.8   | e1.7  | .00  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .00  | 2.1    | 3.2   | 1.8   | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00  | 1.6    | 32    | 1.6   | .00  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .00  | .00  | 1.4    | 20    | 1.5   | .00  | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .00  | .00  | 1.2    | 14    | 1.4   | .00  | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .00  | .00  | 1.0    | 9.9   | 1.1   | .00  | .00  | .00  | .00  | .00  |
| 9     | .00  | .00  | .00  | .00  | .91    | 8.2   | 1.2   | .00  | .00  | .00  | .00  | .00  |
| 10    | .00  | .00  | .00  | .00  | .86    | 4.6   | 1.1   | .00  | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .00  | .00  | .82    | 2.9   | 1.2   | .00  | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | .00  | .00  | .80    | 4.5   | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | .00  | .55    | 16    | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | .47    | 14    | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .00  | .39    | e12   | .82   | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00  | e.05 | .33    | e9.6  | .73   | .00  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00  | e.01 | .32    | e7.5  | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00  | e.01 | .28    | e4.8  | 1.8   | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | e.00 | .27    | e3.9  | 1.5   | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | e.00 | 20     | e3.5  | 1.4   | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | e.90 | 55     | e3.4  | 1.1   | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | e.50 | 24     | e3.2  | 1.0   | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .00  | e.40 | 14     | e3.0  | .82   | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | e.30 | 7.5    | e2.7  | .54   | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .18  | 7.5    | e2.5  | .45   | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .09  | 5.1    | e2.3  | .36   | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .05  | 4.5    | e2.2  | .18   | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .10  | 3.8    | e6.0  | .03   | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00  | .18  | 3.0    | e4.0  | .00   | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00  | .13  | ---    | e3.0  | .00   | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00  | 4.4  | ---    | e2.8  | ---   | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.00 | 7.30 | 175.00 | 215.0 | 31.83 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .24  | 6.03   | 6.94  | 1.06  | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .00  | 4.4  | 55     | 32    | 2.5   | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .27    | 2.2   | .00   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | 14   | 347    | 426   | 63    | .00  | .00  | .00  | .00  | .00  |

e Estimated.

## 11075800 SANTIAGO CREEK AT MODJESKA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .21  | 1.91 | 5.70 | 17.8 | 31.6 | 24.3 | 6.50 | 3.24 | 1.42 | .39  | .15  | .078 |
| MAX  | 5.00 | 33.4 | 97.4 | 179  | 376  | 137  | 33.7 | 27.0 | 7.82 | 2.84 | 1.68 | 1.07 |
| (WY) | 1984 | 1966 | 1967 | 1983 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1962 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 7813.48                |  |  |  | 429.13              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 21.4                   |  |  |  | 1.17                |  |  |  | 7.66                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 47.2                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .21                     |  |  |  |
| HIGHEST DAILY MEAN       | 640                    |  |  |  | 55                  |  |  |  | 3590                    |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 77                  |  |  |  | 6520                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 5.56                |  |  |  | 11.34                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 15500                  |  |  |  | 851                 |  |  |  | 5550                    |  |  |  |
| 10 PERCENT EXCEEDS       | 58                     |  |  |  | 3.0                 |  |  |  | 10                      |  |  |  |
| 50 PERCENT EXCEEDS       | .06                    |  |  |  | .00                 |  |  |  | .29                     |  |  |  |
| 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 50 ft upstream from Bristol Street Bridge at Santa Ana and 1,625 ft upstream from mouth at Santa Ana River.

DRAINAGE AREA.--98.6 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; from Sept. 9, 1969, to July 21, 1976, at site 50 ft downstream at different datum; from July 22, 1976 to Sept. 30, 1993, at site 77 upstream at datum 5.25 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated since December 1931 by Santiago Reservoir, capacity, 25,000 acre-ft; since January 1963 by Villa Park flood-control reservoir, capacity, 15,500 acre-ft, and affected by intervening gravel pits. Diversions upstream from station by Irvine Company and Serrano and Carpenter Irrigation Districts. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,600 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 9.10 ft, site and datum then in use; maximum gage height, 11.57 ft, Jan. 4, 1995; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB    | MAR    | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|--------|--------|------|------|------|------|------|------|
| 1     | e.00 | .00  | .00  | .00   | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 2     | e.00 | .00  | .00  | .00   | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 3     | e.00 | .00  | .00  | .00   | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .00   | .00    | 26     | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00   | .00    | 3.3    | .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  | e.00  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | e.00  | .00    | 108    | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | e.00  | .00    | 1.4    | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | e.00  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00  | e1.0  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00  | e5.0  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00  | e.00  | .00    | .00    | 3.7  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | e3.0  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | e.00  | 121    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | e13   | e27    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | e3.0  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | 1.8  | e.00  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | e.00  | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .00   | 3.4    | .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   | 11     | .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  | 18    | ---    | .00    | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 1.80 | 43.00 | 162.40 | 138.70 | 3.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .058 | 1.39  | 5.60   | 4.47   | .12  | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | 1.8  | 18    | 121    | 108    | 3.7  | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00   | .00    | .00    | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | 3.6  | 85    | 322    | 275    | 7.3  | .00  | .00  | .00  | .00  | .00  |

e Estimated.



## 11077500 SANTIAGO CREEK AT SANTA ANA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .079 | .37  | 2.20 | 5.64 | 9.28 | 29.7 | 7.56 | .32  | .002 | .000 | .000 | .053 |
| MAX  | 2.61 | 3.03 | 9.71 | 62.3 | 94.6 | 329  | 159  | 3.85 | .050 | .000 | .000 | 1.20 |
| (WY) | 1935 | 1945 | 1937 | 1952 | 1937 | 1938 | 1941 | 1941 | 1941 | 1931 | 1931 | 1939 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1931 | 1931 | 1931 | 1936 | 1952 | 1931 | 1932 | 1931 | 1931 | 1931 | 1931 | 1931 |

## SUMMARY STATISTICS

## WATER YEARS 1931 - 1963

|                          |      |             |
|--------------------------|------|-------------|
| ANNUAL MEAN              | 4.60 |             |
| HIGHEST ANNUAL MEAN      | 40.0 | 1941        |
| LOWEST ANNUAL MEAN       | .067 | 1961        |
| HIGHEST DAILY MEAN       | 2320 | Mar 3 1938  |
| LOWEST DAILY MEAN        | .00  | Oct 1 1930  |
| ANNUAL SEVEN-DAY MINIMUM | .00  | Oct 1 1930  |
| INSTANTANEOUS PEAK FLOW  | 4400 | Mar 2 1938  |
| INSTANTANEOUS PEAK STAGE | 9.85 | Jan 16 1952 |
| ANNUAL RUNOFF (AC-FT)    | 3330 |             |
| 10 PERCENT EXCEEDS       | .40  |             |
| 50 PERCENT EXCEEDS       | .00  |             |
| 90 PERCENT EXCEEDS       | .00  |             |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .19  | 1.82 | 1.97 | 12.8 | 37.2 | 25.2 | .59  | .053 | .011 | .018 | .059 | .10  |
| MAX  | 4.29 | 7.80 | 10.1 | 259  | 616  | 253  | 4.52 | 1.25 | .24  | .58  | 1.60 | 1.59 |
| (WY) | 1984 | 1983 | 1967 | 1993 | 1969 | 1978 | 1965 | 1977 | 1993 | 1984 | 1977 | 1976 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1965 | 1969 | 1964 | 1972 | 1964 | 1966 | 1966 | 1964 | 1964 | 1964 | 1964 | 1964 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1964 - 1996

|                          |         |        |        |        |
|--------------------------|---------|--------|--------|--------|
| ANNUAL TOTAL             | 7181.68 |        | 349.60 |        |
| ANNUAL MEAN              | 19.7    |        | .96    |        |
| HIGHEST ANNUAL MEAN      |         |        |        | 6.51   |
| LOWEST ANNUAL MEAN       |         |        |        | 71.7   |
| HIGHEST DAILY MEAN       | 1580    | Mar 6  | 121    | Feb 20 |
| LOWEST DAILY MEAN        | .00     | Jan 1  | .00    | Oct 1  |
| ANNUAL SEVEN-DAY MINIMUM | .00     | Jan 13 | .00    | Oct 1  |
| INSTANTANEOUS PEAK FLOW  |         |        | 1250   | Mar 13 |
| INSTANTANEOUS PEAK STAGE |         |        | 9.59   | Mar 13 |
| ANNUAL RUNOFF (AC-FT)    | 14240   |        | 693    |        |
| 10 PERCENT EXCEEDS       | .00     |        | .00    | .00    |
| 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.--Lat 33°45'04", long 117°54'27", in NW 1/4 SE 1/4 sec.10, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on right bank 850 ft upstream from Fifth Street Bridge in Santa Ana and 1.6 mi downstream from Santiago Creek.

DRAINAGE AREA.--1,700 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1923 to September 1989, October 1990 to current year. Discharge measurements only, October 1989 to September 1990.

REVISED RECORDS.--WSP 1635: 1940(M), 1944. WDR CA-74-1: Drainage area. WDR CA-79-1: 1978(M).

GAGE.--Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 70 ft, above sea level, from topographic map. Oct. 1, 1990, to Feb. 12, 1991, at site 900 ft downstream at different datum. Feb. 13, 1991, to Apr. 4, 1994, at datum 3 ft lower. See WDR CA-90-1 for complete history of location and datum changes.

REMARKS.--Records fair. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, 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. Gage out of operation from Apr. 5, 1994, through Nov. 14, 1994, due to channel work (lining). See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,300 ft<sup>3</sup>/s, Mar. 3, 1938, gage height, 10.20 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN    | FEB      | MAR    | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|-------|--------|----------|--------|-------|------|------|------|------|------|
| 1     | .00  | .00  | .00   | .00    | 37       | .00    | 1.5   | .00  | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00   | .00    | .36      | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00   | .00    | 10       | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00   | .00    | .63      | 92     | .13   | .00  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00   | .00    | .00      | 98     | .00   | .00  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .00   | .00    | .00      | .02    | .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    | .09   | .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  | 3.0   | .00    | .00      | 17     | .00   | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | 4.7   | .00    | .00      | 342    | .00   | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00   | .00    | .00      | 151    | .00   | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00   | .00    | .00      | .01    | .00   | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .98  | .00   | 3.5    | .00      | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 17    | .00  | .33  | .00   | 16     | .00      | .00    | .01   | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00   | .08    | .00      | .00    | 17    | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00   | 12     | 1.0      | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00   | .68    | 1070     | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00   | 39     | 3650     | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00   | 9.9    | 3730     | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | 29    | .00    | 1050     | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | 2.2   | .00    | 165      | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00   | .00    | 177      | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00   | .00    | 60       | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00   | .00    | 48       | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .62  | .00   | 1.2    | 16       | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .39  | .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   | 348    | ---      | .00    | ---   | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 2.32 | 38.90 | 430.36 | 10014.99 | 700.03 | 18.73 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .077 | 1.25  | 13.9   | 345      | 22.6   | .62   | .000 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .98  | 29    | 348    | 3730     | 342    | 17    | .00  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00   | .00    | .00      | .00    | .00   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | 4.6  | 77    | 854    | 19860    | 1390   | 37    | .00  | .00  | .00  | .00  | .00  |

## 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.50 | 11.6 | 35.6 | 175  | 238  | 258  | 63.3 | 17.4 | 8.40 | .44  | 2.03 | 1.47 |
| MAX  | 179  | 154  | 428  | 3962 | 3014 | 2342 | 889  | 613  | 433  | 22.9 | 102  | 40.6 |
| (WY) | 1984 | 1984 | 1985 | 1993 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1940 - 1996

|                          |           |          |       |
|--------------------------|-----------|----------|-------|
| ANNUAL TOTAL             | 141413.84 | 11205.33 |       |
| ANNUAL MEAN              | 387       | 30.6     | 67.2  |
| HIGHEST ANNUAL MEAN      |           |          | 612   |
| LOWEST ANNUAL MEAN       |           |          | .006  |
| HIGHEST DAILY MEAN       | 7410      | Jan 12   | 3730  |
| LOWEST DAILY MEAN        | .00       | Jan 1    | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00       | Feb 2    | .00   |
| INSTANTANEOUS PEAK FLOW  |           |          | 5350  |
| INSTANTANEOUS PEAK STAGE |           |          | 4.83  |
| ANNUAL RUNOFF (AC-FT)    | 280500    | 22230    | 48690 |
| 10 PERCENT EXCEEDS       | 848       | .34      | 10    |
| 50 PERCENT EXCEEDS       | .00       | .00      | .00   |
| 90 PERCENT EXCEEDS       | .00       | .00      | .00   |

## SANTA ANA RIVER BASIN

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 1995 TO SEPTEMBER 1996

|              |      | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND   | TEMPER-<br>ATURE<br>WATER<br>(DEG C)                         | SEDI-<br>MENT,<br>SUS-<br>PENDED<br>(MG/L)                   | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PENDED<br>(T/DAY) | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.002 MM  | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.004 MM  |   |
|--------------|------|--|--|--|--|---|---|---|
| DATE         | TIME |  |  |  |  |   |   |   |
| JAN<br>31... | 1120 | 143  | 14.5   | 77   | 30   | --  | --  |   |
| FEB<br>21... | 1145 | 4170   | 15.5   | 3210   | 36100  | 21  | 27  |   |
| MAR<br>13... | 1220 | 65   | --   | 55   | 9.7  | --  | --  |   |
|              |      |  |  |  |  |   |   |   |
|              |      | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.008 MM | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.016 MM | SED.<br>SUSP.<br>FALL<br>DIAM.<br>% FINER<br>THAN<br>.031 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM  | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
| DATE         |      |  |  |  |  |   |   |   |
| JAN<br>31... | --   | --   | --   | 96   | --   | --  | --  | --  |
| FEB<br>21... | 29   | 37   | 48   | 56   | 76   | 96  | 100   |   |
| MAR<br>13... | --   | --   | --   | 98   | --   | --  | --  |   |

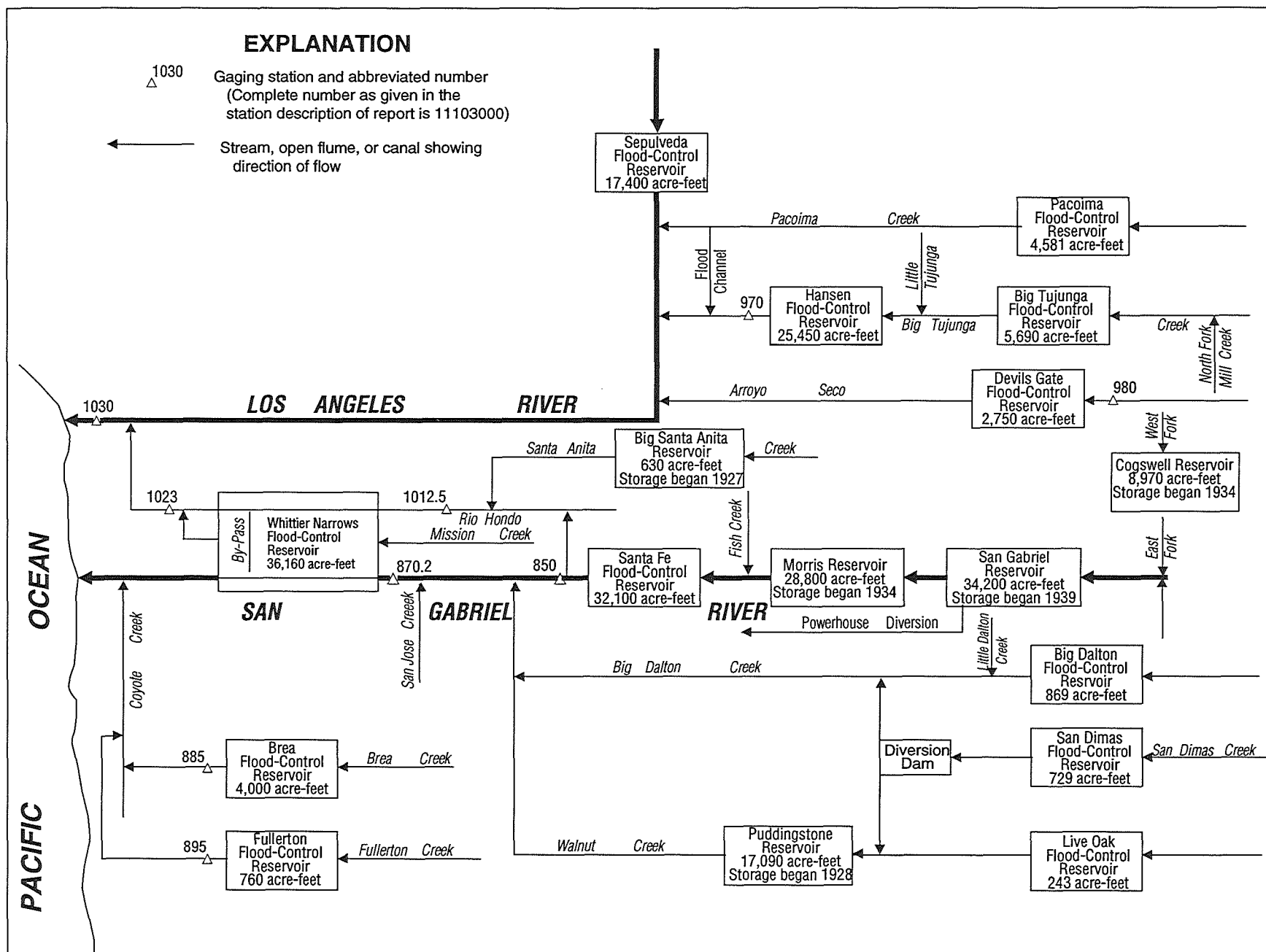


Figure 17. Diversions and storage in San Gabriel and Los Angeles River basins.

## 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 sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair except for estimated daily discharges and discharges below 100 ft<sup>3</sup>/s, which are poor. Flow regulated by Cogswell and San Gabriel Flood-Control Reservoirs, combined capacity, 43,170 acre-ft; Morris Reservoir, capacity, 28,800 acre-ft; and Santa Fe Flood-Control Reservoir, capacity, 32,100 acre-ft. Diversions upstream from station for irrigation, power development, and ground-water replenishment. At times water is diverted from side of stilling basin to headwaters of Rio Hondo; 25,990 acre-ft were diverted during the current year. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,900 ft<sup>3</sup>/s, Jan. 26, 1969, gage height, 22.20 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB    | MAR    | APR   | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------|------|------|------|------|--------|--------|-------|------|------|------|------|-------|
| 1     | .00  | .00  | .00  | .00  | 24     | .19    | 3.0   | .03  | .00  | .00  | .00  | .00   |
| 2     | .00  | .00  | .00  | .00  | .05    | .12    | 3.2   | .03  | .00  | .00  | .00  | .00   |
| 3     | .00  | .00  | .00  | .00  | .03    | .08    | 1.8   | .03  | .00  | .00  | .00  | .00   |
| 4     | .00  | .00  | .00  | .00  | .03    | 1.6    | .42   | .02  | .00  | .00  | .00  | .00   |
| 5     | .00  | .00  | .00  | .00  | .02    | 26     | .13   | .01  | .00  | .00  | .00  | .00   |
| 6     | .00  | .00  | .00  | .00  | .00    | 4.8    | .06   | .00  | .00  | .00  | .00  | .00   |
| 7     | .00  | .00  | .00  | .00  | .00    | 3.3    | .04   | .00  | .00  | .00  | .00  | .00   |
| 8     | .00  | .00  | .00  | .00  | .00    | 4.7    | .04   | 8.3  | .00  | .00  | .00  | .00   |
| 9     | .00  | .00  | .00  | .00  | .00    | 4.3    | 1.0   | .00  | .00  | .00  | .00  | .00   |
| 10    | .00  | .00  | .00  | .00  | .00    | 4.0    | 12    | .00  | .00  | .00  | .00  | .10   |
| 11    | .00  | .00  | .00  | .00  | .00    | 3.5    | .13   | .00  | .00  | .00  | .00  | .00   |
| 12    | .00  | .00  | .00  | .00  | .00    | 2.9    | .06   | .00  | .00  | .00  | .00  | .00   |
| 13    | .00  | .00  | .00  | .00  | .00    | 5.5    | .04   | .00  | .00  | .00  | .00  | .00   |
| 14    | .00  | .00  | .00  | .00  | .00    | 6.8    | .04   | .00  | .00  | .00  | .00  | .00   |
| 15    | .00  | .00  | .00  | .00  | .00    | 7.1    | .03   | .00  | .00  | .00  | .00  | .00   |
| 16    | .00  | .00  | .00  | .00  | .00    | 7.7    | .03   | .00  | .00  | .00  | .00  | .00   |
| 17    | .00  | .00  | .00  | .00  | .00    | 7.7    | .03   | .00  | .00  | .00  | .00  | .00   |
| 18    | .00  | .00  | .00  | .00  | .00    | 36     | .02   | .00  | .00  | .00  | .00  | .00   |
| 19    | .00  | .00  | .00  | .00  | .00    | 62     | e.01  | .00  | .00  | .00  | .00  | .00   |
| 20    | .00  | .00  | .00  | .00  | 14     | 53     | e.00  | .00  | .00  | .00  | .00  | .00   |
| 21    | .00  | .00  | .00  | .00  | 50     | 34     | e.00  | .00  | .00  | .00  | .00  | .00   |
| 22    | .00  | .00  | .00  | .00  | 90     | 1.7    | e.00  | .00  | .00  | .00  | .00  | .00   |
| 23    | .00  | .00  | .00  | .00  | 84     | 1.4    | e.00  | .00  | .00  | .00  | .07  | .00   |
| 24    | .00  | .00  | .00  | .00  | 76     | 1.1    | e.00  | .00  | .00  | .00  | .15  | .00   |
| 25    | .00  | .00  | .00  | .00  | 69     | .83    | e.00  | .00  | .00  | .00  | .00  | .00   |
| 26    | .00  | .00  | .00  | .00  | 61     | .63    | e.00  | .00  | .00  | .00  | 2.0  | 5.7   |
| 27    | .00  | .00  | .00  | .00  | 53     | .60    | e.00  | .00  | .04  | .00  | 2.0  | 9.1   |
| 28    | .00  | .00  | .00  | .00  | 37     | 2.5    | e.00  | .00  | .04  | .00  | .00  | 8.6   |
| 29    | .00  | .00  | .00  | .00  | .46    | 6.1    | .13   | .00  | .03  | .00  | .00  | 8.0   |
| 30    | .00  | .00  | .00  | .00  | ---    | 3.3    | .04   | .00  | .00  | .00  | .00  | 7.4   |
| 31    | .00  | ---  | .00  | 7.8  | ---    | 2.6    | ---   | .00  | ---  | .00  | .00  | ---   |
| TOTAL | 0.00 | 0.00 | 0.00 | 7.80 | 558.59 | 296.05 | 22.25 | 8.42 | 0.11 | 0.00 | 4.22 | 38.90 |
| MEAN  | .000 | .000 | .000 | .25  | 19.3   | 9.55   | .74   | .27  | .004 | .000 | .14  | 1.30  |
| MAX   | .00  | .00  | .00  | 7.8  | 90     | 62     | 12    | 8.3  | .04  | .00  | 2.0  | 9.1   |
| MIN   | .00  | .00  | .00  | .00  | .00    | .08    | .00   | .00  | .00  | .00  | .00  | .00   |
| AC-FT | .00  | .00  | .00  | 15   | 1110   | 587    | 44    | 17   | .2   | .00  | 8.4  | 77    |

e Estimated.

## 11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.66 | 18.1 | 31.2 | 139  | 237  | 214  | 62.0 | 57.4 | 26.1 | 8.66 | 5.94 | 10.3 |
| MAX  | 74.6 | 577  | 514  | 2151 | 3259 | 2465 | 616  | 480  | 414  | 170  | 121  | 206  |
| (WY) | 1993 | 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1943 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 61459.17               |  |  | 936.34              |  |  |                         |  |  |
| ANNUAL MEAN              | 168                    |  |  | 2.56                |  |  | 66.9                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 540                     |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 5430                   |  |  | 90                  |  |  | 26000                   |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  | .00                 |  |  | .00                     |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 91                  |  |  | 30900                   |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 10.96               |  |  | 22.20                   |  |  |
| ANNUAL RUNOFF (AC-FT)    | 121900                 |  |  | 1860                |  |  | 48460                   |  |  |
| 10 PERCENT EXCEEDS       | 299                    |  |  | 3.2                 |  |  | 75                      |  |  |
| 50 PERCENT EXCEEDS       | .08                    |  |  | .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 sea level, from topographic map.

REMARKS.--Records good except for 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 25,990 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| 1     | 47   | 49   | 37   | 38    | 347   | 59    | 165  | 71   | 105  | 64   | 117  | 29   |
| 2     | 46   | 50   | 39   | 39    | 47    | 49    | 185  | 67   | 113  | 58   | 121  | 27   |
| 3     | 41   | 46   | 36   | 12    | 63    | 50    | 167  | 68   | 112  | 57   | 121  | 31   |
| 4     | 38   | 46   | 51   | 36    | 59    | 375   | 165  | 65   | 54   | 128  | 110  | 29   |
| 5     | 39   | 40   | 35   | 45    | 66    | 1060  | 176  | 66   | 75   | 92   | 121  | 28   |
| 6     | 41   | 41   | 34   | 41    | 53    | 63    | 185  | 68   | 70   | 73   | 115  | 32   |
| 7     | 39   | 39   | 38   | 40    | 47    | 59    | 172  | 69   | 68   | 76   | 113  | 27   |
| 8     | 41   | 41   | 32   | 44    | 52    | 53    | 160  | 70   | 72   | 71   | 119  | 24   |
| 9     | 47   | 38   | 31   | 45    | 49    | 52    | 158  | 68   | 73   | 59   | 121  | 31   |
| 10    | 49   | 39   | 31   | 39    | 45    | 44    | 158  | 69   | 70   | 52   | 103  | 32   |
| 11    | 50   | 42   | 30   | 45    | 40    | 44    | 46   | 67   | 65   | 60   | 88   | 45   |
| 12    | 42   | 41   | 84   | 42    | 47    | 235   | 38   | 65   | 64   | 58   | 119  | 46   |
| 13    | 41   | 41   | 462  | 46    | 46    | 2090  | 33   | 72   | 68   | 58   | 116  | 51   |
| 14    | 41   | 41   | 136  | 37    | 44    | 223   | 34   | 65   | 62   | 44   | 118  | 47   |
| 15    | 39   | 43   | 81   | 34    | 43    | 98    | 35   | 67   | 56   | 62   | 88   | 47   |
| 16    | 40   | 42   | 70   | 337   | 48    | 79    | 42   | 66   | 60   | 76   | 38   | 57   |
| 17    | 44   | 37   | 72   | 90    | 43    | 47    | 49   | 65   | 67   | 87   | 32   | 58   |
| 18    | 43   | 40   | 77   | 81    | 43    | 52    | 345  | 65   | 59   | 91   | 29   | 82   |
| 19    | 40   | 41   | 70   | 108   | 115   | 113   | 39   | 66   | 54   | 93   | 37   | 77   |
| 20    | 40   | 43   | 84   | 83    | 6920  | 105   | 35   | 77   | 40   | 93   | 36   | 74   |
| 21    | 38   | 32   | 85   | 762   | 3680  | 53    | 35   | 96   | 44   | 98   | 33   | 66   |
| 22    | 44   | 41   | 85   | 84    | 373   | 48    | 46   | 98   | 45   | 102  | 33   | 65   |
| 23    | 44   | 49   | 231  | 40    | 137   | 53    | 78   | 92   | 46   | 107  | 35   | 70   |
| 24    | 42   | 40   | 41   | 32    | 150   | 49    | 75   | 94   | 35   | 107  | 29   | 71   |
| 25    | 42   | 39   | 38   | 34    | 425   | 53    | 72   | 94   | 40   | 112  | 28   | 62   |
| 26    | 42   | 38   | 60   | 48    | 174   | 50    | 74   | 93   | 34   | 123  | 33   | 74   |
| 27    | 43   | 42   | 45   | 48    | 612   | 51    | 70   | 91   | 32   | 120  | 30   | 74   |
| 28    | 42   | 45   | 40   | 55    | 95    | 66    | 70   | 108  | 31   | 89   | 33   | 69   |
| 29    | 43   | 45   | 45   | 45    | 58    | 73    | 72   | 130  | 42   | 125  | 30   | 66   |
| 30    | 45   | 45   | 43   | 42    | ---   | 72    | 69   | 110  | 36   | 118  | 32   | 73   |
| 31    | 43   | ---  | 37   | 3040  | ---   | 66    | ---  | 118  | ---  | 117  | 31   | ---  |
| TOTAL | 1316 | 1256 | 2280 | 5512  | 13921 | 5584  | 3048 | 2480 | 1792 | 2670 | 2209 | 1564 |
| MEAN  | 42.5 | 41.9 | 73.5 | 178   | 480   | 180   | 102  | 80.0 | 59.7 | 86.1 | 71.3 | 52.1 |
| MAX   | 50   | 50   | 462  | 3040  | 6920  | 2090  | 345  | 130  | 113  | 128  | 121  | 82   |
| MIN   | 38   | 32   | 30   | 12    | 40    | 44    | 33   | 65   | 31   | 44   | 28   | 24   |
| AC-FT | 2610 | 2490 | 4520 | 10930 | 27610 | 11080 | 6050 | 4920 | 3550 | 5300 | 4380 | 3100 |



## 11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 88.5 | 148  | 157  | 392  | 581  | 419  | 115  | 91.5 | 65.9 | 57.7 | 56.0 | 75.0 |
| MAX  | 208  | 782  | 426  | 4150 | 4497 | 3796 | 590  | 274  | 254  | 230  | 208  | 205  |
| (WY) | 1979 | 1966 | 1993 | 1993 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1956 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 111959                 |  |  |  | 43632               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 307                    |  |  |  | 119                 |  |  |  |                         |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 185                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 810                     |  |  |  |
| HIGHEST DAILY MEAN       | 8380                   |  |  |  | 6920                |  |  |  | 24.4                    |  |  |  |
| LOWEST DAILY MEAN        | 27                     |  |  |  | 12                  |  |  |  | 24800                   |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 33                     |  |  |  | 28                  |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 22900               |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 8.78                |  |  |  | 46600                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 222100                 |  |  |  | 86540               |  |  |  | 10.90                   |  |  |  |
| 10 PERCENT EXCEEDS       | 593                    |  |  |  | 121                 |  |  |  | 134200                  |  |  |  |
| 50 PERCENT EXCEEDS       | 65                     |  |  |  | 53                  |  |  |  | 210                     |  |  |  |
| 90 PERCENT EXCEEDS       | 39                     |  |  |  | 34                  |  |  |  | 66                      |  |  |  |
|                          |                        |  |  |  |                     |  |  |  | .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 sea level, from topographic map. Prior to Dec. 4, 1964, at datum 1.03 ft higher.

REMARKS.--Records poor except for discharges above 50 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN    | FEB    | MAR   | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|------|------|-------|--------|--------|-------|-------|-------|-------|------|-------|-------|
| 1     | .24  | .18  | .37   | .64    | 51     | 28    | 6.1   | e1.9  | .72   | .36  | .34   | .48   |
| 2     | .29  | .14  | .15   | .27    | 5.4    | 41    | 2.8   | 1.9   | .72   | .35  | .33   | .49   |
| 3     | .28  | .14  | .14   | .25    | 5.5    | 11    | e2.5  | 1.5   | .72   | .34  | .44   | .49   |
| 4     | .25  | .12  | .13   | .26    | 2.3    | 46    | e2.3  | 1.7   | .79   | .33  | .36   | .38   |
| 5     | .12  | .17  | 1.1   | .23    | 1.7    | 74    | e1.9  | 1.6   | .64   | .36  | .28   | .21   |
| 6     | .13  | .16  | .46   | .24    | 1.6    | 13    | e1.7  | 1.5   | .98   | .32  | .20   | .36   |
| 7     | .16  | .17  | .28   | .29    | 1.8    | 12    | e1.6  | 1.7   | 1.1   | .18  | .31   | .21   |
| 8     | .14  | .17  | .19   | .40    | 1.8    | 8.7   | e1.6  | 1.9   | 1.1   | .03  | .31   | .35   |
| 9     | .19  | .17  | .34   | .45    | 1.4    | 7.6   | e1.5  | 1.1   | .89   | .03  | .32   | .27   |
| 10    | .34  | .16  | .61   | .40    | 1.1    | 8.1   | e1.4  | 1.2   | .94   | .12  | .34   | .34   |
| 11    | .41  | .20  | .38   | .45    | 1.1    | 41    | e1.5  | 1.3   | .52   | .32  | .31   | .25   |
| 12    | .37  | .25  | 3.0   | .39    | 1.1    | 154   | e1.4  | 1.3   | .34   | .36  | .39   | .41   |
| 13    | .30  | .17  | 33    | .36    | .93    | 50    | e1.2  | 1.3   | .09   | .41  | .38   | .35   |
| 14    | .33  | .17  | 11    | .27    | .99    | 18    | 1.1   | 1.1   | .32   | .35  | .31   | .44   |
| 15    | .30  | .28  | 1.6   | .30    | 1.0    | 17    | 1.8   | 1.1   | .82   | .22  | .31   | .72   |
| 16    | .34  | .24  | .91   | 24     | .78    | 13    | 3.0   | 1.1   | .41   | .13  | .35   | .61   |
| 17    | .18  | .18  | .83   | 8.5    | .75    | 13    | 42    | 1.1   | .42   | .19  | .29   | .60   |
| 18    | .15  | .14  | .59   | 2.5    | .90    | 11    | 8.8   | 1.1   | .33   | .10  | .25   | .50   |
| 19    | .16  | .17  | .43   | 2.2    | 6.4    | 9.3   | 3.8   | 1.1   | .33   | .25  | .22   | .48   |
| 20    | .16  | .15  | .39   | .73    | 429    | 3.7   | e3.5  | 1.1   | .13   | .10  | .26   | .94   |
| 21    | .13  | .12  | .33   | 23     | 237    | e3.0  | e3.2  | 1.1   | .17   | .03  | .28   | .59   |
| 22    | .17  | .09  | .29   | 4.0    | 56     | e2.9  | e3.0  | 1.0   | .54   | .03  | .98   | .56   |
| 23    | .15  | .10  | 22    | 2.4    | 15     | e2.8  | e2.7  | .90   | .55   | .03  | .93   | .61   |
| 24    | .12  | .12  | 1.7   | 1.4    | 14     | e2.7  | e2.5  | .90   | .28   | .03  | .90   | .70   |
| 25    | .11  | .10  | .97   | 1.4    | 37     | 2.6   | e2.4  | .90   | .06   | .19  | .85   | .61   |
| 26    | .11  | .10  | .58   | 1.1    | 16     | 1.8   | e2.1  | .90   | .02   | .28  | .88   | .62   |
| 27    | .12  | .11  | .44   | 1.2    | 34     | 11    | e2.0  | .90   | .00   | .30  | .80   | 1.0   |
| 28    | .14  | .11  | .35   | 1.7    | 24     | 1.9   | e2.0  | .90   | .00   | .24  | .86   | .90   |
| 29    | .11  | .15  | .35   | .98    | 7.3    | 1.4   | e1.9  | .90   | .01   | .36  | .50   | .93   |
| 30    | .44  | .28  | .38   | .90    | ---    | 2.8   | e1.8  | .90   | .34   | .31  | .56   | .80   |
| 31    | .10  | ---  | .31   | 108    | ---    | 6.1   | ---   | .77   | ---   | .30  | .52   | ---   |
| TOTAL | 6.54 | 4.81 | 83.60 | 189.21 | 956.85 | 618.4 | 115.1 | 37.67 | 14.28 | 6.95 | 14.36 | 16.20 |
| MEAN  | .21  | .16  | 2.70  | 6.10   | 33.0   | 19.9  | 3.84  | 1.22  | .48   | .22  | .46   | .54   |
| MAX   | .44  | .28  | 33    | 108    | 429    | 154   | 42    | 1.9   | 1.1   | .41  | .98   | 1.0   |
| MIN   | .10  | .09  | .13   | .23    | .75    | 1.4   | 1.1   | .77   | .00   | .03  | .20   | .21   |
| AC-FT | 13   | 9.5  | 166   | 375    | 1900   | 1230  | 228   | 75    | 28    | 14   | 28    | 32    |

e Estimated.

## 11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.00 | 2.96 | 4.13 | 9.56 | 13.1 | 9.93 | 2.99 | .84  | .63  | .46  | .56  | .77  |
| MAX  | 15.3 | 31.6 | 26.6 | 95.8 | 165  | 79.9 | 50.3 | 4.49 | 7.56 | 3.03 | 4.68 | 7.02 |
| (WY) | 1984 | 1984 | 1989 | 1993 | 1980 | 1978 | 1983 | 1977 | 1995 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1942 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 5050.40                |  |  |  | 2063.97             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 13.8                   |  |  |  | 5.64                |  |  |  | 3.87                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 20.9                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .001                    |  |  |  |
| HIGHEST DAILY MEAN       | 531                    |  |  |  | 429                 |  |  |  | 1700                    |  |  |  |
| LOWEST DAILY MEAN        | .09                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .10                    |  |  |  | .08                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 1280                |  |  |  | a                       |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 5.72                |  |  |  | a                       |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 10020                  |  |  |  | 4090                |  |  |  | 2800                    |  |  |  |
| 10 PERCENT EXCEEDS       | 24                     |  |  |  | 8.6                 |  |  |  | 3.1                     |  |  |  |
| 50 PERCENT EXCEEDS       | 2.3                    |  |  |  | .56                 |  |  |  | .20                     |  |  |  |
| 90 PERCENT EXCEEDS       | .17                    |  |  |  | .14                 |  |  |  | .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 sea level, from topographic map. V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956. Prior to Dec. 3, 1971, at datum 3.00 ft higher.

REMARKS.--Records fair. Flow regulated by Fullerton flood-control reservoir, capacity, 760 acre-ft (resurvey of 1970). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River basins.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 392 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 8.25 ft, present datum; no flow at times some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR    | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | .52   | .60   | .40   | .34   | 1.7    | .80    | .63   | .55   | .42   | .39   | .51   | .53   |
| 2     | .44   | .40   | .41   | .38   | .58    | .74    | .41   | .47   | .47   | .40   | .66   | .44   |
| 3     | .53   | .37   | .39   | .40   | 2.5    | .43    | .38   | .43   | .47   | .39   | .53   | .67   |
| 4     | .42   | .36   | .40   | .44   | .52    | 14     | .36   | .39   | .42   | .41   | .48   | .55   |
| 5     | .36   | .32   | .43   | .48   | .44    | 24     | .40   | .45   | .42   | .39   | .59   | .54   |
| 6     | .42   | .35   | .40   | .45   | .47    | .42    | .38   | .42   | .49   | .38   | .48   | .61   |
| 7     | .43   | .39   | .46   | .43   | .42    | .39    | .44   | .47   | .45   | .32   | .57   | .53   |
| 8     | .39   | .37   | .38   | .45   | .41    | .41    | .44   | .49   | .46   | .38   | .46   | .39   |
| 9     | .43   | .40   | .41   | .45   | .41    | .37    | .46   | .48   | .39   | .79   | .50   | .48   |
| 10    | .48   | .38   | .40   | .47   | .40    | .39    | .43   | .49   | .49   | .38   | .45   | .47   |
| 11    | .48   | .39   | .41   | .39   | .42    | 16     | .53   | .49   | .47   | .38   | .44   | .45   |
| 12    | .59   | .35   | 3.9   | .44   | .43    | 29     | .49   | .44   | .48   | .39   | .46   | .53   |
| 13    | .62   | .38   | 16    | .45   | .38    | 21     | .44   | .57   | .93   | .50   | .57   | .54   |
| 14    | .61   | .39   | .91   | .43   | .37    | .58    | .51   | .53   | .57   | .34   | .64   | .48   |
| 15    | .58   | .40   | .43   | .47   | .39    | .47    | 1.1   | .48   | .69   | .43   | .50   | .49   |
| 16    | .65   | .42   | .44   | 16    | .45    | .53    | 3.3   | .52   | .74   | .45   | .62   | .42   |
| 17    | .58   | .39   | .43   | 2.3   | .41    | .59    | 16    | .53   | .76   | .51   | .64   | .54   |
| 18    | .60   | .40   | .40   | .53   | .38    | .58    | .37   | .49   | .47   | .52   | .44   | .45   |
| 19    | .57   | .42   | .39   | 1.3   | 4.6    | .53    | .35   | .44   | .50   | .51   | .58   | .49   |
| 20    | .59   | .37   | .44   | .48   | 161    | .56    | .34   | .48   | .46   | .46   | .56   | .51   |
| 21    | .61   | .35   | .41   | 12    | 91     | .45    | .52   | .42   | .50   | .39   | .36   | .51   |
| 22    | .60   | .37   | .45   | .94   | 3.6    | .39    | 1.1   | .48   | .43   | .46   | .50   | .44   |
| 23    | .53   | .40   | 13    | .43   | .73    | .33    | .96   | .45   | .41   | .48   | .62   | .49   |
| 24    | .46   | .39   | .74   | .43   | .66    | .38    | .62   | .49   | .48   | .55   | .44   | .51   |
| 25    | .51   | .36   | .45   | .55   | 6.7    | .39    | .69   | .44   | .40   | .48   | .42   | .45   |
| 26    | .36   | .36   | .38   | .46   | .99    | .38    | .70   | .38   | .36   | .46   | .46   | .47   |
| 27    | .33   | .30   | .40   | .45   | 15     | 4.0    | .58   | .41   | .39   | .49   | .47   | .51   |
| 28    | .35   | .33   | .40   | 1.2   | 2.5    | .47    | .43   | .46   | .38   | .43   | .40   | .46   |
| 29    | .32   | .39   | .50   | .45   | .76    | .41    | .37   | .53   | .39   | .47   | .39   | .47   |
| 30    | .39   | .39   | .46   | .45   | ---    | .35    | .37   | .44   | .34   | .49   | .59   | .47   |
| 31    | .34   | ---   | .41   | 44    | ---    | 1.6    | ---   | .44   | ---   | .51   | .54   | ---   |
| TOTAL | 15.09 | 11.49 | 45.43 | 88.44 | 298.62 | 120.94 | 34.10 | 14.55 | 14.63 | 13.93 | 15.87 | 14.89 |
| MEAN  | .49   | .38   | 1.47  | 2.85  | 10.3   | 3.90   | 1.14  | .47   | .49   | .45   | .51   | .50   |
| MAX   | .65   | .60   | .16   | .44   | .161   | .29    | .16   | .57   | .93   | .79   | .66   | .67   |
| MIN   | .32   | .30   | .38   | .34   | .37    | .33    | .34   | .38   | .34   | .32   | .36   | .39   |
| AC-FT | 30    | 23    | 90    | 175   | 592    | 240    | 68    | 29    | 29    | 28    | 31    | 30    |

## 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .52  | 1.07 | 1.82 | 4.14 | 4.58 | 3.39 | .91  | .38  | .34  | .30  | .36  | .44  |
| MAX  | 5.31 | 5.76 | 9.96 | 28.0 | 25.0 | 18.6 | 6.28 | 1.92 | 1.66 | 1.01 | 1.72 | 2.53 |
| (WY) | 1984 | 1986 | 1993 | 1993 | 1980 | 1983 | 1958 | 1977 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1955 - 1996

|                          |         |        |      |
|--------------------------|---------|--------|------|
| ANNUAL TOTAL             | 1470.41 | 687.98 |      |
| ANNUAL MEAN              | 4.03    | 1.88   |      |
| HIGHEST ANNUAL MEAN      |         |        | 1.51 |
| LOWEST ANNUAL MEAN       |         |        | 5.16 |
| HIGHEST DAILY MEAN       | 166     | Mar 11 | .028 |
| LOWEST DAILY MEAN        | .00     | Feb 24 | .30  |
| ANNUAL SEVEN-DAY MINIMUM | .27     | Apr 10 | .36  |
| INSTANTANEOUS PEAK FLOW  |         |        | 362  |
| INSTANTANEOUS PEAK STAGE |         |        | 8.15 |
| ANNUAL RUNOFF (AC-FT)    | 2920    | 1360   | 1090 |
| 10 PERCENT EXCEEDS       | 2.1     | .77    | .97  |
| 50 PERCENT EXCEEDS       | .43     | .46    | .26  |
| 90 PERCENT EXCEEDS       | .31     | .38    | .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 sea level (U.S. Army Corps of Engineers benchmark). See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.--Records fair except for discharges below 100 ft<sup>3</sup>/s, which are poor. Flow regulated since July 1931 by Big Tujunga Flood-Control Reservoir, capacity, 5,690 acre-ft, and since September 1940 by Hansen Flood-Control Reservoir, capacity, 25,450 acre-ft. Several small diversions for domestic use and irrigation. Since about 1948, Los Angeles County Department of Public Works has diverted water 0.3 mi upstream from gage to spreading grounds, as shown in footnote below table. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Records of diversion provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft<sup>3</sup>/s, Feb. 10, 1978, Mar. 2, 1983; maximum gage height, 7.64 ft, Mar. 2, 1983; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 54,000 ft<sup>3</sup>/s, estimated, Mar. 2, 1938.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC    | JAN  | FEB     | MAR     | APR  | MAY    | JUN    | JUL  | AUG   | SEP   |
|-------|-------|-------|--------|------|---------|---------|------|--------|--------|------|-------|-------|
| 1     | 3.4   | 6.6   | 12     | .00  | .00     | 54      | .00  | .00    | 26     | .00  | 4.3   | 9.7   |
| 2     | 4.2   | 8.0   | 12     | .00  | .00     | 55      | .77  | .00    | 24     | .00  | 6.1   | 10    |
| 3     | 4.6   | 8.0   | 12     | .00  | .00     | 73      | .00  | .00    | 21     | .00  | 6.1   | 12    |
| 4     | 4.6   | 8.0   | 12     | .00  | .00     | 79      | .00  | .00    | 21     | .00  | 5.6   | 12    |
| 5     | 4.6   | 8.0   | 13     | .00  | .77     | 109     | .00  | .00    | 21     | .00  | 4.3   | 12    |
| 6     | 4.6   | 8.0   | 20     | .00  | .00     | 74      | .00  | .00    | 21     | .00  | 3.4   | 13    |
| 7     | 4.6   | 8.0   | 21     | .00  | .00     | 90      | .00  | .00    | 21     | .00  | 5.8   | 14    |
| 8     | 4.6   | 9.4   | 21     | .00  | .46     | 87      | .00  | .00    | 21     | .00  | 9.0   | 14    |
| 9     | 4.6   | 9.7   | 21     | .00  | .00     | 85      | .00  | .00    | 19     | .00  | 8.0   | 14    |
| 10    | 5.2   | 9.7   | 21     | .00  | .00     | 101     | .00  | .00    | 16     | .00  | 6.3   | 14    |
| 11    | 4.6   | 9.7   | 17     | .77  | .00     | 90      | .61  | .00    | 18     | .00  | 6.1   | 14    |
| 12    | 4.6   | 9.7   | 9.3    | .00  | .72     | 82      | .00  | .00    | 18     | .00  | 6.1   | 14    |
| 13    | 4.6   | 9.7   | 3.2    | .00  | .00     | 198     | .00  | 42     | 16     | .00  | 7.0   | 12    |
| 14    | 4.6   | 9.7   | .00    | .00  | .00     | 172     | .00  | 57     | 16     | .00  | 9.3   | 12    |
| 15    | 4.6   | 9.7   | .00    | .00  | .00     | 143     | 3.3  | 66     | 16     | .00  | 9.7   | 14    |
| 16    | 4.6   | 9.7   | .00    | .00  | .64     | 123     | .00  | 74     | 16     | .00  | 8.0   | 14    |
| 17    | 4.6   | 9.7   | .00    | .00  | .00     | 111     | .00  | 49     | 6.7    | .00  | 8.0   | 15    |
| 18    | 4.6   | 9.7   | .00    | .77  | .00     | 106     | .00  | 47     | .26    | .05  | 8.6   | 14    |
| 19    | 4.6   | 9.7   | .00    | .00  | .00     | 58      | .00  | 44     | .00    | .00  | 12    | 11    |
| 20    | 4.6   | 9.7   | .00    | .00  | 104     | .00     | .00  | 44     | .00    | .00  | 12    | 12    |
| 21    | 5.5   | 9.7   | .00    | .00  | 743     | .00     | .00  | 43     | .00    | .00  | 9.7   | 12    |
| 22    | 6.1   | 12    | .00    | .12  | 174     | .00     | .61  | 41     | .00    | .00  | 8.1   | 12    |
| 23    | 6.1   | 10    | .00    | .00  | 102     | .00     | .00  | 40     | .00    | .00  | 8.0   | 11    |
| 24    | 6.1   | 9.7   | .00    | .43  | 98      | .00     | .00  | 33     | .00    | .00  | 8.0   | 9.8   |
| 25    | 6.1   | 9.7   | .00    | .60  | 54      | .00     | .00  | 27     | .00    | .00  | 8.0   | 9.7   |
| 26    | 6.1   | 9.4   | .00    | .00  | 71      | .00     | .00  | 26     | .00    | .00  | 8.0   | 9.7   |
| 27    | 6.1   | 8.9   | .00    | .00  | 64      | .00     | .00  | 28     | .00    | .00  | 7.2   | 9.7   |
| 28    | 6.1   | 14    | .00    | .00  | 66      | .00     | .00  | 29     | .00    | .00  | 6.1   | 10    |
| 29    | 6.1   | 13    | .00    | .31  | 57      | .00     | .00  | 29     | .00    | .00  | 7.4   | 14    |
| 30    | 6.1   | 12    | .00    | .00  | ---     | .00     | .00  | 26     | .00    | .00  | 9.7   | 13    |
| 31    | 6.1   | ---   | .00    | .00  | ---     | .00     | ---  | 26     | ---    | .00  | 9.7   | ---   |
| TOTAL | 157.5 | 288.8 | 194.50 | 3.00 | 1535.59 | 1890.00 | 5.29 | 771.00 | 317.96 | 0.05 | 235.6 | 367.6 |
| MEAN  | 5.08  | 9.63  | 6.27   | .097 | 53.0    | 61.0    | .18  | 24.9   | 10.6   | .002 | 7.60  | 12.3  |
| MAX   | 6.1   | 14    | 21     | .77  | 743     | 198     | 3.3  | 74     | 26     | .05  | 12    | 15    |
| MIN   | 3.4   | 6.6   | .00    | .00  | .00     | .00     | .00  | .00    | .00    | .00  | 3.4   | 9.7   |
| AC-FT | 312   | 573   | 386    | 6.0  | 3050    | 3750    | 10   | 1530   | 631    | .1   | 467   | 729   |
| a     | 363   | 657   | 838    | 485  | 4880    | 4000    | 220  | 1690   | 721    | 96   | 626   | 889   |

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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.49 | 7.92 | 3.76 | 41.8 | 93.1 | 84.9 | 27.1 | 17.1 | 5.90 | 1.52 | 1.46 | 3.29 |
| MAX  | 32.2 | 153  | 65.3 | 742  | 1218 | 1387 | 252  | 285  | 64.6 | 26.8 | 18.4 | 41.4 |
| (WY) | 1984 | 1984 | 1984 | 1993 | 1993 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1948 - 1996 |            |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL             | 24836.93               |        | 5766.89             |        |                         |            |
| ANNUAL MEAN              | 68.0                   |        | 15.8                |        | 23.8                    |            |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 224                     |            |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .000                    |            |
| HIGHEST DAILY MEAN       | 1090                   | Jan 11 | 743                 | Feb 21 | 11400                   | Mar 2 1983 |
| LOWEST DAILY MEAN        | .00                    | Jan 1  | .00                 | Dec 14 | .00                     | Oct 1 1947 |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Jul 30 | .00                 | Dec 14 | .00                     | Oct 1 1947 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 1500                | Feb 21 | 15200                   | Mar 2 1983 |
| INSTANTANEOUS PEAK STAGE |                        |        | 2.69                | Feb 21 | 7.64                    | Mar 2 1983 |
| ANNUAL RUNOFF (AC-FT)    | 49260                  |        | 11440               |        | 17260                   |            |
| 10 PERCENT EXCEEDS       | 115                    |        | 43                  |        | 16                      |            |
| 50 PERCENT EXCEEDS       | 9.3                    |        | 4.6                 |        | .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 sea level. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

REMARKS.--Records 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 or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 21 | 0645 | 584                               | 3.83                | Mar. 13 | 0015 | 274                               | 3.20                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  |
|-------|------|------|------|------|--------|-------|-------|-------|-------|-------|-------|------|
| 1     | 2.1  | 2.5  | 1.9  | 2.1  | 22     | 12    | 11    | 4.0   | 2.5   | .80   | e.55  | .17  |
| 2     | 1.9  | 2.5  | 2.0  | 2.3  | 6.8    | 10    | 12    | 4.2   | 2.2   | .72   | e.54  | .18  |
| 3     | 1.7  | 2.5  | 2.0  | 2.4  | 5.0    | 9.7   | 10    | 4.5   | 2.1   | .72   | e.53  | .30  |
| 4     | 1.6  | 2.2  | 1.9  | 2.4  | 4.5    | 17    | 9.2   | 4.3   | 2.0   | .69   | e.52  | .41  |
| 5     | 1.5  | 2.0  | 2.0  | 2.4  | 4.0    | 47    | 8.4   | 4.2   | 1.9   | .59   | e.51  | .43  |
| 6     | 1.5  | 2.0  | 2.1  | 2.4  | 3.6    | 23    | 8.1   | 4.0   | 2.0   | .55   | e.50  | .29  |
| 7     | 1.6  | 2.0  | 2.1  | 2.4  | 3.2    | 18    | 8.1   | 4.0   | 1.9   | .58   | e.49  | .27  |
| 8     | 1.7  | 1.9  | 2.1  | 2.4  | 3.0    | 15    | 7.8   | 4.0   | 1.8   | .61   | e.48  | .24  |
| 9     | 1.7  | 2.0  | 2.0  | 2.3  | 3.0    | 13    | 7.9   | 3.8   | 1.6   | .61   | .47   | .16  |
| 10    | 1.7  | 2.0  | 1.9  | 2.3  | 3.0    | 11    | 8.0   | 3.6   | 1.4   | .55   | .42   | .13  |
| 11    | 1.7  | 1.9  | 1.9  | 2.1  | 3.1    | 10    | 7.9   | 3.2   | 1.3   | .52   | .41   | .14  |
| 12    | 1.8  | 1.9  | 1.9  | 2.0  | 3.0    | 27    | 7.4   | 3.0   | 1.3   | .52   | .39   | .13  |
| 13    | 1.6  | 1.9  | 3.1  | 2.0  | 3.0    | 125   | 6.8   | 3.1   | 1.4   | .53   | .37   | .22  |
| 14    | 1.5  | 1.7  | 2.9  | 2.0  | 3.0    | 74    | 6.7   | 2.9   | 1.4   | .45   | .35   | .31  |
| 15    | 1.5  | 1.8  | 2.7  | 2.0  | 3.0    | 48    | 6.4   | 2.8   | 1.3   | .39   | .36   | .26  |
| 16    | 1.6  | 1.8  | 2.4  | 2.4  | 3.0    | 37    | 7.0   | 3.5   | 1.3   | .42   | .36   | .32  |
| 17    | 1.7  | 1.7  | 2.2  | 3.2  | 2.9    | 29    | 9.8   | 3.7   | 1.1   | .39   | e.38  | .23  |
| 18    | 1.6  | 1.6  | 2.1  | 2.5  | 2.9    | 25    | 9.9   | 3.3   | 1.1   | .43   | e.39  | .21  |
| 19    | 1.6  | 1.6  | 2.1  | 2.4  | 9.3    | 22    | 7.8   | 3.2   | 1.0   | .46   | e.41  | .20  |
| 20    | 1.6  | 1.7  | 2.2  | 2.4  | 342    | 20    | 7.1   | 3.0   | 1.1   | .48   | e.43  | .20  |
| 21    | 1.7  | 1.7  | 2.2  | 2.5  | 376    | 18    | 7.0   | 2.9   | 1.2   | .54   | e.44  | .19  |
| 22    | 1.8  | 1.7  | 2.3  | 3.1  | 136    | 17    | 6.8   | 2.9   | 1.2   | .52   | e.46  | .30  |
| 23    | 1.7  | 1.6  | 3.1  | 2.6  | 51     | 16    | 6.2   | 2.9   | 1.3   | .54   | e.48  | .40  |
| 24    | 1.6  | 1.5  | 3.8  | 2.2  | 30     | 15    | 6.1   | 2.5   | 1.4   | .62   | e.50  | .40  |
| 25    | 1.6  | 1.5  | 3.0  | 2.1  | 24     | 14    | 5.6   | 2.3   | 1.5   | .61   | e.51  | .41  |
| 26    | 1.6  | 1.5  | 2.6  | 2.1  | 19     | 13    | 5.5   | 2.6   | 1.5   | .62   | e.53  | .48  |
| 27    | 1.6  | 1.5  | 2.5  | 2.1  | 17     | 11    | 5.4   | 3.0   | 1.5   | e.61  | .31   | .47  |
| 28    | 1.6  | 1.6  | 2.4  | 2.2  | 16     | 11    | 5.1   | e3.5  | 1.4   | e.60  | .26   | .32  |
| 29    | 1.7  | 1.7  | 2.4  | 2.1  | 14     | 11    | 4.4   | 3.2   | 1.1   | e.59  | .26   | .21  |
| 30    | 1.9  | 1.8  | 2.4  | 2.0  | ---    | 10    | 4.2   | 3.2   | .92   | e.58  | .24   | .40  |
| 31    | 2.1  | ---  | 2.4  | 26   | ---    | 9.4   | ---   | 3.0   | ---   | e.56  | .16   | ---  |
| TOTAL | 52.1 | 55.3 | 72.6 | 95.4 | 1116.3 | 738.1 | 223.6 | 104.3 | 44.72 | 17.40 | 13.01 | 8.38 |
| MEAN  | 1.68 | 1.84 | 2.34 | 3.08 | 38.5   | 23.8  | 7.45  | 3.36  | 1.49  | .56   | .42   | .28  |
| MAX   | 2.1  | 2.5  | 3.8  | 26   | 376    | 125   | 12    | 4.5   | 2.5   | .80   | .55   | .48  |
| MIN   | 1.5  | 1.5  | 1.9  | 2.0  | 2.9    | 9.4   | 4.2   | 2.3   | .92   | .39   | .16   | .13  |
| AC-FT | 103  | 110  | 144  | 189  | 2210   | 1460  | 444   | 207   | 89    | 35    | 26    | 17   |

e Estimated.



11098000 ARROYO SECO NEAR PASADENA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.17 | 3.93 | 8.86 | 19.0 | 33.0 | 28.9 | 14.2 | 6.59 | 3.37 | 1.66 | 1.00 | 1.04 |
| 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 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1911 - 1996

|                          |        |         |      |
|--------------------------|--------|---------|------|
| ANNUAL TOTAL             | 9117.3 | 2541.21 |      |
| ANNUAL MEAN              | 25.0   | 6.94    | 10.1 |
| HIGHEST ANNUAL MEAN      |        |         | 57.8 |
| LOWEST ANNUAL MEAN       |        |         | .75  |
| HIGHEST DAILY MEAN       | 477    | Jan 10  | 3690 |
| LOWEST DAILY MEAN        | 1.1    | Aug 15  | .00  |
| ANNUAL SEVEN-DAY MINIMUM | 1.3    | Aug 12  | .00  |
| INSTANTANEOUS PEAK FLOW  |        |         | 584  |
| INSTANTANEOUS PEAK STAGE |        |         | 3.83 |
| ANNUAL RUNOFF (AC-FT)    | 18080  | 5040    | 7330 |
| 10 PERCENT EXCEEDS       | 64     | 11      | 16   |
| 50 PERCENT EXCEEDS       | 6.2    | 2.0     | 1.8  |
| 90 PERCENT EXCEEDS       | 1.6    | .40     | .20  |

## 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 sea level.

REMARKS.--Records fair. 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 25,990 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT     | NOV   | DEC    | JAN     | FEB    | MAR     | APR    | MAY   | JUN     | JUL   | AUG   | SEP  |
|-------|---------|-------|--------|---------|--------|---------|--------|-------|---------|-------|-------|------|
| 1     | 5.6     | 7.4   | 1.4    | .79     | 56     | 5.9     | 43     | 1.2   | .64     | 32    | 2.5   | 45   |
| 2     | 5.7     | 1.2   | 1.1    | 2.6     | 5.0    | 1.7     | 5.1    | 1.1   | .67     | 15    | 2.4   | 34   |
| 3     | 12      | 1.2   | 1.6    | 1.1     | 29     | 1.6     | 1.8    | 1.5   | 29      | 1.7   | 1.0   | 25   |
| 4     | 78      | 1.1   | 1.4    | 1.0     | 1.3    | 380     | 1.4    | 1.5   | 51      | .98   | 1.8   | 19   |
| 5     | 131     | 1.1   | 1.4    | 1.4     | 2.2    | 147     | 1.3    | 1.2   | 37      | .97   | 1.2   | 33   |
| 6     | 149     | 3.4   | 1.5    | 1.0     | 3.1    | 2.5     | 1.1    | .80   | 28      | .85   | 1.9   | 48   |
| 7     | 153     | 5.4   | 2.1    | 1.1     | 2.2    | 1.7     | .95    | 1.5   | 20      | .80   | 1.7   | 56   |
| 8     | 100     | .95   | 1.6    | 3.2     | 1.2    | 1.2     | 1.3    | .83   | 14      | .95   | 1.2   | 62   |
| 9     | 62      | 1.2   | .91    | 3.2     | 1.9    | 1.8     | .95    | .75   | 9.7     | 1.1   | 1.5   | 66   |
| 10    | 36      | 1.1   | .81    | 1.6     | 1.0    | .60     | 1.1    | 1.6   | 8.9     | 1.3   | 1.3   | 76   |
| 11    | 52      | 1.1   | 2.1    | 2.2     | 1.0    | 1.7     | 1.2    | .64   | 62      | 1.1   | 1.0   | 80   |
| 12    | 96      | .86   | 93     | 1.7     | 2.1    | 454     | 1.0    | .82   | 141     | 1.2   | 1.3   | 83   |
| 13    | 125     | 1.6   | 148    | 2.2     | 3.2    | 1610    | .96    | 1.5   | 189     | .79   | 1.2   | 87   |
| 14    | 140     | 1.3   | 7.8    | 2.1     | 1.5    | 88      | 1.0    | .88   | 241     | 1.0   | 2.0   | 88   |
| 15    | 161     | 1.5   | 3.5    | 1.5     | 4.4    | 17      | .94    | .96   | 282     | 1.5   | 1.7   | 91   |
| 16    | 191     | 1.2   | .59    | 230     | 2.7    | 12      | 104    | 1.5   | 312     | 1.2   | 2.5   | 178  |
| 17    | 245     | 1.7   | .38    | 7.9     | 1.9    | 8.9     | 12     | 1.1   | 326     | 2.1   | 1.1   | 234  |
| 18    | 189     | .95   | 1.7    | 1.4     | 1.7    | 2.1     | 64     | .87   | 326     | 1.1   | 1.1   | 200  |
| 19    | 114     | 1.1   | .87    | 9.8     | 314    | 1.2     | 1.1    | .87   | 326     | 1.1   | 2.4   | 177  |
| 20    | 75      | 1.3   | 1.5    | .80     | 2960   | 1.5     | 1.1    | .64   | 326     | .92   | 3.8   | 164  |
| 21    | 50      | 1.3   | .96    | 377     | 2760   | 1.1     | .89    | .62   | 327     | .85   | 3.1   | 157  |
| 22    | 33      | 1.1   | 2.9    | 2.7     | 932    | 1.2     | 1.7    | .79   | 326     | .91   | 5.0   | 152  |
| 23    | 22      | .97   | 278    | .70     | 114    | 1.0     | 1.3    | 1.2   | 326     | .85   | 19    | 144  |
| 24    | 10      | 1.1   | 1.3    | .82     | 32     | .94     | 1.2    | 1.4   | 326     | 2.0   | 41    | 142  |
| 25    | 1.1     | .98   | .59    | 1.1     | 120    | 1.3     | 1.0    | .98   | 326     | 1.5   | 57    | 134  |
| 26    | 1.9     | 1.9   | .66    | 1.2     | 23     | 1.3     | 1.4    | .81   | 220     | 2.1   | 67    | 82   |
| 27    | 1.2     | 1.5   | .60    | 1.0     | 283    | 1.8     | .85    | 1.1   | 147     | 1.0   | 73    | 50   |
| 28    | .97     | 3.2   | .84    | 9.3     | 6.3    | 2.3     | .83    | .87   | 128     | .96   | 77    | 31   |
| 29    | .96     | 1.0   | .84    | 1.1     | 7.6    | 1.4     | .73    | .98   | 76      | .95   | 76    | 21   |
| 30    | 1.2     | 1.1   | .86    | 2.7     | ---    | 1.1     | .91    | 1.1   | 48      | 1.3   | 61    | 13   |
| 31    | 1.3     | ---   | .90    | 1550    | ---    | 1.1     | ---    | .86   | ---     | 2.7   | 55    | ---  |
| TOTAL | 2243.93 | 50.81 | 561.71 | 2224.21 | 7673.3 | 2754.94 | 256.11 | 32.47 | 4979.91 | 82.78 | 568.7 | 2772 |
| MEAN  | 72.4    | 1.69  | 18.1   | 71.7    | 265    | 88.9    | 8.54   | 1.05  | 166     | 2.67  | 18.3  | 92.4 |
| MAX   | 245     | 7.4   | 278    | 1550    | 2960   | 1610    | 104    | 1.6   | 327     | 32    | 77    | 234  |
| MIN   | .96     | .86   | .38    | .70     | 1.0    | .60     | .73    | .62   | .64     | .79   | 1.0   | 13   |
| AC-FT | 4450    | 101   | 1110   | 4410    | 15220  | 5460    | 508    | 64    | 9880    | 164   | 1130  | 5500 |

## 11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 18.2 | 38.7 | 44.3 | 95.1 | 146  | 103  | 40.3 | 23.2 | 25.0 | 13.5 | 9.90 | 11.7 |
| MAX  | 253  | 284  | 178  | 834  | 860  | 796  | 236  | 168  | 166  | 187  | 112  | 109  |
| (WY) | 1984 | 1966 | 1978 | 1993 | 1969 | 1983 | 1983 | 1986 | 1996 | 1983 | 1991 | 1982 |
| MIN  | .59  | .087 | .49  | .85  | .34  | .31  | .47  | .41  | .13  | .26  | .035 | .097 |
| (WY) | 1978 | 1957 | 1959 | 1976 | 1961 | 1956 | 1977 | 1959 | 1956 | 1956 | 1956 | 1956 |

| SUMMARY STATISTICS       | FOR 1985 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1956 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 39142.31               |  |  |  | 24200.87            |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 107                    |  |  |  | 66.1                |  |  |  | 47.3                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 187                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 6.01                    |  |  |  |
| HIGHEST DAILY MEAN       | 3430                   |  |  |  | 2960                |  |  |  | 7700                    |  |  |  |
| LOWEST DAILY MEAN        | .38                    |  |  |  | .38                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .73                    |  |  |  | .76                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 12400               |  |  |  | 18200                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 6.35                |  |  |  | 7.35                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 77640                  |  |  |  | 48000               |  |  |  | 34280                   |  |  |  |
| 10 PERCENT EXCEEDS       | 169                    |  |  |  | 154                 |  |  |  | 92                      |  |  |  |
| 50 PERCENT EXCEEDS       | 5.3                    |  |  |  | 1.7                 |  |  |  | 1.9                     |  |  |  |
| 90 PERCENT EXCEEDS       | .86                    |  |  |  | .87                 |  |  |  | .48                     |  |  |  |

## 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 sea level, from topographic map.

REMARKS.--Records fair except for discharges below 100 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Flow regulated by Whittier Narrows Flood-Control Reservoir, capacity, 36,160 acre-ft. There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

COOPERATION.--Discharge records provided by Los Angeles County Department of Public Works for the following dates: Oct. 1 to Jan. 29, Feb. 2-18 and 23-26, Feb. 29 to Mar. 3, Mar. 6-12, Mar. 15 to Apr. 11, and Apr. 16 to Sept. 30.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,800 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 13.82 ft, from rating curve extended above 15,000 ft<sup>3</sup>/s on basis of gate openings at dam at gage heights 12.32 and 13.82 ft; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|-------|------|------|------|------|------|------|------|
| 1     | 42   | 60   | 76   | 73    | 814   | 90   | 107  | 91   | 69   | 56   | 95   | 97   |
| 2     | 44   | 71   | 77   | 98    | 92    | 79   | 246  | 138  | 68   | 39   | 95   | 84   |
| 3     | 47   | 60   | 77   | 63    | 116   | 77   | 223  | 89   | 92   | 33   | 93   | 101  |
| 4     | 118  | 60   | 66   | 56    | 27    | 421  | 182  | 86   | 109  | 35   | 88   | 75   |
| 5     | 181  | 60   | 55   | 80    | 28    | 355  | 161  | 89   | 64   | 39   | 172  | 84   |
| 6     | 214  | 23   | 47   | 81    | 64    | 176  | 152  | 77   | 40   | 47   | 118  | 94   |
| 7     | 214  | 52   | 38   | 74    | 63    | 74   | 147  | 43   | 44   | 47   | 118  | 103  |
| 8     | 186  | 74   | 38   | 41    | 35    | 36   | 192  | 42   | 44   | 39   | 118  | 109  |
| 9     | 139  | 73   | 36   | 77    | 73    | 25   | 134  | 42   | 41   | 40   | 122  | 199  |
| 10    | 104  | 71   | 42   | 85    | 64    | 21   | 134  | 40   | 37   | 30   | 119  | 126  |
| 11    | 134  | 72   | 52   | 84    | 64    | 18   | 130  | 40   | 63   | 32   | 81   | 140  |
| 12    | 181  | 74   | 65   | 75    | 65    | 296  | e102 | 40   | 154  | 33   | 173  | 146  |
| 13    | 214  | 87   | 232  | 78    | 60    | 1320 | e99  | 35   | 268  | 33   | 128  | 152  |
| 14    | 225  | 65   | 64   | 85    | 69    | 263  | e90  | 49   | 217  | 33   | 113  | 151  |
| 15    | 231  | 39   | 22   | 72    | 62    | 112  | e61  | 49   | 217  | 29   | 77   | 154  |
| 16    | 243  | 40   | 21   | 205   | 72    | 82   | 75   | 51   | 217  | 29   | 51   | 125  |
| 17    | 263  | 39   | 20   | 149   | 68    | 76   | 67   | 49   | 132  | 33   | 50   | 178  |
| 18    | 230  | 39   | 24   | 97    | 66    | 65   | 171  | 50   | 248  | 49   | 47   | 136  |
| 19    | 170  | 38   | 48   | 14    | 250   | 58   | 20   | 49   | 261  | 38   | 52   | 120  |
| 20    | 122  | 39   | 55   | 110   | 6220  | 63   | 18   | 52   | 265  | 38   | 52   | 121  |
| 21    | 81   | 38   | 68   | 282   | 3260  | 265  | 18   | 75   | 259  | 38   | 52   | 121  |
| 22    | 67   | 29   | 36   | 90    | 561   | 110  | 20   | 80   | 258  | 23   | 59   | 121  |
| 23    | 62   | 64   | 276  | 70    | 268   | 79   | 46   | 80   | 259  | 23   | 66   | 121  |
| 24    | 58   | 74   | 66   | 74    | 193   | 78   | 46   | 82   | 228  | 24   | 85   | 121  |
| 25    | 52   | 70   | 52   | 34    | 180   | 70   | 54   | 84   | 204  | 50   | 100  | 122  |
| 26    | 33   | 76   | 67   | 36    | 168   | 70   | 98   | 82   | 147  | 91   | 96   | 97   |
| 27    | 60   | 78   | 216  | 36    | 624   | 66   | 99   | 82   | 147  | 91   | 118  | 72   |
| 28    | 60   | 82   | 97   | 50    | 170   | 68   | 101  | 80   | 156  | 91   | 122  | 50   |
| 29    | 60   | 82   | 79   | 31    | 96    | 77   | 145  | 80   | 120  | 121  | 121  | 38   |
| 30    | 60   | 82   | 82   | 123   | ---   | 79   | 94   | 75   | 72   | 70   | 115  | 32   |
| 31    | 60   | ---  | 81   | 2650  | ---   | 80   | ---  | 73   | ---  | 80   | 107  | ---  |
| TOTAL | 3955 | 1811 | 2275 | 5173  | 13892 | 4749 | 3232 | 2074 | 4500 | 1454 | 3003 | 3390 |
| MEAN  | 128  | 60.4 | 73.4 | 167   | 479   | 153  | 108  | 66.9 | 150  | 46.9 | 96.9 | 113  |
| MAX   | 263  | 87   | 276  | 2650  | 6220  | 1320 | 246  | 138  | 268  | 121  | 173  | 199  |
| MIN   | 33   | 23   | 20   | 14    | 27    | 18   | 18   | 35   | 37   | 23   | 47   | 32   |
| AC-FT | 7840 | 3590 | 4510 | 10260 | 27550 | 9420 | 6410 | 4110 | 8930 | 2880 | 5960 | 6720 |

e Estimated.

## 11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 108  | 141  | 160  | 361  | 529  | 369  | 118  | 112  | 102  | 71.9 | 58.2 | 76.2 |
| MAX  | 302  | 362  | 522  | 2378 | 3459 | 2265 | 371  | 289  | 355  | 205  | 244  | 413  |
| (WY) | 1984 | 1992 | 1992 | 1993 | 1969 | 1983 | 1983 | 1994 | 1992 | 1993 | 1991 | 1991 |
| MIN  | .001 | 7.08 | 10.3 | 29.2 | 22.1 | 15.6 | 4.25 | 10.6 | .093 | 1.10 | 2.57 | .13  |
| (WY) | 1978 | 1978 | 1977 | 1976 | 1984 | 1972 | 1977 | 1972 | 1977 | 1972 | 1995 | 1972 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1967 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 96187.70               |  |  |  | 49508               |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 264                    |  |  |  | 135                 |  |  |  | 182                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 638                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 40.9                    |  |  |  |
| HIGHEST DAILY MEAN       | 9000                   |  |  |  | 6220                |  |  |  | 21200                   |  |  |  |
| LOWEST DAILY MEAN        | .00 Sep 8              |  |  |  | 14 Jan 19           |  |  |  | .00 Oct 29 1966         |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00 Sep 12             |  |  |  | 31 Jul 10           |  |  |  | .00 Sep 10 1969         |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 17900               |  |  |  | 38800                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 9.18 Feb 20         |  |  |  | 13.82 Jan 25 1969       |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 190800                 |  |  |  | 98200               |  |  |  | 132000                  |  |  |  |
| 10 PERCENT EXCEEDS       | 257                    |  |  |  | 215                 |  |  |  | 257                     |  |  |  |
| 50 PERCENT EXCEEDS       | 62                     |  |  |  | 77                  |  |  |  | 82                      |  |  |  |
| 90 PERCENT EXCEEDS       | 2.5                    |  |  |  | 36                  |  |  |  | 3.6                     |  |  |  |

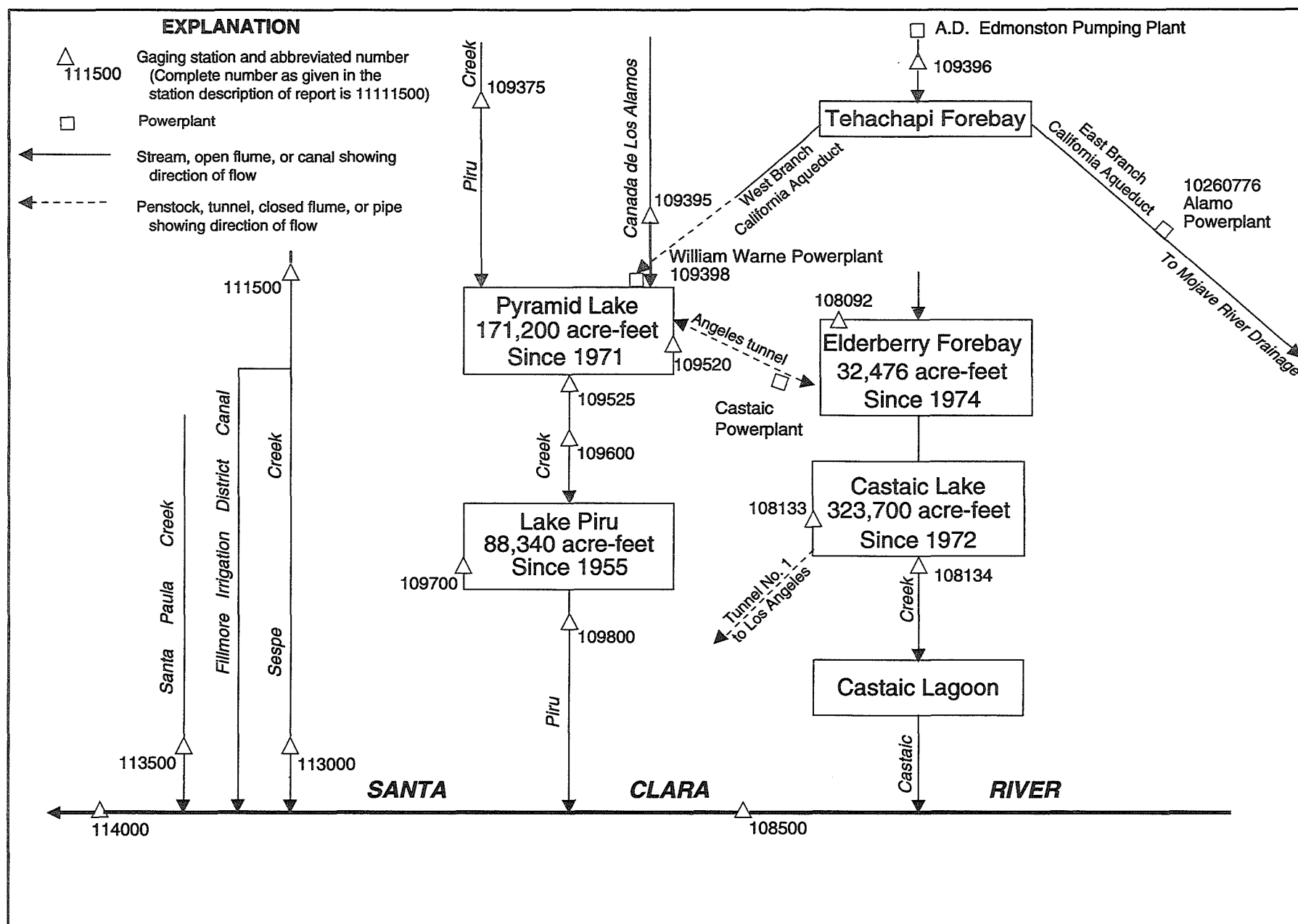


Figure 18. Diversions and storage in Santa Clara River basin.

## 11108092 ELDERBERRY FOREBAY NEAR CASTAIC, CA

LOCATION.--Lat 34°33'46", long 118°37'58", in SW 1/4 SE 1/4 sec.36, T.6 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, Angeles National Forest, in outlet tower in Elderberry Forebay and 5 mi north of Castaic.

PERIOD OF RECORD.--October 1995 to September 1996. Prior to October 1995 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is sea level (levels by Los Angeles Department of Water and Power).

REMARKS.--Forebay is formed by a concrete dam on Castaic Creek completed in 1974. Capacity, 32,476 acre-ft at spillway crest on dam at elevation 1,540 ft. Storage at normal minimum pool, 12,228 acre-ft at elevation 1,490 ft. Forebay receives water from Pyramid Lake (station 11109520) via Castaic Powerplant. Water is pumped at times to Pyramid Lake during off-peak periods to be re-released through the powerplant. See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 30,720 acre-ft, June 7, 1996, elevation, 1,536.41 ft; minimum, 15,716 acre-ft, Feb. 9, 1996, elevation, 1,500.54 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
Based on table provided by California Department of Water Resources dated Jan. 27, 1995)

|       |        |       |        |
|-------|--------|-------|--------|
| 1,490 | 12,228 | 1,520 | 23,240 |
| 1,500 | 15,527 | 1,530 | 27,680 |
| 1,510 | 19,183 | 1,540 | 32,476 |

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 18161   | 21554   | 20812   | 19366   | 25274   | 19805   | 22720   | 20897   | 25141   | 25615   | 23020   | 18086   |
| 2   | 18997   | 21757   | 19836   | 19339   | 23966   | 18882   | 21617   | 22333   | 23550   | 24291   | 20556   | 18422   |
| 3   | 19440   | 21803   | 19207   | 20763   | 23300   | 21707   | 20159   | 22812   | 29651   | 24723   | 19641   | 18347   |
| 4   | 19836   | 21985   | 19016   | 21299   | 20239   | 22213   | 19537   | 20982   | 28212   | 20449   | 17493   | 17566   |
| 5   | 18280   | 22171   | 19591   | 21786   | 16752   | 20433   | 20796   | 19966   | 24754   | 23463   | 19211   | 16265   |
| 6   | 18738   | 22221   | 20374   | 21658   | 23041   | 21645   | 19809   | 22774   | 27731   | 22088   | 19668   | 19805   |
| 7   | 18856   | 22188   | 23326   | 21035   | 19576   | 19130   | 18570   | 22648   | 30720   | 18498   | 20060   | 18574   |
| 8   | 19214   | 20628   | 20636   | 22271   | 19774   | 21604   | 21124   | 22897   | 27918   | 20584   | 21802   | 18498   |
| 9   | 19716   | 19945   | 21832   | 23639   | 15716   | 21238   | 23262   | 22283   | 21902   | 21368   | 20540   | 20756   |
| 10  | 19755   | 19020   | 21351   | 22931   | 19153   | 18902   | 21621   | 22349   | 25589   | 21063   | 23527   | 20564   |
| 11  | 19755   | 18291   | 19782   | 24610   | 18235   | 21952   | 21347   | 24056   | 23957   | 20995   | 19766   | 20278   |
| 12  | 19755   | 18291   | 21136   | 22295   | 20656   | 22948   | 19638   | 25016   | 25696   | 22690   | 21773   | 19657   |
| 13  | 19743   | 19731   | 20155   | 21104   | 20350   | 21662   | 22982   | 28380   | 25780   | 24108   | 24802   | 16755   |
| 14  | 19735   | 21108   | 18867   | 29292   | 17325   | 17427   | 23777   | 29324   | 25221   | 20549   | 26800   | 17438   |
| 15  | 19735   | 20804   | 20517   | 17851   | 17146   | 18822   | 26067   | 24754   | 21914   | 22063   | 22138   | 16840   |
| 16  | 19735   | 18381   | 21429   | 18284   | 20139   | 21392   | 28216   | 24491   | 19958   | 22606   | 26992   | 18231   |
| 17  | 19755   | 19145   | 20711   | 20052   | 20410   | 19475   | 26085   | 22321   | 20970   | 21621   | 22673   | 19575   |
| 18  | 19794   | 19910   | 20294   | 21645   | 19650   | 22665   | 23394   | 20341   | 22505   | 24928   | 19134   | 18400   |
| 19  | 19797   | 20354   | 19692   | 20207   | 21112   | 24575   | 24990   | 17633   | 24623   | 25700   | 18374   | 17873   |
| 20  | 19797   | 20723   | 21307   | 18978   | 21209   | 22217   | 22712   | 20817   | 25296   | 23343   | 20841   | 23497   |
| 21  | 19794   | 21364   | 21376   | 20318   | 19669   | 19638   | 19790   | 23647   | 23134   | 20954   | 21421   | 23411   |
| 22  | 20147   | 19405   | 20999   | 22970   | 20151   | 19050   | 20877   | 23523   | 22321   | 24776   | 22107   | 21531   |
| 23  | 20425   | 18202   | 20857   | 25305   | 21682   | 17219   | 21445   | 23053   | 21071   | 22200   | 21733   | 22821   |
| 24  | 20437   | 19196   | 20584   | 24379   | 22374   | 17449   | 21836   | 24035   | 23236   | 22534   | 21129   | 22208   |
| 25  | 21254   | 18589   | 19712   | 24972   | 23528   | 22039   | 23773   | 22906   | 25611   | 25353   | 21003   | 24126   |
| 26  | 21254   | 19981   | 18677   | 25562   | 21774   | 22789   | 24200   | 20556   | 24126   | 26477   | 16873   | 25598   |
| 27  | 21234   | 20433   | 19397   | 24527   | 22855   | 25771   | 24099   | 20958   | 21831   | 23832   | 20318   | 24335   |
| 28  | 21226   | 22606   | 19809   | 19700   | 20556   | 26265   | 20437   | 25691   | 21839   | 19447   | 23700   | 25229   |
| 29  | 21209   | 22750   | 20183   | 21687   | 19766   | 24710   | 21120   | 22246   | 25620   | 22400   | 23464   | 22446   |
| 30  | 21368   | 22341   | 20751   | 21465   | ---     | 23970   | 21263   | 21588   | 23236   | 23681   | 24318   | 21934   |
| 31  | 21538   | ---     | 20163   | 24326   | ---     | 20560   | ---     | 23520   | ---     | 22740   | 22732   | ---     |
| MAX | 21538   | 22750   | 23326   | 29292   | 25274   | 26265   | 28216   | 29324   | 30720   | 26477   | 26992   | 25598   |
| MIN | 18161   | 18202   | 18677   | 17851   | 15716   | 17219   | 18570   | 17633   | 19958   | 18498   | 16873   | 16265   |
| a   | 1515.93 | 1517.87 | 1512.51 | 1522.52 | 1511.50 | 1513.51 | 1515.25 | 1520.65 | 1519.20 | 1518.82 | 1518.80 | 1516.87 |
| b   |         | +803    | -2178   | +4163   | -4560   | +794    | +703    | +2257   | -284    | -496    | -8      | -798    |

WTR YR 1996 MAX 30720 MIN 15716

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

## 11108133 CASTAIC LAKE NEAR CASTAIC, CA

LOCATION (REVISED).--Lat 34°31'22", long 118°36'43", in NW 1/4 NE 1/4 sec.13, T.5 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, in intake tower in Castaic Lake and 2.3 mi north of Castaic.

DRAINAGE AREA.--137 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> 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 sea level.

REMARKS.--Lake is formed by earthfill dam. Storage began April 1972. Dead storage below outlet tower to downstream distribution system, 1,799 acre-ft, elevation, 1,213 ft. Capacity below spillway level, 323,699 acre-ft, elevation 1,515 ft. Lake receives California Aqueduct water diverted from Pyramid Lake (station 11109520) via Castaic Powerplant to Elderberry Forebay (station 11108092). Water is released downstream through Castaic Tunnel No. 1 and to Castaic Lagoon. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 321,914 acre-ft, Mar. 28, 29, 1993, elevation, 1,514.20 ft; minimum, 142,325 acre-ft, Jan. 7, 1995, elevation, 1,415.48 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 317,587 acre-ft, May 31, elevation, 1,512.24 ft; minimum, 251,358 acre-ft, Jan. 23, elevation, 1,480.24 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on table provided by California Department of Water Resources in 1978)

|      |         |      |         |
|------|---------|------|---------|
| 1450 | 196,414 | 1490 | 270,629 |
| 1460 | 213,807 | 1500 | 291,186 |
| 1470 | 231,964 | 1510 | 310,451 |
| 1480 | 250,894 | 1520 | 334,985 |

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 296083  | 279606  | 275543  | 264465  | 255361  | 278295  | 301692  | 311674  | 316924  | 312768  | 306540  | 286712  |
| 2   | 295426  | 279298  | 274812  | 264008  | 255029  | 277948  | 302121  | 310582  | 316152  | 313469  | 308209  | 285507  |
| 3   | 294664  | 278909  | 274000  | 263511  | 254795  | 277580  | 305891  | 312877  | 315315  | 312636  | 307363  | 284283  |
| 4   | 295892  | 278520  | 272968  | 263094  | 254542  | 277315  | 309296  | 312155  | 314523  | 313447  | 306583  | 284781  |
| 5   | 295277  | 278152  | 271999  | 262301  | 254269  | 279914  | 308470  | 311433  | 315205  | 312636  | 305696  | 286795  |
| 6   | 294558  | 277641  | 270911  | 261391  | 253880  | 279965  | 307428  | 310822  | 316064  | 311870  | 304617  | 286338  |
| 7   | 294009  | 277233  | 271696  | 260522  | 254347  | 281908  | 306388  | 310037  | 317587  | 311084  | 305956  | 285050  |
| 8   | 293481  | 276764  | 273919  | 259537  | 255185  | 281537  | 305415  | 311433  | 316968  | 310233  | 304660  | 283787  |
| 9   | 292890  | 276235  | 273029  | 258455  | 255595  | 281208  | 304380  | 311674  | 316262  | 309318  | 306518  | 282609  |
| 10  | 292258  | 275767  | 272302  | 257454  | 255205  | 280838  | 306432  | 312571  | 315513  | 312483  | 305351  | 283539  |
| 11  | 291670  | 275360  | 271757  | 256475  | 254873  | 280509  | 310473  | 313074  | 314787  | 314171  | 304207  | 283849  |
| 12  | 291081  | 274913  | 271475  | 255732  | 254600  | 280304  | 314237  | 312417  | 314062  | 313491  | 302894  | 284822  |
| 13  | 290599  | 274528  | 271233  | 255244  | 256397  | 284346  | 313206  | 311674  | 315887  | 312746  | 301542  | 285860  |
| 14  | 290053  | 274061  | 270891  | 254795  | 258651  | 288735  | 314281  | 311084  | 316791  | 312023  | 300022  | 284822  |
| 15  | 289530  | 275197  | 270611  | 254347  | 262242  | 288463  | 313316  | 313574  | 316064  | 311302  | 300514  | 283683  |
| 16  | 288965  | 278111  | 270269  | 253900  | 261708  | 288150  | 312395  | 313053  | 315271  | 310516  | 299082  | 282527  |
| 17  | 288443  | 277621  | 269967  | 253452  | 261312  | 287816  | 313206  | 313206  | 314567  | 312111  | 297633  | 281290  |
| 18  | 287921  | 277192  | 269525  | 253083  | 260976  | 287191  | 315271  | 313974  | 313798  | 311499  | 296359  | 282960  |
| 19  | 287921  | 276764  | 269223  | 252714  | 260799  | 286837  | 314655  | 313272  | 312943  | 312220  | 295108  | 284843  |
| 20  | 287358  | 276357  | 268862  | 252326  | 264008  | 290494  | 313798  | 312614  | 314589  | 311433  | 293840  | 285238  |
| 21  | 286775  | 275889  | 268480  | 252055  | 266878  | 295108  | 312899  | 312045  | 315953  | 310713  | 294939  | 284180  |
| 22  | 286192  | 277866  | 268099  | 251706  | 269585  | 294854  | 311958  | 313053  | 315227  | 310015  | 294516  | 283063  |
| 23  | 285237  | 279934  | 267759  | 251358  | 269283  | 294325  | 310996  | 312395  | 314545  | 309187  | 294854  | 282197  |
| 24  | 284263  | 279544  | 267378  | 264289  | 269002  | 293882  | 312899  | 315623  | 313820  | 310582  | 293291  | 284946  |
| 25  | 283208  | 279053  | 267058  | 253938  | 268761  | 293481  | 312417  | 314941  | 313074  | 309753  | 292006  | 285714  |
| 26  | 282527  | 278541  | 266718  | 253627  | 273353  | 296465  | 313864  | 314413  | 312505  | 308839  | 290724  | 286587  |
| 27  | 282052  | 278152  | 266379  | 253238  | 273090  | 298698  | 312833  | 313754  | 313359  | 308036  | 289362  | 286192  |
| 28  | 281496  | 277519  | 265999  | 252908  | 275848  | 302014  | 312177  | 313206  | 315161  | 307320  | 290074  | 285112  |
| 29  | 281023  | 276846  | 265640  | 252617  | 277050  | 303002  | 310669  | 315601  | 314413  | 306496  | 290640  | 284118  |
| 30  | 280591  | 276275  | 265281  | 255615  | ---     | 302636  | 309579  | 314963  | 313689  | 305696  | 289279  | 284346  |
| 31  | 280139  | ---     | 264823  | 255576  | ---     | 302207  | ---     | 317587  | ---     | 307623  | 287942  | ---     |
| MAX | 296083  | 279934  | 275543  | 264465  | 277050  | 303002  | 315271  | 317587  | 317587  | 314171  | 308209  | 286795  |
| MIN | 280139  | 274061  | 264823  | 251358  | 253880  | 277315  | 301692  | 310037  | 312505  | 305696  | 287942  | 281290  |
| a   | 1494.68 | 1492.79 | 1487.10 | 1482.41 | 1493.17 | 1505.19 | 1508.60 | 1512.24 | 1510.48 | 1507.70 | 1498.45 | 1496.72 |
| b   | -17090  | -3864   | -11452  | -9247   | +21474  | +25157  | +7372   | +8008   | -3898   | -6066   | -19681  | -3596   |

CAL YR 1995 MAX 316240 MIN 142325 b +117696  
WTR YR 1996 MAX 317587 MIN 251358 b -12883

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



## 11108134 CASTAIC CREEK RELEASE FLOW BELOW CASTAIC LAKE, NEAR CASTAIC, CA

LOCATION.--Lat 34°31'10", long 118°36'34", in NE 1/4 SE 1/4 sec.13, T.5 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, in outlet structure below Castaic Dam and 1.9 mi north of Castaic.

DRAINAGE AREA.--138 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> noncontributing area in Elizabeth Canyon Creek basin.

PERIOD OF RECORD.--October 1994 to current year. Records for 1995 water year published as station 11108135. Records for station 11108135 for October 1976 to September 1978 and October 1988 to September 1994 are not equivalent at low flows due to evaporation and seepage.

GAGE.--Flow meters on outlet pipes. Elevation of gage is 1,200 ft above sea level, from topographic map.

REMARKS.--Flow regulated by Castaic Lake (station 11108133). See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 100 ft<sup>3</sup>/s, Apr. 7 to May 3, 1996; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 7,670 ft<sup>3</sup>/s, Mar. 2, 1983, at station 11108135; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR     | MAY    | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|---------|--------|------|------|------|------|
| 1     | .00  | .00  | .00  | .00  | .00  | .00  | .00     | 100    | .00  | .00  | .00  | .00  |
| 2     | .00  | .00  | .00  | .00  | .00  | .00  | .00     | 100    | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | .00  | .00  | .00  | .00     | 100    | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .00  | .00  | .00  | .00  | .00     | 39     | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .00  | .00  | .00  | .00  | .00     | .00    | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .00  | .00  | .00  | .00  | 41      | .00    | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 9     | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 10    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .00  | .00  | .00  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .00  | .00  | ---  | .00  | 100     | .00    | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00  | .00  | ---  | .00  | ---     | .00    | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2441.00 | 339.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .000 | .000 | .000 | 81.4    | 10.9   | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .00  | .00  | .00  | .00  | 100     | 100    | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00  | .00  | .00     | .00    | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | .00  | .00  | .00  | 4840    | 672    | .00  | .00  | .00  | .00  |

## 11108134 CASTAIC CREEK RELEASE FLOW BELOW CASTAIC LAKE, NEAR CASTAIC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .000 | .000 | .000 | .000 | .000 | .000 | 40.7 | 5.47 | 14.0 | 17.1 | 15.0 | .000 |
| MAX  | .000 | .000 | .000 | .000 | .000 | .000 | 81.4 | 10.9 | 28.0 | 34.2 | 29.9 | .000 |
| (WY) | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1996 | 1996 | 1995 | 1995 | 1995 | 1995 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 1996 | 1996 | 1996 | 1995 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1995 - 1996

|                          |         |     |   |         |     |   |      |     |        |
|--------------------------|---------|-----|---|---------|-----|---|------|-----|--------|
| ANNUAL TOTAL             | 2829.00 |     |   | 2780.00 |     |   |      |     |        |
| ANNUAL MEAN              | 7.75    |     |   | 7.60    |     |   | 7.67 |     |        |
| HIGHEST ANNUAL MEAN      |         |     |   |         |     |   | 7.75 |     |        |
| LOWEST ANNUAL MEAN       |         |     |   |         |     |   | 7.60 |     |        |
| HIGHEST DAILY MEAN       | 53      | Aug | 1 | 100     | Apr | 7 | 100  | Apr | 7 1996 |
| LOWEST DAILY MEAN        | .00     | Jan | 1 | .00     | Oct | 1 | .00  | Oct | 1 1994 |
| ANNUAL SEVEN-DAY MINIMUM | .00     | Jan | 1 | .00     | Oct | 1 | .00  | Oct | 1 1994 |
| ANNUAL RUNOFF (AC-FT)    | 5610    |     |   | 5510    |     |   | 5560 |     |        |
| 10 PERCENT EXCEEDS       | 35      |     |   | .00     |     |   | 35   |     |        |
| 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 September 1996 (discontinued).

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 sea level.

REMARKS.--Records fair. Base flow affected by pumping from wells along stream for irrigation. Flow partly regulated since January 1972 by Castaic Lake (station 11108133), capacity, 323,700 acre-ft. Imported water from California Water Project stored and released at Castaic Dam. See schematic diagram of Santa Clara River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 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 or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 2015 | 1,860                             | 6.74                | Mar. 13 | 2300 | 1,190                             | 6.22                |
| Feb. 20 | 0530 | 4,450                             | 7.90                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|-------|------|------|------|------|------|------|------|
| 1     | 26   | 29   | 37   | 57   | 115   | 72   | 147  | 72   | 41   | 26   | 26   | 24   |
| 2     | 26   | 33   | 36   | 53   | 29    | 67   | 151  | e68  | 39   | 26   | 25   | 26   |
| 3     | 25   | 39   | 36   | 51   | 41    | 62   | 148  | e64  | 37   | 26   | 25   | 28   |
| 4     | 23   | 41   | 41   | 50   | 42    | 58   | 143  | e60  | 32   | 26   | 26   | 26   |
| 5     | 26   | 41   | 41   | 46   | 47    | 61   | 149  | e56  | 28   | 25   | 27   | 27   |
| 6     | 31   | 40   | 38   | 47   | 55    | 54   | 130  | e52  | 26   | 24   | 26   | 25   |
| 7     | 33   | 37   | 39   | 48   | 69    | 55   | 113  | 48   | 26   | 25   | 26   | 23   |
| 8     | 30   | 37   | 38   | 49   | 58    | 60   | 89   | 51   | 24   | 27   | 25   | 25   |
| 9     | 28   | 39   | 40   | 48   | 44    | 54   | 75   | 55   | 25   | 29   | 25   | 27   |
| 10    | 27   | 39   | 46   | 45   | 40    | 53   | 80   | 61   | 25   | 29   | 24   | 27   |
| 11    | 25   | 40   | 52   | 45   | 35    | 51   | 90   | 63   | 25   | 28   | 26   | 27   |
| 12    | 26   | 37   | 55   | 47   | 35    | 105  | 83   | 71   | 24   | 28   | 27   | 26   |
| 13    | 27   | 35   | 62   | 50   | 32    | 373  | 80   | 68   | 25   | 28   | 27   | 26   |
| 14    | 26   | 35   | 34   | 50   | 29    | 247  | 90   | 70   | 25   | 29   | 26   | 24   |
| 15    | 29   | 34   | 28   | 47   | 28    | 174  | 93   | 66   | 26   | 29   | 25   | 23   |
| 16    | 33   | 30   | 35   | 45   | 28    | 177  | 99   | 69   | 28   | 29   | 25   | 24   |
| 17    | 31   | 32   | 55   | 40   | 27    | 168  | 97   | 69   | 30   | 27   | 27   | 25   |
| 18    | 26   | 34   | 71   | 41   | 29    | 158  | 119  | 68   | 31   | 27   | 26   | 25   |
| 19    | 23   | 35   | 75   | 41   | 34    | 154  | 78   | 61   | 28   | 27   | 28   | 24   |
| 20    | 24   | 38   | 77   | 41   | 1950  | 151  | 102  | 63   | 29   | 26   | 28   | 25   |
| 21    | 28   | 38   | 73   | 49   | 1480  | 140  | 101  | 60   | 30   | 26   | 26   | 24   |
| 22    | e30  | 38   | 65   | 48   | 167   | 138  | 87   | 54   | 30   | 27   | 24   | 25   |
| 23    | e32  | 37   | 117  | 42   | 170   | 134  | 93   | 58   | 30   | 27   | 25   | 26   |
| 24    | 33   | 28   | 54   | 39   | 166   | 136  | 100  | 54   | 28   | 26   | 25   | 26   |
| 25    | 33   | 25   | 51   | 38   | 164   | 137  | 99   | 47   | 28   | 26   | 26   | 26   |
| 26    | 31   | 27   | 50   | 38   | 149   | 139  | 97   | 50   | 26   | 26   | 27   | 24   |
| 27    | 28   | 29   | 56   | 40   | 160   | 138  | 94   | 44   | 26   | 25   | 27   | 24   |
| 28    | 27   | 32   | 52   | 42   | 86    | 146  | 86   | 49   | 25   | 26   | 26   | 25   |
| 29    | 26   | 33   | 57   | 42   | 70    | 133  | 76   | 50   | 25   | 26   | 24   | 26   |
| 30    | 26   | 34   | 59   | 42   | ---   | 138  | 73   | 44   | 24   | 26   | 23   | 28   |
| 31    | 26   | ---  | 61   | 456  | ---   | 138  | ---  | 42   | ---  | 25   | 23   | ---  |
| TOTAL | 865  | 1046 | 1631 | 1817 | 5379  | 3871 | 3062 | 1807 | 846  | 827  | 796  | 761  |
| MEAN  | 27.9 | 34.9 | 52.6 | 58.6 | 185   | 125  | 102  | 58.3 | 28.2 | 26.7 | 25.7 | 25.4 |
| MAX   | 33   | 41   | 117  | 456  | 1950  | 373  | 151  | 72   | 41   | 29   | 28   | 28   |
| MIN   | 23   | 25   | 28   | 38   | 27    | 51   | 73   | 42   | 24   | 24   | 23   | 23   |
| AC-FT | 1720 | 2070 | 3240 | 3600 | 10670 | 7680 | 6070 | 3580 | 1680 | 1640 | 1580 | 1510 |

e Estimated.

## 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 26.1 | 36.1 | 57.0 | 121  | 188  | 183  | 72.2 | 45.1 | 35.3 | 24.6 | 20.8 | 22.6 |
| MAX  | 60.5 | 131  | 169  | 768  | 806  | 1101 | 189  | 168  | 188  | 106  | 45.1 | 49.6 |
| (WY) | 1979 | 1979 | 1989 | 1993 | 1993 | 1983 | 1983 | 1983 | 1978 | 1978 | 1993 | 1993 |
| 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1972 - 1996

|                          |       |        |             |
|--------------------------|-------|--------|-------------|
| ANNUAL TOTAL             | 41548 | 22708  |             |
| ANNUAL MEAN              | 114   | 62.0   | 68.7        |
| HIGHEST ANNUAL MEAN      |       |        | 207         |
| LOWEST ANNUAL MEAN       |       |        | 14.4        |
| HIGHEST DAILY MEAN       | 6150  | Jan 10 | 1950 Feb 20 |
| LOWEST DAILY MEAN        | 17    | Jul 27 | 23 Oct 4    |
| ANNUAL SEVEN-DAY MINIMUM | 23    | Jul 23 | 24 Sep 14   |
| INSTANTANEOUS PEAK FLOW  |       |        | 4450 Feb 20 |
| INSTANTANEOUS PEAK STAGE |       |        | 7.90 Feb 20 |
| ANNUAL RUNOFF (AC-FT)    | 82410 | 45040  | 49760       |
| 10 PERCENT EXCEEDS       | 239   | 116    | 98          |
| 50 PERCENT EXCEEDS       | 45    | 37     | 29          |
| 90 PERCENT EXCEEDS       | 26    | 25     | 13          |

## 11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA

LOCATION.--Lat 34°39'58", long 118°49'24", in SE 1/4 SE 1/4 sec.30, T.7 N., R.18 W., Ventura County, Hydrologic Unit 18070102, Los Padres National Forest, on left bank 300 ft downstream from the confluence of Piru Creek and Buck Creek and 2.3 mi southeast of U.S. Forest Service Hardluck Campground, and 3.7 mi northwest of Pyramid Dam.

DRAINAGE AREA.--198 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to September 1978, October 1988 to current year. February 1975 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 2,700 ft above sea level, from topographic map.

REMARKS.--No regulation or diversion upstream from station. See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with 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, maximum gage height, 12.06 ft, Feb. 12, 1992; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1     | 11   | 14   | 13   | 18   | 99   | 39   | 23   | 14    | 8.7   | 4.9   | 3.8   | 2.9   |
| 2     | 11   | 14   | 13   | 17   | 42   | 37   | 99   | 13    | 8.3   | 4.8   | 3.6   | 3.0   |
| 3     | 11   | 13   | 13   | 17   | 32   | 35   | 100  | 13    | 8.1   | 4.6   | 3.6   | 3.1   |
| 4     | 11   | 13   | 13   | 17   | 32   | 34   | 49   | 13    | 7.5   | 4.6   | 3.9   | 3.1   |
| 5     | 10   | 13   | 13   | 16   | 34   | 36   | 41   | 13    | 7.2   | 4.6   | 3.9   | 3.2   |
| 6     | 10   | 13   | 14   | 16   | 38   | 36   | 37   | 12    | 6.9   | 4.5   | 3.9   | 3.3   |
| 7     | 11   | 13   | 14   | 16   | 28   | 33   | 45   | 12    | 6.7   | 4.4   | 3.7   | 3.4   |
| 8     | 11   | 13   | 14   | 16   | 24   | 31   | 37   | 12    | 6.5   | 4.3   | 3.4   | 3.4   |
| 9     | 11   | 13   | 14   | 16   | 23   | 29   | 28   | 11    | 6.3   | 4.1   | 3.2   | 3.4   |
| 10    | 11   | 14   | 14   | 16   | 22   | 28   | 24   | 11    | 5.9   | 4.0   | 3.3   | 3.3   |
| 11    | 11   | 13   | 14   | 16   | 21   | 27   | 21   | 11    | 5.7   | 3.9   | 3.2   | 3.2   |
| 12    | 11   | 13   | 14   | 15   | 20   | 33   | 19   | 11    | 5.8   | 3.8   | 3.1   | 3.2   |
| 13    | 11   | 13   | 16   | 15   | 20   | 53   | 18   | 11    | 5.9   | 3.8   | 3.2   | 3.6   |
| 14    | 11   | 13   | 17   | 15   | 20   | 51   | 17   | 10    | 5.9   | 3.7   | 3.3   | 4.2   |
| 15    | 11   | 13   | 17   | 15   | 20   | 42   | 16   | 10    | 6.0   | 3.6   | 3.2   | 4.1   |
| 16    | 11   | 13   | 16   | 15   | 20   | 38   | 15   | 10    | 5.6   | 3.6   | 3.2   | 4.0   |
| 17    | 12   | 13   | 16   | 16   | 19   | 37   | 15   | 11    | 5.4   | 3.6   | 3.3   | 4.0   |
| 18    | 12   | 13   | 15   | 15   | 19   | 35   | 14   | 10    | 5.4   | 3.1   | 3.2   | 4.0   |
| 19    | 12   | 13   | 15   | 15   | 29   | 32   | 13   | 10    | 5.3   | 3.1   | 3.5   | 3.9   |
| 20    | 12   | 13   | 15   | 15   | 707  | 30   | 13   | 10    | 5.2   | 3.0   | 3.6   | 3.9   |
| 21    | 12   | 13   | 15   | 15   | 394  | 30   | 16   | 9.8   | 5.2   | 2.8   | 3.5   | 3.8   |
| 22    | 12   | 13   | 15   | 15   | 166  | 29   | 16   | 9.7   | 5.2   | 2.8   | 3.3   | 3.9   |
| 23    | 12   | 13   | 22   | 15   | 105  | 27   | 17   | 9.6   | 5.2   | 2.7   | 3.2   | 4.0   |
| 24    | 12   | 13   | 17   | 15   | 78   | 26   | 16   | 9.3   | 5.2   | 2.7   | 3.1   | 3.9   |
| 25    | 12   | 13   | 17   | 15   | 68   | 26   | 16   | 9.5   | 5.1   | 2.6   | 3.1   | 4.0   |
| 26    | 12   | 13   | 17   | 15   | 59   | 25   | 16   | 9.5   | 5.3   | 2.6   | 3.1   | 4.0   |
| 27    | 12   | 13   | 16   | 14   | 54   | 25   | 16   | 9.5   | 5.8   | 2.8   | 3.2   | 3.9   |
| 28    | 12   | 13   | 17   | 15   | 56   | 26   | 16   | 9.5   | 6.2   | 5.7   | 3.2   | 3.8   |
| 29    | 12   | 13   | 17   | 14   | 46   | 25   | 15   | 9.3   | 5.8   | 5.3   | 3.1   | 3.9   |
| 30    | 12   | 13   | 17   | 14   | ---  | 24   | 15   | 8.9   | 5.3   | 4.3   | 2.9   | 3.9   |
| 31    | 13   | ---  | 18   | 59   | ---  | 24   | ---  | 8.9   | ---   | 4.0   | 2.9   | ---   |
| TOTAL | 355  | 393  | 478  | 523  | 2295 | 1003 | 803  | 331.5 | 182.6 | 118.3 | 103.7 | 109.3 |
| MEAN  | 11.5 | 13.1 | 15.4 | 16.9 | 79.1 | 32.4 | 26.8 | 10.7  | 6.09  | 3.82  | 3.35  | 3.64  |
| MAX   | 13   | 14   | 22   | 59   | 707  | 53   | 100  | 14    | 8.7   | 5.7   | 3.9   | 4.2   |
| MIN   | 10   | 13   | 13   | 14   | 19   | 24   | 13   | 8.9   | 5.1   | 2.6   | 2.9   | 2.9   |
| AC-FT | 704  | 780  | 948  | 1040 | 4550 | 1990 | 1590 | 658   | 362   | 235   | 206   | 217   |

## 11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 4.74 | 6.07 | 13.4 | 102  | 220  | 203  | 99.0 | 41.9 | 18.2 | 8.69 | 5.40 | 5.35 |
| MAX  | 14.9 | 17.1 | 33.1 | 501  | 679  | 674  | 235  | 93.5 | 49.4 | 24.7 | 16.1 | 13.8 |
| (WY) | 1994 | 1994 | 1978 | 1995 | 1993 | 1978 | 1978 | 1978 | 1993 | 1993 | 1993 | 1993 |
| MIN  | .099 | 1.16 | 1.62 | 2.28 | 5.36 | 5.31 | 2.67 | 1.21 | .46  | .001 | .000 | .000 |
| (WY) | 1978 | 1978 | 1991 | 1991 | 1990 | 1990 | 1990 | 1990 | 1990 | 1990 | 1989 | 1990 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1977 - 1996 |            |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL             | 46118.4                |        | 6695.4              |        |                         |            |
| ANNUAL MEAN              | 126                    |        | 18.3                |        |                         |            |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 59.7                    |            |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 153                     | 1993       |
| HIGHEST DAILY MEAN       |                        |        |                     |        | 2.45                    | 1990       |
| LOWEST DAILY MEAN        | 3430                   | Jan 10 | 707                 | Feb 20 | 7010                    | Feb 9 1978 |
| ANNUAL SEVEN-DAY MINIMUM | 8.8                    | Sep 14 | 2.6                 | Jul 25 | .00                     | Sep 6 1977 |
| INSTANTANEOUS PEAK FLOW  | 9.3                    | Sep 13 | 2.7                 | Jul 21 | .00                     | Sep 6 1977 |
| INSTANTANEOUS PEAK STAGE |                        |        | 1540                | Feb 20 | 19000                   | Mar 4 1978 |
| ANNUAL RUNOFF (AC-FT)    |                        |        | 6.14                | Feb 20 | 10.08                   | Mar 4 1978 |
| 10 PERCENT EXCEEDS       | 91480                  |        | 13280               |        | 43280                   |            |
| 50 PERCENT EXCEEDS       | 295                    |        | 32                  |        | 147                     |            |
| 90 PERCENT EXCEEDS       | 25                     |        | 13                  |        | 9.2                     |            |
|                          | 11                     |        | 3.3                 |        | .56                     |            |

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 and concrete control. Elevation of gage is 2,800 ft above sea level, from topographic map.

REMARKS.--No regulation or diversion upstream from station. See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB   | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| 1     | 2.0  | 2.7  | 2.9   | 3.3   | 4.2   | 4.3   | 3.5  | 2.2  | 2.8  | 1.5  | 1.6  | 1.9  |
| 2     | 2.0  | 2.6  | 2.9   | 3.2   | 3.0   | 4.2   | 2.9  | 2.2  | 2.6  | 1.5  | 1.5  | 2.0  |
| 3     | 1.9  | 3.1  | 2.9   | 3.2   | 4.7   | 4.1   | 3.4  | 2.0  | 2.2  | 1.6  | 1.9  | 2.2  |
| 4     | 1.9  | 3.0  | 2.9   | 3.3   | 3.8   | 3.8   | 3.1  | 2.0  | 1.9  | 1.5  | 2.0  | 2.3  |
| 5     | 1.9  | 3.1  | 3.0   | 3.3   | 7.3   | 3.8   | 3.6  | 2.0  | 1.7  | 1.4  | 2.2  | 2.4  |
| 6     | 1.9  | 3.1  | 2.9   | 3.2   | 3.9   | 3.9   | 3.8  | 2.1  | 1.9  | 1.5  | 2.2  | 2.4  |
| 7     | 1.9  | 3.0  | 2.7   | 3.2   | 3.5   | 3.4   | 2.8  | 2.3  | 1.9  | 1.6  | 2.0  | 2.2  |
| 8     | 1.9  | 3.0  | 2.8   | 3.4   | 3.4   | 2.9   | 2.6  | 2.2  | 1.8  | 1.6  | 1.9  | 2.1  |
| 9     | 2.0  | 3.1  | 2.8   | 3.4   | 3.4   | 3.0   | 2.6  | 2.3  | 1.8  | 1.5  | 1.8  | 2.1  |
| 10    | 2.0  | 3.1  | 3.0   | 3.6   | 3.4   | 3.0   | 2.4  | 2.2  | 1.7  | 1.5  | 1.8  | 2.0  |
| 11    | 2.0  | 2.9  | 3.0   | 3.5   | 3.4   | 3.4   | 2.5  | 2.3  | 1.8  | 1.9  | 1.8  | 2.0  |
| 12    | 2.0  | 2.9  | 3.4   | 3.5   | 3.6   | 4.6   | 2.5  | 2.2  | 2.2  | 2.0  | 2.0  | 2.0  |
| 13    | 2.0  | 2.8  | 3.4   | 3.5   | 3.4   | 5.9   | 2.5  | 1.9  | 2.3  | 1.9  | 1.9  | 2.0  |
| 14    | 2.0  | 2.9  | 3.2   | 3.5   | 3.3   | 4.4   | 2.2  | 2.0  | 2.2  | 1.9  | 1.9  | 2.3  |
| 15    | 2.0  | 2.7  | 3.1   | 3.6   | 3.4   | 3.9   | 2.2  | 2.2  | 2.4  | 1.9  | 1.8  | 2.3  |
| 16    | 2.1  | 2.8  | 5.3   | 3.5   | 3.8   | 3.7   | 2.2  | 2.5  | 2.4  | 2.1  | 2.0  | 2.4  |
| 17    | 2.2  | 2.8  | 3.7   | 3.6   | 3.7   | 3.9   | 2.2  | 2.4  | 2.4  | 2.1  | 2.1  | 2.3  |
| 18    | 2.3  | 2.8  | 3.2   | 3.5   | 4.1   | 4.0   | 2.2  | 2.3  | 2.1  | 2.0  | 2.0  | 2.3  |
| 19    | 2.3  | 2.6  | 3.2   | 3.3   | 10    | 4.2   | 2.3  | 2.5  | 2.1  | 1.9  | 2.2  | 2.3  |
| 20    | 2.4  | 2.6  | 3.2   | 3.2   | 11    | 4.1   | 3.0  | 2.4  | 2.0  | 1.9  | 2.3  | 2.3  |
| 21    | 2.5  | 2.7  | 3.2   | 3.4   | 5.3   | 4.1   | 3.2  | 2.5  | 2.4  | 1.8  | 2.4  | 2.3  |
| 22    | 2.5  | 2.7  | 3.2   | 3.6   | 4.3   | 3.9   | 3.4  | 2.5  | 2.4  | 1.7  | 2.2  | 2.3  |
| 23    | 2.5  | 2.6  | 5.0   | 3.4   | 4.0   | 3.9   | 2.4  | 3.2  | 2.2  | 1.7  | 2.0  | 2.3  |
| 24    | 2.5  | 2.6  | 4.0   | 3.2   | 3.8   | 3.8   | 2.4  | 3.1  | 2.1  | 1.6  | 2.2  | 2.4  |
| 25    | 2.4  | 2.7  | 3.7   | 3.2   | 4.0   | 3.7   | 2.6  | 3.0  | 2.3  | 1.7  | 2.1  | 2.6  |
| 26    | 2.3  | 2.8  | 3.5   | 3.1   | 3.7   | 3.7   | 2.8  | 2.7  | 2.5  | 1.8  | 2.1  | 2.8  |
| 27    | 2.4  | 2.8  | 3.5   | 3.0   | 4.1   | 3.9   | 2.6  | 2.9  | 2.2  | 1.9  | 2.1  | 2.6  |
| 28    | 2.3  | 2.8  | 3.3   | 3.0   | 4.2   | 4.1   | 2.5  | 2.7  | 2.2  | 1.8  | 2.2  | 2.5  |
| 29    | 2.5  | 2.8  | 3.3   | 3.0   | 4.2   | 3.6   | 2.6  | 2.9  | 2.0  | 1.8  | 2.0  | 2.6  |
| 30    | 2.5  | 2.9  | 3.7   | 3.0   | ---   | 3.5   | 2.5  | 2.8  | 1.9  | 1.7  | 1.8  | 2.6  |
| 31    | 2.5  | ---  | 3.4   | 6.5   | ---   | 3.5   | ---  | 2.9  | ---  | 1.7  | 1.8  | ---  |
| TOTAL | 67.8 | 85.0 | 103.3 | 106.2 | 127.9 | 120.2 | 81.5 | 75.4 | 64.4 | 54.0 | 61.8 | 68.8 |
| MEAN  | 2.18 | 2.83 | 3.33  | 3.43  | 4.41  | 3.88  | 2.72 | 2.43 | 2.15 | 1.74 | 1.99 | 2.29 |
| MAX   | 2.5  | 3.1  | 5.3   | 6.5   | 11    | 5.9   | 3.8  | 3.2  | 2.8  | 2.1  | 2.4  | 2.8  |
| MIN   | 1.9  | 2.6  | 2.7   | 3.0   | 3.0   | 2.9   | 2.2  | 1.9  | 1.7  | 1.4  | 1.5  | 1.9  |
| AC-FT | 134  | 169  | 205   | 211   | 254   | 238   | 162  | 150  | 128  | 107  | 123  | 136  |

## 11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.89 | 2.41 | 2.90 | 5.63 | 13.2 | 8.74 | 2.76 | 2.22 | 1.88 | 1.56 | 1.57 | 1.69 |
| MAX  | 2.35 | 2.86 | 3.65 | 22.0 | 64.3 | 40.5 | 4.55 | 3.55 | 2.97 | 2.00 | 1.99 | 2.29 |
| (WY) | 1994 | 1994 | 1993 | 1995 | 1978 | 1978 | 1995 | 1995 | 1995 | 1994 | 1996 | 1996 |
| 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1977 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 1769.4                 |  |  |  | 1016.1              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 4.85                   |  |  |  | 2.78                |  |  |  | 3.83                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 9.72                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 1.54                    |  |  |  |
| HIGHEST DAILY MEAN       | 181                    |  |  |  | 11                  |  |  |  | 1220                    |  |  |  |
| LOWEST DAILY MEAN        | 1.4                    |  |  |  | 1.4                 |  |  |  | .30                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | 1.4                    |  |  |  | 1.5                 |  |  |  | .36                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 17                  |  |  |  | 2990                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 2.93                |  |  |  | 5.10                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 3510                   |  |  |  | 2020                |  |  |  | 2770                    |  |  |  |
| 10 PERCENT EXCEEDS       | 4.9                    |  |  |  | 3.8                 |  |  |  | 3.6                     |  |  |  |
| 50 PERCENT EXCEEDS       | 2.8                    |  |  |  | 2.6                 |  |  |  | 2.2                     |  |  |  |
| 90 PERCENT EXCEEDS       | 1.7                    |  |  |  | 1.9                 |  |  |  | 1.4                     |  |  |  |



## 11109396 NORTH PORTAL TEHACHAPI TUNNEL NEAR GORMAN, CA

LOCATION.--Lat 34°55'46", long 118°48'17", unsurveyed, T.10 N., R.18 E., Kern County, Los Alamos Y Caliente Grant, at entrance to Tehachapi Tunnel 1.5 mi southeast of A.D. Edmonston Pumping Plant, and 10 mi north of Gorman.

PERIOD OF RECORD.--October 1995 to September 1996. Prior to October 1995 in files of California Department of Water Resources.

GAGE.--Acoustic velocity meter. Elevation of gage is 3,220 ft above sea level, from topographic map.

REMARKS.--Records represent flow pumped from the California Aqueduct through the A.D. Edmonston Pumping Plant to southern California. Downstream, the flow splits as it leaves Tehachapi Afterbay. The East Branch flows through Alamo Powerplant (station 10260776), and the West Branch flows through William Warne Powerplant (station 11109398). See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were computed by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,560 ft<sup>3</sup>/s, Apr. 14, 1996; no discharge on many days in 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT     | NOV      | DEC      | JAN      | FEB   | MAR   | APR    | MAY   | JUN   | JUL   | AUG   | SEP    |
|-------|---------|----------|----------|----------|-------|-------|--------|-------|-------|-------|-------|--------|
| 1     | 153     | .00      | 785      | 335      | 452   | 1140  | 1320   | 1900  | 1050  | 1170  | 1900  | 1770   |
| 2     | 207     | .00      | 748      | 83       | 412   | 958   | 1250   | 1660  | 962   | 1690  | 1670  | 1650   |
| 3     | 333     | 33       | 1410     | .00      | 223   | 1330  | 1460   | 1730  | 1320  | 1910  | 1020  | 1340   |
| 4     | 360     | 170      | 780      | 26       | 811   | 976   | 1710   | 1440  | 1720  | 1950  | 1460  | 1880   |
| 5     | 355     | 340      | 675      | .00      | 314   | 710   | 1460   | 1000  | 1940  | 1410  | 1510  | 1810   |
| 6     | 354     | 123      | 767      | 330      | 592   | 538   | 1190   | 1200  | 1720  | 1170  | 1930  | 1640   |
| 7     | 270     | .00      | 652      | 330      | 605   | 457   | 1280   | 1680  | 1750  | 1180  | 2150  | 1390   |
| 8     | 26      | .00      | 651      | 110      | 865   | 348   | 1160   | 1680  | 1140  | 1310  | 1960  | 1950   |
| 9     | .00     | .00      | 524      | .00      | 838   | 473   | 1760   | 1610  | 1000  | 2020  | 1510  | 1610   |
| 10    | .00     | .00      | 360      | .00      | 549   | 1660  | 2020   | 1310  | 1140  | 2000  | 1170  | 1840   |
| 11    | .00     | 38       | 435      | 138      | 770   | 485   | 2780   | 1420  | 1750  | 2080  | 1530  | 1790   |
| 12    | 126     | 266      | 458      | 248      | 460   | 859   | 2880   | 1240  | 1790  | 2000  | 1570  | 2180   |
| 13    | 83      | 2.0      | 134      | 524      | 895   | 883   | 2920   | 1340  | 1960  | 1300  | 1540  | 1730   |
| 14    | 125     | 455      | 140      | 990      | 1020  | 799   | 3560   | 1970  | 1810  | 1530  | 1540  | 1380   |
| 15    | 336     | 451      | 128      | 373      | 1390  | 747   | 2210   | 1900  | 1210  | 1450  | 1350  | 1980   |
| 16    | 131     | 427      | 14       | 400      | 1180  | 621   | 2030   | 1860  | 1000  | 1910  | 1600  | 1510   |
| 17    | .00     | 328      | 1620     | 567      | 624   | 979   | 1700   | 1660  | 1390  | 2000  | 1640  | 2010   |
| 18    | .00     | 276      | 84       | 553      | 970   | 384   | 2000   | 1520  | 1610  | 1980  | 1870  | 1900   |
| 19    | .00     | 662      | 13       | 428      | 844   | 538   | 1630   | 1330  | 1840  | 2010  | 1440  | 2010   |
| 20    | .00     | 277      | 126      | 388      | 1030  | 746   | 976    | 1460  | 1800  | 1330  | 1850  | 1910   |
| 21    | .00     | 278      | 119      | 990      | 718   | 1020  | 1200   | 1610  | 1610  | 1520  | 1760  | 1640   |
| 22    | .00     | 455      | 14       | 400      | 832   | 972   | 1000   | 1550  | 1200  | 1730  | 1760  | 1200   |
| 23    | .00     | 1540     | 153      | 415      | 1090  | 1100  | 1930   | 1770  | 1210  | 1670  | 1840  | 1770   |
| 24    | 89      | 737      | 662      | 428      | 968   | 979   | 1870   | 1820  | 1380  | 1840  | 1550  | 1690   |
| 25    | 97      | 659      | 360      | 427      | 990   | 1040  | 1880   | 1520  | 1710  | 1370  | 2300  | 1930   |
| 26    | 99      | 659      | 112      | 440      | 953   | 1240  | 1700   | 1100  | 1820  | 1030  | 1210  | 1910   |
| 27    | 84      | 422      | .00      | 509      | 1050  | 1500  | 1650   | 1090  | 1460  | 971   | 918   | 1910   |
| 28    | .00     | 598      | 106      | 990      | 1070  | 1470  | 1580   | 1590  | 1650  | 876   | 1620  | 1790   |
| 29    | .00     | 564      | .00      | 425      | 1090  | 1490  | 1290   | 1800  | 1150  | 1260  | 1690  | 2150   |
| 30    | .00     | 705      | .00      | 427      | ---   | 1360  | 1890   | 1680  | 1130  | 1730  | 1720  | 1570   |
| 31    | .00     | ---      | 335      | 454      | ---   | 1480  | ---    | 1600  | ---   | 2010  | 1430  | ---    |
| TOTAL | 3228.00 | 10465.00 | 12365.00 | 11728.00 | 23605 | 29282 | 53286  | 48040 | 44222 | 49407 | 50008 | 52840  |
| MEAN  | 104     | 349      | 399      | 378      | 814   | 945   | 1776   | 1550  | 1474  | 1594  | 1613  | 1761   |
| MAX   | 360     | 1540     | 1620     | 990      | 1390  | 1660  | 3560   | 1970  | 1960  | 2080  | 2300  | 2180   |
| MIN   | .00     | .00      | .00      | .00      | 223   | 348   | 976    | 1000  | 962   | 876   | 918   | 1200   |
| AC-FT | 6400    | 20760    | 24530    | 23260    | 46820 | 58080 | 105700 | 95290 | 87710 | 98000 | 99190 | 104800 |
| a     | 1720    | 8690     | 20300    | 11800    | 16690 | 17550 | 65560  | 66080 | 63890 | 74890 | 76170 | 74780  |
| b     | 4390    | 11830    | 3480     | 12180    | 30510 | 39980 | 37950  | 28190 | 22770 | 22430 | 21940 | 27620  |

a Diversion, in acre-feet, to Alamo Powerplant, provided by California Department of Water Resources.

b Diversion, in acre-feet, to William Warne Powerplant, provided by California Department of Water Resources.

11109396 NORTH PORTAL TEHACHAPI TUNNEL NEAR GORMAN, CA--Continued

## SUMMARY STATISTICS

## FOR 1996 WATER YEAR

|                            |           |        |
|----------------------------|-----------|--------|
| ANNUAL TOTAL               | 388476.00 |        |
| ANNUAL MEAN                | 1061      |        |
| HIGHEST DAILY MEAN         | 3560      | Apr 14 |
| LOWEST DAILY MEAN          | .00       | Oct 9  |
| ANNUAL SEVEN-DAY MINIMUM   | .00       | Oct 17 |
| ANNUAL RUNOFF (AC-FT)      | 770500    |        |
| ANNUAL DIVERSION (AC-FT) a | 498100    |        |
| ANNUAL DIVERSION (AC-FT) b | 263300    |        |
| 10 PERCENT EXCEEDS         | 1910      |        |
| 50 PERCENT EXCEEDS         | 1110      |        |
| 90 PERCENT EXCEEDS         | 83        |        |

a Diversion, in acre-feet, to Alamo Powerplant, provided by California Department of Water Resources.

b Diversion, in acre-feet, to William Warne Powerplant, provided by California Department of Water Resources.

## 11109520 PYRAMID LAKE NEAR GORMAN, CA

LOCATION (REVISED).--Lat 34°38'41", long 118°45'47", in NE 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, Angeles National Forest, in control structure near left abutment of Pyramid Dam on Piru Creek, and 11.7 mi southeast of Gorman.

DRAINAGE AREA.--295 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Water-stage recorder. Datum of gage is sea level.

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 imported water from West Branch California Aqueduct via William Warne Powerplant (station 11109398). Water is released through the Angeles Tunnel to Castaic Powerplant and during periods of low electricity demand water from Elderberry Forebay (station 11108092) is pumped back to Pyramid Lake. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards. See schematic diagram of Santa Clara River basin.

EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 170,457 acre-ft, Feb. 9, 1996; elevation, 2,578.43 ft; minimum, 137,883 acre-ft, Nov. 26, 1991, elevation, 2,551.53 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 170,457 acre-ft, Feb. 9, elevation, 2,578.43 ft; minimum, 149,791 acre-ft, Sept. 26, 1996, elevation, 2,561.78 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on table 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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 167536  | 165498  | 165536  | 162308  | 158874  | 164687  | 165460  | 165054  | 159666  | 160672  | 163640  | 167319  |
| 2   | 167511  | 165282  | 166451  | 162296  | 160822  | 167293  | 167127  | 165219  | 151258  | 161121  | 164359  | 166859  |
| 3   | 167613  | 165219  | 166974  | 160623  | 161483  | 164384  | 165650  | 162885  | 156159  | 162145  | 165092  | 168138  |
| 4   | 167728  | 164991  | 167089  | 160039  | 164498  | 165206  | 163627  | 164700  | 158936  | 164523  | 167255  | 168049  |
| 5   | 167882  | 164725  | 166477  | 159456  | 168845  | 164081  | 164043  | 165663  | 161770  | 162634  | 166515  | 166987  |
| 6   | 168010  | 164649  | 165638  | 159468  | 163163  | 163879  | 165080  | 164093  | 158048  | 164005  | 167089  | 163602  |
| 7   | 167805  | 164649  | 162070  | 159977  | 166783  | 164852  | 166299  | 165358  | 153751  | 167511  | 165181  | 164814  |
| 8   | 167409  | 166210  | 162734  | 158529  | 166171  | 163262  | 165422  | 164018  | 156465  | 166502  | 164498  | 164788  |
| 9   | 166847  | 166910  | 162233  | 157016  | 170457  | 164637  | 164637  | 164763  | 162772  | 166694  | 163677  | 163451  |
| 10  | 166757  | 167741  | 162647  | 158294  | 166949  | 167664  | 164877  | 164106  | 160051  | 163854  | 160498  | 162509  |
| 11  | 167140  | 168382  | 164106  | 157065  | 167844  | 165333  | 162960  | 160809  | 162722  | 162509  | 164321  | 162133  |
| 12  | 167306  | 168344  | 162722  | 159952  | 166987  | 166337  | 162672  | 159939  | 161970  | 161995  | 162986  | 161783  |
| 13  | 167255  | 167856  | 163551  | 161059  | 166515  | 165282  | 162208  | 157372  | 160486  | 160436  | 160859  | 162998  |
| 14  | 167217  | 167447  | 164864  | 162772  | 168446  | 166541  | 162258  | 157568  | 160449  | 163993  | 159679  | 162158  |
| 15  | 167179  | 166961  | 163111  | 164738  | 165841  | 166847  | 160685  | 159939  | 163791  | 163627  | 163048  | 162938  |
| 16  | 167485  | 167076  | 162020  | 164776  | 163426  | 164157  | 159369  | 161221  | 165587  | 164308  | 158874  | 162271  |
| 17  | 167447  | 167191  | 162760  | 163438  | 163816  | 166108  | 161083  | 164030  | 165422  | 164093  | 163187  | 161945  |
| 18  | 167306  | 166350  | 162960  | 162296  | 164573  | 164258  | 161945  | 164561  | 164776  | 161433  | 166630  | 161895  |
| 19  | 167293  | 166796  | 163501  | 164258  | 165080  | 163866  | 161096  | 167242  | 163514  | 160262  | 168061  | 159109  |
| 20  | 167255  | 167332  | 161733  | 165308  | 165232  | 163803  | 163363  | 164839  | 161158  | 162509  | 166668  | 153872  |
| 21  | 167217  | 167025  | 161558  | 163854  | 166350  | 163011  | 166248  | 163463  | 162183  | 164877  | 164599  | 153909  |
| 22  | 166719  | 167319  | 161833  | 161845  | 164611  | 165308  | 166095  | 162822  | 162986  | 161858  | 163993  | 156086  |
| 23  | 166375  | 166872  | 161845  | 160150  | 165054  | 167051  | 166783  | 164207  | 164119  | 165067  | 163967  | 156306  |
| 24  | 166311  | 166770  | 162045  | 158640  | 164321  | 166770  | 164675  | 160237  | 162873  | 163187  | 164523  | 154078  |
| 25  | 165422  | 167319  | 162697  | 158887  | 163627  | 164144  | 163124  | 161333  | 161345  | 160436  | 164535  | 151907  |
| 26  | 165346  | 165841  | 163778  | 158726  | 162308  | 161770  | 161608  | 163640  | 163690  | 159196  | 168292  | 149791  |
| 27  | 165308  | 166286  | 162898  | 159654  | 162923  | 158233  | 161445  | 163363  | 165270  | 161808  | 166286  | 152063  |
| 28  | 165308  | 163980  | 162346  | 164485  | 163703  | 156208  | 165181  | 160337  | 163677  | 166184  | 160884  | 152701  |
| 29  | 165270  | 163791  | 161845  | 163199  | 164611  | 158566  | 165701  | 162145  | 159790  | 164232  | 160536  | 157114  |
| 30  | 165016  | 164081  | 161133  | 160834  | ---     | 162421  | 166719  | 164270  | 152120  | 163854  | 161108  | 157704  |
| 31  | 164750  | ---     | 161670  | 158936  | ---     | 165930  | ---     | 160386  | ---     | 162935  | 162647  | ---     |
| MAX | 168010  | 168382  | 167089  | 165308  | 170457  | 167664  | 167127  | 167242  | 165587  | 167511  | 168292  | 168138  |
| MIN | 164750  | 163791  | 161133  | 157016  | 158874  | 156208  | 159369  | 157372  | 151258  | 159196  | 158874  | 149791  |
| a   | 2573.97 | 2573.44 | 2571.52 | 2569.32 | 2573.86 | 2574.90 | 2575.52 | 2570.49 | 2562.72 | 2572.53 | 2572.30 | 2568.32 |
| b   | -3055   | -698    | -2411   | -2734   | +5675   | +1319   | +789    | -6333   | -8266   | +10815  | -288    | -4943   |

CAL YR 1995 MAX 169695 MIN 155976 b +2165  
WTR YR 1996 MAX 170457 MIN 149791 b -10101

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

11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA

LOCATION.--Lat 34°38'30", long 118°45'49", in SW 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, Los Padres National Forest, at downstream base of dam and 11.7 mi southeast of Gorman.

DRAINAGE AREA.--295 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.--Flow meters with totalizer. Elevation of gage is 2,200 ft above sea level, from topographic map.

REMARKS.--Flow regulated beginning December 1971 by Pyramid Lake (station 11109520). See schematic diagram of Santa Clara River basin.

COOPERATION.--Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,990 ft<sup>3</sup>/s, Feb. 26, 1993; minimum daily, 5.0 ft<sup>3</sup>/s, many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1     | 25   | 25   | 50   | 75   | 75   | 50   | 19   | 24   | 25   | 25   | 24   | 25   |
| 2     | 25   | 25   | 50   | 75   | 75   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 3     | 25   | 25   | 50   | 75   | 75   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 4     | 25   | 25   | 50   | 75   | 75   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 5     | 25   | 25   | 50   | 75   | 50   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 6     | 25   | 25   | 50   | 75   | 50   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 7     | 25   | 25   | 50   | 74   | 50   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 8     | 25   | 25   | 50   | 74   | 50   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 9     | 25   | 25   | 56   | 74   | 35   | 50   | 25   | 24   | 25   | 25   | 24   | 25   |
| 10    | 25   | 25   | 60   | 74   | 35   | 50   | 25   | 24   | 25   | 25   | 25   | 25   |
| 11    | 25   | 25   | 60   | 74   | 35   | 50   | 25   | 24   | 25   | 25   | 25   | 25   |
| 12    | 25   | 25   | 60   | 74   | 35   | 50   | 25   | 24   | 25   | 25   | 25   | 25   |
| 13    | 25   | 25   | 60   | 74   | 35   | 50   | 25   | 24   | 25   | 25   | 25   | 25   |
| 14    | 25   | 25   | 60   | 74   | 35   | 75   | 25   | 24   | 25   | 25   | 25   | 25   |
| 15    | 25   | 25   | 60   | 74   | 35   | 75   | 25   | 24   | 25   | 25   | 25   | 25   |
| 16    | 25   | 25   | 60   | 74   | 25   | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 17    | 25   | 25   | 60   | 74   | 25   | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 18    | 25   | 25   | 73   | 74   | 25   | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 19    | 25   | 25   | 75   | 74   | 25   | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 20    | 25   | 25   | 75   | 74   | 25   | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 21    | 25   | 25   | 75   | 74   | 502  | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 22    | 25   | 25   | 75   | 74   | 288  | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| 23    | 25   | 35   | 75   | 74   | 75   | 50   | 25   | 25   | 25   | 25   | 25   | 25   |
| 24    | 25   | 35   | 75   | 74   | 75   | 25   | 25   | 25   | 24   | 24   | 25   | 25   |
| 25    | 25   | 35   | 75   | 74   | 50   | 25   | 25   | 25   | 24   | 24   | 25   | 25   |
| 26    | 25   | 35   | 75   | 74   | 50   | 25   | 25   | 25   | 24   | 24   | 25   | 23   |
| 27    | 25   | 35   | 75   | 74   | 50   | 25   | 25   | 25   | 24   | 24   | 25   | 19   |
| 28    | 25   | 35   | 75   | 74   | 50   | 25   | 25   | 25   | 24   | 24   | 25   | 15   |
| 29    | 25   | 35   | 75   | 74   | 50   | 25   | 25   | 25   | 24   | 24   | 25   | 10   |
| 30    | 26   | 35   | 75   | 74   | ---  | 25   | 25   | 25   | 24   | 24   | 25   | 10   |
| 31    | 26   | ---  | 75   | 74   | ---  | 25   | ---  | 25   | ---  | 24   | 25   | ---  |
| TOTAL | 777  | 830  | 1984 | 2300 | 2060 | 1575 | 744  | 760  | 743  | 767  | 766  | 702  |
| MEAN  | 25.1 | 27.7 | 64.0 | 74.2 | 71.0 | 50.8 | 24.8 | 24.5 | 24.8 | 24.7 | 24.7 | 23.4 |
| MAX   | 26   | 35   | 75   | 75   | 502  | 75   | 25   | 25   | 25   | 25   | 25   | 25   |
| MIN   | 25   | 25   | 50   | 74   | 25   | 25   | 19   | 24   | 24   | 24   | 24   | 10   |
| AC-FT | 1540 | 1650 | 3940 | 4560 | 4090 | 3120 | 1480 | 1510 | 1470 | 1520 | 1520 | 1390 |

11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 21.2 | 28.3 | 26.1 | 117  | 137  | 87.2 | 40.9 | 32.5 | 24.2 | 23.0 | 20.8 | 20.5 |
| MAX  | 45.5 | 83.8 | 64.0 | 422  | 491  | 242  | 132  | 97.3 | 41.0 | 32.9 | 25.8 | 25.6 |
| (WY) | 1993 | 1993 | 1996 | 1995 | 1992 | 1992 | 1993 | 1991 | 1993 | 1993 | 1993 | 1993 |
| MIN  | 11.5 | 7.40 | 5.03 | 5.00 | 5.00 | 5.10 | 5.57 | 10.6 | 12.5 | 13.6 | 12.9 | 13.0 |
| (WY) | 1990 | 1989 | 1995 | 1991 | 1991 | 1995 | 1992 | 1990 | 1990 | 1989 | 1989 | 1990 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1989 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 21051.0                | 14008               |                         |
| ANNUAL MEAN              | 57.7                   | 38.3                | 47.8                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 119                     |
| LOWEST ANNUAL MEAN       |                        |                     | 10.8                    |
| HIGHEST DAILY MEAN       | 3670                   | Jan 10              | 502                     |
| LOWEST DAILY MEAN        | 5.0                    | Jan 1               | 10                      |
| ANNUAL SEVEN-DAY MINIMUM | 5.0                    | Jan 1               | 18                      |
| ANNUAL RUNOFF (AC-FT)    | 41750                  |                     | 27780                   |
| 10 PERCENT EXCEEDS       | 50                     |                     | 74                      |
| 50 PERCENT EXCEEDS       | 25                     |                     | 25                      |
| 90 PERCENT EXCEEDS       | 5.0                    |                     | 24                      |

## 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 sea level (levels by U.S. Forest Service). Prior to Dec. 15, 1972, at site 0.3 mi upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated beginning December 1971 by Pyramid Lake (station 11109520). Imported water from the California Water Project stored and released at Pyramid Dam. See schematic diagram of Santa Clara River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP   |
|-------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1     | 26   | 27   | 48   | 88   | e100 | e65  | 31   | 25   | 26   | 25   | 23   | 20    |
| 2     | 26   | 27   | 52   | 86   | e90  | e60  | 32   | 25   | 26   | 25   | 23   | 20    |
| 3     | 25   | 27   | 52   | 88   | e90  | e58  | 32   | 26   | 26   | 25   | 23   | 21    |
| 4     | 25   | 27   | 51   | 90   | e87  | e56  | 31   | 25   | 26   | 25   | 23   | 21    |
| 5     | 26   | 27   | 52   | 91   | e82  | e55  | 31   | 25   | 26   | 25   | 24   | e20   |
| 6     | 26   | 28   | 52   | 88   | e83  | e54  | 30   | 25   | 26   | 26   | 24   | e20   |
| 7     | 26   | 28   | 51   | 88   | e82  | e53  | 30   | 25   | 26   | 26   | 24   | e19   |
| 8     | 27   | 28   | 52   | 88   | e79  | e52  | 30   | 24   | 26   | 26   | 24   | e19   |
| 9     | 26   | 27   | 64   | 90   | e75  | 50   | 30   | 24   | 26   | 26   | 23   | e18   |
| 10    | 26   | 27   | 64   | 88   | e70  | 51   | 31   | 24   | 26   | 26   | 23   | e17   |
| 11    | 26   | 27   | 64   | 88   | e70  | 51   | 31   | 24   | 26   | 25   | 23   | e17   |
| 12    | 26   | 27   | 68   | 88   | e68  | 68   | 31   | 24   | 26   | 24   | 23   | e16   |
| 13    | 26   | 27   | 82   | 88   | e66  | 82   | 31   | 24   | 26   | 24   | 23   | e16   |
| 14    | 25   | 26   | 73   | 88   | e64  | 91   | 31   | 24   | 26   | 24   | 23   | e15   |
| 15    | 25   | 26   | 70   | 86   | e62  | 83   | 29   | 24   | 26   | 24   | 22   | e15   |
| 16    | 26   | 26   | 88   | 88   | e61  | e80  | 29   | 25   | 26   | 25   | 22   | e14   |
| 17    | 26   | 26   | 90   | 90   | e60  | e70  | 30   | 24   | 25   | 25   | 22   | e13   |
| 18    | 26   | 26   | 90   | 88   | e60  | e60  | 33   | 24   | 25   | 24   | 22   | e13   |
| 19    | 26   | 26   | 90   | 88   | e95  | e53  | 30   | 24   | 25   | 23   | 23   | e12   |
| 20    | 26   | 26   | 90   | 88   | e550 | e48  | 30   | 24   | 25   | 23   | 23   | e12   |
| 21    | 27   | 26   | 90   | 86   | e220 | e43  | 29   | 25   | 25   | 23   | 22   | e11   |
| 22    | 27   | 25   | 88   | 88   | e180 | e38  | 29   | 25   | 25   | 23   | 22   | e10   |
| 23    | 27   | 34   | 100  | 88   | e150 | e36  | 29   | 25   | 25   | 23   | 22   | e10   |
| 24    | 27   | 36   | 95   | 89   | e130 | 36   | 28   | 25   | 25   | 22   | 22   | e9.3  |
| 25    | 27   | 36   | 91   | 89   | e100 | 33   | 28   | 25   | 25   | 22   | 22   | e8.7  |
| 26    | 27   | 36   | 91   | 89   | e90  | 32   | 28   | 25   | 25   | 23   | 22   | e8.1  |
| 27    | 27   | 37   | 91   | 89   | e80  | 31   | 27   | 25   | 25   | 23   | 22   | e7.5  |
| 28    | 27   | 38   | 88   | 89   | e75  | 31   | 26   | 25   | 25   | 23   | 22   | e6.9  |
| 29    | 27   | 37   | 88   | 89   | e70  | 31   | 26   | 25   | 25   | 23   | 21   | e6.4  |
| 30    | 27   | 37   | 88   | 89   | ---  | 31   | 26   | 25   | 25   | 23   | 19   | e5.8  |
| 31    | 27   | ---  | 88   | 148  | ---  | 31   | ---  | 25   | ---  | 22   | 19   | ---   |
| TOTAL | 814  | 878  | 2341 | 2798 | 3089 | 1613 | 889  | 764  | 766  | 746  | 695  | 421.7 |
| MEAN  | 26.3 | 29.3 | 75.5 | 90.3 | 107  | 52.0 | 29.6 | 24.6 | 25.5 | 24.1 | 22.4 | 14.1  |
| MAX   | 27   | 38   | 100  | 148  | 550  | 91   | 33   | 26   | 26   | 26   | 24   | 21    |
| MIN   | 25   | 25   | 48   | 86   | 60   | 31   | 26   | 24   | 25   | 22   | 19   | 5.8   |
| AC-FT | 1610 | 1740 | 4640 | 5550 | 6130 | 3200 | 1760 | 1520 | 1520 | 1480 | 1380 | 836   |

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 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 | 18.6  | Feb 25 1969 |
| ANNUAL RUNOFF (AC-FT)    | 41470 |             |
| 10 PERCENT EXCEEDS       | 84    |             |
| 50 PERCENT EXCEEDS       | 8.2   |             |
| 90 PERCENT EXCEEDS       | .00   |             |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 14.1 | 18.9 | 37.3 | 124  | 216  | 200  | 83.7 | 50.7 | 29.5 | 19.8 | 16.0 | 13.9 |
| MAX  | 51.8 | 92.4 | 180  | 1154 | 855  | 1126 | 289  | 204  | 93.7 | 46.8 | 37.4 | 29.3 |
| (WY) | 1993 | 1993 | 1984 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1972 - 1996

|                          |        |         |       |
|--------------------------|--------|---------|-------|
| ANNUAL TOTAL             | 65896  | 15814.7 |       |
| ANNUAL MEAN              | 181    | 43.2    | 67.9  |
| HIGHEST ANNUAL MEAN      |        |         | 193   |
| LOWEST ANNUAL MEAN       |        |         | 9.52  |
| HIGHEST DAILY MEAN       | 7700   | Jan 10  | 14000 |
| LOWEST DAILY MEAN        | 12     | Jan 1   | .07   |
| ANNUAL SEVEN-DAY MINIMUM | 24     | Sep 13  | .09   |
| INSTANTANEOUS PEAK FLOW  |        |         | 20800 |
| INSTANTANEOUS PEAK STAGE |        |         | 11.36 |
| ANNUAL RUNOFF (AC-FT)    | 130700 | 31370   | 49160 |
| 10 PERCENT EXCEEDS       | 276    | 88      | 117   |
| 50 PERCENT EXCEEDS       | 52     | 26      | 18    |
| 90 PERCENT EXCEEDS       | 26     | 22      | 5.9   |

e Estimated.

## SANTA CLARA RIVER BASIN

11109700 LAKE PIRU NEAR PIRU, CA

LOCATION.--Lat 34°27'41", long 118°45'02", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, near center of Santa Felicia Dam on Piru Creek, 0.5 mi downstream from Santa Felicia Canyon, 4.2 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.--425 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 sea level (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum. Jan. 27, 1956, to Dec. 1, 1980, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity below spillway level at elevation 1,055.0 ft, 88,340 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use, and irrigation on the Oxnard Plain. See schematic diagram of Santa Clara River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,400 acre-ft, Feb. 25, 1969, elevation, 1,061.45 ft; lake dry, Oct. 25 to Nov. 20, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 64,900 acre-ft, Aug. 23; maximum elevation, 1,034.36 ft, Aug. 23; minimum contents 41,500 acre-ft, Dec. 1; minimum elevation 1009.42 ft, Dec. 1.

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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT     | NOV     | DEC     | JAN     | FEB     | MAR     | APR     | MAY     | JUN     | JUL     | AUG     | SEP     |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | e58200  | e47600  | e41500  | 45600   | 50900   | 57300   | 61300   | 62600   | 63500   | 64100   | 64600   | 64300   |
| 2   | e57900  | e47200  | e41600  | 45700   | 51100   | 57400   | 61400   | 62600   | 63500   | 64100   | 64600   | 64200   |
| 3   | e57500  | e46900  | e41700  | 45900   | 51300   | 57500   | 61400   | 62700   | 63500   | 64100   | 64500   | 64100   |
| 4   | e57100  | e46500  | e41700  | 46000   | 51500   | 57600   | 61500   | 62700   | 63500   | 64100   | 64600   | 64000   |
| 5   | e56800  | e46200  | 41800   | 46200   | 51600   | 57700   | 61500   | 62700   | 63500   | 64100   | 64600   | 63900   |
| 6   | e56400  | e45800  | 41900   | 46400   | 51800   | 57900   | 61600   | 62700   | 63600   | 64200   | 64600   | 63700   |
| 7   | e56000  | e45800  | 42000   | 46500   | 51900   | 58000   | 61600   | 62800   | 63600   | 64200   | 64600   | 63600   |
| 8   | e55700  | e45800  | 42100   | 46700   | 52000   | 58100   | 61600   | 62800   | 63600   | 64200   | 64600   | 63400   |
| 9   | e55300  | e45600  | 42200   | 46900   | 52100   | 58200   | 61700   | 62800   | 63700   | 64200   | 64700   | 63300   |
| 10  | e54900  | e45400  | 42300   | 47100   | 52200   | 58300   | 61700   | 62800   | 63700   | 64200   | 64700   | 63100   |
| 11  | e54500  | e45200  | 42400   | 47200   | 52300   | 58400   | 61800   | 62900   | 63700   | 64200   | 64700   | 62900   |
| 12  | e54200  | e45100  | 42600   | 47400   | 52400   | 58600   | 61800   | 62900   | 63700   | 64200   | 64700   | 62700   |
| 13  | e53800  | e44900  | 42800   | 47500   | 52500   | 58800   | 61800   | 62900   | 63700   | 64300   | 64800   | 62600   |
| 14  | e53500  | e44700  | 42900   | 47700   | 52500   | 59100   | 61900   | 62900   | 63700   | 64300   | 64800   | 62400   |
| 15  | e53200  | e44500  | 43100   | 47900   | 52600   | 59200   | 61900   | 63000   | 63700   | 64300   | 64800   | 62300   |
| 16  | e52900  | e44300  | 43200   | 48000   | 52700   | 59400   | 62000   | 63000   | 63800   | 64300   | 64800   | 62100   |
| 17  | e52600  | e44100  | 43300   | 48100   | 52700   | 59600   | 62100   | 63100   | 63800   | 64300   | 64800   | 61800   |
| 18  | e52300  | e43900  | 43500   | 48300   | 52800   | 59800   | 62100   | 63100   | 63800   | 64300   | 64800   | 61500   |
| 19  | e52000  | e43700  | 43600   | 48400   | 53100   | 60300   | 62100   | 63100   | 63800   | 64400   | 64800   | 61200   |
| 20  | e51600  | e43600  | 43800   | 48600   | 54000   | 60500   | 62200   | 63100   | 63800   | 64400   | 64800   | 60800   |
| 21  | e51300  | e43400  | 43900   | 48700   | 55200   | 60600   | 62200   | 63200   | 63800   | 64400   | 64800   | 60400   |
| 22  | e51000  | e43200  | 44100   | 48900   | 55700   | 60700   | 62300   | 63200   | 63800   | 64400   | 64800   | 60100   |
| 23  | e50700  | e43000  | 44300   | 49000   | 56100   | 60800   | 62300   | 63200   | 63900   | 64400   | 64800   | 59700   |
| 24  | e50400  | e42800  | 44500   | 49200   | 56300   | 60900   | 62400   | 63200   | 63900   | 64400   | 64800   | 59400   |
| 25  | e50000  | e42600  | 44700   | 49300   | 56500   | 61000   | 62500   | 63200   | 63900   | 64500   | 64700   | 59000   |
| 26  | e49700  | e42400  | 44900   | 49500   | 56600   | 61000   | 62400   | 63200   | 63900   | 64500   | 64600   | 58700   |
| 27  | e49300  | e42200  | 45000   | 49700   | 56800   | 61100   | 62400   | 63200   | 63900   | 64500   | 64600   | 58400   |
| 28  | e49000  | e42100  | 45200   | 49800   | 57000   | 61100   | 62500   | 63300   | 64000   | 64500   | 64500   | 58000   |
| 29  | e48600  | e41900  | 45400   | 49900   | 57100   | 61100   | 62500   | 63300   | 64100   | 64600   | 64500   | 57700   |
| 30  | e48300  | e41700  | 45300   | 50100   | ---     | 61200   | 62600   | 63300   | 64100   | 64600   | 64400   | 57300   |
| 31  | e48000  | ---     | 45400   | 50600   | ---     | 61300   | ---     | 63400   | ---     | 64600   | 64300   | ---     |
| MAX | 58200   | 47600   | 45400   | 50600   | 57100   | 61300   | 62600   | 63400   | 64100   | 64600   | 64800   | 64300   |
| MIN | 48000   | 41700   | 41500   | 45600   | 50900   | 57300   | 61300   | 62600   | 63500   | 64100   | 64300   | 57300   |
| a   | 1016.89 | 1009.66 | 1014.00 | 1019.76 | 1026.60 | 1030.78 | 1032.09 | 1032.89 | 1033.55 | 1034.03 | 1033.79 | 1026.79 |
| b   | -10600  | -6300   | +3700   | +5200   | +6500   | +4200   | +1300   | +800    | +700    | +500    | -300    | -7000   |

CAL YR 1995 b +11900

WTR YR 1996 b -1300

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 sea level (levels by United Water Conservation District).

REMARKS.--Records good except those 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. See schematic diagram of Santa Clara River basin.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC   | JAN   | FEB  | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP  |
|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|
| 1     | 234   | 222  | 41    | e5.0  | 2.9  | 4.8   | 4.8   | 4.8   | 5.6   | 4.5   | 4.8   | 40   |
| 2     | 234   | 237  | 11    | e5.0  | 2.4  | 4.8   | 4.8   | 4.5   | 5.2   | 4.5   | 4.8   | 40   |
| 3     | 234   | 244  | 11    | e5.0  | 2.4  | 4.8   | 4.8   | 4.5   | 5.2   | 4.5   | 4.8   | 40   |
| 4     | 234   | 246  | 11    | e5.0  | 2.4  | 4.8   | 4.8   | 4.5   | 5.2   | 4.5   | 4.8   | 39   |
| 5     | 234   | 247  | 11    | e5.0  | 2.4  | 4.8   | 4.8   | 4.5   | 5.2   | 4.5   | 4.8   | 73   |
| 6     | 234   | 211  | 11    | e5.0  | 2.4  | 4.8   | 4.8   | 4.7   | 5.2   | 4.5   | 5.0   | 89   |
| 7     | 232   | 156  | 11    | e5.0  | 2.4  | 4.8   | 4.8   | 4.8   | 5.2   | 4.3   | 5.0   | 89   |
| 8     | 227   | 176  | 11    | e5.0  | 2.5  | 4.9   | 4.8   | 4.8   | 5.2   | 4.3   | 4.8   | 89   |
| 9     | 213   | 163  | 11    | e5.0  | 2.6  | 5.0   | 4.8   | 4.8   | 5.4   | 4.3   | 4.8   | 89   |
| 10    | 219   | 117  | e11   | e5.0  | 2.6  | 5.0   | 4.8   | 5.0   | 5.4   | 4.3   | 4.8   | 89   |
| 11    | 227   | 23   | e11   | e5.0  | 2.6  | 5.0   | 4.8   | 5.0   | 5.2   | 4.2   | 4.6   | 89   |
| 12    | 240   | 23   | e10   | e5.0  | 2.4  | 5.0   | 4.9   | 5.0   | 5.2   | 4.5   | 4.5   | 87   |
| 13    | 248   | 23   | e10   | e5.0  | 2.4  | 5.1   | 5.0   | 5.0   | 5.4   | 4.6   | 4.5   | 89   |
| 14    | 248   | 97   | e10   | e5.0  | 2.4  | 5.0   | 4.8   | 5.0   | 5.5   | 4.8   | 4.5   | 89   |
| 15    | 245   | 153  | e10   | e5.0  | 2.4  | 5.0   | 4.8   | 5.0   | 5.5   | 4.8   | 4.5   | 89   |
| 16    | 163   | 150  | e10   | e5.0  | 2.4  | 5.0   | 4.8   | 5.0   | 5.5   | 4.8   | 4.7   | 89   |
| 17    | 108   | 150  | e10   | e5.0  | 2.4  | 5.0   | 4.8   | 5.2   | 5.5   | 4.7   | 4.8   | 156  |
| 18    | 236   | 161  | e10   | 2.1   | 2.6  | 5.0   | 4.8   | 5.2   | 5.5   | 4.6   | 4.6   | 187  |
| 19    | 234   | 163  | e10   | 2.0   | 3.2  | 5.0   | 4.8   | 5.2   | 5.5   | 4.8   | 4.5   | 185  |
| 20    | 223   | 151  | e10   | 2.0   | 2.6  | 5.0   | 4.8   | 5.2   | 5.5   | 4.8   | 4.5   | 185  |
| 21    | 219   | 132  | e10   | 2.0   | 2.6  | 5.0   | 4.8   | 5.2   | 5.5   | 4.8   | 1.8   | 185  |
| 22    | 217   | 113  | e10   | 2.1   | 2.6  | 4.8   | 4.8   | 5.2   | 5.5   | 5.0   | 4.0   | 185  |
| 23    | 219   | 113  | e5.0  | 2.1   | 2.6  | 4.8   | 4.5   | 5.2   | 5.5   | 2.7   | 17    | 186  |
| 24    | 208   | 113  | e5.0  | 2.1   | 2.6  | 4.8   | 4.5   | 5.5   | 5.6   | 4.3   | 28    | 188  |
| 25    | 220   | 113  | e5.0  | 2.1   | 2.8  | 4.8   | 4.5   | 5.5   | 5.5   | 4.5   | 33    | 188  |
| 26    | 222   | 113  | e5.0  | 2.1   | 3.1  | 4.9   | 4.6   | 5.5   | 5.5   | 4.7   | 34    | 188  |
| 27    | 220   | 113  | e5.0  | 2.1   | 4.7  | 5.0   | 4.8   | 5.5   | 5.0   | 4.8   | 38    | 186  |
| 28    | 220   | 113  | e5.0  | 2.1   | e5.5 | 5.0   | 4.8   | 5.5   | 4.5   | 4.6   | 40    | 185  |
| 29    | 200   | 113  | e5.0  | 1.4   | 5.0  | 5.0   | 4.8   | 5.5   | 4.5   | 4.5   | 40    | 188  |
| 30    | 228   | 112  | e5.0  | 1.9   | ---  | 5.0   | 4.8   | 5.5   | 4.5   | 4.5   | 40    | 188  |
| 31    | 207   | ---  | e5.0  | 2.4   | ---  | 4.9   | ---   | 5.7   | ---   | 4.6   | 40    | ---  |
| TOTAL | 6847  | 4261 | 306.0 | 113.5 | 81.9 | 152.6 | 143.2 | 157.5 | 158.7 | 139.8 | 409.9 | 3789 |
| MEAN  | 221   | 142  | 9.87  | 3.66  | 2.82 | 4.92  | 4.77  | 5.08  | 5.29  | 4.51  | 13.2  | 126  |
| MAX   | 248   | 247  | 41    | 5.0   | 5.5  | 5.1   | 5.0   | 5.7   | 5.6   | 5.0   | 40    | 188  |
| MIN   | 108   | 23   | 5.0   | 1.4   | 2.4  | 4.8   | 4.5   | 4.5   | 4.5   | 2.7   | 1.8   | 39   |
| AC-FT | 13580 | 8450 | 607   | 225   | 162  | 303   | 284   | 312   | 315   | 277   | 813   | 7520 |

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 1974 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 104  | 49.9 | 18.6 | 14.6 | 20.2 | 27.7 | 24.4 | 45.1 | 51.8 | 75.8 | 83.9 | 105  |
| MAX  | 446  | 323  | 89.5 | 86.6 | 123  | 132  | 109  | 224  | 241  | 271  | 322  | 294  |
| (WY) | 1993 | 1993 | 1995 | 1994 | 1984 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1974 - 1996

|                          |         |         |       |
|--------------------------|---------|---------|-------|
| ANNUAL TOTAL             | 45149.2 | 16560.1 |       |
| ANNUAL MEAN              | 124     | 45.2    | 51.9  |
| HIGHEST ANNUAL MEAN      |         |         | 138   |
| LOWEST ANNUAL MEAN       |         |         | 7.03  |
| HIGHEST DAILY MEAN       | 377     | Mar 9   | 248   |
| LOWEST DAILY MEAN        | 5.0     | Dec 23  | 1.4   |
| ANNUAL SEVEN-DAY MINIMUM | 5.0     | Dec 23  | 2.0   |
| INSTANTANEOUS PEAK FLOW  |         |         | 252   |
| INSTANTANEOUS PEAK STAGE |         |         | 3.12  |
| ANNUAL RUNOFF (AC-FT)    | 89550   | 32850   | 37620 |
| 10 PERCENT EXCEEDS       | 227     | 188     | 195   |
| 50 PERCENT EXCEEDS       | 105     | 5.0     | 6.9   |
| 90 PERCENT EXCEEDS       | 11      | 2.6     | 3.5   |

11111500 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 sea level (levels by Ventura County Flood Control District).

REMARKS.--Records fair. No regulation or diversion upstream from station. See schematic diagram of Santa Clara River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,600 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 15.02 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for many days in some years.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 20 | 2000 | 296                               | 2.38                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN  | FEB   | MAR   | APR   | MAY  | JUN   | JUL   | AUG  | SEP  |
|-------|------|------|-------|------|-------|-------|-------|------|-------|-------|------|------|
| 1     | 2.2  | 2.7  | 2.8   | 3.6  | 11    | 8.8   | 7.3   | 3.2  | 1.9   | .85   | .26  | .06  |
| 2     | 2.1  | 2.8  | 2.9   | 3.6  | 8.4   | 8.5   | 7.6   | 3.1  | 1.8   | .78   | .27  | .06  |
| 3     | 2.0  | 2.8  | 2.7   | 3.5  | 9.0   | 8.3   | 6.9   | 3.0  | 1.7   | .74   | .27  | .05  |
| 4     | 1.8  | 2.7  | 2.8   | 3.3  | 8.2   | 8.8   | 6.6   | 3.0  | 1.5   | .65   | .27  | .05  |
| 5     | 1.8  | 2.6  | 2.8   | 3.3  | 8.0   | 9.0   | 6.3   | 2.9  | 1.4   | .59   | .28  | .06  |
| 6     | 2.0  | 2.6  | 2.8   | 3.3  | 7.7   | 8.5   | 6.0   | 2.9  | 1.4   | .56   | .29  | .06  |
| 7     | 2.2  | 2.5  | 3.1   | 3.2  | 7.2   | 8.3   | 5.9   | 3.0  | 1.3   | .54   | .28  | .06  |
| 8     | 2.3  | 2.4  | 3.2   | 2.9  | 7.0   | 8.2   | 5.8   | 2.9  | 1.2   | .49   | .27  | .07  |
| 9     | 2.1  | 2.3  | 3.4   | 2.8  | 6.7   | 8.1   | 5.7   | 2.9  | 1.2   | .46   | .27  | .08  |
| 10    | 2.0  | 2.2  | 3.7   | 2.8  | 6.7   | 7.9   | 5.8   | 2.9  | 1.1   | .45   | .23  | .08  |
| 11    | 2.0  | 2.3  | 3.9   | 2.8  | 6.4   | 7.7   | 5.7   | 2.7  | 1.1   | .46   | .23  | .06  |
| 12    | 2.0  | 2.3  | 4.7   | 2.8  | 6.4   | 10    | 5.6   | 2.7  | 1.1   | .47   | .22  | .07  |
| 13    | 2.0  | 2.4  | 6.2   | 2.6  | 6.4   | 12    | 5.6   | 2.5  | 1.2   | .44   | .22  | .10  |
| 14    | 1.9  | 2.4  | 4.8   | 2.4  | 6.4   | 12    | 5.4   | 2.4  | 1.2   | .37   | .22  | .13  |
| 15    | 2.1  | 2.4  | 4.1   | 2.4  | 6.4   | 11    | 5.1   | 2.5  | 1.2   | .35   | .24  | .14  |
| 16    | 2.2  | 2.5  | 4.4   | 2.3  | 6.4   | 9.6   | 5.2   | 3.5  | 1.2   | .36   | .23  | .16  |
| 17    | 2.2  | 2.5  | 4.3   | 2.3  | 6.2   | 8.8   | 5.3   | 3.4  | 1.1   | .39   | .22  | .20  |
| 18    | 2.0  | 2.7  | 4.1   | 2.2  | 6.2   | 8.8   | 5.7   | 2.9  | 1.1   | .35   | .22  | .18  |
| 19    | 1.9  | 2.7  | 4.1   | 2.3  | 9.8   | 8.4   | 5.2   | 2.8  | 1.1   | .30   | e.21 | .16  |
| 20    | 1.9  | 2.8  | 4.1   | 2.2  | 137   | 8.1   | 5.0   | 2.7  | 1.0   | .31   | e.20 | .16  |
| 21    | 1.8  | 2.8  | 4.4   | 2.3  | 61    | 7.9   | 5.0   | 2.6  | 1.0   | .34   | e.20 | .17  |
| 22    | 1.8  | 2.8  | 4.3   | 2.4  | 22    | 7.9   | 4.6   | 2.6  | 1.0   | .32   | e.19 | .17  |
| 23    | 2.0  | 2.6  | 5.3   | 2.4  | 15    | 7.8   | 4.4   | 2.5  | .99   | .29   | e.18 | .18  |
| 24    | 2.3  | 2.6  | 4.7   | 2.4  | 12    | 7.8   | 4.1   | 2.5  | .94   | .30   | e.17 | .21  |
| 25    | 2.3  | 2.6  | 4.5   | 2.4  | 11    | 7.5   | 3.9   | 2.7  | 1.0   | .29   | e.16 | .23  |
| 26    | 2.3  | 2.5  | 4.5   | 2.2  | 10    | 7.2   | 3.8   | 2.7  | 1.1   | .30   | e.16 | .24  |
| 27    | 2.2  | 2.7  | 4.1   | 2.2  | 10    | 7.1   | 3.6   | 2.5  | 1.2   | .33   | e.15 | .25  |
| 28    | 2.2  | 2.9  | 3.8   | 2.2  | 9.7   | 7.1   | 3.5   | 2.3  | 1.2   | .29   | e.14 | .27  |
| 29    | 2.3  | 3.0  | 3.8   | 2.2  | 9.2   | 7.1   | 3.5   | 2.3  | 1.1   | .29   | .13  | .26  |
| 30    | 2.3  | 2.9  | 4.4   | 2.2  | ---   | 7.0   | 3.4   | 2.3  | .92   | .28   | .09  | .23  |
| 31    | 2.3  | ---  | 4.0   | 12   | ---   | 6.5   | ---   | 2.1  | ---   | .27   | .07  | ---  |
| TOTAL | 64.5 | 78.0 | 122.7 | 91.5 | 437.4 | 261.7 | 157.5 | 85.0 | 36.25 | 13.21 | 6.54 | 4.20 |
| MEAN  | 2.08 | 2.60 | 3.96  | 2.95 | 15.1  | 8.44  | 5.25  | 2.74 | 1.21  | .43   | .21  | .14  |
| MAX   | 2.3  | 3.0  | 6.2   | 12   | 137   | 12    | 7.6   | 3.5  | 1.9   | .85   | .29  | .27  |
| MIN   | 1.8  | 2.2  | 2.7   | 2.2  | 6.2   | 6.5   | 3.4   | 2.1  | .92   | .27   | .07  | .05  |
| AC-FT | 128  | 155  | 243   | 181  | 868   | 519   | 312   | 169  | 72    | 26    | 13   | 8.3  |

e Estimated.

## 11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .81  | 4.99 | 7.20 | 33.9 | 63.1 | 54.1 | 23.7 | 8.16 | 2.98 | 1.36 | .69  | .84  |
| MAX  | 10.3 | 131  | 85.5 | 456  | 561  | 553  | 233  | 59.5 | 18.6 | 8.08 | 5.11 | 10.7 |
| (WY) | 1984 | 1966 | 1966 | 1995 | 1993 | 1983 | 1958 | 1983 | 1983 | 1983 | 1983 | 1976 |
| MIN  | .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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1948 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 28993.5                |        | 1358.50             |        |                         |             |
| ANNUAL MEAN              | 79.4                   |        | 3.71                |        | 16.6                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 101                     |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .33                     |             |
| HIGHEST DAILY MEAN       | 3520                   | Jan 24 | 137                 | Feb 20 | 6430                    | Mar 1 1983  |
| LOWEST DAILY MEAN        | 1.6                    | Sep 16 | .05                 | Sep 3  | .00                     | Aug 25 1949 |
| ANNUAL SEVEN-DAY MINIMUM | 1.7                    | Sep 16 | .06                 | Sep 1  | .00                     | Aug 25 1949 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 296                 | Feb 20 | 11600                   | Mar 1 1983  |
| INSTANTANEOUS PEAK STAGE |                        |        | 2.38                | Feb 20 | 15.02                   | Mar 1 1983  |
| ANNUAL RUNOFF (AC-FT)    | 57510                  |        | 2690                |        | 12000                   |             |
| 10 PERCENT EXCEEDS       | 134                    |        | 7.9                 |        | 19                      |             |
| 50 PERCENT EXCEEDS       | 8.2                    |        | 2.4                 |        | 1.5                     |             |
| 90 PERCENT EXCEEDS       | 2.0                    |        | .21                 |        | .10                     |             |

## SANTA CLARA RIVER BASIN

325

11113000 SESPE CREEK NEAR FILLMORE, CA

LOCATION.--Lat 34°26'32", long 118°55'35", in SE 1/4 NW 1/4 SE 1/4 sec.12, T.4 N., R.20 W., Ventura County, Hydrologic Unit 18070102, on right bank 0.6 mi downstream from Little Sespe Creek and 2.9 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 January 1993, Oct. 1, 1993, to current year; combined records of creek and canal, October 1927 to September 1939 monthly only, October 1939 to September 1985, October 1990 to January 1993. Prior to 1935, published as "at Sespe."

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 580 ft above sea level, from topographic map. See WSP 1315-B for history of changes prior to Jan. 17, 1946. Oct. 1, 1990, to Jan. 15, 1993, at site 0.5 mi upstream at same elevation. Gage on diversion canal discontinued Jan. 15, 1993.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation upstream from station. Fillmore Irrigation Co. has diverted water 1 mi upstream since September 1911. See schematic diagram of Santa Clara River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 73,000 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 22.40 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 22.40 ft; maximum gage height, 24.95 ft, Feb. 25, 1969, from debris wave; no flow at times in some years.

EXTREMES FOR 1995 WATER YEAR.--(Not previously published.) Peak discharges greater than base discharge of 1,300 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 4  | 1645 | 1,790                             | 9.89                | Mar. 5  | 2300 | 3,110                             | 9.82                |
| Jan. 10 | 0800 | 65,000                            | 16.46               | Mar. 11 | 1045 | 3,070                             | 9.77                |
| Jan. 24 | 0845 | 25,100                            | 13.97               | Mar. 23 | 0630 | 9,830                             | 11.84               |
| Feb. 14 | 0630 | 5,390                             | 10.67               |         |      |                                   |                     |

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 20 | 1700 | 4,870                             | 10.63               |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995  
DAILY MEAN VALUES  
(NOT PREVIOUSLY PUBLISHED)

| DAY   | OCT   | NOV   | DEC   | JAN    | FEB   | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|------|------|------|------|
| 1     | 2.8   | 4.8   | 12    | 21     | 858   | 264   | 579   | 177   | 118  | 62   | 26   | e15  |
| 2     | 2.7   | 5.3   | 12    | 21     | 784   | 409   | e550  | 171   | 122  | 59   | 24   | e14  |
| 3     | 2.5   | 5.3   | 12    | 59     | 702   | 737   | e520  | 165   | 117  | 58   | 23   | e14  |
| 4     | 5.7   | 5.2   | 13    | 573    | 638   | 450   | e500  | 163   | 111  | 58   | e23  | e14  |
| 5     | 36    | 4.8   | 12    | 389    | 583   | 1410  | e470  | 163   | 106  | 55   | e22  | e13  |
| 6     | 14    | 5.4   | 10    | 119    | 547   | 1780  | e460  | 158   | 100  | 51   | e22  | e13  |
| 7     | 9.4   | 5.8   | 9.8   | 255    | 504   | 913   | e440  | 157   | 99   | 50   | e22  | e13  |
| 8     | 8.8   | 7.1   | 10    | 740    | 487   | 699   | e420  | 157   | 100  | 49   | e21  | e13  |
| 9     | 8.4   | 9.5   | 8.4   | 4240   | 459   | 610   | e410  | 156   | 100  | 48   | e21  | 14   |
| 10    | 5.5   | 18    | 7.3   | 28800  | 425   | 714   | e400  | 151   | 96   | 47   | e21  | 14   |
| 11    | 3.1   | 18    | 7.2   | 8130   | 403   | 1030  | e385  | 149   | 91   | 47   | e20  | 14   |
| 12    | 3.1   | 18    | 9.8   | 2600   | 382   | 1210  | 377   | 148   | 88   | 48   | e20  | 15   |
| 13    | 3.5   | 15    | 12    | 1400   | 378   | 1050  | 364   | 152   | 85   | 43   | e20  | 15   |
| 14    | 3.7   | 12    | 12    | 929    | 2610  | 1110  | 356   | 153   | 84   | 42   | e19  | 16   |
| 15    | 3.7   | 11    | 12    | 764    | 1120  | 1230  | 347   | 498   | 87   | 41   | e19  | 16   |
| 16    | 3.7   | 11    | 12    | 557    | 761   | 1000  | 367   | 443   | 95   | 40   | e19  | 16   |
| 17    | 3.7   | 12    | 12    | 449    | 630   | 841   | 334   | 261   | 98   | 41   | e18  | 16   |
| 18    | 3.7   | 12    | 12    | 377    | 550   | 722   | 321   | 230   | 91   | 41   | e18  | 16   |
| 19    | 3.7   | 12    | 12    | 314    | 496   | 645   | 300   | 198   | 85   | 40   | e18  | 16   |
| 20    | 3.7   | 12    | 13    | 284    | 460   | 586   | 279   | 177   | 82   | 38   | e18  | 15   |
| 21    | 3.7   | 11    | 13    | 332    | 432   | 831   | 263   | 161   | 79   | 37   | e17  | 15   |
| 22    | 3.9   | 13    | 14    | 273    | 403   | 662   | 249   | 156   | 77   | 36   | e17  | 15   |
| 23    | 3.9   | 12    | 14    | 2410   | 375   | 4060  | 237   | 154   | 75   | 35   | e17  | 15   |
| 24    | 4.1   | 12    | 20    | 17700  | 349   | 1720  | 227   | 149   | 73   | 35   | e17  | 15   |
| 25    | 4.1   | 13    | 29    | 16200  | 327   | 1200  | 219   | 148   | 71   | 34   | e16  | 14   |
| 26    | 4.4   | 14    | 26    | 4150   | 307   | 983   | 211   | 141   | 69   | 32   | e16  | 14   |
| 27    | 4.8   | 13    | 25    | 2110   | 288   | 859   | 203   | 136   | 69   | 30   | e16  | 14   |
| 28    | 4.8   | 13    | 23    | 1520   | 276   | 775   | 199   | 134   | 67   | 29   | e16  | 14   |
| 29    | 4.8   | 12    | 22    | 1200   | ---   | 710   | 190   | 131   | 67   | 27   | e15  | 14   |
| 30    | 4.8   | 12    | 22    | 1020   | ---   | 657   | 184   | 127   | 66   | 26   | e15  | 13   |
| 31    | 4.8   | ---   | 21    | 901    | ---   | 614   | ---   | 120   | ---  | 26   | e15  | ---  |
| TOTAL | 179.5 | 329.2 | 449.5 | 98837  | 16534 | 30481 | 10361 | 5584  | 2668 | 1305 | 591  | 435  |
| MEAN  | 5.79  | 11.0  | 14.5  | 3188   | 590   | 983   | 345   | 180   | 88.9 | 42.1 | 19.1 | 14.5 |
| MAX   | 36    | 18    | 29    | 28800  | 2610  | 4060  | 579   | 498   | 122  | 62   | 26   | 16   |
| MIN   | 2.5   | 4.8   | 7.2   | 21     | 276   | 264   | 184   | 120   | 66   | 26   | 15   | 13   |
| AC-FT | 356   | 653   | 892   | 196000 | 32800 | 60460 | 20550 | 11080 | 5290 | 2590 | 1170 | 863  |

e Estimated.

## 11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1995, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 4.66 | 41.6 | 93.8 | 249  | 457  | 370  | 167  | 50.9 | 17.7 | 6.95 | 3.57 | 3.59 |
| 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 1994 CALENDAR YEAR

## FOR 1995 WATER YEAR

## WATER YEARS 1911 - 1995

|                          |         |        |          |  |        |        |  |  |       |      |        |      |
|--------------------------|---------|--------|----------|--|--------|--------|--|--|-------|------|--------|------|
| ANNUAL TOTAL             | 13110.9 |        | 167754.2 |  |        |        |  |  |       |      |        |      |
| ANNUAL MEAN              | 35.9    |        | 460      |  |        |        |  |  |       | 120  |        |      |
| HIGHEST ANNUAL MEAN      |         |        |          |  |        |        |  |  |       | 641  |        | 1969 |
| LOWEST ANNUAL MEAN       |         |        |          |  |        |        |  |  |       | 1.78 |        | 1951 |
| HIGHEST DAILY MEAN       | 810     | Feb 7  |          |  | 28800  | Jan 10 |  |  | 29100 |      | Jan 25 | 1969 |
| LOWEST DAILY MEAN        | 1.9     | Aug 14 |          |  | 2.5    | Oct 3  |  |  | .00   |      | Jul 11 | 1912 |
| ANNUAL SEVEN-DAY MINIMUM | 2.0     | Aug 12 |          |  | 3.5    | Oct 11 |  |  | .00   |      | Jul 11 | 1912 |
| INSTANTANEOUS PEAK FLOW  |         |        |          |  | 65000  | Jan 10 |  |  | 73000 |      | Feb 10 | 1978 |
| INSTANTANEOUS PEAK STAGE |         |        |          |  | 16.46  | Jan 10 |  |  | 24.95 |      | Feb 25 | 1969 |
| ANNUAL RUNOFF (AC-FT)    | 26010   |        |          |  | 332700 |        |  |  | 87190 |      |        |      |
| 10 PERCENT EXCEEDS       | 87      |        |          |  | 768    |        |  |  | 171   |      |        |      |
| 50 PERCENT EXCEEDS       | 13      |        |          |  | 58     |        |  |  | 9.3   |      |        |      |
| 90 PERCENT EXCEEDS       | 2.3     |        |          |  | 8.0    |        |  |  | .15   |      |        |      |

## 11113000 SESPE CREEK NEAR FILLMORE, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV  | DEC  | JAN  | FEB   | MAR  | APR  | MAY  | JUN   | JUL  | AUG   | SEP   |
|-------|-------|------|------|------|-------|------|------|------|-------|------|-------|-------|
| 1     | 14    | 14   | 15   | 23   | 259   | 118  | 75   | e20  | e12   | 3.7  | 1.4   | .65   |
| 2     | 13    | 14   | 15   | 25   | 88    | 114  | 80   | e19  | e12   | 3.7  | 1.4   | .69   |
| 3     | 13    | 15   | 16   | 24   | 59    | 112  | 84   | e19  | e12   | 3.6  | 1.3   | .68   |
| 4     | 12    | 15   | 15   | 24   | 50    | 109  | 77   | e18  | 11    | 3.4  | 1.2   | .73   |
| 5     | 12    | 15   | 15   | 23   | 48    | 116  | 66   | e18  | 9.3   | 7.2  | 1.2   | .76   |
| 6     | 12    | 14   | 17   | 21   | 44    | 121  | 62   | e18  | 8.7   | 5.2  | 1.1   | .89   |
| 7     | 10    | 14   | 15   | 20   | 41    | 103  | 65   | e18  | 8.5   | 1.8  | 1.2   | .86   |
| 8     | 10    | 15   | 15   | 19   | 37    | 96   | 54   | e18  | 8.4   | 1.7  | 1.1   | .80   |
| 9     | 9.9   | 14   | 15   | 19   | 33    | 92   | 56   | e18  | 8.3   | 1.7  | 1.1   | .91   |
| 10    | 10    | 14   | 15   | 19   | 32    | 89   | 52   | e18  | 8.2   | 1.8  | 1.1   | .92   |
| 11    | 10    | 14   | 15   | 19   | 30    | 89   | 56   | e17  | 8.4   | 1.9  | .98   | .89   |
| 12    | 9.5   | 15   | 22   | 19   | 29    | 145  | 51   | e16  | 8.1   | 1.9  | .82   | .88   |
| 13    | 10    | 14   | 53   | 18   | 28    | 249  | 47   | e16  | 8.0   | 2.0  | .72   | .90   |
| 14    | 11    | 14   | 38   | 18   | 27    | 209  | 44   | e15  | 7.9   | 2.2  | .71   | .93   |
| 15    | 11    | 14   | 36   | 17   | 27    | 162  | 44   | e16  | 6.9   | 3.4  | .70   | 1.2   |
| 16    | 10    | 14   | 30   | 18   | 27    | 143  | 44   | e20  | 5.7   | 3.1  | .73   | 1.5   |
| 17    | 11    | 14   | 27   | 17   | 26    | 125  | 44   | e19  | 5.6   | 3.1  | .73   | 1.5   |
| 18    | 11    | 13   | 25   | 17   | 26    | 118  | 51   | e18  | 5.3   | 3.1  | .74   | 1.4   |
| 19    | 11    | 12   | 25   | 18   | 106   | 106  | 37   | e17  | 4.8   | 3.3  | .73   | 1.2   |
| 20    | 11    | 12   | 25   | 17   | 2590  | 104  | e37  | e16  | 4.0   | 4.5  | .75   | 1.3   |
| 21    | 11    | 12   | 25   | 20   | 1540  | 93   | e28  | e16  | 4.1   | 1.9  | .73   | 1.4   |
| 22    | 11    | 13   | 25   | 21   | 569   | 95   | e27  | e16  | 4.2   | 2.4  | .69   | 1.8   |
| 23    | 9.9   | 13   | 30   | 18   | 302   | 90   | e26  | e16  | 4.1   | 3.0  | .69   | 1.2   |
| 24    | 8.4   | 13   | 31   | 18   | 220   | 90   | e25  | e16  | 4.1   | 2.2  | .69   | 1.1   |
| 25    | 8.8   | 13   | 29   | 18   | 175   | 85   | e24  | e17  | 4.4   | 2.5  | .69   | 1.2   |
| 26    | 9.5   | 13   | 27   | 18   | 160   | 85   | e23  | e17  | 4.4   | 2.5  | .71   | 1.1   |
| 27    | 11    | 14   | 26   | 19   | 142   | 82   | e22  | e16  | 4.2   | 2.4  | .73   | 1.2   |
| 28    | 11    | 13   | 25   | 19   | 134   | 82   | e21  | e15  | 4.1   | 2.3  | .69   | 1.2   |
| 29    | 11    | 13   | 25   | 19   | 126   | 80   | e21  | e15  | 3.9   | 2.3  | .69   | 1.4   |
| 30    | 12    | 14   | 25   | 21   | ---   | 78   | e20  | e14  | 3.7   | 2.1  | .69   | 2.7   |
| 31    | 12    | ---  | 23   | 345  | ---   | 83   | ---  | e13  | ---   | 2.1  | .64   | ---   |
| TOTAL | 337.0 | 411  | 740  | 931  | 6975  | 3463 | 1363 | 525  | 204.3 | 88.0 | 27.35 | 33.89 |
| MEAN  | 10.9  | 13.7 | 23.9 | 30.0 | 241   | 112  | 45.4 | 16.9 | 6.81  | 2.84 | .88   | 1.13  |
| MAX   | 14    | 15   | 53   | 345  | 2590  | 249  | 84   | 20   | 12    | 7.2  | 1.4   | 2.7   |
| MIN   | 8.4   | 12   | 15   | 17   | 26    | 78   | 20   | 13   | 3.7   | 1.7  | .64   | .65   |
| AC-FT | 668   | 815  | 1470 | 1850 | 13830 | 6870 | 2700 | 1040 | 405   | 175  | 54    | 67    |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1996, BY WATER YEAR (WY)

|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 4.76 | 41.2 | 92.7 | 246  | 453  | 367  | 165  | 50.3 | 17.5 | 6.88 | 3.53 | 3.55 |
| 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1911 - 1996

|                          |          |          |       |
|--------------------------|----------|----------|-------|
| ANNUAL TOTAL             | 168284.0 | 15098.54 |       |
| ANNUAL MEAN              | 461      | 41.3     | 119   |
| HIGHEST ANNUAL MEAN      |          |          | 641   |
| LOWEST ANNUAL MEAN       |          |          | 1.78  |
| HIGHEST DAILY MEAN       | 28800    | Jan 10   | 29100 |
| LOWEST DAILY MEAN        | 8.4      | Oct 24   | .00   |
| ANNUAL SEVEN-DAY MINIMUM | 9.9      | Oct 7    | .00   |
| INSTANTANEOUS PEAK FLOW  |          |          | 73000 |
| INSTANTANEOUS PEAK STAGE |          |          | 24.95 |
| ANNUAL RUNOFF (AC-FT)    | 333800   | 29950    | 86300 |
| 10 PERCENT EXCEEDS       | 768      | 89       | 169   |
| 50 PERCENT EXCEEDS       | 58       | 15       | 9.5   |
| 90 PERCENT EXCEEDS       | 13       | 1.1      | .18   |

e Estimated

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. October 1, 1995 to September 30, 1996, operated by Ventura County Public Works Agency. 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). WDR CA-95-1: 1994. WSP 1715: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and ultra-sonic sensor. Elevation of gage is 785 ft above sea level, from topographic map. Prior to Oct. 22, 1980, at various sites and datums 1.3 mi downstream. See WDR CA-79-1 for history of changes prior to Oct. 22, 1980. Prior to Feb. 12, 1992, at datum 5.0 ft higher at same site. High flow data for 1996 recorded by sonic sensor gage set to sea level datum.

REMARKS.--Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Clara River basin.

COOPERATION.--Records of discharge collected and provided by Ventura County Public Works Agency.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 15.18 ft, from floodmark, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of critical-depth measurement at gage height 12.2 ft; maximum gage height 15.28 ft, Jan. 10, 1995 at present datum, no flow at times in 1927, 1949, 1951-52, 1965.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 1730 | 242                               | ----                | Feb. 20 | 1745 | 1,230                             | ----                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB  | MAR  | APR   | MAY   | JUN   | JUL   | AUG  | SEP  |
|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|------|------|
| 1     | e7.0  | e6.6  | e6.1  | e6.4  | 49   | 28   | 22    | 9.2   | e6.9  | 4.0   | 3.0  | 2.7  |
| 2     | e7.0  | e6.6  | e6.2  | e6.4  | 22   | 18   | 22    | 9.3   | e6.8  | 3.7   | 3.1  | 2.7  |
| 3     | e7.0  | e6.5  | e6.2  | e6.4  | 21   | 20   | 20    | 9.2   | e6.7  | 3.6   | 3.2  | 2.6  |
| 4     | e7.0  | e6.5  | e6.2  | e6.4  | 17   | 19   | 19    | 9.3   | e6.6  | 3.7   | 3.1  | 2.7  |
| 5     | e7.0  | e6.5  | e6.2  | e6.4  | 17   | 18   | 18    | 9.2   | e6.5  | 3.6   | 3.0  | 2.7  |
| 6     | e6.9  | e6.5  | e6.2  | e6.4  | 14   | 20   | 17    | 9.1   | e6.4  | 3.7   | 2.8  | 2.6  |
| 7     | e6.9  | e6.5  | e6.2  | e6.5  | 14   | 26   | 16    | 8.7   | e6.3  | 4.3   | 3.5  | 2.6  |
| 8     | e6.9  | e6.5  | e6.2  | e6.5  | 13   | 26   | 16    | 8.8   | e6.2  | 4.5   | 3.4  | 2.6  |
| 9     | e6.9  | e6.4  | e6.2  | e6.5  | 12   | 25   | 15    | 8.5   | e6.1  | 4.5   | 3.3  | 2.6  |
| 10    | e6.9  | e6.4  | e6.2  | e6.5  | 12   | 24   | 15    | 8.2   | e6.0  | 4.6   | 3.2  | 2.8  |
| 11    | e6.9  | e6.4  | e6.2  | e6.5  | 12   | 25   | 15    | 8.4   | e5.9  | 4.1   | 3.1  | 2.8  |
| 12    | e6.9  | e6.4  | e7.0  | 7.5   | 15   | 41   | 14    | 8.3   | e5.8  | 3.8   | 3.1  | 2.8  |
| 13    | e6.9  | e6.4  | e7.5  | 6.7   | 14   | 63   | 14    | 8.0   | e5.7  | 3.6   | 2.7  | 3.0  |
| 14    | e6.8  | e6.3  | e7.0  | 7.5   | 17   | 55   | 13    | 7.9   | e5.6  | 3.7   | 2.9  | 3.1  |
| 15    | e6.8  | e6.3  | e6.3  | 7.4   | 20   | 46   | 13    | 8.0   | e5.5  | 3.8   | 2.8  | 3.3  |
| 16    | e6.8  | e6.3  | e6.3  | 9.4   | 18   | 40   | 14    | 12    | e5.4  | 3.8   | 2.8  | 3.4  |
| 17    | e6.8  | e6.3  | e6.3  | 7.7   | 20   | 37   | 15    | 9.7   | e5.3  | 4.0   | 2.8  | 3.2  |
| 18    | e6.8  | e6.3  | e6.3  | 8.5   | 18   | 34   | 16    | 9.1   | e5.3  | 3.6   | 2.9  | 3.0  |
| 19    | e6.8  | e6.3  | e6.3  | 8.6   | 75   | 32   | 14    | 8.7   | e5.3  | 3.1   | 3.2  | 2.9  |
| 20    | e6.8  | e6.2  | e6.3  | 7.6   | 552  | 31   | 14    | 8.2   | e5.3  | 3.6   | 3.0  | 2.8  |
| 21    | e6.8  | e6.2  | e6.3  | 10    | 221  | 29   | 13    | 8.1   | e5.3  | 3.6   | 2.8  | 2.7  |
| 22    | e6.7  | e6.2  | e6.3  | 8.6   | 80   | 32   | 13    | 8.1   | e5.3  | 3.5   | 2.7  | 2.6  |
| 23    | e6.7  | e6.2  | e6.3  | 7.7   | 47   | 27   | 12    | 7.8   | e5.3  | 3.5   | 2.6  | 2.7  |
| 24    | e6.7  | e6.2  | e6.4  | 8.2   | 34   | 28   | 12    | e7.7  | e5.3  | 3.3   | 2.5  | 3.1  |
| 25    | e6.7  | e6.2  | e6.4  | 9.9   | 28   | 28   | 11    | e7.6  | 5.4   | 3.0   | 2.6  | 2.8  |
| 26    | e6.7  | e6.2  | e6.4  | 8.4   | 23   | 27   | 9.9   | e7.5  | 5.3   | 2.9   | 2.5  | 2.7  |
| 27    | e6.7  | e6.1  | e6.4  | 10    | 28   | 26   | 10    | e7.4  | e5.2  | 2.9   | 2.5  | 3.0  |
| 28    | e6.6  | e6.1  | e6.4  | 8.5   | 21   | 23   | 10    | e7.3  | 4.9   | 2.9   | 2.4  | 2.7  |
| 29    | e6.6  | e6.1  | e6.4  | 8.9   | 22   | 23   | 9.7   | e7.2  | 4.7   | 3.1   | 2.5  | 2.8  |
| 30    | e6.6  | e6.1  | e6.4  | 9.9   | ---  | 22   | 9.5   | e7.1  | 4.4   | 3.1   | 2.5  | 2.9  |
| 31    | e6.6  | ---   | e6.4  | 66    | ---  | 21   | ---   | e7.0  | ---   | 3.1   | 2.5  | ---  |
| TOTAL | 211.2 | 189.8 | 197.5 | 297.9 | 1456 | 914  | 432.1 | 260.6 | 170.7 | 112.2 | 89.0 | 84.9 |
| MEAN  | 6.81  | 6.33  | 6.37  | 9.61  | 50.2 | 29.5 | 14.4  | 8.41  | 5.69  | 3.62  | 2.87 | 2.83 |
| MAX   | 7.0   | 6.6   | 7.5   | 66    | 552  | 63   | 22    | 12    | 6.9   | 4.6   | 3.5  | 3.4  |
| MIN   | 6.6   | 6.1   | 6.1   | 6.4   | 12   | 18   | 9.5   | 7.0   | 4.4   | 2.9   | 2.4  | 2.6  |
| AC-FT | 419   | 376   | 392   | 591   | 2890 | 1810 | 857   | 517   | 339   | 223   | 177  | 168  |

e Estimated.



## 11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.00 | 8.14 | 15.1 | 45.8 | 87.0 | 70.4 | 35.2 | 14.3 | 8.17 | 4.99 | 3.23 | 3.13 |
| 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1928 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 32051.9                |        | 4415.9              |        | 24.5                    |             |
| ANNUAL MEAN              | 87.8                   |        | 12.1                |        | 156                     |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 1.37                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 8900                    |             |
| HIGHEST DAILY MEAN       | 3250                   | Jan 10 | 552                 | Feb 20 | 8900                    | Feb 25 1969 |
| LOWEST DAILY MEAN        | 3.9                    | Jan 2  | 2.4                 | Aug 28 | .00                     | Oct 1 1927  |
| ANNUAL SEVEN-DAY MINIMUM | 5.5                    | Aug 29 | 2.5                 | Aug 24 | .00                     | Oct 1 1927  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 1230                | Feb 20 | 21000                   | Feb 25 1969 |
| INSTANTANEOUS PEAK STAGE |                        |        |                     |        | 15.28                   | Jan 10 1995 |
| ANNUAL RUNOFF (AC-FT)    | 63570                  |        | 8760                |        | 17780                   |             |
| 10 PERCENT EXCEEDS       | 204                    |        | 22                  |        | 36                      |             |
| 50 PERCENT EXCEEDS       | 17                     |        | 6.5                 |        | 4.8                     |             |
| 90 PERCENT EXCEEDS       | 6.3                    |        | 2.9                 |        | .88                     |             |

## 11114000 SANTA CLARA RIVER AT MONTALVO, CA

LOCATION.--Lat 34°16'44", long 119°08'28" in Santa Clara Del Norte Grant, Ventura County, Hydrologic Unit 18070102, on right downstream side of State Highway 118 bridge, 0.8 mi southeast of Saticoy.

DRAINAGE AREA.--1,577 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1927 to September 1932, October 1949 to September 1988, October 1989 to September 1993, October 1995 to September 1996. Discharge measurements only October 1993 to September 1994 at site 3.9 mi downstream, October 1994 to September 1995 at present site. Monthly discharge only for 1950-65, published in WSP 2128 (daily discharge available in the files of the U.S. Geological Survey).

CHEMICAL DATA.--Water years 1968-85, 1989, 1991-1993.

REVISED RECORDS.--WSP 2128: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 120 ft above sea level from topographic map. Oct. 1, 1927, to Sept. 30, 1932, Oct. 1, 1949, to Sept. 30, 1967, and Feb. 3, 1970, to Sept. 30, 1993, at site 3.9 mi downstream at different datums. Oct. 1, 1967, to Feb. 2, 1970, at present site at different datum. Feb. 9, 1984, to Jan. 27, 1993, supplementary gage 3.2 mi downstream at different datum.

REMARKS.--Records fair, except estimated daily discharges, which are 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. See schematic diagram of Santa Clara River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 165,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 17.41 ft, at datum 5.0 ft higher; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 2, 1938, reached a discharge of 120,000 ft<sup>3</sup>/s, estimated by Ventura County Flood Control District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB     | MAR   | APR  | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|------|------|------|------|---------|-------|------|-------|-------|------|------|------|
| 1     | e19  | 15   | 26   | 15   | 1860    | 190   | 47   | 16    | 2.7   | e.08 | .00  | .00  |
| 2     | e19  | 16   | 18   | 15   | 310     | 59    | 36   | 16    | 2.2   | .00  | .00  | .00  |
| 3     | e19  | 30   | 19   | 15   | 214     | 62    | 29   | 22    | 2.0   | .00  | .00  | .00  |
| 4     | e18  | 18   | 18   | 15   | 138     | 53    | 30   | 16    | 1.9   | .00  | .00  | .00  |
| 5     | e18  | 17   | 18   | 21   | 17      | 46    | 44   | 19    | 2.2   | .00  | .00  | .00  |
| 6     | e18  | 18   | 18   | 19   | 13      | 87    | 27   | 16    | 1.6   | .00  | .00  | .00  |
| 7     | e18  | 18   | 19   | 17   | 10      | 21    | 27   | 13    | 1.9   | .00  | .00  | .00  |
| 8     | e18  | 19   | 18   | 73   | 12      | 52    | 26   | 12    | 1.2   | .00  | .00  | .00  |
| 9     | e17  | 69   | 17   | 128  | 19      | 25    | 29   | 11    | .50   | .00  | .00  | .00  |
| 10    | e17  | 25   | 18   | 120  | 8.3     | 25    | 28   | 9.8   | 1.7   | .00  | .00  | .00  |
| 11    | e17  | 22   | 18   | 110  | 7.4     | 28    | 26   | 9.8   | e1.6  | .00  | .00  | .00  |
| 12    | e17  | 22   | 30   | 89   | 7.3     | 565   | 41   | 9.0   | e1.5  | .00  | .00  | .00  |
| 13    | e17  | 34   | 123  | 18   | 6.5     | 1400  | 25   | 8.2   | e1.5  | .00  | .00  | .00  |
| 14    | e17  | 26   | 18   | 16   | 6.2     | 1120  | 24   | 7.8   | e1.4  | .00  | .00  | .00  |
| 15    | e16  | 37   | 16   | 15   | 6.3     | 598   | 27   | 7.5   | e1.3  | .00  | .00  | .00  |
| 16    | e16  | 34   | 15   | 16   | 6.0     | 104   | 26   | 9.5   | e1.2  | .00  | .00  | .00  |
| 17    | e16  | 23   | 15   | 41   | 6.0     | 135   | 38   | 11    | e1.2  | .00  | .00  | .00  |
| 18    | e16  | 21   | 15   | 16   | 5.8     | 245   | 23   | 5.4   | e1.1  | .00  | .00  | .00  |
| 19    | e16  | 20   | 15   | 15   | 294     | 104   | 23   | 5.1   | e1.0  | .00  | .00  | .00  |
| 20    | e15  | 19   | 15   | 14   | 9330    | 140   | 22   | 5.7   | e.93  | .00  | .00  | .00  |
| 21    | e15  | 19   | 15   | 14   | 5080    | 98    | 20   | 5.3   | e.85  | .00  | .00  | .00  |
| 22    | e15  | 20   | 15   | 16   | 964     | 122   | 18   | 6.3   | e.78  | .00  | .00  | .00  |
| 23    | e15  | 20   | 43   | 13   | 509     | 76    | 18   | 6.6   | e.70  | .00  | .00  | .00  |
| 24    | e14  | 18   | 26   | 12   | 264     | 75    | 19   | 5.9   | e.62  | .00  | .00  | .00  |
| 25    | 14   | 18   | 13   | 13   | 123     | 98    | 19   | 5.6   | e.54  | .00  | .00  | .00  |
| 26    | 15   | 19   | 13   | 13   | 76      | 66    | 25   | 5.5   | e.47  | .00  | .00  | .00  |
| 27    | 32   | 21   | 12   | 12   | 100     | 69    | 19   | 5.1   | e.39  | .00  | .00  | .00  |
| 28    | 16   | 20   | 12   | 12   | 76      | 67    | 18   | 5.5   | e.31  | .00  | .00  | .00  |
| 29    | 16   | 20   | 19   | 12   | 48      | 74    | 18   | 4.9   | e.24  | .00  | .00  | .00  |
| 30    | 16   | 19   | 13   | 11   | ---     | 53    | 16   | 4.1   | e.16  | .00  | .00  | .00  |
| 31    | 16   | ---  | 14   | 774  | ---     | 49    | ---  | 5.1   | ---   | .00  | .00  | ---  |
| TOTAL | 528  | 697  | 664  | 1690 | 19516.8 | 5906  | 788  | 289.7 | 35.69 | 0.08 | 0.00 | 0.00 |
| MEAN  | 17.0 | 23.2 | 21.4 | 54.5 | 673     | 191   | 26.3 | 9.35  | 1.19  | .003 | .000 | .000 |
| MAX   | 32   | 69   | 123  | 774  | 9330    | 1400  | 47   | 22    | 2.7   | .08  | .00  | .00  |
| MIN   | 14   | 15   | 12   | 11   | 5.8     | 21    | 16   | 4.1   | .16   | .00  | .00  | .00  |
| AC-FT | 1050 | 1380 | 1320 | 3350 | 38710   | 11710 | 1560 | 575   | 71    | .2   | .00  | .00  |

e Estimated.

## 11114000 SANTA CLARA RIVER AT MONTALVO, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.45 | 54.1 | 96.0 | 328  | 802  | 548  | 184  | 26.6 | 6.08 | 2.45 | .22  | 1.14 |
| MAX  | 87.3 | 1603 | 917  | 5477 | 7314 | 5985 | 2668 | 736  | 182  | 61.8 | 8.85 | 31.7 |
| (WY) | 1995 | 1966 | 1966 | 1969 | 1969 | 1983 | 1958 | 1983 | 1993 | 1993 | 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 1996 WATER YEAR

## WATER YEARS 1928 - 1996

|                          |          |             |
|--------------------------|----------|-------------|
| ANNUAL TOTAL             | 30115.27 |             |
| ANNUAL MEAN              | 82.3     | 167         |
| HIGHEST ANNUAL MEAN      |          | 1229        |
| LOWEST ANNUAL MEAN       |          | .000        |
| HIGHEST DAILY MEAN       | 9330     | Feb 20      |
| LOWEST DAILY MEAN        | .00      | Jul 2       |
| ANNUAL SEVEN-DAY MINIMUM | .00      | Jul 2       |
| INSTANTANEOUS PEAK FLOW  | 17000    | Feb 20      |
| INSTANTANEOUS PEAK STAGE | 8.55     | Feb 20      |
| ANNUAL RUNOFF (AC-FT)    | 59730    |             |
| 10 PERCENT EXCEEDS       | 74       |             |
| 50 PERCENT EXCEEDS       | 15       |             |
| 90 PERCENT EXCEEDS       | .00      |             |
|                          |          | 1699        |
|                          |          | 1951        |
|                          |          | Feb 25 1969 |
|                          |          | Oct 1 1927  |
|                          |          | Oct 1 1927  |
|                          |          | Jan 25 1969 |
|                          |          | Jan 25 1969 |
|                          |          | 17.41       |
|                          |          | 121200      |
|                          |          | 80          |
|                          |          | .00         |
|                          |          | .00         |

## 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 fair. Flow partly regulated since March 1948 by Matilija Reservoir (station 11115000), usable capacity, 1,480 acre-ft, and since October 1959 by Lake Casitas (station 11119700), capacity, 267,000 acre-ft. Water diverted to Lake Casitas on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. For records of combined discharge of river and Ventura City Diversion (station 11118400), see station 11118501.

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 63,600 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 24.14 ft, from rating curve extended above 34,000 ft<sup>3</sup>/s; maximum gage height, 29.3 ft, Jan. 25, 1969, present datum, from floodmarks; no flow at times in many years.

Combined river and diversion: Maximum discharge, 63,600 ft<sup>3</sup>/s, Feb. 10, 1978; no flow Nov. 28, 29, 1977; Oct. 23-26, 1989; July 9-11, 1990; many days, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR  | APR   | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|------|-------|-------|-------|------|-------|-------|
| 1     | 6.3   | 5.5   | e4.4  | 5.6   | 40     | 55   | 19    | 9.4   | 4.2   | 2.9  | 1.7   | .76   |
| 2     | 6.2   | 5.3   | e4.4  | 5.5   | 14     | 52   | 23    | 9.7   | 4.2   | 3.0  | 1.7   | .71   |
| 3     | 6.4   | 5.8   | e4.4  | 5.1   | 13     | 49   | 19    | 9.7   | 4.2   | 2.9  | 1.6   | .70   |
| 4     | 6.5   | 6.1   | e4.4  | 5.1   | 10     | 46   | 19    | 9.1   | 4.4   | 2.8  | 1.6   | .73   |
| 5     | 7.3   | 5.8   | e4.3  | 5.3   | 8.8    | 46   | 19    | 8.9   | 4.2   | 2.8  | 1.6   | .62   |
| 6     | 7.9   | 5.9   | e4.3  | 5.5   | 7.9    | 42   | 18    | 7.6   | 4.2   | 2.7  | 1.5   | .56   |
| 7     | 7.4   | 5.7   | 4.4   | 5.5   | 6.0    | 40   | 20    | 7.2   | 4.3   | 2.7  | 1.4   | .50   |
| 8     | 7.0   | 5.4   | 4.8   | 5.4   | 5.5    | 37   | 27    | 6.6   | 4.5   | 2.7  | 1.3   | .51   |
| 9     | 7.0   | e5.1  | 5.0   | 5.5   | 4.9    | 35   | 29    | 5.8   | 4.4   | 2.5  | 1.3   | .61   |
| 10    | 6.9   | e5.1  | 4.8   | 6.0   | 4.1    | 32   | 28    | 5.4   | 4.3   | 2.5  | 1.4   | .53   |
| 11    | 6.6   | e5.0  | 4.8   | 5.9   | 3.7    | 30   | 24    | 5.4   | 4.5   | 2.4  | 1.4   | .53   |
| 12    | 6.6   | e5.0  | 10    | 5.5   | 3.3    | 83   | 15    | 5.4   | 4.3   | 2.3  | 1.6   | .51   |
| 13    | 6.8   | e5.0  | 20    | 5.5   | 2.9    | 124  | 13    | 5.5   | 4.0   | 2.4  | 1.7   | .49   |
| 14    | 6.8   | e5.0  | 9.6   | 5.4   | 2.7    | 82   | 13    | 4.8   | 4.2   | 2.4  | 1.6   | .43   |
| 15    | 6.5   | e4.9  | 8.1   | 5.5   | 2.1    | 51   | 14    | 4.3   | 4.3   | 2.5  | 1.5   | .41   |
| 16    | 6.4   | e4.9  | 7.5   | 6.2   | 2.0    | 35   | 17    | 4.7   | 4.2   | 2.5  | 1.5   | .39   |
| 17    | 6.6   | e4.9  | 7.4   | 7.5   | 1.9    | 30   | 20    | 5.8   | 4.0   | 2.6  | 1.4   | .40   |
| 18    | 6.3   | e4.8  | 6.7   | 7.3   | 1.6    | 25   | 25    | 4.8   | 4.1   | 2.6  | 1.4   | .41   |
| 19    | 6.4   | e4.8  | 5.8   | 7.6   | 50     | 22   | 21    | 5.1   | 4.2   | 2.3  | 1.2   | .38   |
| 20    | 7.0   | e4.8  | 5.7   | 7.2   | 1430   | 21   | 19    | 4.8   | 4.2   | 2.2  | 1.0   | .31   |
| 21    | 7.3   | e4.7  | 6.1   | 7.3   | 652    | 22   | 18    | 3.7   | 3.7   | 2.2  | 1.1   | .27   |
| 22    | 7.9   | e4.7  | 5.9   | 7.0   | 292    | 21   | 19    | 3.5   | 3.5   | 2.3  | 1.1   | .23   |
| 23    | 7.4   | e4.7  | 8.6   | 6.0   | 180    | 20   | 21    | 3.6   | 3.5   | 2.8  | 1.1   | .49   |
| 24    | 7.1   | e4.7  | 7.7   | 6.1   | 131    | 20   | 18    | 3.1   | 3.7   | 2.5  | 1.1   | .37   |
| 25    | 6.8   | e4.6  | 7.0   | 6.5   | 105    | 20   | 18    | 3.2   | 3.9   | 2.1  | .85   | .28   |
| 26    | 7.0   | e4.6  | 6.8   | 6.2   | 83     | 20   | 12    | 3.5   | 4.1   | 1.9  | .78   | .27   |
| 27    | 6.4   | e4.6  | 6.8   | 6.4   | 89     | 19   | 11    | 3.6   | 3.5   | 1.9  | .70   | .17   |
| 28    | 5.6   | e4.5  | 6.4   | 6.4   | 81     | 18   | 10    | 3.7   | 3.2   | 2.0  | .69   | .15   |
| 29    | 5.9   | e4.5  | 6.1   | 6.6   | 63     | 17   | 9.9   | 3.8   | 3.0   | 1.8  | .93   | .13   |
| 30    | 6.2   | e4.5  | 5.5   | 7.4   | ---    | 18   | 9.6   | 5.5   | 3.0   | 1.8  | .76   | .09   |
| 31    | 5.7   | ---   | 5.5   | 90    | ---    | 16   | ---   | 4.9   | ---   | 1.8  | .79   | ---   |
| TOTAL | 208.2 | 150.9 | 203.3 | 274.0 | 3290.4 | 1148 | 548.5 | 172.1 | 120.0 | 74.8 | 39.30 | 12.94 |
| MEAN  | 6.72  | 5.03  | 6.56  | 8.84  | 113    | 37.0 | 18.3  | 5.55  | 4.00  | 2.41 | 1.27  | .43   |
| MAX   | 7.9   | 6.1   | 20    | 90    | 1430   | 124  | 29    | 9.7   | 4.5   | 3.0  | 1.7   | .76   |
| MIN   | 5.6   | 4.5   | 4.3   | 5.1   | 1.6    | 16   | 9.6   | 3.1   | 3.0   | 1.8  | .69   | .09   |
| AC-FT | 413   | 299   | 403   | 543   | 6530   | 2280 | 1090  | 341   | 238   | 148  | 78    | 26    |

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  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      | 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.52 | 14.8 | 23.8 | 151  | 277  | 211  | 69.7 | 27.3 | 12.6 | 6.82 | 3.46 | 2.81 |
| MAX  | 40.9 | 278  | 234  | 1880 | 1899 | 1797 | 758  | 238  | 81.6 | 38.5 | 17.4 | 15.2 |
| (WY) | 1984 | 1966 | 1966 | 1969 | 1969 | 1983 | 1983 | 1983 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1960 - 1996

|                          |           |         |       |
|--------------------------|-----------|---------|-------|
| ANNUAL TOTAL             | 140265.30 | 6242.44 |       |
| ANNUAL MEAN              | 384       | 17.1    | 65.8  |
| HIGHEST ANNUAL MEAN      |           |         | 383   |
| LOWEST ANNUAL MEAN       |           |         | .29   |
| HIGHEST DAILY MEAN       | 16800     | Jan 10  | 1430  |
| LOWEST DAILY MEAN        | .00       | Jan 1   | .09   |
| ANNUAL SEVEN-DAY MINIMUM | 4.4       | Dec 1   | .21   |
| INSTANTANEOUS PEAK FLOW  |           |         | 3660  |
| INSTANTANEOUS PEAK STAGE |           |         | 7.38  |
| INSTANTANEOUS LOW FLOW   |           |         | .04   |
| ANNUAL RUNOFF (AC-FT)    | 278200    | 12380   | 47670 |
| 10 PERCENT EXCEEDS       | 853       | 23      | 46    |
| 50 PERCENT EXCEEDS       | 42        | 5.2     | 2.9   |
| 90 PERCENT EXCEEDS       | 5.1       | .91     | .00   |

## VENTURA RIVER BASIN

11118501 VENTURA RIVER NEAR VENTURA, CA--Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA  
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR  | APR  | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|-------|-------|-------|-------|--------|------|------|-------|-------|------|-------|-------|
| 1     | 10    | 8.0   | 5.8   | 6.6   | 40     | 56   | 20   | 12    | 5.4   | 3.8  | 1.8   | .76   |
| 2     | 9.6   | 7.3   | 5.9   | 6.9   | 14     | 52   | 23   | 11    | 5.3   | 3.8  | 1.8   | .71   |
| 3     | 9.5   | 7.1   | 5.9   | 6.8   | 13     | 49   | 20   | 11    | 5.3   | 3.7  | 1.7   | .70   |
| 4     | 9.0   | 7.6   | 5.7   | 6.7   | 10     | 46   | 19   | 10    | 5.7   | 3.5  | 1.6   | .83   |
| 5     | 8.7   | 7.5   | 5.7   | 6.5   | 8.8    | 46   | 19   | 10    | 5.7   | 3.5  | 1.6   | .79   |
| 6     | 10    | 7.7   | 5.8   | 7.1   | 8.0    | 42   | 18   | 9.2   | 5.5   | 3.3  | 1.5   | .69   |
| 7     | 10    | 7.3   | 5.5   | 6.9   | 6.7    | 40   | 20   | 9.1   | 5.4   | 3.4  | 1.4   | .58   |
| 8     | 10    | 7.5   | 5.6   | 7.0   | 5.9    | 37   | 27   | 8.6   | 5.6   | 3.3  | 1.3   | .54   |
| 9     | 9.9   | 7.2   | 6.2   | 7.0   | 7.3    | 35   | 29   | 8.0   | 5.8   | 3.2  | 1.3   | .69   |
| 10    | 9.4   | 7.1   | 6.3   | 6.5   | 6.1    | 32   | 28   | 7.4   | 5.6   | 3.0  | 1.4   | .57   |
| 11    | 9.3   | 7.0   | 6.2   | 7.2   | 5.8    | 30   | 25   | 7.2   | 5.8   | 3.0  | 1.4   | .53   |
| 12    | 8.7   | 6.6   | 11    | 6.9   | 5.3    | 83   | 17   | 6.8   | 5.6   | 2.8  | 1.6   | .51   |
| 13    | 8.8   | 6.8   | 21    | 6.9   | 5.1    | 124  | 15   | 7.1   | 5.5   | 2.9  | 1.7   | .49   |
| 14    | 9.1   | 6.5   | 10    | 6.6   | 4.6    | 82   | 14   | 6.6   | 5.6   | 2.9  | 1.6   | .43   |
| 15    | 8.8   | 6.2   | 8.7   | 7.0   | 4.8    | 52   | 15   | 6.3   | 5.5   | 2.9  | 1.5   | .41   |
| 16    | 8.6   | 6.1   | 8.1   | 7.3   | 3.6    | 36   | 18   | 6.0   | 5.5   | 3.0  | 1.5   | .39   |
| 17    | 8.6   | 5.0   | 7.7   | 8.0   | 3.5    | 31   | 20   | 6.4   | 5.5   | 2.9  | 1.4   | .40   |
| 18    | 8.3   | 5.7   | 7.6   | 7.3   | 4.0    | 26   | 25   | 5.7   | 5.0   | 3.2  | 1.4   | .41   |
| 19    | 8.3   | 6.4   | 7.1   | 8.1   | 51     | 23   | 21   | 5.6   | 5.2   | 2.8  | 1.2   | .38   |
| 20    | 8.7   | 6.4   | 6.7   | 7.8   | 1430   | 22   | 20   | 5.9   | 5.4   | 2.6  | 1.0   | .31   |
| 21    | 9.0   | 5.7   | 7.0   | 7.8   | 652    | 22   | 19   | 5.6   | 5.2   | 2.6  | 1.1   | .27   |
| 22    | 9.0   | 5.9   | 6.9   | 7.8   | 292    | 22   | 21   | 5.0   | 4.9   | 2.4  | 1.1   | .23   |
| 23    | 9.1   | 6.4   | 10    | 7.6   | 180    | 21   | 22   | 5.1   | 4.8   | 2.8  | 1.1   | .49   |
| 24    | 8.7   | 6.4   | 8.8   | 7.3   | 131    | 21   | 20   | 4.9   | 4.9   | 2.8  | 1.1   | .37   |
| 25    | 8.7   | 6.3   | 7.8   | 7.7   | 105    | 21   | 20   | 5.0   | 4.4   | 2.5  | .85   | .28   |
| 26    | 8.1   | 6.2   | 7.2   | 7.9   | 84     | 20   | 14   | 5.0   | 5.1   | 2.2  | .78   | .27   |
| 27    | 8.1   | 6.2   | 7.9   | 8.1   | 91     | 19   | 14   | 5.4   | 4.7   | 2.1  | .70   | .17   |
| 28    | 7.5   | 5.8   | 7.4   | 7.8   | 81     | 19   | 13   | 5.2   | 4.4   | 2.0  | .69   | .15   |
| 29    | 7.6   | 5.9   | 7.3   | 7.6   | 63     | 18   | 13   | 5.1   | 4.1   | 2.0  | .95   | .13   |
| 30    | 8.0   | 6.0   | 6.8   | 7.9   | ---    | 19   | 12   | 5.8   | 4.0   | 1.9  | .76   | .09   |
| 31    | 8.0   | ---   | 6.7   | 90    | ---    | 17   | ---  | 6.1   | ---   | 1.9  | .79   | ---   |
| TOTAL | 275.1 | 197.8 | 236.3 | 308.6 | 3316.5 | 1163 | 581  | 218.1 | 156.4 | 88.7 | 39.62 | 13.57 |
| MEAN  | 8.87  | 6.59  | 7.62  | 9.95  | 114    | 37.5 | 19.4 | 7.04  | 5.21  | 2.86 | 1.28  | .45   |
| MAX   | 10    | 8.0   | 21    | 90    | 1430   | 124  | 29   | 12    | 5.8   | 3.8  | 1.8   | .83   |
| MIN   | 7.5   | 5.0   | 5.5   | 6.5   | 3.5    | 17   | 12   | 4.9   | 4.0   | 1.9  | .69   | .09   |
| AC-FT | 546   | 392   | 469   | 612   | 6580   | 2310 | 1150 | 433   | 310   | 176  | 79    | 27    |

## 11118501 VENTURA RIVER NEAR VENTURA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1957, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SEP  | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  |      |
| MEAN | 8.12 | 9.68 | 33.2 | 138  | 191  | 266  | 91.0 | 35.4 | 20.8 | 13.2 | 9.67 | 8.33 |
| MAX  | 27.8 | 45.3 | 115  | 1106 | 1061 | 1953 | 877  | 232  | 110  | 65.0 | 43.2 | 28.7 |
| (WY) | 1942 | 1947 | 1937 | 1952 | 1941 | 1938 | 1941 | 1941 | 1941 | 1941 | 1941 | 1941 |
| MIN  | .39  | .29  | .14  | 2.16 | 1.72 | 2.71 | 2.54 | 1.34 | 1.64 | .92  | .37  | .23  |
| (WY) | 1936 | 1937 | 1933 | 1949 | 1949 | 1951 | 1951 | 1933 | 1936 | 1936 | 1935 | 1935 |

## SUMMARY STATISTICS

## WATER YEARS 1933 - 1957

|                          |                   |
|--------------------------|-------------------|
| ANNUAL TOTAL             |                   |
| ANNUAL MEAN              | 72.9              |
| HIGHEST ANNUAL MEAN      | 359 1941          |
| LOWEST ANNUAL MEAN       | 2.31 1951         |
| HIGHEST DAILY MEAN       | 17900 Mar 2 1938  |
| LOWEST DAILY MEAN        | .00 Apr 27 1934   |
| ANNUAL SEVEN-DAY MINIMUM | .00 Oct 1 1934    |
| INSTANTANEOUS PEAK FLOW  | 63600 Feb 10 1978 |
| INSTANTANEOUS PEAK STAGE | 29.30 Feb 25 1969 |
| ANNUAL RUNOFF (AC-FT)    | 52800             |
| 10 PERCENT EXCEEDS       | 84                |
| 50 PERCENT EXCEEDS       | 11                |
| 90 PERCENT EXCEEDS       | 2.2               |

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 8.79 | 20.7 | 29.2 | 157  | 283  | 218  | 78.2 | 36.6 | 21.7 | 15.7 | 11.6 | 10.0 |
| MAX  | 50.3 | 282  | 240  | 1883 | 1901 | 1804 | 766  | 248  | 90.5 | 49.1 | 27.8 | 26.2 |
| (WY) | 1984 | 1966 | 1966 | 1969 | 1969 | 1983 | 1983 | 1983 | 1978 | 1983 | 1978 | 1983 |
| MIN  | .000 | .000 | .11  | 1.88 | 2.04 | 3.17 | 3.19 | 2.89 | 2.07 | 1.48 | .63  | .005 |
| (WY) | 1995 | 1995 | 1995 | 1991 | 1961 | 1961 | 1961 | 1961 | 1961 | 1961 | 1994 | 1994 |

## SUMMARY STATISTICS

## FOR 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1960 - 1996

|                          |              |             |                   |
|--------------------------|--------------|-------------|-------------------|
| ANNUAL TOTAL             | 140751.20    | 6594.69     |                   |
| ANNUAL MEAN              | 386          | 18.0        | 73.1              |
| HIGHEST ANNUAL MEAN      |              |             | 384 1995          |
| LOWEST ANNUAL MEAN       |              |             | 2.22 1961         |
| HIGHEST DAILY MEAN       | 16800 Jan 10 | 1430 Feb 20 | 22000 Feb 9 1978  |
| LOWEST DAILY MEAN        | .00 Jan 1    | .09 Sep 30  | .00 Nov 28 1977   |
| ANNUAL SEVEN-DAY MINIMUM | 5.7 Dec 2    | .21 Sep 24  | .00 Sep 7 1994    |
| INSTANTANEOUS PEAK FLOW  |              | 3660 Feb 20 | 63600 Feb 10 1978 |
| INSTANTANEOUS PEAK STAGE |              | 7.38 Feb 2  | 29.30 Feb 25 1969 |
| ANNUAL RUNOFF (AC-FT)    | 279200       | 13080       | 52980             |
| 10 PERCENT EXCEEDS       | 853          | 24          | 55                |
| 50 PERCENT EXCEEDS       | 43           | 6.6         | 12                |
| 90 PERCENT EXCEEDS       | 6.8          | .92         | 3.4               |

## 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 1995 TO SEPTEMBER 1996

| DATE  | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PEN-<br>DED<br>(MG/L) | SEDI-<br>MENT,<br>DIS-<br>CHARGE,<br>SUS-<br>PEN-<br>DED<br>(T/DAY) | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.062 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.125 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.250 MM | SED.<br>SUSP.<br>SIEVE<br>DIAM.<br>% FINER<br>THAN<br>.500 MM |
|-------|------|--|--------------------------------------|--|---|---|---|---|---|
| JAN   |      |  |                                      |  |   |   |   |   |   |
| 31... | 1035 | 15   | 14.0                                 | 98   | 4.0   | 94  | --  | --  | --  |
| 31... | 1110 | 19   | 14.0                                 | 143  | 7.3   | 96  | 97  | 98  | 100   |
| FEB   |      |  |                                      |  |   |   |   |   |   |
| 21... | 1150 | 572  | 15.5                                 | 78   | 120   | 82  | --  | --  | --  |
| MAR   |      |  |                                      |  |   |   |   |   |   |
| 13... | 1250 | 90   | 17.0                                 | 12   | 2.9   | 79  | --  | --  | --  |



11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA

LOCATION.--Lat 34°24'05", long 119°29'08", in El Rincon Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 100 ft upstream from bridge on State Highway 192, 165 ft downstream from Gobernador Creek, and 1.8 mi northeast of Carpinteria.

DRAINAGE AREA.--13.1 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1941 to September 1977, October 1978 to current year.

REVISED RECORDS.--WSP 1061: 1943. WSP 1928: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 130 ft above sea level, from topographic map. Prior to July 1, 1958, at site 100 ft downstream, at datum 6.00 ft higher. July 2, 1958, to Aug. 27, 1970, at site 65 ft downstream at datum 4.00 ft higher. Aug. 28, 1970, to Sept. 30, 1977, at site 100 ft downstream at same datum.

REMARKS.--Records fair. No regulation upstream from station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 mi upstream from station. Small lake 0.8 mi southeast of station and outside the drainage area stores storm runoff and surplus water diverted from Gobernador Creek by Gobernador Land and Water Co. At times this lake is drained by pumping water back into Gobernador Creek 1,000 ft upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,880 ft<sup>3</sup>/s, Dec. 27, 1971, gage height, 14.10 ft, from floodmark, from rating curve extended above 130 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 125 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 20 | 0030 | 1,060                             | 5.59                | Mar. 13 | 2230 | 198                               | 4.20                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB    | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|-------|-------|--------|-------|-------|------|------|------|------|------|
| 1     | .06  | .25  | .01   | .00   | 9.4    | 14    | 3.6   | .04  | .00  | .00  | .00  | .00  |
| 2     | .05  | .28  | .03   | .09   | 2.5    | 11    | 4.0   | .02  | .00  | .00  | .00  | .00  |
| 3     | .00  | .28  | .10   | .12   | 4.5    | 10    | 3.8   | .16  | .00  | .00  | .00  | .00  |
| 4     | .05  | .27  | .13   | .12   | 2.3    | 11    | 3.2   | .20  | .00  | .00  | .00  | .00  |
| 5     | .05  | .19  | .11   | .12   | 1.5    | 12    | 2.3   | .09  | .00  | .00  | .00  | .00  |
| 6     | .05  | .11  | .09   | .12   | 1.2    | 8.6   | 1.7   | .02  | .00  | .00  | .00  | .00  |
| 7     | .11  | .13  | .03   | .12   | .80    | 8.1   | 1.6   | .00  | .00  | .00  | .00  | .00  |
| 8     | .16  | .14  | .01   | .12   | .59    | 6.8   | 1.4   | .00  | .00  | .00  | .00  | .00  |
| 9     | .25  | .04  | .00   | .09   | .51    | 6.5   | .92   | .00  | .00  | .00  | .00  | .00  |
| 10    | .21  | .11  | .00   | .07   | .47    | 6.2   | .62   | .00  | .00  | .00  | .00  | .00  |
| 11    | .07  | .14  | .00   | .07   | .38    | 6.1   | .62   | .00  | .00  | .00  | .00  | .00  |
| 12    | .13  | .04  | 4.3   | .08   | .36    | 19    | .62   | .00  | .00  | .00  | .00  | .00  |
| 13    | .14  | .01  | 4.6   | .08   | .29    | 56    | .68   | .00  | .00  | .00  | .00  | .00  |
| 14    | .06  | .01  | 1.3   | .07   | .28    | 37    | .70   | .00  | .00  | .00  | .00  | .00  |
| 15    | .08  | .07  | .43   | .07   | .28    | 15    | .70   | .02  | .00  | .00  | .00  | .00  |
| 16    | .17  | .09  | .31   | .42   | .28    | 12    | .91   | .39  | .00  | .00  | .00  | .00  |
| 17    | .17  | .09  | .28   | .63   | .28    | 9.6   | 1.3   | .51  | .00  | .00  | .00  | .00  |
| 18    | .15  | .08  | .28   | .22   | .28    | 9.2   | 1.2   | .30  | .00  | .00  | .00  | .00  |
| 19    | .11  | .04  | .27   | .19   | .68    | 8.7   | .95   | .09  | .00  | .00  | .00  | .00  |
| 20    | .11  | .05  | .25   | .19   | 443    | 7.2   | .83   | .00  | .00  | .00  | .00  | .00  |
| 21    | .07  | .02  | .25   | .19   | 137    | 6.6   | .81   | .00  | .00  | .00  | .00  | .00  |
| 22    | .15  | .04  | .25   | .19   | 38     | 6.0   | .62   | .00  | .00  | .00  | .00  | .00  |
| 23    | .15  | .02  | 1.2   | .19   | 25     | 5.9   | .62   | .00  | .00  | .00  | .00  | .00  |
| 24    | .01  | .00  | .37   | .19   | 17     | 5.1   | .54   | .00  | .00  | .00  | .00  | .00  |
| 25    | .02  | .00  | .27   | .19   | 14     | 4.8   | .41   | .00  | .00  | .00  | .00  | .00  |
| 26    | .04  | .00  | .25   | .19   | 16     | 4.3   | .27   | .03  | .00  | .00  | .00  | .00  |
| 27    | .01  | .00  | .22   | .20   | 12     | 4.1   | .17   | .09  | .00  | .00  | .00  | .00  |
| 28    | .03  | .01  | .22   | .22   | 12     | 3.9   | .38   | .18  | .00  | .00  | .00  | .00  |
| 29    | .14  | .03  | .20   | .21   | 14     | 3.9   | .33   | .19  | .00  | .00  | .00  | .00  |
| 30    | .17  | .01  | .14   | .19   | ---    | 3.7   | .07   | .13  | .00  | .00  | .00  | .00  |
| 31    | .17  | ---  | .13   | 17    | ---    | 3.2   | ---   | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 3.14 | 2.55 | 16.03 | 21.95 | 822.20 | 325.5 | 35.87 | 2.46 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .10  | .085 | .52   | .71   | 28.4   | 10.5  | 1.20  | .079 | .000 | .000 | .000 | .000 |
| MAX   | .25  | .28  | 4.6   | .17   | 443    | 56    | 4.0   | .51  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00   | .00   | .28    | 3.2   | .07   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | 6.2  | 5.1  | 32    | 44    | 1630   | 646   | 71    | 4.9  | .00  | .00  | .00  | .00  |

## CARPINTERIA CREEK BASIN

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .094 | .82  | 2.41 | 13.4 | 14.0 | 9.46 | 4.10 | .93  | .38  | .17  | .070 | .067 |
| MAX  | 3.59 | 16.7 | 38.9 | 242  | 209  | 83.8 | 67.8 | 9.93 | 4.48 | 2.23 | 1.21 | .99  |
| (WY) | 1984 | 1966 | 1967 | 1995 | 1969 | 1995 | 1958 | 1983 | 1995 | 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 1995 CALENDAR YEAR |  |  | FOR 1996 WATER YEAR |  |  | WATER YEARS 1941 - 1996 |  |  |
|--------------------------|------------------------|--|--|---------------------|--|--|-------------------------|--|--|
| ANNUAL TOTAL             | 11343.62               |  |  | 1229.70             |  |  |                         |  |  |
| ANNUAL MEAN              | 31.1                   |  |  | 3.36                |  |  | 3.58                    |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |                     |  |  | 33.5                    |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |                     |  |  | .000                    |  |  |
| HIGHEST DAILY MEAN       | 4000 Jan 10            |  |  | 443 Feb 20          |  |  | 4000 Jan 10 1995        |  |  |
| LOWEST DAILY MEAN        | .00 Jan 1              |  |  | .00 Oct 3           |  |  | .00 Jan 4 1941          |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .01 Nov 24             |  |  | .00 May 7           |  |  | .00 Nov 18 1941         |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  | 1060 Feb 20         |  |  | 8880 Dec 27 1971        |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  | 5.59 Feb 20         |  |  | 14.10 Dec 27 1971       |  |  |
| ANNUAL RUNOFF (AC-FT)    | 22500                  |  |  | 2440                |  |  | 2600                    |  |  |
| 10 PERCENT EXCEEDS       | 29                     |  |  | 5.3                 |  |  | 3.0                     |  |  |
| 50 PERCENT EXCEEDS       | 3.5                    |  |  | .07                 |  |  | .00                     |  |  |
| 90 PERCENT EXCEEDS       | .06                    |  |  | .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 September 1996 (discontinued).

GAGE.--Water-stage recorder and low-flow concrete control. Concrete-lined channel. Elevation of gage is 105 ft above sea level, from topographic map.

REMARKS.--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, 6.60 ft, Jan. 10, 1995; no flow most of each year.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 19 | 2300 | 262                               | 2.93                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB    | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|-------|-------|--------|-------|------|------|------|------|------|------|
| 1     | e.00 | .00  | .00   | .00   | 8.0    | 2.5   | 3.8  | .00  | .00  | .00  | .00  | .00  |
| 2     | e.00 | .00  | .00   | .00   | 1.5    | 1.7   | .44  | .00  | .00  | .00  | .00  | .00  |
| 3     | e.00 | .00  | .00   | .00   | 15     | 1.6   | .00  | .00  | .00  | .00  | .00  | .00  |
| 4     | e.00 | .00  | .00   | .00   | 3.9    | 5.0   | .00  | .00  | .00  | .00  | .00  | .00  |
| 5     | e.00 | .00  | .00   | .00   | 5.1    | 2.5   | .00  | .00  | .00  | .00  | .00  | .00  |
| 6     | e.00 | .00  | .00   | .00   | 1.4    | 2.1   | .00  | .00  | .00  | .00  | .00  | .00  |
| 7     | e.00 | .00  | .00   | .00   | .78    | 3.4   | .00  | .00  | .00  | .00  | .00  | .00  |
| 8     | e.00 | .00  | .00   | .00   | .51    | 2.0   | .00  | .00  | .00  | .00  | .00  | .00  |
| 9     | e.00 | .00  | .00   | .00   | .09    | 2.1   | .00  | .00  | .00  | .00  | .00  | .00  |
| 10    | e.00 | .00  | .00   | .00   | .00    | 1.5   | .00  | .00  | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .00   | .00   | .00    | 2.1   | .00  | .00  | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | 8.4   | .00   | .00    | 14    | .00  | .00  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | 11    | .00   | .00    | 18    | .00  | .00  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | .64   | .00   | .00    | 13    | .00  | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | .02   | .00   | .48    | 6.2   | .00  | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | .00   | 1.8   | .04    | 4.3   | .21  | 1.5  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | .00   | .24   | .00    | 3.3   | .86  | .01  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | .00   | .01   | .00    | 2.5   | .49  | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | .00   | 1.8   | 46     | 1.7   | .00  | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | .00   | .00   | 124    | 1.3   | .00  | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00   | .29   | 53     | 1.1   | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .94   | .01   | 20     | .90   | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | 5.8   | .73   | 11     | .72   | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .08   | .08   | 6.5    | .54   | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00   | .33   | 6.4    | .44   | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00   | .00   | 5.0    | .29   | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .66   | .46   | 9.2    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | 1.0   | .09   | 4.3    | .26   | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .00  | .16   | .00   | 3.3    | .01   | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .00  | .11   | .00   | ---    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | .00   | 34    | ---    | .00   | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 28.81 | 39.84 | 325.50 | 95.06 | 5.80 | 1.51 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .93   | 1.29  | 11.2   | 3.07  | .19  | .049 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | 11    | 34    | 124    | 18    | 3.8  | 1.5  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00   | .00   | .00    | .00   | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | 57    | 79    | 646    | 189   | 12   | 3.0  | .00  | .00  | .00  | .00  |

e Estimated.

## MISSION CREEK BASIN

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .11  | 1.10 | 2.31 | 8.70 | 10.7 | 9.65 | 2.08 | .79  | .13  | .024 | .042 | .16  |
| MAX  | 2.01 | 14.0 | 13.9 | 79.9 | 54.8 | 62.3 | 17.2 | 8.88 | 1.25 | .49  | 1.08 | 1.37 |
| (WY) | 1984 | 1973 | 1972 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1971 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 4267.60                |  |  |  | 496.52              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 11.7                   |  |  |  | 1.36                |  |  |  |                         |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 2.95                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | 15.1                    |  |  |  |
| HIGHEST DAILY MEAN       | 1390 Jan 10            |  |  |  | 124 Feb 20          |  |  |  | 1390 Jan 10 1995        |  |  |  |
| LOWEST DAILY MEAN        | .00 Jan 1              |  |  |  | .00 Oct 1           |  |  |  | .00 Oct 1 1970          |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jun 22             |  |  |  | .00 Oct 1           |  |  |  | .00 Oct 1 1970          |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 262 Feb 19          |  |  |  | 2580 Jan 18 1995        |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 2.93 Feb 19         |  |  |  | 6.60 Jan 10 1995        |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 8460                   |  |  |  | 985                 |  |  |  | 2140                    |  |  |  |
| 10 PERCENT EXCEEDS       | 17                     |  |  |  | 1.8                 |  |  |  | 3.0                     |  |  |  |
| 50 PERCENT EXCEEDS       | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| 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 sea level, from topographic map.

REMARKS.--Records poor. No regulation upstream from station. Some pumping for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,600 ft<sup>3</sup>/s, Mar. 10, 1995, gage height, 10.16 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow most of each year.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 1345 | 80                                | 2.07                | Feb. 19 | 2300 | 409                               | 3.35                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB    | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|--------|-------|------|------|------|------|------|------|
| 1     | .00  | .07  | .00  | e.15  | 4.5    | e.40  | e2.0 | .02  | .00  | .00  | .00  | .00  |
| 2     | .00  | .02  | .00  | e.15  | 1.6    | e.35  | e.80 | .05  | .00  | .00  | .00  | .00  |
| 3     | .00  | .00  | .00  | e.15  | 6.0    | e.50  | e.25 | .06  | .00  | .00  | .00  | .00  |
| 4     | .00  | .00  | .01  | e.14  | 1.5    | e.80  | e.50 | .03  | .00  | .00  | .00  | .00  |
| 5     | .00  | .00  | .03  | e.13  | 1.6    | e1.1  | e.25 | .01  | .00  | .00  | .00  | .00  |
| 6     | .00  | .00  | .04  | e.13  | e.50   | e.70  | e.15 | .02  | .00  | .00  | .00  | .00  |
| 7     | .00  | .00  | .04  | e.12  | e.20   | e.50  | e.14 | .00  | .00  | .00  | .00  | .00  |
| 8     | .00  | .00  | .04  | e.12  | e.12   | e.40  | e.14 | .00  | .00  | .00  | .00  | .00  |
| 9     | .00  | .01  | .03  | e.11  | e.08   | e.30  | e.14 | .01  | .00  | .00  | .00  | .00  |
| 10    | .00  | .01  | .04  | e.11  | e.06   | e.30  | e.15 | .03  | .00  | .00  | .00  | .00  |
| 11    | .00  | .00  | .04  | e.11  | e.05   | e1.5  | e.14 | .00  | .00  | .00  | .00  | .00  |
| 12    | .00  | .00  | 1.2  | e.10  | e.05   | e8.0  | e.14 | .02  | .00  | .00  | .00  | .00  |
| 13    | .00  | .00  | .97  | .02   | e.05   | e4.0  | e.13 | .02  | .00  | .00  | .00  | .00  |
| 14    | .00  | .00  | e.30 | .00   | e.04   | e1.5  | e.12 | .00  | .00  | .00  | .00  | .00  |
| 15    | .00  | .00  | e.20 | .00   | e.04   | e.90  | e.10 | .00  | .00  | .00  | .00  | .00  |
| 16    | .00  | .00  | e.15 | .06   | e.04   | e.50  | e.35 | .09  | .00  | .00  | .00  | .00  |
| 17    | .00  | .00  | e.12 | .00   | e.04   | e.35  | e1.2 | .00  | .00  | .00  | .00  | .00  |
| 18    | .00  | .00  | e.10 | .00   | e.04   | e.30  | e.35 | .00  | .00  | .00  | .00  | .00  |
| 19    | .00  | .00  | e.08 | .04   | 51     | e.30  | e.10 | .00  | .00  | .00  | .00  | .00  |
| 20    | .00  | .00  | e.07 | .00   | 122    | e.25  | e.03 | .00  | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | e.10 | .00   | 35     | e.25  | .00  | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | e.45 | .00   | 15     | e.24  | .00  | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .02  | e.30 | .00   | 5.5    | e.24  | .00  | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .09  | e.25 | .00   | 3.2    | e.22  | .00  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .06  | e.22 | .03   | 1.5    | e.20  | .00  | .00  | .00  | .00  | .00  | .00  |
| 26    | .00  | .04  | e.18 | .03   | .39    | e.22  | .00  | .00  | .00  | .00  | .00  | .00  |
| 27    | .00  | .03  | e.17 | .15   | .65    | e.20  | .00  | .00  | .00  | .00  | .00  | .00  |
| 28    | .00  | .03  | e.17 | .07   | e.50   | e.20  | .00  | .00  | .00  | .00  | .00  | .00  |
| 29    | .00  | .02  | e.16 | .00   | e.45   | e.20  | .00  | .00  | .00  | .00  | .00  | .00  |
| 30    | .00  | .02  | e.16 | .12   | ---    | e.20  | .00  | .00  | .00  | .00  | .00  | .00  |
| 31    | .00  | ---  | e.16 | 21    | ---    | e.20  | ---  | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.42 | 5.78 | 23.04 | 251.70 | 25.32 | 7.18 | 0.36 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .014 | .19  | .74   | 8.68   | .82   | .24  | .012 | .000 | .000 | .000 | .000 |
| MAX   | .00  | .09  | 1.2  | 21    | 122    | 8.0   | 2.0  | .09  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00   | .04    | .20   | .00  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .8   | 11   | 46    | 499    | 50    | 14   | .7   | .00  | .00  | .00  | .00  |

e Estimated.

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .094 | .24  | 1.27 | 5.92 | 7.40 | 7.61 | 1.04 | .29  | .10  | .039 | .028 | .040 |
| MAX  | 2.05 | 2.35 | 8.18 | 61.2 | 34.6 | 32.9 | 7.64 | 3.42 | 1.15 | .52  | .27  | .50  |
| (WY) | 1984 | 1983 | 1984 | 1995 | 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1971 - 1996

|                          |            |             |              |
|--------------------------|------------|-------------|--------------|
| ANNUAL TOTAL             | 3204.33    | 313.80      |              |
| ANNUAL MEAN              | 8.78       | .86         | 1.98         |
| HIGHEST ANNUAL MEAN      |            |             | 8.78         |
| LOWEST ANNUAL MEAN       |            |             | .039         |
| HIGHEST DAILY MEAN       | 629 Jan 10 | 122 Feb 20  | 629 Jan 10   |
| LOWEST DAILY MEAN        | .00 Jan 1  | .00 Oct 1   | .00 Oct 1    |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jul 20 | .00 Oct 1   | .00 Oct 1    |
| INSTANTANEOUS PEAK FLOW  |            | 409 Feb 19  | 4600 Mar 10  |
| INSTANTANEOUS PEAK STAGE |            | 3.35 Feb 19 | 10.16 Mar 10 |
| ANNUAL RUNOFF (AC-FT)    | 6360       | 622         | 1440         |
| 10 PERCENT EXCEEDS       | 15         | .40         | 1.4          |
| 50 PERCENT EXCEEDS       | .40        | .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."

SEDIMENT CONCENTRATION: 1982 water year.

SUSPENDED-SEDIMENT DISCHARGE: 1982 water year.

WATER TEMPERATURE: 1982 water year.

REVISED RECORDS.--WSP 1635: 1943-45(M), 1947(M). WSP 1928: Drainage area.

GAGE.--Water-stage recorder and broad-crested weir. Datum of gage is 8.59 ft, 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 those for estimated daily discharges, which are poor. No regulation upstream from station. Small diversions for irrigation upstream from station. Some low-flow results from return irrigation wastewater.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft<sup>3</sup>/s, Mar. 10, 1995, gage height, 12.45 ft, present datum, from rating curve extended above 6,900 ft<sup>3</sup>/s; maximum gage height, 17.3 ft, from floodmark, Dec. 3, 1974, present datum; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 260 ft<sup>3</sup>/s or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|---------|-----------------------------------|---------------------|
| Dec. 12 | 1800 | 271                               | 3.01                | Feb. 20 | unknown | 528                               | 3.62                |
| Jan. 31 | 1315 | 323                               | 3.15                |         |         |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC    | JAN    | FEB    | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|--------|--------|--------|-------|-------|-------|------|------|------|------|
| 1     | .00  | .85  | .02    | .10    | e15    | e4.0  | 18    | .06   | .03  | .01  | .00  | .00  |
| 2     | .00  | .06  | .04    | .10    | e4.0   | e3.0  | 2.6   | .06   | .02  | .03  | .00  | .00  |
| 3     | .01  | .05  | .04    | .10    | e8.0   | e2.5  | 1.6   | .09   | .00  | .03  | .00  | .00  |
| 4     | .01  | .03  | .08    | .11    | e2.0   | e3.0  | 4.5   | .09   | .01  | .02  | .00  | .00  |
| 5     | .00  | .03  | .08    | .12    | e1.0   | e3.5  | 1.4   | .09   | .03  | .01  | .00  | .00  |
| 6     | .01  | .03  | .04    | .12    | e.60   | 2.1   | .85   | .06   | .02  | .02  | .00  | .00  |
| 7     | .00  | .03  | .02    | .12    | e.40   | 1.6   | .51   | .06   | .03  | .01  | .00  | .00  |
| 8     | .01  | .02  | .02    | .12    | e.35   | 1.5   | .47   | .16   | .03  | .01  | .00  | .00  |
| 9     | .01  | .04  | .05    | .12    | e.35   | 1.4   | .55   | .49   | .03  | .00  | .00  | .00  |
| 10    | .12  | .03  | .07    | .12    | e.30   | 1.3   | .57   | .10   | .01  | .00  | .00  | .00  |
| 11    | .00  | .02  | .15    | .12    | e.25   | 1.3   | .57   | .06   | .02  | .00  | .00  | .00  |
| 12    | .00  | .03  | 45     | .14    | e.25   | 54    | .51   | .06   | .06  | .00  | .00  | .00  |
| 13    | .00  | .03  | 57     | .15    | e.20   | 42    | .46   | .07   | .14  | .00  | .00  | .00  |
| 14    | .00  | .06  | 2.3    | .15    | e.20   | 17    | .36   | .06   | .10  | .00  | .00  | .00  |
| 15    | .00  | .04  | .86    | .15    | e.20   | 6.4   | .29   | .07   | .10  | .00  | .00  | .00  |
| 16    | .01  | .03  | .55    | 8.2    | e.20   | 4.2   | 2.2   | 12    | .09  | .00  | .00  | .00  |
| 17    | .03  | .03  | .38    | 1.2    | e.20   | 3.7   | 6.9   | .21   | .05  | .00  | .00  | .00  |
| 18    | .03  | .07  | .31    | .35    | e.20   | 3.0   | 3.4   | .06   | .04  | .00  | .00  | .00  |
| 19    | .03  | .07  | .26    | 5.2    | e60    | 2.7   | .15   | .03   | .15  | .00  | .01  | .00  |
| 20    | .03  | .06  | .20    | .38    | e350   | 2.7   | .12   | .03   | .06  | .00  | .01  | .00  |
| 21    | .03  | .04  | .17    | 1.0    | e50    | 2.6   | .08   | .02   | .15  | .00  | .01  | .00  |
| 22    | .01  | .02  | 7.2    | .41    | e16    | 2.4   | .04   | .01   | .02  | .00  | .01  | .00  |
| 23    | .02  | .03  | 20     | .21    | e9.0   | 2.1   | .04   | .01   | .01  | .00  | .01  | .00  |
| 24    | .02  | .04  | .97    | .19    | e7.0   | 2.0   | .04   | .02   | .01  | .00  | .02  | .00  |
| 25    | .00  | .05  | .78    | 3.4    | e5.0   | 2.0   | .03   | .03   | .02  | .00  | .02  | .01  |
| 26    | .01  | .07  | .50    | .43    | e6.0   | 1.8   | .04   | .04   | .03  | .00  | .01  | .00  |
| 27    | .01  | .03  | .29    | 3.0    | e4.0   | 1.6   | .05   | .04   | .03  | .00  | .00  | .00  |
| 28    | .01  | .02  | .20    | 1.3    | e3.5   | 2.2   | .05   | .04   | .02  | .00  | .00  | .00  |
| 29    | .00  | .00  | .16    | .33    | e4.0   | 1.6   | .04   | .05   | .02  | .00  | .00  | .01  |
| 30    | .01  | .02  | .14    | .26    | ---    | 1.3   | .05   | .04   | .01  | .00  | .00  | .01  |
| 31    | .02  | ---  | .12    | 80     | ---    | 1.3   | ---   | .03   | ---  | .00  | .00  | ---  |
| TOTAL | 0.44 | 1.93 | 138.00 | 107.70 | 548.20 | 181.8 | 46.27 | 14.24 | 1.34 | 0.14 | 0.10 | 0.03 |
| MEAN  | .014 | .064 | 4.45   | 3.47   | 18.9   | 5.86  | 1.54  | .46   | .045 | .005 | .003 | .001 |
| MAX   | .12  | .85  | 57     | 80     | 350    | 54    | 18    | 12    | .15  | .03  | .02  | .01  |
| MIN   | .00  | .00  | .02    | .10    | .20    | 1.3   | .03   | .01   | .00  | .00  | .00  | .00  |
| AC-FT | .9   | 3.8  | 274    | 214    | 1090   | 361   | 92    | 28    | 2.7  | .3   | .2   | .06  |

e Estimated.

## ATASCADERO CREEK BASIN

11120000 ATASCADERO CREEK NEAR GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .30  | 3.28 | 5.40 | 17.9 | 19.4 | 14.7 | 3.89 | .58  | .16  | .047 | .061 | .25  |
| MAX  | 8.08 | 49.8 | 41.5 | 230  | 143  | 112  | 63.5 | 8.69 | 2.20 | .59  | 1.41 | 4.68 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1962 | 1985 | 1958 | 1983 | 1983 | 1985 | 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 1995 CALENDAR YEAR | FOR 1996 WATER YEAR | WATER YEARS 1942 - 1996 |
|--------------------------|------------------------|---------------------|-------------------------|
| ANNUAL TOTAL             | 10034.79               | 1040.19             |                         |
| ANNUAL MEAN              | 27.5                   | 2.84                | 5.43                    |
| HIGHEST ANNUAL MEAN      |                        |                     | 29.0                    |
| LOWEST ANNUAL MEAN       |                        |                     | .018                    |
| HIGHEST DAILY MEAN       | 2120 Jan 10            | 350 Feb 20          | 2410 Jan 25 1969        |
| LOWEST DAILY MEAN        | .00 Jan 1              | .00 Oct 1           | .00 Oct 1 1941          |
| ANNUAL SEVEN-DAY MINIMUM | .00 Jul 19             | .00 Jul 9           | .00 Oct 1 1941          |
| INSTANTANEOUS PEAK FLOW  |                        | 528 Feb 20          | 10200 Mar 10 1985       |
| INSTANTANEOUS PEAK STAGE |                        | 3.62 Feb 20         | 17.30 Dec 3 1974        |
| ANNUAL RUNOFF (AC-FT)    | 19900                  | 2060                | 3930                    |
| 10 PERCENT EXCEEDS       | 57                     | 3.0                 | 2.7                     |
| 50 PERCENT EXCEEDS       | 1.5                    | .04                 | .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 January 1995, October 1995 to current year.

CHEMICAL DATA: Water years 1978-91.

REVISED RECORDS.--WSP 1928: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete low-water control. 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.--Records fair. 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, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 19 | 2300 | 368                               | 5.38                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL  | AUG  | SEP  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1     | .07   | 1.6   | .36   | .45   | 8.7   | 6.2   | 2.2   | .38   | .59   | .19  | .00  | .10  |
| 2     | .18   | 1.4   | .50   | .49   | 3.7   | 5.8   | 2.3   | .44   | .53   | .09  | .00  | .10  |
| 3     | .02   | 1.2   | 1.1   | .49   | 16    | 5.5   | 1.8   | .38   | .31   | .39  | .01  | .12  |
| 4     | .01   | .99   | 1.3   | .50   | 8.1   | 6.4   | 1.6   | .46   | .21   | .09  | .00  | .12  |
| 5     | .03   | .99   | 1.0   | .56   | 5.8   | 6.5   | 1.4   | .61   | .40   | .07  | e.01 | .10  |
| 6     | .04   | .86   | 1.0   | .57   | 6.2   | 5.8   | 1.3   | .62   | .44   | .12  | e.03 | .10  |
| 7     | .05   | .90   | .71   | .59   | 3.6   | 5.4   | 1.2   | .72   | .59   | .12  | e.10 | .10  |
| 8     | .15   | .86   | .59   | .58   | 2.8   | 5.1   | 1.0   | .72   | .71   | .18  | e.17 | .13  |
| 9     | .40   | .40   | 1.2   | .62   | 2.7   | 4.9   | .96   | .83   | .67   | .18  | .22  | .14  |
| 10    | .31   | .33   | .93   | .71   | 1.8   | 4.7   | .82   | .57   | .75   | .17  | .23  | .17  |
| 11    | .42   | .20   | 1.6   | .80   | 1.3   | 4.5   | .73   | .70   | .73   | .17  | .24  | .13  |
| 12    | .28   | .51   | 5.1   | 1.3   | 1.5   | 16    | .61   | .52   | .81   | .29  | .20  | .16  |
| 13    | .24   | .47   | 8.5   | 1.3   | 1.5   | 15    | .57   | .60   | .69   | .18  | .17  | .14  |
| 14    | .18   | .41   | 1.5   | 1.2   | 1.5   | 9.1   | .57   | .43   | .76   | .28  | .16  | .11  |
| 15    | .13   | .44   | .60   | 1.2   | 1.1   | 7.0   | .63   | .42   | .44   | .25  | .18  | .12  |
| 16    | .20   | .36   | .49   | 1.7   | 1.1   | 6.3   | .82   | 2.4   | .35   | .21  | .12  | .11  |
| 17    | .08   | .69   | .43   | 1.7   | 1.2   | 5.5   | .95   | 1.9   | .37   | .23  | .13  | .12  |
| 18    | .19   | .81   | .38   | 1.6   | 1.2   | 4.7   | 1.3   | 1.3   | .33   | .17  | .14  | .09  |
| 19    | .42   | .80   | .38   | 2.3   | 59    | 4.5   | .76   | 1.2   | .30   | .13  | .14  | .08  |
| 20    | .31   | .51   | .37   | 1.8   | 116   | 4.1   | .73   | 1.1   | .38   | .19  | .17  | .08  |
| 21    | .59   | .68   | .36   | 2.1   | 37    | 3.7   | .83   | .65   | .38   | .11  | .24  | .10  |
| 22    | .49   | .61   | .68   | 2.0   | 19    | 3.5   | .74   | .32   | .31   | .07  | .22  | .13  |
| 23    | .86   | .36   | 2.4   | 2.1   | 12    | 3.1   | .71   | .26   | .54   | .05  | .21  | .14  |
| 24    | .72   | .67   | .85   | 2.0   | 9.7   | 2.9   | .45   | .23   | .97   | .03  | .20  | .12  |
| 25    | .39   | .80   | .56   | 2.4   | 8.5   | 2.7   | .44   | .50   | 1.1   | .02  | .22  | .13  |
| 26    | .35   | .79   | .50   | 2.2   | 7.5   | 2.6   | .62   | .57   | 1.3   | .01  | .15  | .18  |
| 27    | .38   | .70   | .47   | 2.5   | 8.4   | 2.4   | .55   | .86   | .89   | .01  | .15  | .14  |
| 28    | .33   | .35   | .47   | 2.4   | 7.9   | 2.4   | .41   | .87   | .54   | .03  | .14  | .14  |
| 29    | .82   | .38   | .45   | 2.3   | 6.9   | 2.2   | .41   | .42   | .34   | .02  | .13  | .13  |
| 30    | .94   | .23   | .46   | 2.2   | ---   | 1.9   | .32   | .48   | .15   | .01  | .12  | .13  |
| 31    | 1.3   | ---   | .46   | 22    | ---   | 1.9   | ---   | .49   | ---   | .00  | .09  | ---  |
| TOTAL | 10.88 | 20.30 | 35.70 | 64.66 | 361.7 | 162.3 | 27.73 | 21.95 | 16.88 | 4.06 | 4.28 | 3.66 |
| MEAN  | .35   | .68   | 1.15  | 2.09  | 12.5  | 5.24  | .92   | .71   | .56   | .13  | .14  | .12  |
| MAX   | 1.3   | 1.6   | 8.5   | 22    | 116   | 16    | 2.3   | 2.4   | 1.3   | .39  | .24  | .18  |
| MIN   | .01   | .20   | .36   | .45   | 1.1   | 1.9   | .32   | .23   | .15   | .00  | .00  | .08  |
| AC-FT | 22    | 40    | 71    | 128   | 717   | 322   | 55    | 44    | 33    | 8.1  | 8.5  | 7.3  |

e Estimated.

## SAN JOSE CREEK BASIN

11120500 SAN JOSE CREEK NEAR GOLETA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .25  | 1.10 | 2.35 | 5.49 | 7.51 | 5.72 | 2.70 | .73  | .30  | .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 1996 WATER YEAR

## WATER YEARS 1941 - 1996

|                          |        |        |                   |
|--------------------------|--------|--------|-------------------|
| ANNUAL TOTAL             | 734.11 |        |                   |
| ANNUAL MEAN              | 2.01   |        | 2.04              |
| HIGHEST ANNUAL MEAN      |        |        | 9.80 1983         |
| LOWEST ANNUAL MEAN       |        |        | .042 1948         |
| HIGHEST DAILY MEAN       | 116    | Feb 20 | 602 Jan 15 1952   |
| LOWEST DAILY MEAN        | .00    | Jul 31 | .00 Jan 2 1941    |
| ANNUAL SEVEN-DAY MINIMUM | .00    | Jul 30 | .00 Aug 18 1942   |
| INSTANTANEOUS PEAK FLOW  | 368    | Feb 19 | 2000 Jan 25 1989  |
| INSTANTANEOUS PEAK STAGE | 5.38   | Feb 19 | 12.74 Jan 21 1943 |
| ANNUAL RUNOFF (AC-FT)    | 1460   |        | 1480              |
| 10 PERCENT EXCEEDS       | 4.6    |        | 2.0               |
| 50 PERCENT EXCEEDS       | .54    |        | .24               |
| 90 PERCENT EXCEEDS       | .10    |        | .00               |

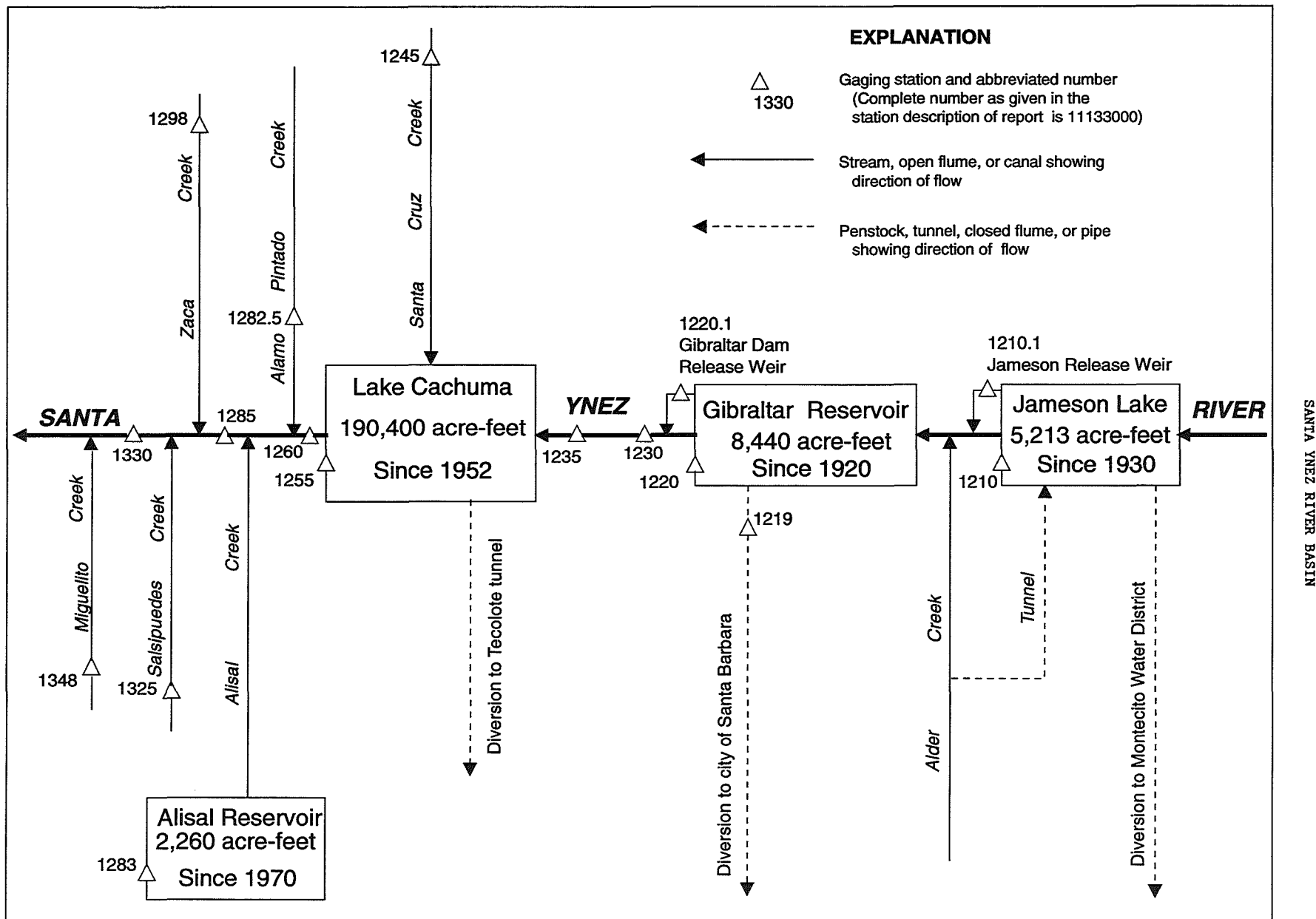


Figure 19. Diversions and storage in Santa Ynez River basin.

## 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 U.S. Bureau of Reclamation Datum or 2,000 ft above sea level. Supplementary gage and sharp-crested weir on outlet conduit of lake release, at different datum.

REMARKS.--Records of total inflow represent all water reaching Jameson Lake, including precipitation on the lake. Total inflow computed on basis of records of storage, diversion (draft) to city of Montecito, spill and release (station 11121010) to river, evaporation, and seepage. Records of net inflow exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on survey made in 1994. Lake capacity at spillway level, gage height 223.82 ft, 5,213 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. See schematic diagram of Santa Ynez River basin.

COOPERATION.--Reservoir-operation records and related data provided by Montecito Water District.

AVERAGE DISCHARGE.--65 years (water years 1932-96), spill and release, 8.09 ft<sup>3</sup>/s, 5,860 acre-ft/yr.

## MONTHLY NET INFLOW, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| Date             | Elevation<br>(feet) <sup>a</sup> | Contents<br>(acre-<br>feet) | Change<br>in<br>contents<br>(acre-<br>feet) | Draft<br>(acre-<br>feet) | Spill<br>and<br>release<br>(acre-<br>feet) | Evapo-<br>ration<br>and<br>seepage<br>(acre-<br>feet) | Total<br>inflow<br>(acre-<br>feet) | Rain on<br>reservoir<br>(acre-<br>feet) | Net<br>inflow<br>(acre-<br>feet) |
|------------------|----------------------------------|-----------------------------|---|--------------------------|--|---|------------------------------------|---|----------------------------------|
| Sept. 30.....    | 2,221.12                         | 4,890                       | --  | --                       | --   | --  | --                                 | --                                      | --                               |
| Oct. 31.....     | 2,220.22                         | 4,790                       | -100  | 147                      | 0  | 30  | 77                                 | 0                                       | 77                               |
| Nov. 30.....     | 2,219.41                         | 4,710                       | -80   | 120                      | 0  | 12  | 52                                 | 6                                       | 46                               |
| Dec. 31.....     | 2,219.18                         | 4,670                       | -40   | 105                      | 0  | 15  | 80                                 | 24                                      | 56                               |
| CAL YR 1995..... | --                               | --                          | +1,250                                      | 1,277                    | 41,581                                     | 228   | 44,336                             | 735                                     | 43,601                           |
| Jan. 31.....     | 2,219.24                         | 4,680                       | +10   | 97                       | 0  | 7   | 114                                | 28                                      | 86                               |
| Feb. 28.....     | 2,224.00                         | 5,240                       | +560  | 80                       | 44   | 3   | 687                                | 108                                     | 579                              |
| Mar. 31.....     | 2,223.97                         | 5,230                       | -10   | 107                      | 1,190                                      | 10  | 1,297                              | 86                                      | 1,211                            |
| Apr. 30.....     | 2,223.53                         | 5,180                       | -50   | 149                      | 222  | 37  | 358                                | 12                                      | 346                              |
| May 31.....      | 2,222.23                         | 5,020                       | -160  | 182                      | 0  | 43  | 65                                 | 3                                       | 62                               |
| June 30.....     | 2,220.39                         | 4,810                       | -210  | 200                      | 0  | 56  | 46                                 | 0                                       | 46                               |
| July 31.....     | 2,218.06                         | 4,540                       | -270  | 227                      | 0  | 44  | 1                                  | 0                                       | 1                                |
| Aug. 31.....     | 2,215.65                         | 4,280                       | -260  | 222                      | 0  | 64  | 26                                 | 0                                       | 26                               |
| Sept. 30.....    | 2,213.60                         | 4,060                       | -220  | 185                      | 0  | 40  | 5                                  | 0                                       | 5                                |
| WTR YR 1996..... | --                               | --                          | -830  | 1,821                    | 1,456                                      | 361   | 2,808                              | 267                                     | 2,541                            |

<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.--WSP 706: 1921-22. WSP 1041: 1944. WSP 1395: DA. WSP 1635: 1914, 15 (M). WDR CA-86-1: 1934-43.

GAGE.--Two water-stage recorders. Datum of gage is sea level. Supplementary gage and sharp-crested weir on diversion from reservoir at different datum. See WSP 1735 for history of changes on both gages prior to Oct. 1, 1955. Spill and release measured by station (11123000) downstream from dam.

REMARKS.--Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage, diversion (draft--station 11121900) to city of Santa Barbara, spill and release (station 11123000) to river, evaporation, and seepage. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on 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. See schematic diagram of Santa Ynez River basin.

COOPERATION.--Reservoir-operation records and related data provided by city of Santa Barbara.

## MONTHLY NET INFLOW, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| Date             | Elevation<br>(feet) <sup>a</sup> | Contents<br>(acre-feet) | Change<br>in<br>contents<br>(acre-feet) | Draft<br>(acre-feet) | Spill<br>and<br>release<br>(acre-feet) | Evapo-<br>ration<br>and<br>seepage<br>(acre-feet) | Total<br>inflow<br>(acre-feet) | Rain on<br>reservoir<br>(acre-feet) | Net<br>inflow<br>(acre-feet) |
|------------------|----------------------------------|-------------------------|---|----------------------|--|---|--------------------------------|-------------------------------------|------------------------------|
| Sept. 30.....    | 1,391.32                         | 6,370                   | --                                      | --                   | --                                     | --  | --                             | --                                  | --                           |
| Oct. 31.....     | 1,388.28                         | 5,720                   | -650                                    | 574                  | 0                                      | 89  | 13                             | 0                                   | 13                           |
| Nov. 30.....     | 1,386.00                         | 5,260                   | -460                                    | 512                  | 0                                      | 49  | 101                            | 3                                   | 98                           |
| Dec. 31.....     | 1,385.32                         | 5,120                   | -140                                    | 435                  | 0                                      | 28  | 323                            | 47                                  | 276                          |
| CAL YR 1995..... | --                               | --                      | -800                                    | 4,531                | 236,031                                | 2,070   | 241,874                        | 1,339                               | 240,533                      |
| Jan. 31.....     | 1,387.79                         | 5,620                   | +500                                    | 13                   | 0                                      | 25  | 538                            | 49                                  | 489                          |
| Feb. 29.....     | 1,399.93                         | 8,550                   | +2,930                                  | 20                   | 6,670                                  | 31  | 9,651                          | 223                                 | 9,428                        |
| Mar. 31.....     | 1,399.76                         | 8,510                   | -40                                     | 341                  | 3,240                                  | 79  | 3,620                          | 53                                  | 3,567                        |
| Apr. 30.....     | 1,399.77                         | 8,510                   | 0                                       | 587                  | 609                                    | 152   | 1,348                          | 24                                  | 1,324                        |
| May 31.....      | 1,398.35                         | 8,120                   | -390                                    | 694                  | 3                                      | 173   | 480                            | 9                                   | 471                          |
| June 30.....     | 1,395.82                         | 7,440                   | -680                                    | 614                  | 0                                      | 183   | 117                            | 0                                   | 117                          |
| July 31.....     | 1,392.61                         | 6,670                   | -770                                    | 132                  | 947                                    | 207   | 516                            | 0                                   | 516                          |
| Aug. 31.....     | 1,391.90                         | 6,510                   | -160                                    | 0                    | 0                                      | 187   | 27                             | 0                                   | 27                           |
| Sept. 30.....    | 1,391.03                         | 6,310                   | -200                                    | 68                   | 0                                      | 133   | 1                              | 0                                   | 1                            |
| WTR YR 1996..... | --                               | --                      | -60                                     | 3,990                | 11,469                                 | 1,336   | 16,735                         | 408                                 | 16,327                       |

<sup>a</sup> Elevation at 0800.

NOTE.--For months when inflow to the lake was small and other quantities were large, preliminary computations may indicate negative net inflow. This arises primarily from the difficulty of computing net inflow as the residual of several large quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

## 11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.--Lat 34°31'28", long 119°41'11", in SW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on left bank 700 ft downstream from Gibraltar Dam and 7 mi north of Santa Barbara.

DRAINAGE AREA.--216 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only prior to October 1933. Daily records for water years 1934-43 in files of U.S. Geological Survey.

REVISED RECORDS.--WDR CA-86-1: 1934-43.

GAGE.--Two water-stage recorders. Datum of gage on main channel is 1,227 ft above sea level. Supplementary gage and sharp-crested weir on the release channel from Gibraltar Dam to river at different datum (station 11122010). See WSP 1735 for history of changes on both gages prior to May 20, 1958.

REMARKS.--Records fair. Flow regulated by Jameson Lake (station 11121000) and Gibraltar Reservoir (station 11122000). City of Santa Barbara diverted 3,990 acre-ft during current year from Gibraltar Reservoir; Montecito Water District diverted 1,821 acre-ft during current year from Jameson Lake. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 54,200 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 25.8 ft, from rating curve extended above 2,100 ft<sup>3</sup>/s on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 and 25.8 ft; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB     | MAR  | APR    | MAY  | JUN  | JUL    | AUG  | SEP  |
|-------|------|------|------|------|---------|------|--------|------|------|--------|------|------|
| 1     | .00  | .00  | .00  | .00  | .00     | 59   | 17     | .16  | .00  | .00    | .00  | .00  |
| 2     | .00  | .00  | .00  | .00  | .00     | 51   | 38     | .16  | .00  | .00    | .00  | .00  |
| 3     | .00  | .00  | .00  | .00  | .00     | 60   | 28     | .15  | .00  | .00    | .00  | .00  |
| 4     | .00  | .00  | .00  | .00  | .00     | 62   | 16     | .14  | .00  | .00    | .00  | .00  |
| 5     | .00  | .00  | .00  | .00  | .00     | 65   | 13     | .13  | .00  | 12     | .00  | .00  |
| 6     | .00  | .00  | .00  | .00  | .00     | 52   | 14     | .10  | .00  | 23     | .00  | .00  |
| 7     | .00  | .00  | .00  | .00  | .00     | 50   | 14     | .10  | .00  | 23     | .00  | .00  |
| 8     | .00  | .00  | .00  | .00  | .00     | 50   | 11     | .09  | .00  | 23     | .00  | .00  |
| 9     | .00  | .00  | .00  | .00  | .00     | 40   | 12     | .08  | .00  | 22     | .00  | .00  |
| 10    | .00  | .00  | .00  | .00  | .00     | 35   | 12     | .06  | .00  | 22     | .00  | .00  |
| 11    | .00  | .00  | .00  | .00  | .00     | 39   | 11     | .06  | .00  | 22     | .00  | .00  |
| 12    | .00  | .00  | .00  | .00  | .00     | 103  | 10     | .06  | .00  | 22     | .00  | .00  |
| 13    | .00  | .00  | .00  | .00  | .00     | 170  | 8.2    | .05  | .00  | 23     | .00  | .00  |
| 14    | .00  | .00  | .00  | .00  | .00     | 105  | 5.5    | .05  | .00  | 23     | .00  | .00  |
| 15    | .00  | .00  | .00  | .00  | .00     | 83   | 6.5    | .04  | .00  | 23     | .00  | .00  |
| 16    | .00  | .00  | .00  | .00  | .00     | 66   | 6.8    | .05  | .00  | 23     | .00  | .00  |
| 17    | .00  | .00  | .00  | .00  | .00     | 63   | 12     | .04  | .00  | 22     | .00  | .00  |
| 18    | .00  | .00  | .00  | .00  | .00     | 54   | 21     | .02  | .00  | 25     | .00  | .00  |
| 19    | .00  | .00  | .00  | .00  | .24     | 47   | 8.8    | .02  | .00  | 25     | .00  | .00  |
| 20    | .00  | .00  | .00  | .00  | 1150    | 47   | 8.9    | .01  | .00  | 24     | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | 967     | 44   | 8.7    | .01  | .00  | 23     | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | 421     | 42   | 7.5    | .01  | .00  | 16     | .00  | .00  |
| 23    | .00  | .00  | .00  | .00  | 217     | 34   | 6.4    | .00  | .00  | 24     | .00  | .00  |
| 24    | .00  | .00  | .00  | .00  | 131     | 28   | 4.5    | .00  | .00  | 24     | .00  | .00  |
| 25    | .00  | .00  | .00  | .00  | 117     | 30   | 1.9    | .00  | .00  | 24     | .00  | .00  |
| 26    | .00  | .00  | .00  | .00  | 98      | 30   | 1.6    | .00  | .00  | 9.3    | .00  | .00  |
| 27    | .00  | .00  | .00  | .00  | 107     | 28   | 1.5    | .00  | .00  | .06    | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | 69      | 27   | .75    | .00  | .00  | .01    | .00  | .00  |
| 29    | .00  | .00  | .00  | .00  | 84      | 26   | .21    | .00  | .00  | .00    | .00  | .00  |
| 30    | .00  | .00  | .00  | .00  | ---     | 24   | .17    | .00  | .00  | .00    | .00  | .00  |
| 31    | .00  | ---  | .00  | .00  | ---     | 18   | ---    | .00  | ---  | .00    | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.00 | 0.00 | 3361.24 | 1632 | 306.93 | 1.59 | 0.00 | 477.37 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .000 | .116    | 52.6 | 10.2   | .051 | .000 | 15.4   | .000 | .000 |
| MAX   | .00  | .00  | .00  | .00  | 1150    | 170  | 38     | .16  | .00  | 25     | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00     | 18   | .17    | .00  | .00  | .00    | .00  | .00  |
| AC-FT | .00  | .00  | .00  | .00  | 6670    | 3240 | 609    | 3.2  | .00  | 947    | .00  | .00  |

## 11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .71  | 6.47 | 25.5 | 128  | 222  | 241  | 102  | 25.5 | 6.75 | 3.03 | 1.28 | .39  |
| MAX  | 32.6 | 336  | 607  | 2077 | 2189 | 1712 | 1168 | 258  | 82.9 | 43.6 | 24.1 | 2.92 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1969 | 1983 | 1958 | 1983 | 1983 | 1983 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1934 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 118995.96              |  |  |  | 5779.13             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 326                    |  |  |  | 15.8                |  |  |  | 62.8                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 437                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 10300                  |  |  |  | Jan 10              |  |  |  | 26600                   |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | Jan 1               |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  |  | Sep 9               |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  |                     |  |  |  | 3900                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  |                     |  |  |  | Feb 20                  |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 236000                 |  |  |  | 12.93               |  |  |  | Feb 20                  |  |  |  |
| 10 PERCENT EXCEEDS       | 735                    |  |  |  | 11460               |  |  |  | 25.80                   |  |  |  |
| 50 PERCENT EXCEEDS       | 28                     |  |  |  | 29                  |  |  |  | 45520                   |  |  |  |
| 90 PERCENT EXCEEDS       | .00                    |  |  |  | .00                 |  |  |  | 75                      |  |  |  |
|                          |                        |  |  |  |                     |  |  |  | .08                     |  |  |  |
|                          |                        |  |  |  |                     |  |  |  | .00                     |  |  |  |

## SANTA YNEZ RIVER BASIN

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 sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Jameson Lake and Gibraltar Reservoir (stations 11121000 and 11122000). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station. Satellite telemeter at station. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 67,500 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft<sup>3</sup>/s on basis of peak flow for station below Gibraltar Dam plus tributary inflow; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB    | MAR  | APR   | MAY  | JUN   | JUL   | AUG   | SEP  |
|-------|------|------|-------|-------|--------|------|-------|------|-------|-------|-------|------|
| 1     | 2.6  | e1.6 | 1.8   | .40   | 20     | 103  | 34    | 3.8  | 1.1   | .84   | 1.6   | .00  |
| 2     | 2.4  | e1.5 | 1.5   | .38   | 8.2    | 67   | 42    | 3.6  | 2.0   | .87   | 1.6   | .00  |
| 3     | 2.1  | e1.5 | 1.5   | .40   | 16     | 71   | 41    | 3.7  | 2.2   | .87   | 1.6   | .00  |
| 4     | 2.6  | e1.5 | 1.5   | .40   | 21     | 80   | 41    | 4.5  | 2.5   | .84   | 1.6   | .00  |
| 5     | 2.5  | e1.4 | 1.3   | .41   | 13     | 79   | 30    | 4.4  | 2.1   | .85   | 1.6   | .00  |
| 6     | 2.3  | e1.4 | 1.4   | .42   | 14     | 77   | 27    | 4.1  | 1.8   | .96   | 1.6   | .00  |
| 7     | 2.1  | e1.4 | 1.5   | .42   | 9.5    | 62   | 26    | 4.1  | 1.8   | 1.0   | 1.6   | .00  |
| 8     | 1.8  | e1.4 | 1.4   | .42   | 7.4    | 67   | 26    | 3.8  | 1.6   | 1.0   | 1.6   | .00  |
| 9     | 1.5  | e1.3 | 2.3   | .42   | 6.2    | 57   | 26    | 3.7  | 1.5   | .96   | 1.6   | .00  |
| 10    | 1.3  | e1.3 | 2.5   | .42   | 5.4    | 56   | 24    | 3.6  | 1.4   | .99   | 1.6   | .00  |
| 11    | 1.2  | e1.3 | 3.1   | .38   | 5.2    | 49   | 23    | 3.2  | 1.3   | .98   | 1.5   | .00  |
| 12    | 1.4  | e1.3 | 3.7   | .35   | 7.4    | 89   | 22    | 3.2  | 1.3   | 1.0   | 1.3   | .00  |
| 13    | 1.7  | e1.2 | 3.3   | .30   | 7.4    | 203  | 21    | 3.1  | 1.3   | 1.0   | 1.1   | .00  |
| 14    | 1.7  | e1.2 | 3.1   | .30   | 6.7    | 212  | 20    | 3.0  | 1.5   | 1.0   | 1.1   | .00  |
| 15    | 1.9  | e1.2 | 4.1   | .30   | 7.3    | 111  | 15    | 2.2  | 1.5   | .93   | .98   | .00  |
| 16    | 1.9  | e1.1 | 4.6   | .37   | 7.9    | 92   | 14    | 1.5  | 1.4   | .88   | .84   | .00  |
| 17    | 1.9  | e1.1 | 4.9   | .50   | 9.4    | 81   | 15    | 1.7  | 1.3   | .84   | .73   | .00  |
| 18    | 1.8  | e1.1 | 5.0   | .49   | 12     | 79   | 23    | 1.5  | 1.1   | .69   | .63   | .00  |
| 19    | 1.7  | e1.1 | 4.5   | .47   | 70     | 67   | 22    | 1.4  | 1.1   | .53   | .59   | .00  |
| 20    | 1.8  | e1.0 | 4.1   | .45   | 1360   | 64   | 15    | 1.2  | 1.2   | .65   | .57   | .00  |
| 21    | 1.8  | e1.0 | 4.3   | .45   | 1640   | 62   | 14    | 1.2  | 1.2   | 4.3   | .46   | .00  |
| 22    | 1.9  | 1.0  | 3.7   | .40   | 743    | 58   | 13    | 1.3  | 1.2   | 7.3   | .41   | .00  |
| 23    | 1.8  | 1.1  | 4.6   | .44   | 422    | 56   | 10    | 1.2  | 1.2   | 7.2   | .36   | .00  |
| 24    | 1.9  | 1.0  | 2.8   | .45   | 248    | 47   | 9.5   | 1.2  | 1.1   | 5.3   | .30   | .00  |
| 25    | 1.9  | 1.0  | 1.7   | .42   | 162    | 45   | 8.9   | 1.6  | 1.1   | 7.5   | .30   | .00  |
| 26    | 1.8  | 1.1  | 1.2   | .45   | 125    | 45   | 7.1   | 1.5  | 1.2   | 7.4   | .30   | .00  |
| 27    | 1.8  | 1.3  | 1.1   | .47   | 124    | 43   | 5.8   | 1.2  | 1.4   | 7.3   | .26   | .00  |
| 28    | 1.7  | 1.3  | .92   | .50   | 142    | 42   | 4.9   | 1.2  | 1.4   | 4.8   | .20   | .00  |
| 29    | 1.7  | 1.3  | .79   | .54   | 74     | 42   | 4.5   | 1.2  | 1.1   | 2.9   | .14   | .00  |
| 30    | 1.6  | 1.4  | .59   | .56   | ---    | 41   | 4.2   | 1.0  | .93   | 2.1   | .07   | .00  |
| 31    | 1.6  | ---  | .45   | 20    | ---    | 40   | ---   | 1.0  | ---   | 1.8   | .02   | ---  |
| TOTAL | 57.7 | 37.4 | 79.25 | 32.68 | 5294.0 | 2287 | 588.9 | 74.9 | 42.83 | 75.58 | 28.16 | 0.00 |
| MEAN  | 1.86 | 1.25 | 2.56  | 1.05  | 183    | 73.8 | 19.6  | 2.42 | 1.43  | 2.44  | .91   | .000 |
| MAX   | 2.6  | 1.6  | 5.0   | 20    | 1640   | 212  | 42    | 4.5  | 2.5   | 7.5   | 1.6   | .00  |
| MIN   | 1.2  | 1.0  | .45   | .30   | 5.2    | 40   | 4.2   | 1.0  | .93   | .53   | .02   | .00  |
| AC-FT | 114  | 74   | 157   | 65    | 10500  | 4540 | 1170  | 149  | 85    | 150   | 56    | .00  |

e Estimated.



## 11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .50  | 8.23 | 36.4 | 193  | 305  | 294  | 124  | 34.3 | 8.88 | 2.43 | .83  | .28  |
| MAX  | 18.8 | 315  | 608  | 2755 | 2682 | 2525 | 1480 | 320  | 109  | 30.3 | 10.1 | 4.21 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1969 | 1995 | 1958 | 1983 | 1983 | 1983 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1947 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 176992.25              |  |  |  | 8598.40             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 485                    |  |  |  | 23.5                |  |  |  | 82.9                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 554                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .013                    |  |  |  |
| HIGHEST DAILY MEAN       | 19800                  |  |  |  | 1640                |  |  |  | 33700                   |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .96                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 4210                |  |  |  | 67500                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 8.00                |  |  |  | 18.88                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 351100                 |  |  |  | 17050               |  |  |  | 60040                   |  |  |  |
| 10 PERCENT EXCEEDS       | 1190                   |  |  |  | 45                  |  |  |  | 85                      |  |  |  |
| 50 PERCENT EXCEEDS       | 15                     |  |  |  | 1.5                 |  |  |  | .03                     |  |  |  |
| 90 PERCENT EXCEEDS       | 1.4                    |  |  |  | .30                 |  |  |  | .00                     |  |  |  |

WATER-QUALITY RECORDS

CHEMICAL DATA: Water years 1973-89, 1991 to current year.

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|--------------|------|--|---|---|--------------------------------------|---|--|--|--|-------------------|
| OCT<br>12... | 1435 | 1.5  | 1140  | 7.5   | 26.0                                 | --  | --   | --   | --   | --                |
| NOV<br>30... | 1440 | 1.5  | 1180  | 7.7   | 16.0                                 | --  | --   | --   | --   | --                |
| JAN<br>04... | 1430 | 0.40   | 1170  | 7.7   | 13.0                                 | --  | --   | --   | --   | --                |
| FEB<br>15... | 1410 | 6.6  | 1260  | 8.0   | 15.0                                 | --  | --   | --   | --   | --                |
| APR<br>11... | 1510 | 24   | 1170  | 8.3   | 20.0                                 | 530   | 120  | 55   | 53   | 18                |
| MAY<br>08... | 1500 | 3.7  | 1170  | 7.8   | 20.0                                 | --  | --   | --   | --   | --                |
| JUN<br>06... | 1505 | 1.7  | 1190  | 7.5   | 23.0                                 | --  | --   | --   | --   | --                |
| JUL<br>18... | 1700 | 0.59   | 1160  | 7.5   | 24.0                                 | --  | --   | --   | --   | --                |
| AUG<br>14... | 1430 | 1.0  | 1300  | 7.6   | 23.0                                 | --  | --   | --   | --   | --                |

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

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 sea level. 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 good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,050 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 14.45 ft, from floodmark, present datum, from rating curve extended above 2,500 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 14.16 ft; no flow at times since 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or 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<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 1945 | 195                               | 8.28                | Mar. 13 | 1915 | 203                               | 8.25                |
| Feb. 20 | 0115 | 1,690                             | 10.92               |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC   | JAN   | FEB    | MAR  | APR  | MAY   | JUN  | JUL   | AUG  | SEP  |
|-------|------|------|-------|-------|--------|------|------|-------|------|-------|------|------|
| 1     | 2.4  | 2.5  | 2.4   | 3.7   | 62     | e60  | e19  | 10    | 6.2  | 1.4   | .11  | .00  |
| 2     | 2.2  | 2.6  | 2.4   | 3.8   | 17     | e42  | e24  | 10    | 5.5  | 1.2   | .10  | .00  |
| 3     | 2.1  | 2.6  | 2.5   | 3.8   | 24     | e46  | e23  | 10    | 5.0  | 1.0   | .10  | .00  |
| 4     | 2.0  | 2.6  | 2.5   | 3.8   | 27     | e48  | e23  | 9.8   | 4.4  | .96   | .09  | .00  |
| 5     | 1.9  | 2.4  | 2.6   | 3.8   | 27     | e48  | e21  | 9.5   | 4.2  | .90   | .09  | .00  |
| 6     | 1.9  | 2.4  | 2.6   | 3.8   | 33     | e47  | e20  | 9.3   | 4.0  | .87   | .09  | .00  |
| 7     | 2.0  | 2.4  | 2.6   | 3.8   | 17     | e40  | e20  | 9.3   | 3.9  | .85   | .08  | .00  |
| 8     | 2.2  | 2.3  | 2.5   | 3.8   | 13     | e45  | e20  | 9.2   | 3.8  | .76   | .08  | .00  |
| 9     | 2.2  | 2.3  | 2.6   | 3.8   | 11     | e40  | e19  | 9.0   | 3.6  | .73   | .07  | .00  |
| 10    | 2.2  | 2.3  | 2.5   | 3.8   | 11     | e40  | e19  | 8.7   | 3.1  | .69   | .07  | .00  |
| 11    | 2.2  | 2.4  | 2.5   | 3.7   | 10     | e35  | e19  | 8.3   | 3.0  | .66   | .06  | .00  |
| 12    | 2.2  | 2.3  | 3.0   | 3.6   | 9.7    | e70  | 18   | 7.8   | 3.1  | .69   | .05  | .00  |
| 13    | 2.1  | 2.2  | 4.1   | 3.6   | 9.5    | e160 | 17   | 7.7   | 3.3  | .65   | .05  | .00  |
| 14    | 2.0  | 2.3  | 4.6   | 3.7   | 9.4    | e72  | 17   | 7.5   | 3.4  | .63   | .04  | .00  |
| 15    | 2.0  | 2.3  | 3.8   | 3.8   | 9.2    | e58  | 16   | 7.5   | 3.3  | .56   | .04  | .00  |
| 16    | 2.1  | 2.3  | 3.4   | 5.0   | 9.2    | e52  | 17   | 8.4   | 3.1  | .55   | .04  | .00  |
| 17    | 2.2  | 2.3  | 3.3   | 7.1   | 8.8    | e50  | 18   | 9.4   | 2.9  | .56   | .04  | .00  |
| 18    | 2.2  | 2.3  | 3.5   | 5.1   | 8.6    | e50  | 20   | 8.4   | 2.7  | .55   | .04  | .00  |
| 19    | 2.1  | 2.3  | 3.5   | 6.0   | 141    | e40  | 18   | 8.0   | 2.4  | .49   | .03  | .00  |
| 20    | 2.1  | 2.2  | 3.5   | 5.6   | 876    | e36  | 17   | 7.7   | 2.2  | .39   | .03  | .00  |
| 21    | 2.1  | 2.2  | 3.5   | 5.2   | 276    | e34  | 16   | 7.4   | 2.1  | .37   | .02  | .00  |
| 22    | 2.2  | 2.3  | 3.6   | 5.4   | 178    | e30  | 15   | 7.3   | 2.2  | .34   | .02  | .00  |
| 23    | 2.1  | 2.3  | 5.4   | 5.0   | e145   | e30  | 15   | 7.6   | 2.2  | .30   | .01  | .00  |
| 24    | 2.1  | 2.2  | 5.5   | 4.8   | e100   | e26  | 14   | 7.1   | 2.0  | .26   | .00  | .00  |
| 25    | 2.1  | 2.2  | 4.4   | 5.7   | e82    | e25  | 13   | 7.1   | 2.0  | .26   | .00  | .00  |
| 26    | 2.2  | 2.2  | 4.2   | 5.6   | e74    | e25  | 12   | 7.1   | 2.4  | .22   | .00  | .00  |
| 27    | 2.2  | 2.3  | 4.0   | 5.3   | e74    | e25  | 12   | 7.2   | 2.7  | .20   | .00  | .00  |
| 28    | 2.1  | 2.3  | 3.9   | 6.5   | e80    | e23  | 11   | 7.3   | 2.6  | .18   | .00  | .00  |
| 29    | 2.2  | 2.3  | 3.8   | 5.8   | e50    | e22  | 11   | 7.0   | 2.3  | .15   | .00  | .00  |
| 30    | 2.3  | 2.3  | 3.8   | 5.4   | ---    | e22  | 11   | 6.9   | 1.8  | .13   | .00  | .00  |
| 31    | 2.2  | ---  | 3.8   | 43    | ---    | e20  | ---  | 6.8   | ---  | .12   | .00  | ---  |
| TOTAL | 66.1 | 69.9 | 106.3 | 182.8 | 2392.4 | 1361 | 515  | 254.3 | 95.4 | 17.62 | 1.35 | 0.00 |
| MEAN  | 2.13 | 2.33 | 3.43  | 5.90  | 82.5   | 43.9 | 17.2 | 8.20  | 3.18 | .57   | .044 | .000 |
| MAX   | 2.4  | 2.6  | 5.5   | 43    | 876    | 160  | 24   | 10    | 6.2  | 1.4   | .11  | .00  |
| MIN   | 1.9  | 2.2  | 2.4   | 3.6   | 8.6    | 20   | 11   | 6.8   | 1.8  | .12   | .00  | .00  |
| AC-FT | 131  | 139  | 211   | 363   | 4750   | 2700 | 1020 | 504   | 189  | 35    | 2.7  | .00  |

e Estimated.

## SANTA YNEZ RIVER BASIN

357

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .57  | 3.04 | 10.8 | 37.4 | 64.4 | 59.4 | 33.9 | 13.3 | 5.42 | 1.92 | .77  | .43  |
| MAX  | 12.4 | 50.4 | 205  | 510  | 743  | 355  | 378  | 98.1 | 40.3 | 20.5 | 9.93 | 4.64 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1969 | 1995 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1942 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 27334.33               |        | 5062.17             |        | 19.0                    |             |
| ANNUAL MEAN              | 74.9                   |        | 13.8                |        | 134                     |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | .066                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | 1969                    |             |
| HIGHEST DAILY MEAN       | 1500                   | Jan 24 | 876                 | Feb 20 | 5000                    | Feb 24 1969 |
| LOWEST DAILY MEAN        | .78                    | Jan 2  | .00                 | Aug 24 | .00                     | Jul 6 1953  |
| ANNUAL SEVEN-DAY MINIMUM | 2.0                    | Oct 2  | .00                 | Aug 24 | .00                     | Jul 6 1953  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 1690                | Feb 20 | 7050                    | Feb 24 1969 |
| INSTANTANEOUS PEAK STAGE |                        |        | 10.92               | Feb 20 | 14.45                   | Feb 24 1969 |
| ANNUAL RUNOFF (AC-FT)    | 54220                  |        | 10040               |        | 13790                   |             |
| 10 PERCENT EXCEEDS       | 201                    |        | 30                  |        | 31                      |             |
| 50 PERCENT EXCEEDS       | 12                     |        | 3.2                 |        | 1.1                     |             |
| 90 PERCENT EXCEEDS       | 2.2                    |        | .00                 |        | .00                     |             |

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

October 1991 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|--------------|------|--|---|---|--------------------------------------|---|--|--|--|-------------------|
| OCT<br>12... | 1155 | 2.2  | 1050  | 8.1   | 18.5                                 | --  | --   | --   | --   | --                |
| NOV<br>30... | 1120 | 2.5  | 1110  | 8.3   | 14.0                                 | --  | --   | --   | --   | --                |
| JAN<br>04... | 1140 | 3.8  | 1150  | 8.2   | 11.5                                 | --  | --   | --   | --   | --                |
| FEB<br>15... | 1100 | 9.2  | 1080  | 7.9   | 14.5                                 | --  | --   | --   | --   | --                |
| APR<br>11... | 1145 | 19   | 913   | 8.4   | 17.5                                 | 410   | 85   | 48   | 40   | 17                |
| MAY<br>08... | 1125 | 9.5  | 951   | 8.2   | 20.0                                 | --  | --   | --   | --   | --                |
| JUN<br>06... | 1130 | 4.3  | 952   | 8.3   | 26.0                                 | --  | --   | --   | --   | --                |
| JUL<br>18... | 1400 | 0.61   | 915   | 8.3   | 28.5                                 | --  | --   | --   | --   | --                |
| AUG<br>15... | 1400 | 0.04   | 936   | 8.0   | 30.0                                 | --  | --   | --   | --   | --                |

[illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

## 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 sea level (U.S. Bureau of Reclamation benchmark). Prior to Oct. 1, 1965, nonrecording gage.

REMARKS.--Reservoir is formed by earthfill dam. Storage began November 1952. Dead storage below outlet gage to river, elevation, 600 ft, 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. See schematic diagram of Santa Ynez River basin.

COOPERATION.--Reservoir elevation, contents, and diversion figures provided by U.S. Bureau of Reclamation. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 221,100 acre-ft, Feb. 24, 1969, elevation, 755.11 ft; minimum since initial filling in April 1958, 27,681 acre-ft, Feb. 27, 1991, elevation 661.06 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 151,794 acre-ft, Apr. 19, elevation, 736.23 ft; minimum, 120,503 acre-ft, Sept. 30, elevation, 723.13 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 | 760 | 222,431 |

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 0800 HOURS

| DAY | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 134713 | 131741 | 129809 | 128584 | 127964 | 143892 | 150994 | 151458 | 148692 | 144766 | 136068 | 127205 |
| 2   | 134594 | 131694 | 129739 | 128515 | 128078 | 144166 | 151173 | 151354 | 148616 | 144591 | 135759 | 126975 |
| 3   | 134522 | 131647 | 129646 | 128492 | 128331 | 144341 | 151251 | 151277 | 148540 | 144416 | 135426 | 126748 |
| 4   | 134356 | 131576 | 129577 | 128423 | 128492 | 144616 | 151354 | 151173 | 148439 | 144241 | 135117 | 126520 |
| 5   | 134261 | 131529 | 129483 | 128354 | 128561 | 144890 | 151458 | 151046 | 148287 | 144091 | 134784 | 126270 |
| 6   | 134118 | 131460 | 129414 | 128262 | 128791 | 145115 | 151535 | 150943 | 148161 | 143892 | 134475 | 126043 |
| 7   | 133976 | 131390 | 129367 | 128262 | 128906 | 145340 | 151535 | 150815 | 148035 | 143767 | 134166 | 125816 |
| 8   | 133857 | 131344 | 129321 | 128216 | 128929 | 145515 | 151613 | 150687 | 147933 | 143494 | 133834 | 125589 |
| 9   | 133763 | 131250 | 129251 | 128125 | 128975 | 145690 | 151639 | 150560 | 147832 | 143321 | 133552 | 125362 |
| 10  | 133622 | 131181 | 129182 | 128078 | 128975 | 145814 | 151639 | 150483 | 147655 | 143148 | 133246 | 125021 |
| 11  | 133528 | 131111 | 129113 | 127987 | 128998 | 145939 | 151639 | 150380 | 147529 | 143000 | 133011 | 124794 |
| 12  | 133434 | 131065 | 129159 | 127941 | 128998 | 146114 | 151665 | 150329 | 147378 | 142828 | 132728 | 124545 |
| 13  | 133364 | 130948 | 129159 | 127849 | 129021 | 146771 | 151665 | 150253 | 147226 | 142680 | 132423 | 124276 |
| 14  | 133269 | 130879 | 129090 | 127780 | 129021 | 147529 | 151691 | 150176 | 147100 | 142532 | 132140 | 124029 |
| 15  | 133175 | 130832 | 129090 | 127734 | 129021 | 147959 | 151691 | 150073 | 146973 | 142359 | 131858 | 123827 |
| 16  | 133081 | 130739 | 128998 | 127665 | 129067 | 148338 | 151716 | 150048 | 146847 | 142186 | 131576 | 123579 |
| 17  | 132987 | 130669 | 128975 | 127688 | 129021 | 148667 | 151716 | 149997 | 146720 | 142013 | 131297 | 123332 |
| 18  | 132917 | 130623 | 128929 | 127619 | 129021 | 148922 | 151716 | 149920 | 146619 | 141841 | 131018 | 123108 |
| 19  | 132846 | 130553 | 128883 | 127596 | 129021 | 149153 | 151794 | 149818 | 146443 | 141446 | 130716 | 122883 |
| 20  | 132776 | 130506 | 128860 | 127573 | 131670 | 149383 | 151768 | 149741 | 146291 | 140979 | 130460 | 122614 |
| 21  | 132728 | 130437 | 128814 | 127504 | 136932 | 149587 | 151768 | 149690 | 146165 | 140565 | 130158 | 122390 |
| 22  | 132611 | 130390 | 128883 | 127481 | 139517 | 149767 | 151794 | 149562 | 145989 | 140102 | 129856 | 122146 |
| 23  | 132517 | 130344 | 128860 | 127435 | 140858 | 149869 | 151794 | 149485 | 145839 | 139663 | 129600 | 121946 |
| 24  | 132423 | 130297 | 128860 | 127343 | 141619 | 150073 | 151794 | 149408 | 145714 | 139200 | 129321 | 121746 |
| 25  | 132305 | 130251 | 128837 | 127389 | 142112 | 150201 | 151768 | 149306 | 145565 | 138762 | 128975 | 121502 |
| 26  | 132211 | 130181 | 128814 | 127366 | 142581 | 150329 | 151768 | 149255 | 145415 | 138328 | 128653 | 121302 |
| 27  | 132117 | 130135 | 128745 | 127343 | 142902 | 150432 | 151716 | 149178 | 145290 | 137919 | 128331 | 121080 |
| 28  | 132046 | 130042 | 128791 | 127366 | 143370 | 150585 | 151665 | 149101 | 145140 | 137461 | 128078 | 120881 |
| 29  | 131952 | 129995 | 128699 | 127343 | 143742 | 150687 | 151613 | 148999 | 144990 | 137028 | 127872 | 120681 |
| 30  | 131858 | 129925 | 128584 | 127343 | ---    | 150790 | 151535 | 148871 | 144890 | 136715 | 127665 | 120503 |
| 31  | 131788 | ---    | 128584 | 127458 | ---    | 150892 | ---    | 148769 | ---    | 136402 | 127435 | ---    |
| MAX | 134713 | 131741 | 129809 | 128584 | 143742 | 150892 | 151794 | 151458 | 148692 | 144766 | 136068 | 127205 |
| MIN | 131788 | 129925 | 128584 | 127343 | 127964 | 143892 | 150994 | 148769 | 144890 | 136402 | 127435 | 120503 |
| a   | 728.09 | 727.29 | 726.71 | 726.22 | 733.05 | 735.88 | 736.13 | 735.05 | 733.51 | 730.04 | 726.21 | 723.13 |
| b   | -3067  | -1863  | -1341  | -1126  | +16284 | +7150  | +643   | -2766  | -3879  | -8488  | -8967  | -6932  |
| c   | 2217   | 1464   | 1189   | 1665   | 1294   | 1237   | 1501   | 2200   | 2750   | 3909   | 4105   | 3384   |

CAL YR 1995 MAX 191510 MIN 128584 b -13997

WTR YR 1996 MAX 151794 MIN 120503 b -14352

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversions, in acre-feet, to Tecolote Tunnel.



## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA

LOCATION.--Lat 34°35'21", long 119°59'16", in Canada de los Pinos Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 0.7 mi downstream from Bradbury Dam, and 5.5 mi southeast of Santa Ynez.

DRAINAGE AREA.--422 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1928 to September 1931, October 1932 to September 1976, May 1994 to current year (seasonal records only).

GAGE.--Water-stage recorder. Datum of gage is 545.66 ft above sea level (Bureau of Reclamation benchmark). Prior to Oct. 1, 1955, at site 2.5 mi downstream at different datum. Oct. 1, 1955, to Sept. 16, 1969, at site 0.4 mi downstream at datum 7.2 ft higher.

REMARKS.--Records poor, no records computed above 250 ft<sup>3</sup>/s. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (stations 11121000, 11122000, 11125500). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and to the Santa Ynez Valley for municipal supply. Some water pumped from wells along river banks for irrigation. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 79,000 ft<sup>3</sup>/s Jan. 25, 1969, gage height, 22.00 ft, from floodmark, present datum, on basis of computation of maximum flow over dam; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT | NOV | DEC | JAN | FEB | MAR | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| 1     | --- | --- | --- | --- | --- | --- | e2.4 | e3.4 | 2.4  | e3.1 | 99   | 45   |
| 2     | --- | --- | --- | --- | --- | --- | e2.4 | e3.0 | 2.4  | e3.1 | 100  | 46   |
| 3     | --- | --- | --- | --- | --- | --- | e2.3 | 1.8  | 2.6  | e3.0 | 98   | 45   |
| 4     | --- | --- | --- | --- | --- | --- | e2.5 | 1.8  | 2.9  | e3.5 | 99   | 45   |
| 5     | --- | --- | --- | --- | --- | --- | e2.4 | 1.7  | 3.0  | e3.0 | 96   | 44   |
| 6     | --- | --- | --- | --- | --- | --- | 2.5  | 1.6  | 3.0  | e3.0 | 94   | 43   |
| 7     | --- | --- | --- | --- | --- | --- | 2.5  | 1.9  | 2.8  | e2.9 | 90   | 42   |
| 8     | --- | --- | --- | --- | --- | --- | 2.7  | 1.8  | 2.7  | e3.5 | 86   | 40   |
| 9     | --- | --- | --- | --- | --- | --- | 2.7  | 1.9  | 2.6  | e3.0 | 82   | 66   |
| 10    | --- | --- | --- | --- | --- | --- | 2.6  | 1.9  | 2.6  | 23   | 80   | 81   |
| 11    | --- | --- | --- | --- | --- | --- | 2.7  | 2.0  | 2.9  | e25  | 78   | 66   |
| 12    | --- | --- | --- | --- | --- | --- | 2.7  | 2.2  | 2.9  | e3.0 | 76   | 64   |
| 13    | --- | --- | --- | --- | --- | --- | 2.7  | 2.2  | 3.0  | e25  | 74   | 64   |
| 14    | --- | --- | --- | --- | --- | --- | 2.9  | 2.1  | 2.8  | e3.0 | 73   | 68   |
| 15    | --- | --- | --- | --- | --- | --- | 3.0  | 2.2  | 2.6  | e3.0 | 60   | 68   |
| 16    | --- | --- | --- | --- | --- | --- | 3.2  | 2.5  | 2.5  | e3.0 | 51   | 71   |
| 17    | --- | --- | --- | --- | --- | --- | e3.2 | 2.6  | 2.6  | e3.0 | 57   | 70   |
| 18    | --- | --- | --- | --- | --- | --- | e3.3 | 2.8  | 2.5  | e100 | 62   | 63   |
| 19    | --- | --- | --- | --- | --- | --- | e3.3 | 3.1  | 2.4  | ---  | 65   | 65   |
| 20    | --- | --- | --- | --- | --- | --- | e3.4 | 3.0  | 2.6  | ---  | 65   | 68   |
| 21    | --- | --- | --- | --- | --- | --- | e3.4 | 2.7  | 2.7  | ---  | 70   | 69   |
| 22    | --- | --- | --- | --- | --- | --- | e3.4 | 2.6  | 3.3  | ---  | 68   | 68   |
| 23    | --- | --- | --- | --- | --- | --- | e3.4 | 2.2  | 3.4  | ---  | 69   | 71   |
| 24    | --- | --- | --- | --- | --- | --- | e3.6 | 2.2  | 3.3  | ---  | 86   | 76   |
| 25    | --- | --- | --- | --- | --- | --- | e3.4 | 2.8  | 3.3  | ---  | 98   | 80   |
| 26    | --- | --- | --- | --- | --- | --- | e3.4 | 3.6  | 3.2  | ---  | 97   | 76   |
| 27    | --- | --- | --- | --- | --- | --- | e3.5 | 3.8  | e3.2 | ---  | 92   | 77   |
| 28    | --- | --- | --- | --- | --- | --- | e3.5 | 3.7  | e3.2 | ---  | 53   | 71   |
| 29    | --- | --- | --- | --- | --- | --- | e3.5 | 3.7  | e3.2 | 173  | 40   | 67   |
| 30    | --- | --- | --- | --- | --- | --- | e3.0 | 3.3  | e3.1 | 101  | 42   | 55   |
| 31    | --- | --- | --- | --- | --- | --- | ---  | 2.9  | ---  | 100  | 42   | ---  |
| TOTAL | --- | --- | --- | --- | --- | --- | 89.5 | 79.0 | 85.7 | ---  | 2342 | 1874 |
| MEAN  | --- | --- | --- | --- | --- | --- | 2.98 | 2.55 | 2.86 | ---  | 75.5 | 62.5 |
| MAX   | --- | --- | --- | --- | --- | --- | 3.6  | 3.8  | 3.4  | ---  | 100  | 81   |
| MIN   | --- | --- | --- | --- | --- | --- | 2.3  | 1.6  | 2.4  | ---  | 40   | 40   |
| AC-FT | --- | --- | --- | --- | --- | --- | 178  | 157  | 170  | ---  | 4650 | 3720 |

e Estimated.

## SANTA YNEZ RIVER BASIN

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 1.67 | 2.25 | 14.7 | 146  | 233  | 293  | 129  | 34.0 | 11.3 | 5.81 | 5.94 | 4.23 |
| MAX  | 28.2 | 26.9 | 104  | 2498 | 3971 | 3098 | 2034 | 364  | 122  | 51.6 | 75.5 | 62.5 |
| (WY) | 1958 | 1947 | 1942 | 1969 | 1969 | 1941 | 1941 | 1941 | 1941 | 1941 | 1996 | 1996 |
| MIN  | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| (WY) | 1930 | 1930 | 1930 | 1930 | 1930 | 1948 | 1931 | 1931 | 1931 | 1931 | 1929 | 1929 |

## SUMMARY STATISTICS

WATER YEARS 1929 - 1996

|                          |       |             |
|--------------------------|-------|-------------|
| ANNUAL MEAN              | 73.9  |             |
| HIGHEST ANNUAL MEAN      | 666   | 1969        |
| LOWEST ANNUAL MEAN       | .000  | 1948        |
| HIGHEST DAILY MEAN       | 38900 | Jan 25 1969 |
| LOWEST DAILY MEAN        | .00   | Jul 22 1929 |
| ANNUAL SEVEN-DAY MINIMUM | .00   | Jul 22 1929 |
| INSTANTANEOUS PEAK FLOW  | 79000 | Jan 25 1969 |
| INSTANTANEOUS PEAK STAGE | 22.00 | Jan 25 1969 |
| ANNUAL RUNOFF (AC-FT)    | 53520 |             |
| 10 PERCENT EXCEEDS       | 69    |             |
| 50 PERCENT EXCEEDS       | 1.0   |             |
| 90 PERCENT EXCEEDS       | .00   |             |

## WATER-QUALITY RECORDS

**WATER TEMPERATURE:** Maximum recorded, 25.0°C, May 14, 16; minimum recorded, 11.0°C, Feb. 28.

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DAY   | MAX     | MIN  | MAX      | MIN  | MAX      | MIN  | MAX     | MIN  | MAX      | MIN  | MAX       | MIN  |
|-------|---------|------|----------|------|----------|------|---------|------|----------|------|-----------|------|
|       | OCTOBER |      | NOVEMBER |      | DECEMBER |      | JANUARY |      | FEBRUARY |      | MARCH     |      |
| 1     | 19.0    | 18.5 | 18.0     | 17.0 | 16.5     | 15.5 | 15.0    | 14.5 | 13.5     | 13.0 | 14.0      | 12.5 |
| 2     | 19.0    | 18.5 | 18.5     | 17.5 | 16.5     | 15.5 | 15.0    | 13.5 | 14.0     | 13.5 | 15.5      | 14.0 |
| 3     | 19.0    | 18.5 | 18.5     | 18.0 | 16.0     | 15.5 | 14.5    | 13.0 | 14.0     | 13.5 | 16.0      | 15.0 |
| 4     | 19.5    | 18.5 | 18.0     | 17.5 | 16.0     | 15.0 | 14.5    | 13.5 | 14.5     | 13.5 | 16.5      | 15.0 |
| 5     | 19.5    | 18.5 | 18.0     | 17.0 | 16.0     | 15.5 | 14.5    | 13.5 | 15.5     | 14.5 | 16.0      | 15.5 |
| 6     | 19.5    | 18.5 | 18.0     | 17.0 | 16.5     | 15.5 | 14.5    | 13.5 | 16.0     | 14.5 | 16.0      | 14.5 |
| 7     | 19.5    | 18.5 | 18.0     | 17.0 | 16.5     | 15.5 | 14.5    | 13.0 | 15.5     | 15.0 | 17.0      | 15.5 |
| 8     | 19.0    | 18.5 | 18.0     | 17.0 | 16.0     | 15.5 | 15.0    | 13.5 | 16.0     | 15.0 | 17.0      | 15.5 |
| 9     | 19.0    | 18.5 | 17.5     | 16.5 | 16.0     | 15.0 | 14.5    | 13.5 | 16.0     | 15.0 | 17.5      | 16.0 |
| 10    | 19.0    | 18.0 | 18.0     | 17.5 | 15.5     | 15.0 | 15.0    | 14.0 | 15.5     | 14.5 | 17.5      | 16.0 |
| 11    | 19.0    | 18.5 | 18.0     | 17.0 | 15.5     | 15.0 | 14.5    | 13.5 | 16.5     | 15.5 | 18.5      | 17.0 |
| 12    | 19.0    | 18.5 | 17.5     | 16.5 | 15.5     | 15.0 | 14.0    | 13.0 | 17.0     | 15.5 | 18.0      | 16.5 |
| 13    | 19.0    | 18.0 | 17.5     | 16.5 | 16.0     | 15.5 | 14.0    | 13.0 | 16.5     | 15.5 | 16.5      | 15.5 |
| 14    | 19.0    | 18.5 | 17.5     | 16.5 | 16.0     | 15.5 | 14.5    | 14.0 | 16.5     | 15.5 | 16.0      | 15.0 |
| 15    | 19.0    | 18.5 | 17.5     | 17.0 | 16.0     | 15.0 | 15.0    | 14.0 | 16.5     | 15.0 | 17.5      | 15.5 |
| 16    | 19.0    | 18.0 | 18.0     | 17.0 | 15.5     | 14.5 | 14.5    | 14.0 | 16.5     | 14.5 | 18.5      | 17.0 |
| 17    | 19.0    | 17.5 | 17.5     | 16.5 | 15.0     | 13.5 | 14.5    | 13.5 | 16.5     | 16.5 | 19.0      | 17.5 |
| 18    | 19.0    | 18.0 | 17.5     | 16.5 | 14.0     | 13.0 | 14.0    | 13.0 | 17.0     | 16.0 | 20.0      | 18.5 |
| 19    | 19.5    | 18.5 | 17.5     | 16.5 | 14.0     | 13.5 | 15.0    | 14.0 | 16.5     | 16.0 | 20.5      | 19.0 |
| 20    | 19.5    | 19.0 | 17.5     | 16.5 | 15.0     | 13.5 | 14.0    | 13.0 | 16.0     | 14.5 | 20.5      | 19.0 |
| 21    | 19.0    | 18.5 | 17.5     | 16.5 | 14.5     | 13.0 | 13.5    | 13.0 | 14.5     | 14.0 | 20.5      | 19.0 |
| 22    | 19.5    | 18.5 | 17.0     | 16.0 | 13.5     | 12.5 | 13.5    | 12.5 | 14.5     | 13.5 | 20.0      | 18.5 |
| 23    | 19.0    | 17.5 | 17.0     | 16.0 | 13.5     | 13.0 | 13.0    | 11.5 | 14.5     | 13.5 | 19.0      | 17.5 |
| 24    | 18.0    | 17.0 | 17.0     | 16.0 | 13.5     | 12.5 | 13.0    | 11.5 | 14.5     | 13.5 | 18.5      | 17.0 |
| 25    | 17.5    | 16.5 | 17.0     | 16.5 | 13.5     | 12.5 | 13.5    | 12.5 | 14.5     | 13.5 | 19.0      | 17.0 |
| 26    | 17.5    | 16.5 | 17.5     | 16.5 | 13.5     | 12.5 | 13.0    | 12.0 | 14.5     | 13.0 | 19.0      | 17.0 |
| 27    | 18.0    | 17.0 | 17.0     | 16.0 | 13.5     | 12.5 | 12.5    | 12.0 | 13.5     | 12.0 | 19.5      | 17.0 |
| 28    | 18.0    | 17.0 | 16.5     | 15.5 | 13.5     | 12.5 | 13.5    | 12.5 | 13.0     | 11.0 | 20.0      | 18.5 |
| 29    | 17.5    | 17.0 | 16.5     | 15.0 | 13.5     | 12.5 | 13.5    | 12.5 | 13.0     | 12.0 | 19.0      | 17.5 |
| 30    | 18.0    | 17.0 | 16.0     | 15.5 | 15.0     | 13.5 | 13.5    | 13.0 | ---      | ---  | 19.5      | 17.5 |
| 31    | 18.0    | 17.5 | ---      | ---  | 15.5     | 15.0 | 13.0    | 12.5 | ---      | ---  | 20.0      | 18.0 |
| MONTH | 19.5    | 16.5 | 18.5     | 15.0 | 16.5     | 12.5 | 15.0    | 11.5 | 17.0     | 11.0 | 20.5      | 12.5 |
|       | APRIL   |      | MAY      |      | JUNE     |      | JULY    |      | AUGUST   |      | SEPTEMBER |      |
| 1     | 19.5    | 18.5 | 23.0     | 21.5 | 22.0     | 18.5 | 24.5    | 21.0 | ---      | ---  | ---       | ---  |
| 2     | 19.5    | 17.5 | 24.0     | 22.0 | 23.5     | 20.5 | 24.5    | 21.0 | ---      | ---  | ---       | ---  |
| 3     | 20.0    | 18.5 | 23.5     | 21.0 | 24.5     | 21.0 | 24.5    | 21.0 | ---      | ---  | ---       | ---  |
| 4     | 20.5    | 18.5 | 23.0     | 20.0 | 24.0     | 21.0 | 24.5    | 21.0 | ---      | ---  | ---       | ---  |
| 5     | 21.0    | 19.0 | 23.0     | 19.5 | 24.0     | 21.0 | 24.0    | 20.5 | ---      | ---  | ---       | ---  |
| 6     | 21.5    | 19.5 | 22.5     | 19.0 | 24.0     | 21.0 | 24.0    | 20.5 | ---      | ---  | ---       | ---  |
| 7     | 21.5    | 20.0 | 22.0     | 19.0 | 24.5     | 21.0 | 24.0    | 20.5 | ---      | ---  | ---       | ---  |
| 8     | 22.0    | 20.5 | 22.5     | 19.0 | 24.5     | 21.5 | 24.5    | 20.5 | ---      | ---  | ---       | ---  |
| 9     | 22.0    | 20.5 | 23.0     | 19.0 | 24.0     | 21.0 | 24.0    | 20.5 | ---      | ---  | ---       | ---  |
| 10    | 21.5    | 20.0 | 22.5     | 19.5 | 23.5     | 20.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 11    | 21.0    | 19.5 | 23.5     | 19.5 | 23.0     | 20.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 12    | 20.5    | 19.5 | 23.0     | 19.0 | 23.0     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 13    | 20.5    | 19.0 | 24.0     | 20.5 | 22.5     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 14    | 21.5    | 19.0 | 25.0     | 21.0 | 23.0     | 19.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 15    | 21.0    | 19.5 | 24.0     | 21.5 | 22.5     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 16    | 21.0    | 19.5 | 25.0     | 22.0 | 22.5     | 19.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 17    | 20.5    | 19.5 | 24.0     | 21.0 | 22.5     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 18    | 20.5    | 18.5 | 24.0     | 21.0 | 22.5     | 19.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 19    | 20.0    | 18.5 | 22.5     | 20.0 | 23.0     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 20    | 19.5    | 18.5 | 22.5     | 19.5 | 23.0     | 20.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 21    | 19.5    | 18.0 | 22.0     | 19.0 | 23.0     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 22    | 20.0    | 18.0 | 21.5     | 19.5 | 23.0     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 23    | 21.0    | 19.0 | 21.5     | 17.5 | 23.0     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 24    | 21.5    | 20.0 | 21.5     | 18.0 | 23.5     | 20.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 25    | 22.0    | 20.5 | 23.0     | 18.5 | 21.5     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 26    | 22.5    | 21.0 | 22.0     | 19.5 | 20.5     | 19.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 27    | 23.0    | 21.5 | 21.5     | 19.5 | 21.0     | 17.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 28    | 22.5    | 21.0 | 21.0     | 18.5 | 22.0     | 18.5 | ---     | ---  | ---      | ---  | ---       | ---  |
| 29    | 22.5    | 21.0 | 21.0     | 18.5 | 23.0     | 19.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 30    | 22.5    | 21.0 | 21.0     | 18.5 | 23.5     | 20.0 | ---     | ---  | ---      | ---  | ---       | ---  |
| 31    | ---     | ---  | 21.5     | 18.5 | ---      | ---  | ---     | ---  | ---      | ---  | ---       | ---  |
| MONTH | 23.0    | 17.5 | 25.0     | 17.5 | 24.5     | 17.5 | ---     | ---  | ---      | ---  | ---       | ---  |

## 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 September 1992, October 1994 to current year. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 540.49 ft, Santa Barbara County datum.

REMARKS.--Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 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 FOR OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 10.32 ft, from information provided by Santa Barbara County Flood Control District.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 20 | 0115 | 486                               | 4.62                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN  | FEB    | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | e1.1  | 3.8   | 1.4   | 1.8  | 4.8    | 5.5   | .49   | .90   | e.80  | e.50  | e.35  | e.30  |
| 2     | e1.1  | 6.0   | 1.4   | 1.7  | 4.7    | 2.7   | .26   | .87   | e.75  | e.53  | e.33  | e.34  |
| 3     | e1.0  | 6.1   | 1.3   | 1.8  | 4.7    | .50   | .33   | .90   | e.70  | e.46  | e.40  | e.39  |
| 4     | e.92  | 6.7   | 1.3   | 1.8  | 2.7    | 1.2   | .34   | e.86  | e.71  | e.46  | e.33  | e.44  |
| 5     | e.85  | 6.5   | 1.4   | 2.0  | 4.3    | 1.3   | .34   | e.85  | e.72  | e.47  | e.34  | e.40  |
| 6     | .78   | 6.5   | 1.5   | 2.1  | 1.3    | .31   | e.30  | e.84  | e.76  | e.50  | e.36  | e.38  |
| 7     | .87   | 9.8   | 1.6   | 2.3  | .86    | .21   | e.24  | e.84  | e.76  | e.54  | e.37  | e.35  |
| 8     | .87   | 10    | 1.4   | 2.6  | .79    | .18   | e.18  | e.83  | e.78  | e.59  | e.38  | e.33  |
| 9     | 1.1   | 12    | 1.4   | 2.7  | .69    | .22   | e.27  | e.83  | e.80  | e.63  | e.41  | e.30  |
| 10    | 1.1   | 13    | 1.4   | 2.7  | 1.0    | .12   | e.80  | e.82  | e.85  | e.59  | e.43  | e.32  |
| 11    | .77   | e12   | 1.2   | 2.7  | .91    | .07   | 1.1   | e.82  | e.82  | e.60  | e.40  | e.36  |
| 12    | .84   | e11   | 1.6   | 2.8  | .97    | 4.3   | .29   | e.86  | e.90  | e.65  | e.37  | e.34  |
| 13    | .87   | e10   | 1.6   | 3.1  | 1.6    | 7.8   | .35   | e.89  | e.95  | e.64  | e.35  | e.32  |
| 14    | .87   | e9.2  | 1.4   | 3.1  | .73    | 2.4   | .90   | e.90  | e.92  | e.63  | e.33  | e.35  |
| 15    | .96   | e8.2  | 1.4   | 3.3  | .73    | 1.9   | .68   | e.91  | e.90  | e.60  | e.31  | e.34  |
| 16    | 1.6   | e7.3  | 1.3   | 3.6  | .79    | 1.7   | .87   | e2.3  | e.93  | e.60  | e.29  | e.32  |
| 17    | 2.9   | e6.4  | 1.2   | 3.1  | 1.5    | 1.5   | 1.1   | e1.6  | e.95  | e.60  | e.27  | e.30  |
| 18    | 2.9   | e5.4  | 1.2   | 3.1  | 2.8    | 1.2   | 1.8   | e.95  | e.92  | e.60  | e.28  | e.25  |
| 19    | 4.0   | e4.4  | 1.2   | 3.3  | 21     | 1.1   | 1.1   | e.93  | e.90  | e.60  | e.29  | e.26  |
| 20    | 3.7   | e3.5  | 1.2   | 3.3  | 350    | 1.0   | .93   | e.93  | e.92  | e.54  | e.31  | e.27  |
| 21    | 3.1   | e2.6  | 1.1   | 3.3  | 72     | .98   | .86   | e.92  | e.95  | e.48  | e.33  | e.26  |
| 22    | 3.7   | e1.6  | .99   | 3.8  | 90     | .92   | .86   | e.91  | e.85  | e.53  | e.35  | e.31  |
| 23    | 3.1   | 1.2   | 1.2   | 4.1  | 12     | .97   | .77   | e.90  | e.85  | e.45  | e.37  | e.37  |
| 24    | 2.2   | 1.2   | 1.3   | 4.0  | 3.8    | .92   | 1.0   | e.90  | e.90  | e.46  | e.38  | e.34  |
| 25    | 2.2   | 1.2   | 1.3   | 4.0  | .78    | .93   | .75   | e.90  | e.93  | e.47  | e.38  | e.46  |
| 26    | 2.6   | 1.1   | 1.5   | 3.7  | .47    | .86   | .77   | e.89  | e.95  | e.48  | e.39  | e.65  |
| 27    | 3.0   | 1.2   | 1.7   | 3.9  | 5.3    | .68   | .96   | e.95  | e.83  | e.45  | e.39  | e.61  |
| 28    | 3.3   | 1.2   | 1.4   | 4.3  | 9.1    | .78   | 1.1   | e1.0  | e.73  | e.43  | e.37  | e.58  |
| 29    | 3.7   | 1.3   | 1.5   | 4.5  | 2.3    | .87   | 1.2   | e1.1  | e.65  | e.40  | e.34  | e.55  |
| 30    | 3.5   | 1.4   | 2.2   | 4.5  | ---    | .70   | .94   | e1.0  | e.57  | e.39  | e.30  | e.53  |
| 31    | 3.6   | ---   | 1.8   | 5.6  | ---    | .53   | ---   | e1.0  | ---   | e.37  | e.30  | ---   |
| TOTAL | 63.10 | 171.8 | 43.39 | 98.6 | 602.62 | 44.35 | 21.88 | 30.10 | 24.95 | 16.24 | 10.80 | 11.32 |
| MEAN  | 2.04  | 5.73  | 1.40  | 3.18 | 20.8   | 1.43  | .73   | .97   | .83   | .52   | .35   | .38   |
| MAX   | 4.0   | 13    | 2.2   | 5.6  | 350    | 7.8   | 1.8   | 2.3   | .95   | .65   | .43   | .65   |
| MIN   | .77   | 1.1   | .99   | 1.7  | .47    | .07   | .18   | .82   | .57   | .37   | .27   | .25   |
| AC-FT | 125   | 341   | 86    | 196  | 1200   | 88    | 43    | 60    | 49    | 32    | 21    | 22    |

e Estimated.

## 11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .14  | .38  | .35  | 3.81 | 4.92 | 6.81 | .92  | .36  | .33  | .13  | .11  | .12  |
| MAX  | 2.04 | 5.73 | 1.92 | 56.8 | 26.2 | 44.8 | 8.24 | 2.86 | 4.83 | 1.04 | .73  | 1.26 |
| (WY) | 1996 | 1996 | 1984 | 1995 | 1992 | 1995 | 1983 | 1995 | 1995 | 1995 | 1995 | 1995 |
| 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1971 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 4118.21                |        | 1139.15             |        |                         |             |
| ANNUAL MEAN              | 11.3                   |        | 3.11                |        | 1.52                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 10.6                    | 1995        |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .000                    | 1990        |
| HIGHEST DAILY MEAN       | 542                    | Jan 25 | 350                 | Feb 20 | 542                     | Jan 25 1995 |
| LOWEST DAILY MEAN        | .07                    | Jan 8  | .07                 | Mar 11 | .00                     | Oct 1 1970  |
| ANNUAL SEVEN-DAY MINIMUM | .21                    | Aug 16 | .28                 | Sep 16 | .00                     | Oct 1 1970  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 486                 | Feb 20 | 900                     | Mar 1 1983  |
| INSTANTANEOUS PEAK STAGE |                        |        | 4.62                | Feb 20 | 6.80                    | Feb 9 1978  |
| ANNUAL RUNOFF (AC-FT)    | 8170                   |        | 2260                |        | 1100                    |             |
| 10 PERCENT EXCEEDS       | 12                     |        | 4.2                 |        | 1.1                     |             |
| 50 PERCENT EXCEEDS       | 2.2                    |        | .91                 |        | .00                     |             |
| 90 PERCENT EXCEEDS       | .80                    |        | .33                 |        | .00                     |             |



## 11128300 ALISAL RESERVOIR NEAR SOLVANG, CA

LOCATION.--Lat 34°32'56", long 120°07'45", in NE 1/4 NW 1/4 sec.4, T.5 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, in cove on right bank 0.4 mi upstream from reservoir spillway and 3 mi south of Solvang.

DRAINAGE AREA.--7.83 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1971 to current year. Prior to October 1985, only monthend elevations and contents published.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft between bottom of outlet gate at elevation 555.70 ft, and crest of spillway at elevation 599.88 ft. Dead storage, 110 acre-ft. Inflow must total 150 acre-ft during any one month between November and June in order to store flows for that water year. See schematic diagram of Santa Ynez River basin.

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, 2,440 acre-ft, Feb. 20, elevation, 600.67 ft; minimum contents, 1,980 acre-ft, several days in September, elevation, 595.50 ft.

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 1995 TO SEPTEMBER 1996  
DAILY OBSERVATION AT 2400 HOURS

| DAY | OCT    | NOV    | DEC    | JAN    | FEB    | MAR    | APR    | MAY    | JUN    | JUL    | AUG    | SEP    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 2170   | 2120   | 2090   | 2100   | 2140   | 2380   | 2380   | 2350   | 2300   | 2220   | 2140   | 2040   |
| 2   | 2170   | 2120   | 2090   | 2100   | 2150   | 2380   | 2370   | 2350   | 2300   | 2220   | 2130   | 2040   |
| 3   | 2170   | 2120   | 2090   | 2100   | 2160   | 2380   | 2370   | 2350   | 2300   | 2220   | 2130   | 2040   |
| 4   | 2170   | 2120   | 2090   | 2100   | 2170   | 2380   | 2370   | 2350   | 2290   | 2220   | 2130   | 2030   |
| 5   | 2170   | 2120   | 2090   | 2100   | 2180   | 2380   | 2370   | 2340   | 2290   | 2210   | 2130   | 2030   |
| 6   | 2170   | 2120   | 2090   | 2100   | 2180   | 2380   | 2370   | 2340   | 2290   | 2210   | 2120   | 2030   |
| 7   | 2160   | 2120   | 2090   | 2100   | 2180   | 2380   | 2370   | 2340   | 2280   | 2210   | 2120   | 2030   |
| 8   | 2160   | 2120   | 2080   | 2100   | 2190   | 2380   | 2370   | 2340   | 2280   | 2210   | 2120   | 2020   |
| 9   | 2160   | 2120   | 2080   | 2100   | 2190   | 2380   | 2370   | 2340   | 2280   | 2200   | 2120   | 2020   |
| 10  | 2160   | 2120   | 2080   | 2100   | 2190   | 2380   | 2370   | 2330   | 2280   | 2200   | 2110   | 2020   |
| 11  | 2150   | 2120   | 2080   | 2100   | 2190   | 2380   | 2370   | 2330   | 2280   | 2200   | 2110   | 2010   |
| 12  | 2150   | 2110   | 2090   | 2090   | 2190   | 2390   | 2370   | 2330   | 2280   | 2190   | 2110   | 2010   |
| 13  | 2150   | 2110   | 2100   | 2090   | 2190   | 2380   | 2370   | 2330   | 2270   | 2190   | 2100   | 2010   |
| 14  | 2150   | 2110   | 2100   | 2090   | 2190   | 2380   | 2370   | 2330   | 2270   | 2190   | 2100   | 2010   |
| 15  | 2150   | 2110   | 2100   | 2090   | 2200   | 2380   | 2370   | 2330   | 2270   | 2190   | 2100   | 2000   |
| 16  | 2140   | 2110   | 2100   | 2100   | 2200   | 2380   | 2370   | 2330   | 2260   | 2190   | 2090   | 2000   |
| 17  | 2140   | 2110   | 2100   | 2100   | 2200   | 2380   | 2370   | 2330   | 2260   | 2180   | 2090   | 2000   |
| 18  | 2140   | 2110   | 2100   | 2100   | 2200   | 2380   | 2370   | 2330   | 2260   | 2180   | 2090   | 2000   |
| 19  | 2140   | 2110   | 2100   | 2100   | 2280   | 2380   | 2370   | 2320   | 2260   | 2170   | 2080   | 2000   |
| 20  | 2140   | 2110   | 2090   | 2100   | 2430   | 2380   | 2370   | 2320   | 2250   | 2170   | 2080   | 1990   |
| 21  | 2130   | 2110   | 2090   | 2100   | 2400   | 2380   | 2370   | 2320   | 2250   | 2170   | 2080   | 1990   |
| 22  | 2130   | 2110   | 2100   | 2100   | 2390   | 2380   | 2370   | 2320   | 2250   | 2170   | 2070   | 1990   |
| 23  | 2130   | 2100   | 2100   | 2100   | 2380   | 2370   | 2370   | 2320   | 2240   | 2160   | 2070   | 1990   |
| 24  | 2130   | 2100   | 2100   | 2100   | 2380   | 2370   | 2370   | 2310   | 2240   | 2160   | 2070   | 1980   |
| 25  | 2130   | 2100   | 2100   | 2100   | 2380   | 2370   | 2360   | 2310   | 2240   | 2160   | 2060   | 1980   |
| 26  | 2130   | 2100   | 2100   | 2100   | 2380   | 2370   | 2360   | 2310   | 2240   | 2150   | 2060   | 1980   |
| 27  | 2130   | 2100   | 2100   | 2100   | 2380   | 2370   | 2360   | 2310   | 2240   | 2150   | 2060   | 1980   |
| 28  | 2120   | 2100   | 2100   | 2110   | 2380   | 2370   | 2360   | 2310   | 2230   | 2150   | 2060   | 1980   |
| 29  | 2120   | 2090   | 2100   | 2110   | 2380   | 2370   | 2360   | 2310   | 2230   | 2150   | 2050   | 1980   |
| 30  | 2120   | 2090   | 2100   | 2110   | ---    | 2370   | 2350   | 2310   | 2230   | 2140   | 2050   | 1980   |
| 31  | 2120   | ---    | 2100   | 2140   | ---    | 2370   | ---    | 2300   | ---    | 2140   | 2050   | ---    |
| MAX | 2170   | 2120   | 2100   | 2140   | 2430   | 2390   | 2380   | 2350   | 2300   | 2220   | 2140   | 2040   |
| MIN | 2120   | 2090   | 2080   | 2090   | 2140   | 2370   | 2350   | 2300   | 2230   | 2140   | 2050   | 1980   |
| a   | 597.11 | 596.78 | 596.89 | 597.33 | 600.00 | 599.89 | 599.67 | 599.11 | 598.33 | 597.33 | 596.33 | 595.50 |
| b   | -60    | -30    | +10    | +40    | +240   | -10    | -20    | -50    | -70    | -90    | -90    | -70    |

CAL YR 1995 b -110

WTR YR 1996 b -200

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 sea level. Various datums used during period of record. July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 2.00 ft higher. Oct. 1, 1968, to Sept. 30, 1988, water-stage recorder at datum 5.00 ft higher.

REMARKS.--Records fair except those 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). Additional water may be added by releases from Alisal Reservoir (11128300). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water for irrigation pumped from wells along banks of river in valley upstream. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD (water years 1928-36, 1946-94).--Maximum discharge, 82,000 ft<sup>3</sup>/s, Jan. 25, 1969, estimated on basis of discharge measurements up to 81,000 ft<sup>3</sup>/s for Santa Ynez River near Buellton, gage height, 17.1 ft, from floodmark; no flow for several months in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB    | MAR  | APR   | MAY  | JUN  | JUL     | AUG  | SEP  |
|-------|-------|-------|-------|-------|--------|------|-------|------|------|---------|------|------|
| 1     | .00   | 5.1   | 4.4   | 9.3   | 19     | 38   | 13    | e1.0 | e.00 | e.00    | 55   | 13   |
| 2     | .00   | 4.9   | 4.3   | 10    | 11     | 32   | 13    | e.80 | e.00 | e.00    | 56   | 15   |
| 3     | .00   | 4.7   | 4.1   | 10    | 13     | 27   | 12    | e.70 | e.00 | e.00    | 56   | 17   |
| 4     | .00   | 4.7   | 4.3   | 10    | 14     | 28   | 11    | e.50 | e.00 | e.00    | 57   | 19   |
| 5     | .00   | 4.5   | 4.3   | 10    | 35     | 29   | 9.6   | e.30 | e.00 | e.00    | 59   | 20   |
| 6     | .00   | 4.6   | 4.2   | 10    | 73     | 29   | 8.2   | e.20 | e.00 | e.00    | 61   | 18   |
| 7     | .00   | 4.7   | 4.0   | 10    | 43     | 22   | 8.1   | e.10 | e.00 | e.00    | 62   | 17   |
| 8     | .00   | 4.5   | 4.2   | 10    | 34     | 20   | 8.8   | e.10 | e.00 | e.00    | 64   | 17   |
| 9     | .00   | 4.4   | 4.5   | 10    | 28     | 18   | 8.7   | e.00 | e.00 | e.00    | 64   | 19   |
| 10    | .00   | 3.4   | 4.5   | 10    | 23     | 16   | 8.1   | e.00 | e.00 | e.00    | 65   | 58   |
| 11    | .00   | 3.5   | 4.2   | 10    | 20     | 14   | 7.2   | e.00 | e.00 | e.00    | 70   | 55   |
| 12    | .00   | 3.3   | 4.6   | 10    | 18     | 27   | 6.0   | e.00 | e.00 | e.00    | 76   | 44   |
| 13    | .00   | 3.5   | 5.7   | 10    | 16     | 101  | 5.3   | e.00 | e.00 | e.00    | 71   | 42   |
| 14    | .00   | 3.7   | 5.5   | 10    | 15     | 56   | 5.1   | e.00 | e.00 | e.00    | 69   | 39   |
| 15    | .61   | 3.8   | 5.5   | 10    | 14     | 34   | 4.4   | e.00 | e.00 | e.00    | 65   | 37   |
| 16    | 3.3   | 3.8   | 6.1   | 10    | 12     | 27   | 4.4   | e.00 | e.00 | e.00    | 39   | 40   |
| 17    | 3.9   | 4.0   | 6.0   | 10    | 9.7    | 22   | 4.6   | e.00 | e.00 | e.00    | 35   | 42   |
| 18    | 3.3   | 4.2   | 6.0   | 10    | 8.9    | 20   | 4.4   | e.00 | e.00 | e.00    | 35   | 33   |
| 19    | 3.5   | 4.6   | 6.6   | 10    | 44     | 19   | 3.8   | e.00 | e.00 | e.00    | 39   | 28   |
| 20    | 4.2   | 4.5   | 6.8   | 10    | 793    | 18   | 3.5   | e.00 | e.00 | e.00    | 54   | 25   |
| 21    | 4.6   | e4.3  | 6.8   | 10    | 435    | 17   | 3.1   | e.00 | e.00 | 22      | 68   | 25   |
| 22    | 4.6   | e4.4  | 7.1   | 11    | 272    | 16   | 3.1   | e.00 | e.00 | 68      | 66   | 25   |
| 23    | 4.5   | 4.3   | 7.5   | 10    | 146    | 16   | 2.7   | e.00 | e.00 | 88      | 64   | 27   |
| 24    | 4.5   | 4.4   | 7.5   | 10    | 94     | 15   | 2.3   | e.00 | e.00 | 106     | 70   | 28   |
| 25    | 4.6   | 4.4   | 7.7   | 10    | 73     | 14   | e2.1  | e.00 | e.00 | 120     | 111  | 36   |
| 26    | 4.8   | 4.3   | 8.0   | 10    | 63     | 13   | e1.9  | e.00 | e.00 | 136     | 99   | 39   |
| 27    | 4.7   | 4.3   | 8.0   | 10    | 59     | 14   | e1.8  | e.00 | e.00 | 145     | 78   | 40   |
| 28    | 4.7   | 4.4   | 8.1   | 10    | 62     | 13   | e1.6  | e.00 | e.00 | 150     | 54   | 42   |
| 29    | 4.9   | 4.2   | 8.7   | 10    | 45     | 13   | e1.4  | e.00 | e.00 | 135     | 31   | 39   |
| 30    | 5.2   | 4.3   | 8.8   | 10    | ---    | 12   | e1.2  | e.00 | e.00 | 63      | 19   | 37   |
| 31    | 5.0   | ---   | 9.2   | 12    | ---    | 12   | ---   | e.00 | ---  | 55      | 14   | ---  |
| TOTAL | 70.91 | 127.7 | 187.2 | 312.3 | 2492.6 | 752  | 170.4 | 3.70 | 0.00 | 1088.00 | 1826 | 934  |
| MEAN  | 2.29  | 4.26  | 6.04  | 10.1  | 86.0   | 24.3 | 5.68  | .12  | .000 | 35.1    | 58.9 | 31.1 |
| MAX   | 5.2   | 5.1   | 9.2   | 12    | 793    | 101  | 13    | 1.0  | .00  | 150     | 111  | 56   |
| MIN   | .00   | 3.3   | 4.0   | 9.3   | 8.9    | 12   | 1.2   | .00  | .00  | .00     | 14   | 13   |
| AC-FT | 141   | 253   | 371   | 619   | 4940   | 1490 | 338   | 7.3  | .00  | 2160    | 3620 | 1850 |

e Estimated.

## SANTA YNEZ RIVER BASIN

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## 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   |
| LOWEST ANNUAL MEAN       | 3.31  |
| HIGHEST DAILY MEAN       | 12300 |
| LOWEST DAILY MEAN        | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00   |
| INSTANTANEOUS PEAK FLOW  | 18700 |
| 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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 5.46 | 4.25 | 19.3 | 257  | 360  | 408  | 145  | 40.5 | 10.6 | 5.20 | 5.86 | 5.83 |
| MAX  | 88.7 | 96.2 | 263  | 3572 | 4445 | 4029 | 1258 | 568  | 105  | 41.0 | 58.9 | 38.3 |
| (WY) | 1992 | 1966 | 1984 | 1995 | 1969 | 1983 | 1983 | 1983 | 1983 | 1969 | 1986 | 1994 |
| 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 1995 CALENDAR YEAR

## FOR 1996 WATER YEAR

## WATER YEARS 1952 - 1996

|                          |           |         |       |
|--------------------------|-----------|---------|-------|
| ANNUAL TOTAL             | 268433.61 | 7964.81 |       |
| ANNUAL MEAN              | 735       | 21.8    | 104   |
| HIGHEST ANNUAL MEAN      |           |         | 758   |
| LOWEST ANNUAL MEAN       |           |         | .86   |
| HIGHEST DAILY MEAN       | 13300     | Jan 10  | 793   |
| LOWEST DAILY MEAN        | .00       | Aug 8   | .00   |
| ANNUAL SEVEN-DAY MINIMUM | .00       | Aug 8   | .00   |
| INSTANTANEOUS PEAK FLOW  |           |         | 1790  |
| INSTANTANEOUS PEAK STAGE |           |         | 4.18  |
| ANNUAL RUNOFF (AC-FT)    | 532400    | 15800   | 75690 |
| 10 PERCENT EXCEEDS       | 2330      | 60      | 70    |
| 50 PERCENT EXCEEDS       | 42        | 7.1     | 1.8   |
| 90 PERCENT EXCEEDS       | .00       | .00     | .00   |

## SANTA YNEZ RIVER BASIN

11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.--Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2 ft upstream from bridge on Frontage Road, 0.9 mi upstream from Dry Creek, 2.4 mi north of Buellton, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--32.8 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1963 to September 1981, October 1989 to September 30, 1992, October 1994 to current year.

Gage.--Water-stage recorder. Datum of gage is 471.54 ft above sea level.

REMARKS.--Records poor. Some pumping from wells along stream for irrigation upstream from station. Small regulation by Zaca Lake, about 15 mi upstream. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 9.20 ft; maximum gage height, 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, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 20 | 0415 | 103                               | 3.80                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB    | MAR   | APR   | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|--------|-------|-------|------|------|------|------|------|
| 1     | .00  | .74  | .04  | .24  | .54    | e1.2  | e1.1  | e.06 | .00  | .00  | .00  | .00  |
| 2     | .00  | .21  | .05  | .22  | .34    | e.60  | e.60  | .05  | .00  | .00  | .00  | .00  |
| 3     | .00  | .07  | .04  | .15  | 1.4    | e.13  | e.70  | .10  | .00  | .00  | .00  | .00  |
| 4     | .00  | .06  | .04  | .17  | .49    | e.26  | e.80  | .06  | .00  | .00  | .00  | .00  |
| 5     | .00  | .04  | .04  | .17  | 5.1    | e.30  | e.70  | .05  | .00  | .00  | .00  | .00  |
| 6     | .00  | .05  | .11  | .17  | 4.1    | e.07  | e.60  | .04  | .00  | .00  | .00  | .00  |
| 7     | .00  | .05  | .05  | .17  | e3.6   | e.05  | e.50  | .05  | .00  | .00  | .00  | .00  |
| 8     | .00  | .04  | .06  | .19  | e3.3   | e.04  | e.40  | .07  | .00  | .00  | .00  | .00  |
| 9     | .00  | .05  | .09  | .17  | e3.0   | e.05  | e.30  | .05  | .00  | .00  | .00  | .00  |
| 10    | .00  | .08  | .10  | .17  | e2.8   | e.03  | e.20  | .06  | .00  | .00  | .00  | .00  |
| 11    | .00  | .04  | .05  | .17  | e3.2   | e.01  | .19   | .05  | .00  | .00  | .00  | .00  |
| 12    | .00  | .06  | .23  | .17  | e3.6   | e9.0  | .18   | .04  | .00  | .00  | .00  | .00  |
| 13    | .00  | .07  | .47  | .17  | e3.8   | e17   | .20   | .02  | .00  | .00  | .00  | .00  |
| 14    | .00  | .07  | .22  | .17  | e4.0   | e5.0  | .21   | .01  | .00  | .00  | .00  | .00  |
| 15    | .00  | .10  | .16  | .18  | e4.6   | e4.0  | .20   | .01  | .00  | .00  | .00  | .00  |
| 16    | .00  | .08  | .15  | .67  | e5.0   | e3.5  | .29   | .15  | .00  | .00  | .00  | .00  |
| 17    | .00  | .09  | .12  | .43  | e5.5   | e3.0  | .32   | .07  | .00  | .00  | .00  | .00  |
| 18    | .00  | .11  | .13  | .25  | e7.0   | e2.6  | .34   | .03  | .00  | .00  | .00  | .00  |
| 19    | .00  | .11  | .14  | .40  | e15    | e2.2  | .28   | .02  | .00  | .00  | .00  | .00  |
| 20    | .00  | .09  | .15  | .25  | 49     | e2.1  | .34   | .01  | .00  | .00  | .00  | .00  |
| 21    | .00  | .04  | .16  | .26  | 17     | e2.0  | .37   | .00  | .00  | .00  | .00  | .00  |
| 22    | .00  | .05  | .16  | .46  | e35    | e2.0  | .38   | .00  | .00  | .00  | .00  | .00  |
| 23    | .00  | .06  | .29  | .27  | e6.0   | e1.9  | .36   | .00  | .00  | .00  | .00  | .00  |
| 24    | .00  | .05  | .24  | .26  | e2.0   | e2.0  | e.28  | .00  | .00  | .00  | .00  | .00  |
| 25    | .00  | .05  | .21  | .56  | e.40   | e1.8  | e.23  | .00  | .00  | .00  | .00  | .00  |
| 26    | .02  | .06  | .21  | .32  | e.23   | e1.8  | e.19  | .00  | .00  | .00  | .00  | .00  |
| 27    | .02  | .05  | .21  | .37  | e1.2   | e1.5  | e.16  | .00  | .00  | .00  | .00  | .00  |
| 28    | .04  | .04  | .21  | .40  | e2.0   | e1.7  | e.13  | .00  | .00  | .00  | .00  | .00  |
| 29    | .06  | .04  | .21  | .29  | e.50   | e1.8  | e.10  | .00  | .00  | .00  | .00  | .00  |
| 30    | .43  | .04  | .22  | .28  | ---    | e1.7  | e.08  | .00  | .00  | .00  | .00  | .00  |
| 31    | .56  | ---  | .23  | .69  | ---    | e1.2  | ---   | .00  | ---  | .00  | .00  | ---  |
| TOTAL | 1.13 | 2.69 | 4.79 | 8.84 | 189.70 | 70.54 | 10.73 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .036 | .090 | .15  | .29  | 6.54   | 2.28  | .36   | .032 | .000 | .000 | .000 | .000 |
| MAX   | .56  | .74  | .47  | .69  | 49     | 17    | 1.1   | .15  | .00  | .00  | .00  | .00  |
| MIN   | .00  | .04  | .04  | .15  | .23    | .01   | .08   | .00  | .00  | .00  | .00  | .00  |
| AC-FT | 2.2  | 5.3  | 9.5  | 18   | 376    | 140   | 21    | 2.0  | .00  | .00  | .00  | .00  |

e Estimated.

11129800 ZACA CREEK NEAR BUELLTON, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .002 | .007 | .20  | 3.00 | 6.34 | 4.81 | 1.26 | .36  | .10  | .016 | .003 | .003 |
| MAX  | .036 | .090 | 2.88 | 32.1 | 56.8 | 40.1 | 9.75 | 4.31 | 1.89 | .38  | .073 | .059 |
| (WY) | 1996 | 1996 | 1967 | 1969 | 1969 | 1995 | 1995 | 1995 | 1995 | 1995 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1964 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 2829.93                |  |  |  | 289.42              |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 7.75                   |  |  |  | .79                 |  |  |  | 1.32                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 9.23                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 305                    |  |  |  | 49                  |  |  |  | 450                     |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 103                 |  |  |  | 1390                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 3.80                |  |  |  | 9.66                    |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 5610                   |  |  |  | 574                 |  |  |  | 953                     |  |  |  |
| 10 PERCENT EXCEEDS       | 15                     |  |  |  | 1.8                 |  |  |  | .50                     |  |  |  |
| 50 PERCENT EXCEEDS       | .83                    |  |  |  | .04                 |  |  |  | .00                     |  |  |  |
| 90 PERCENT EXCEEDS       | .00                    |  |  |  | .00                 |  |  |  | .00                     |  |  |  |

## SANTA YNEZ RIVER BASIN

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 sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation upstream from station. Small diversions for irrigation upstream from station. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft<sup>3</sup>/s, Mar. 15, 1952, gage height, 20.80 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|------|------|-----------------------------------|---------------------|
| Feb. 20 | 1330 | 1,380                             | 2.95                |      |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR   | APR   | MAY  | JUN   | JUL   | AUG   | SEP   |
|-------|------|------|------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | e2.7 | e2.5 | e2.4 | 2.8   | 9.5   | 9.9   | 7.0   | 2.7  | 1.9   | .84   | .61   | .45   |
| 2     | e2.7 | e2.5 | e2.4 | 2.7   | 7.4   | 9.0   | 7.1   | 2.7  | 1.8   | .88   | .56   | .49   |
| 3     | e2.7 | e2.5 | e2.4 | 2.7   | 15    | 8.4   | 5.8   | 2.7  | 1.7   | .78   | .65   | .61   |
| 4     | e2.7 | e2.5 | e2.4 | 3.0   | 8.3   | 10    | 5.5   | 2.6  | 1.7   | .79   | .57   | .66   |
| 5     | e2.7 | e2.5 | e2.4 | 3.2   | 9.9   | 14    | 5.1   | 2.5  | 1.7   | .81   | .61   | .55   |
| 6     | e2.7 | e2.5 | e2.4 | 3.5   | 8.1   | 8.8   | 5.0   | 2.5  | 1.8   | 1.0   | .61   | .53   |
| 7     | e2.7 | e2.5 | e2.4 | 2.8   | 7.8   | 7.9   | 5.0   | 2.5  | 1.8   | 1.0   | .66   | .49   |
| 8     | e2.7 | e2.5 | e2.4 | 2.8   | 7.8   | 7.6   | 5.0   | 2.5  | 1.7   | 1.1   | .69   | .45   |
| 9     | e2.6 | e2.5 | 2.4  | 2.8   | 7.8   | 7.2   | 4.9   | 2.5  | 1.6   | 1.1   | .71   | .44   |
| 10    | e2.6 | e2.5 | 2.4  | 2.8   | 8.2   | 6.6   | 4.6   | 2.5  | 1.4   | 1.0   | .73   | .46   |
| 11    | e2.6 | e2.5 | 2.5  | 3.0   | 8.2   | 6.6   | 4.4   | 2.3  | 1.4   | 1.1   | .71   | .53   |
| 12    | e2.6 | e2.5 | 6.9  | 3.0   | 8.2   | 26    | 4.3   | 2.5  | 1.5   | 1.1   | .63   | .50   |
| 13    | e2.6 | e2.5 | 7.5  | 3.0   | 8.2   | 36    | 4.3   | 2.5  | 1.6   | .97   | .59   | .48   |
| 14    | e2.6 | e2.5 | 3.3  | 3.0   | 8.2   | 12    | 4.2   | 2.5  | 1.5   | .96   | .53   | .52   |
| 15    | e2.6 | e2.5 | 2.8  | 3.2   | 8.2   | 9.6   | 3.8   | 2.5  | 1.5   | .99   | .49   | .45   |
| 16    | e2.6 | e2.5 | 2.8  | 3.4   | 8.2   | 9.0   | 4.4   | 5.4  | 1.6   | 1.0   | .47   | .44   |
| 17    | e2.6 | e2.5 | 2.6  | 3.8   | 8.6   | 8.5   | 4.2   | 3.5  | 1.6   | 1.0   | .47   | .45   |
| 18    | e2.6 | e2.5 | 2.6  | 3.3   | 8.6   | 8.2   | 4.8   | 2.7  | 1.6   | 1.0   | .48   | .36   |
| 19    | e2.6 | e2.5 | 2.7  | 3.6   | 52    | 7.8   | 3.9   | 2.6  | 1.5   | 1.0   | .55   | .37   |
| 20    | e2.6 | e2.5 | 2.6  | 3.3   | 398   | 7.7   | 3.6   | 2.5  | 1.5   | .90   | .56   | .41   |
| 21    | e2.6 | e2.5 | 2.6  | 3.6   | 76    | 7.4   | 3.6   | 2.5  | 1.6   | .78   | .56   | .37   |
| 22    | e2.6 | e2.5 | 2.7  | 4.4   | 31    | 7.1   | 3.5   | 2.5  | 1.4   | .89   | .62   | .44   |
| 23    | e2.6 | e2.5 | 3.2  | 4.3   | 16    | 6.6   | 3.5   | 2.5  | 1.5   | .76   | .63   | .55   |
| 24    | e2.6 | e2.5 | 2.7  | 4.6   | 12    | 6.4   | 3.4   | 2.5  | 1.5   | .76   | .61   | .49   |
| 25    | e2.6 | e2.5 | 3.1  | 4.9   | 10    | 6.3   | 3.3   | 2.5  | 1.5   | .78   | .63   | .86   |
| 26    | e2.6 | e2.5 | 2.8  | 5.2   | 10    | 6.3   | 3.1   | 2.5  | 1.6   | .80   | .64   | .96   |
| 27    | e2.6 | e2.5 | 2.8  | 5.5   | 38    | 6.3   | 3.1   | 2.6  | 1.5   | .72   | .66   | .86   |
| 28    | e2.6 | e2.5 | 2.8  | 6.2   | 22    | 6.3   | 3.0   | 2.7  | 1.4   | .71   | .59   | .83   |
| 29    | e2.6 | e2.4 | 2.7  | 6.5   | 12    | 5.9   | 3.0   | 2.7  | 1.2   | .66   | .52   | .81   |
| 30    | e2.6 | e2.4 | 3.0  | 6.6   | ---   | 5.9   | 2.7   | 2.6  | .95   | .66   | .45   | .77   |
| 31    | e2.6 | ---  | 2.9  | 15    | ---   | 5.7   | ---   | 2.3  | ---   | .65   | .45   | ---   |
| TOTAL | 81.4 | 74.8 | 91.6 | 128.5 | 833.2 | 291.0 | 129.1 | 82.6 | 46.55 | 27.49 | 18.24 | 16.58 |
| MEAN  | 2.63 | 2.49 | 2.95 | 4.15  | 28.7  | 9.39  | 4.30  | 2.66 | 1.55  | .89   | .59   | .55   |
| MAX   | 2.7  | 2.5  | 7.5  | 15    | 398   | 36    | 7.1   | 5.4  | 1.9   | 1.1   | .73   | .96   |
| MIN   | 2.6  | 2.4  | 2.4  | 2.7   | 7.4   | 5.7   | 2.7   | 2.3  | .95   | .65   | .45   | .36   |
| AC-FT | 161  | 148  | 182  | 255   | 1650  | 577   | 256   | 164  | 92    | 55    | 36    | 33    |

e Estimated.

## 11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .76  | 2.19 | 7.43 | 24.4 | 38.0 | 38.4 | 14.6 | 4.22 | 2.22 | 1.28 | .87  | .75  |
| MAX  | 4.26 | 48.6 | 102  | 281  | 294  | 545  | 158  | 28.5 | 12.5 | 8.23 | 5.77 | 4.51 |
| (WY) | 1942 | 1966 | 1956 | 1995 | 1962 | 1995 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1941 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 29603.20               |        | 1821.06             |        |                         |             |
| ANNUAL MEAN              | 81.1                   |        | 4.98                |        | 10.8                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 80.6                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .17                     |             |
| HIGHEST DAILY MEAN       | 5390                   | Mar 11 | 398                 | Feb 20 | 5390                    | Mar 11 1995 |
| LOWEST DAILY MEAN        | .50                    | Jan 1  | .36                 | Sep 18 | .00                     | Jul 23 1948 |
| ANNUAL SEVEN-DAY MINIMUM | 2.4                    | Nov 29 | .41                 | Sep 16 | .00                     | Jul 23 1948 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 1380                | Feb 20 | 11400                   | Mar 15 1952 |
| INSTANTANEOUS PEAK STAGE |                        |        | 2.95                | Feb 20 | 20.80                   | Mar 15 1952 |
| ANNUAL RUNOFF (AC-FT)    | 58720                  |        | 3610                |        | 7850                    |             |
| 10 PERCENT EXCEEDS       | 109                    |        | 8.2                 |        | 11                      |             |
| 50 PERCENT EXCEEDS       | 7.5                    |        | 2.6                 |        | 1.4                     |             |
| 90 PERCENT EXCEEDS       | 2.5                    |        | .59                 |        | .09                     |             |

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1978 to current year.

**CHEMICAL DATA:** Water years 1978 to current year.

pH: Water years 1982-83.

**WATER TEMPERATURE:** Water years 1982-83.

PERIOD OF DAILY RECORD.--

pH: Water years 1982-83.

**WATER TEMPERATURE:** Water years 1982-83.

**INSTRUMENTATION.**--Water-quality monitor, water years 1982-83.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-CHARGE,<br>INST. CUBIC<br>FEET<br>PER<br>SECOND | SPE-CIFIC<br>CON-DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|--------------|------|---|---|---|--------------------------------------|---|--|--|--|-------------------|
| OCT<br>18... | 1520 | 2.6   | 1330                                      | 8.2   | 16.0                                 | --  | --   | --   | --   | --                |
| DEC<br>08... | 1200 | 2.4   | 1370                                      | 8.1   | 14.5                                 | --  | --   | --   | --   | --                |
| JAN<br>05... | 0800 | 3.2   | 1590                                      | 8.2   | 10.5                                 | --  | --   | --   | --   | --                |
| FEB<br>21... | 1450 | 53  | 1020                                      | 8.2   | --                                   | --  | --   | --   | --   | --                |
| APR<br>02... | 1145 | 6.6   | 1350                                      | 8.4   | 15.5                                 | 540   | 140  | 46   | 93   | 27                |
| MAY<br>02... | 1220 | 2.8   | 1350                                      | 8.0   | 19.0                                 | --  | --   | --   | --   | --                |
| 31...        | 1045 | 2.4   | 1280                                      | 7.9   | 19.0                                 | --  | --   | --   | --   | --                |
| JUL<br>17... | 1645 | 1.1   | 1360                                      | 8.1   | 21.0                                 | --  | --   | --   | --   | --                |
| AUG<br>13... | 1640 | 0.56  | 1430                                      | 7.9   | 24.5                                 | --  | --   | --   | --   | --                |

[illegible]





## SANTA YNEZ RIVER BASIN

## 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.

CHEMICAL DATA: Water years 1978-88.

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 sea level, 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 sea level.

REMARKS.--Records good, except those 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. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD (water years 1952-63, 1964-93).--Maximum discharge, 80,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 24.20 ft, from supplementary gage; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 9, 1907, reached a stage of 22.0 ft, site and datum then in use, discharge, 120,000 ft<sup>3</sup>/s, from mean-depth study.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995  
DAILY MEAN VALUES  
(NOT PREVIOUSLY PUBLISHED)

| DAY   | OCT   | NOV   | DEC   | JAN    | FEB   | MAR    | APR   | MAY   | JUN  | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|--------|-------|--------|-------|-------|------|-------|-------|-------|
| 1     | 17    | 7.2   | 9.0   | 13     | e1200 | 194    | 1080  | 309   | 169  | 76    | 10    | 19    |
| 2     | 16    | 6.1   | 9.0   | 12     | e950  | 188    | 1010  | 341   | 147  | 71    | 8.8   | 9.8   |
| 3     | 16    | 4.4   | 9.0   | 34     | e750  | 353    | 1030  | 347   | 133  | 73    | 8.3   | 4.7   |
| 4     | 17    | 4.1   | 9.0   | 1280   | e640  | 449    | 903   | 340   | 128  | 82    | 8.5   | 5.0   |
| 5     | 19    | 3.7   | 9.0   | 537    | e530  | 2740   | 883   | 340   | 144  | 82    | 9.2   | 5.4   |
| 6     | 20    | 3.4   | 8.9   | 116    | e450  | 4960   | 871   | 343   | 114  | 74    | 11    | 4.9   |
| 7     | 19    | 3.4   | 8.2   | 704    | e380  | 4880   | 801   | 315   | 108  | 57    | 9.4   | 4.5   |
| 8     | 16    | 3.6   | 7.8   | 357    | e330  | 4730   | 748   | 312   | 106  | 45    | 9.5   | 4.7   |
| 9     | 15    | 3.5   | 9.0   | 767    | e290  | 2630   | 651   | 304   | 99   | 36    | 10    | 5.0   |
| 10    | 14    | 9.7   | 9.0   | 10700  | e250  | 6300   | 605   | 286   | 94   | 30    | 8.9   | 9.5   |
| 11    | 12    | 9.6   | 9.2   | 5570   | e230  | 14000  | 666   | 295   | 90   | 26    | 7.9   | 8.8   |
| 12    | 10    | 9.7   | 9.8   | 5030   | e210  | 8610   | 659   | 310   | 85   | 24    | 8.0   | 6.8   |
| 13    | 18    | 9.5   | 10    | 4050   | e190  | 3480   | 586   | 294   | 86   | 21    | 20    | 5.4   |
| 14    | 30    | 8.9   | 9.9   | 3060   | e1580 | 4300   | 324   | 247   | 77   | 18    | 17    | 4.2   |
| 15    | 35    | 8.6   | 11    | 2630   | e950  | 5200   | 489   | 294   | 76   | 16    | 23    | 5.7   |
| 16    | 38    | 9.3   | 11    | 2700   | e660  | 4460   | 601   | 364   | 88   | 15    | 21    | 4.5   |
| 17    | 39    | 9.0   | 11    | 2140   | e500  | 4180   | 605   | 301   | 116  | 15    | 18    | 2.9   |
| 18    | 43    | 9.7   | 11    | 1960   | e430  | 2600   | 522   | 295   | 109  | 13    | 13    | 2.7   |
| 19    | 43    | 9.0   | 11    | 1720   | e370  | 1580   | 500   | 300   | 114  | 12    | 12    | 2.8   |
| 20    | 35    | 9.0   | 9.9   | 1760   | e335  | 1050   | 429   | 295   | 109  | 10    | 14    | 2.7   |
| 21    | 29    | 9.0   | 9.8   | 1300   | e305  | 1120   | 439   | 289   | 103  | 9.8   | 15    | 2.1   |
| 22    | 24    | 9.0   | 9.8   | 1550   | e280  | 1140   | 393   | 291   | 96   | 9.6   | 12    | 2.1   |
| 23    | 20    | 9.0   | 10    | 2820   | e260  | 6980   | 407   | 275   | 90   | 8.3   | 9.3   | 2.4   |
| 24    | 16    | 9.0   | 12    | 6700   | e240  | 6360   | 424   | 236   | 88   | 8.9   | 12    | 2.4   |
| 25    | 14    | 8.8   | 13    | 9320   | e235  | 1720   | 413   | 223   | 86   | 8.4   | 14    | 2.7   |
| 26    | 12    | 8.9   | 13    | 9410   | e230  | 1380   | 314   | 234   | 84   | 9.1   | 10    | 2.9   |
| 27    | 11    | 9.0   | 13    | 7470   | e220  | 1440   | 277   | 267   | 81   | 7.4   | 16    | 3.2   |
| 28    | 9.8   | 9.0   | 13    | 6310   | 217   | 1350   | 315   | 268   | 77   | 6.7   | 12    | 3.4   |
| 29    | 9.2   | 9.0   | 13    | 3860   | ---   | 1210   | 311   | 275   | 72   | 10    | 11    | 3.6   |
| 30    | 8.0   | 9.0   | 13    | 1910   | ---   | 1120   | 371   | 262   | 73   | 14    | 20    | 3.5   |
| 31    | 7.2   | ---   | 13    | 1520   | ---   | 1130   | ---   | 206   | ---  | 12    | 23    | ---   |
| TOTAL | 632.2 | 231.1 | 324.3 | 97310  | 13212 | 101834 | 17627 | 9058  | 3042 | 900.2 | 401.8 | 147.3 |
| MEAN  | 20.4  | 7.70  | 10.5  | 3139   | 472   | 3285   | 588   | 292   | 101  | 29.0  | 13.0  | 4.91  |
| MAX   | 43    | 9.7   | 13    | 10700  | 1580  | 14000  | 1080  | 364   | 169  | 82    | 23    | 19    |
| MIN   | 7.2   | 3.4   | 7.8   | 12     | 190   | 188    | 277   | 206   | 72   | 6.7   | 7.9   | 2.1   |
| AC-FT | 1250  | 458   | 643   | 193000 | 26210 | 202000 | 34960 | 17970 | 6030 | 1790  | 797   | 292   |

e Estimated.

## 11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1995, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.04 | 5.89 | 27.1 | 257  | 392  | 442  | 175  | 54.5 | 13.5 | 3.81 | 1.88 | 2.18 |
| MAX  | 29.9 | 112  | 291  | 3303 | 4969 | 3590 | 1154 | 618  | 177  | 30.0 | 19.4 | 28.4 |
| (WY) | 1992 | 1966 | 1984 | 1969 | 1969 | 1983 | 1983 | 1983 | 1983 | 1983 | 1994 | 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 1994 CALENDAR YEAR |  |  |  | FOR 1995 WATER YEAR |  |  |  | WATER YEARS 1952 - 1995 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 8189.05                |  |  |  | 244719.9            |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 22.4                   |  |  |  | 670                 |  |  |  | 113                     |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 853                     |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .000                    |  |  |  |
| HIGHEST DAILY MEAN       | 921                    |  |  |  | 14000               |  |  |  | 38000                   |  |  |  |
| LOWEST DAILY MEAN        | .00                    |  |  |  | 2.1                 |  |  |  | .00                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    |  |  |  | 2.5                 |  |  |  | .00                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 19400               |  |  |  | 80000                   |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 14.73               |  |  |  | 24.20                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 16240                  |  |  |  | 485400              |  |  |  | 82070                   |  |  |  |
| 10 PERCENT EXCEEDS       | 38                     |  |  |  | 1640                |  |  |  | 103                     |  |  |  |
| 50 PERCENT EXCEEDS       | 14                     |  |  |  | 72                  |  |  |  | 1.3                     |  |  |  |
| 90 PERCENT EXCEEDS       | .49                    |  |  |  | 7.2                 |  |  |  | .00                     |  |  |  |

## SANTA YNEZ RIVER BASIN

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC  | JAN  | FEB   | MAR  | APR   | MAY   | JUN   | JUL    | AUG  | SEP   |
|-------|-------|-------|------|------|-------|------|-------|-------|-------|--------|------|-------|
| 1     | 3.0   | 6.1   | 16   | 32   | 81    | 95   | e38   | e8.1  | e3.0  | .16    | 20   | 11    |
| 2     | 3.6   | 6.1   | 22   | 32   | 85    | 88   | e39   | e7.6  | e3.0  | .16    | 18   | 9.4   |
| 3     | 6.3   | 5.7   | 21   | 29   | 89    | 83   | e36   | e7.2  | e2.9  | .16    | 18   | 8.8   |
| 4     | 6.4   | 5.2   | 22   | 24   | 109   | 79   | e34   | e7.2  | e2.8  | .16    | 19   | 9.1   |
| 5     | 6.1   | 6.0   | 22   | 21   | 126   | 84   | e33   | e6.7  | e2.7  | .16    | 21   | 8.6   |
| 6     | 5.4   | 8.1   | 17   | 22   | 152   | 72   | e32   | e6.4  | e2.2  | .16    | 22   | 8.2   |
| 7     | 5.1   | 12    | 14   | 21   | 147   | 67   | e31   | e6.2  | e.88  | .16    | 24   | 7.7   |
| 8     | 2.8   | 12    | 14   | 23   | 88    | 60   | e30   | e6.1  | e.78  | .16    | 24   | 7.4   |
| 9     | 3.0   | 12    | 14   | 22   | 74    | 56   | e28   | e5.7  | e.78  | .16    | 23   | 7.2   |
| 10    | 3.1   | 11    | 14   | 20   | 65    | 51   | e26   | e5.5  | e.75  | .14    | 24   | 7.3   |
| 11    | 3.1   | 12    | 15   | 18   | 61    | 49   | e24   | e5.3  | e.71  | .10    | 27   | 7.3   |
| 12    | 3.2   | 15    | 22   | 18   | 54    | 64   | e23   | e5.0  | .79   | .10    | 30   | 18    |
| 13    | 3.1   | 17    | 46   | 18   | 46    | 105  | e22   | e4.9  | 1.0   | .15    | 31   | 20    |
| 14    | 3.1   | 18    | 32   | 18   | 40    | e94  | e22   | e4.8  | 1.0   | .16    | 28   | 19    |
| 15    | 2.9   | 16    | 30   | 17   | 37    | e79  | e21   | e4.6  | .92   | .16    | 28   | 20    |
| 16    | 2.7   | 16    | 30   | 19   | 37    | e69  | e21   | e4.4  | .83   | .16    | 28   | 19    |
| 17    | 3.1   | 19    | 29   | 23   | 32    | e61  | e20   | e4.3  | .96   | .16    | 23   | 20    |
| 18    | 2.8   | 23    | 30   | 25   | 30    | e54  | e20   | e4.2  | .93   | .16    | 21   | 20    |
| 19    | 2.7   | 24    | 32   | 26   | 47    | e50  | e19   | e4.1  | .70   | .16    | 20   | 20    |
| 20    | 2.7   | 25    | 31   | 27   | 1850  | e48  | e18   | e4.0  | .61   | .16    | 20   | 18    |
| 21    | 3.0   | 18    | 31   | 27   | 1370  | e46  | e16   | e3.9  | .54   | .16    | 20   | 17    |
| 22    | 5.0   | 13    | 29   | 32   | 717   | e44  | e14   | e3.8  | .51   | .16    | 18   | 16    |
| 23    | 6.0   | 15    | 30   | 29   | 206   | e44  | e13   | e3.7  | .47   | .15    | 18   | 17    |
| 24    | 5.2   | 21    | 29   | 29   | 154   | e42  | e13   | e3.7  | .59   | .07    | 18   | 18    |
| 25    | 5.0   | 22    | 30   | 31   | 138   | e42  | e12   | e3.6  | .63   | .05    | 19   | 19    |
| 26    | 5.0   | 22    | 30   | 36   | 124   | e41  | e11   | e3.5  | .62   | .01    | 26   | 20    |
| 27    | 4.9   | 20    | 30   | 36   | 133   | e40  | e10   | e3.3  | .62   | .00    | 32   | 22    |
| 28    | 4.6   | 19    | 30   | 38   | 128   | e40  | e8.6  | e3.2  | .42   | 3.4    | 33   | 23    |
| 29    | 4.2   | 17    | 30   | 34   | 103   | e39  | e8.9  | e3.2  | .21   | 30     | 29   | 24    |
| 30    | 3.9   | 16    | 30   | 31   | ---   | e37  | e8.4  | e3.1  | .19   | 45     | 20   | 25    |
| 31    | 5.0   | ---   | 29   | 47   | ---   | e36  | ---   | e3.0  | ---   | 27     | 15   | ---   |
| TOTAL | 126.0 | 452.2 | 801  | 825  | 6323  | 1859 | 652.9 | 150.3 | 33.04 | 109.05 | 717  | 467.0 |
| MEAN  | 4.06  | 15.1  | 25.8 | 26.6 | 218   | 60.0 | 21.8  | 4.85  | 1.10  | 3.52   | 23.1 | 15.6  |
| MAX   | 6.4   | 25    | 46   | 47   | 1850  | 105  | 39    | 8.1   | 3.0   | 45     | 33   | 25    |
| MIN   | 2.7   | 5.2   | 14   | 17   | 30    | 36   | 8.4   | 3.0   | .19   | .00    | 15   | 7.2   |
| AC-FT | 250   | 897   | 1590 | 1640 | 12540 | 3690 | 1300  | 298   | 66    | 216    | 1420 | 926   |

e Estimated

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

|      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 3.06 | 6.11 | 27.1 | 251  | 388  | 433  | 171  | 53.3 | 13.2 | 3.80 | 2.37 | 2.50 |
| MAX  | 29.9 | 112  | 291  | 3303 | 4969 | 3590 | 1154 | 618  | 177  | 30.0 | 23.1 | 29.4 |
| (WY) | 1992 | 1966 | 1984 | 1969 | 1969 | 1983 | 1983 | 1983 | 1983 | 1983 | 1996 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1952 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 244911.5               |        | 12515.49            |        | 111                     |             |
| ANNUAL MEAN              | 671                    |        | 34.2                |        | 853                     |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 1969                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .000                    |             |
| HIGHEST DAILY MEAN       | 14000                  | Mar 11 | 1850                | Feb 20 | 38000                   | Jan 25 1969 |
| LOWEST DAILY MEAN        | 2.1                    | Sep 21 | .00                 | Jul 27 | .00                     | Sep 18 1953 |
| ANNUAL SEVEN-DAY MINIMUM | 2.5                    | Sep 18 | .09                 | Jul 21 | .00                     | Oct 23 1953 |
| INSTANTANEOUS PEAK FLOW  |                        |        | 5240                | Feb 20 | 80000                   | Jan 25 1969 |
| INSTANTANEOUS PEAK STAGE |                        |        | 8.46                | Feb 20 | 24.20                   | Jan 25 1969 |
| ANNUAL RUNOFF (AC-FT)    | 485800                 |        | 24820               |        | 80700                   |             |
| 10 PERCENT EXCEEDS       | 1640                   |        | 55                  |        | 100                     |             |
| 50 PERCENT EXCEEDS       | 72                     |        | 18                  |        | 1.4                     |             |
| 90 PERCENT EXCEEDS       | 4.7                    |        | .62                 |        | .00                     |             |

11134800 MIGUELITO CREEK AT LOMPOC, CA

LOCATION.--Lat 34°37'54", long 120°27'50", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 120 ft upstream from drop structure to debris basin and 1,900 ft south of Lompoc Union High School.

DRAINAGE AREA.--11.6 mi<sup>2</sup>.

## 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 poor. No regulation or diversion upstream from station; some pumping from wells along stream for irrigation. See schematic diagram of Santa Ynez River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,830 ft<sup>3</sup>/s, Mar. 10, 1995, gage height, 3.71 ft, from theoretical rating curve above 50 ft<sup>3</sup>/s; no flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 25, 1969, reached a stage of 5.83 ft, site in use prior to 1986, from floodmark, discharge, 680 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Dec. 12 | 1515 | 365                               | 1.76                | Feb. 3  | 1100 | 203                               | 1.41                |
| Jan. 31 | 1315 | 276                               | 1.58                | Feb. 20 | 1130 | 600                               | 2.15                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC    | JAN   | FEB    | MAR    | APR   | MAY   | JUN   | JUL   | AUG  | SEP  |
|-------|-------|-------|--------|-------|--------|--------|-------|-------|-------|-------|------|------|
| 1     | .60   | 3.6   | e16    | e.49  | 21     | e7.8   | e1.6  | e.69  | .13   | .60   | e.09 | e.06 |
| 2     | .56   | 2.8   | e14    | e.46  | 13     | e5.0   | e1.3  | e.50  | .10   | .60   | e.09 | e.06 |
| 3     | .54   | 1.5   | e11    | e.43  | 64     | e3.4   | e1.0  | e.44  | .13   | .54   | e.09 | e.06 |
| 4     | .47   | 1.3   | e8.0   | e.40  | 8.0    | e13    | e1.2  | .47   | .13   | .95   | e.09 | e.06 |
| 5     | .50   | 1.7   | e6.5   | e.41  | 28     | e7.0   | e1.4  | .36   | .13   | 1.5   | e.08 | e.06 |
| 6     | .60   | 1.6   | e5.5   | e.42  | 2.4    | e4.0   | e1.3  | .31   | .28   | .99   | e.08 | e.06 |
| 7     | .63   | 1.3   | e.45   | e.42  | e2.4   | e3.1   | e1.2  | .45   | .36   | .85   | e.08 | e.06 |
| 8     | 1.0   | .98   | e.41   | e.43  | e.70   | e2.5   | e1.3  | .63   | .56   | .64   | e.08 | e.06 |
| 9     | .70   | 1.0   | e.38   | e.43  | e1.2   | e2.0   | e1.4  | .58   | 1.1   | .52   | e.08 | e.06 |
| 10    | .66   | 2.1   | e.33   | e.44  | e2.0   | e1.6   | e1.0  | .63   | 1.2   | .36   | e.07 | e.06 |
| 11    | .66   | 1.4   | .26    | e.44  | e.33   | e1.3   | e1.2  | .57   | 3.2   | .23   | e.07 | e.06 |
| 12    | .68   | 1.8   | 95     | e.45  | e.38   | e15    | e1.5  | 1.1   | 1.6   | .23   | e.07 | e.06 |
| 13    | .60   | 1.7   | 2.7    | e.46  | e.42   | e8.5   | e1.4  | .55   | 1.4   | .23   | e.07 | e.06 |
| 14    | .65   | 1.6   | 1.4    | e.47  | e.50   | e5.2   | e1.3  | .46   | 1.4   | .22   | e.07 | e.06 |
| 15    | .70   | 4.0   | e1.5   | e.48  | e.45   | e4.6   | e1.3  | .50   | 1.4   | .19   | e.07 | e.06 |
| 16    | .68   | 1.4   | e1.4   | e.49  | e.41   | e4.0   | e1.4  | 38    | 1.7   | .18   | e.07 | e.06 |
| 17    | .62   | 1.4   | e1.3   | e.50  | e.37   | e3.5   | e1.4  | .57   | 1.7   | e.13  | e.07 | e.06 |
| 18    | .60   | 1.7   | e1.2   | e.47  | e.35   | e3.0   | e1.5  | .50   | 1.3   | e.13  | e.07 | e.06 |
| 19    | .62   | 2.2   | e1.1   | e.45  | 67     | e2.8   | e1.5  | .31   | 1.1   | e.13  | e.07 | e.06 |
| 20    | .60   | 2.2   | e1.0   | e.42  | 97     | e2.3   | e1.4  | .38   | .94   | e.12  | e.07 | e.06 |
| 21    | .67   | 1.9   | e.95   | e.50  | 29     | e2.0   | e1.3  | .41   | .70   | e.12  | e.07 | e.06 |
| 22    | 1.0   | 1.6   | e.89   | e.60  | e17    | e1.8   | e1.2  | .37   | 1.1   | e.12  | e.07 | e.06 |
| 23    | .96   | 6.0   | e.81   | e.54  | e10    | e1.6   | e1.7  | .33   | 1.2   | e.11  | e.07 | e.06 |
| 24    | .82   | 2.9   | e.79   | e.48  | e5.5   | e1.5   | e1.5  | .30   | .68   | e.11  | e.07 | e.06 |
| 25    | .60   | 3.1   | e.74   | e.60  | e15    | e1.3   | e1.3  | .23   | .70   | e.11  | e.07 | e.05 |
| 26    | .60   | 3.5   | e.70   | e.50  | e14    | e1.0   | e1.0  | .30   | .70   | e.10  | e.06 | e.05 |
| 27    | .52   | 3.0   | e.65   | e.55  | e26    | e.90   | e.84  | .39   | .68   | e.10  | e.06 | e.05 |
| 28    | .59   | 2.5   | e.61   | e.60  | e18    | e.80   | e.96  | .51   | .65   | e.10  | e.06 | e.05 |
| 29    | .78   | 2.3   | e.58   | e.55  | e12    | e.70   | e.89  | .29   | .60   | e.10  | e.06 | e.05 |
| 30    | .80   | e19   | e.55   | e.50  | ---    | e.60   | e.78  | .23   | .62   | e.10  | e.06 | e.05 |
| 31    | .60   | ---   | e.51   | 84    | ---    | e.50   | ---   | .22   | ---   | e.09  | e.06 | ---  |
| TOTAL | 20.61 | 83.08 | 177.21 | 98.38 | 456.41 | 112.30 | 38.07 | 51.58 | 27.49 | 10.50 | 2.24 | 1.74 |
| MEAN  | .66   | 2.77  | 5.72   | 3.17  | 15.7   | 3.62   | 1.27  | 1.66  | .92   | .34   | .072 | .058 |
| MAX   | 1.0   | .19   | 95     | 84    | 97     | 15     | 1.7   | .38   | 3.2   | 1.5   | .09  | .06  |
| MIN   | .47   | .98   | .26    | .40   | .33    | .50    | .78   | .22   | .10   | .09   | .06  | .05  |
| AC-FT | 41    | 165   | 351    | 195   | 905    | 223    | 76    | 102   | 55    | 21    | 4.4  | 3.5  |

e Estimated.

## 11134800 MIGUELITO CREEK AT LOMPOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .24  | .55  | 1.74 | 3.86 | 5.44 | 9.33 | 1.94 | 1.05 | .66  | .45  | .33  | .31  |
| MAX  | 1.39 | 2.77 | 8.69 | 37.9 | 19.7 | 106  | 14.2 | 6.04 | 3.79 | 2.64 | 2.33 | 2.05 |
| (WY) | 1984 | 1996 | 1993 | 1995 | 1978 | 1995 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1971 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 5284.33                |        | 1079.61             |        |                         |             |
| ANNUAL MEAN              | 14.5                   |        | 2.95                |        | 2.15                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 13.8                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .15                     |             |
| HIGHEST DAILY MEAN       | 1170                   | Mar 11 | 97                  | Feb 20 | 1170                    | Mar 11 1995 |
| LOWEST DAILY MEAN        | .04                    | Jan 2  | .05                 | Sep 25 | .00                     | Jul 21 1971 |
| ANNUAL SEVEN-DAY MINIMUM | .56                    | Oct 1  | .05                 | Sep 24 | .00                     | Sep 8 1971  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 600                 | Feb 20 | 1830                    | Mar 10 1995 |
| INSTANTANEOUS PEAK STAGE |                        |        | 2.15                | Feb 20 | 3.71                    | Mar 10 1995 |
| ANNUAL RUNOFF (AC-FT)    | 10480                  |        | 2140                |        | 1560                    |             |
| 10 PERCENT EXCEEDS       | 14                     |        | 4.0                 |        | 2.6                     |             |
| 50 PERCENT EXCEEDS       | 1.8                    |        | .60                 |        | .33                     |             |
| 90 PERCENT EXCEEDS       | .66                    |        | .07                 |        | .02                     |             |

## WATER-QUALITY RECORDS

**CHEMICAL DATA:** Water years 1980-86, 1988 to current year.

| DATE         | TIME | DIS-CHARGE,<br>INST. CUBIC<br>FEET PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|--------------|------|--|---|---|--------------------------------------|---|--|--|--|-------------------|
| OCT<br>19... | 1130 | 0.62   | 1530  | 8.2   | 18.0                                 | --  | --   | --   | --   | --                |
| DEC<br>07... | 1400 | 0.48   | 1540  | 8.3   | 16.0                                 | --  | --   | --   | --   | --                |
| JAN<br>05... | 0925 | 0.40   | 1730  | 8.2   | 11.0                                 | --  | --   | --   | --   | --                |
| FEB<br>22... | 1340 | 7.4  | 1030  | 8.0   | --                                   | --  | --   | --   | --   | --                |
| APR<br>02... | 1510 | 1.2  | 1360  | 8.3   | 16.0                                 | 590   | 130  | 65   | 69   | 20                |
| MAY<br>30... | 1145 | 0.24   | 1350  | 8.5   | 19.5                                 | --  | --   | --   | --   | --                |
| JUL<br>17... | 1017 | 0.13   | 1530  | 8.4   | 17.0                                 | --  | --   | --   | --   | --                |
| AUG<br>13... | 1530 | 0.07   | 1560  | 8.3   | 23.5                                 | --  | --   | --   | --   | --                |

[illegible][illegible]

## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.--Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060009, on Vandenberg Military Reservation, on downstream side of San Antonio Road Bridge, 0.7 mi east of junction of San Antonio Road and Lompoc-Casmalia Road, and 3.8 mi south of Casmalia.

DRAINAGE AREA.--135 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to September 1993, October 1994 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 160 ft above sea level, from topographic map. Prior to June 27, 1958, at datum 2.00 ft higher.

REMARKS.--Records fair except those 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, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 5  | 1615 | 428                               | 4.71                | Feb. 27 | 1845 | 168                               | 3.39                |
| Feb. 20 | 1715 | 704                               | 5.80                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT   | NOV   | DEC   | JAN   | FEB   | MAR   | APR  | MAY   | JUN   | JUL   | AUG   | SEP   |
|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|
| 1     | .66   | 1.1   | .85   | .78   | 7.6   | e19   | e3.0 | 1.3   | .56   | .73   | e.61  | e.55  |
| 2     | .66   | .93   | .88   | .78   | 1.2   | e13   | e2.4 | 1.5   | .56   | .69   | e.61  | e.55  |
| 3     | .65   | .92   | .93   | .78   | 13    | e8.0  | e1.9 | 1.5   | .52   | .70   | e.60  | e.55  |
| 4     | .60   | .78   | .83   | .77   | 2.8   | e30   | e2.2 | 1.6   | .49   | .66   | e.60  | e.55  |
| 5     | .58   | .78   | .78   | .82   | 89    | e18   | 2.5  | 1.3   | .55   | .70   | e.60  | e.55  |
| 6     | .58   | .78   | .78   | .78   | 24    | e10   | 2.5  | 1.3   | .59   | .70   | e.60  | e.55  |
| 7     | .60   | .78   | .74   | .82   | 7.5   | e7.8  | 2.1  | 1.2   | .62   | .66   | e.60  | e.54  |
| 8     | .66   | .78   | .72   | .85   | e2.2  | e6.1  | 2.5  | 1.2   | .58   | .75   | e.59  | e.54  |
| 9     | .66   | .79   | .72   | .84   | e4.0  | e4.9  | 2.6  | 1.2   | .55   | .56   | e.59  | e.54  |
| 10    | .72   | .73   | .72   | .87   | e6.5  | e3.9  | 1.9  | 1.1   | .62   | .59   | e.59  | e.54  |
| 11    | .85   | .72   | .72   | .88   | e1.0  | e3.0  | 2.4  | 1.4   | .68   | .59   | e.59  | e.54  |
| 12    | .69   | .72   | 2.3   | .90   | e1.3  | e35   | 2.7  | 1.3   | .59   | .66   | e.59  | e.54  |
| 13    | .67   | .73   | 1.2   | .87   | e1.5  | e20   | 2.4  | 1.1   | .66   | .66   | e.58  | e.53  |
| 14    | .65   | .85   | .75   | .85   | 1.7   | e13   | 2.3  | 1.2   | .83   | .63   | e.58  | e.53  |
| 15    | .64   | .87   | .80   | .85   | 1.6   | e7.0  | 2.4  | 1.2   | .76   | .60   | e.58  | e.53  |
| 16    | .64   | .86   | .80   | .91   | 1.6   | e4.1  | 2.7  | 1.8   | .76   | .65   | e.58  | e.53  |
| 17    | .72   | .88   | .79   | .94   | 1.4   | e3.8  | 2.5  | 1.4   | .61   | e.64  | e.58  | e.53  |
| 18    | .72   | .92   | .85   | .85   | 1.1   | e3.6  | 2.8  | 1.0   | .59   | e.64  | e.58  | e.53  |
| 19    | .75   | .91   | .85   | .91   | 11    | e3.3  | 2.4  | 1.0   | .59   | e.64  | e.58  | e.52  |
| 20    | .79   | .86   | .85   | .85   | 294   | e3.0  | 2.2  | 1.1   | .66   | e.63  | e.57  | e.52  |
| 21    | .94   | .79   | .82   | .93   | 93    | e2.8  | 2.2  | .97   | .57   | e.63  | e.57  | e.52  |
| 22    | .84   | .73   | .80   | 1.2   | 40    | e2.6  | 2.1  | .94   | .68   | e.63  | e.57  | e.52  |
| 23    | .78   | .60   | .81   | .96   | 23    | e2.4  | 3.2  | 1.1   | .71   | e.63  | e.57  | e.52  |
| 24    | .78   | .60   | .78   | .93   | 14    | e2.2  | 2.9  | 1.2   | .60   | e.63  | e.57  | e.52  |
| 25    | .82   | .93   | .87   | 1.2   | 38    | e2.0  | 1.9  | 1.1   | .56   | e.62  | e.57  | e.51  |
| 26    | .79   | 1.1   | .79   | .95   | 34    | e1.8  | 1.7  | 1.1   | .58   | e.62  | e.56  | e.51  |
| 27    | .78   | .93   | .78   | 1.0   | 64    | e1.7  | 1.5  | 1.0   | .58   | e.62  | e.56  | e.51  |
| 28    | .80   | .89   | .78   | 1.2   | 43    | e1.6  | 1.8  | .95   | .56   | e.62  | e.56  | e.51  |
| 29    | .76   | .85   | .78   | 1.0   | 29    | e1.5  | 1.2  | .85   | .59   | e.61  | e.56  | e.51  |
| 30    | .75   | .85   | .78   | 1.0   | ---   | e1.4  | 1.1  | .60   | .66   | e.61  | e.56  | e.50  |
| 31    | .82   | ---   | .78   | 2.1   | ---   | e1.3  | ---  | .58   | ---   | e.61  | e.56  | ---   |
| TOTAL | 22.35 | 24.96 | 26.63 | 29.37 | 852.0 | 237.8 | 68.0 | 36.09 | 18.46 | 19.91 | 18.01 | 15.89 |
| MEAN  | .72   | .83   | .86   | .95   | 29.4  | 7.67  | 2.27 | 1.16  | .62   | .64   | .58   | .53   |
| MAX   | .94   | 1.1   | 2.3   | 2.1   | 294   | 35    | 3.2  | 1.8   | .83   | .75   | .61   | .55   |
| MIN   | .58   | .60   | .72   | .77   | 1.0   | 1.3   | 1.1  | .58   | .49   | .56   | .56   | .50   |
| AC-FT | 44    | 50    | 53    | 58    | 1690  | 472   | 135  | 72    | 37    | 39    | 36    | 32    |

e Estimated.



## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .80  | 1.58 | 2.77 | 12.0 | 24.6 | 21.1 | 7.28 | 1.41 | .92  | .67  | .68  | .72  |
| MAX  | 2.36 | 6.73 | 10.6 | 104  | 163  | 234  | 149  | 3.85 | 2.07 | 1.59 | 1.84 | 2.23 |
| (WY) | 1964 | 1973 | 1956 | 1995 | 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 1995 CALENDAR YEAR |  |  |  | FOR 1996 WATER YEAR |  |  |  | WATER YEARS 1956 - 1996 |  |  |  |
|--------------------------|------------------------|--|--|--|---------------------|--|--|--|-------------------------|--|--|--|
| ANNUAL TOTAL             | 7617.37                |  |  |  | 1369.47             |  |  |  |                         |  |  |  |
| ANNUAL MEAN              | 20.9                   |  |  |  | 3.74                |  |  |  | 6.11                    |  |  |  |
| HIGHEST ANNUAL MEAN      |                        |  |  |  |                     |  |  |  | 39.7                    |  |  |  |
| LOWEST ANNUAL MEAN       |                        |  |  |  |                     |  |  |  | .47                     |  |  |  |
| HIGHEST DAILY MEAN       | 908                    |  |  |  | 294                 |  |  |  | 2040                    |  |  |  |
| LOWEST DAILY MEAN        | .44                    |  |  |  | .49                 |  |  |  | .10                     |  |  |  |
| ANNUAL SEVEN-DAY MINIMUM | .58                    |  |  |  | .51                 |  |  |  | .13                     |  |  |  |
| INSTANTANEOUS PEAK FLOW  |                        |  |  |  | 704                 |  |  |  | 4680                    |  |  |  |
| INSTANTANEOUS PEAK STAGE |                        |  |  |  | 5.80                |  |  |  | 14.32                   |  |  |  |
| ANNUAL RUNOFF (AC-FT)    | 15110                  |  |  |  | 2720                |  |  |  | 4420                    |  |  |  |
| 10 PERCENT EXCEEDS       | 37                     |  |  |  | 3.2                 |  |  |  | 4.6                     |  |  |  |
| 50 PERCENT EXCEEDS       | 1.0                    |  |  |  | .79                 |  |  |  | 1.0                     |  |  |  |
| 90 PERCENT EXCEEDS       | .60                    |  |  |  | .56                 |  |  |  | .37                     |  |  |  |

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA--Continued

## 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 1995 TO SEPTEMBER 1996

| 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) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT |
|-----------|------|---|---------------------------------|--|----------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------------|----------------|
| OCT 19... | 1410 | 0.78                                    | 3000                            | 8.0                                    | 20.5                       | --                              | --                              | --                                  | --                              | --             |
| DEC 07... | 1400 | 0.72                                    | 2950                            | 8.0                                    | 14.5                       | --                              | --                              | --                                  | --                              | --             |
| JAN 04... | 0905 | 0.78                                    | 2710                            | 7.8                                    | 10.0                       | --                              | --                              | --                                  | --                              | --             |
| FEB 13... | 1550 | 1.5                                     | 3280                            | 7.9                                    | 18.0                       | --                              | --                              | --                                  | --                              | --             |
| APR 03... | 0900 | 1.9                                     | 3300                            | 8.0                                    | 13.5                       | 940                             | 250                             | 77                                  | 350                             | 44             |
| MAY 29... | 1740 | 0.65                                    | 2870                            | 8.2                                    | 19.5                       | --                              | --                              | --                                  | --                              | --             |
| JUL 17... | 1220 | 0.64                                    | 3010                            | 8.0                                    | 19.5                       | --                              | --                              | --                                  | --                              | --             |
| AUG 13... | 1045 | 0.58                                    | 3040                            | 7.8                                    | 19.0                       | --                              | --                              | --                                  | --                              | --             |

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

## 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 sea level, from topographic map. Prior to October 1959, nonrecording gage at different site and datum.

REMARKS.--Records poor. 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, or maximum:

| Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|---------|-----------------------------------|---------------------|---------|---------|-----------------------------------|---------------------|
| Feb. 5  | unknown | unknown                           | unknown             | Mar. 13 | unknown | unknown                           | unknown             |
| Feb. 20 | unknown | 2,730                             | 8.58                |         |         |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV   | DEC    | JAN   | FEB   | MAR  | APR   | MAY   | JUN  | JUL  | AUG   | SEP  |
|-------|------|-------|--------|-------|-------|------|-------|-------|------|------|-------|------|
| 1     | e2.2 | e1.1  | e.46   | e2.0  | e85   | e45  | e24   | e7.5  | 3.8  | 2.1  | 1.2   | .22  |
| 2     | e2.2 | e1.1  | e.44   | e1.9  | e60   | e43  | e23   | e7.4  | 3.5  | 2.1  | 1.2   | .23  |
| 3     | e2.1 | e1.1  | e.42   | e2.0  | e45   | e42  | e22   | e7.3  | 3.3  | 2.1  | 1.1   | .23  |
| 4     | e2.1 | e1.1  | e.40   | e2.0  | e100  | e45  | e20   | e7.2  | 3.2  | 1.9  | 1.1   | .24  |
| 5     | e2.1 | e1.0  | e.37   | e2.1  | e200  | e50  | e20   | e7.0  | 3.0  | 1.8  | 1.1   | .21  |
| 6     | e2.0 | e1.0  | e.35   | e2.1  | e100  | e48  | e19   | e6.9  | 3.1  | 1.8  | 1.2   | .17  |
| 7     | e2.0 | e.99  | e.33   | e2.2  | e65   | e45  | e19   | e6.8  | 3.1  | 1.8  | 1.2   | .17  |
| 8     | e2.0 | e.97  | e.31   | e2.2  | e40   | e42  | e18   | e6.6  | 3.0  | 1.9  | 1.2   | .17  |
| 9     | e1.9 | e.95  | e.30   | e2.3  | e35   | e39  | e18   | e6.5  | 2.8  | 1.8  | 1.1   | .17  |
| 10    | e1.9 | e.92  | e.30   | e2.3  | e32   | e37  | e17   | e6.4  | 2.4  | 1.8  | 1.1   | .17  |
| 11    | e1.9 | e.90  | e1.0   | e2.4  | e31   | e36  | e17   | e6.2  | 2.4  | 1.8  | 1.0   | .12  |
| 12    | e1.8 | e.88  | e4.0   | e2.4  | e30   | e120 | e16   | e6.1  | 2.4  | 1.8  | .92   | .12  |
| 13    | e1.8 | e.86  | e20    | e2.5  | e28   | e300 | e16   | e6.0  | 2.5  | 1.7  | .84   | .12  |
| 14    | e1.8 | e.84  | e14    | e2.5  | e28   | e150 | e15   | e5.8  | 2.4  | 1.6  | .78   | .12  |
| 15    | e1.7 | e.81  | e8.0   | e2.6  | e29   | e60  | e15   | e5.7  | 2.4  | 1.6  | .70   | .12  |
| 16    | e1.7 | e.79  | e6.0   | e6.0  | e29   | e48  | e14   | e5.6  | 2.4  | 1.6  | .65   | .12  |
| 17    | e1.7 | e.77  | e5.0   | e4.7  | e28   | e39  | e14   | e5.5  | 2.3  | 1.6  | .67   | .12  |
| 18    | e1.6 | e.75  | e4.0   | e3.7  | e27   | e32  | e13   | e5.3  | 2.3  | 1.5  | .71   | .12  |
| 19    | e1.6 | e.73  | e3.5   | e5.0  | e250  | e33  | e13   | e5.2  | 2.2  | 1.4  | .71   | .12  |
| 20    | e1.6 | e.70  | e3.0   | e4.0  | e2000 | e33  | e12   | e5.1  | 2.2  | 1.3  | .72   | .12  |
| 21    | e1.5 | e.68  | e2.5   | e4.3  | e720  | e30  | e12   | e4.9  | 2.3  | 1.3  | .72   | .12  |
| 22    | e1.5 | e.66  | e3.0   | e4.4  | e300  | e32  | e11   | e4.8  | 2.4  | 1.3  | .60   | .12  |
| 23    | e1.5 | e.64  | e4.0   | e4.0  | e180  | e34  | e11   | e4.7  | 2.4  | 1.3  | .53   | .12  |
| 24    | e1.4 | e.62  | e3.7   | e4.0  | e120  | e36  | e10   | e4.6  | 2.3  | 1.3  | .49   | .12  |
| 25    | e1.4 | e.59  | e3.5   | e20   | e70   | e35  | e9.7  | e4.4  | 2.5  | 1.3  | .49   | .12  |
| 26    | e1.4 | e.57  | e3.2   | e15   | e40   | e32  | e9.2  | e4.3  | 2.7  | 1.3  | .47   | .11  |
| 27    | e1.3 | e.55  | e2.9   | e17   | e42   | e30  | e8.7  | e4.2  | 2.6  | 1.3  | .44   | .11  |
| 28    | e1.3 | e.53  | e2.6   | e20   | e45   | e29  | e8.2  | e4.3  | 2.5  | 1.2  | .37   | .11  |
| 29    | e1.2 | e.51  | e2.3   | e10   | e48   | e27  | e7.8  | 4.3   | 2.3  | 1.1  | .33   | .11  |
| 30    | e1.2 | e.48  | e2.0   | e30   | ---   | e26  | e7.7  | 4.3   | 2.2  | 1.3  | .28   | .09  |
| 31    | e1.2 | ---   | e2.0   | e110  | ---   | e25  | ---   | 4.1   | ---  | 1.2  | .24   | ---  |
| TOTAL | 52.6 | 24.09 | 103.88 | 295.6 | 4807  | 1623 | 440.3 | 175.0 | 78.9 | 48.9 | 24.16 | 4.31 |
| MEAN  | 1.70 | .80   | 3.35   | 9.54  | 166   | 52.4 | 14.7  | 5.65  | 2.63 | 1.58 | .78   | .14  |
| MAX   | 2.2  | 1.1   | 20     | 110   | 2000  | 300  | 24    | 7.5   | 3.8  | 2.1  | 1.2   | .24  |
| MIN   | 1.2  | .48   | .30    | 1.9   | 27    | 25   | 7.7   | 4.1   | 2.2  | 1.1  | .24   | .09  |
| AC-FT | 104  | 48    | 206    | 586   | 9530  | 3220 | 873   | 347   | 156  | 97   | 48    | 8.5  |

e Estimated.

## 11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .59  | 2.42 | 12.3 | 39.7 | 96.6 | 106  | 22.6 | 6.33 | 3.00 | 1.42 | .78  | 1.45 |
| MAX  | 8.40 | 23.6 | 275  | 467  | 920  | 974  | 214  | 53.6 | 23.6 | 8.87 | 6.99 | 22.7 |
| (WY) | 1984 | 1966 | 1967 | 1969 | 1969 | 1995 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1960 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 49318.11               |        | 7677.74             |        |                         |             |
| ANNUAL MEAN              | 135                    |        | 21.0                |        | 24.1                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 141                     |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .002                    |             |
| HIGHEST DAILY MEAN       | 8100                   | Mar 11 | 2000                | Feb 20 | 9390                    | Feb 25 1969 |
| LOWEST DAILY MEAN        | .30                    | Dec 9  | .09                 | Sep 30 | .00                     | Oct 1 1959  |
| ANNUAL SEVEN-DAY MINIMUM | .34                    | Dec 4  | .11                 | Sep 24 | .00                     | Oct 1 1959  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 2730                | Feb 20 | 17800                   | Feb 25 1969 |
| INSTANTANEOUS PEAK STAGE |                        |        | 8.58                | Feb 20 | 14.74                   | Mar 4 1978  |
| ANNUAL RUNOFF (AC-FT)    | 97820                  |        | 15230               |        | 17460                   |             |
| 10 PERCENT EXCEEDS       | 194                    |        | 36                  |        | 16                      |             |
| 50 PERCENT EXCEEDS       | 6.5                    |        | 2.3                 |        | .44                     |             |
| 90 PERCENT EXCEEDS       | 1.0                    |        | .33                 |        | .00                     |             |

## SANTA MARIA RIVER BASIN

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

**CHEMICAL DATA:** Water year 1978 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-CHARGE,<br>INST. CUBIC<br>FEET<br>PER<br>SECOND | SPE-CIFIC<br>CON-DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|--------------|------|---|---|---|--------------------------------------|---|--|--|--|-------------------|
| NOV<br>02... | 0900 | 1.1   | 1440                                      | 7.9   | 14.0                                 | --  | --   | --   | --   | --                |
| DEC<br>10... | 1245 | 0.30  | 1350                                      | 7.9   | 17.5                                 | --  | --   | --   | --   | --                |
| JAN<br>02... | 1615 | 1.9   | 1610                                      | 8.2   | 18.0                                 | --  | --   | --   | --   | --                |
| FEB<br>06... | 1130 | 65  | 1600                                      | 8.2   | 15.0                                 | --  | --   | --   | --   | --                |
| APR<br>04... | 0930 | 20  | 1790                                      | 8.3   | 16.0                                 | 700   | 150  | 78   | 150  | 32                |
| MAY<br>28... | 1750 | 4.0   | 1320                                      | 8.0   | 21.0                                 | --  | --   | --   | --   | --                |
| JUL<br>16... | 0900 | 1.8   | 1310                                      | 8.0   | 19.0                                 | --  | --   | --   | --   | --                |
| AUG<br>12... | 1400 | 0.67  | 1290                                      | 8.2   | 32.5                                 | --  | --   | --   | --   | --                |

[illegible][illegible]

## 11138500 SISQUOC RIVER NEAR SISQUOC, CA

LOCATION.--Lat 34°50'23", long 120°10'02", in Siquoc Grant, Santa Barbara County, Hydrologic Unit 18060008, on left bank 2.6 mi upstream from La Brea Creek and 7 mi east of Siquoc.  
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 and concrete diversion dam. Datum of gage is 624.30 ft above sea level (levels by U.S. Army Corps of Engineers). See WSP 1735 for history of changes prior to Aug. 24, 1951.

REMARKS.--Records 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, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time    | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|---------|-----------------------------------|---------------------|
| Feb. 5  | 1845 | 415                               | 3.67                | Feb. 27 | unknown | unknown                           | unknown             |
| Feb. 20 | 0530 | 2970                              | 6.32                | Mar. 17 | unknown | unknown                           | unknown             |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB   | MAR  | APR    | MAY   | JUN   | JUL  | AUG   | SEP   |
|-------|------|------|------|-------|-------|------|--------|-------|-------|------|-------|-------|
| 1     | e4.5 | 1.7  | 1.7  | e3.2  | 117   | e160 | e130   | e5.7  | e17   | e3.0 | 1.4   | .80   |
| 2     | e4.4 | 1.7  | 1.7  | e3.6  | 76    | e130 | e100   | e5.5  | e13   | e2.8 | 1.4   | .83   |
| 3     | e4.2 | 1.7  | 1.7  | e4.0  | 63    | e120 | e75    | e8.5  | e9.5  | e2.7 | 1.3   | .84   |
| 4     | e4.1 | 1.7  | 1.8  | 4.1   | 70    | e140 | e57    | e14   | e7.8  | e2.6 | 1.5   | .84   |
| 5     | e4.0 | 1.8  | 2.0  | 4.5   | 170   | e120 | e80    | e20   | e7.5  | e2.6 | 1.6   | .81   |
| 6     | e3.7 | 1.8  | 2.0  | 5.0   | 183   | e100 | e130   | e10   | e7.2  | e2.5 | 1.6   | .90   |
| 7     | e3.6 | 1.8  | 2.0  | 5.2   | 98    | e90  | e100   | e5.5  | e7.0  | e2.5 | 1.5   | .91   |
| 8     | e3.4 | 1.7  | 2.0  | 5.6   | 68    | e105 | e80    | e10   | e6.7  | e2.4 | 1.4   | .90   |
| 9     | e3.2 | 1.7  | 1.8  | 5.8   | 46    | e89  | e65    | e9.0  | e6.4  | e2.3 | 1.4   | .96   |
| 10    | e3.1 | 1.7  | 1.7  | 6.1   | 36    | e85  | e55    | e8.0  | e6.1  | e2.3 | 1.6   | .97   |
| 11    | e3.0 | 1.7  | 1.7  | 6.4   | 28    | e80  | e17    | e7.5  | e5.8  | e2.2 | 1.6   | 1.0   |
| 12    | e2.7 | 1.7  | 1.8  | 6.5   | 24    | e78  | e5.0   | e6.6  | e5.6  | e2.1 | 1.5   | 1.0   |
| 13    | e2.6 | 1.7  | 1.6  | 7.2   | 26    | e72  | e10    | e6.0  | e5.3  | e2.1 | 1.3   | .99   |
| 14    | e2.4 | 1.8  | 1.6  | 7.7   | 27    | e70  | e20    | e5.5  | e5.2  | e2.0 | 1.3   | .97   |
| 15    | e2.2 | 2.0  | 1.6  | 7.7   | 25    | e130 | e35    | e25   | e5.0  | e2.0 | 1.3   | .97   |
| 16    | e2.0 | 2.0  | 1.7  | 12    | 26    | e250 | e70    | e95   | e4.9  | 1.8  | 1.2   | .96   |
| 17    | e1.9 | 2.0  | 1.4  | 14    | 24    | e300 | e60    | e33   | e4.8  | 1.9  | 1.3   | .93   |
| 18    | e1.7 | 2.0  | 1.3  | 13    | 23    | e200 | e95    | e15   | e4.6  | 2.0  | 1.3   | .86   |
| 19    | e1.6 | 2.0  | 1.2  | 13    | 50    | e90  | e90    | e5.5  | e4.5  | 1.9  | 1.3   | .70   |
| 20    | e1.4 | 2.0  | 1.2  | 13    | 1900  | e70  | e95    | e7.5  | e4.4  | 1.7  | 1.3   | .69   |
| 21    | 1.2  | 2.0  | 1.2  | 13    | 1050  | e65  | e75    | e9.5  | e4.3  | 1.6  | 1.3   | .70   |
| 22    | 1.2  | 2.0  | 1.1  | 14    | 726   | e60  | e60    | e12   | e4.1  | 1.6  | 1.2   | .76   |
| 23    | 1.2  | 1.8  | 1.2  | 14    | e150  | e55  | e55    | e17   | e4.0  | 1.4  | 1.2   | .82   |
| 24    | 1.2  | 1.7  | e1.4 | 13    | e30   | e50  | e50    | e20   | e3.9  | 1.5  | 1.1   | .77   |
| 25    | 1.3  | 1.9  | e1.6 | 17    | e65   | e45  | e46    | e25   | e3.7  | 1.4  | .95   | .76   |
| 26    | 1.5  | 1.9  | e1.8 | 16    | e160  | e44  | e44    | e30   | e3.6  | 1.4  | .95   | .79   |
| 27    | 1.4  | 2.3  | e1.9 | 17    | e400  | e42  | e41    | e35   | e3.5  | 1.4  | .92   | .75   |
| 28    | 1.4  | 2.3  | e2.1 | 17    | e300  | e40  | e25    | e23   | e3.4  | 1.3  | .85   | .74   |
| 29    | 1.4  | 1.8  | e2.4 | 17    | e200  | e38  | e17    | e32   | e3.2  | 1.3  | .77   | .72   |
| 30    | 1.4  | 1.7  | e2.6 | 17    | ---   | e36  | e9.0   | e25   | e3.1  | 1.4  | .77   | .77   |
| 31    | 1.6  | ---  | e2.9 | 21    | ---   | e60  | ---    | e20   | ---   | 1.4  | .75   | ---   |
| TOTAL | 74.5 | 55.6 | 53.7 | 323.6 | 6161  | 3014 | 1791.0 | 551.3 | 175.1 | 61.1 | 38.86 | 25.41 |
| MEAN  | 2.40 | 1.85 | 1.73 | 10.4  | 212   | 97.2 | 59.7   | 17.8  | 5.84  | 1.97 | 1.25  | .85   |
| MAX   | 4.5  | 2.3  | 2.9  | 21    | 1900  | 300  | 130    | 95    | 17    | 3.0  | 1.6   | 1.0   |
| MIN   | 1.2  | 1.7  | 1.1  | 3.2   | 23    | 36   | 5.0    | 5.5   | 3.1   | 1.3  | .75   | .69   |
| AC-FT | 148  | 110  | 107  | 642   | 12220 | 5980 | 3550   | 1090  | 347   | 121  | 77    | 50    |

e Estimated.

11138500 SISQUOC RIVER NEAR SISQUOC, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 2.50 | 6.65 | 26.5 | 82.7 | 155  | 147  | 90.9 | 30.5 | 11.0 | 4.44 | 2.36 | 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 1995 CALENDAR YEAR |  | FOR 1996 WATER YEAR |  | WATER YEARS 1944 - 1996 |  |
|--------------------------|------------------------|--|---------------------|--|-------------------------|--|
| ANNUAL TOTAL             | 62013.0                |  | 12325.17            |  |                         |  |
| ANNUAL MEAN              | 170                    |  | 33.7                |  | 46.2                    |  |
| HIGHEST ANNUAL MEAN      |                        |  |                     |  | 361                     |  |
| LOWEST ANNUAL MEAN       |                        |  |                     |  | 1.07                    |  |
| HIGHEST DAILY MEAN       | 3230                   |  | 1900                |  | 14800                   |  |
| LOWEST DAILY MEAN        | 1.1                    |  | .69                 |  | .00                     |  |
| ANNUAL SEVEN-DAY MINIMUM | 1.2                    |  | .74                 |  | .00                     |  |
| INSTANTANEOUS PEAK FLOW  |                        |  | 2970                |  | 23200                   |  |
| INSTANTANEOUS PEAK STAGE |                        |  | 6.32                |  | 15.75                   |  |
| ANNUAL RUNOFF (AC-FT)    | 123000                 |  | 24450               |  | 33470                   |  |
| 10 PERCENT EXCEEDS       | 468                    |  | 80                  |  | 80                      |  |
| 50 PERCENT EXCEEDS       | 20                     |  | 3.6                 |  | 2.4                     |  |
| 90 PERCENT EXCEEDS       | 1.7                    |  | 1.0                 |  | .80                     |  |



WATER-QUALITY RECORDS

**CHEMICAL DATA:** Water years 1978 to current year.

| DATE         | TIME | DIS-CHARGE,<br>INST. CUBIC<br>FEET PER<br>SECOND | SPE-CIFIC<br>CON-DUCT-<br>ANCE (US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|--------------|------|--|--|---|--------------------------------------|---|--|--|--|-------------------|
| OCT<br>20... | 1255 | 0.71   | 1190                                   | 8.1   | 18.5                                 | --  | --   | --   | --   | --                |
| DEC<br>09... | 1150 | 2.0  | 1200                                   | 8.0   | 15.0                                 | --  | --   | --   | --   | --                |
| JAN<br>03... | 1120 | 3.9  | 1220                                   | 8.4   | 11.5                                 | --  | --   | --   | --   | --                |
| FEB<br>13... | 1010 | 28   | 1100                                   | 8.3   | 14.0                                 | --  | --   | --   | --   | --                |
| APR<br>04... | 1415 | 57   | 1120                                   | 8.5   | 21.0                                 | 510   | 100  | 64   | 53   | 18                |
| JUL<br>16... | 1530 | 2.0  | 1140                                   | 8.4   | 27.0                                 | --  | --   | --   | --   | --                |
| AUG<br>12... | 1700 | 1.0  | 1160                                   | 8.0   | 24.5                                 | --  | --   | --   | --   | --                |

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

## 11140000 SISQUOC RIVER NEAR GAREY, CA

LOCATION.--Lat 34°53'38", long 120°18'20", in SW 1/4 sec.36, T.10 N., R.33 W., Santa Barbara County, Hydrologic Unit 18060008, on downstream side of Santa Maria Mesa Road Bridge near left bank, 0.6 mi northeast of Garey, and 3.7 mi downstream from Tepusquet Creek.

DRAINAGE AREA.--471 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to current year. Records for water year 1941 incomplete; yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

REVISED RECORDS.--WSP 1011: 1941, 1943. WSP 1928: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of main gage is 354.8 ft, Santa Barbara County datum. See WSP 1735 for history of changes of main gage prior to Oct. 1, 1959. Oct. 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplementary gage on downstream side of bridge near right bank at same datum. Supplementary gage discontinued June 8, 1992.

REMARKS.--Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of about 7,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,600 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.16 ft, from rating curve extended above 22,000 ft<sup>3</sup>/s; maximum gage height, 13.50 ft, Dec. 6, 1966; no flow for many days in each year.

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

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Feb. 20 | 0645 | 7,400                             | 8.07                | Mar. 5  | 2115 | 381                               | 6.00                |
| Feb. 27 | 1645 | 559                               | 6.11                | Mar. 13 | 1000 | 797                               | 6.21                |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN  | FEB      | MAR   | APR   | MAY   | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|------|----------|-------|-------|-------|------|------|------|------|
| 1     | .00  | e.00 | .00  | .00  | .00      | 255   | 79    | 9.1   | .00  | .00  | .00  | .00  |
| 2     | .00  | e.00 | .00  | .00  | .00      | 251   | 104   | 4.3   | .00  | .00  | .00  | .00  |
| 3     | .00  | e.00 | .00  | .00  | .00      | 245   | 84    | 2.3   | .00  | .00  | .00  | .00  |
| 4     | .00  | e.00 | .00  | .00  | .00      | 241   | 69    | 1.4   | .00  | .00  | .00  | .00  |
| 5     | .00  | e.00 | .00  | .00  | .00      | 311   | 55    | .88   | .00  | .00  | .00  | .00  |
| 6     | .00  | e.00 | .00  | .00  | 110      | 312   | e50   | .67   | .00  | .00  | .00  | .00  |
| 7     | .00  | e.00 | .00  | .00  | 106      | 245   | e45   | .48   | .00  | .00  | .00  | .00  |
| 8     | .00  | e.00 | .00  | .00  | 41       | 248   | e40   | .37   | .00  | .00  | .00  | .00  |
| 9     | .00  | e.00 | .00  | .00  | 19       | 243   | e30   | .23   | .00  | .00  | .00  | .00  |
| 10    | .00  | e.00 | .00  | .00  | 8.5      | 241   | e23   | .01   | .00  | .00  | .00  | .00  |
| 11    | .00  | e.00 | .00  | .00  | 1.4      | 241   | e7.0  | .00   | .00  | .00  | .00  | .00  |
| 12    | .00  | e.00 | .00  | .00  | .01      | 266   | e2.0  | .00   | .00  | .00  | .00  | .00  |
| 13    | .00  | e.00 | .00  | .00  | .00      | 685   | e4.0  | .00   | .00  | .00  | .00  | .00  |
| 14    | .00  | e.00 | .00  | .00  | .00      | 513   | e7.5  | .00   | .00  | .00  | .00  | .00  |
| 15    | .00  | e.00 | .00  | .00  | .00      | 361   | e16   | .00   | .00  | .00  | .00  | .00  |
| 16    | .00  | e.00 | .00  | .00  | .00      | 286   | e30   | .00   | .00  | .00  | .00  | .00  |
| 17    | .00  | e.00 | .00  | .00  | .00      | 261   | e33   | .00   | .00  | .00  | .00  | .00  |
| 18    | .00  | e.00 | .00  | .00  | .00      | 221   | e38   | .00   | .00  | .00  | .00  | .00  |
| 19    | .00  | e.00 | .00  | .00  | 14       | 167   | e36   | .00   | .00  | .00  | .00  | .00  |
| 20    | .00  | e.00 | .00  | .00  | 4560     | 152   | e40   | .00   | .00  | .00  | .00  | .00  |
| 21    | .00  | .00  | .00  | .00  | 2870     | 137   | e32   | .00   | .00  | .00  | .00  | .00  |
| 22    | .00  | .00  | .00  | .00  | 1560     | 123   | e26   | .00   | .00  | .00  | .00  | .00  |
| 23    | .00  | .00  | .00  | .00  | 861      | 123   | e22   | .00   | .00  | .00  | .00  | .00  |
| 24    | .00  | .00  | .00  | .00  | 488      | 112   | e20   | .00   | .00  | .00  | .00  | .00  |
| 25    | .00  | .00  | .00  | .00  | 386      | 104   | e18   | .00   | .00  | .00  | .00  | .00  |
| 26    | .00  | .00  | .00  | .00  | 279      | 99    | e17   | .00   | .00  | .00  | .00  | .00  |
| 27    | .00  | .00  | .00  | .00  | 331      | 95    | e16   | .00   | .00  | .00  | .00  | .00  |
| 28    | .00  | .00  | .00  | .00  | 290      | 93    | e15   | .00   | .00  | .00  | .00  | .00  |
| 29    | e.00 | .00  | .00  | .00  | 248      | 90    | e14   | .00   | .00  | .00  | .00  | .00  |
| 30    | e.00 | .00  | .00  | .00  | ---      | 79    | e12   | .00   | .00  | .00  | .00  | .00  |
| 31    | e.00 | ---  | .00  | .00  | ---      | 74    | ---   | .00   | ---  | .00  | .00  | ---  |
| TOTAL | 0.00 | 0.00 | 0.00 | 0.00 | 12172.91 | 6874  | 984.5 | 19.74 | 0.00 | 0.00 | 0.00 | 0.00 |
| MEAN  | .000 | .000 | .000 | .000 | .420     | .222  | .32.8 | .64   | .000 | .000 | .000 | .000 |
| MAX   | .00  | .00  | .00  | .00  | 4560     | 685   | 104   | 9.1   | .00  | .00  | .00  | .00  |
| MIN   | .00  | .00  | .00  | .00  | .00      | 74    | 2.0   | .00   | .00  | .00  | .00  | .00  |
| AC-FT | .00  | .00  | .00  | .00  | 24140    | 13630 | 1950  | 39    | .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 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .13  | 2.70 | 17.2 | 95.5 | 181  | 183  | 79.5 | 15.1 | 2.08 | .18  | .048 | .099 |
| 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 | 1987 | 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 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1942 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 109388.04              |        | 20051.15            |        |                         |             |
| ANNUAL MEAN              | 300                    |        | 54.8                |        | 47.4                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 397                     |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .000                    |             |
| HIGHEST DAILY MEAN       | 9650                   | Mar 11 | 4560                | Feb 20 | 13200                   | Feb 25 1969 |
| LOWEST DAILY MEAN        | .00                    | Jan 1  | .00                 | Oct 1  | .00                     | Oct 1 1941  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Jul 5  | .00                 | Oct 1  | .00                     | Oct 1 1941  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 7400                | Feb 20 | 33600                   | Mar 1 1983  |
| INSTANTANEOUS PEAK STAGE |                        |        | 8.07                | Feb 20 | 13.50                   | Dec 6 1986  |
| ANNUAL RUNOFF (AC-FT)    | 217000                 |        | 39770               |        | 34310                   |             |
| 10 PERCENT EXCEEDS       | 720                    |        | 105                 |        | 39                      |             |
| 50 PERCENT EXCEEDS       | .35                    |        | .00                 |        | .00                     |             |
| 90 PERCENT EXCEEDS       | .00                    |        | .00                 |        | .00                     |             |

## 11141050 ORCUTT CREEK NEAR ORCUTT, CA

LOCATION.--Lat 34°53'01", long 120°29'38", in SW 1/4 SE 1/4 sec.6, T.9 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on right bank 10 ft upstream from Black Road Bridge, 0.2 mi northeast of State Highway 1, and 3.0 mi northwest of Orcutt.

DRAINAGE AREA.--18.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to September 1992, October 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above sea level, 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, 11.07 ft, Mar. 10, 1995; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 25 ft<sup>3</sup>/s, or maximum:

| Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) | Date    | Time | Discharge<br>(ft <sup>3</sup> /s) | Gage height<br>(ft) |
|---------|------|-----------------------------------|---------------------|---------|------|-----------------------------------|---------------------|
| Jan. 31 | 1345 | 31                                | 2.98                | Feb. 27 | 1515 | 211                               | 3.67                |
| Feb. 5  | 1200 | 942                               | 5.74                | Mar. 4  | 2230 | 164                               | 3.49                |
| Feb. 20 | 1330 | 755                               | 5.31                |         |      |                                   |                     |

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

| DAY   | OCT  | NOV  | DEC  | JAN   | FEB    | MAR   | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|-------|------|------|------|-------|--------|-------|------|------|------|------|------|------|
| 1     | .00  | 1.1  | .00  | e.02  | 1.7    | 4.1   | .47  | .01  | e.01 | e.00 | .00  | .00  |
| 2     | .00  | .37  | .00  | e.01  | .27    | 3.4   | .33  | .01  | e.01 | e.00 | .00  | .00  |
| 3     | .00  | .00  | .00  | .01   | 32     | 3.3   | .17  | .02  | e.01 | e.00 | .00  | .00  |
| 4     | .02  | .00  | .00  | .03   | 1.6    | 12    | .17  | .03  | e.01 | e.00 | .03  | .00  |
| 5     | .06  | .00  | .00  | .03   | 132    | 8.4   | .21  | .04  | e.01 | e.00 | .00  | .00  |
| 6     | .00  | .25  | .00  | .03   | 1.8    | 2.8   | .25  | .02  | e.01 | e.00 | .00  | .00  |
| 7     | .10  | .40  | .00  | .04   | .64    | 2.2   | .21  | .02  | e.01 | e.00 | .00  | .00  |
| 8     | .00  | .33  | .07  | .11   | .21    | 2.2   | .19  | .02  | e.01 | e.00 | .00  | .00  |
| 9     | .00  | .19  | .11  | .11   | 1.5    | 1.7   | .16  | .01  | e.01 | e.00 | .00  | .00  |
| 10    | .01  | .00  | .01  | .12   | 2.7    | 1.2   | .11  | .01  | e.01 | e.00 | .00  | .00  |
| 11    | .00  | .08  | e.02 | .09   | .28    | 1.1   | .04  | .00  | e.01 | e.00 | .00  | .00  |
| 12    | .00  | .00  | e.02 | .08   | .27    | 5.0   | .01  | .00  | e.01 | e.00 | .00  | .00  |
| 13    | .00  | .27  | e.04 | .10   | .27    | 3.1   | .02  | .00  | e.01 | e.00 | .00  | .04  |
| 14    | .07  | .03  | e.02 | .12   | .34    | 1.7   | .02  | .01  | e.01 | e.00 | .00  | .00  |
| 15    | .00  | .00  | e.01 | .11   | .58    | 1.5   | .08  | .03  | e.01 | e.00 | .00  | .00  |
| 16    | .12  | .00  | e.01 | 1.7   | 1.4    | 1.3   | .14  | .19  | e.01 | e.00 | .00  | .00  |
| 17    | .02  | .00  | e.01 | 1.2   | .93    | .73   | .11  | .07  | e.01 | e.00 | .00  | .05  |
| 18    | .08  | .00  | e.01 | .35   | 1.1    | .70   | .18  | .03  | e.01 | e.00 | .00  | .00  |
| 19    | .14  | .00  | e.01 | 1.2   | 50     | .62   | .17  | .01  | e.01 | e.00 | .00  | .00  |
| 20    | .00  | .00  | e.01 | .30   | 246    | .58   | .19  | .02  | e.01 | e.00 | .00  | .05  |
| 21    | .00  | .00  | e.01 | .21   | 25     | .53   | .16  | .02  | e.01 | e.00 | .00  | .01  |
| 22    | .00  | .00  | e.01 | 2.3   | 6.4    | .45   | .11  | .00  | e.01 | e.00 | .00  | .00  |
| 23    | .00  | .00  | e.02 | .72   | 4.2    | .36   | .10  | .02  | e.01 | e.00 | .00  | e.00 |
| 24    | .04  | .00  | e.02 | .45   | 3.5    | .32   | .09  | .04  | e.01 | e.00 | .00  | e.00 |
| 25    | .02  | .00  | e.02 | 2.9   | 7.5    | .31   | .09  | .03  | e.01 | .01  | .00  | e.00 |
| 26    | .23  | .00  | e.02 | .97   | 4.9    | .30   | .09  | .06  | e.01 | .04  | .00  | e.00 |
| 27    | .00  | .00  | e.02 | 1.2   | 47     | .28   | .08  | .07  | e.00 | .03  | .04  | e.00 |
| 28    | .02  | .00  | e.02 | 1.5   | 5.2    | .23   | .09  | .04  | e.00 | .00  | .00  | e.00 |
| 29    | .00  | .00  | e.02 | .49   | 4.3    | .19   | .09  | e.10 | e.00 | .00  | .03  | e.00 |
| 30    | .16  | .00  | e.02 | .42   | ---    | .11   | .03  | e.01 | e.00 | .00  | .00  | e.00 |
| 31    | .03  | ---  | e.02 | 6.8   | ---    | .11   | ---  | e.01 | ---  | .00  | .00  | ---  |
| TOTAL | 1.12 | 3.02 | 0.55 | 23.72 | 583.59 | 60.82 | 4.16 | 0.95 | 0.26 | 0.08 | 0.10 | 0.15 |
| MEAN  | .036 | .10  | .018 | .77   | 20.1   | 1.96  | .14  | .031 | .009 | .003 | .003 | .005 |
| MAX   | .23  | 1.1  | .11  | 6.8   | 246    | 12    | .47  | .19  | .01  | .04  | .04  | .05  |
| MIN   | .00  | .00  | .00  | .01   | .21    | .11   | .01  | .00  | .00  | .00  | .00  | .00  |
| AC-FT | 2.2  | 6.0  | 1.1  | 47    | 1160   | 121   | 8.3  | 1.9  | .5   | .2   | .2   | .3   |

e Estimated.

## SANTA MARIA RIVER BASIN

11141050 ORCUTT CREEK NEAR ORCUTT, CA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1996, BY WATER YEAR (WY)

|      | OCT  | NOV  | DEC  | JAN  | FEB  | MAR  | APR  | MAY  | JUN  | JUL  | AUG  | SEP  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | .068 | .19  | .70  | 3.57 | 5.41 | 15.5 | .65  | .26  | .15  | .093 | .081 | .076 |
| MAX  | .29  | .63  | 2.68 | 27.5 | 20.1 | 120  | 3.17 | .87  | .43  | .29  | .23  | .18  |
| (WY) | 1984 | 1983 | 1992 | 1995 | 1996 | 1995 | 1983 | 1995 | 1988 | 1989 | 1983 | 1983 |
| MIN  | .000 | .000 | .018 | .040 | .070 | .058 | .020 | .031 | .009 | .003 | .003 | .005 |
| (WY) | 1995 | 1995 | 1996 | 1985 | 1984 | 1989 | 1990 | 1986 | 1996 | 1996 | 1992 | 1996 |

| SUMMARY STATISTICS       | FOR 1995 CALENDAR YEAR |        | FOR 1996 WATER YEAR |        | WATER YEARS 1983 - 1996 |             |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL             | 5027.43                |        | 678.52              |        |                         |             |
| ANNUAL MEAN              | 13.8                   |        | 1.85                |        | 2.23                    |             |
| HIGHEST ANNUAL MEAN      |                        |        |                     |        | 13.8                    |             |
| LOWEST ANNUAL MEAN       |                        |        |                     |        | .090                    |             |
| HIGHEST DAILY MEAN       | 1460                   | Mar 10 | 246                 | Feb 20 | 1460                    | Mar 10 1995 |
| LOWEST DAILY MEAN        | .00                    | Aug 17 | .00                 | Oct 1  | .00                     | Oct 1 1982  |
| ANNUAL SEVEN-DAY MINIMUM | .00                    | Nov 15 | .00                 | Nov 15 | .00                     | Oct 1 1982  |
| INSTANTANEOUS PEAK FLOW  |                        |        | 942                 | Feb 5  | 1830                    | Mar 1 1983  |
| INSTANTANEOUS PEAK STAGE |                        |        | 5.74                | Feb 5  | 11.07                   | Mar 10 1995 |
| ANNUAL RUNOFF (AC-FT)    | 9970                   |        | 1350                |        | 1610                    |             |
| 10 PERCENT EXCEEDS       | 11                     |        | 1.4                 |        | 1.0                     |             |
| 50 PERCENT EXCEEDS       | .23                    |        | .01                 |        | .06                     |             |
| 90 PERCENT EXCEEDS       | .00                    |        | .00                 |        | .00                     |             |

11141050 ORCUTT CREEK NEAR ORCUTT, CA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL DATA: Water years 1983-92, October 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE      | TIME | DIS-CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-CIFIC<br>CON-DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | HARD-<br>NESS<br>TOTAL<br>(MG/L<br>AS<br>CACO3) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | SODIUM<br>PERCENT |
|-----------|------|--|---|---|--------------------------------------|---|--|--|--|-------------------|
| OCT 19... | 1645 | 0.20   | 1830                                      | 7.5   | 24.5                                 | --  | --   | --   | --   | --                |
| DEC 08... | 1830 | 0.22   | 2770                                      | 8.6   | 16.0                                 | --  | --   | --   | --   | --                |
| JAN 03... | 1515 | 0.01   | 2550                                      | 9.4   | 17.0                                 | --  | --   | --   | --   | --                |
| FEB 12... | 1640 | 0.27   | 2200                                      | 8.0   | 20.5                                 | --  | --   | --   | --   | --                |
| APR 03... | 1125 | 0.19   | 2510                                      | 8.9   | 23.5                                 | 450   | 94   | 52   | 370  | 64                |

| DATE      | SODIUM<br>AD-<br>SORP-<br>TION<br>RATIO | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | BICAR-<br>BONATE<br>WATER<br>DIS IT<br>FIELD<br>MG/L AS<br>HCO3 | CAR-<br>BONATE<br>WATER<br>DIS IT<br>FIELD<br>MG/L AS<br>CO3 | ALKA-<br>LINITY<br>WAT DIS<br>TOT IT<br>FIELD<br>MG/L AS<br>CACO3 | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) |
|-----------|---|---|---|--|---|---|---|--|---|--|
| OCT 19... | --                                      | --  | --  | --   | --  | --  | --  | --   | --  | 1250   |
| DEC 08... | --                                      | --  | --  | --   | --  | --  | --  | --   | --  | 1720   |
| JAN 03... | --                                      | --  | --  | --   | --  | --  | --  | --   | --  | 1600   |
| FEB 12... | --                                      | --  | --  | --   | --  | --  | --  | --   | --  | 1430   |
| APR 03... | 8                                       | 5.8   | 203   | 26   | 210   | 280   | 490   | 0.70   | 20  | 1570   |

| DATE      | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>DIS-<br>SOLVED<br>(TONS<br>PER<br>AC-FT) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | PHOS-<br>PHORUS<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) |
|-----------|---|---|---|---|---|---|--|--|--|
| OCT 19... | --  | --  | --  | --  | --  | --  | --   | --   | --   |
| DEC 08... | --  | --  | --  | --  | --  | --  | --   | --   | --   |
| JAN 03... | --  | --  | --  | --  | --  | --  | --   | --   | --   |
| FEB 12... | --  | --  | --  | --  | --  | --  | --   | --   | --   |
| APR 03... | 1450  | 2.14  | 0.060   | 1.50  | 0.110   | 0.640   | 750  | 17   | 34   |

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 1996

| 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, 1976-96                    | --   | 0                |                                |
| 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, 1961-67a, 1968-69, 1976-96 | --   | 0                |                                |
| 10262600           | Boom Creek near Barstow, CA            | Lat 34°54'20", long 116°56'55", NW 1/4 NE 1/4 sec.2, T.9 N., R.1 W., San Bernardino County, Hydrologic Unit 18090208, at culvert on Interstate Highway 15, 4.3 mi east of Barstow.                              | .24                              | 1956-66, 1967-73a, 1976-96          | --   | 0                |                                |
| Antelope Valley    |  |   |                                  |                                     |      |                  |                                |
| 11263900           | Buckhorn Creek near Valyermo, CA       | Lat 34°54'35", long 117°55'13", in S.W. 1/4 sec.15, T.3 N., R.10 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 2, Angeles National Forrest, 8.1 mi southwest of Valyermo        | .48                              | 1961-66a, 1967-69, 1971-73, 1977-96 | --   | 0                |                                |
| 10264530           | Pine Creek near Palmdale, CA           | Lat 34°36'08", long 118°14'48", in SE 1/4 SW 1/4 sec.15, T.6 N., R.13 W., Los Angeles County, on left bank at culvert on Elizabeth Lake Road, 7.5 miles northwest of Palmdale.                                  | 1.78                             | 1958-73, 1977-88, 1988-94a, 1996    | --   | 0                |                                |
| 10264580           | 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, 1965-73a, 1974, 1978-96    | --   | 0                |                                |

a Operated as a continuous-record station.



Water-quality partial-record stations are particular sites where chemical-quality, biological, and (or) sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

## MOJAVE RIVER BASIN

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, and 3 mi northwest of Victorville.

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

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME  | DIS-CHARGE,<br>INST. CUBIC<br>FEET PER<br>SECOND    | SPE-CIFIC<br>CON-DUCT-<br>ANCE<br>(US/CM)          | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C)                          | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG)          | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L)                      | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |
|--------------|---|---|--|---|---|---|--|--|---|
|              |   |   |  |   |   |   |  |  |   |
| MAR<br>12... | 0900  | 30  | 485  | 8.1   | 13.5  | 692   | 8.8  | 93   | <0.30   |
| JUL<br>19... | 1300  | 2.0   | 586  | 8.9   | 29.5  | 696   | 10.0   | 145  | --  |
| DATE         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR)              | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL     |   |
|              |   |   |  |   |   |   |  |  |   |
| MAR<br>12... | 41  | 31  | 0.80   | <0.15   | 0.600   | 0.020   | -59.0  | -8.24  |   |
| JUL<br>19... | 64  | 45  | 0.70   | 0.12  | --  | --  | --   | --   |   |

## MOJAVE RIVER BASIN

343049117154301 MOJAVE RIVER 1.1 MILE UPSTREAM FROM UPPER NARROWS BRIDGE, NEAR VICTORVILLE, CA

LOCATION.--Lat 34°30'49", long 117°15'43", in NE 1/4 NE 1/4 sec.23, T.5 N., R.4 W., San Bernardino County,  
Hydrologic Unit 18080208, 800 ft west of the end of Seneca Road, 1.1 mi upstream from Upper Narrows Bridge,  
and 2.3 mi southeast of Victorville.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |
|--------------|------|--|---|---|--------------------------------------|--|--|---|
| MAR<br>15... | 1145 | 10   | 283   | 7.5   | 20.5                                 | 696  | 7.0  | 85  |
| JUL<br>19... | 1345 | 0.66   | 442   | 7.7   | 24.0                                 | 695  | 7.4  | 97  |

| DATE         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|---|---|--|--|---|---|--|--|
| MAR<br>15... | 18  | 15  | <0.30  | <0.15  | 0.020   | 0.880   | -61.8  | -9.16  |
| JUL<br>19... | 36  | 23  | 0.20   | 0.080  | --  | --  | --   | --   |

## MOJAVE RIVER BASIN

343202117171301 MOJAVE RIVER AT UPPER NARROWS BRIDGE, AT VICTORVILLE, CA

LOCATION.--Lat 34°32'02", long 117°17'13", in NE 1/4 SW 1/4 sec.10, T.5 N., R.4 W., San Bernardino County,  
Hydrologic Unit 18090208, 100 ft downstream from Highway 18, and 0.3 mi southeast of Victorville.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>(PER-<br>CENT<br>SATUR-<br>ATION) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |
|--------------|------|--|---|---|--------------------------------------|--|-------------------------------------|--|---|
| MAR<br>15... | 1320 | 27   | 509   | 7.6   | 20.0                                 | 697  | 7.8                                 | 94   | <0.30   |
| JUL<br>17..  | 1400 | 4.8  | 600   | 7.9   | 26.5                                 | 696  | 7.4                                 | 101  | --  |

| DATE        | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|-------------|---|---|--|--|---|---|--|--|
| MAR<br>15.. | 49  | 38  | <0.30  | 0.90   | 1.14  | 0.010   | -60.6  | -8.43  |
| JUL<br>17.. | 53  | 41  | 0.40   | 0.11   | --  | --  | --   | --   |

## MOJAVE RIVER BASIN

343230117173001 MOJAVE RIVER 0.6 MILES DOWNSTREAM FROM UPPER NARROWS BRIDGE, AT VICTORVILLE, CA

LOCATION.--Lat 34°32'30", long 117°17'30", in NW 1/4 NW 1/4 sec.10, T.5 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on Mojave River 650 ft east of the end of 3rd Street, and 0.4 mi north of Victorville.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) |
|--------------|------|--|---|---|--------------------------------------|--|-------------------------------------|
| JUL<br>17... | 1100 | 2.5  | 596   | 8.2   | 27.5                                 | 695  | 8.4                                 |

| DATE         | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|--|---|---|--|--|--|--|
| JUL<br>17... | 117  | 54  | 42  | 0.40   | 0.11   | -57.3  | -7.84  |

## MOJAVE RIVER BASIN

343257117173401 MOJAVE RIVER 1.1 MILE DOWNSTREAM FROM UPPER NARROWS BRIDGE, NEAR VICTORVILLE, CA

LOCATION.--Lat 34°32'57", long 117°17'34", in NE 1/4 SW 1/4 sec.3, T.5 N., R.4 W., San Bernardino County,  
Hydrologic Unit 18090208, 150 ft upstream from I-15 bridge, 0.9 mi north of Victorville, and 1.1 mi downstream  
from Upper Narrows Bridge.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE        | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>(PER-<br>CENT<br>SATUR-<br>ATION) |
|-------------|------|--|---|---|--------------------------------------|--|--|
| MAR<br>12.. | 1435 | 29   | 450   | 8.2   | 16.0                                 | 689  | 8.6  |
| JUL<br>17.. | 1245 | 2.0  | 533   | 8.5   | 28.5                                 | 696  | 8.7  |

| DATE         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|---|---|---|--|--|---|---|
| MAR<br>12..  | <0.30   | 30  | 30  | 0.60   | 0.20   | 0.740   | <0.010  |
| JUL<br>17... | --  | 52  | 41  | 0.40   | 0.090  | --  | --  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## MOJAVE RIVER BASIN

343452117201301 MOJAVE RIVER NEAR MOJAVE HEIGHTS, CA

LOCATION.--Lat 34°34'52", long 117°20'13", in SW 1/4 NE 1/4 sec.30, T.6 N., R.4 W., San Bernardino County,  
Hydrologic Unit 18090208, 1.1 mi downstream from Route 66 Bridge, and 1.2 mi northwest of Mojave Heights.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |       |
|--------------|------|--|---|---|--------------------------------------|--|--|---|-------|
| MAR<br>12... | 1150 | 22   | 487   | 8.4   | 16.5                                 | 693  | 9.0  | 102   | <0.30 |

| DATE         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|---|---|--|--|---|---|--|--|
| MAR<br>12... | 42  | 33  | 0.80   | <0.15  | 0.020   | 0.620   | -58.5  | -8.06  |

## MOJAVE RIVER BASIN

343552117204501 MOJAVE RIVER AT ORO GRANDE, CA

LOCATION.--Lat 34°35'52", long 117°20'45", in NW 1/4 NW 1/4 sec.19, T.6 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, 0.6 mi west of Oro Grande, and 1.15 mi upstream from EPA 1 well.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |       |
|--------------|------|--|---|---|--------------------------------------|--|--|---|-------|
| MAR<br>15... | 1530 | 8.0  | 510   | 8.2   | 23.0                                 | 698  | 8.3  | 106   | <0.30 |

| DATE         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|---|---|--|--|---|---|--|--|
| MAR<br>15... | 41  | 33  | 0.70   | 0.20   | 0.010   | 0.550   | -59.5  | -7.87  |

## MOJAVE RIVER BASIN

343651117210301 MOJAVE RIVER 3.8 MILES DOWNSTREAM FROM LOWER NARROWS BRIDGE, NEAR ORO GRANDE, CA

LOCATION.--Lat 34°36'51", long 117°21'03", in NE 1/4 NE 1/4 sec.13, T.6 N., R.5 W., San Bernardino County, Hydrologic Unit 18090208, 150 ft west of EPA 1 well, 0.9 mi northwest of Oro Grande, and 3.8 mi downstream from Lower Narrows Bridge.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| 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)      | BARO-METRIC PRES-SURE (MM OF HG) | OXYGEN, DIS-SOLVED (MG/L)         | OXYGEN, (PER-CENT SATUR-ATION)                  | CALCIUM DIS-SOLVED (MG/L AS CA)                 | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)       | SODIUM, DIS-SOLVED (MG/L AS NA)           | POTAS-SIUM, DIS-SOLVED (MG/L AS K)        |  |
|-----------|-------|---|---|--|---------------------------------|----------------------------------|-----------------------------------|---|---|---|---|---|--|
|           |       |   |   |  |                                 |                                  |                                   |   |   |   |   |   |  |
| MAR 13... | 0845  | 19                                      | 540                                       | 8.0                                    | 13.0                            | 689                              | 9.1                               | 96  | 47  | 10  | 52  | 3.8                                       |  |
| JUL 18... | 1300  | 0.54                                    | 887                                       | 7.5                                    | 28.0                            | 698                              | 5.5                               | 77  | 72  | 14  | 96  | 3.6                                       |  |
| DATE      |       | SULFATE DIS-SOLVED (MG/L AS SO4)        | CHLO-RIDE, DIS-SOLVED (MG/L AS CL)        | FLUO-RIDE, DIS-SOLVED (MG/L AS F)      | BROMIDE DIS-SOLVED (MG/L AS BR) | IODIDE, DIS-SOLVED (MG/L AS I)   | 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) | 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) | NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) |
| MAR 13... | 53    | 36                                      | 0.40                                      | 0.070                                  | 0.008                           | 23                               | 337                               | 331   | 0.010   | 0.520                                     | 0.030                                     | 0.20                                      |  |
| JUL 18... | 150   | 66                                      | 0.60                                      | 0.13                                   | 0.012                           | 25                               | 567                               | 557   | 0.010   | 0.090                                     | 0.090                                     | 0.20                                      |  |
| DATE      |       | PHOS-PHORUS DIS-SOLVED (MG/L AS P)      | PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) | ARSENIC DIS-SOLVED (UG/L AS AS)        | BARIUM, DIS-SOLVED (UG/L AS BA) | BORON, DIS-SOLVED (UG/L AS B)    | IRON, DIS-SOLVED (UG/L AS FE)     | LITHIUM DIS-SOLVED (UG/L AS LI)                 | MANGA-NESE, DIS-SOLVED (UG/L AS MN)             | STRON-TIUM, DIS-SOLVED (UG/L AS SR)       | H-2 / H-1 STABLE ISOTOPE RATIO PER MIL    | O-18 / O-16 STABLE ISOTOPE RATIO PER MIL  |  |
| MAR 13... | 0.120 | 0.110                                   |   | 1                                      | 100                             | 120                              | 48                                | <10   | 120   | 500                                       | --  | --  |  |
| JUL 18... | 0.030 | 0.040                                   |   | <1                                     | 89                              | 277                              | 110                               | 5   | 430   | 800                                       | -60.2                                     | -8.35                                     |  |



## MOJAVE RIVER BASIN

343703117211401 VICTORVILLE WASTEWATER RECLAMATION OUTFLOW NEAR ORO GRANDE, CA

LOCATION.--Lat 34°37'03", long 117°21'14", in SW 1/4 SE 1/4 sec.12, T.6 N., R.5 W., San Bernardino County,  
Hydrologic Unit 18090208, on outflow from Victorville Wastewater Reclamation, 1.4 mi northwest of Oro Grande.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |
|--------------|------|--|---|---|--------------------------------------|--|-------------------------------------|--|--|--|--|---|
| MAR<br>13... | 1400 | 9.4  | 640   | 6.9   | 18.5                                 | 696  | 7.6                                 | 89   | 21   | 3.8  | 97   | 11  |
| JUL<br>19... | 1020 | 11   | 636   | 7.5   | 26.5                                 | 695  | 7.1                                 | 97   | 24   | 4.2  | 100  | 13  |

| DATE         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | IODIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS I) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTI-<br>TUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>DIS.<br>(MG/L<br>AS N) |
|--------------|---|---|--|--|---|---|--|---|---|---|---|---|
| MAR<br>13... | 51  | 76  | 0.50   | 0.030  | 0.002                                       | 24  | 406  | 401   | <0.010  | 14.0  | <0.015  | 0.80  |
| JUL<br>19... | 57  | 85  | 0.60   | 0.020  | 0.001                                       | 24  | 411  | 393   | <0.010  | 5.60  | 0.020   | 0.70  |

| DATE         | PHOS-<br>PHORUS<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|---|---|--|--|--|--|--|--|--|--|--|
| MAR<br>13... | 3.30  | 2.80  | 4  | <100   | 290  | 80   | <10  | 16   | 280  | -65.6  | -9.48  |
| JUL<br>19... | 3.70  | 3.00  | 4  | 11   | 305  | 41   | 7  | 4.0  | 320  | -66.0  | -9.27  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## MOJAVE RIVER BASIN

343732117211101 MOJAVE RIVER 5.2 MILES DOWNSTREAM FROM LOWER NARROWS BRIDGE, NEAR LA DELTA, CA

LOCATION.--Lat 34°37'32", long 117°21'11", in SW 1/4 NE 1/4 sec.12, T.6 N., R.5 W., San Bernardino County, Hydrologic Unit 18090208, on Mojave River directly west of EPA 2 well, 1.2 mi southwest of La Delta, and 5.2 mi downstream from Lower Narrows Bridge.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| 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)     | BARO-METRIC PRES-SURE (MM OF HG)  | OXYGEN, DIS-SOLVED (MG/L)                       | OXYGEN, (PER-CENT SATUR-ATION)                  | CALCIUM DIS-SOLVED (MG/L AS CA)           | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)       | SODIUM, DIS-SOLVED (MG/L AS NA)           | POTAS-SIUM, DIS-SOLVED (MG/L AS K)             |
|-----------|------------------------------------|---|-----------------------------------|--|--------------------------------|-----------------------------------|---|---|---|---|---|--|
|           |                                    |   |                                   |  |                                |                                   |   |   |   |   |   |  |
| MAR 13... | 1100                               | 29  | 607                               | 7.8                                    | 14.0                           | 691                               | 8.2   | 88  | 48  | 9.7                                       | 66  | 5.0  |
| JUL 18... | 0920                               | 7.3                                       | 717                               | 7.6                                    | 28.0                           | 699                               | 5.8   | 81  | 39  | 6.5                                       | 94  | 7.5  |
| DATE      | SULFATE DIS-SOLVED (MG/L AS SO4)   | CHLO-RIDE, DIS-SOLVED (MG/L AS CL)        | FLUO-RIDE, DIS-SOLVED (MG/L AS F) | BROMIDE DIS-SOLVED (MG/L AS BR)        | IODIDE, DIS-SOLVED (MG/L AS I) | 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) | 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) | NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) |
|           |                                    |   |                                   |  |                                |                                   |   |   |   |   |   |  |
| MAR 13... | 66                                 | 47  | 0.50                              | 0.070                                  | 0.009                          | 24                                | 375   | 372   | 0.020                                     | 0.830                                     | 0.040                                     | 0.30   |
| JUL 18... | 82                                 | 76  | 0.70                              | 0.080                                  | 0.012                          | 25                                | 438   | 435   | 0.040                                     | 2.20                                      | 0.050                                     | 0.40   |
| DATE      | PHOS-PHORUS DIS-SOLVED (MG/L AS P) | PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) | ARSENIC DIS-SOLVED (UG/L AS AS)   | BARIUM, DIS-SOLVED (UG/L AS BA)        | BORON, DIS-SOLVED (UG/L AS B)  | IRON, DIS-SOLVED (UG/L AS FE)     | LITHIUM DIS-SOLVED (UG/L AS LI)                 | MANGA-NESE, DIS-SOLVED (UG/L AS MN)             | STRON-TIUM, DIS-SOLVED (UG/L AS SR)       | H-2 / H-1 STABLE ISOTOPE RATIO PER MIL    | O-18 / O-16 STABLE ISOTOPE RATIO PER MIL  |  |
|           |                                    |   |                                   |  |                                |                                   |   |   |   |   |   |  |
| MAR 13... | 0.290                              | 0.280                                     | 1                                 | <100                                   | 170                            | 73                                | <10   | 130   | 500                                       | -58.3                                     | -7.91                                     |  |
| JUL 18... | 1.40                               | 1.50                                      | 3                                 | 45                                     | 320                            | 27                                | 5   | 170   | 440                                       | -64.1                                     | -8.93                                     |  |

## MOJAVE RIVER BASIN

343747117211701 MOJAVE RIVER 5.5 MILES DOWNSTREAM FROM LOWER NARROWS BRIDGE, NEAR LA DELTA, CA

LOCATION.--Lat 34°37'47", long 117°21'17", in NW 1/4 NE 1/4 sec.12, T.6 N., R.5 W., San Bernardino County, Hydrologic Unit 18090208, 1,670 ft downstream from EPA 2 well, 1.0 mi southwest of La Delta, and 5.5 mi downstream from Lower Narrows Bridge.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) |
|--------------|------|--|---|---|--------------------------------------|--|-------------------------------------|-------------------------------------|-------------------------------------|
| MAR<br>13... | 1230 | 31   | 617   | 7.7   | 16.5                                 | 691  | 7.9                                 | 90                                  |                                     |
| JUL<br>18... | 1500 | 12   | 700   | 7.4   | 26.0                                 | 699  | 6.0                                 | 81                                  |                                     |

| DATE         | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|--------------|---|---|---|--|--|---|---|
| MAR<br>13... | <0.30   | 70  | 52  | 0.30   | 0.20   | 0.020   | 1.35  |
| JUL<br>18... | --  | 71  | 80  | 0.60   | 0.060  | --  | --  |

## MOJAVE RIVER BASIN

343812117212201 MOJAVE RIVER 5.9 MILES DOWNSTREAM FROM LOWER NARROWS BRIDGE, NEAR LA DELTA, CA

LOCATION.--Lat 34°38'12", long 117°21'22", in SW 1/4 NE 1/4 sec.1, T.6 N., R.5 W., San Bernardino County, Hydrologic Unit 1809008, near EPA 4 well, 3,500 ft west of Robinson Ranch Road, 0.7 mi west of La Delta, and 5.9 mi downstream from Lower Narrows Bridge.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>(PER-<br>CENT<br>SATUR-<br>ATION) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA) | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG) | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA) | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) |
|--------------|------|--|---|---|--------------------------------------|--|-------------------------------------|--|--|--|--|---|
| MAR<br>13... | 1315 | 35   | 622   | 7.9   | 17.5                                 | 690  | 7.7                                 | 89   | 44   | 8.6  | 73   | 6.3   |
| JUL<br>18... | 1610 | 11   | 688   | 8.2   | 26.0                                 | 699  | 7.0                                 | 95   | 34   | 5.6  | 98   | 8.7   |

| DATE         | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | IODIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS I) | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS,<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>DIS.<br>(MG/L<br>AS N) |
|--------------|---|---|--|--|---|---|--|--|---|---|---|---|
| MAR<br>13... | 65  | 55  | 0.50   | 0.070  | 0.009                                       | 23  | 383  | 381  | 0.030   | 2.20  | 0.040   | 0.30  |
| JUL<br>18... | 74  | 79  | 0.70   | 0.070  | 0.012                                       | 25  | 433  | 428  | 0.030   | 1.90  | 0.050   | 0.40  |

| DATE         | PHOS-<br>PHORUS<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | PHOS-<br>PHORUS<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS) | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B) | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE) | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI) | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN) | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR) | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL |
|--------------|---|---|--|--|--|--|--|--|--|--|--|
| MAR<br>13... | 0.730   | 0.710   | 2  | <100   | 230  | 51   | <10  | 27   | 470  | -55.2  | -8.59  |
| JUL<br>18... | 1.90  | 2.10  | 4  | 36   | 327  | 13   | 6  | 9.0  | 410  | -63.8  | -8.98  |

## MOJAVE RIVER BASIN

343927117213401 MOJAVE RIVER NEAR BRYMAN, CA

LOCATION.--Lat 34°39'27", long 117°21'34", in NE 1/4 NW 1/4 sec.36, T.7 N., R.5 W., San Bernardino County,  
Hydrologic Unit 18090208, 1.5 mi downstream from EPA 4 well and 1.5 mi southwest of Bryman.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(MG/L) | OXYGEN,<br>DIS-<br>SOLVED<br>SATUR-<br>ATION | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO <sub>4</sub> ) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) |
|--------------|------|--|---|---|--------------------------------------|--|-------------------------------------|--|--|---|--|--|
| JUL<br>19... | 2000 | 8.4  | 723   | 8.0   | 23.0                                 | 699  | 8.8                                 | 112  | 72   | 72  | 0.60   | 0.070  |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## MOJAVE RIVER BASIN

344036117211701 MOJAVE RIVER AT BRYMAN, CA

LOCATION.--Lat 34°40'36", long 117°21'17", in SW 1/4 SE 1/4 sec.24, T.7 N., R.5 W., San Bernardino County, Hydrologic Unit 18090208, 1,000 ft downstream from Bryman Road and 0.75 mi west of Bryman.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE  | TIME | DIS-<br>CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C) | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) |
|-------|------|--|---|---|--------------------------------------|--|--|
| MAR   |      |  |   |   |                                      |  |  |
| 13... | 1620 | 34.3   | 631   | 7.9   | 14.0                                 | 692  | 8.4 90   |
| JUL   |      |  |   |   |                                      |  |  |
| 18... | 1800 | 4.0  | 728   | 7.9   | 25.0                                 | 699  | 8.1 107  |

| DATE  | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K) | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4) | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL) | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F) | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
|-------|---|---|---|--|--|---|---|
| MAR   |   |   |   |  |  |   |   |
| 13... | <0.30   | 74  | 56  | <0.30  | 0.20   | 0.010   | 1.83  |
| JUL   |   |   |   |  |  |   |   |
| 18... | --  | 78  | 80  | 0.70   | 0.080  | --  | --  |

344135117211801 MOJAVE RIVER 3.4 MILES UPSTREAM FROM HARPER LAKE ROAD, NEAR BRYMAN, CA

LOCATION.--Lat 34°41'35", long 117°21'18", in NE 1/4 SE 1/4 sec.13, T.7 N., R.5 W., San Bernardino County,  
Hydrologic Unit 18090208, near EPA 5 well, 1.6 mi downstream from Ford Road, 11.6 mi north of Bryman, and  
3.4 mi upstream from Harper Lake Road.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1995 to September 1996.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | DIS-CHARGE,<br>INST.<br>CUBIC<br>FEET<br>PER<br>SECOND | SPE-CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM)                 | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | TEMPER-<br>ATURE<br>WATER<br>(DEG C)         | BARO-<br>METRIC<br>PRES-<br>SURE<br>(MM<br>OF<br>HG) | OXYGEN,<br>DIS-<br>SOLVED<br>(PER-<br>CENT<br>SATUR-<br>ATION) | CALCIUM<br>DIS-<br>SOLVED<br>(MG/L<br>AS CA)                       | MAGNE-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS MG)          | SODIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS NA)                  | POTAS-<br>SIUM,<br>DIS-<br>SOLVED<br>(MG/L<br>AS K)               |   |   |
|--------------|------|--|---|---|--|--|--|--|---|---|---|---|---|
| MAR<br>13... | 1650 | 31   | 632   | 8.1   | 13.5   | 694  | 9.0  | 95   | 41  | 7.9   | 76  | 6.4   |   |
| DATE         |      | SULFATE<br>DIS-<br>SOLVED<br>(MG/L<br>AS SO4)          | CHLO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS CL)           | FLUO-<br>RIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS F)        | IODIDE,<br>DIS-<br>SOLVED<br>(MG/L<br>AS I)  | BROMIDE<br>DIS-<br>SOLVED<br>(MG/L<br>AS BR)         | SILICA,<br>DIS-<br>SOLVED<br>(MG/L<br>AS<br>SIO2)              | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) | SOLIDS<br>SUM OF<br>CONSTITUENTS,<br>DIS-<br>SOLVED<br>(MG/L) | NITRO-<br>GEN,<br>NITRITE<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,AM-<br>MONIA +<br>ORGANIC<br>DIS.<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>NO2+NO3<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) | NITRO-<br>GEN,<br>AMMONIA<br>DIS-<br>SOLVED<br>(MG/L<br>AS N) |
| MAR<br>13... | 66   | 58   | 0.50  | 0.009   | 0.060  | 23   | 388  | 384  | 0.010   | 0.30  | 1.90  | <0.015  |   |
| DATE         |      | PHOS-<br>PHORUS<br>DIS-<br>SOLVED<br>(MG/L<br>AS P)    | PHOS-<br>PHORUS<br>ORTHO,<br>DIS-<br>SOLVED<br>(MG/L<br>AS P) | ARSENIC<br>DIS-<br>SOLVED<br>(UG/L<br>AS AS)              | BARIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS BA) | BORON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS B)           | IRON,<br>DIS-<br>SOLVED<br>(UG/L<br>AS FE)                     | LITHIUM<br>DIS-<br>SOLVED<br>(UG/L<br>AS LI)                       | MANGA-<br>NESE,<br>DIS-<br>SOLVED<br>(UG/L<br>AS MN)          | STRON-<br>TIUM,<br>DIS-<br>SOLVED<br>(UG/L<br>AS SR)          | H-2 /<br>H-1<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL          | O-18 /<br>O-16<br>STABLE<br>ISOTOPE<br>RATIO<br>PER<br>MIL    |   |
| MAR<br>13... |      | 0.750  | 0.700   | 3   | <100   | 240  | 15   | <10  | 2.0   | 450   | -61.5   | -8.66   |   |

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS

## 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 September 1996 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| DATE         | TIME | SPE-<br>CIFIC<br>CON-<br>DUCT-<br>ANCE<br>(US/CM) | PH<br>WATER<br>WHOLE<br>FIELD<br>(STAND-<br>ARD<br>UNITS) | SOLIDS,<br>RESIDUE<br>AT 180<br>DEG. C<br>DIS-<br>SOLVED<br>(MG/L) |
|--------------|------|---|---|--|
| FEB<br>22... | 1520 | 122   | 7.3   | 86   |



## 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 current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

| 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) | CALCIUM DIS-SOLVED (MG/L AS CA) | MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) | SODIUM, DIS-SOLVED (MG/L AS NA) | SODIUM PERCENT |
|-----------|------|---|---------------------------------|--|----------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------------|----------------|
| AUG 19... | 1730 | 5.8                                     | 2590                            | 7.6                                    | 20.0                       | 1200                            | 260                             | 130                                 | 180                             | 25             |

| DATE      | 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) | SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) |
|-----------|---------------------------|------------------------------------|--|---|--|----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|---|
| AUG 19... | 2                         | 11                                 | 372  | 0   | 305  | 880                              | 220                                | 0.40                              | 33                                | 2000  |

| DATE      | 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 DIS-SOLVED (MG/L AS P) | 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) |
|-----------|-------------------------------------|---|---|---|------------------------------------|---|-------------------------------|-------------------------------|-------------------------------------|
| AUG 19... | 2.72                                | 0.310                                     | 22.0                                      | 0.330                                     | 0.500                              | 0.550                                     | 343                           | 40                            | 130                                 |



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## CONVERSION FACTORS AND VERTICAL DATUM

| Multiply   | By                     | To obtain                  |
|--|------------------------|----------------------------|
| <i>Length</i>                                      |                        |                            |
| inch (in.)   | $2.54 \times 10^1$     | millimeter                 |
|  | $2.54 \times 10^{-2}$  | meter                      |
| foot (ft)  | $3.048 \times 10^{-1}$ | meter                      |
| mile (mi)  | $1.609 \times 10^0$    | kilometer                  |
| <i>Area</i>  |                        |                            |
| acre   | $4.047 \times 10^3$    | square meter               |
|  | $4.047 \times 10^{-1}$ | square hectometer          |
|  | $4.047 \times 10^{-3}$ | square kilometer           |
| square mile (mi <sup>2</sup> )                     | $2.590 \times 10^0$    | square kilometer           |
| <i>Volume</i>                                      |                        |                            |
| gallon (gal)                                       | $3.785 \times 10^0$    | liter                      |
|  | $3.785 \times 10^0$    | cubic decimeter            |
|  | $3.785 \times 10^{-3}$ | cubic meter                |
| million gallons (Mgal)                             | $3.785 \times 10^3$    | cubic meter                |
|  | $3.785 \times 10^{-3}$ | cubic hectometer           |
| cubic foot (ft <sup>3</sup> )                      | $2.832 \times 10^1$    | cubic decimeter            |
|  | $2.832 \times 10^{-2}$ | cubic meter                |
| cubic-foot-per-second day [(ft <sup>3</sup> /s) d] | $2.447 \times 10^3$    | cubic meter                |
|  | $2.447 \times 10^{-3}$ | cubic hectometer           |
| acre-foot (acre-ft)                                | $1.233 \times 10^3$    | cubic meter                |
|  | $1.233 \times 10^{-3}$ | cubic hectometer           |
|  | $1.233 \times 10^{-6}$ | cubic kilometer            |
| <i>Flow</i>  |                        |                            |
| cubic foot per second (ft <sup>3</sup> /s)         | $2.832 \times 10^1$    | liter per second           |
|  | $2.832 \times 10^1$    | cubic decimeter per second |
|  | $2.832 \times 10^{-2}$ | cubic meter per second     |
| gallon per minute (gal/min)                        | $6.309 \times 10^{-2}$ | liter per second           |
|  | $6.309 \times 10^{-2}$ | cubic decimeter per second |
|  | $6.309 \times 10^{-5}$ | cubic meter per second     |
| million gallons per day (Mgal/d)                   | $4.381 \times 10^1$    | cubic decimeter per second |
|  | $4.381 \times 10^{-2}$ | cubic meter per second     |
| <i>Mass</i>  |                        |                            |
| ton (short)  | $9.072 \times 10^{-1}$ | megagram or metric ton     |

*Sea level:* In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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