

1966

# Water Resources Data for California

*Hydrographs: ...*

- 1. Strongberg-Carlson Plot g/l/y*
- 2. line plotter - annual*

## Part 1. Surface Water Records

Volume 1: Colorado River Basin, Southern  
Great Basin, and Pacific Slope Basins  
excluding Central Valley.

*On Discont'd Sta: All data sent to  
Fed. Rec'd Ctr.*

*Note: From 1951 thru 1966 MP Subd Files contain  
9-142a (or 9-142-M or Prelim. Comp. Sht) for all Fld Offs.  
Previous to 1951, all 9-142a are in Fed. Rec'd Ctr. a 9-211M  
From 1979 on, the 3 Fld Off retain Prelim Comp Sht (9-142a); we have only*



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

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



United States Department of the Interior  
Geological Survey - Water Resources Division

WATER RESOURCES DATA  
FOR  
CALIFORNIA  
1966

Part 1: Surface Water Records  
Volume 1: Colorado River Basin, Southern  
Great Basin, and Pacific Slope  
Basins excluding Central Valley

Prepared in cooperation with

California Department of Water Resources  
Alameda County Flood Control and Water Conservation District  
Alameda County Water District  
Calaveras County Water District  
Coachella Valley County Water District  
Contra Costa County Flood Control and Water Conservation District  
Lake County Flood Control and Water Conservation District  
Montecito County Water District  
Monterey County Flood Control and Water Conservation District  
Santa Clara County Flood Control and Water Conservation District  
Orange County Flood Control District  
Riverside County Flood Control and Water Conservation District  
San Luis Obispo County Flood Control and Water Conservation District  
San Mateo County  
Santa Barbara County Water Agency  
Santa Cruz County Flood Control and Water Conservation District  
San Francisco (county and city)  
Santa Barbara (city)  
San Diego (city)  
Antelope Valley-East Kern Water Agency  
East Bay Municipal Utility District  
Georgetown Divide Public Utility District  
Imperial Irrigation District  
San Bernardino Valley Water Conservation District  
Santa Maria Valley Water Conservation District  
Ventura River Municipal Water District  
Corps of Engineers, U.S. Army  
U.S. Navy  
Bureau of Reclamation, U.S. Department of the Interior  
Forest Service, U.S. Department of Agriculture

Copies of this report may be obtained from  
District Chief, Water Resources Division  
U.S. Geological Survey  
345 Middlefield Road  
Menlo Park, California, 94025

Water-resources records, 1966, for California are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for California  
Part 1: Surface Water Records  
Volume 1: Colorado River Basin, Southern Great Basin, and Pacific Slope Basins excluding Central Valley
2. Water Resources Data for California  
Part 1: Surface Water Records  
Volume 2: Northern Great Basin and Central Valley
3. Water Resources Data for California  
Part 2: Water Quality Records



# CALENDAR FOR WATER YEAR 1966

## OCTOBER 1965

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

## NOVEMBER 1965

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

## DECEMBER 1965

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

## JANUARY 1966

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

## FEBRUARY 1966

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

## MARCH 1966

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

## APRIL 1966

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

## MAY 1966

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

## JUNE 1966

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

## JULY 1966

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

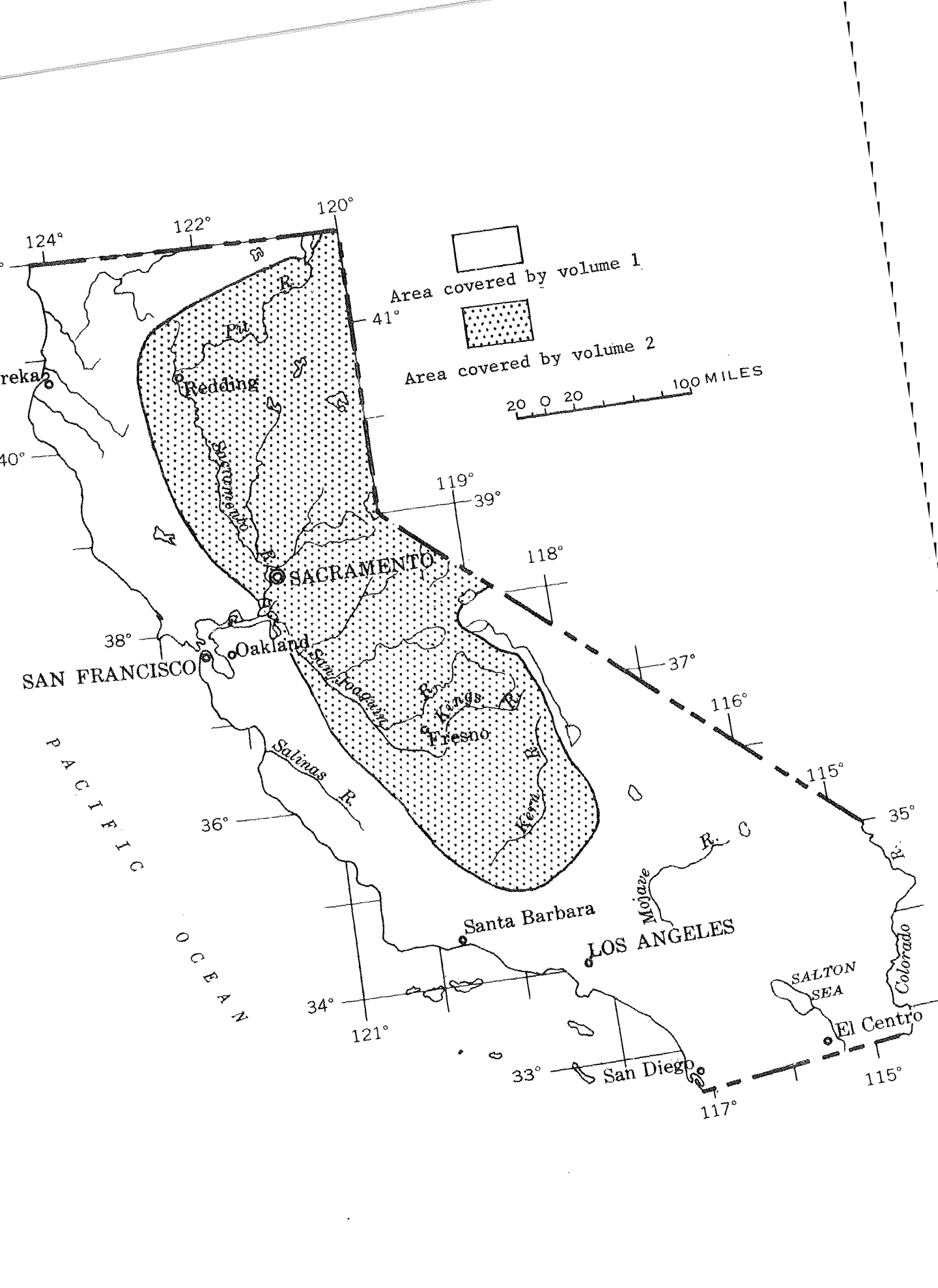
## AUGUST 1966

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

## SEPTEMBER 1966

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







## CONTENTS

---

|  | Page |
|--|------|
| Introduction-----  | 1    |
| Cooperation-----   | 2    |
| Definition of terms and abbreviations-----   | 3    |
| Downstream order and station numbers-----  | 5    |
| Explanation of data-----   | 5    |
| Accuracy of field data and computed results-----   | 8    |
| Other data available-----  | 9    |
| Hydrologic conditions-----   | 10   |
| Gaging-station records-----  | 12   |
| <u>Colorado River</u>  |      |
| Colorado River below Davis Dam, Ariz.-Nev-----   | 12   |
| Colorado River at Needles-----   | 13   |
| Colorado River near Topock, Ariz-----  | 14   |
| Chemehuevi Wash tributary near Needles-----  | 15   |
| Lake Havasu:   |      |
| <u>Diversion from Lake Havasu</u>  |      |
| Colorado River aqueduct near Parker Dam, Ariz.-Calif-----                                  | 16   |
| Lake Havasu near Parker Dam, Ariz.-Calif-----  | 17   |
| Colorado River below Parker Dam, Ariz.-Calif-----  | 19   |
| <u>Tributaries and diversions between Parker Dam and Palo Verde Dam</u>                    |      |
| Arch Creek near Earp-----  | 20   |
| Palo Verde Canal near Blythe-----  | 21   |
| Colorado River below Palo Verde Dam, Ariz.-Calif-----                                      | 22   |
| Colorado River at Imperial Dam, Ariz.-Calif-----   | 23   |
| Colorado River below Yuma Main Canal wasteway, at Yuma, Ariz-----                          | 24   |
| Colorado River at northerly international boundary above Morelos<br>Dam, near Andrade----- | 25   |
| <u>Diversions and return flows at and below Imperial Dam</u>                               |      |
| Gila Gravity Main Canal at Imperial Dam, Ariz.-Calif-----                                  | 26   |
| All-American Canal near Imperial Dam, Ariz.-Calif-----                                     | 27   |
| Pilot Knob powerplant and wasteway near Pilot Knob-----                                    | 28   |
| All-American Canal below Pilot Knob wasteway-----  | 29   |
| Return surface flows below Imperial Dam, Ariz.-Calif-----                                  | 30   |
| <u>Panamint Valley</u>   |      |
| Wildrose Creek near Wildrose Station-----  | 37   |
| Darwin Creek near Darwin-----  | 38   |
| <u>Death Valley</u>  |      |
| Big Dip Creek near Stovepipe Wells-----  | 38   |
| Amargosa River at Tecopa-----  | 39   |
| Horse Thief Creek near Tecopa-----   | 40   |
| <u>Ivanpah Valley</u>  |      |
| China Spring Creek near Mountain Pass-----   | 40   |
| Wheaton Wash near Mountain Pass-----   | 40   |
| <u>Bristol Lake basin</u>  |      |
| Caruthers Creek near Ivanpah-----  | 41   |

|  | Page |
|--|------|
| Gaging-station records--Continued                    |      |
| <u>Danby Lake basin</u>                              |      |
| Sunflower Wash near Essex-----                       | 42   |
| <u>Dale Lake basin</u>                               |      |
| Quail Wash near Joshua Tree-----                     | 42   |
| Fortynine Palms Creek near Twentynine Palms-----     | 42   |
| <u>Chuckwalla Valley</u>                             |      |
| Corn Springs Wash near Desert Center-----            | 43   |
| Eagle Creek at Eagle Mountain-----                   | 43   |
| <u>Salton Sea basin</u>                              |      |
| Salton Sea near Westmoreland-----                    | 44   |
| Inflow to Salton Sea-----                            | 44   |
| Salt Creek near Mecca-----                           | 45   |
| Alamo River near Niland-----                         | 46   |
| New River near Westmoreland-----                     | 47   |
| San Felipe Creek near Julian-----                    | 48   |
| Coyote Creek near Borrego Springs-----               | 49   |
| Borrego Palm Creek near Borrego Springs-----         | 50   |
| Yaqui Pass Wash near Borrego-----                    | 51   |
| Carrizo Creek:                                       |      |
| Vallecito Creek near Julian-----                     | 51   |
| San Felipe Creek near Westmoreland-----              | 52   |
| Whitewater River at White Water-----                 | 53   |
| San Gorgonio River near White Water-----             | 54   |
| Snow Creek near White Water-----                     | 55   |
| Morongo Wash:  |      |
| Long Creek near Desert Hot Springs-----              | 56   |
| Tahquitz Creek near Palm Springs-----                | 57   |
| Palm Canyon Creek near Palm Springs-----             | 58   |
| Andreas Creek near Palm Springs-----                 | 59   |
| Deep Creek near Palm Desert-----                     | 60   |
| Whitewater River at Indio-----                       | 61   |
| Whitewater River near Mecca-----                     | 62   |
| Cottonwood Wash near Cottonwood Spring-----          | 63   |
| Wasteway No. 1 near Mecca-----                       | 63   |
| <u>Emerson Lake basin</u>                            |      |
| Pipes Creek near Yucca Valley-----                   | 64   |
| <u>Lucerne Dry Lake basin</u>                        |      |
| Cushenbury Creek near Lucerne Valley-----            | 64   |
| <u>Mojave River basin</u>                            |      |
| Deep Creek (head of Mojave River) near Hesperia----- | 65   |
| West Fork Mojave River near Hesperia-----            | 66   |
| Mojave River at lower narrows, near Victorville----- | 67   |
| Beacon Creek at Helendale-----                       | 68   |
| Mojave River at Wild Crossing, near Helendale-----   | 68   |
| Mojave River at Barstow-----                         | 69   |
| Mojave River at Afton-----                           | 70   |
| <u>Antelope Valley</u>                               |      |
| Big Rock Creek near Valyermo-----                    | 71   |
| Cooper Creek:  |      |
| Buckhorn Creek near Valyermo-----                    | 72   |

# CONTENTS

VII

Page

## Gaging-station records--Continued

### Antelope Valley--Continued

|   |    |
|---|----|
| Little Rock Creek near Little Rock----- | 73 |
| Spencer Canyon Creek near Fairmont----- | 74 |
| Oak Creek near Mojave-----              | 75 |

### Koehn Lake basin

|                                   |    |
|-----------------------------------|----|
| Goler Gulch near Randsburg-----   | 76 |
| Cache Creek near Mojave-----      | 76 |
| Pine Tree Creek near Mojave-----  | 77 |
| Cottonwood Creek near Cantil----- | 77 |

### Indian Wells Valley

|   |    |
|---|----|
| Little Lake Creek near Little Lake----- | 78 |
| Ninemile Creek near Brown-----          | 79 |

### Owens Lake basin

#### Owens River:

|   |    |
|---|----|
| Convict Creek near Mammoth Lakes-----                         | 80 |
| Rock Creek at Little Round Valley, near Bishop-----           | 81 |
| Pine Creek at diversion box, near Bishop-----                 | 82 |
| Silver Canyon Creek near Laws-----                            | 83 |
| Big Pine Creek near Big Pine-----                             | 84 |
| Owens River near Big Pine-----                                | 86 |
| Independence Creek below Pinyon Creek, near Independence----- | 87 |
| Mazourka Creek near Independence-----                         | 88 |
| Owens River at Keeler Bridge, near Lone Pine-----             | 88 |
| Cottonwood Creek near Olancho-----                            | 89 |

### Mono Lake basin

|  |    |
|--|----|
| Mono Lake near Mono Lake-----                    | 90 |
| Rush Creek above Grant Lake, near June Lake----- | 91 |
| Lee Vining Creek near Lee Vining-----            | 92 |

### Tia Juana River basin

|   |    |
|---|----|
| Cottonwood Creek (head of Tia Juana River) at Morena Dam-----   | 93 |
| Cottonwood Creek at Barrett Dam, near Dulzura-----              | 94 |
| Cottonwood Creek above Tecate Creek, near Dulzura-----          | 95 |
| Tecate Creek:   |    |
| Campo Creek near Campo-----                                     | 96 |
| Tia Juana River near Dulzura-----                               | 97 |
| Rodriguez Reservoir at Rodriguez Dam, Baja California, Mex----- | 98 |
| Tia Juana River near Nestor-----                                | 99 |

### Otay River basin

|  |     |
|--|-----|
| Jamul Creek (head of Otay River) near Jamul----- | 100 |
|--|-----|

### Sweetwater River basin

#### Sweetwater River:

|  |     |
|--|-----|
| Japacha Creek near Descanso-----                   | 101 |
| Sweetwater River near Descanso-----                | 102 |
| Sweetwater River at Loveland Dam, near Alpine----- | 104 |
| Sweetwater River at Sweetwater Dam-----            | 105 |

### San Diego River basin

#### San Diego River:

|   |     |
|---|-----|
| Boulder Creek at Cuyamaca Reservoir, near Julian----- | 106 |
| San Diego River at El Capitan Dam-----                | 107 |
| San Diego River near Santee-----                      | 108 |

|  | Page |
|--|------|
| Gaging-station records--Continued                                    |      |
| <u>Los Penasquitos Creek basin</u>                                   |      |
| Los Penasquitos Creek near Poway-----                                | 109  |
| <u>San Dieguito River basin</u>                                      |      |
| Santa Ysabel Creek (head of San Dieguito River) at Sutherland Dam--- | 110  |
| Santa Ysabel Creek near Ramona-----                                  | 111  |
| Santa Ysabel Creek near San Pasqual-----                             | 112  |
| Guejito Creek near San Pasqual-----                                  | 113  |
| Santa Maria Creek near Ramona-----                                   | 114  |
| San Dieguito River near San Pasqual-----                             | 115  |
| San Dieguito River at Lake Hodges-----                               | 116  |
| <u>San Luis Rey River basin</u>                                      |      |
| San Luis Rey River:  |      |
| Agua Caliente Creek near Warner Springs-----                         | 117  |
| West Fork San Luis Rey River near Warner Springs-----                | 118  |
| San Luis Rey River at Lake Henshaw, near Mesa Grande-----            | 119  |
| Pauma Creek near Pauma Valley-----                                   | 120  |
| San Luis Rey tributary near Pala-----                                | 122  |
| San Luis Rey River at Monserate Narrows, near Pala-----              | 123  |
| San Luis Rey River near Bonsall-----                                 | 124  |
| San Luis Rey River at Oceanside-----                                 | 125  |
| <u>Santa Margarita River basin</u>                                   |      |
| Temecula Creek (head of Santa Margarita River) near Aguanga-----     | 126  |
| Temecula Creek at Vail Dam-----                                      | 127  |
| Murrieta Creek at Temecula-----                                      | 128  |
| Santa Margarita River near Temecula-----                             | 129  |
| Santa Margarita River near Fallbrook-----                            | 130  |
| De Luz Creek near Fallbrook-----                                     | 131  |
| Santa Margarita River at Ysidora-----                                | 132  |
| <u>Las Flores Creek basin</u>  |      |
| Las Flores Creek near Oceanside-----                                 | 133  |
| <u>San Onofre Creek basin</u>  |      |
| San Onofre Creek near San Onofre-----                                | 134  |
| San Onofre Creek at San Onofre-----                                  | 135  |
| <u>San Mateo Creek basin</u>   |      |
| San Mateo Creek near San Clemente-----                               | 136  |
| Cristianitos Creek near San Clemente-----                            | 137  |
| San Mateo Creek at San Onofre-----                                   | 138  |
| <u>San Juan Creek basin</u>  |      |
| San Juan Creek near San Juan Capistrano-----                         | 139  |
| Arroyo Trabuco near San Juan Capistrano-----                         | 141  |
| <u>Aliso Creek basin</u>   |      |
| Aliso Creek at El Toro-----  | 142  |
| <u>Peters Canyon Wash basin</u>                                      |      |
| Peters Canyon Wash:  |      |
| San Diego Creek near Irvine-----                                     | 143  |
| <u>Santa Ana River basin</u>   |      |
| Santa Ana River:   |      |
| Bear Creek:  |      |
| Big Bear Lake near Big Bear Lake-----                                | 145  |



# CONTENTS

IX

|  | Page |
|--|------|
| Gaging-station records--Continued                            |      |
| Santa Ana River basin--Continued                             |      |
| Santa Ana River near Mentone-----                            | 146  |
| Mill Creek near Yucaipa-----                                 | 148  |
| Plunge Creek near East Highlands-----                        | 150  |
| City Creek near Highland-----                                | 152  |
| Santa Ana River at Waterman Avenue, at San Bernardino-----   | 154  |
| San Timoteo Creek:   |      |
| Little San Gorgonio Creek near Beaumont-----                 | 155  |
| San Timoteo Creek near Redlands-----                         | 155  |
| Warm Creek:  |      |
| East Twin Creek near Arrowhead Springs-----                  | 156  |
| Waterman Canyon Creek near Arrowhead Springs-----            | 157  |
| Warm Creek Floodway at San Bernardino-----                   | 158  |
| Warm Creek near San Bernardino-----                          | 159  |
| Meeks & Daley Canal near Colton-----                         | 160  |
| Lytle Creek near Fontana-----                                | 161  |
| Cajon Creek near Keenbrook-----                              | 163  |
| Lone Pine Creek near Keenbrook-----                          | 164  |
| Devil Canyon Creek near San Bernardino-----                  | 165  |
| Lytle Creek at Colton-----                                   | 166  |
| Santa Ana River at Colton-----                               | 167  |
| Santa Ana River at Riverside Narrows, near Arlington-----    | 168  |
| Sheehan ditch at Riverside Narrows, near Arlington-----      | 169  |
| Day Creek near Etiwanda-----                                 | 170  |
| Santa Ana River at Auburndale Bridge, near Corona-----       | 172  |
| San Jacinto River:   |      |
| Lake Hemet near Idyllwild-----                               | 173  |
| South Fork San Jacinto River tributary near Valle Vista----- | 174  |
| San Jacinto River near San Jacinto-----                      | 175  |
| Bautista Creek near Hemet-----                               | 177  |
| San Jacinto River near Elsinore-----                         | 178  |
| Elsinore Lake at Elsinore-----                               | 179  |
| Temescal Creek near Corona-----                              | 180  |
| Chino Creek:   |      |
| San Antonio Creek near Claremont-----                        | 181  |
| San Antonio Creek below San Antonio Dam-----                 | 183  |
| Cucamonga Creek near Upland-----                             | 184  |
| Santa Ana River below Prado Dam-----                         | 185  |
| Carbon Creek below Carbon Canyon Dam-----                    | 186  |
| Santiago Creek at Modjeska-----                              | 187  |
| Santiago Creek at Santiago Dam, near Villa Park-----         | 188  |
| Santiago Creek at Santa Ana-----                             | 189  |
| Santa Ana River at Santa Ana-----                            | 190  |
| <u>San Gabriel River basin</u>                               |      |
| East Fork San Gabriel River near Camp Bonita-----            | 192  |
| West Fork San Gabriel River at Camp Rincon-----              | 193  |
| San Gabriel River near Azusa-----                            | 194  |
| Fish Creek near Duarte-----                                  | 195  |

|  | Page |
|--|------|
| Gaging-station records--Continued                            |      |
| San Gabriel River basin--Continued                           |      |
| San Gabriel River below Santa Fe Dam, near Baldwin Park----- | 196  |
| Walnut Creek:  |      |
| Dalton Creek:  |      |
| San Dimas Creek below San Dimas Dam-----                     | 197  |
| Little Dalton Creek near Glendora-----                       | 198  |
| San Jose Creek near El Monte-----                            | 199  |
| San Gabriel River above Whittier Narrows Dam-----            | 200  |
| San Gabriel River at Pico-----                               | 201  |
| San Gabriel River at Spring Street, near Los Alamitos-----   | 202  |
| Coyote Creek:  |      |
| Brea Creek below Brea Dam, near Fullerton-----               | 203  |
| Brea Creek at Fullerton-----                                 | 204  |
| Fullerton Creek below Fullerton Dam, near Brea-----          | 205  |
| Fullerton Creek at Richman Avenue, near Fullerton-----       | 206  |
| Coyote Creek at Los Alamitos-----                            | 207  |
| <u>Los Angeles River basin</u>                               |      |
| Los Angeles River at Sepulveda Dam-----                      | 208  |
| Pacoima Creek near San Fernando-----                         | 209  |
| Tujunga Creek below Mill Creek, near Colby Ranch-----        | 210  |
| Tujunga Creek near Sunland-----                              | 211  |
| Little Tujunga Creek near San Fernando-----                  | 212  |
| Tujunga Creek below Hansen Dam-----                          | 213  |
| Los Angeles River at Los Angeles-----                        | 214  |
| Arroyo Seco near Pasadena-----                               | 215  |
| Los Angeles River near Downey-----                           | 216  |
| Rio Hondo:   |      |
| Santa Anita Creek near Sierra Madre-----                     | 217  |
| Eaton Creek near Pasadena-----                               | 218  |
| Rio Hondo above Whittier Narrows Dam-----                    | 219  |
| Rio Hondo near Montebello-----                               | 220  |
| Mission Creek near Montebello-----                           | 221  |
| Mission Creek below Whittier Narrows Dam-----                | 222  |
| Rio Hondo near Downey-----                                   | 223  |
| Los Angeles River at Long Beach-----                         | 224  |
| <u>Ballona Creek basin</u>                                   |      |
| Ballona Creek near Culver City-----                          | 225  |
| <u>Topanga Creek basin</u>                                   |      |
| Topanga Creek near Topanga Beach-----                        | 226  |
| <u>Malibu Creek basin</u>                                    |      |
| Malibu Creek at Crater Camp, near Calabasas-----             | 227  |
| <u>Santa Clara River basin</u>                               |      |
| Santa Clara River at Los Angeles-Ventura County line-----    | 228  |
| Piru Creek above Lake Piru-----                              | 229  |
| Lake Piru near Piru-----                                     | 230  |
| Piru Creek below Santa Felicia Dam-----                      | 231  |
| Hopper Creek near Piru-----                                  | 232  |
| Sespe Creek near Wheeler Springs-----                        | 233  |
| Sespe Creek near Fillmore-----                               | 234  |
| Santa Paula Creek near Santa Paula-----                      | 236  |

# CONTENTS

XI

|  | Page |
|--|------|
| Gaging-station records--Continued                                |      |
| <u>Ventura River basin</u>                                       |      |
| Matilija Creek (head of Ventura River) above reservoir, near     |      |
| Matilija Hot Springs-----  | 237  |
| Matilija Creek at Matilija Hot Springs-----                      | 238  |
| North Fork Matilija Creek at Matilija Hot Springs-----           | 239  |
| Ventura River near Meiners Oaks-----                             | 240  |
| San Antonio Creek at Casitas Springs-----                        | 241  |
| Coyote Creek near Oak View-----                                  | 242  |
| Santa Ana Creek near Oak View-----                               | 243  |
| Ventura River near Ventura-----                                  | 244  |
| <u>Carpinteria Creek basin</u>                                   |      |
| Carpinteria Creek near Carpinteria-----                          | 246  |
| <u>Atascadero Creek basin</u>                                    |      |
| Atascadero Creek near Goleta-----                                | 247  |
| <u>San Jose Creek basin</u>                                      |      |
| San Jose Creek near Goleta-----                                  | 248  |
| <u>Jalama Creek basin</u>  |      |
| Jalama Creek near Lompoc-----                                    | 249  |
| <u>Santa Ynez River basin</u>                                    |      |
| Santa Ynez River at Jameson Lake, near Montecito-----            | 250  |
| Santa Ynez River above Gibraltar Dam, near Santa Barbara-----    | 251  |
| Santa Ynez River below Gibraltar Dam, near Santa Barbara-----    | 252  |
| Santa Ynez River below Los Laureles Canyon, near Santa Ynez----- | 253  |
| Santa Cruz Creek near Santa Ynez-----                            | 254  |
| Lake Cachuma near Santa Ynez-----                                | 255  |
| Santa Ynez River near Santa Ynez-----                            | 256  |
| Santa Agueda Creek near Santa Ynez-----                          | 257  |
| Alisal Creek near Solvang-----                                   | 258  |
| Santa Ynez River at Solvang-----                                 | 259  |
| Zaca Creek near Buellton-----                                    | 260  |
| Santa Ynez River near Buellton-----                              | 261  |
| Santa Ynez River at Cooper's Reef, near Lompoc-----              | 262  |
| Salsipuedes Creek near Lompoc-----                               | 263  |
| Santa Ynez River at narrows, near Lompoc-----                    | 264  |
| Santa Ynez River at 13th Street, near Lompoc-----                | 265  |
| Santa Ynez River at Pine Caynon, near Lompoc-----                | 266  |
| <u>San Antonio Creek basin</u>                                   |      |
| San Antonio Creek near Casmalia-----                             | 267  |
| San Antonio Creek tributary near Casmalia-----                   | 268  |
| <u>Santa Maria River basin</u>                                   |      |
| Cuyama River (head of Santa Maria River):                        |      |
| Aliso Canyon Creek near New Cuyama-----                          | 268  |
| Cuyama River below Buckhorn Canyon, near Santa Maria-----        | 269  |
| Alamo Creek near Nipomo-----                                     | 270  |
| Huasna River near Arroyo Grande-----                             | 270  |
| Cuyama River below Twitchell Dam-----                            | 271  |
| Sisquoc River near Sisquoc-----                                  | 272  |
| La Brea Creek near Sisquoc-----                                  | 273  |
| Foxen Creek near Sisquoc-----                                    | 274  |
| Tepusquet Creek near Sisquoc-----                                | 275  |

|  | Page |
|--|------|
| Gaging-station records--Continued                              |      |
| Santa Maria River basin--Continued                             |      |
| Cuyama River--Continued  |      |
| Sisquoc River near Garey-----                                  | 276  |
| Santa Maria River at Guadalupe-----                            | 277  |
| <u>Arroyo Grande basin</u>                                     |      |
| Arroyo Grande near Arroyo Grande-----                          | 278  |
| Arroyo Grande at Arroyo Grande-----                            | 279  |
| <u>Santa Rosa Creek basin</u>                                  |      |
| Santa Rosa Creek near Cambria-----                             | 280  |
| <u>Arroyo de la Cruz basin</u>                                 |      |
| Arroyo de la Cruz near San Simeon-----                         | 281  |
| <u>Big Sur River basin</u>                                     |      |
| Big Sur River near Big Sur-----                                | 282  |
| <u>Carmel River basin</u>                                      |      |
| Carmel River at Robles del Rio-----                            | 283  |
| Carmel River near Carmel-----                                  | 284  |
| <u>Salinas River basin</u>                                     |      |
| Salinas River near Pozo-----                                   | 285  |
| Toro Creek near Pozo-----                                      | 286  |
| Salinas Reservoir near Pozo-----                               | 287  |
| Salinas River above Pilitas Creek, near Santa Margarita-----   | 288  |
| Jack Creek near Templeton-----                                 | 289  |
| Santa Rita Creek near Templeton-----                           | 290  |
| Huerhuero Creek near Creston-----                              | 291  |
| Estrella River:  |      |
| Cholame Creek near Shandon-----                                | 292  |
| Estrella River near Estrella-----                              | 293  |
| Nacimiento River near Bryson-----                              | 294  |
| Nacimiento River below Nacimiento Dam, near Bradley-----       | 295  |
| San Antonio River near Lockwood-----                           | 296  |
| Salinas River near Bradley-----                                | 297  |
| San Lorenzo Creek below Bitterwater Creek, near King City----- | 298  |
| Arroyo Seco near Greenfield-----                               | 299  |
| Arroyo Seco near Soledad-----                                  | 300  |
| Salinas River near Spreckels-----                              | 301  |
| El Toro Creek near Spreckels-----                              | 302  |
| <u>Pajaro River basin</u>                                      |      |
| Pajaro River:  |      |
| Cedar Creek near Bell Station-----                             | 303  |
| Pacheco Creek near Dunneville-----                             | 304  |
| Llagas Creek near Morgan Hill-----                             | 305  |
| Pajaro River near Gilroy-----                                  | 306  |
| Carnadero Creek:   |      |
| Uvas Creek above Uvas Reservoir, near Morgan Hill-----         | 307  |
| Bodfish Creek near Gilroy-----                                 | 308  |
| Uvas Creek near Gilroy-----                                    | 309  |
| San Benito River near Willow Creek School-----                 | 310  |
| Pescadero Creek near Paicines-----                             | 311  |
| Tres Pinos Creek near Tres Pinos-----                          | 312  |
| San Benito River near Hollister-----                           | 313  |

# CONTENTS

XIII

|  | Page |
|--|------|
| Gaging-station records--Continued                              |      |
| Pajaro River basin--Continued                                  |      |
| Pajaro River at Chittenden-----                                | 314  |
| Corralitos Creek near Corralitos-----                          | 315  |
| Corralitos Creek at Freedom-----                               | 316  |
| Green Valley Creek near Corralitos-----                        | 317  |
| Reservoirs in Pajaro River basin-----                          | 318  |
| <u>Aptos Creek basin</u>                                       |      |
| Aptos Creek at Aptos-----                                      | 319  |
| <u>Soquel Creek basin</u>                                      |      |
| Soquel Creek:  |      |
| West Branch Soquel Creek near Soquel-----                      | 320  |
| Soquel Creek at Soquel-----                                    | 321  |
| <u>San Lorenzo River basin</u>                                 |      |
| San Lorenzo River:   |      |
| Zayante Creek at Zayante-----                                  | 322  |
| San Lorenzo River at Big Trees-----                            | 323  |
| Branciforte Creek at Santa Cruz-----                           | 324  |
| <u>Scott Creek basin</u>                                       |      |
| Scott Creek above Little Creek, near Davenport-----            | 325  |
| <u>Pescadero Creek basin</u>                                   |      |
| Pescadero Creek near Pescadero-----                            | 326  |
| Butano Creek near Pescadero-----                               | 327  |
| <u>Purisima Creek basin</u>                                    |      |
| Purisima Creek near Half Moon Bay-----                         | 329  |
| <u>Colma Creek basin</u>                                       |      |
| Colma Creek at South San Francisco-----                        | 330  |
| Spruce Branch at South San Francisco-----                      | 331  |
| <u>Redwood Creek basin</u>                                     |      |
| Redwood Creek at Redwood City-----                             | 332  |
| <u>Atherton Drainage Channel basin</u>                         |      |
| Sharon Creek near Menlo Park-----                              | 333  |
| <u>San Francisquito Creek basin</u>                            |      |
| San Francisquito Creek below Ladera damsite, near Stanford     |      |
| University-----  | 334  |
| Los Trancos Creek:   |      |
| Los Trancos Creek tributary near Stanford University-----      | 335  |
| San Francisquito Creek at Stanford University-----             | 336  |
| <u>Matadero Creek basin</u>                                    |      |
| Matadero Creek at Palo Alto-----                               | 337  |
| <u>Stevens Creek basin</u>                                     |      |
| Stevens Creek Reservoir near Monte Vista-----                  | 338  |
| <u>Guadalupe River basin</u>                                   |      |
| Alamitos Creek (head of Guadalupe River) near New Almaden----- | 339  |
| Guadalupe River:   |      |
| Ross Creek at San Jose-----                                    | 340  |
| Los Gatos Creek at Los Gatos-----                              | 341  |
| Guadalupe River at San Jose-----                               | 342  |
| Saratoga Creek at Saratoga-----                                | 343  |
| Reservoirs in Guadalupe River basin-----                       | 344  |

## Gaging-station records--Continued

Coyote Creek basin

Coyote Creek near Gilroy----- 345

Coyote Creek near Madrone----- 346

Upper Penitencia Creek at San Jose----- 347

Reservoirs in Coyote Creek basin----- 348

Alameda Creek basin

## Alameda Creek:

## Arroyo de la Laguna:

## Arroyo Mocho Canal:

Arroyo Mocho near Livermore----- 349

Arroyo Mocho near Pleasanton----- 350

Arroyo Valle above Lang Canyon, near Livermore----- 351

Arroyo Valle near Livermore----- 352

Arroyo Valle at Pleasanton----- 353

Alameda Creek near Niles----- 354

Dry Creek at Union City----- 355

Patterson Creek at Union City----- 356

Alameda Creek at Union City----- 357

San Lorenzo Creek basin

San Lorenzo Creek at Hayward----- 358

Castro Creek basin

Wildcat Creek at Richmond----- 359

Rheem Creek basin

Rheem Creek at San Pablo----- 360

Pinole Creek basin

Pinole Creek at Pinole----- 361

Arroyo del Hambre basin

Arroyo del Hambre at Martinez----- 362

Pacheco Creek basin

## Walnut Creek (head of Pacheco Creek):

San Ramon Creek at San Ramon----- 363

San Ramon Creek at Walnut Creek----- 364

Walnut Creek at Walnut Creek----- 365

Napa River basin

## Napa River:

Sulphur Creek near St. Helena----- 366

Napa River near St. Helena----- 367

Dry Creek near Napa----- 368

Napa River near Napa----- 369

## Napa Creek:

Redwood Creek near Napa----- 370

Sonoma Creek basin

Sonoma Creek at Boyes Hot Springs----- 371

Novato Creek basin

Novato Creek near Novato----- 372

Corte Madera Creek basin

Corte Madera Creek at Ross----- 373

Arroyo Corte Madera del Presidio basin

Arroyo Corte Madera del Presidio at Mill Valley----- 374

## Gaging-station records--Continued

Walker Creek basin

Walker Creek near Tomales----- 375

Salmon Creek basin

Salmon Creek at Bodega----- 376

Russian River basin

Russian River near Redwood Valley----- 377

Russian River near Ukiah----- 378

East Fork Russian River near Calpella----- 379

Lake Mendocino near Ukiah----- 380

East Fork Russian River near Ukiah----- 381

Russian River near Hopland----- 382

Feliz Creek near Hopland----- 383

Russian River near Cloverdale----- 384

Big Sulphur Creek near Cloverdale----- 385

Maacama Creek near Kellogg----- 386

Franz Creek near Kellogg----- 387

Russian River near Healdsburg----- 388

Dry Creek near Cloverdale----- 389

Dry Creek near Geyserville----- 390

Santa Rosa Creek near Santa Rosa----- 391

Laguna de Santa Rosa near Graton----- 392

Russian River near Guerneville----- 393

Austin Creek near Cazadero----- 394

Gualala River basin

South Fork Gualala River near Annapolis----- 395

Garcia River basin

Garcia River near Point Arena----- 396

Navarro River basin

Rancheria Creek (head of Navarro River) near Boonville----- 397

Anderson Creek:

Soda Creek:

Soda Creek tributary near Boonville----- 398

Navarro River near Navarro----- 399

Albion River basin

Albion River near Comptche----- 400

Big River basin

Big River:

South Fork Big River near Comptche----- 401

Noyo River basin

Noyo River near Fort Bragg----- 402

Pudding Creek basin

Pudding Creek near Fort Bragg----- 403

Tenmile River basin

Tenmile River:

Middle Fork Tenmile River near Fort Bragg----- 404

Mattole River basin

Mattole River near Petrolia----- 405

|  | Page |
|--|------|
| Gaging-station records---Continued                                       |      |
| <u>Eel River basin</u>   |      |
| Eel River:   |      |
| Lake Pillsbury near Potter Valley-----                                   | 406  |
| Eel River below Scott Dam, near Potter Valley-----                       | 407  |
| Potter Valley powerhouse tailrace near Potter Valley-----                | 408  |
| Eel River at Van Arsdale Dam, near Potter Valley-----                    | 409  |
| Tomki Creek near Willits-----  | 411  |
| Outlet Creek near Longvale-----  | 412  |
| Middle Fork Eel River:   |      |
| Black Butte River near Covelo-----                                       | 413  |
| Middle Fork Eel River below Black Butte River, near Covelo-----          | 414  |
| Williams Creek near Covelo-----  | 415  |
| Mill Creek:  |      |
| Short Creek near Covelo-----   | 416  |
| Mill Creek near Covelo-----  | 417  |
| Elk Creek near Hearst-----   | 418  |
| Middle Fork Eel River near Dos Rios-----                                 | 419  |
| Goforth Creek at Dos Rios-----   | 420  |
| Eel River below Dos Rios-----  | 421  |
| North Fork Eel River near Mina-----                                      | 422  |
| Eel River at Fort Seward-----  | 423  |
| South Fork Eel River near Branscomb-----                                 | 424  |
| Tenmile Creek near Laytonville-----                                      | 425  |
| South Fork Eel River at Leggett-----                                     | 426  |
| East Branch South Fork Eel River near Garberville-----                   | 427  |
| South Fork Eel River near Miranda-----                                   | 428  |
| Bull Creek near Weott-----   | 429  |
| Eel River at Scotia-----   | 430  |
| Van Duzen River near Dinsmores-----                                      | 431  |
| South Fork Van Duzen River near Bridgeville-----                         | 432  |
| Van Duzen River near Bridgeville-----                                    | 433  |
| Yager Creek near Carlotta-----   | 434  |
| <u>Elk River basin</u>   |      |
| Elk River near Falk-----   | 435  |
| <u>Mad River basin</u>   |      |
| Mad River near Forest Glen-----  | 436  |
| Mad River near Kneeland-----   | 437  |
| Mad River near Arcata-----   | 438  |
| <u>Little River basin</u>  |      |
| Little River at Crannell-----  | 439  |
| <u>Redwood Creek basin</u>   |      |
| Redwood Creek at Orick-----  | 440  |
| <u>Lost River basin (closed basin adjacent to Klamath River basin)</u>   |      |
| <u>Dry Lake basin (closed basin adjacent to Lost River basin)</u>        |      |
| Dry Lake:  |      |
| Dry Lake tributary at Perez-----   | 441  |
| <u>Butte Valley basin (closed basin adjacent to Klamath River basin)</u> |      |
| Butte Creek:   |      |
| Antelope Creek near Tennant-----   | 442  |



# CONTENTS

XVII

|  | Page |
|--|------|
| Gaging-station records--Continued                                  |      |
| <u>Klamath River basin</u>   |      |
| Klamath River below John C. Boyle powerplant, near Keno, Oreg----- | 443  |
| Klamath River below Iron Gate Dam-----                             | 444  |
| Cottonwood Creek at Hornbrook-----                                 | 445  |
| Shasta River:  |      |
| Little Shasta River near Montague-----                             | 446  |
| Shasta River near Yreka-----                                       | 447  |
| Scott River:   |      |
| East Fork Scott River at Callahan-----                             | 448  |
| Cedar Gulch near Callahan-----                                     | 449  |
| Moffett Creek near Fort Jones-----                                 | 450  |
| Scott River near Fort Jones-----                                   | 451  |
| Klamath River near Seiad Valley-----                               | 452  |
| Indian Creek near Happy Camp-----                                  | 453  |
| Salmon River at Somesbar-----                                      | 454  |
| Klamath River at Orleans-----                                      | 455  |
| Trinity River above Coffee Creek, near Trinity Center-----         | 456  |
| Coffee Creek near Trinity Center-----                              | 457  |
| Clair Engle Lake near Lewiston-----                                | 458  |
| Judge Francis Carr powerplant near French Gulch-----               | 459  |
| Trinity River at Lewiston-----                                     | 460  |
| Weaver Creek near Douglas City-----                                | 461  |
| Browns Creek near Douglas City-----                                | 462  |
| North Fork Trinity River at Helena-----                            | 463  |
| Trinity River near Burnt Ranch-----                                | 464  |
| New River at Denny-----  | 465  |
| South Fork Trinity River:  |      |
| Hayfork Creek:   |      |
| Big Creek near Hayfork-----  | 466  |
| Hayfork Creek near Hyampom-----                                    | 467  |
| South Fork Trinity River below Hyampom-----                        | 468  |
| South Fork Trinity River near Salyer-----                          | 469  |
| Willow Creek near Willow Creek-----                                | 470  |
| Trinity River at Hoopa-----  | 471  |
| Blue Creek near Klamath-----                                       | 472  |
| Klamath River near Klamath-----                                    | 473  |
| <u>Smith River basin</u>   |      |
| Smith River near Crescent City-----                                | 474  |
| <u>Lopez Creek basin</u>   |      |
| Lopez Creek near Smith River-----                                  | 475  |
| Discharge at partial-record stations and miscellaneous sites-----  | 476  |
| Crest-stage partial-record stations-----                           | 476  |
| Santa Ana River, absorption studies-----                           | 478  |
| Index-----   | 479  |

## ILLUSTRATIONS

|  | Page |
|--|------|
| Figure 1. Map showing runoff for the 1966 water year-----  | 11   |
| 2. Schematic diagram showing gaging stations on streams,<br>diversions, and return flows between Imperial Dam<br>and the southerly international boundary----- | 36   |
| 3-4. Schematic diagrams showing diversions and storage in--  |      |
| 3. Santa Ana River basin-----  | 144  |
| 4. San Gabriel and Los Angeles river basins-----   | 191  |

## WATER RESOURCES DATA FOR CALIFORNIA, 1966

### Part 1. SURFACE WATER RECORDS

---

#### INTRODUCTION

The surface-water records for the 1966 water year for gaging stations, partial-record stations, and miscellaneous sites within California are given in this report. For convenience, also included are records for a few pertinent gaging stations in bordering States. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of Walter Hofmann and R. Stanley Lord, successive district chiefs, Menlo Park, Calif.

Through September 30, 1960, the records of discharge and stage of streams and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Since 1951 there have been 20 volumes in the series; each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records in California were contained in parts 9, 10, and 11 of that series.

Beginning with the 1961 water year, streamflow records and related data are being released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports is limited and is made primarily for local needs. The records later will be published in Geological Survey water-supply papers at 5-year intervals. These water-supply papers will show daily discharge and will be compiled for the same geographical areas used for the annual series.

## COOPERATION

In California the work was done under cooperative agreements with:

California Department of Water Resources, W. E. Warne, Director.  
Alameda County Flood Control and Water Conservation District,  
Paul E. Lanferman, Engineer-Manager.  
Alameda County Water District, M. P. Whitfield, General Manager.  
Calaveras County Water District, T. Stanley Edwards, Secretary-Manager.  
Coachella Valley County Water District, Lowell O. Weeks,  
General Manager-Chief Engineer.  
Contra Costa County Flood Control and Water Conservation District,  
C. C. Rich, Chief Engineer.  
Lake County Flood Control and Water Conservation District,  
Willard D. Hansen, Manager.  
Montecito County Water District, Delbert D. Smith, General Manager.  
Monterey County Flood Control and Water Conservation District,  
Loren Bunte, Jr., District Engineer.  
Santa Clara County Flood Control and Water Conservation District,  
Donald K. Currlin, Manager-Counsel.  
Orange County Flood Control District, H. G. Osborne, Chief Engineer.  
Riverside County Flood Control and Water Conservation District,  
J. W. Bryant, Chief Engineer.  
San Luis Obispo County Flood Control and Water Conservation District,  
Robert H. Born, County Hydraulic Engineer.  
Santa Barbara County Water Agency, Curtis Tunnell, Chairman.  
Santa Cruz County Flood Control and Water Conservation District,  
Warren M. Harrison, Director of Public Works.  
San Mateo County, D. S. Wilson, County Engineer and Road Commissioner.  
San Diego (city), R. E. Graham, Director of Utilities.  
Santa Barbara City Water Department, Clyde Richardson, Director;  
succeeded by Neil Mendenall, Superintendent.  
Antelope Valley-East Kern Water Agency, W. G. Spinarski, Manager.  
East Bay Municipal Utility District, J. W. McFarland, General Manager.  
Georgetown Divide Public Utility District, J. E. Christensen, Manager.  
Imperial Irrigation District, R. F. Carter, General Manager.  
San Bernardino Valley Water Conservation District, E. F. Dibble, Engineer  
and Secretary.  
Santa Maria Valley Water Conservation District, L. H. Adam, President.  
Ventura River Municipal Water District, L. G. Bennett, General Manager  
and Chief Engineer.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; U.S. Navy; Bureau of Reclamation and National Park Service, U.S. Department of the Interior; Forest Service, U.S. Department of Agriculture; and the city and county of San Francisco.

The following organizations and individuals aided in collecting records: Pacific Power and Light Co., California American Water Co., Irvine Ranch, Kings River Water Association, Los Angeles City Department of Water and Power, Los Angeles County Flood Control District, Rancho California, Pacific Gas and Electric Co., Placer County Water Agency, Sacramento Municipal Utility District, Southern California Edison Co., Kern County Land and Water Co., United Water Conservation District, Ventura County Water Resources Division, Helix, Madera, Merced, Modesto, Nevada, Serrano and Carpenter, Turlock, Oakdale, Oroville-Wyandotte, South San Joaquin, Vista, and Woodbridge Irrigation Districts, and Yuba County Water Agency.

#### DEFINITION OF TERMS AND ABBREVIATIONS

The terms of streamflow and other hydrologic data, as used in this report, are defined as follows:

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hydrologic bench mark is an area or basin in which the hydrologic regimen will likely be governed solely by natural conditions. Such a basin provides a reference for separating the effects of cultural changes in other basins with similar climate, physiography, and geology.

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

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

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.

Runoff in inches (in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Acre-foot (ac-ft) is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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

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, a long reach of the channel, or an artificial structure.

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.

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

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

## DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before the station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention shows which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial-record and continuous-record gaging stations, so that the 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 numbers to allow for new stations that may be established; hence, the numbers are not consecutive.

The complete 8-digit number for each station, such as 11-1208.00 includes the part number "11" plus a 6-digit number. In this report, the nonessential zeros are not shown. For example, the complete number 11-1208.00 would appear as 11-1208, just to the left of the station name. In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number.

## EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that gives a continuous chart of the fluctuations (for digital recorders, a tape punched at 15-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. 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 shifting-control method, in which correction factors, based on individual discharge measurements and notes by engineers and observers, are used in applying the gage heights to the rating tables.

At some 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 determining discharge. Information required for determining 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. For such stations, the rate of change in stage is used as a factor in determining discharge.

At some gaging stations the stage-discharge relation is affected by ice during the winter, and computing the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for other stations in the same or nearby basins.

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 the daily discharge. This can happen when the recorder stops or otherwise fails to operate properly, when intakes are plugged, or when the float is held by ice. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjacent good record, discharge measurements, weather records, and comparison with station records from the same or nearby basins.

The data in this report generally comprise a description of the station and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins October 1 and ends September 30. A calendar for the 1966 water year is shown on page III.



The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. Under "Records available" are given the periods for which there are published records for the present station or for generally equivalent stations. Under "Gage" are given the type of gage currently in use and the datum of the gage above mean sea level and a condensed history of the types, locations, and datums of previous gages used during the period of records available. The references to "datum of 1929" and adjustments of other years are to the datum and adjustments of the U.S. Coast and Geodetic Survey. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than 5 complete years of record or for stations where changes in water development cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height if it is significant. In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage indicator, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and to conditions which affect the natural flow at the gaging station is given under "Remarks."

The daily table gives the discharge corresponding to the daily mean gage height, unless the discharge changes greatly during a day. For days having large or rapid changes, the discharge is computed by averaging the mean discharges for several parts of the day. For digital recorders, the daily mean discharge is the average of the discharges at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

In the monthly summary below the daily table, the "Total" is the sum of the daily figures; it is the total cfs-days for the month. The "Mean" is the average flow in cubic feet per second during the month. Discharge for the month is expressed in acre-feet ("Ac-ft"). For three stations only discharge for the month is expressed in cubic feet per second per square mile ("Cfsm"), in inches ("In."), and in acre-feet ("Ac-ft"). For those stations equipped with a tipping-bucket rain gage, precipitation, in inches, is given for the month.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and the times of their occurrence and corresponding gage heights for most stations are listed below the table of daily and monthly discharge. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time, for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330 hours.

In a general footnote, introduced by the word "Note," certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given.

#### ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description, under "Remarks," states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

For most gaging stations equipped with digital recorders the figures of mean daily discharge are shown to the nearest hundredth for discharges less than 1 cfs. This has been done as a matter of uniformity in the computer program and should not be construed to indicate an accuracy greater than that used in the past.

Discharge at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes or to other factors. 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 when large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

## OTHER DATA AVAILABLE

Data from partial-record stations and measurements made at miscellaneous sites are given at the end of this report. Occasionally, discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also at the end of this report. Data for most crest-stage partial-record stations in California are not included in this report. They are published separately in an annual report, "Floods from Small Drainage Areas," copies of which may be obtained from the district office.

More detailed information than that published for most of the gaging stations is on file in the district office; information, such as discharge measurements and recorder charts or nonrecording-gage readings. Most gaging-station records in the State through 1958 have been analyzed with an electronic computer to give: (1) The number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in part 2 of this report. Under the "Remarks" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

## HYDROLOGIC CONDITIONS

Runoff for October was deficient in the south, well above normal in the Sierra Nevada, and near normal elsewhere. Heavy storms in November and December produced excessive runoff in all but the extreme northern part of the State. The storms were especially severe in southern California. New record daily and monthly totals of precipitation were reported in many places. Peak discharges at streamflow stations were generally the highest since 1943. The Los Angeles River at Sepulveda Dam and the Santa Clara River at Los Angeles-Ventura County line had peak discharges greater than those of March 1938, the highest previously known. Two Ventura County hydrographers were drowned while measuring the flow of the Santa Clara River. Eleven deaths were attributed to the storm and the resulting floods, and estimates indicated damages in excess of \$11 million. In contrast, below-normal precipitation and above-normal temperatures reduced the runoff in southern California to below normal by February. Runoff was deficient thereafter to the end of the year, with extreme drought conditions prevailing during the summer months. Runoff from the Sierra Nevada was above or near normal in March, April and May because of early snowmelt, but was generally deficient for the remainder of the year. Runoff for the water year was excessive in the south, generally well below normal in the Central Valley and the central coastal areas, and near or somewhat above normal in the north coastal area. Figure 1 shows the runoff for the 1966 water year, in percentage of the 1930-60 median.

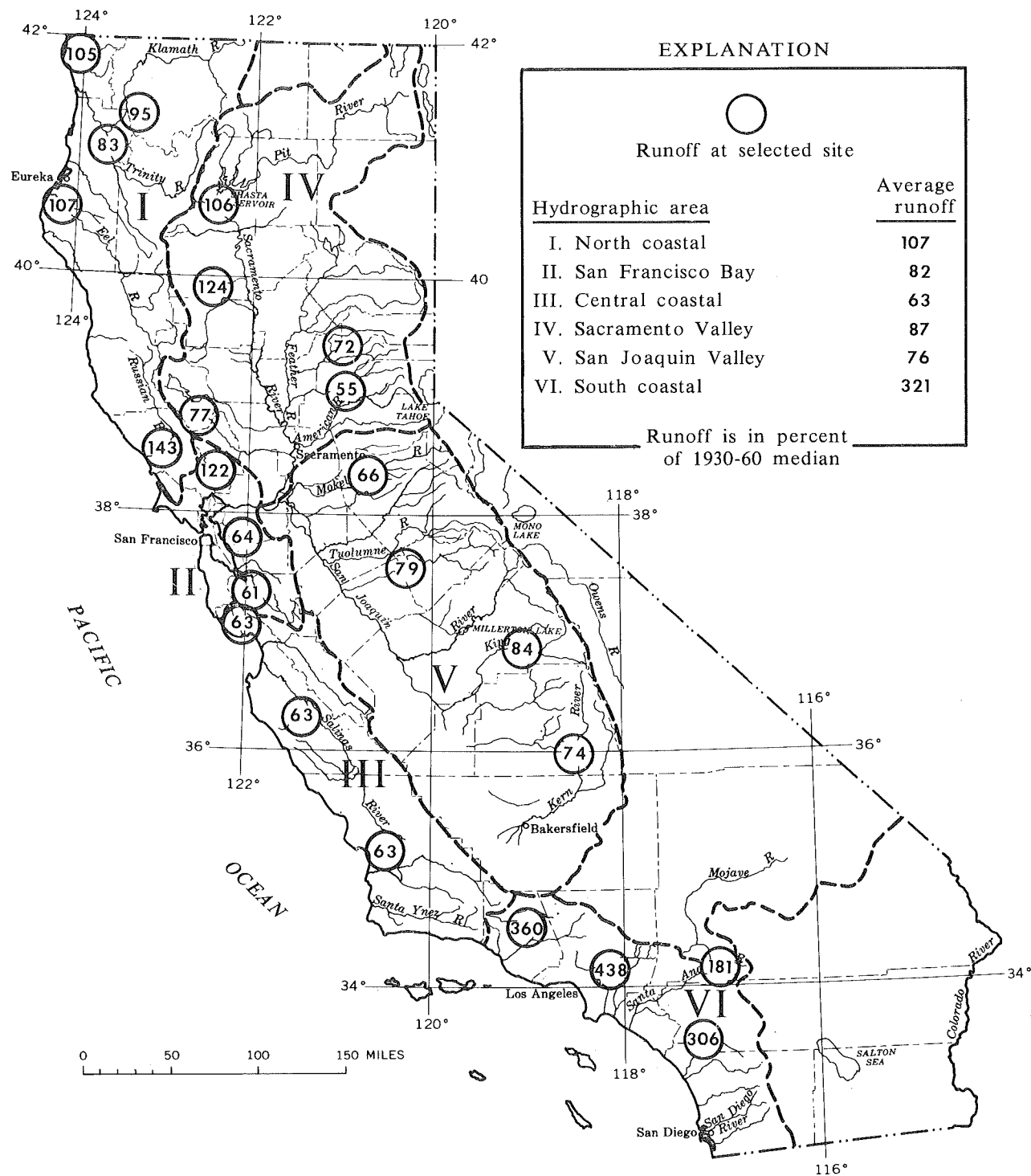


Figure 1.--Runoff for the 1966 water year.

## COLORADO RIVER MAIN STEM

9-4230. Colorado River below Davis Dam, Ariz.-Nev.

Location.--Lat 35°11'30", long 114°34'15", in SE 1/4 sec. 1, T.32 S., R.66 E., Mount Diablo meridian, on right bank half a mile downstream from Davis Dam, 29 miles west of Kingman, Ariz., and 68 miles downstream from Hoover Dam.

Drainage area.--169,300 sq mi, approximately.

Records available.--June 1905 to September 1907 (published as "at Hardyville"), March 1949 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 500.00 ft above mean sea level, datum of 1929. 1905-7, staff gage at site 1/4 miles downstream at datum about 13.4 ft lower. Mar. 16 to May 3, 1949, graphic water-stage recorder at site half a mile downstream at present datum. May 4, 1949, to Feb. 24, 1956, graphic water-stage recorder at site 400 ft upstream at present datum.

Average discharge.--17 years (1949-66), 13,330 cfs (9,651,000 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 27,200 cfs Aug. 10 (gage height, 6.47 ft); minimum daily, 1,520 cfs Dec. 15.

1905-7: Maximum daily discharge, 116,000 cfs June 20, 1906; minimum daily, 2,850 cfs Jan. 5, 1906.

1949-66: Maximum discharge, 31,200 cfs Apr. 22, 1952 (gage height, 13.91 ft); no flow at Davis Dam parts of several days July to September and Dec. 27, 1950, when gates in dam were closed; minimum daily discharge, 285 cfs Aug. 3, 1950.

Remarks.--Records excellent. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950. Many diversions upstream for irrigation, industrial, and municipal uses.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.    | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE    | JULY      | AUG.    | SEPT.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|
| 1     | 9,960   | 7,760   | 5,670   | 1,710   | 5,100   | 10,300  | 14,500  | 9,940   | 16,100  | 17,900    | 15,800  | 13,700  |
| 2     | 13,900  | 7,090   | 5,970   | 1,680   | 5,410   | 10,200  | 15,500  | 13,500  | 15,200  | 18,500    | 15,900  | 13,800  |
| 3     | 10,800  | 7,100   | 5,880   | 1,700   | 8,460   | 9,160   | 9,980   | 13,700  | 14,900  | 14,400    | 16,000  | 14,000  |
| 4     | 9,030   | 6,470   | 5,980   | 1,720   | 9,390   | 9,250   | 16,800  | 15,600  | 14,900  | 11,900    | 16,000  | 12,100  |
| 5     | 9,060   | 6,140   | 5,750   | 2,200   | 9,450   | 9,080   | 18,600  | 16,600  | 10,100  | 19,000    | 16,900  | 12,600  |
| 6     | 9,080   | 6,410   | 6,240   | 1,740   | 8,640   | 7,250   | 17,900  | 16,700  | 16,400  | 19,300    | 17,400  | 12,700  |
| 7     | 11,000  | 6,440   | 6,200   | 3,590   | 9,360   | 13,800  | 18,000  | 16,800  | 17,400  | 16,000    | 13,900  | 14,900  |
| 8     | 10,800  | 6,310   | 5,890   | 3,690   | 8,350   | 13,900  | 17,100  | 10,300  | 18,900  | 15,800    | 17,300  | 14,900  |
| 9     | 10,800  | 6,120   | 4,240   | 3,680   | 8,340   | 13,900  | 17,200  | 14,500  | 17,400  | 16,200    | 17,500  | 14,800  |
| 10    | 8,200   | 6,580   | 2,530   | 3,700   | 6,120   | 14,000  | 10,200  | 15,400  | 16,400  | 12,000    | 18,100  | 15,000  |
| 11    | 8,610   | 6,740   | 1,640   | 3,690   | 6,210   | 14,000  | 16,700  | 16,400  | 15,300  | 17,100    | 19,000  | 12,100  |
| 12    | 8,880   | 6,670   | 1,780   | 3,680   | 7,250   | 13,900  | 16,900  | 16,200  | 10,100  | 17,400    | 18,000  | 11,200  |
| 13    | 8,800   | 6,590   | 1,650   | 2,910   | 7,330   | 7,490   | 17,000  | 16,300  | 17,400  | 18,400    | 18,600  | 12,000  |
| 14    | 8,130   | 5,860   | 1,580   | 1,990   | 9,310   | 13,900  | 14,900  | 16,300  | 17,600  | 17,800    | 14,500  | 12,800  |
| 15    | 7,960   | 6,010   | 1,520   | 2,350   | 9,220   | 14,200  | 15,000  | 10,300  | 17,200  | 17,400    | 16,800  | 13,000  |
| 16    | 7,900   | 5,910   | 1,610   | 3,600   | 9,430   | 14,300  | 15,100  | 12,800  | 14,800  | 17,500    | 16,600  | 12,100  |
| 17    | 7,510   | 5,990   | 1,640   | 5,370   | 10,300  | 15,900  | 11,500  | 13,180  | 15,100  | 14,100    | 16,500  | 12,200  |
| 18    | 7,890   | 3,380   | 1,650   | 5,670   | 10,200  | 16,000  | 15,000  | 13,000  | 15,000  | 16,000    | 15,700  | 11,700  |
| 19    | 7,820   | 1,900   | 1,640   | 2,990   | 11,400  | 16,200  | 15,800  | 12,900  | 13,000  | 16,600    | 15,400  | 9,330   |
| 20    | 7,860   | 1,930   | 1,660   | 2,410   | 8,300   | 7,620   | 15,900  | 14,000  | 17,700  | 16,500    | 15,700  | 9,170   |
| 21    | 6,770   | 3,200   | 1,650   | 2,810   | 13,100  | 15,400  | 17,100  | 12,000  | 17,600  | 17,200    | 11,800  | 9,100   |
| 22    | 6,820   | 3,240   | 1,670   | 4,050   | 13,300  | 15,400  | 17,900  | 11,100  | 17,600  | 18,000    | 13,700  | 11,500  |
| 23    | 6,960   | 3,230   | 1,650   | 3,860   | 13,400  | 15,600  | 17,900  | 15,300  | 16,400  | 17,400    | 14,700  | 11,900  |
| 24    | 6,000   | 3,350   | 1,650   | 5,880   | 13,300  | 15,600  | 10,200  | 16,200  | 16,300  | 14,200    | 15,000  | 11,500  |
| 25    | 6,750   | 3,330   | 1,650   | 4,870   | 13,600  | 15,700  | 16,200  | 15,300  | 16,300  | 17,200    | 14,800  | 10,400  |
| 26    | 6,710   | 2,530   | 1,660   | 3,640   | 13,500  | 14,500  | 16,100  | 15,100  | 13,900  | 17,600    | 14,900  | 12,200  |
| 27    | 6,830   | 1,630   | 1,650   | 5,260   | 6,500   | 6,920   | 15,900  | 14,900  | 16,300  | 17,500    | 14,800  | 11,600  |
| 28    | 8,320   | 1,600   | 2,760   | 5,310   | 10,300  | 9,830   | 13,600  | 15,200  | 17,300  | 17,100    | 14,000  | 11,900  |
| 29    | 8,210   | 5,390   | 2,660   | 2,960   | -----   | 11,800  | 13,300  | 12,600  | 18,700  | 18,400    | 13,800  | 10,400  |
| 30    | 8,330   | 5,310   | 1,720   | 2,970   | -----   | 14,200  | 13,300  | 14,500  | 18,500  | 18,700    | 13,800  | 10,300  |
| 31    | 6,840   | -----   | 1,660   | 4,150   | -----   | 14,400  | -----   | 16,200  | -----   | 14,800    | 13,800  | -----   |
| TOTAL | 262,530 | 150,210 | 91,100  | 105,830 | 264,570 | 393,700 | 461,080 | 442,740 | 479,800 | 517,900   | 486,700 | 364,700 |
| MEAN  | 8,469   | 5,007   | 2,939   | 3,414   | 9,449   | 12,700  | 15,370  | 14,280  | 15,990  | 16,710    | 15,700  | 12,160  |
| AC-FT | 520,700 | 297,900 | 180,700 | 209,900 | 524,800 | 780,900 | 914,500 | 878,200 | 951,700 | 1,027,000 | 965,400 | 723,400 |

|                    |     |        |     |       |      |        |       |           |
|--------------------|-----|--------|-----|-------|------|--------|-------|-----------|
| CALENDAR YEAR 1965 | MAX | 19,400 | MIN | 1,520 | MEAN | 10,680 | AC-FT | 7,735,000 |
| WATER YEAR 1965-66 | MAX | 19,300 | MIN | 1,520 | MEAN | 11,020 | AC-FT | 7,975,000 |

COLORADO RIVER MAIN STEM

13

9-4235. Colorado River at Needles, Calif.

Location.--Lat 34°51'05", long 114°36'35", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.19, T.9 N., R.23 E., San Bernardino meridian, on right bank at Needles, 18 miles upstream from gaging station near Topock, Ariz., 31 miles downstream from Davis Dam, and 98 miles downstream from Hoover Dam.

Drainage area.--170,600 sq mi, approximately.

Records available.--April 1931 to September 1966 (elevations only).

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929; gage readings have been reduced to elevations above mean sea level. Prior to May 15, 1942, at site 750 ft downstream and May 15, 1942, to Jan. 12, 1952, at present site, both at datum 66.23 ft higher.

Extremes.--Maximum elevation during year, 471.13 ft July 6; minimum, about 460.0 ft Dec. 23, 31 (based on Bureau of Reclamation gage at site  $1\frac{1}{2}$  miles downstream and station below Davis Dam).  
1931-66: Maximum elevation, 475.77 ft Nov. 30, 1944; minimum, that of Dec. 23, 31, 1965.

Remarks.--Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

Mean elevation, in feet, water year October 1965 to September 1966

| Day | Oct.   | Nov.    | Dec.   | Jan.    | Feb.   | Mar.   | Apr.   | May    | June    | July   | Aug.   | Sept.  |
|-----|--------|---------|--------|---------|--------|--------|--------|--------|---------|--------|--------|--------|
| 1   | 465.33 | 464.06  | 462.94 | -       | 461.87 | 465.24 | 467.09 | 465.52 | 467.86  | 468.39 | 467.96 | 466.94 |
| 2   | 466.27 | 464.43  | 463.08 | -       | 462.90 | 464.91 | 467.21 | 466.05 | 468.25  | 469.17 | 467.63 | 466.84 |
| 3   | 466.32 | 463.59  | 463.21 | -       | 463.16 | 464.92 | 467.14 | 466.64 | 467.38  | 467.80 | 467.83 | 466.83 |
| 4   | 465.50 | 463.98  | 463.05 | -       | 464.34 | 464.61 | 465.79 | 466.87 | 467.65  | 466.54 | 467.83 | 466.47 |
| 5   | 465.00 | 463.20  | 463.19 | -       | 464.94 | 464.59 | 468.79 | 467.47 | 467.16  | 467.55 | 467.88 | 466.05 |
| 6   | 464.82 | 463.42  | 463.01 | -       | 464.66 | 464.61 | 468.72 | 467.84 | 466.72  | 469.54 | 468.67 | 466.28 |
| 7   | 465.36 | 463.59  | 463.18 | -       | 464.27 | 464.65 | 468.54 | 467.92 | 467.87  | 469.05 | 467.33 | 466.62 |
| 8   | 465.48 | 463.48  | 463.21 | d461.70 | 464.86 | 466.69 | 468.56 | 466.65 | 469.43  | 467.08 | 467.74 | 467.42 |
| 9   | 465.91 | 463.46  | 463.08 | d461.70 | 464.23 | 466.70 | 468.16 | 466.00 | 468.17  | 467.91 | 468.51 | 467.14 |
| 10  | 465.36 | 463.54  | 461.81 | d461.71 | 464.03 | 466.84 | 466.65 | 466.89 | -       | 466.96 | 468.48 | 467.09 |
| 11  | 464.60 | 463.57  | -      | d461.69 | 463.13 | 466.89 | 466.86 | 468.23 | -       | 467.42 | 468.87 | 466.45 |
| 12  | 464.83 | 463.80  | -      | d461.69 | 463.10 | 466.64 | 468.10 | 467.84 | -       | 468.38 | 468.78 | 465.99 |
| 13  | 464.81 | 463.83  | -      | d461.61 | 463.64 | 465.39 | 467.75 | 467.90 | -       | 468.46 | 468.62 | 465.74 |
| 14  | 464.73 | 463.69  | -      | -       | 464.20 | 464.84 | 467.98 | 467.89 | -       | 469.20 | 467.94 | 465.93 |
| 15  | 464.25 | 463.15  | -      | -       | 464.82 | 466.51 | 466.86 | 466.50 | -       | 468.38 | 467.90 | 466.32 |
| 16  | 464.30 | 463.42  | -      | -       | 464.59 | 466.88 | 467.42 | 466.02 | -       | 468.52 | 468.12 | 466.11 |
| 17  | 464.38 | 463.28  | -      | 462.16  | 464.79 | 466.91 | 466.28 | 467.00 | -       | 467.38 | 468.02 | 465.96 |
| 18  | 464.04 | 463.18  | -      | 462.57  | 465.24 | 467.53 | 466.72 | 466.40 | -       | 467.46 | 468.10 | 465.71 |
| 19  | 464.26 | -       | -      | 462.61  | 465.23 | 467.60 | 467.34 | 466.62 | -       | 468.40 | 467.11 | 465.49 |
| 20  | 464.48 | -       | -      | -       | 465.30 | 466.30 | 467.64 | 466.49 | -       | 468.06 | 467.60 | 464.76 |
| 21  | 463.90 | -       | -      | -       | 464.83 | 465.40 | 467.79 | 466.50 | d468.20 | 467.95 | 467.04 | 464.46 |
| 22  | 463.92 | 462.13  | -      | -       | 466.34 | 467.29 | 468.36 | 465.94 | 468.61  | 468.94 | 466.16 | 464.86 |
| 23  | 463.69 | -       | -      | 461.95  | 466.48 | 467.35 | 468.41 | 466.52 | 468.27  | 468.55 | 466.91 | 465.87 |
| 24  | 463.70 | 461.63  | -      | 462.40  | 467.21 | 467.59 | 466.93 | 468.28 | 468.12  | 467.38 | 467.25 | 465.55 |
| 25  | 463.32 | 461.51  | -      | 462.80  | 466.68 | 467.48 | 466.40 | 467.39 | 468.06  | 467.98 | 467.17 | 465.30 |
| 26  | 463.75 | d461.53 | -      | 462.15  | 466.74 | 467.47 | 467.68 | 467.65 | 467.90  | 468.64 | 467.19 | 465.50 |
| 27  | 463.74 | -       | -      | 461.87  | 465.29 | 465.41 | 467.58 | 467.48 | 466.90  | 468.50 | 467.17 | 465.84 |
| 28  | 463.83 | -       | -      | 463.04  | 463.38 | 464.67 | 467.48 | 467.46 | 468.24  | 468.39 | 467.01 | 465.80 |
| 29  | 464.57 | -       | -      | -       | -      | 464.86 | 466.58 | 466.77 | 468.97  | 468.35 | 466.66 | 465.73 |
| 30  | 464.50 | 462.67  | -      | -       | -----  | 466.31 | 466.47 | 466.72 | 468.93  | 469.14 | 466.87 | 465.18 |
| 31  | 464.47 | -----   | -      | -       | -----  | 467.05 | -----  | 467.57 | -----   | 467.91 | 466.75 | -----  |

d Computed from reconstructed gage-height record.

Note.--No gage-height record Nov. 19-21, 23, 27-29, Dec. 11 to Jan. 7, Jan. 14-16, 20-22, 29-31, June 10-20.

## COLORADO RIVER MAIN STEM

9-4240. Colorado River near Topock, Ariz.

Location.--Lat 34°41'15", long 114°27'45", in SW 1/4 sec.13, T.15 N., R.21 W., Gila and Salt River meridian, on left bank in Mohave Canyon, 2.7 miles downstream from Topock, 39.5 miles upstream from Parker Dam, and 49 miles downstream from Davis Dam.

Drainage area.--172,300 sq mi, approximately.

Records available.--January 1917 to September 1966. Daily mean elevations published since October 1938.

Gage.--Digital water-stage recorder. Datum of gage is 423.02 ft above mean sea level, datum of 1929; gage readings have been reduced to elevations above mean sea level. Prior to Dec. 3, 1922, graphic water-stage recorder at site about 1 mile upstream at different datum. Dec. 3, 1922, to Apr. 25, 1966, graphic water-stage recorder at present site and datum. Since May 1, 1939, supplementary water-stage recorder at former highway bridge at Topock, 2.7 miles upstream from base gage at datum 13.33 ft higher.

Average discharge.--17 years (1917-34), 20,260 cfs (14,670,000 acre-ft per year); 32 years (1934-66), 13,520 cfs (9,788,000 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 19,400 cfs July 7; maximum elevation, 456.82 ft July 7; minimum daily discharge, 1,760 cfs Dec. 15; minimum elevation, 448.58 ft Dec. 28.

1917-34: Maximum discharge probably exceeded 200,000 cfs June 22, 1921; minimum, 1,480 cfs Aug. 17, 1934.

1934-66: Maximum discharge, 35,700 cfs Jan. 29, 1942; maximum elevation, 457.37 ft July 9, 1959; minimum discharge, 375 cfs Feb. 14, 1935; minimum daily, 422 cfs Feb. 14, 1935.

Discharge of about 300,000 cfs (based on determination at Lees Ferry gaging station) occurred about July 10, 1884. Discharge in excess of 400,000 cfs (estimated) probably occurred within the period 1857-68 and most likely in 1862.

Remarks.--Records excellent. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead since Feb. 1, 1935, and by Lake Mohave since Jan. 17, 1950.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT.       | NOV.    | DEC.      | JAN.    | FEB.        | MAR.    | APR.          | MAY     | JUNE    | JULY    | AUG.    | SEPT.   |
|--------------------|------------|---------|-----------|---------|-------------|---------|---------------|---------|---------|---------|---------|---------|
| 1                  | 10,600     | 7,280   | 5,390     | 1,930   | 3,960       | 9,830   | 13,500        | 12,500  | 15,200  | 17,300  | 14,900  | 12,900  |
| 2                  | 10,200     | 7,860   | 5,440     | 1,920   | 5,150       | 10,100  | 13,500        | 10,900  | 16,000  | 17,600  | 14,900  | 12,900  |
| 3                  | 12,500     | 7,200   | 6,060     | 1,880   | 5,770       | 10,000  | 14,300        | 12,800  | 15,000  | 16,900  | 14,900  | 12,800  |
| 4                  | 10,700     | 7,200   | 5,880     | 1,870   | 7,770       | 9,400   | 10,700        | 13,100  | 14,700  | 14,300  | 14,900  | 12,900  |
| 5                  | 9,280      | 6,730   | 5,960     | 1,840   | 9,040       | 9,060   | 15,400        | 14,400  | 13,800  | 13,100  | 15,000  | 11,600  |
| 6                  | 9,040      | 6,380   | 5,770     | 2,130   | 9,470       | 9,040   | 16,800        | 15,300  | 11,800  | 17,600  | 16,000  | 11,900  |
| 7                  | 9,230      | 6,770   | 5,980     | 1,990   | 8,560       | 8,030   | 16,700        | 15,600  | 15,000  | 18,300  | 15,400  | 12,100  |
| 8                  | 10,400     | 6,580   | 6,160     | 3,180   | 9,280       | 12,200  | 16,700        | 15,300  | 17,200  | 15,400  | 13,800  | 13,800  |
| 9                  | 10,400     | 6,770   | 6,100     | 3,590   | 8,700       | 13,000  | 16,200        | 11,600  | 17,200  | 15,200  | 15,800  | 13,900  |
| 10                 | 10,600     | 6,160   | 4,860     | 3,650   | 8,520       | 13,200  | 15,000        | 13,400  | 16,900  | 15,100  | 16,200  | 13,800  |
| 11                 | 8,720      | 6,900   | 2,500     | 3,620   | 6,600       | 13,100  | 12,100        | 15,300  | 16,000  | 13,000  | 17,000  | 13,600  |
| 12                 | 8,800      | 6,980   | 2,270     | 3,540   | 6,320       | 13,200  | 15,100        | 15,300  | 14,700  | 15,900  | 17,200  | 11,800  |
| 13                 | 8,940      | 6,940   | 2,190     | 3,660   | 6,960       | 12,600  | 15,200        | 15,500  | 12,200  | 16,400  | 16,900  | 10,900  |
| 14                 | 8,920      | 6,940   | 1,910     | 3,110   | 7,590       | 8,770   | 15,700        | 15,600  | 15,800  | 17,600  | 16,400  | 11,300  |
| 15                 | 8,470      | 6,280   | 1,760     | 2,150   | 9,160       | 12,300  | 14,200        | 14,800  | 16,700  | 16,700  | 14,300  | 11,900  |
| 16                 | 8,170      | 6,340   | 1,950     | 2,200   | 9,160       | 13,300  | 14,200        | 11,900  | 16,300  | 16,600  | 15,500  | 12,100  |
| 17                 | 8,170      | 6,400   | 1,990     | 3,470   | 9,320       | 13,400  | 13,900        | 13,200  | 14,700  | 15,800  | 15,600  | 11,500  |
| 18                 | 7,940      | 6,340   | 2,010     | 5,020   | 10,000      | 14,700  | 11,800        | 12,800  | 14,700  | 14,100  | 15,500  | 11,400  |
| 19                 | 8,060      | 3,880   | 1,930     | 5,690   | 10,200      | 15,000  | 13,700        | 13,100  | 14,400  | 15,700  | 14,500  | 11,100  |
| 20                 | 8,060      | 2,620   | 1,880     | 3,410   | 10,800      | 14,500  | 14,500        | 13,000  | 13,800  | 15,500  | 14,300  | 9,460   |
| 21                 | 7,790      | 2,370   | 1,860     | 2,440   | 8,990       | 9,880   | 14,900        | 13,500  | 16,400  | 15,500  | 14,100  | 9,000   |
| 22                 | 7,150      | 3,660   | 1,870     | 2,750   | 11,800      | 13,500  | 16,000        | 12,600  | 16,800  | 16,500  | 11,700  | 9,000   |
| 23                 | 7,020      | 3,600   | 1,910     | 3,740   | 12,500      | 14,300  | 16,300        | 12,000  | 16,700  | 16,700  | 12,500  | 10,800  |
| 24                 | 7,150      | 3,500   | 1,960     | 4,150   | 13,500      | 14,800  | 16,100        | 15,000  | 16,100  | 15,700  | 13,500  | 10,800  |
| 25                 | 6,320      | 3,590   | 1,920     | 5,440   | 13,100      | 14,800  | 11,600        | 15,100  | 15,800  | 14,600  | 13,700  | 10,700  |
| 26                 | 6,790      | 3,580   | 1,870     | 4,930   | 13,200      | 14,800  | 14,700        | 14,400  | 15,700  | 16,000  | 13,600  | 10,200  |
| 27                 | 6,730      | 2,890   | 1,830     | 3,980   | 12,100      | 13,200  | 15,000        | 14,700  | 13,800  | 16,500  | 13,600  | 11,200  |
| 28                 | 6,790      | 2,050   | 1,830     | 5,440   | 7,480       | 8,650   | 15,000        | 14,500  | 15,500  | 16,400  | 13,700  | 11,100  |
| 29                 | 8,100      | 2,230   | 2,660     | 4,930   | -----       | 9,640   | 13,500        | 14,300  | 17,000  | 16,200  | 12,900  | 11,200  |
| 30                 | 8,150      | 4,840   | 2,780     | 3,140   | -----       | 11,200  | 12,800        | 12,900  | 17,500  | 17,300  | 13,000  | 10,200  |
| 31                 | 8,220      | -----   | 2,290     | 3,040   | -----       | 13,000  | -----         | 14,100  | -----   | 16,700  | 12,800  | -----   |
| TOTAL              | 267,410    | 160,860 | 100,770   | 103,830 | 255,000     | 372,500 | 435,100       | 428,500 | 463,400 | 496,200 | 454,100 | 347,860 |
| MEAN               | 8,626      | 5,362   | 3,251     | 3,349   | 9,107       | 12,020  | 14,500        | 13,820  | 15,450  | 16,010  | 14,650  | 11,600  |
| AC-FT              | 530,400    | 319,100 | 199,900   | 205,900 | 505,800     | 738,800 | 863,000       | 849,900 | 919,100 | 984,200 | 900,700 | 690,000 |
| CALENDAR YEAR 1965 | MAX 17,700 |         | MIN 1,760 |         | MEAN 10,570 |         | AC-FT 7,652 M |         |         |         |         |         |
| WATER YEAR 1965-66 | MAX 18,300 |         | MIN 1,760 |         | MEAN 10,650 |         | AC-FT 7,707 M |         |         |         |         |         |



## 9-4240. Colorado River near Topock, Ariz.--Continued

Mean elevation, in feet, water year October 1965 to September 1966

| DAY | OCT.  | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 53.38 | 52.07 | 51.02 | 48.70 | 50.16 | 52.96 | 54.48 | 54.10 | 55.20 | 56.01 | 55.19 | 54.38 |
| 2   | 53.19 | 52.33 | 51.05 | 48.69 | 50.86 | 53.06 | 54.46 | 53.45 | 55.49 | 56.12 | 55.19 | 54.38 |
| 3   | 54.15 | 52.02 | 51.37 | 48.66 | 51.19 | 53.04 | 54.76 | 54.21 | 55.10 | 55.85 | 55.20 | 54.34 |
| 4   | 53.42 | 52.02 | 51.28 | 48.65 | 52.14 | 52.78 | 53.34 | 54.32 | 55.01 | 54.86 | 55.22 | 54.35 |
| 5   | 52.82 | 51.79 | 51.32 | 48.63 | 52.69 | 52.64 | 55.20 | 54.83 | 54.64 | 54.39 | 55.25 | 53.83 |
| 6   | 52.72 | 51.62 | 51.22 | 48.85 | 52.86 | 52.63 | 55.74 | 55.18 | 53.84 | 56.13 | 55.66 | 53.92 |
| 7   | 52.80 | 51.80 | 51.33 | 48.74 | 52.48 | 52.20 | 55.72 | 55.31 | 55.11 | 56.40 | 55.40 | 54.00 |
| 8   | 53.30 | 51.71 | 51.42 | 49.60 | 52.78 | 53.97 | 55.71 | 55.18 | 55.95 | 55.29 | 54.82 | 54.69 |
| 9   | 53.28 | 51.79 | 51.39 | 49.88 | 52.54 | 54.26 | 55.51 | 53.72 | 55.93 | 55.20 | 55.60 | 54.71 |
| 10  | 53.38 | 51.66 | 50.73 | 49.92 | 52.45 | 54.35 | 55.04 | 54.46 | 55.84 | 55.16 | 55.76 | 54.64 |
| 11  | 52.59 | 51.84 | 49.91 | 49.90 | 51.58 | 54.32 | 53.91 | 55.19 | 55.49 | 54.36 | 56.06 | 54.57 |
| 12  | 52.62 | 51.88 | 49.75 | 49.85 | 51.43 | 54.34 | 55.08 | 55.21 | 54.99 | 55.47 | 56.14 | 53.83 |
| 13  | 52.68 | 51.85 | 49.69 | 49.93 | 51.74 | 54.12 | 55.11 | 55.27 | 54.01 | 55.69 | 56.02 | 53.46 |
| 14  | 52.68 | 51.85 | 49.48 | 49.56 | 52.03 | 52.52 | 55.32 | 55.31 | 55.44 | 56.17 | 55.84 | 53.63 |
| 15  | 52.50 | 51.52 | 49.37 | 48.88 | 52.71 | 54.00 | 54.75 | 54.99 | 55.76 | 55.83 | 55.04 | 53.85 |
| 16  | 52.38 | 51.55 | 49.21 | 48.92 | 52.70 | 54.40 | 54.74 | 53.85 | 55.64 | 55.76 | 55.51 | 53.93 |
| 17  | 52.39 | 51.57 | 48.94 | 49.82 | 52.77 | 54.45 | 54.64 | 54.41 | 55.00 | 55.47 | 55.55 | 53.67 |
| 18  | 52.30 | 51.54 | 48.76 | 50.78 | 53.06 | 54.93 | 53.81 | 54.22 | 54.99 | 54.81 | 55.51 | 53.64 |
| 19  | 52.36 | 50.17 | 48.70 | 51.14 | 53.14 | 55.06 | 54.57 | 54.34 | 54.86 | 55.44 | 55.09 | 53.53 |
| 20  | 52.38 | 49.29 | 48.66 | 49.80 | 53.36 | 54.85 | 54.85 | 54.31 | 54.64 | 55.36 | 55.02 | 52.83 |
| 21  | 52.27 | 49.11 | 48.64 | 49.11 | 52.62 | 52.98 | 55.03 | 54.53 | 55.65 | 55.37 | 54.93 | 52.64 |
| 22  | 51.99 | 50.01 | 48.65 | 49.34 | 53.80 | 54.48 | 55.44 | 54.15 | 55.82 | 55.78 | 53.96 | 52.64 |
| 23  | 51.94 | 49.97 | 48.68 | 50.03 | 54.07 | 54.78 | 55.57 | 53.92 | 55.79 | 55.85 | 54.30 | 53.39 |
| 24  | 52.01 | 49.89 | 48.72 | 50.29 | 54.48 | 54.96 | 55.49 | 55.13 | 55.55 | 55.47 | 54.67 | 53.38 |
| 25  | 51.62 | 49.95 | 48.69 | 51.04 | 54.32 | 54.98 | 53.73 | 55.17 | 55.43 | 55.03 | 54.76 | 53.37 |
| 26  | 51.86 | 49.94 | 48.65 | 50.76 | 54.34 | 54.99 | 54.98 | 54.87 | 55.39 | 55.58 | 54.70 | 53.17 |
| 27  | 51.83 | 49.46 | 48.62 | 50.19 | 53.92 | 54.33 | 55.07 | 55.00 | 54.63 | 55.80 | 54.72 | 53.58 |
| 28  | 51.86 | 48.86 | 48.62 | 51.03 | 51.95 | 52.47 | 55.08 | 54.92 | 55.30 | 55.75 | 54.72 | 53.52 |
| 29  | 52.45 | 48.99 | 49.23 | 50.75 | ----- | 52.88 | 54.50 | 54.84 | 55.90 | 55.68 | 54.42 | 53.58 |
| 30  | 52.47 | 50.72 | 49.31 | 49.62 | ----- | 53.55 | 54.21 | 54.31 | 56.07 | 56.10 | 54.45 | 53.14 |
| 31  | 52.49 | ----- | 48.96 | 49.54 | ----- | 54.27 | ----- | 54.77 | ----- | 55.88 | 54.36 | ----- |

Note.--Add 400.00 ft to obtain elevation above mean sea level.

## 9-4240.5. Chemehuevi Wash tributary near Needles, Calif.

Location.--Lat 34°30'30", long 114°36'10", on right bank on Havasu Lake road, 22 miles south of Needles, San Bernardino County.

Drainage area.--2.04 sq mi.

Records available.--December 1959 to September 1966. Peak discharges only December 1959 to September 1962.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,580 ft (from topographic map). December 1959 to April 1963, crest-stage gage only at same site and datum.

Extremes.--Maximum discharge during year, 74 cfs Dec. 29 (gage height, 6.73 ft, from crest-stage gage), from rating curve based on 3 computations of flow through culvert; no flow all year except Dec. 29.

1959-66: Maximum discharge, 114 cfs Sept. 26, 1962 (gage height, 8.51 ft, from crest-stage gage), based on computation of maximum flow through culvert; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Dec. 29..... 5.0

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| December 1965.....      | 5.0      | 5.0     | 0       | 0.16 | 9.9       |
| Calendar year 1965..... | -        | 5.0     | 0       | .014 | 9.9       |
| Water year 1965-66..... | -        | 5.0     | 0       | .014 | 9.9       |

Note.--Flow occurred only on day listed above.

## DIVERSIONS FROM LAKE HAVASU

9-4241.5 Colorado River aqueduct near Parker Dam, Ariz.-Calif.

Location.--Lat 34°19'00", long 114°09'25", in NW¼SW¼ sec.28, T.3 N., R.27 E., San Bernardino meridian, at intake pumping plant of Metropolitan Water District of Southern California on Lake Havasu, 1.8 miles upstream from Parker Dam and 154 miles downstream from Hoover Dam.

Records available.--January 1939 to September 1966 (monthly diversions only since October 1942). Published as a supplement to records for Colorado River below Parker Dam, 1942-50.

Gage.--Venturi meters in pressure lines at intake pumping plant. Digital water-stage recorders with weirs on 4 percolation returns; prior to October 1964 miscellaneous measurements only.

Average discharge.--27 years, 617 cfs (446,700 acre-ft per year).

Extremes.--1939-66: Maximum daily diversion, 3,970 acre-ft (2,000 cfs) June 24, 1966; no diversion at times.

Remarks.--Pumping began Jan. 7, 1939. Figures of monthly diversion shown represent water pumped from Lake Havasu less return surface flow from Gene and Copper Basin Reservoirs. No water returned as surface flow from these reservoirs this year. Percolation return flow from Gene and Copper Basin Reservoirs was measured in 4 washes between pumping plant and Copper Basin Wash, each about 1 mile from the Colorado River. No distinction is made between percolation return flow and storm runoff, which is minute. The percolation return flow, as shown in table below, is not subtracted from the diversion record.

Cooperation.--Diversion records furnished by Metropolitan Water District of Southern California.

Monthly diversions and percolation return flow, in acre-feet, water year October 1965 to September 1966

| Month                   | Total<br>percolation † | Diversions |         |       |           |
|-------------------------|------------------------|------------|---------|-------|-----------|
|                         |                        | Maximum    | Minimum | Mean  | Total     |
| October.....            | 391                    | 3,938      | 2,735   | 3,332 | 103,293   |
| November.....           | 404                    | 3,867      | 2,504   | 3,324 | 99,735    |
| December.....           | 460                    | 3,864      | 825     | 2,843 | 88,140    |
| Calendar year 1965..... | 5,042                  | 3,942      | 0       | 3,228 | 1,178,058 |
| January.....            | 402                    | 2,837      | 0       | 1,643 | 50,927    |
| February.....           | 365                    | 2,690      | 1,400   | 2,251 | 63,034    |
| March.....              | 396                    | 3,502      | 2,637   | 2,826 | 87,617    |
| April.....              | 361                    | 3,552      | 3,028   | 3,433 | 102,996   |
| May.....                | 364                    | 3,910      | 3,125   | 3,499 | 108,484   |
| June.....               | 342                    | 3,970      | 3,163   | 3,490 | 104,709   |
| July.....               | 353                    | 3,815      | 3,147   | 3,469 | 107,531   |
| August.....             | 350                    | 3,921      | 3,124   | 3,462 | 107,334   |
| September.....          | 347                    | 3,598      | 3,175   | 3,415 | 102,440   |
| Water year 1965-66..... | 4,535                  | 3,970      | 0       | 3,086 | 1,126,240 |

† Total of percolation is measured as surface flow at the following stations:

9-4241.70      Gene Wash  
 9-4276.00      Desilt Wash  
 9-4278.00      Eureka Wash  
 9-4282.00      Copper Basin Wash

9-4275. Lake Havasu near Parker Dam, Ariz.-Calif.

Location.--Lat 34°19'00", long 114°09'25", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.28, T.3 N., R.27 E., San Bernardino meridian, at intake pumping plant for Colorado River aqueduct of Metropolitan Water District of Southern California, 1.8 miles upstream from Parker Dam on Colorado River, which is 156 miles downstream from Hoover Dam.

Drainage area.--178,800 sq mi, approximately.

Records available.--July 1938 to September 1966. Published as Parker Reservoir near Parker Dam 1938.

Gage.--Water-stage recorder. Datum of gage is 400.54 ft above mean sea level, datum of 1929. Gage readings have been reduced to elevations above mean sea level.

Extremes.--Maximum contents during year, 616,800 acre-ft June 11 (elevation, 450.41 ft); minimum, 520,900 acre-ft Mar. 8 (elevation, 445.33 ft).

1938-66: Maximum contents, 693,000 acre-ft (by temporary use of flashboards) Apr. 18, 1943, June 4, 1953; maximum elevation, 450.77 ft June 26, 1958; minimum contents, 71,400 acre-ft June 25, 1942 (elevation, 412.09 ft).

Remarks.--Lake is formed by concrete-arch dam; dam was completed and storage began July 1, 1938. Usable capacity, 619,400 acre-ft between elevation 400.54 (sill of regulating gates) and 450.54 ft (top of regulating gates) above mean sea level, based on re-survey of Lake Havasu made in April 1957 by Bureau of Reclamation between elevations 430.54 and 450.54 ft. Prior to Oct. 1, 1956, different capacity table used. Dead storage, 28,600 acre-ft below 400.54 ft (based on original survey). About 0.07 ft fall indicated between gage and Parker Dam under normal operating conditions. Drawdown below elevation 440.54 ft not legally permissible except by consent of the Metropolitan Water District of Southern California or in an emergency affecting the safety of the dam. Lake is used for flood control, power development, reregulation of river for irrigation demand, and as a basin from which water is pumped by Metropolitan Water District of Southern California to Colorado River aqueduct. Figures given herein represent usable contents. For record of diversion to Colorado River aqueduct and return flow, see record for Colorado River aqueduct near Parker Dam (sta 9-4241.5).

Contents, in acre-feet, at 2400, water year October 1965 to September 1966

| Day | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July    | Aug.    | Sept.   |
|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1   | 551,000 | 556,500 | 545,000 | 557,500 | 536,000 | 544,000 | 559,200 | 592,600 | 604,400 | 606,600 | 586,300 | 565,200 |
| 2   | 549,200 | 557,500 | 545,200 | 556,500 | 533,500 | 544,500 | 556,200 | 586,600 | 610,200 | 606,400 | 585,100 | 567,100 |
| 3   | 551,500 | 558,400 | 545,000 | 555,600 | 530,300 | 545,200 | 553,900 | 584,400 | 612,000 | 606,200 | 582,800 | 567,100 |
| 4   | 553,100 | 559,600 | 544,900 | 554,400 | 528,700 | 540,200 | 545,000 | 583,800 | 611,800 | 601,400 | 581,900 | 565,900 |
| 5   | 551,200 | 559,000 | 544,100 | 552,200 | 528,800 | 535,000 | 541,300 | 587,600 | 608,800 | 593,800 | 578,500 | 562,700 |
| 6   | 549,700 | 557,500 | 543,600 | 550,400 | 533,300 | 529,200 | 542,300 | 590,800 | 598,200 | 594,200 | 576,000 | 560,300 |
| 7   | 550,400 | 556,000 | 543,600 | 546,500 | 535,500 | 522,000 | 545,200 | 592,800 | 596,200 | 602,000 | 574,300 | 557,900 |
| 8   | 552,400 | 554,300 | 546,800 | 544,700 | 540,500 | 523,300 | 547,000 | 595,600 | 600,800 | 603,200 | 568,000 | 560,500 |
| 9   | 554,800 | 553,700 | 552,800 | 544,500 | 544,900 | 528,300 | 549,900 | 589,500 | 607,400 | 598,600 | 565,000 | 562,900 |
| 10  | 558,400 | 553,000 | 563,100 | 545,800 | 550,100 | 532,600 | 552,200 | 587,800 | 611,800 | 596,200 | 562,900 | 564,800 |
| 11  | 558,800 | 553,100 | 590,400 | 549,200 | 549,500 | 533,300 | 546,800 | 590,600 | 614,000 | 587,800 | 564,800 | 564,400 |
| 12  | 558,200 | 551,900 | 589,300 | 551,900 | 550,600 | 534,400 | 548,300 | 599,200 | 612,800 | 583,800 | 566,700 | 561,800 |
| 13  | 559,200 | 551,200 | 586,800 | 555,200 | 547,700 | 536,000 | 551,000 | 604,600 | 604,800 | 583,400 | 567,300 | 557,300 |
| 14  | 562,000 | 551,500 | 583,800 | 555,800 | 545,200 | 529,400 | 554,400 | 609,200 | 605,400 | 588,000 | 567,300 | 557,700 |
| 15  | 563,700 | 549,900 | 581,000 | 553,900 | 545,000 | 527,800 | 554,300 | 612,200 | 608,000 | 589,300 | 565,600 | 561,500 |
| 16  | 563,500 | 549,700 | 572,000 | 549,000 | 542,700 | 531,000 | 552,800 | 609,000 | 611,400 | 589,900 | 564,800 | 565,900 |
| 17  | 561,100 | 553,500 | 559,800 | 547,400 | 540,900 | 536,600 | 552,600 | 608,800 | 609,800 | 589,300 | 565,800 | 567,300 |
| 18  | 559,800 | 557,300 | 552,800 | 550,600 | 538,700 | 539,800 | 550,100 | 609,800 | 606,600 | 582,500 | 568,800 | 566,300 |
| 19  | 560,200 | 557,500 | 549,500 | 555,400 | 536,000 | 544,900 | 550,400 | 612,000 | 601,000 | 580,200 | 571,800 | 568,400 |
| 20  | 562,000 | 555,600 | 547,900 | 557,500 | 534,200 | 547,200 | 551,200 | 611,800 | 595,400 | 579,400 | 571,600 | 566,900 |
| 21  | 564,600 | 551,300 | 545,800 | 552,400 | 528,300 | 539,500 | 554,800 | 611,000 | 595,600 | 580,400 | 572,000 | 563,100 |
| 22  | 563,300 | 550,300 | 544,700 | 549,000 | 527,000 | 538,000 | 560,300 | 606,200 | 597,800 | 582,100 | 566,900 | 560,700 |
| 23  | 561,300 | 550,800 | 556,400 | 547,600 | 528,100 | 538,700 | 568,400 | 600,400 | 602,400 | 584,800 | 560,500 | 561,500 |
| 24  | 558,400 | 550,800 | 555,400 | 547,000 | 533,300 | 543,800 | 576,200 | 601,000 | 604,400 | 585,700 | 560,000 | 560,700 |
| 25  | 555,400 | 551,000 | 551,900 | 549,400 | 538,000 | 552,200 | 574,300 | 604,800 | 606,400 | 581,900 | 563,100 | 560,000 |
| 26  | 553,500 | 563,300 | 549,400 | 552,200 | 544,000 | 560,200 | 577,000 | 607,400 | 608,200 | 581,500 | 563,800 | 556,700 |
| 27  | 552,200 | 563,100 | 547,900 | 553,000 | 549,200 | 567,100 | 583,400 | 608,800 | 605,400 | 581,300 | 564,000 | 556,900 |
| 28  | 551,500 | 556,400 | 545,900 | 545,800 | 545,400 | 562,900 | 590,400 | 607,800 | 602,600 | 582,300 | 564,400 | 559,600 |
| 29  | 552,600 | 549,200 | 545,400 | 546,700 | -       | 560,000 | 592,800 | 606,000 | 602,200 | 581,100 | 563,100 | 562,700 |
| 30  | 554,800 | 546,700 | 551,200 | 544,000 | -----   | 558,100 | 593,000 | 601,800 | 604,400 | 584,000 | 561,100 | 564,600 |
| 31  | 556,500 | -----   | 556,700 | 540,700 | -----   | 559,400 | -----   | 601,800 | -----   | 588,400 | 561,600 | -----   |
| (*) | +6,100  | -9,800  | +10,000 | -16,000 | +4,700  | +14,000 | +33,600 | +8,800  | +2,600  | -16,000 | -26,800 | +3,000  |

Calendar year 1965 ..... +17,400

Water year 1965-66 ..... +14,200

\* Change in contents, in acre-feet.

## COLORADO RIVER MAIN STEM

9-4275. Lake Havasu near Parker Dam, Ariz.-Calif.--Continued

Elevation, in feet, at 2400, water year October 1965 to September 1966

| Day | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 447.00 | 447.30 | 446.67 | 447.35 | 446.17 | 446.61 | 447.44 | 449.20 | 449.79 | 449.90 | 448.87 | 447.76 |
| 2   | 446.90 | 447.35 | 446.68 | 447.30 | 446.03 | 446.64 | 447.28 | 448.89 | 450.08 | 449.89 | 448.81 | 447.86 |
| 3   | 447.03 | 447.40 | 446.67 | 447.25 | 445.85 | 446.68 | 447.16 | 448.77 | 450.17 | 449.88 | 448.69 | 447.86 |
| 4   | 447.12 | 447.46 | 446.66 | 447.19 | 445.76 | 446.40 | 446.67 | 448.74 | 450.16 | 449.64 | 448.64 | 447.80 |
| 5   | 447.01 | 447.43 | 446.62 | 447.07 | 445.77 | 446.11 | 446.46 | 448.94 | 450.01 | 449.26 | 448.46 | 447.63 |
| 6   | 446.93 | 447.35 | 446.59 | 446.97 | 446.02 | 445.79 | 446.52 | 449.11 | 449.48 | 449.28 | 448.33 | 447.50 |
| 7   | 446.97 | 447.27 | 446.59 | 446.75 | 446.14 | 445.39 | 446.68 | 449.21 | 449.38 | 449.67 | 448.24 | 447.37 |
| 8   | 447.08 | 447.18 | 446.77 | 446.65 | 446.42 | 445.46 | 446.78 | 449.35 | 449.61 | 449.73 | 447.91 | 447.51 |
| 9   | 447.21 | 447.15 | 447.10 | 446.64 | 446.66 | 445.74 | 446.94 | 449.04 | 449.94 | 449.50 | 447.75 | 447.64 |
| 10  | 447.40 | 447.11 | 447.65 | 446.71 | 446.95 | 445.98 | 447.07 | 448.95 | 450.16 | 449.38 | 447.64 | 447.74 |
| 11  | 447.42 | 447.12 | 449.09 | 446.90 | 446.92 | 446.02 | 446.77 | 449.10 | 450.27 | 448.95 | 447.74 | 447.72 |
| 12  | 447.39 | 447.05 | 449.03 | 447.05 | 446.98 | 446.08 | 446.85 | 449.53 | 450.21 | 448.74 | 447.84 | 447.58 |
| 13  | 447.44 | 447.01 | 448.90 | 447.23 | 446.82 | 446.17 | 447.00 | 449.80 | 449.81 | 448.72 | 447.87 | 447.34 |
| 14  | 447.59 | 447.03 | 448.74 | 447.26 | 446.68 | 445.80 | 447.19 | 450.03 | 449.84 | 448.96 | 447.87 | 447.36 |
| 15  | 447.68 | 446.94 | 448.59 | 447.16 | 446.67 | 445.71 | 447.18 | 450.18 | 449.97 | 449.03 | 447.78 | 447.56 |
| 16  | 447.67 | 446.93 | 448.12 | 446.89 | 446.54 | 445.89 | 447.10 | 450.02 | 450.14 | 449.06 | 447.74 | 447.80 |
| 17  | 447.54 | 447.14 | 447.47 | 446.80 | 446.44 | 446.20 | 447.09 | 450.01 | 450.06 | 449.03 | 447.79 | 447.87 |
| 18  | 447.47 | 447.34 | 447.10 | 446.98 | 446.32 | 446.38 | 446.95 | 450.06 | 449.90 | 448.67 | 447.95 | 447.82 |
| 19  | 447.49 | 447.35 | 446.92 | 447.24 | 446.17 | 446.66 | 446.97 | 450.17 | 449.62 | 448.55 | 448.11 | 447.93 |
| 20  | 447.59 | 447.25 | 446.83 | 447.35 | 446.07 | 446.79 | 447.01 | 450.16 | 449.34 | 448.51 | 448.10 | 447.85 |
| 21  | 447.73 | 447.02 | 446.71 | 447.08 | 445.74 | 446.36 | 447.21 | 450.12 | 449.35 | 448.56 | 448.12 | 447.65 |
| 22  | 447.66 | 446.96 | 446.65 | 446.89 | 445.67 | 446.28 | 447.50 | 449.88 | 449.46 | 448.65 | 447.85 | 447.52 |
| 23  | 447.55 | 446.99 | 447.29 | 446.81 | 445.73 | 446.32 | 447.93 | 449.59 | 449.69 | 448.79 | 447.51 | 447.56 |
| 24  | 447.40 | 446.99 | 447.24 | 446.78 | 446.02 | 446.60 | 448.34 | 449.62 | 449.79 | 448.84 | 447.48 | 447.52 |
| 25  | 447.24 | 447.00 | 447.05 | 446.91 | 446.28 | 447.07 | 448.24 | 449.81 | 449.89 | 448.64 | 447.65 | 447.48 |
| 26  | 447.14 | 447.66 | 446.91 | 447.07 | 446.61 | 447.49 | 448.38 | 449.94 | 449.98 | 448.62 | 447.69 | 447.31 |
| 27  | 447.07 | 447.65 | 446.83 | 447.11 | 446.90 | 447.86 | 448.72 | 450.01 | 449.84 | 448.61 | 447.70 | 447.32 |
| 28  | 447.03 | 447.29 | 446.72 | 446.71 | 446.69 | 447.64 | 449.09 | 449.96 | 449.70 | 448.66 | 447.72 | 447.46 |
| 29  | 447.09 | 446.90 | 446.69 | 446.76 | -      | 447.48 | 449.21 | 449.87 | 449.68 | 448.60 | 447.65 | 447.63 |
| 30  | 447.21 | 446.76 | 447.01 | 446.61 | -----  | 447.38 | 449.22 | 449.66 | 449.79 | 448.75 | 447.54 | 447.73 |
| 31  | 447.30 | -----  | 447.31 | 446.43 | -----  | 447.45 | -----  | 449.66 | -----  | 448.98 | 447.57 | -----  |

COLORADO RIVER MAIN STEM

19

9-4280. Colorado River below Parker Dam, Ariz.-Calif.

Location.--Lat 34°15'30", long 114°09'00", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.16, T.2 N., R.27 E., San Bernardino meridian, on right bank 3.9 miles downstream from Parker Dam, 10.4 miles upstream from Headgate Rock Dam, and 11 miles northeast of Parker, Ariz.

Drainage area.--178,800 sq mi, approximately.

Records available.--February to September 1934 (gage heights and fragmentary discharge records), October 1934 to September 1966. Prior to October 1937 published as "near Parker, Ariz."

Gage.--Water-stage recorder. Datum of gage is 346.23 ft above mean sea level, datum of 1929.

Average discharge.--32 years (1934-66), 12,930 cfs (9,361,000 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 19,400 cfs Aug. 10; maximum gage height, 22.21 ft Aug. 9; minimum daily discharge, 1,680 cfs Nov. 24.

1934-66: Maximum discharge, 42,400 cfs Feb. 8, 1937; no flow at Parker Dam for parts of several days in 1942 when gates in dam were closed; minimum daily discharge, 1,440 cfs Feb. 15, 1935.

An unregulated discharge of probably less than 1,350 cfs occurred Aug. 18, 1934 (lowest unregulated discharge since 1917 and probably since a much earlier date).

Remarks.--Records excellent except those below 4,000 cfs, which are good. Flow regulated by Lake Mead since Feb. 1, 1935, Lake Mohave since Jan. 17, 1950, and by Lake Havasu since July 1, 1936. Many diversions above station. For record of diversion to Colorado River aqueduct and return flows, see record for Colorado River aqueduct near Parker Dam (sta 9-4241.5). Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July    | Aug.    | Sept.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 8,160   | 4,960   | 3,860   | 1,770   | 4,780   | 8,440   | 11,800  | 11,100  | 11,600  | 14,200  | 14,800  | 10,100  |
| 2     | 8,880   | 5,140   | 3,110   | 1,820   | 4,740   | 8,330   | 12,700  | 11,600  | 11,000  | 15,200  | 14,500  | 10,400  |
| 3     | 9,000   | 4,710   | 3,880   | 1,770   | 5,640   | 7,430   | 13,800  | 11,900  | 12,200  | 15,400  | 14,500  | 11,400  |
| 4     | 8,300   | 3,990   | 4,000   | 1,770   | 6,960   | 9,880   | 14,000  | 11,900  | 13,000  | 15,200  | 14,100  | 12,200  |
| 5     | 8,240   | 4,900   | 3,840   | 1,820   | 6,930   | 9,920   | 14,600  | 10,900  | 13,200  | 14,500  | 15,000  | 12,400  |
| 6     | 7,810   | 4,840   | 3,720   | 1,820   | 5,760   | 9,960   | 14,500  | 12,000  | 14,000  | 14,300  | 16,000  | 11,400  |
| 7     | 6,440   | 5,020   | 3,680   | 2,700   | 6,870   | 9,820   | 13,600  | 12,700  | 13,800  | 12,600  | 15,900  | 11,600  |
| 8     | 7,140   | 5,380   | 2,560   | 2,460   | 5,630   | 9,510   | 13,800  | 12,400  | 12,900  | 13,900  | 15,500  | 10,700  |
| 9     | 7,060   | 5,100   | 1,950   | 2,580   | 5,090   | 8,490   | 13,300  | 12,500  | 12,300  | 15,100  | 15,200  | 11,600  |
| 10    | 6,360   | 4,760   | 1,820   | 2,100   | 4,490   | 9,440   | 12,900  | 11,900  | 12,400  | 14,700  | 16,000  | 11,100  |
| 11    | 6,710   | 4,550   | 2,340   | 3,330   | 4,950   | 10,700  | 13,100  | 11,500  | 12,800  | 15,700  | 14,600  | 12,300  |
| 12    | 6,610   | 5,430   | 2,700   | 3,300   | 4,720   | 11,000  | 12,300  | 9,320   | 13,700  | 15,500  | 15,100  | 11,400  |
| 13    | 5,980   | 5,210   | 2,940   | 3,250   | 5,720   | 10,200  | 11,900  | 10,200  | 13,700  | 14,900  | 15,300  | 11,000  |
| 14    | 5,260   | 4,810   | 2,700   | 2,870   | 6,970   | 9,850   | 11,700  | 10,600  | 13,100  | 13,400  | 15,500  | 9,790   |
| 15    | 5,870   | 4,810   | 1,840   | 4,100   | 7,850   | 10,800  | 13,300  | 10,700  | 13,500  | 14,800  | 14,300  | 8,890   |
| 16    | 5,590   | 4,110   | 6,700   | 4,350   | 8,500   | 9,560   | 13,300  | 10,200  | 12,500  | 14,700  | 14,600  | 7,910   |
| 17    | 6,210   | 2,970   | 6,950   | 4,200   | 8,370   | 8,750   | 12,800  | 10,400  | 14,000  | 14,900  | 14,200  | 8,950   |
| 18    | 6,090   | 2,300   | 5,180   | 3,080   | 9,480   | 11,100  | 12,400  | 9,500   | 14,200  | 15,800  | 12,600  | 9,660   |
| 19    | 5,490   | 1,780   | 2,100   | 1,860   | 10,000  | 10,500  | 12,000  | 8,470   | 14,900  | 15,200  | 12,900  | 8,320   |
| 20    | 4,660   | 1,780   | 2,100   | 2,240   | 9,980   | 11,900  | 12,300  | 10,100  | 14,300  | 15,100  | 13,000  | 8,450   |
| 21    | 3,940   | 2,190   | 1,840   | 2,380   | 10,300  | 12,400  | 11,500  | 10,900  | 14,000  | 13,600  | 12,800  | 8,910   |
| 22    | 5,560   | 2,090   | 1,820   | 3,230   | 10,600  | 12,400  | 11,600  | 11,800  | 13,800  | 13,800  | 13,000  | 8,020   |
| 23    | 6,190   | 1,780   | 5,110   | 3,080   | 10,700  | 11,500  | 10,800  | 12,600  | 12,200  | 13,900  | 14,200  | 8,170   |
| 24    | 5,930   | 1,680   | 4,960   | 2,950   | 9,280   | 10,300  | 10,500  | 12,200  | 13,100  | 14,100  | 12,900  | 9,150   |
| 25    | 5,600   | 1,910   | 2,700   | 2,910   | 9,320   | 8,520   | 10,900  | 11,300  | 12,600  | 14,900  | 10,600  | 9,090   |
| 26    | 5,390   | 1,810   | 1,820   | 2,410   | 8,700   | 8,700   | 11,000  | 10,900  | 12,600  | 15,000  | 11,600  | 9,380   |
| 27    | 5,200   | 2,630   | 1,840   | 1,770   | 7,900   | 8,400   | 9,450   | 11,700  | 13,300  | 15,100  | 12,600  | 9,310   |
| 28    | 5,070   | 2,320   | 1,840   | 6,950   | 7,920   | 8,470   | 9,520   | 12,700  | 14,300  | 14,100  | 12,400  | 7,920   |
| 29    | 5,560   | 4,080   | 1,950   | 3,390   | -       | 8,820   | 10,900  | 13,200  | 14,600  | 15,600  | 12,300  | 7,730   |
| 30    | 5,140   | 3,940   | 1,840   | 3,390   | -----   | 9,530   | 11,400  | 13,000  | 14,900  | 14,900  | 12,300  | 7,580   |
| 31    | 4,870   | -----   | 5,460   | 3,390   | -----   | 9,930   | -----   | 12,200  | -----   | 14,000  | 11,400  | -----   |
| Total | 194,310 | 110,980 | 99,150  | 89,040  | 208,150 | 304,550 | 367,670 | 352,390 | 398,500 | 454,100 | 429,700 | 294,830 |
| Mean  | 6,268   | 3,699   | 3,198   | 2,872   | 7,434   | 9,824   | 12,260  | 11,370  | 13,280  | 14,650  | 13,860  | 9,828   |
| Ac-ft | 385,400 | 220,100 | 196,700 | 176,600 | 432,900 | 604,100 | 729,300 | 699,000 | 790,400 | 900,700 | 852,300 | 584,800 |

Calendar year 1965: Max 16,400 Min 1,680 Mean 8,780 Ac-ft 6,356,000  
 Water year 1965-66: Max 16,000 Min 1,680 Mean 9,050 Ac-ft 6,552,000

## TRIBUTARIES AND DIVERSIONS BETWEEN PARKER DAM AND PALO VERDE DAM

9-4285.3. Arch Creek near Earp, Calif.

Location.--Lat 34°09'55", long 114°22'20", in NE $\frac{1}{2}$  sec. 20, T.1 N., R.25 E., on right bank on Parker Dam road, 4 miles east of Earp.Drainage area.--1.52 sq mi.Records available.--January 1960 to September 1966.Gage.--Graphic water-stage recorder with rain-gage attachment, and crest-stage gage. Altitude of gage is 600 ft (from topographic map).Average discharge.--6 years, 0.002 cfs (1.4 acre-ft per year).Extremes.--Maximum discharge during year, 30 cfs Dec. 29 (gage height, 4.55 ft); no flow all year except Dec. 29.

1960-66: Maximum discharge, 68 cfs Mar. 11, 1965 (gage height, 5.10 ft); no flow for most of each year.

Flood of Sept. 13, 1959 reached a stage of 13.24 ft from floodmarks (discharge, 674 cfs, based on computation of maximum flow through culvert).

Remarks.--Records good. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.4; December, 1.0; January, 1.2; February, 0.3; March, 0.2; July, 0.7; the water year, 4.8.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Dec. 29..... 2.3

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| December 1965.....      | 2.3      | 2.3     | 0       | 0.07 | 4.6       |
| Calendar year 1965..... | -        | 2.6     | 0       | .015 | 11        |
| Water year 1965-66..... | -        | 2.3     | 0       | .006 | 4.6       |

Note.--Flow occurred only on day listed above.

9-4290. Palo Verde Canal near Blythe, Calif.

Location.--Lat 33°43'54", long 114°30'43", in SE 1/4 NW 1/4 sec. 19, T.5 S., R.24 E., San Bernardino meridian, at canal intake structure on west side of Palo Verde Diversion Dam, 10 miles northeast of Blythe and 43 miles downstream from Headgate Rock Dam.

Records available.--January 1922 to December 1923, January 1925 to September 1966 (prior to October 1950, monthly discharge only).

Gage.--Recording gages above and below intakes to record head. Since May 18, 1964, recorder to show gate openings. Datum of gage is: Forebay gage, at mean sea level; tailrace gage, 274.13 ft above mean sea level; both to datum of 1929. Aug. 7, 1950, to Nov. 30, 1952, water-stage recorder on tailrace and auxiliary recorder half a mile downstream and Dec. 1, 1952, to Oct. 28, 1957, recording gage above and below former intake structure a quarter of a mile upstream, at different datums.

Average discharge.--16 years (1950-66), 1,190 cfs (861,500 acre-ft per year).

Extremes.--1950-66: Maximum daily discharge, 2,180 cfs Aug. 7, 1962; no flow at times in several years.

Remarks.--Records excellent except those below 300 cfs, which are good. Daily diversions computed on basis of head on intake gates and gate openings. Records published herein represent flow diverted from Colorado River during 1966 for irrigation of 86,863 acres. Return flows to Colorado River are measured by 10 wasteways and drains extending throughout the project; 1 of these is equipped with water-stage recorder and Parshall flume, 3 are equipped with Sparling flowmeters and 3 with total-flow meters on Parshall flumes. Return flows have not been subtracted; combined monthly return flows are given in table below. Check measurements of return flows are made about once a month by the Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June    | July    | Aug.    | Sept.  |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|
| 1     | 1040   | 659    | 240    | 45     | 504    | 1090   | 1190   | 1210   | 1630    | 1940    | 1680    | 1570   |
| 2     | 892    | 735    | 363    | 0      | 601    | 1210   | 1180   | 1270   | 1760    | 1980    | 1650    | 1520   |
| 3     | 846    | 753    | 375    | 0      | 646    | 1340   | 1150   | 1300   | 1700    | 2050    | 1780    | 1590   |
| 4     | 958    | 742    | 391    | 0      | 657    | 1300   | 1210   | 1400   | 1680    | 1970    | 1870    | 1670   |
| 5     | 875    | 679    | 417    | 0      | 600    | 1260   | 1180   | 1530   | 1730    | 1880    | 1920    | 1700   |
| 6     | 872    | 645    | 477    | 0      | 526    | 1220   | 1360   | 1570   | 1700    | 1910    | 1830    | 1660   |
| 7     | 918    | 534    | 470    | 0      | 590    | 1250   | 1490   | 1500   | 1620    | 1960    | 1660    | 1770   |
| 8     | 917    | 538    | 486    | 0      | 611    | 1280   | 1540   | 1440   | 1670    | 1820    | 1770    | 1810   |
| 9     | 874    | 587    | 323    | 0      | 789    | 1460   | 1430   | 1470   | 1690    | 1810    | 1670    | 1790   |
| 10    | 710    | 605    | 127    | 0      | 737    | 1440   | 1330   | 1480   | 1680    | 1760    | 1700    | 1710   |
| 11    | 733    | 553    | 135    | 0      | 749    | 1430   | 1350   | 1450   | 1530    | 1790    | 1790    | 1600   |
| 12    | 717    | 604    | 175    | 0      | 781    | 1340   | 1440   | 1430   | 1470    | 1690    | 1780    | 1580   |
| 13    | 800    | 613    | 189    | 0      | 682    | 1240   | 1560   | 1400   | 1540    | 1760    | 1720    | 1550   |
| 14    | 819    | 561    | 187    | 0      | 679    | 1270   | 1550   | 1230   | 1560    | 1700    | 1620    | 1560   |
| 15    | 868    | 534    | 202    | 96     | 690    | 1320   | 1500   | 1080   | 1620    | 1750    | 1660    | 1570   |
| 16    | 734    | 553    | 184    | 512    | 904    | 1460   | 1460   | 1260   | 1670    | 1660    | 1630    | 1600   |
| 17    | 623    | 552    | 178    | 711    | 979    | 1600   | 1340   | 1360   | 1710    | 1680    | 1810    | 1510   |
| 18    | 692    | 520    | 163    | 335    | 942    | 1540   | 1460   | 1460   | 1710    | 1710    | 1800    | 1440   |
| 19    | 610    | 455    | 158    | 244    | 988    | 1580   | 1460   | 1470   | 1590    | 1770    | 1780    | 1460   |
| 20    | 666    | 428    | 163    | 213    | 961    | 1330   | 1570   | 1500   | 1650    | 1900    | 1640    | 1510   |
| 21    | 711    | 388    | 163    | 159    | 1080   | 1300   | 1610   | 1530   | 1650    | 1980    | 1580    | 1580   |
| 22    | 743    | 334    | 147    | 151    | 1070   | 1180   | 1600   | 1520   | 1740    | 2040    | 1640    | 1560   |
| 23    | 648    | 257    | 125    | 169    | 1050   | 1240   | 1450   | 1490   | 1800    | 1980    | 1580    | 1510   |
| 24    | 663    | 211    | 113    | 184    | 942    | 1300   | 1310   | 1550   | 1830    | 1900    | 1630    | 1410   |
| 25    | 737    | 185    | 114    | 241    | 900    | 1160   | 1480   | 1610   | 1860    | 1920    | 1730    | 1330   |
| 26    | 737    | 208    | 114    | 296    | 989    | 968    | 1540   | 1590   | 1870    | 1970    | 1770    | 1340   |
| 27    | 817    | 184    | 124    | 350    | 998    | 983    | 1600   | 1620   | 1830    | 1920    | 1740    | 1280   |
| 28    | 892    | 167    | 163    | 453    | 1060   | 889    | 1490   | 1540   | 1830    | 1940    | 1630    | 1210   |
| 29    | 846    | 214    | 259    | 440    | -      | 929    | 1500   | 1540   | 1880    | 1940    | 1550    | 1130   |
| 30    | 771    | 199    | 260    | 418    | -----  | 1050   | 1330   | 1610   | 1930    | 1860    | 1490    | 914    |
| 31    | 683    | -----  | 197    | 490    | -----  | 1260   | -----  | 1660   | -----   | 1800    | 1550    | -----  |
| Total | 24,412 | 14,197 | 7,182  | 5,507  | 22,705 | 39,219 | 42,660 | 45,070 | 51,130  | 57,740  | 52,650  | 45,434 |
| Mean  | 787    | 473    | 232    | 178    | 811    | 1,265  | 1,422  | 1,454  | 1,704   | 1,863   | 1,698   | 1,514  |
| Ac-ft | 48,420 | 28,160 | 14,250 | 10,920 | 45,030 | 77,790 | 84,610 | 89,400 | 101,400 | 114,500 | 104,400 | 90,120 |
| (†)   | 37,900 | 30,580 | 23,630 | 19,180 | 20,120 | 32,310 | 36,070 | 40,040 | 41,020  | 47,180  | 50,000  | 46,630 |

|                     |     |       |     |   |      |       |       |         |   |         |
|---------------------|-----|-------|-----|---|------|-------|-------|---------|---|---------|
| Calendar year 1965: | Max | 2,040 | Min | 0 | Mean | 1,071 | Ac-ft | 775,300 | † | 424,600 |
| Water year 1965-66: | Max | 2,050 | Min | 0 | Mean | 1,118 | Ac-ft | 809,000 | † | 424,700 |

† Return flows, in acre-feet, to Colorado River.

## COLORADO RIVER MAIN STEM

9-4291. Colorado River below Palo Verde Dam, Ariz.-Calif.

Location.--Lat 33°43'10", long 114°29'50", in NE¼ sec.2, T.4 N., R.22 W., Gila and Salt River meridian, on right bank 1.2 miles downstream from Palo Verde Diversion Dam, 9.5 miles northeast of Blythe, Calif., and 11.0 miles upstream from Ehrenberg, Ariz.

Drainage area.--182,200 sq mi, approximately.

Records available.--March 1956 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 260.00 ft above mean sea level, datum of 1929. Prior to June 1, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--10 years (1957-66) 8,862 cfs (6,416,000 acre-ft per year).

Extremes.--Maximum discharge recorded during year, 16,400 cfs Aug. 9 (gage height, 16.59 ft, result of sluicing operation at dam); minimum daily, 1,840 cfs Jan. 28.  
1956-66: Maximum discharge, 24,300 cfs Mar. 21, 1958; maximum gage height, 17.94 ft May 4, 1958; minimum daily discharge, 1,380 cfs Dec. 21, 1961.

Remarks.--Records excellent. Many diversions above station for irrigation, municipal, and industrial uses. Flow regulated by Lake Mead, Lake Mohave, and Lake Havasu.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.    | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE    | JULY    | AUG.    | SEPT.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 6,650   | 4,270   | 3,820   | 5,010   | 3,080   | 6,300   | 8,740   | 8,530   | 8,940   | 11,200  | 11,500  | 8,700   |
| 2     | 7,130   | 4,200   | 3,800   | 2,400   | 4,220   | 6,190   | 9,520   | 8,610   | 8,700   | 11,700  | 12,000  | 7,720   |
| 3     | 6,730   | 4,090   | 2,880   | 2,220   | 4,420   | 5,920   | 11,400  | 9,140   | 8,010   | 11,900  | 11,600  | 8,430   |
| 4     | 7,350   | 3,640   | 3,720   | 2,140   | 5,100   | 5,820   | 11,500  | 9,190   | 9,340   | 12,300  | 11,500  | 8,920   |
| 5     | 6,970   | 3,390   | 3,760   | 2,050   | 6,280   | 8,020   | 11,800  | 8,800   | 9,880   | 11,700  | 11,600  | 9,460   |
| 6     | 6,800   | 4,080   | 3,660   | 2,150   | 6,350   | 7,800   | 12,000  | 8,020   | 10,900  | 11,700  | 12,600  | 9,330   |
| 7     | 6,480   | 4,200   | 3,530   | 2,120   | 5,140   | 7,870   | 11,600  | 9,590   | 10,700  | 11,200  | 12,600  | 8,680   |
| 8     | 5,580   | 4,330   | 3,490   | 2,980   | 5,870   | 7,500   | 11,100  | 9,800   | 10,400  | 10,400  | 12,800  | 8,920   |
| 9     | 5,920   | 4,540   | 2,670   | 3,180   | 4,920   | 7,300   | 11,500  | 9,460   | 10,200  | 11,600  | 12,300  | 8,190   |
| 10    | 6,060   | 4,450   | 2,560   | 3,140   | 4,450   | 6,800   | 11,100  | 9,620   | 9,350   | 12,000  | 12,700  | 8,680   |
| 11    | 5,740   | 4,180   | 2,220   | 2,850   | 3,790   | 7,380   | 10,500  | 9,540   | 9,930   | 12,200  | 12,200  | 8,800   |
| 12    | 5,700   | 3,880   | 2,430   | 3,620   | 4,260   | 8,800   | 10,700  | 9,080   | 11,000  | 12,500  | 11,500  | 9,350   |
| 13    | 5,470   | 4,700   | 2,640   | 2,910   | 4,080   | 8,220   | 9,640   | 7,840   | 10,900  | 12,200  | 12,300  | 8,760   |
| 14    | 4,920   | 4,660   | 2,590   | 2,820   | 5,060   | 8,250   | 9,620   | 8,560   | 10,800  | 11,400  | 12,400  | 8,510   |
| 15    | 4,180   | 4,420   | 2,530   | 2,740   | 5,820   | 8,200   | 10,000  | 8,870   | 10,400  | 11,300  | 12,200  | 7,670   |
| 16    | 4,870   | 4,340   | 1,950   | 3,180   | 6,480   | 8,260   | 10,500  | 8,860   | 10,500  | 11,900  | 11,800  | 6,470   |
| 17    | 4,820   | 3,520   | 5,870   | 3,230   | 6,930   | 7,640   | 10,200  | 9,150   | 9,720   | 12,100  | 11,700  | 6,290   |
| 18    | 5,230   | 2,650   | 5,920   | 3,670   | 6,530   | 6,900   | 9,850   | 7,730   | 10,800  | 12,500  | 10,700  | 7,230   |
| 19    | 5,330   | 2,240   | 4,300   | 2,760   | 7,470   | 8,620   | 9,590   | 7,580   | 11,400  | 12,800  | 10,000  | 7,860   |
| 20    | 4,760   | 1,850   | 2,240   | 2,260   | 8,140   | 8,450   | 9,350   | 7,070   | 11,600  | 11,300  | 10,300  | 6,570   |
| 21    | 4,030   | 1,880   | 2,050   | 2,300   | 8,020   | 9,490   | 9,360   | 8,040   | 11,100  | 11,200  | 10,700  | 6,500   |
| 22    | 3,450   | 2,150   | 2,070   | 2,530   | 8,190   | 10,200  | 8,800   | 8,710   | 11,100  | 10,900  | 10,000  | 6,940   |
| 23    | 4,680   | 2,080   | 2,090   | 3,010   | 8,190   | 9,770   | 8,860   | 9,650   | 10,300  | 10,800  | 10,600  | 6,090   |
| 24    | 5,200   | 2,030   | 4,530   | 2,950   | 8,290   | 9,200   | 8,650   | 9,790   | 11,000  | 11,000  | 11,000  | 6,600   |
| 25    | 4,860   | 1,950   | 4,730   | 2,780   | 7,490   | 8,980   | 8,400   | 9,270   | 10,200  | 11,500  | 9,750   | 7,350   |
| 26    | 4,780   | 1,920   | 2,910   | 2,630   | 7,390   | 6,990   | 8,280   | 8,630   | 9,990   | 12,000  | 8,150   | 7,490   |
| 27    | 4,560   | 2,080   | 2,180   | 2,250   | 7,030   | 7,450   | 8,480   | 8,040   | 10,500  | 11,700  | 9,250   | 7,800   |
| 28    | 4,320   | 2,590   | 2,060   | 1,840   | 6,420   | 7,220   | 7,820   | 9,050   | 10,900  | 11,300  | 9,750   | 8,410   |
| 29    | 4,150   | 2,790   | 1,930   | 3,120   | -----   | 7,200   | 7,160   | 9,680   | 11,400  | 11,800  | 9,990   | 6,670   |
| 30    | 4,560   | 4,030   | 1,920   | 2,970   | -----   | 7,350   | 8,560   | 9,810   | 11,200  | 12,600  | 9,800   | 6,660   |
| 31    | 4,330   | -----   | 2,170   | 2,980   | -----   | 7,850   | -----   | 9,680   | -----   | 11,100  | 9,660   | -----   |
| TOTAL | 165,610 | 101,130 | 95,220  | 86,790  | 169,410 | 241,940 | 294,580 | 275,080 | 309,950 | 361,800 | 344,950 | 235,050 |
| MEAN  | 5,342   | 3,371   | 3,072   | 2,800   | 6,050   | 7,805   | 9,819   | 8,874   | 10,330  | 11,670  | 11,130  | 7,835   |
| AC-FT | 328,500 | 200,600 | 188,900 | 172,100 | 336,000 | 479,900 | 584,300 | 545,600 | 614,800 | 717,600 | 684,200 | 466,200 |

|                    |     |        |     |       |      |       |       |        |
|--------------------|-----|--------|-----|-------|------|-------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 13,500 | MIN | 1,850 | MEAN | 7,216 | AC-FT | 5,224M |
| WATER YEAR 1965-66 | MAX | 12,800 | MIN | 1,840 | MEAN | 7,347 | AC-FT | 5,319M |



9-4295, Colorado River at Imperial Dam, Ariz.-Calif.

Location.--Lat 32°53'00", long 114°27'50", in W $\frac{1}{2}$  sec.9, T.15 S., R.24 E., San Bernardino meridian, near All-American Canal headworks at west end of Imperial Dam, 5 miles upstream from Laguna Dam, 15 miles northeast of Yuma, 90 miles downstream from Palo Verde Dam, and 147 miles downstream from Parker Dam.

Drainage area.--184, 600 sq mi, approximately.

Records available.--Flow of Colorado River passing Imperial Dam: October 1960 to September 1966. Flow of Colorado River reaching Imperial Dam: 1903-34 (yearly discharge only), July 1934 to September 1966 (monthly discharge only since October 1942). Prior to 1943 published as "near Picacho, Calif."

Gage.--Water-stage recorder in forebay, 12 calibrated gates on California sluiceway, 8 gates on Gila sluiceway, and calibrated manometer on each discharge pipe from desilting basin. Datum of forebay gage is 162.00 ft above mean sea level, (U.S. Bureau of Reclamation benchmark), July 1, 1934, to Sept. 30, 1942, water-stage recorder at site 14 $\frac{1}{2}$  miles upstream at datum 167.38 ft above mean sea level, datum of 1929. Oct. 1, 1942, to Sept. 30, 1960, no gage on river at this site (see Remarks).

Average discharge (flow reaching Imperial Dam).--32 years (1934-66), 12,060 cfs (8,731,000 acre-ft per year).

Extremes (flow reaching Imperial Dam).--1934-66: Maximum discharge, 40,800 cfs Sept. 5, 1939; minimum, 538 cfs Aug. 3, 1934; minimum daily since regulation of Hoover Dam began, 1,450 cfs Feb. 17, 1935.

Remarks.--Records excellent above 500 cfs and good below. Records of daily discharge show flow of Colorado River passing Imperial Dam, and include water released to river through California and Gila sluiceways, sludge from desilting basins returned to river, and leakage through dam. Records of flow reaching Imperial Dam (given in monthly and yearly summaries below) are based on combined monthly cfs-days of Colorado River at this station, and at gaging stations on All-American Canal near Imperial Dam (sta 9-5230), and Gila Gravity Main Canal at Imperial Dam (sta 9-5225). Records for October 1942 to September 1960 were computed as combined flow of Colorado River at Yuma (sta 9-5210) and the All-American and Gila Gravity Main Canals, less flow of Gila River near Dome (drainage and waste return flows and channel losses between the gaging stations and Imperial Dam were neglected). Flow of Colorado River regulated by many reservoirs, principally Lake Mead, since 1935. Many diversions from Colorado River and tributaries above station. Additional regulation, beginning Jan. 31, 1966, to equalize supplies for downstream water users, is provided by pumped storage in reservoir on Senator Wash, about 2 miles upstream from Imperial Dam. Month-end contents of Senator Wash Reservoir (capacity, 13,840 acre-ft) is given in table below.

Cooperation.--Records of gate openings furnished by Bureau of Reclamation. Records of sludge return flow from desilting basins furnished by Imperial Irrigation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July    | Aug.    | Sept.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 279     | 259     | 293     | 296     | 298     | 241     | 356     | 334     | 346     | 371     | 743     | 391     |
| 2     | 279     | 259     | 280     | 296     | 241     | 246     | 356     | 335     | 346     | 371     | 567     | 391     |
| 3     | 279     | 259     | 261     | 296     | 241     | 241     | 356     | 236     | 346     | 371     | 519     | 391     |
| 4     | 279     | 259     | 261     | 281     | 241     | 241     | 344     | 237     | 346     | 371     | 386     | 391     |
| 5     | 279     | 259     | 261     | 261     | 241     | 241     | 331     | 239     | 458     | 371     | 386     | 391     |
| 6     | 279     | 259     | 261     | 261     | 241     | 241     | 331     | 340     | 346     | 555     | 386     | 391     |
| 7     | 267     | 259     | 261     | 261     | 1,030   | 529     | 331     | 341     | 346     | 689     | 386     | 724     |
| 8     | 259     | 259     | 261     | 261     | 1,000   | 754     | 506     | 342     | 346     | 565     | 386     | 915     |
| 9     | 259     | 259     | 261     | 261     | 818     | 241     | 436     | 343     | 371     | 447     | 624     | 391     |
| 10    | 259     | 259     | 261     | 261     | 1,180   | 241     | 1,310   | 345     | 371     | 371     | 391     | 391     |
| 11    | 359     | 259     | 261     | 261     | 334     | 241     | 824     | 346     | 371     | 371     | 391     | 391     |
| 12    | 259     | 259     | 261     | 272     | 241     | 341     | 742     | 346     | 371     | 371     | 391     | 391     |
| 13    | 259     | 259     | 261     | 261     | 252     | 241     | 403     | 497     | 441     | 371     | 391     | 1,470   |
| 14    | 259     | 259     | 261     | 261     | 241     | 241     | 331     | 1,170   | 371     | 371     | 507     | 1,710   |
| 15    | 259     | 259     | 261     | 261     | 241     | 324     | 331     | 1,080   | 512     | 371     | 660     | 711     |
| 16    | 259     | 259     | 261     | 261     | 241     | 419     | 331     | 370     | 371     | 371     | 505     | 391     |
| 17    | 259     | 407     | 421     | 251     | 241     | 481     | 331     | 521     | 371     | 371     | 391     | 391     |
| 18    | 259     | 1,330   | 581     | 241     | 241     | 356     | 331     | 346     | 371     | 371     | 391     | 415     |
| 19    | 259     | 1,270   | 2,610   | 543     | 305     | 356     | 589     | 346     | 371     | 614     | 1,000   | 495     |
| 20    | 259     | 765     | 4,190   | 857     | 782     | 356     | 628     | 346     | 371     | 419     | 604     | 460     |
| 21    | 540     | 925     | 2,320   | 250     | 316     | 356     | 331     | 346     | 371     | 371     | 391     | 497     |
| 22    | 562     | 920     | 261     | 241     | 298     | 356     | 331     | 346     | 371     | 565     | 391     | 291     |
| 23    | 259     | 918     | 261     | 483     | 241     | 356     | 402     | 346     | 371     | 371     | 391     | 291     |
| 24    | 259     | 1,410   | 261     | 247     | 241     | 356     | 577     | 346     | 371     | 371     | 391     | 291     |
| 25    | 259     | 1,410   | 261     | 539     | 361     | 356     | 433     | 346     | 371     | 371     | 391     | 291     |
| 26    | 259     | 1,090   | 261     | 450     | 241     | 1,650   | 668     | 416     | 371     | 371     | 391     | 291     |
| 27    | 259     | 1,290   | 261     | 524     | 871     | 2,430   | 512     | 346     | 371     | 371     | 391     | 291     |
| 28    | 259     | 674     | 261     | 359     | 297     | 955     | 331     | 359     | 371     | 517     | 391     | 291     |
| 29    | 259     | 321     | 330     | 565     | -       | 356     | 331     | 405     | 371     | 468     | 391     | 391     |
| 30    | 259     | 312     | 296     | 782     | -----   | 356     | 331     | 346     | 371     | 371     | 846     | 391     |
| 31    | 259     | -----   | 296     | 950     | -----   | 356     | -----   | 346     | -----   | 971     | 847     | -----   |
| Total | 8,841   | 17,186  | 17,098  | 11,594  | 11,516  | 14,455  | 13,745  | 12,408  | 11,253  | 13,601  | 15,217  | 14,908  |
| Mean  | 285     | 573     | 552     | 374     | 411     | 466     | 458     | 400     | 375     | 439     | 491     | 497     |
| Ac-ft | 17,540  | 34,090  | 33,910  | 23,000  | 22,840  | 28,670  | 27,260  | 24,610  | 22,320  | 26,980  | 30,180  | 29,570  |
| (†)   | 6,508   | 4,318   | 3,860   | 3,302   | 6,012   | 8,414   | 10,450  | 9,374   | 10,710  | 11,850  | 11,920  | 8,938   |
| (‡)   | 400,100 | 256,900 | 237,400 | 203,000 | 333,900 | 517,300 | 621,800 | 576,400 | 637,200 | 728,700 | 732,800 | 531,800 |
| (††)  | -       | -       | 0       | 50      | 5,080   | 7,980   | 3,200   | 6,000   | 11,390  | 12,190  | 9,670   | 11,820  |

Calendar year 1965: Max 4,190 Min 259 Mean 410 Ac-ft 297,000 †7,905 ‡5,723,000  
 Water year 1965-66: Max 4,190 Min 236 Mean 443 Ac-ft 321,000 †7,980 ‡5,777,000

† Mean flow reaching Imperial Dam, in cubic feet per second (combined monthly flow of Colorado River, All-American Canal near Imperial Dam, and Gila Gravity Main Canal at Imperial Dam).

‡ Flow reaching Imperial Dam, in acre-feet.

†† Senator Wash Reservoir contents, in acre-feet, at end of month.

## COLORADO RIVER MAIN STEM

9-5211. Colorado River below Yuma Main Canal  
wasteway, at Yuma, Ariz.

Location.--Lat 32°43'54", long 114°37'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.26, T.16 S., R.22 E., San Bernardino meridian, on right bank in California, 1,000 ft downstream from Yuma Main Canal wasteway, 0.6 mile downstream from gaging station on Colorado River at Yuma, 1.1 miles northwest of Post Office in Yuma, 5.2 miles downstream from Gila River, and 6.4 miles upstream from northerly international boundary.

Drainage area.--242,900 sq mi, approximately, including all closed basins entirely within the drainage boundary.

Records available.--October 1963 to September 1966. If records for Yuma Main Canal wasteway at Yuma (sta 9-5250) and Reservation Main Drain No. 4 (sta 9-5300) are subtracted from records at this station, records equivalent to those published 1902-64 as "Colorado River at Yuma" (sta 9-5210) can be obtained.

Gage.--Digital water-stage recorder. Datum of gage is 101.99 ft above mean sea level, datum of 1929. Prior to Apr. 29, 1966, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 4,560 cfs Dec. 21 (gage height, 14.00 ft); minimum daily, 494 cfs Sept. 10.  
1963-66: Maximum discharge, that of Dec. 21, 1965; minimum daily, that of Sept. 10, 1966.  
Maximum discharge known, 250,000 cfs Jan. 22, 1916 (gage height, 34.0 ft, at former gaging station at Yuma).

Remarks.--Records excellent. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, municipal, and industrial uses, and return flows from irrigated areas.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEPT.  |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 940    | 722    | 1,100  | 542    | 692    | 740    | 1,070  | 922    | 933    | 674    | 842    | 536    |
| 2     | 996    | 734    | 1,500  | 554    | 608    | 770    | 1,310  | 866    | 926    | 650    | 1,000  | 542    |
| 3     | 989    | 734    | 1,140  | 554    | 692    | 1,500  | 996    | 890    | 870    | 651    | 769    | 578    |
| 4     | 919    | 644    | 1,030  | 542    | 740    | 1,300  | 947    | 921    | 856    | 639    | 670    | 626    |
| 5     | 926    | 989    | 1,040  | 530    | 686    | 1,230  | 1,050  | 921    | 877    | 661    | 716    | 690    |
| 6     | 734    | 1,010  | 1,040  | 554    | 620    | 1,300  | 1,130  | 906    | 1,160  | 656    | 1,110  | 1,040  |
| 7     | 752    | 961    | 1,010  | 572    | 656    | 1,340  | 1,010  | 926    | 1,130  | 668    | 1,000  | 906    |
| 8     | 596    | 933    | 1,060  | 584    | 692    | 1,220  | 728    | 933    | 631    | 682    | 721    | 677    |
| 9     | 710    | 996    | 1,090  | 566    | 905    | 828    | 716    | 919    | 806    | 650    | 665    | 567    |
| 10    | 728    | 982    | 776    | 536    | 1,360  | 1,400  | 686    | 926    | 653    | 649    | 631    | 494    |
| 11    | 716    | 954    | 644    | 566    | 870    | 1,360  | 1,110  | 926    | 638    | 674    | 630    | 553    |
| 12    | 704    | 975    | 608    | 590    | 947    | 947    | 961    | 884    | 644    | 1,040  | 624    | 539    |
| 13    | 680    | 968    | 602    | 614    | 1,000  | 1,330  | 933    | 905    | 607    | 916    | 633    | 701    |
| 14    | 686    | 954    | 614    | 656    | 989    | 1,040  | 668    | 912    | 626    | 720    | 653    | 2,220  |
| 15    | 734    | 947    | 626    | 644    | 1,040  | 954    | 734    | 1,350  | 669    | 783    | 594    | 1,400  |
| 16    | 728    | 968    | 608    | 734    | 1,390  | 961    | 1,050  | 996    | 668    | 960    | 643    | 729    |
| 17    | 716    | 1,000  | 620    | 728    | 1,520  | 1,000  | 788    | 877    | 666    | 956    | 663    | 608    |
| 18    | 710    | 1,100  | 698    | 722    | 602    | 1,060  | 692    | 884    | 655    | 890    | 1,140  | 1,180  |
| 19    | 734    | 1,720  | 1,590  | 644    | 548    | 1,080  | 680    | 877    | 656    | 700    | 1,330  | 915    |
| 20    | 764    | 1,320  | 3,660  | 758    | 532    | 1,100  | 620    | 863    | 650    | 658    | 962    | 695    |
| 21    | 710    | 1,070  | 4,240  | 722    | 518    | 1,100  | 554    | 884    | 652    | 660    | 947    | 918    |
| 22    | 716    | 1,260  | 1,320  | 608    | 512    | 1,450  | 1,300  | 891    | 670    | 669    | 924    | 865    |
| 23    | 740    | 1,270  | 716    | 636    | 524    | 1,450  | 1,350  | 842    | 673    | 657    | 811    | 699    |
| 24    | 704    | 1,410  | 650    | 704    | 548    | 1,260  | 1,390  | 870    | 689    | 636    | 1,040  | 883    |
| 25    | 716    | 1,660  | 608    | 788    | 578    | 1,260  | 1,350  | 933    | 671    | 905    | 901    | 690    |
| 26    | 716    | 1,580  | 578    | 940    | 638    | 1,250  | 989    | 961    | 642    | 680    | 676    | 826    |
| 27    | 686    | 1,430  | 548    | 710    | 680    | 2,130  | 905    | 905    | 641    | 674    | 664    | 837    |
| 28    | 704    | 1,560  | 542    | 746    | 1,000  | 2,920  | 828    | 891    | 605    | 662    | 653    | 788    |
| 29    | 710    | 1,050  | 548    | 740    | -----  | 1,420  | 919    | 912    | 620    | 644    | 629    | 639    |
| 30    | 710    | 1,000  | 518    | 884    | -----  | 1,220  | 940    | 884    | 804    | 650    | 634    | 821    |
| 31    | 716    | -----  | 518    | 961    | -----  | 1,030  | -----  | 905    | -----  | 662    | 637    | -----  |
| TOTAL | 23,290 | 32,901 | 31,842 | 20,679 | 22,087 | 36,950 | 28,404 | 28,482 | 22,428 | 22,376 | 24,512 | 24,966 |
| MEAN  | 751    | 1,097  | 1,027  | 667    | 789    | 1,256  | 947    | 919    | 748    | 722    | 791    | 834    |
| AC-FT | 46,200 | 65,260 | 63,160 | 41,020 | 43,810 | 77,260 | 56,340 | 56,490 | 44,490 | 44,380 | 48,620 | 49,520 |

CALENDAR YEAR 1965 MAX 4,240 MIN 518 MEAN 1,009 AC-FT 730,700  
WATER YEAR 1965-66 MAX 4,240 MIN 494 MEAN 879 AC-FT 636,600

9-5220. Colorado River at northerly international boundary  
above Morelos Dam, near Andrade, Calif.

Location.--Lat 32°43'00", long 114°43'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.21, T.8 S., R.24 W., Gila and Salt River meridian, on left bank at northerly international boundary, half a mile east of Andrade, 1.1 miles upstream from Morelos Dam, 1.1 miles downstream from Rockwood Gate, and 7.0 miles downstream from gaging station on Colorado River at Yuma, Ariz.

Drainage area.--243,000 sq mi, approximately, including all closed basins entirely within the drainage boundary.

Records available.--January 1950 to September 1966. Prior to October 1958, published as "at international boundary."

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929, leveling of 1941. Supplementary water-stage recorder 1,680 ft upstream at same datum.

Extremes.--Maximum discharge during year, 6,530 cfs Dec. 20; maximum elevation, 109.39 ft Dec. 20; minimum discharge, 566 cfs Nov. 4; minimum elevation, 102.18 ft Feb. 2.

1950-66: Maximum discharge, 25,390 cfs Jan. 1, 1953; maximum elevation, 114.24 ft Jan. 28, 1958; minimum discharge, that of Nov. 4, 1965; minimum elevation, that of Feb. 2, 1966.

Remarks.--This record shows water passing northerly international boundary. Minor diversions to the United States below this station from river and by pumping from ground water for irrigation in the floodway between river and Yuma levee.

Cooperation.--Records furnished by International Boundary and Water Commission, United States Section (discharge figures rounded in accordance with Geological Survey standard practice).

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.   | Dec.    | Jan.   | Feb.   | Mar.    | Apr.    | May    | June    | July    | Aug.    | Sept.   |
|-------|--------|--------|---------|--------|--------|---------|---------|--------|---------|---------|---------|---------|
| 1     | 999    | 798    | 1,070   | 1,670  | 814    | 2,170   | 3,580   | 1,300  | 1,250   | 2,640   | 3,620   | 2,670   |
| 2     | 1,040  | 807    | 1,530   | 2,080  | 636    | 1,850   | 3,470   | 1,240  | 1,240   | 3,010   | 3,980   | 2,660   |
| 3     | 1,030  | 814    | 1,300   | 3,240  | 701    | 1,580   | 3,310   | 1,210  | 1,190   | 3,270   | 4,060   | 2,640   |
| 4     | 995    | 638    | 1,070   | 1,870  | 782    | 1,540   | 3,300   | 1,260  | 1,150   | 3,540   | 4,380   | 2,630   |
| 5     | 1,010  | 968    | 1,080   | 764    | 724    | 1,530   | 3,420   | 1,260  | 1,180   | 3,750   | 4,540   | 2,620   |
| 6     | 795    | 1,090  | 1,090   | 657    | 701    | 1,620   | 3,500   | 1,240  | 1,450   | 3,810   | 4,640   | 2,670   |
| 7     | 802    | 1,010  | 1,130   | 668    | 725    | 1,680   | 3,430   | 1,250  | 1,760   | 3,770   | 4,640   | 2,690   |
| 8     | 666    | 940    | 1,140   | 682    | 2,000  | 1,830   | 3,560   | 1,270  | 2,170   | 3,730   | 4,390   | 2,650   |
| 9     | 733    | 1,060  | 1,320   | 682    | 1,820  | 2,040   | 3,710   | 1,240  | 2,150   | 3,690   | 4,280   | 2,690   |
| 10    | 791    | 1,010  | 2,550   | 658    | 1,810  | 1,690   | 3,640   | 1,270  | 2,050   | 3,770   | 4,380   | 2,650   |
| 11    | 784    | 996    | 1,980   | 681    | 1,880  | 1,840   | 3,860   | 1,260  | 2,100   | 3,730   | 4,310   | 2,710   |
| 12    | 786    | 1,000  | 2,090   | 690    | 968    | 2,160   | 3,770   | 1,250  | 2,210   | 3,680   | 4,380   | 2,690   |
| 13    | 752    | 1,060  | 1,830   | 710    | 1,040  | 2,620   | 3,550   | 1,220  | 2,200   | 3,710   | 4,340   | 2,750   |
| 14    | 734    | 998    | 1,720   | 739    | 1,050  | 2,860   | 3,440   | 1,230  | 2,340   | 3,700   | 4,350   | 3,750   |
| 15    | 762    | 1,020  | 2,020   | 768    | 1,110  | 2,860   | 3,380   | 1,560  | 2,370   | 3,610   | 4,070   | 3,430   |
| 16    | 781    | 1,040  | 1,910   | 800    | 1,410  | 2,760   | 3,150   | 1,450  | 2,340   | 3,570   | 3,820   | 2,160   |
| 17    | 767    | 1,090  | 2,120   | 839    | 1,660  | 2,740   | 2,760   | 1,280  | 2,350   | 3,590   | 3,680   | 1,840   |
| 18    | 743    | 1,130  | 2,190   | 808    | 1,870  | 2,840   | 2,290   | 1,260  | 2,350   | 3,650   | 3,750   | 1,560   |
| 19    | 777    | 1,740  | 2,620   | 760    | 2,200  | 2,740   | 2,040   | 1,290  | 2,390   | 3,600   | 3,680   | 1,280   |
| 20    | 810    | 1,500  | 4,820   | 1,280  | 2,380  | 2,960   | 2,000   | 1,220  | 2,340   | 3,560   | 3,700   | 1,210   |
| 21    | 742    | 1,190  | 5,420   | 1,880  | 2,490  | 3,260   | 1,840   | 1,250  | 2,300   | 3,620   | 3,690   | 1,260   |
| 22    | 734    | 1,320  | 3,790   | 675    | 2,480  | 3,350   | 1,540   | 1,270  | 2,310   | 3,260   | 3,670   | 1,140   |
| 23    | 799    | 1,410  | 2,840   | 697    | 2,570  | 3,580   | 1,670   | 1,220  | 2,410   | 3,210   | 3,670   | 1,160   |
| 24    | 746    | 1,450  | 2,340   | 759    | 2,510  | 3,710   | 1,780   | 1,170  | 2,460   | 3,230   | 3,650   | 1,150   |
| 25    | 749    | 1,710  | 2,420   | 785    | 2,560  | 3,760   | 1,800   | 1,240  | 2,410   | 3,230   | 3,420   | 1,160   |
| 26    | 751    | 1,660  | 3,630   | 1,020  | 2,540  | 3,710   | 1,370   | 1,250  | 2,400   | 3,250   | 3,380   | 1,120   |
| 27    | 732    | 1,490  | 4,510   | 754    | 2,570  | 4,300   | 1,260   | 1,240  | 2,460   | 3,230   | 3,190   | 1,140   |
| 28    | 754    | 1,600  | 3,050   | 805    | 2,520  | 5,420   | 1,160   | 1,260  | 2,440   | 3,140   | 2,800   | 1,100   |
| 29    | 766    | 1,120  | 2,040   | 748    | —      | 4,040   | 1,230   | 1,270  | 2,350   | 3,250   | 2,490   | 1,110   |
| 30    | 750    | 1,070  | 1,810   | 928    | -----  | 3,510   | 1,290   | 1,260  | 2,390   | 3,220   | 2,500   | 1,110   |
| 31    | 780    | -----  | 1,660   | 972    | -----  | 3,570   | -----   | 1,230  | -----   | 3,270   | 2,460   | -----   |
| Total | 24,860 | 34,729 | 70,090  | 31,069 | 46,521 | 86,120  | 80,100  | 39,220 | 62,510  | 107,290 | 117,910 | 61,400  |
| Mean  | 802    | 1,158  | 2,261   | 1,002  | 1,661  | 2,778   | 2,670   | 1,265  | 2,084   | 3,461   | 3,804   | 2,047   |
| Ac-ft | 49,310 | 66,880 | 139,000 | 61,620 | 92,270 | 170,800 | 158,900 | 77,790 | 124,000 | 212,800 | 233,900 | 121,800 |

Calendar year 1965: Max 7,240 Min 638 Mean 2,105 Ac-ft 1,524,000  
Water year 1965-66: Max 5,420 Min 636 Mean 2,087 Ac-ft 1,511,000

## DIVERIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5225. Gila Gravity Main Canal at Imperial Dam, Ariz.-Calif.

Location.--Lat 32°52'35", long 114°27'15", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.30, T.6 S., R.21 W., Gila and Salt River meridian, on right bank 3,200 ft downstream from intake at east end of Imperial Dam.

Records available.--August 1943 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 160.00 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--7 years (1959-66), 1,188 cfs (860,100 acre-ft per year).

Extremes.--1943-66: Maximum daily discharge, 2,240 cfs May 25, 1965; no flow at canal intake at times in several years when intake gates were closed.

Remarks.--Records excellent except those below 100 cfs, which are fair. Gila Gravity Main Canal diverts water from Colorado River at left end of Imperial Dam for irrigation of lands on Gila Project in Arizona. Diversion to this canal began Aug. 17, 1943. Diversion to North Gila Valley from this canal began Dec. 16, 1954. During the 1966 water year, water was used for irrigation of 96,487 acres divided as follows: North and South Gila Valleys, 16,356 acres; Yuma Mesa Division 16,768 acres; Wellton-Mohawk Division, 60,062 acres; Yuma Mesa Auxiliary Division, 3,301 acres. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.   | DEC.    | JAN.   | FEB.   | MAR.   | APR.   | MAY     | JUNE    | JULY    | AUG.    | SEPT.  |
|-------|--------|--------|---------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 1     | 1,400  | 866    | 280     | 83     | 495    | 914    | 1,140  | 1,370   | 2,010   | 1,820   | 1,690   | 1,820  |
| 2     | 1,290  | 934    | 530     | 70     | 548    | 970    | 933    | 1,760   | 2,040   | 1,580   | 2,070   | 1,670  |
| 3     | 949    | 981    | 544     | 295    | 447    | 901    | 775    | 1,950   | 1,930   | 1,360   | 1,980   | 1,460  |
| 4     | 1,220  | 859    | 544     | 397    | 435    | 826    | 1,550  | 2,110   | 1,720   | 1,640   | 1,850   | 1,150  |
| 5     | 1,590  | 844    | 414     | 422    | 362    | 568    | 1,790  | 2,010   | 1,430   | 1,800   | 1,870   | 1,410  |
| 6     | 1,640  | 630    | 714     | 488    | 312    | 440    | 1,900  | 2,060   | 1,820   | 1,960   | 1,490   | 1,590  |
| 7     | 1,380  | 564    | 912     | 372    | 578    | 994    | 1,820  | 1,720   | 2,050   | 1,860   | 1,400   | 1,610  |
| 8     | 1,310  | 859    | 713     | 305    | 630    | 1,100  | 1,590  | 1,750   | 2,060   | 1,970   | 1,770   | 1,540  |
| 9     | 1,030  | 1,110  | 334     | 271    | 628    | 1,310  | 1,340  | 1,740   | 2,010   | 1,700   | 1,890   | 1,570  |
| 10    | 864    | 1,110  | 251     | 410    | 446    | 1,260  | 993    | 1,890   | 1,800   | 1,480   | 2,030   | 1,510  |
| 11    | 1,080  | 1,030  | 22      | 521    | 358    | 1,140  | 1,560  | 2,010   | 1,640   | 1,640   | 1,990   | 1,460  |
| 12    | 1,350  | 914    | 40      | 552    | 238    | 947    | 1,650  | 1,910   | 1,440   | 1,890   | 1,850   | 1,620  |
| 13    | 1,380  | 769    | 89      | 498    | 267    | 824    | 1,750  | 1,880   | 1,660   | 2,010   | 1,740   | 1,770  |
| 14    | 1,240  | 515    | 180     | 376    | 614    | 1,120  | 1,650  | 1,660   | 1,960   | 1,920   | 1,620   | 1,820  |
| 15    | 1,080  | 826    | 135     | 362    | 678    | 1,240  | 1,610  | 1,430   | 1,940   | 1,840   | 1,910   | 1,540  |
| 16    | 803    | 963    | 101     | 236    | 780    | 1,380  | 1,380  | 1,600   | 2,010   | 1,620   | 2,000   | 1,430  |
| 17    | 778    | 974    | 19      | 482    | 746    | 1,320  | 1,140  | 1,920   | 2,000   | 1,520   | 1,830   | 1,170  |
| 18    | 1,060  | 903    | 42      | 398    | 652    | 1,200  | 1,750  | 2,060   | 1,740   | 1,760   | 1,870   | 1,010  |
| 19    | 1,190  | 892    | 63      | 374    | 484    | 1,140  | 1,960  | 2,070   | 1,440   | 1,860   | 1,770   | 1,300  |
| 20    | 1,140  | 740    | 129     | 302    | 421    | 881    | 1,960  | 2,090   | 1,720   | 1,800   | 1,620   | 1,540  |
| 21    | 997    | 329    | 150     | 248    | 724    | 1,060  | 1,910  | 1,640   | 1,670   | 1,950   | 1,240   | 1,730  |
| 22    | 861    | 53     | 129     | 130    | 914    | 1,280  | 1,610  | 1,590   | 1,790   | 1,600   | 1,560   | 1,720  |
| 23    | 788    | 0      | 35      | 106    | 1,100  | 1,330  | 1,610  | 1,780   | 1,600   | 1,640   | 1,690   | 1,650  |
| 24    | 656    | 0      | 23      | 266    | 1,060  | 1,190  | 1,460  | 2,060   | 1,720   | 1,460   | 1,730   | 1,460  |
| 25    | 877    | 0      | 17      | 288    | 883    | 1,140  | 1,600  | 2,140   | 1,390   | 1,890   | 1,720   | 1,240  |
| 26    | 1,040  | 0      | 16      | 290    | 837    | 792    | 1,850  | 2,010   | 1,320   | 2,030   | 1,680   | 1,350  |
| 27    | 1,040  | 0      | 170     | 284    | 837    | 600    | 1,870  | 2,040   | 1,610   | 1,630   | 1,550   | 1,540  |
| 28    | 1,000  | 284    | 200     | 217    | 914    | 833    | 1,790  | 1,840   | 1,970   | 1,830   | 1,300   | 1,700  |
| 29    | 855    | 349    | 256     | 127    | -----  | 1,110  | 1,760  | 1,590   | 1,950   | 1,810   | 1,740   | 1,630  |
| 30    | 782    | 298    | 295     | 125    | -----  | 1,070  | 1,480  | 1,790   | 1,840   | 1,780   | 1,810   | 1,560  |
| 31    | 628    | -----  | 253     | 421    | -----  | 1,030  | -----  | 1,900   | -----   | 1,200   | 1,780   | -----  |
| TOTAL | 33,298 | 18,596 | 7,564.0 | 9,716  | 17,368 | 31,930 | 47,581 | 57,570  | 53,880  | 54,450  | 54,040  | 45,570 |
| MEAN  | 1,074  | 620    | 244     | 313    | 621    | 1,030  | 1,586  | 1,857   | 1,796   | 1,756   | 1,743   | 1,512  |
| AC-FT | 66,050 | 36,880 | 15,000  | 19,270 | 34,490 | 63,330 | 94,380 | 114,200 | 106,900 | 108,000 | 107,200 | 89,990 |

CALENDAR YEAR 1965 MAX 2,240 MIN 0 MEAN 1,176 AC-FT 851,700  
 WATER YEAR 1965-66 MAX 2,140 MIN 0 MEAN 1,182 AC-FT 855,700

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

27

9-5230. All-American Canal near Imperial Dam, Ariz.-Calif.

Location.--Lat 32°52'15", long 114°28'50", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.17, T.15 S., R.24 E., San Bernardino meridian, on left bank 6,000 ft downstream from intake at west end of Imperial Dam and 13 $\frac{1}{2}$  miles upstream from turnout to Yuma Main Canal.

Records available.--October 1938 to September 1966. Monthly discharge only prior to October 1939, published in WSP 1313.

Gage.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level, datum of 1929 (subject to undetermined changes caused by earthquake of May 18, 1940). Since Aug. 21, 1952, auxiliary water-stage recorder 18 $\frac{1}{2}$  miles downstream from base gage.

Average discharge.--25 years (1941-66), 7,130 cfs (5,162,000 acre-ft per year).

Extremes.--1938-66: Maximum daily discharge, 13,500 cfs Apr. 16, 1938; no flow at times in several years.

Remarks.--Records excellent. All-American Canal diverts water from Colorado River at Imperial Dam. Water is used for power development and for irrigation in Yuma, Coachella, and Imperial Valleys. Water can be released back to the river through Pilot Knob powerplant and wasteway for power, regulatory purposes, or for downstream use in Mexico. First diversion to All-American Canal began October 1938, but prior to October 1940 was used only for priming canal.

Cooperation.--Gage-height record furnished by Imperial Irrigation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July    | Aug.    | Sept.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 5,720   | 4,010   | 3,050   | 2,080   | 2,720   | 6,470   | 7,900   | 6,610   | 7,730   | 9,350   | 9,330   | 8,510   |
| 2     | 5,580   | 3,910   | 3,560   | 2,940   | 2,930   | 6,510   | 7,830   | 6,360   | 7,750   | 9,770   | 9,450   | 8,640   |
| 3     | 6,210   | 3,860   | 3,560   | 4,130   | 2,760   | 6,110   | 8,080   | 6,840   | 7,510   | 9,660   | 9,730   | 8,260   |
| 4     | 6,360   | 4,090   | 3,540   | 2,920   | 2,930   | 5,880   | 8,540   | 7,090   | 7,510   | 9,600   | 10,200  | 7,600   |
| 5     | 6,570   | 4,190   | 3,510   | 2,140   | 3,300   | 6,040   | 8,740   | 7,510   | 7,270   | 9,730   | 10,400  | 7,650   |
| 6     | 6,390   | 3,930   | 3,510   | 2,180   | 3,590   | 5,730   | 9,210   | 7,430   | 7,770   | 9,810   | 10,400  | 7,160   |
| 7     | 6,370   | 3,820   | 3,420   | 2,140   | 4,100   | 5,640   | 9,670   | 7,470   | 8,020   | 9,780   | 10,400  | 7,510   |
| 8     | 6,290   | 3,820   | 3,240   | 2,220   | 5,500   | 6,180   | 9,750   | 7,280   | 8,530   | 9,820   | 10,100  | 7,920   |
| 9     | 6,120   | 3,880   | 3,440   | 2,180   | 4,360   | 6,770   | 9,960   | 7,280   | 8,620   | 9,910   | 10,500  | 7,880   |
| 10    | 5,810   | 3,820   | 4,550   | 2,280   | 4,660   | 6,730   | 9,650   | 7,100   | 8,620   | 9,750   | 10,900  | 7,730   |
| 11    | 5,520   | 4,090   | 3,470   | 2,650   | 5,000   | 6,770   | 9,630   | 7,030   | 8,770   | 10,000  | 11,200  | 7,390   |
| 12    | 5,360   | 4,230   | 3,090   | 2,800   | 4,420   | 6,920   | 9,370   | 6,910   | 8,310   | 10,000  | 11,200  | 7,350   |
| 13    | 5,080   | 4,090   | 2,800   | 2,770   | 4,070   | 6,600   | 9,340   | 6,940   | 8,280   | 9,940   | 11,100  | 7,390   |
| 14    | 5,260   | 4,050   | 2,750   | 3,210   | 3,930   | 7,040   | 9,570   | 7,020   | 8,740   | 9,980   | 10,400  | 7,380   |
| 15    | 5,130   | 4,030   | 2,880   | 3,310   | 3,730   | 6,830   | 9,270   | 6,630   | 8,730   | 10,100  | 10,200  | 7,550   |
| 16    | 4,820   | 3,880   | 3,020   | 2,860   | 4,070   | 6,650   | 8,720   | 6,690   | 9,220   | 9,820   | 10,000  | 7,080   |
| 17    | 4,420   | 3,340   | 2,750   | 2,620   | 4,550   | 6,940   | 8,690   | 6,790   | 9,120   | 9,540   | 9,710   | 7,050   |
| 18    | 4,220   | 2,830   | 2,470   | 2,650   | 5,350   | 7,330   | 8,540   | 7,020   | 9,300   | 9,670   | 9,770   | 6,120   |
| 19    | 4,120   | 2,210   | 2,250   | 2,010   | 5,880   | 6,940   | 8,080   | 7,300   | 9,060   | 9,820   | 9,500   | 5,830   |
| 20    | 4,240   | 2,210   | 2,560   | 3,210   | 6,180   | 6,920   | 7,760   | 7,340   | 9,090   | 10,200  | 9,640   | 6,070   |
| 21    | 4,450   | 1,950   | 1,850   | 3,310   | 6,600   | 7,410   | 8,160   | 7,410   | 9,090   | 10,400  | 9,150   | 6,160   |
| 22    | 4,350   | 1,840   | 2,880   | 2,250   | 6,880   | 7,570   | 7,750   | 6,790   | 9,190   | 9,710   | 9,210   | 5,790   |
| 23    | 4,390   | 1,950   | 2,720   | 2,250   | 6,910   | 7,950   | 7,510   | 6,920   | 9,340   | 9,520   | 9,280   | 5,740   |
| 24    | 4,290   | 1,880   | 2,410   | 2,410   | 6,970   | 8,670   | 7,520   | 6,920   | 9,170   | 9,110   | 9,180   | 6,100   |
| 25    | 4,330   | 1,990   | 2,730   | 2,600   | 7,400   | 8,590   | 7,240   | 7,140   | 8,950   | 8,940   | 9,190   | 5,890   |
| 26    | 4,350   | 1,710   | 4,170   | 2,620   | 7,600   | 7,720   | 6,900   | 7,580   | 8,470   | 8,500   | 9,430   | 5,860   |
| 27    | 4,560   | 1,600   | 4,620   | 2,480   | 6,530   | 6,850   | 6,960   | 7,320   | 8,270   | 8,860   | 9,080   | 5,870   |
| 28    | 4,460   | 1,750   | 3,320   | 2,570   | 6,520   | 7,080   | 7,300   | 7,410   | 8,560   | 9,630   | 8,060   | 5,870   |
| 29    | 4,350   | 2,190   | 2,410   | 2,380   | -       | 7,120   | 7,260   | 7,380   | 8,430   | 10,100  | 7,780   | 6,270   |
| 30    | 4,270   | 2,610   | 2,280   | 2,380   | -----   | 7,040   | 7,240   | 7,510   | 8,720   | 9,540   | 7,760   | 6,230   |
| 31    | 4,210   | -----   | 2,200   | 2,510   | -----   | 7,440   | -----   | 7,610   | -----   | 8,780   | 7,970   | -----   |
| Total | 159,600 | 93,760  | 95,010  | 81,060  | 139,440 | 214,440 | 252,140 | 220,630 | 256,140 | 299,340 | 300,220 | 207,850 |
| Mean  | 5,148   | 3,125   | 3,065   | 2,615   | 4,980   | 6,917   | 8,405   | 7,117   | 8,538   | 9,656   | 9,685   | 6,928   |
| Ac-ft | 316,600 | 186,000 | 188,400 | 160,800 | 276,600 | 425,300 | 500,100 | 437,600 | 508,000 | 593,700 | 595,500 | 412,300 |

Calendar year 1965: Max 11,200 Min 1,600 Mean 6,318 Ac-ft 4,574,000  
 Water year 1965-66: Max 11,200 Min 1,600 Mean 6,355 Ac-ft 4,601,000

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

9-5270. Pilot Knob powerplant and wasteway near Pilot Knob, Calif.

Location.--Lat 32°44'15", long 114°42'55", in NW 1/4 SW 1/4 sec. 25, T.16 S., R.21 E., San Bernardino meridian, 2 miles east of summit of Pilot Knob, 6 miles west of Yuma, Ariz., and 20.8 miles downstream from intake of All-American at Imperial Dam.

Records available.--February 1939 to September 1966. Prior to October 1943, monthly discharge only, published in WSP 1313. Prior to October 1956, published as Pilot Knob wasteway near Pilot Knob.

Gage.--Totalizing flowmeter on each turbine. In addition water-stage recorder in forebay on right bank of All-American Canal (also used as auxiliary gage for station No. 9-5275); tailrace gage with remote recorder logged hourly in control house; calibrated wicket gates for turbine flow and calibrated bypass gates for wasteway flow which are logged for each change. Datum of forebay gage staff is 150.00 ft; that of tailrace gage staff is 0.00 ft; elevation of sill of bypass gates is 147.88 ft, all of which are to mean sea level, datum of 1929.

Extremes.--1939-66: Maximum daily discharge, 8,350 cfs Jan. 26, 1958; no flow for long periods.

Remarks.--Records excellent. Daily discharge computed from flowmeter equipment or from head and gate openings on wicket gates. Records show water released through Pilot Knob powerplant and wasteway from All-American Canal and returned to Colorado River through Rockwood gates. Pilot Knob wasteway completed in summer of 1938 and first flow occurred Feb. 5, 1939. Pilot Knob powerplant was completed in January 1957 and first flow occurred Jan. 14, 1957. See table below for monthly return flow by Pilot Knob wasteway only.

Cooperation.--Midnight readings of flowmeter, recorder graph of forebay, and record of tailrace elevation and gate openings furnished by Imperial Irrigation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May | June   | July    | Aug.    | Sept.  |
|-------|------|-------|--------|--------|--------|--------|--------|-----|--------|---------|---------|--------|
| 1     |      |       | 0      | 1,000  | 0      | 1,400  | 2,260  |     | 0      | 1,770   | 2,500   | 1,850  |
| 2     |      |       | 0      | 1,800  | 0      | 1,040  | 1,880  |     | 0      | 2,220   | 2,700   | 1,820  |
| 3     |      |       | 0      | 2,760  | 0      | 0      | 2,080  |     | 0      | 2,470   | 2,970   | 1,770  |
| 4     |      |       | 0      | 1,190  | 0      | 0      | 2,290  |     | 0      | 2,800   | 3,410   | 1,700  |
| 5     |      |       | 0      | 63     | 0      | 0      | 2,430  |     | 0      | 2,970   | 3,610   | 1,690  |
| 6     |      |       | 0      | 0      | 0      | 0      | 2,440  |     | 0      | 2,960   | 3,300   | 1,350  |
| 7     |      |       | 0      | 0      | 0      | 0      | 2,470  |     | 302    | 2,900   | 3,320   | 1,420  |
| 8     |      |       | 0      | 0      | 1,360  | 361    | 2,650  |     | 1,320  | 2,920   | 3,320   | 1,650  |
| 9     |      |       | 208    | 0      | 709    | 904    | 2,700  |     | 1,130  | 2,940   | 3,300   | 1,800  |
| 10    |      |       | 1,670  | 0      | 582    | 0      | 2,660  |     | 1,260  | 2,940   | 3,440   | 1,850  |
| 11    |      |       | 1,430  | 0      | 770    | 41     | 2,560  |     | 1,360  | 2,860   | 3,430   | 1,840  |
| 12    |      |       | 1,540  | 0      | 0      | 1,000  | 2,590  |     | 1,390  | 2,480   | 3,480   | 1,800  |
| 13    |      |       | 1,230  | 0      | 0      | 1,010  | 2,350  |     | 1,420  | 2,560   | 3,440   | 1,800  |
| 14    |      |       | 1,210  | 0      | 0      | 1,490  | 2,540  |     | 1,570  | 2,810   | 3,430   | 1,750  |
| 15    |      |       | 1,290  | 0      | 0      | 1,560  | 2,420  |     | 1,520  | 2,660   | 3,190   | 1,660  |
| 16    |      |       | 1,310  | 0      | 0      | 1,500  | 1,770  |     | 1,500  | 2,670   | 2,950   | 1,040  |
| 17    |      |       | 1,460  | 0      | 46     | 1,480  | 1,730  |     | 1,520  | 2,700   | 2,800   | 1,000  |
| 18    |      |       | 1,550  | 0      | 1,310  | 1,430  | 1,340  |     | 1,560  | 2,670   | 2,520   | 0      |
| 19    |      |       | 1,350  | 0      | 1,740  | 1,330  | 1,150  |     | 1,540  | 2,640   | 2,340   | 0      |
| 20    |      |       | 1,690  | 670    | 1,940  | 1,570  | 1,080  |     | 1,540  | 2,640   | 2,700   | 0      |
| 21    |      |       | 1,010  | 969    | 2,050  | 1,860  | 1,010  |     | 1,560  | 2,650   | 2,700   | 0      |
| 22    |      |       | 1,920  | 0      | 2,080  | 1,650  | 0      |     | 1,560  | 2,260   | 2,710   | 0      |
| 23    |      |       | 2,060  | 0      | 2,090  | 1,910  | 0      |     | 1,600  | 2,260   | 2,700   | 0      |
| 24    |      |       | 1,640  | 0      | 2,040  | 2,220  | 0      |     | 1,500  | 2,300   | 2,360   | 0      |
| 25    |      |       | 1,890  | 0      | 2,030  | 2,200  | 0      |     | 1,490  | 2,250   | 2,150   | 0      |
| 26    |      |       | 3,340  | 0      | 1,960  | 2,200  | 0      |     | 1,480  | 1,910   | 2,360   | 0      |
| 27    |      |       | 3,860  | 0      | 1,950  | 2,200  | 0      |     | 1,510  | 2,050   | 2,150   | 0      |
| 28    |      |       | 2,430  | 0      | 1,480  | 2,270  | 0      |     | 1,490  | 2,140   | 1,830   | 0      |
| 29    |      |       | 1,360  | 0      | -      | 2,310  | 0      |     | 1,230  | 2,380   | 1,540   | 0      |
| 30    |      |       | 1,130  | 0      | -----  | 2,160  | 0      |     | 1,240  | 2,290   | 1,560   | 0      |
| 31    |      | ----- | 1,000  | 0      | -----  | 2,350  | -----  |     | -----  | 2,340   | 1,520   | -----  |
| Total | 0    | 0     | 37,578 | 8,452  | 24,137 | 39,446 | 44,400 | 0   | 33,592 | 78,410  | 85,730  | 27,790 |
| Mean  | 0    | 0     | 1,212  | 273    | 862    | 1,272  | 1,480  | 0   | 1,120  | 2,529   | 2,765   | 926    |
| Ac-ft | 0    | 0     | 74,530 | 16,760 | 47,880 | 78,240 | 88,070 | 0   | 66,630 | 155,500 | 170,000 | 55,120 |
| (†)   | 0    | 0     | 0      | 0      | 0      | 0      | 0      | 0   | 0      | 36      | 12      | 0      |

Calendar year 1965: Max 6,040 Min 0 Mean 1,049 Ac-ft 759,400 † 103  
 Water year 1965-66: Max 3,860 Min 0 Mean 1,040 Ac-ft 752,700 † 48

† Return flow, in acre-feet, by Pilot Knob wasteway (included in daily discharge table).

9-5275. All-American Canal below Pilot Knob wasteway, Calif.

Location.--Lat 32°44'05", long 114°43'25", in NW 1/4 sec. 26, T. 16 S., R. 21 E., San Bernardino meridian, on left bank 0.4 mile downstream from Pilot Knob wasteway, 6 1/2 miles west of Yuma, Ariz., 15 miles upstream from turnout to Coachella Canal, and 21.2 miles downstream from intake at Imperial Dam.

Records available.--October 1961 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 150.00 ft above mean sea level, datum of 1929. Auxiliary water-stage recorder on right bank 0.4 mile upstream used to determine head on Pilot Knob check gates (also used as forebay gage for sta 9-5270, Pilot Knob power-plant and wasteway). Datum of auxiliary gage is 150.00 ft above mean sea level, datum of 1929.

Average discharge.--5 years 4,766 cfs (3,450,000 acre-ft per year).

Extremes.--1961-66: Maximum daily discharge, 7,220 cfs July 12, 1963; minimum daily, 615 cfs Dec. 27, 1965.

Remarks.--Records excellent. Water is used for power development at three sites below station, and for irrigation in Coachella and Imperial Valleys.

Cooperation.--Gage-height record and log of gate operation furnished by Imperial Irrigation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.   | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July    | Aug.    | Sept.   |
|-------|---------|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 5,720   | 3,480   | 2,060  | 835     | 2,280   | 4,160   | 4,910   | 5,850   | 6,230   | 6,720   | 6,190   | 5,750   |
| 2     | 5,600   | 3,360   | 2,230  | 865     | 2,510   | 4,330   | 5,090   | 5,480   | 6,330   | 6,810   | 6,170   | 5,860   |
| 3     | 5,410   | 3,270   | 2,630  | 1,050   | 2,420   | 4,550   | 5,310   | 5,580   | 6,110   | 6,560   | 5,970   | 5,610   |
| 4     | 5,520   | 3,340   | 2,720  | 1,400   | 2,570   | 4,800   | 5,540   | 5,750   | 6,120   | 6,230   | 5,810   | 5,160   |
| 5     | 5,620   | 3,270   | 2,810  | 1,850   | 2,890   | 4,870   | 5,700   | 6,080   | 5,920   | 6,120   | 5,800   | 5,120   |
| 6     | 5,610   | 3,080   | 2,810  | 1,880   | 3,210   | 4,580   | 6,030   | 6,060   | 6,060   | 6,120   | 6,070   | 4,950   |
| 7     | 5,580   | 3,040   | 2,720  | 1,950   | 3,490   | 4,500   | 6,280   | 6,170   | 6,010   | 6,170   | 6,110   | 5,140   |
| 8     | 5,570   | 2,930   | 2,540  | 2,050   | 3,600   | 4,710   | 6,280   | 5,960   | 6,130   | 6,180   | 5,900   | 5,300   |
| 9     | 5,520   | 2,900   | 2,510  | 2,030   | 3,150   | 5,020   | 6,490   | 5,940   | 6,370   | 6,280   | 6,080   | 5,180   |
| 10    | 5,340   | 2,850   | 2,600  | 2,100   | 3,310   | 5,290   | 6,280   | 5,700   | 6,320   | 6,060   | 6,310   | 5,070   |
| 11    | 4,970   | 3,070   | 1,920  | 2,300   | 3,610   | 5,370   | 6,290   | 5,690   | 6,430   | 6,220   | 6,680   | 4,810   |
| 12    | 4,730   | 3,230   | 1,480  | 2,400   | 3,400   | 5,230   | 5,920   | 5,790   | 6,150   | 6,580   | 6,680   | 4,740   |
| 13    | 4,440   | 3,160   | 1,440  | 2,310   | 3,120   | 5,020   | 6,130   | 5,760   | 6,080   | 6,590   | 6,710   | 4,890   |
| 14    | 4,650   | 3,290   | 1,390  | 2,550   | 2,890   | 5,030   | 6,230   | 5,870   | 6,270   | 6,510   | 6,250   | 4,990   |
| 15    | 4,470   | 3,220   | 1,420  | 2,740   | 2,630   | 4,760   | 6,080   | 5,610   | 6,310   | 6,720   | 6,240   | 5,230   |
| 16    | 4,250   | 3,000   | 1,660  | 2,660   | 2,920   | 4,550   | 6,240   | 5,620   | 6,650   | 6,460   | 6,230   | 5,380   |
| 17    | 4,050   | 2,740   | 1,230  | 2,500   | 3,260   | 4,870   | 6,220   | 5,630   | 6,540   | 6,190   | 6,150   | 5,450   |
| 18    | 3,780   | 2,620   | 867    | 2,520   | 3,370   | 5,280   | 6,230   | 5,660   | 6,810   | 6,240   | 6,440   | 5,030   |
| 19    | 3,640   | 2,110   | 893    | 1,840   | 3,560   | 5,140   | 6,110   | 5,880   | 6,580   | 6,200   | 6,330   | 4,870   |
| 20    | 3,650   | 2,120   | 914    | 2,190   | 3,710   | 4,920   | 6,000   | 5,950   | 6,710   | 6,550   | 6,120   | 5,000   |
| 21    | 3,830   | 1,830   | 912    | 2,100   | 3,960   | 5,120   | 6,370   | 6,060   | 6,700   | 6,840   | 5,730   | 5,140   |
| 22    | 3,680   | 1,790   | 854    | 2,100   | 4,150   | 5,390   | 6,170   | 5,800   | 6,770   | 6,690   | 5,710   | 4,660   |
| 23    | 3,700   | 1,930   | 648    | 2,080   | 4,190   | 5,370   | 6,030   | 5,880   | 6,870   | 6,470   | 5,740   | 4,560   |
| 24    | 3,690   | 1,810   | 754    | 2,180   | 4,280   | 5,700   | 6,020   | 5,750   | 6,850   | 6,010   | 5,900   | 4,850   |
| 25    | 3,660   | 1,540   | 781    | 2,170   | 4,590   | 5,720   | 5,830   | 5,750   | 6,750   | 5,810   | 6,000   | 4,690   |
| 26    | 3,660   | 1,430   | 655    | 2,220   | 4,900   | 5,150   | 5,780   | 6,140   | 6,340   | 5,590   | 6,100   | 4,650   |
| 27    | 3,830   | 1,390   | 615    | 2,220   | 4,070   | 4,260   | 5,940   | 5,980   | 6,140   | 5,660   | 6,050   | 4,640   |
| 28    | 3,880   | 1,420   | 704    | 2,270   | 4,360   | 4,330   | 6,090   | 6,060   | 6,230   | 6,250   | 5,640   | 4,710   |
| 29    | 3,880   | 1,650   | 836    | 2,110   | -       | 4,360   | 5,990   | 6,100   | 6,360   | 6,620   | 5,620   | 5,090   |
| 30    | 3,810   | 1,890   | 886    | 2,090   | -----   | 4,340   | 6,080   | 6,100   | 6,580   | 6,380   | 5,590   | 5,210   |
| 31    | 3,780   | -----   | 911    | 2,050   | -----   | 4,470   | -----   | 6,140   | -----   | 5,780   | 5,610   | -----   |
| Total | 139,520 | 76,760  | 47,400 | 63,610  | 96,400  | 151,190 | 179,660 | 181,790 | 191,720 | 195,610 | 187,930 | 151,730 |
| Mean  | 4,501   | 2,559   | 1,529  | 2,052   | 3,443   | 4,877   | 5,989   | 5,864   | 6,391   | 6,310   | 6,062   | 5,058   |
| Ac-ft | 276,700 | 152,300 | 94,020 | 126,200 | 191,200 | 299,900 | 356,400 | 360,600 | 386,300 | 388,000 | 372,800 | 301,000 |

Calendar year 1965: Max 6,900 Min 615 Mean 4,487 Ac-ft 3,249,000  
 Water year 1965-66: Max 6,870 Min 615 Mean 4,557 Ac-ft 3,299,000

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.

Between Imperial Dam and the international boundary return surface flows from irrigated areas enter the Colorado River through many drains and wasteways in Arizona and California. Other return flows enter the Gila River below the gaging station near Dome (9-5205). In addition, return flows collected by the Main Drain and East Main Canal are delivered across the international boundary for use in Mexico.

Diversions for irrigation in the Gila project in Arizona are made at Imperial Dam by the Gila Gravity Main Canal (see sta 9-5225). Diversions for the Yuma project in Arizona and California are made at Imperial Dam by the All-American Canal (see sta 9-5230) and by the Yuma Main Canal.

See figure 2 on p. 36 for a schematic diagram showing location of diversions and return flows.

9-5250. Yuma Main Canal wasteway.--See daily table elsewhere in this report.

9-5270. Pilot Knob powerplant and wasteway.--See daily table elsewhere in this report.

9-5286. Laguna Canal wasteway.

Location.--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) and sharp-crested weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.14, T.7 S., R.22 W., 1,000 ft downstream from Laguna Dam and three-quarters of a mile upstream from outlet to Colorado River.

Records available.--Monthly discharge October 1960 to September 1966.

Remarks.--Record shows waste water from North Gila Valley Irrigation District to Colorado River. Flow record computed from standard weir rating.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5288. Levee Canal wasteway.

Location.--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) and sharp-crested weir, in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.4, T.8 S., R.22 W., 1,000 ft upstream from outlet to Colorado River.

Records available.--Monthly discharge October 1960 to September 1966.

Remarks.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5290. North Gila Drain No. 1.

Location.--Enters Colorado River in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.9, T.8 S., R.22 W., 5 $\frac{1}{2}$  miles downstream from Laguna Dam.

Records available.--Monthly discharge October 1960 to September 1966.

Remarks.--Record shows waste water from North Gila Valley Irrigation District returned to Colorado River. There is no gage but, due to fairly constant drainage, flow record is computed by interpolation between discharge measurements, which are made on a monthly basis (weekly prior to June 1966) at bridge 1,000 ft above outlet.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5290.5 North Gila Drain No. 3.

Location.--Enters Gila River in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.18, T.8 S., R.21 W., 10 miles upstream from mouth.

Records available.--Monthly discharge April 1962 to September 1966.

Remarks.--Record shows seepage from Gila Gravity Main Canal. There is no gage; records are computed by interpolation between discharge measurements made five to six times a year.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5291. Fortuna wasteway.

Location.--Water-stage recorder and sharp-crested weir, in NE $\frac{1}{4}$  sec.30, T.8 S., R.21 W., 1 $\frac{1}{4}$  miles upstream from outlet to Gila River.

Records available.--Monthly discharge October 1960 to September 1963, October 1964 to September 1966.

Remarks.--Record shows waste water spilled from Gila Gravity Main Canal; flow rarely reaches Gila River.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5291.5 North Gila Main Canal wasteway.

Location.--Digital water-stage recorder in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.22, T.8 S., R.22 W., 1,000 ft upstream from outlet to Gila River. Prior to July 1966 graphic water-stage recorder and sharp-crested weir, 1 mile upstream from outlet to Gila River.

Records available.--Monthly discharge October 1960 to September 1966.

Remarks.--Record shows waste water from North Gila Valley Irrigation District. Prior to July 1966 record shows waste water less flow diverted for irrigation between gage and Gila River.

Cooperation.--Prior to July 1966 record furnished by Bureau of Reclamation.



Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

9-5291.6 South Gila Pump Outlet Channel No. 3.

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) in NW $\frac{1}{4}$ SE $\frac{1}{4}$  (revised) sec.22, T.8 S., R.22 W., half a mile upstream from outlet to Gila River. Prior to Aug. 1, 1965, record obtained by Badger total-flow meter about 500 ft downstream.

Records available--Monthly discharge January 1965 to September 1966.

Remarks--Record shows water pumped from wells in South Gila Valley Unit.

Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5292. Bruce Church Drain.

Location--Pump in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.21, T.8 S., R.22 W., a quarter of a mile upstream from outlet to Gila River.

Records available--Monthly discharge April 1962 to September 1966.

Remarks--Record shows seepage water from parts of secs.15, 16, and 21 (Bruce Church Ranch). Flow determined from pump rating.

Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5292.4(revised) South Gila Pump Outlet Channel No. 2.

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.28, T.8 S., R.22 W., half a mile upstream from outlet to Gila River; prior to Oct. 18, 1965, outlet was to Wellton-Mohawk Main Outlet Drain. Prior to Aug. 1, 1965, Sparling meter at outlet to Wellton-Mohawk Main Outlet Drain.

Records available--Monthly discharge January 1962 to September 1966.

Remarks--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to Gila River.

Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5292.5 Bruce Church wasteway.

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) and sharp-crested weir, in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.20, T.8 S., R.22 W., 500 ft upstream from outlet to Gila River.

Records available--Monthly discharge October 1960 to September 1966.

Remarks--Record shows waste water from North Gila Valley Irrigation District returned to Gila River.

Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5293. Wellton-Mohawk Main Outlet Drain (Conveyance Channel).

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.17, T.8 S., R.21 W., 8 miles upstream from outlet to Gila River, which is half a mile upstream from mouth of Gila River. Prior to Feb. 20, 1962, gage heights measured from reference point on measuring bridge.

Records available--Monthly discharge October 1960 to September 1966.

Remarks--Record shows water pumped from numerous wells in Wellton-Mohawk Irrigation and Drainage District to lower the water table. Drainage is conveyed by concrete and earth channels to Gila River or Colorado River (see stas 9-5293.5, 9-5318, and 9-5319).

Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

9-5293.5 Main Outlet Drain above Gila River.

Location--Water-stage recorder in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.30, T.8 S., R.22 W., about 1,000 ft upstream from outlet to Gila River (M. O. D. E. 1), which is half a mile upstream from mouth of Gila River, and 8 miles downstream from sta 9-5293.

Records Available--Monthly discharge October 1965 to September 1966.

Remarks--Record shows water pumped from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. Above this station flow passes through 8 miles of unlined channel. Flow past this station included that of South Gila Pump Outlet Channel No. 2 prior to Oct. 18, 1965. During construction of headgates of the Main Outlet Drain Extension (Aug. 3 to Nov. 4, 1965), flow bypassed this station by being diverted, at a point 1,000 ft downstream from sta 9-5293, directly to the Gila River. Prior to Nov. 15, 1965, all flow passing this station was released to Gila River, at a point about 1,000 ft downstream (M. O. D. E. 1). After completion of the Main Outlet Drain Extension on Nov. 15, 1965, flow can be returned to the Gila or Colorado River by any one of, or combination of, three outlets. Operationally, these outlets are known as: M. O. D. E. 1 (release to the Gila River about 1,000 ft below sta 9-5293.5); M. O. D. E. 2 (see sta 9-5318), release to Colorado River above Morelos Dam; and M. O. D. E. 3 (see sta 9-5319), release to Colorado River below Morelos Dam. During period Nov. 15 to Sept. 30, a total of 7,050 acre-ft was released to Gila River through M. O. D. E. 1.

Cooperation--Prior to Aug. 16, 1966, record furnished by Bureau of Reclamation.

9-5293.6 South Gila Pump Outlet Channel No. 1.

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.30, T.8 S., R.22 W., 0.2 mile upstream from outlet to Gila River, which is half a mile upstream from mouth of Gila River. Prior to Aug. 1, 1965, Sparling total-flow meter 300 ft upstream.

Records available--Monthly discharge August 1961 to September 1966.

Remarks--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete channel to Gila River.

Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

## 9-5294. South Gila Drain No. 2.

Location--Sparling total-flow meter, near center of sec.24, T.8 S., R.23 W., at outlet to Colorado River.Records available--Monthly discharge October 1960 to September 1966.Remarks--Record shows waste water from South Gila Valley Unit returned to Colorado River.Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

## 9-5294.2 South Gila Terminal wasteway.

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) and Parshall flume in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.36, T.8 S., R.23 W., 2.0 miles upstream from outlet to Colorado River. Prior to Aug. 1, 1965, total-flow meter at same site.Records available--Monthly discharge March 1965 to September 1966.Remarks--Record shows waste water from South Gila Canal of South Gila Valley Unit returned to Colorado River.Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

## 9-5294.4 South Gila Pump Outlet Channel No. 4.

Location--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) and broad-crested weir, in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.26, T.8 S., R.23 W., 1 mile upstream from outlet to Colorado River.Records available--Monthly discharge July 1965 to September 1966.Remarks--Record shows water pumped from wells in South Gila Valley Unit and conveyed by concrete lined channel to Colorado River.Cooperation--Prior to June 1966 record furnished by Bureau of Reclamation.

## 9-5296. Reservation Drain No. 7.

Location--Staff gage at downstream end of culvert on Avenue C in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.33, T.15 S., R.23 E., San Bernardino meridian, half a mile upstream from outlet to Reservation Main Drain.Records available--Monthly discharge March to September 1966.Remarks--Record shows drainage water from sec.34, T.15 S., R.23 E., and is used with sta 9-5297 to determine seepage from All-American Canal. Flow record computed by interpolation between discharge measurements made monthly; prior to August 1966 measurements made weekly by Bureau of Reclamation.Cooperation--Records prior to August 1966 furnished by Bureau of Reclamation.

## 9-5297. Reservation Main Drain No. 6.

Location--Staff gage on upstream right piling of 9th Street bridge, in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.32, T.15 S., R.23 E., San Bernardino meridian.Records available--Monthly discharge March to September 1966.Remarks--Record shows waste and drainage water from the Reservation Division, and is used with sta 9-5296 to determine seepage from All-American Canal, which parallels drain for 4 miles. Flow record computed by interpolation between discharge measurements made monthly; prior to August 1966 measurements made weekly by Bureau of Reclamation.Cooperation--Records prior to August 1966 furnished by Bureau of Reclamation.

## 9-5298. Reservation Drain No. 2.

Location--At upstream side of bridge in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.6, T.16 S., R.23 E., San Bernardino meridian, 0.9 mile upstream from outlet to Reservation Main Drain.Records available--Monthly discharge March to September 1966.Remarks--Record used to compute seepage from All-American Canal in sec.31, T.15 S., R.22 E. There is no gage; flow record computed by interpolation between discharge measurements made monthly; prior to August 1966 measurements made weekly by Bureau of Reclamation.Cooperation--Records prior to August 1966 furnished by Bureau of Reclamation.

## 9-5299. Reservation Drain No. 3.

Location--Staff gage on pier on right side of 5th Street bridge in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.10, T.16 S., R.22 E., San Bernardino meridian, 1 mile upstream from outlet to Reservation Main Drain.Records available--Monthly discharge March to September 1966.Remarks--Record used to compute seepage from All-American Canal upstream from Yuma Main Canal. Flow record computed by interpolation between discharge measurements made monthly; prior to August 1966 measurements made weekly by Bureau of Reclamation.Cooperation--Records prior to 1966 furnished by Bureau of Reclamation.

## Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

## 9-5300. Reservation Main Drain No. 4.

Location.--Digital water-stage recorder (prior to June 1966 graphic water-stage recorder) in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.26, T.16 S., R.22 E., San Bernardino meridian, 500 ft upstream from crossing of U. S. Highway 80. Drainage canal enters Yuma Main Canal wasteway 200 ft downstream from spillway structure. Prior to May 1955, it entered 500 ft upstream from outlet of Yuma Main Canal wasteway in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.26, T.16 S., R.22 E., San Bernardino meridian.

Records available.--Monthly discharge January 1913 to April 1920, October 1921 to March 1925, January 1934 to September 1966. Prior to October 1955, published as California drainage canal.

Remarks.--Record shows waste and drainage water from area east of Yuma Main Canal on Reservation Division. Since 1939, seepage from All-American Canal has caused large increase. Flow is not included in the record of Yuma Main Canal wasteway.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

## 9-5304. Reservation Drain No. 11.

Location.--At outlet to Drain 8-B (Araz drain), in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.19, T.16 S., R.22 E., San Bernardino meridian.

Records available.--Monthly discharge March to September 1966.

Remarks.--Record shows drainage from sec.20, T.16 S., R.22 E. Flow at this station, with that at sta 9-5305, is used to determine seepage from All-American Canal. There is no gage; flow record computed by interpolation between discharge measurements made monthly; prior to August 1966 measurements made weekly by Bureau of Reclamation.

Cooperation.--Records prior to August 1966 furnished by Bureau of Reclamation.

## 9-5305. Drain 8-B.

Location.--Enters Colorado River in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.30, T.16 S., R.22 E., San Bernardino meridian, 4 miles downstream from outlet of Yuma Main Canal wasteway.

Records available.--Monthly discharge March 1948 to September 1966. Prior to October 1955, published as Araz drain.

Remarks.--Record shows seepage from All-American Canal, and waste and drainage water west of Yuma Main Canal on the Reservation Division. Flow at this station, with that at sta 9-5304, is used to determine seepage from All-American Canal. There is no gage, but due to fairly constant drainage, flow record is computed by interpolation between discharge measurements made monthly; prior to June 1966 made weekly by Bureau of Reclamation. Imperial Irrigation District also makes discharge measurements weekly at site 1,000 ft above.

Cooperation.--Prior to June 1966 record furnished by Bureau of Reclamation.

## 9-5318. Main Outlet Drain Extension above Morelos Dam (M. O. D. E. 2).

Location.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.36, T.16 S., R.21 E., San Bernardino meridian, at outlet to Colorado River  $1\frac{1}{4}$  miles upstream from Morelos Dam.

Records available.--November 1965 to September 1966.

Remarks.--Record shows water conveyed to Colorado River  $1\frac{1}{4}$  miles above Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 9-5293, 9-5293.5, 9-5319.)

Cooperation.--Records furnished by Bureau of Reclamation.

## 9-5319. Main Outlet Drain Extension below Morelos Dam (M. O. D. E. 3).

Location.--Water-stage recorder and Parshall flume in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.28, T.8 S., R.24 W., at outlet to Colorado River just downstream from Morelos Dam.

Records available.--November 1965 to September 1966.

Remarks.--Record shows water conveyed to Colorado River below Morelos Dam, from numerous drainage wells in Wellton-Mohawk Irrigation and Drainage District. (See also stas 9-5293, 9-5293.5, 9-5318.)

Cooperation.--Records furnished by International Boundary and Water Commission (U.S. Section).

## 9-5320. Cooper wasteway.

Location.--Water-stage recorder and weir, in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.33, T.8 S., R.24 W., half a mile downstream from Morelos Dam.

Records available.--Monthly discharge January 1934 to September 1966.

Remarks.--Record shows waste water from Valley Division returned to Colorado River.

Cooperation.--Record furnished by International Boundary and Water Commission (U. S. Section).

## 9-5325. Eleven Mile wasteway.

Location.--Water-stage recorder and regulating gate in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.8, T.9 S., R.24 W.,  $\frac{3}{4}$  miles downstream from Morelos Dam.

Records available.--Monthly discharge January 1924 to September 1966.

Remarks.--Record shows waste water from Valley Division returned to Colorado River.

Cooperation.--Record furnished by International Boundary and Water Commission (U. S. Section).

## DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

## 9-5330. Twenty-one Mile wasteway.

Location.--Recording gage and flume, in NE $\frac{1}{4}$  sec.35, T.10 S., R.25 W., 17 $\frac{1}{2}$  miles downstream from Morelos Dam.Records available.--Monthly discharge March 1939 to September 1966.Remarks.--Record shows waste water from Valley Division returned to Colorado River.Cooperation.--Record furnished by International Boundary and Water Commission (U. S. Section).

## 9-5340. Main drain.

Location.--Pumping plant in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.11, T.11 S., R.25 W., half a mile west of San Luis, Ariz. Water-stage recorder at outlet, and at inlet since May 8, 1953.Records available.--Monthly discharge January 1919 to September 1966.Remarks.--Record computed from rated pumps checked by discharge measurements made by International Boundary and Water Commission (U. S. Section). Flow consists mostly of drainage water from the Valley Division which is pumped across the Arizona-Sonora boundary for use in Mexico.Cooperation.--Record furnished by International Boundary and Water Commission (U. S. Section).

## 9-5345. East Main Canal wasteway.

Location.--Water-stage recorder, in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.12, T.11 S., R.25 W., a quarter of a mile east of Main drain pumping plant and a quarter of a mile west of San Luis, Ariz.Records available.--Monthly discharge January 1924 to June 1928, January 1932 to December 1933, April 1935 to September 1966. Calendar year estimates 1934 and 1935, published in WSP 1313.Remarks.--Record shows amount of unused water at the extreme end of the Valley Division which is discharged across the Arizona-Sonora boundary for use in Mexico.Cooperation.--Record furnished by International Boundary and Water Commission (U. S. Section).

Monthly return flows, in acre-feet, water year October 1965 to September 1966

| Month                   | Laguna Canal<br>wasteway<br>9-5286                     | Levee Canal<br>wasteway<br>9-5288 | North Gila<br>Drain No.1<br>9-5290                     | North Gila<br>Drain No.3<br>9-5290.5 | Fortuna<br>wasteway<br>9-5291                    | North Gila<br>Main Canal<br>wasteway<br>9-5291.5     |
|-------------------------|--|-----------------------------------|--|--------------------------------------|--|--|
| October.....            | 26   | 335                               | 718  | 61                                   | 229  | 952  |
| November.....           | 12   | 460                               | 633  | 60                                   | 163  | 464  |
| December.....           | 254  | 199                               | 413  | 51                                   | 224  | 509  |
| Calendar year 1965..... | 1,040  | 7,720                             | 7,460  | 729                                  | 1,570  | 6,850  |
| January.....            | 23   | 786                               | 357  | 25                                   | 63   | 446  |
| February.....           | 26   | 228                               | 290  | 35                                   | 28   | 307  |
| March.....              | 7.3  | 487                               | 478  | 31                                   | 23   | 656  |
| April.....              | 12   | 591                               | 470  | 54                                   | 68   | 471  |
| May.....                | 18   | 353                               | 649  | 65                                   | 115  | 231  |
| June.....               | 37   | 604                               | 714  | 97                                   | 72   | 554  |
| July.....               | 143  | 396                               | 738  | 70                                   | 110  | 451  |
| August.....             | 49   | 575                               | 738  | 42                                   | 77   | 378  |
| September.....          | 5.6  | 631                               | 938  | 28                                   | 129  | 486  |
| Water year 1965-66..... | 613  | 5,640                             | 7,140  | 619                                  | 1,300  | 5,900  |
| Month                   | South Gila<br>Pump Outlet<br>Channel No. 3<br>9-5291.6 | Bruce Church<br>Drain<br>9-5292   | South Gila<br>Pump Outlet<br>Channel No. 2<br>9-5292.4 | Bruce Church<br>wasteway<br>9-5292.5 | Wellton-Mohawk<br>Main Outlet<br>Drain<br>9-5293 | Main Outlet<br>Drain above<br>Gila River<br>9-5293.5 |
| October.....            | 3.4  | 61                                | 1,350  | 40                                   | 17,470   | 18,630   |
| November.....           | 1,300  | 60                                | 1,750  | 391                                  | 13,120   | 11,540   |
| December.....           | 1,990  | 61                                | 2,040  | 230                                  | 10,320   | 17,920   |
| Calendar year 1965..... | 11,860   | 723                               | 20,780   | 4,640                                | 186,100  | -  |
| January.....            | 1,300  | 61                                | 2,080  | 236                                  | 18,660   | 18,040   |
| February.....           | 234  | 56                                | 1,150  | 396                                  | 15,930   | 15,470   |
| March.....              | 1,030  | 61                                | 1,510  | 479                                  | 17,930   | 17,440   |
| April.....              | 1,400  | 60                                | 1,350  | 202                                  | 17,300   | 16,890   |
| May.....                | 38   | 61                                | .4   | 22                                   | 18,310   | 17,680   |
| June.....               | 1,330  | 60                                | 1,920  | 82                                   | 17,970   | 17,120   |
| July.....               | 2,230  | 61                                | 2,360  | 23                                   | 18,190   | 17,380   |
| August.....             | 2,160  | 92                                | 2,550  | 269                                  | 18,690   | 17,700   |
| September.....          | 60   | 18                                | 1,140  | 308                                  | 17,810   | 16,990   |
| Water year 1965-66..... | 13,080   | 712                               | 19,200   | 2,680                                | 209,700  | 186,000  |

a Includes 644 acre-ft of water from South Gila Pump Outlet Channel No. 2.

b Includes 7,050 acre-ft released to Gila River through M.O.D.E. 1.

Return surface flows below Imperial Dam, Ariz.-Calif.--Continued

Monthly return flows, in acre-feet, water year October 1965 to September 1966

| Month                   | South Gila<br>Pump Outlet<br>Channel No. 1<br>9-5293.6 | South Gila<br>Drain No. 2<br>9-5294  | South Gila<br>Terminal<br>wasteway<br>9-5294.2 | South Gila<br>Pump Outlet<br>Channel No. 4<br>9-5294.4 | Reservation<br>Drain No. 7<br>9-5296 | Reservation<br>Main Drain<br>No. 6<br>9-5297   |
|-------------------------|--|--------------------------------------|--|--|--------------------------------------|--|
| October.....            | 2,160  | -                                    | 85   | 448  | -                                    | -  |
| November.....           | 2,140  | -                                    | 58   | 825  | -                                    | -  |
| December.....           | 2,780  | -                                    | 32   | 1,090  | -                                    | -  |
| Calendar year 1965..... | 29,350   | 0                                    | 690  | 3,880  | -                                    | -  |
| January.....            | 2,740  | -                                    | 3.4  | 884  | -                                    | -  |
| February.....           | 2,120  | -                                    | 9.3  | 225  | -                                    | -  |
| March.....              | 2,760  | -                                    | 83   | 0  | 110                                  | 1,110  |
| April.....              | 2,380  | -                                    | 58   | 2.8  | 127                                  | 1,110  |
| May.....                | 1,870  | -                                    | 117  | 0  | 145                                  | 1,330  |
| June.....               | 2,590  | -                                    | 144  | .6   | 183                                  | 1,240  |
| July.....               | 2,910  | -                                    | 216  | 835  | 179                                  | 1,390  |
| August.....             | 2,830  | -                                    | 160  | 1,270  | 141                                  | 1,320  |
| September.....          | 1,820  | -                                    | 114  | 1.2  | 149                                  | 1,220  |
| Water year 1965-66..... | 29,100   | 0                                    | 1,080  | 5,580  | -                                    | -  |
| Month                   | Reservation<br>Drain No. 2<br>9-5298                   | Reservation<br>Drain No. 3<br>9-5299 | Reservation<br>Main Drain<br>No. 4<br>9-5300   | Reservation<br>Drain No. 11<br>9-5304                  | Drain 8-B<br>9-5305                  | M.O.D.E. 2<br>(above<br>Morelos Dam)<br>9-5318 |
| October.....            | -  | -                                    | 2,910  | -  | 185                                  | -  |
| November.....           | -  | -                                    | 2,870  | -  | 156                                  | 0  |
| December.....           | -  | -                                    | 2,650  | -  | 138                                  | 587  |
| Calendar year 1965..... | -  | -                                    | 38,360   | -  | 2,320                                | 587  |
| January.....            | -  | -                                    | 2,520  | -  | 97                                   | 0  |
| February.....           | -  | -                                    | 2,530  | -  | 40                                   | 0  |
| March.....              | 26   | 263                                  | 3,170  | 8.5  | 103                                  | 14,030   |
| April.....              | 47   | 288                                  | 3,430  | 18   | 128                                  | 13,770   |
| May.....                | 57   | 263                                  | 3,820  | 8.7  | 105                                  | 11,200   |
| June.....               | 57   | 278                                  | 3,790  | 4.6  | 107                                  | 13,340   |
| July.....               | 81   | 310                                  | 3,990  | 0  | 98                                   | 15,260   |
| August.....             | 60   | 314                                  | 3,750  | 6.1  | 117                                  | 13,920   |
| September.....          | 60   | 303                                  | 3,240  | 6.0  | 122                                  | 12,930   |
| Water year 1965-66..... | -  | -                                    | 38,670   | -  | 1,400                                | 95,040   |
| Month                   | M.O.D.E. 3<br>(below<br>Morelos Dam)<br>9-5319         | Cooper wasteway<br>9-5320            | Eleven Mile<br>wasteway<br>9-5325              | Twenty-one<br>Mile wasteway<br>9-5330                  | Main drain<br>9-5340                 | East Main<br>Canal wasteway<br>9-5345          |
| October.....            | 0  | 97                                   | 372  | 248  | 11,410                               | 476  |
| November.....           | 7,700  | 81                                   | 489  | 194  | 10,590                               | 606  |
| December.....           | 16,240   | 79                                   | 411  | 125  | 10,000                               | 879  |
| Calendar year 1965..... | 23,940   | 1,100                                | 4,880  | 2,890  | 129,800                              | 5,040  |
| January.....            | 17,740   | 97                                   | 215  | 157  | 9,080                                | 409  |
| February.....           | 15,150   | 86                                   | 464  | 314  | 8,480                                | 328  |
| March.....              | 3,350  | 137                                  | 171  | 216  | 10,840                               | 335  |
| April.....              | 1,280  | 92                                   | 291  | 238  | 9,950                                | 420  |
| May.....                | 5,790  | 81                                   | 157  | 59   | 11,150                               | 302  |
| June.....               | 3,550  | 89                                   | 173  | 172  | 9,880                                | 179  |
| July.....               | 0  | 91                                   | 369  | 156  | 10,450                               | 325  |
| August.....             | 35   | 78                                   | 378  | 256  | 10,840                               | 366  |
| September.....          | 3,580  | 82                                   | 260  | 214  | 10,680                               | 338  |
| Water year 1965-66..... | 74,420   | 1,090                                | 3,750  | 2,350  | 123,400                              | 4,960  |



PANAMINT VALLEY

37

10-2506, Wildrose Creek near Wildrose Station, Calif.  
(Hydrologic bench-mark station)

Location.--Lat 36°15'55", long 117°10'40", in Death Valley National Monument, on left bank 0.4 mile east of Wildrose Ranger Headquarters, 2 miles east of Wildrose Spring and 2½ miles east of Wildrose Station, Inyo County.

Drainage area.--23.7 sq mi.

Records available.--October 1960 to September 1966. Weather records since June 1964.

Instrumentation.--Graphic water-stage recorder with rain-gage attachment at altitude of 4,300 ft (from topographic map). Recording and storage-type precipitation gages, anemometer, and max-min thermometer at altitude of 9,990 ft; similar instruments and 24-inch screened evaporation pan at altitude of 5,750 ft; recording rain gages at altitudes of 8,400 (discontinued), 7,400 (discontinued), 7,200, 6,400, and 5,300 ft.

Average discharge.--6 years, 0.017 cfs (12 acre-ft per year).

Extremes.--Maximum discharge during year, 600 cfs Aug. 1 (gage height, 4.82 ft), on basis of field estimate of maximum flow; no flow for most of year.

1960-66: Maximum discharge, that of Aug. 1, 1966; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Nov. 22..... 0.10  
23..... .30  
Dec. 29..... 8.0  
Aug. 1.....13

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 0.40     | 0.30    | 0       | 0.01 | 0.8       |
| December.....           | 8.0      | 8.0     | 0       | .26  | 16        |
| August 1966.....        | 13       | 13      | 0       | .42  | 26        |
| Calendar year 1965..... | -        | 8.0     | 0       | .02  | 17        |
| Water year 1965-66..... | -        | 13      | 0       | .06  | 42        |

| Period                          | Pan evaporation (inches) | Temperature (°F) at altitude: |         |          |         | Average wind velocity (mph) at altitude: |          |
|---------------------------------|--------------------------|-------------------------------|---------|----------|---------|--|----------|
|                                 |                          | 9,990 ft                      |         | 5,750 ft |         |  |          |
|                                 |                          | Maximum                       | Minimum | Maximum  | Minimum | 9,990 ft                                 | 5,750 ft |
| Oct. 6, 1965 to Jan. 13, 1966.. | 12.82                    | 70                            | -16     | 92       | 4       | -  | 2.06     |
| Jan. 13 to Mar. 17.....         | 4.60                     | 54                            | 10      | 68       | 18      | -  | 1.60     |
| Mar. 17 to May 18.....          | 14.95                    | 70                            | 27      | 82       | 40      | -  | .86      |
| May 18 to July 28.....          | 28.92                    | 80                            | 50      | 96       | 62      | 4.87                                     | 1.87     |
| July 28 to Oct. 15.....         | -                        | 50                            | 18      | 84       | 32      | 4.58                                     | 2.77     |

| Month                | Precipitation (inches) at location and altitude indicated |                         |                         |                         |                         |                         |                         |                         |
|----------------------|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                      | 117°05'05"<br>36°13'05"                                   | 117°05'35"<br>36°17'10" | 117°08'20"<br>36°13'35" | 117°04'15"<br>36°15'30" | 117°06'50"<br>36°13'55" | 117°06'40"<br>36°15'10" | 117°08'10"<br>36°16'15" | 117°10'40"<br>36°15'55" |
|                      | 9,990 ft  | 8,400 ft                | 7,400 ft                | 7,200 ft                | 6,400 ft                | 5,750 ft                | 5,300 ft                | 4,300 ft                |
| October 1965.....    |   | 0.09                    | 0                       | 0.08                    | 0                       | 0                       | 0.11                    | 0                       |
| November.....        |   | 1.69                    |                         |                         | 3.46                    |                         | 2.24                    | 3.1                     |
| December.....        |   | .45                     | 5.02                    |                         | 4.02                    |                         | 2.65                    | 2.9                     |
| Calendar year 1965.. | -   | -                       | -                       | -                       | -                       | -                       | -                       | 11.8                    |
| January 1966.....    |   | 0                       |                         | 6.71                    |                         |                         |                         | 0                       |
| February.....        | 12.2  | .14                     | .24                     |                         | .30                     | 15.0                    | .04                     | .1                      |
| March.....           |   | .12                     | .07                     |                         | .02                     |                         | .03                     | 0                       |
| April.....           |   | .07                     | 0                       | .03                     | 0                       |                         | 0                       | 0                       |
| May.....             |   | .04                     | .35                     | .07                     | 0                       |                         | .07                     | .3                      |
| June.....            |   | .04                     | 0                       | .05                     | 0                       |                         | 0                       | 0                       |
| July.....            |   | 1.09                    | .23                     | .99                     | .40                     |                         | .39                     | .3                      |
| August.....          | .40   | .54                     | .91                     | .29                     | .75                     | 2.28                    | 3.51                    | 1.0                     |
| September.....       | .16   | .10                     | .20                     | .10                     | .10                     | .20                     | .10                     | .1                      |
| Water year 1965-66.. | 12.8  | 4.37                    | 7.02                    | 8.32                    | 9.05                    | 17.5                    | 9.14                    | 7.8                     |

## PANAMINT VALLEY

10-2508. Darwin Creek near Darwin, Calif.

Location.--Lat 36°19'15", long 117°31'20", in SE 1/4 sec. 34, T.18 S., R.41 E., on right bank 700 ft downstream from Darwin Falls, 1.3 miles upstream from unnamed tributary, and 5.4 miles northeast of Darwin.

Drainage area.--173 sq mi.

Records available.--October 1962 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,640 ft (from topographic map). U. S. Weather Bureau non-recording rain gage at Darwin.

Extremes.--Maximum discharge during year, 150 cfs Dec. 29 (gage height, 3.30 ft), on basis of field estimate of maximum flow; minimum daily, 0.2 cfs Aug. 3-29.

1962-66: Maximum discharge, that of Dec. 29, 1965; minimum daily, 0.2 cfs for many days in each year.

Remarks.--Records good. No regulation above station. Town of Darwin pumps water above station for municipal supply.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan. | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 0.30 | 0.30  | 0.40  | 0.40 | 0.30  | 0.30  | 0.30  | 0.40  | 0.60  | 1.0   | 0.30 | 0.30  |
| 2     | 30   | 30    | 40    | 40   | 30    | 30    | 30    | 40    | 70    | 1.1   | 1.9  | 30    |
| 3     | 30   | 30    | 40    | 30   | 30    | 30    | 30    | 40    | 80    | 1.1   | 20   | 30    |
| 4     | 30   | 30    | 40    | 30   | 30    | 30    | 30    | 40    | 80    | 1.2   | 20   | 30    |
| 5     | 30   | 30    | 40    | 30   | 30    | 40    | 30    | 40    | 80    | 1.2   | 20   | 30    |
| 6     | 30   | 30    | 40    | 30   | 30    | 40    | 30    | 40    | 80    | 1.0   | 20   | 30    |
| 7     | 30   | 30    | 40    | 30   | 30    | 40    | 40    | 40    | 60    | 1.0   | 20   | 30    |
| 8     | 30   | 30    | 40    | 30   | 30    | 40    | 40    | 40    | 60    | 1.0   | 20   | 30    |
| 9     | 30   | 30    | 40    | 30   | 30    | 40    | 40    | 40    | 60    | 1.0   | 20   | 30    |
| 10    | 30   | 30    | 40    | 30   | 40    | 40    | 40    | 40    | 50    | 1.0   | 20   | 30    |
| 11    | 30   | 30    | 40    | 30   | 40    | 40    | 30    | 40    | 50    | 1.0   | 20   | 30    |
| 12    | 30   | 40    | 40    | 30   | 40    | 40    | 30    | 40    | 40    | 1.0   | 20   | 30    |
| 13    | 30   | 40    | 40    | 30   | 40    | 40    | 30    | 40    | 40    | 1.0   | 20   | 30    |
| 14    | 30   | 40    | 40    | 30   | 40    | 40    | 30    | 40    | 40    | 80    | 20   | 30    |
| 15    | 30   | 40    | 40    | 30   | 40    | 40    | 30    | 40    | 50    | 80    | 20   | 30    |
| 16    | 30   | 40    | 40    | 30   | 40    | 40    | 30    | 40    | 60    | 70    | 20   | 30    |
| 17    | 30   | 40    | 40    | 30   | 40    | 40    | 30    | 50    | 60    | 60    | 20   | 30    |
| 18    | 30   | 40    | 40    | 30   | 40    | 40    | 40    | 50    | 60    | 50    | 20   | 30    |
| 19    | 30   | 40    | 40    | 30   | 40    | 40    | 40    | 40    | 60    | 30    | 20   | 40    |
| 20    | 30   | 40    | 40    | 30   | 40    | 40    | 40    | 40    | 60    | 30    | 20   | 40    |
| 21    | 30   | 40    | 40    | 30   | 40    | 40    | 40    | 50    | 60    | 30    | 20   | 30    |
| 22    | 30   | 40    | 40    | 30   | 30    | 40    | 40    | 50    | 60    | 30    | 20   | 30    |
| 23    | 30   | 40    | 40    | 30   | 30    | 40    | 40    | 50    | 70    | 30    | 20   | 30    |
| 24    | 30   | 40    | 40    | 30   | 30    | 30    | 40    | 60    | 80    | 30    | 20   | 30    |
| 25    | 30   | 40    | 40    | 30   | 30    | 30    | 40    | 60    | 80    | 30    | 20   | 30    |
| 26    | 30   | 40    | 40    | 30   | 30    | 30    | 40    | 60    | 80    | 30    | 20   | 30    |
| 27    | 30   | 40    | 40    | 30   | 30    | 30    | 40    | 60    | 80    | 30    | 20   | 30    |
| 28    | 30   | 40    | 40    | 30   | 30    | 30    | 40    | 60    | 80    | 30    | 20   | 30    |
| 29    | 30   | 40    | 16    | 30   | ----- | 30    | 40    | 70    | 10    | 30    | 20   | 30    |
| 30    | 30   | 40    | 80    | 30   | ----- | 30    | 40    | 80    | 10    | 30    | 30   | 30    |
| 31    | 30   | ----- | 40    | 30   | ----- | 30    | ----- | 80    | ----- | 30    | 30   | ----- |
| Total | 9.30 | 10.90 | 28.40 | 9.50 | 9.60  | 11.20 | 10.70 | 15.00 | 19.90 | 20.90 | 8.20 | 9.20  |
| Mean  | 0.30 | 0.36  | 0.92  | 0.31 | 0.34  | 0.36  | 0.36  | 0.48  | 0.66  | 0.67  | 0.26 | 0.31  |
| Ac-ft | 18   | 22    | 56    | 19   | 19    | 22    | 21    | 30    | 39    | 41    | 16   | 18    |
| (†)   | 0.10 | 0.98  | 1.04  | 0    | 0.04  | 0     | 0     | 0.90  | 0.32  | 0.18  | 0.58 | 0     |

Calendar year 1965 Max 16 Min 0.20 Mean 0.410 Ac-ft 297  
 Water year 1965-66 Max 1.9 Min 0.20 Mean 0.446 Ac-ft 323

Peak discharge (base, 10 cfs).--Dec. 29 (1800 hrs) 150 cfs (3.30 ft); Aug. 2 (1900 hrs) 31 cfs (2.58 ft).

† Precipitation, in inches.

## DEATH VALLEY

10-2510. Big Dip Creek near Stovepipe Wells, Calif.

Location.--Lat 36°55'05", long 117°17'35", in Death Valley at culvert on road to Scotty's Castle, 21 miles northwest of Stovepipe Wells, Inyo County.

Drainage area.--0.95 sq mi.

Records available.--Water years 1959-63 (annual maximum), April 1963 to September 1966.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,620 ft (from topographic map). Jan. 16, 1959, to Apr. 7, 1963, crest-stage only at same site and datum. Recording rain gage at site 0.5 mile upstream.

Extremes.--No flow during year.

1959-66: Maximum discharge, 46 cfs Aug. 22, 1961 (gage height, 13.58 ft), based on computation of maximum flow through culvert; no flow for most of each year.

Remarks.--No flow since July 17, 1965. No regulation or diversion above station. Discharge for calendar year 1965 is as follows: maximum daily, 0.4 cfs; minimum, zero; mean, 0.002 cfs; total, 1.4 acre-ft. Rainfall records, incomplete.



10-2513. Amargosa River at Tecopa, Calif.

Location.---Lat 35°50'55", long 116°13'45", in NW¼SE¼ sec.9, T.20 N., R.7 E., on right bank 20 ft upstream from county road and 0.2 mile west of Tecopa.

Records available.---October 1961 to September 1966.

Gage.---Graphic water-stage recorder with rain-gage attachment and concrete-culvert control. Altitude of gage is 1,310 ft (from topographic map).

Average discharge.---5 years, 2.61 cfs (1,890 acre-ft per year).

Extremes.---Maximum discharge during year, 950 cfs Dec. 9 (gage height, 10.10 ft), from rating curve extended above 8.0 cfs on basis of computation of flow through culvert at gage height 8.1 ft; no flow May 21 to Sept. 13, Sept. 20-30.

1961-66: Maximum discharge, that of Dec. 9, 1965; no flow for many days in each year.

Flood (date unknown) reached a stage of 8.1 ft, from floodmarks (discharge, 790 cfs, based on computation of maximum flow through culvert).

Remarks.---Records good except those for period Dec. 13 to Jan. 12, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May  | June | July | Aug. | Sept. |
|-------|------|--------|--------|--------|-------|-------|-------|------|------|------|------|-------|
| 1     | 0.10 | 0.40   | 5.2    | 3.4    | 7.8   | 1.1   | 0.50  | 0.20 |      |      |      | 0     |
| 2     | .10  | .40    | 4.6    | 1.8    | 10    | 1.1   | .40   | .20  |      |      |      | 0     |
| 3     | .10  | .40    | 4.3    | 1.5    | 10    | 1.1   | .30   | .20  |      |      |      | 0     |
| 4     | .10  | .40    | 4.1    | 1.4    | 9.0   | 1.1   | .40   | .10  |      |      |      | 0     |
| 5     | .10  | .40    | 3.7    | 1.3    | 7.3   | 1.2   | .50   | .10  |      |      |      | 0     |
| 6     | .10  | .50    | 3.3    | 1.2    | 8.7   | 1.2   | .50   | .10  |      |      |      | 0     |
| 7     | .10  | .50    | 3.5    | 1.1    | 10    | 1.2   | .50   | .10  |      |      |      | 0     |
| 8     | .10  | .50    | 4.3    | 1.1    | 8.4   | 1.3   | .50   | .10  |      |      |      | 0     |
| 9     | .10  | .50    | 485    | 10     | 10    | 1.7   | .40   | .10  |      |      |      | 0     |
| 10    | .10  | .50    | 425    | 10     | 9.6   | 1.8   | .40   | .10  |      |      |      | 0     |
| 11    | .10  | .50    | 562    | 9.0    | 8.7   | 2.6   | .40   | .20  |      |      |      | 0     |
| 12    | .10  | .60    | 132    | 8.7    | 7.1   | 2.7   | .40   | .10  |      |      |      | 0     |
| 13    | .10  | .60    | 20     | 6.8    | 3.0   | 2.4   | .40   | .10  |      |      |      | 0     |
| 14    | .10  | .60    | 17     | 5.8    | 3.0   | 1.9   | .40   | .10  |      |      |      | .10   |
| 15    | .10  | 1.2    | 15     | 5.2    | 3.0   | 1.7   | .40   | .10  |      |      |      | .10   |
| 16    | .10  | 2.1    | 14     | 3.7    | 2.9   | 1.1   | .40   | .10  |      |      |      | .10   |
| 17    | .10  | 1.5    | 13     | 3.5    | 2.9   | 1.0   | .30   | .10  |      |      |      | .10   |
| 18    | .10  | 5.8    | 12     | 2.4    | 3.0   | .80   | .20   | .10  |      |      |      | .10   |
| 19    | .10  | 1.3    | 11     | 2.1    | 3.2   | .80   | .30   | .10  |      |      |      | .20   |
| 20    | .10  | 1.0    | 10     | 1.9    | 2.9   | .80   | .30   | .10  |      |      |      | 0     |
| 21    | .10  | 1.1    | 9.0    | .60    | 2.2   | .90   | .40   | 0    |      |      |      | 0     |
| 22    | .10  | .49    | 8.0    | 1.0    | 1.7   | .80   | .30   | 0    |      |      |      | 0     |
| 23    | .10  | 10.4   | 7.1    | 1.2    | 1.5   | .60   | .30   | 0    |      |      |      | 0     |
| 24    | .20  | .48    | 6.1    | 1.3    | 1.5   | .80   | .30   | 0    |      |      |      | 0     |
| 25    | .20  | .42    | 5.8    | 1.5    | 1.8   | .70   | .30   | 0    |      |      |      | 0     |
| 26    | .20  | 1.5    | 5.6    | 3.3    | 2.4   | .70   | .20   | 0    |      |      |      | 0     |
| 27    | .20  | 1.6    | 5.4    | 4.3    | 1.7   | .70   | .20   | 0    |      |      |      | 0     |
| 28    | .30  | 1.6    | 6.6    | 4.6    | 1.5   | .70   | .20   | 0    |      |      |      | 0     |
| 29    | .30  | 9.6    | 6.4    | 5.4    | ----- | .60   | .20   | 0    |      |      |      | 0     |
| 30    | .30  | 6.6    | 5.7    | 7.3    | ----- | .60   | .20   | 0    |      |      |      | 0     |
| 31    | .30  | -----  | 10.1   | 7.8    | ----- | .60   | ----- | .0   |      |      |      | ----- |
| Total | 4.30 | 34.050 | 2024.6 | 235.40 | 144.8 | 36.30 | 10.50 | 2.40 | 0    | 0    | 0    | 6.70  |
| Mean  | 0.14 | 11.4   | 65.3   | 7.59   | 5.17  | 1.17  | 0.35  | 0.08 | 0    | 0    | 0    | 0.02  |
| Ac-ft | 8.5  | 67.5   | 4,020  | 467    | 287   | 72    | 21    | 4.8  | 0    | 0    | 0    | 1.4   |
| (†)   | 0    | 2.3    | 1.8    | 0      | 0.1   | 0     | 0     | 0    | 0    | 0.1  | 0    | 0     |

Calendar year 1965 Max **562** Min **0** Mean **7.41** Ac-ft **5,370**

Water year 1965-66 Max **562** Min **0** Mean **7.67** Ac-ft **5,550**

Peak discharge (base, 15 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time    | Gage height | Discharge |
|-------|------|-------------|-----------|-------|---------|-------------|-----------|
| 11-17 | 1000 | 1.70        | 24        | 12-9  | 1500    | 10.10       | 950       |
| 11-22 | 2300 | 4.98        | 411       | 12-31 | Unknown | 3.40        | 190       |

† Precipitation, in inches.

## DEATH VALLEY

10-2513.5. Horse Thief Creek near Tecopa, Calif.

Location.--Lat 35°46'50", long 115°53'35", T.20 N., R.10 E., on left bank 0.6 mile northwest of Horse Thief Springs and 19.2 miles southeast of Tecopa, San Bernardino County.

Drainage area.--3.06 sq mi.

Records available.--October 1960 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment. Altitude of gage is 4,600 ft (from topographic map).

Average discharge.--6 years, 0.004 cfs (2.9 acre-ft per year).

Extremes.--Maximum discharge during year, 15 cfs Dec. 29 (gage height, 1.90 ft), from outside gage; no flow all year except Dec. 29, 30, 1960-66; Maximum discharge, 411 cfs Aug. 23, 1961 (gage height, 3.13 ft), from rating curve extended above 10 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: December, 2.5; February, 1.0; July, 0.1; the water year, 3.6.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Dec. 29..... 1.3  
30..... .3

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| December 1965.....      | 1.6      | 1.3     | 0       | 0.05 | 3.2       |
| Calendar year 1965..... | -        | 1.3     | 0       | .004 | 3.2       |
| Water year 1965-66..... | -        | 1.3     | 0       | .004 | 3.2       |

Note.--Flow occurred only on days listed above.

## IVANPAH VALLEY

10-2523. China Spring Creek near Mountain Pass, Calif.

Location.--Lat 35°28'05", long 115°30'30", in E½ sec.31, T.16 N., R.14 E., on upstream right bank of State highway culvert on U.S. Highway 466 and 91 and 2.0 miles east of Mountain Pass.

Drainage area.--0.94 sq mi.

Records available.--January 1959 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and box-culvert control since Oct. 9, 1963. Altitude of gage is 4,400 ft (from topographic map).

Average discharge.--7 years (1960-66), 0.001 cfs (0.7 acre-ft per year).

Extremes.--No flow during year.

1959-66: Maximum discharge, 113 cfs Aug. 5, 1964 (gage height, 2.75 ft), by computation of maximum flow through culvert; no flow in most years.

Remarks.--No flow since Aug. 5, 1964. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November-December, 5.0; February, 0.2; March, 0.2; July, 0.6; September, 0.3; the water year, 6.3.

10-2523.3. Wheaton Wash near Mountain Pass, Calif.

Location.--Lat 35°28'00", long 115°29'10", in NE¼SE¼ sec.32, T.16 N., R.14 E., on left bank, 35 ft upstream from westbound lane U.S. Highway 15, 1.3 miles downstream from China Spring Creek, and 3.1 miles east of Mountain Pass.

Drainage area.--10.2 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 4,120 ft (from topographic map).

Remarks.--No flow since Oct. 1, 1964, date of establishment. No regulation or diversion above station.

## BRISTOL LAKE BASIN

41

10-2525.5. Caruthers Creek near Ivanpah, Calif.

Location.--Lat 35°14'35", long 115°17'55", in NW 1/4 sec. 6, T.13 N., R.16 E., on left bank 6.6 miles south of Ivanpah.

Drainage area.--1.13 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 5,640 ft (from topographic map).

Extremes.--Maximum discharge during year, 174 cfs July 26 (gage height, 3.46 ft); from rating curve extended to slope-area measurement at gage height 3.75 ft; no flow for most of year.

1963-66: Maximum discharge, 230 cfs Aug. 15, 1965 (gage height, 3.75 ft), on basis of slope area measurement of maximum flow; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July  | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|-----|-------|-------|------|-------|
| 1     |      | 0     | 0.70  | 2.5   |       | 0    |       |     |       | 0     | 0    |       |
| 2     |      | 0     | .60   | 2.0   |       | 0    |       |     |       | 0     | .20  |       |
| 3     |      | 0     | .50   | 1.5   |       | 0    |       |     |       | 0     | 0    |       |
| 4     |      | 0     | .40   | 1.1   |       | 0    |       |     |       | 0     | 0    |       |
| 5     |      | 0     | .30   | .8    |       | 0    |       |     |       | 0     | 0    |       |
| 6     |      | 0     | .10   | .60   |       | 0    |       |     |       | 0     | 0    |       |
| 7     |      | 0     | 0     | .40   |       | 0    |       |     |       | 0     | 0    |       |
| 8     |      | 0     | 0     | .30   |       | 0    |       |     |       | 0     | 0    |       |
| 9     |      | 0     | 1.2   | .20   |       | 0    |       |     |       | 0     | 0    |       |
| 10    |      | 0     | 1.6   | .20   |       | 0    |       |     |       | 0     | 0    |       |
| 11    |      | 0     | 2.1   | .20   |       | 0    |       |     |       | 0     | 0    |       |
| 12    |      | 0     | 2.1   | .10   |       | 0    |       |     |       | 0     | 0    |       |
| 13    |      | 0     | 1.5   | .10   |       | 0    |       |     |       | 0     | 0    |       |
| 14    |      | 0     | 1.5   | .10   |       | 0    |       |     |       | 0     | 0    |       |
| 15    |      | 0     | 1.3   | .10   |       | 0    |       |     |       | 0     | 0    |       |
| 16    |      | .20   | 1.3   | .10   |       | 0    |       |     |       | 0     | 0    |       |
| 17    |      | 1.7   | 1.2   | .10   |       | 0    |       |     |       | 0     | 0    |       |
| 18    |      | .30   | 1.1   | .10   |       | 0    |       |     |       | 0     | .30  |       |
| 19    |      | .20   | 1.1   | .10   |       | 0    |       |     |       | 0     | .10  |       |
| 20    |      | .20   | 1.1   | .20   |       | 0    |       |     |       | 0     | .10  |       |
| 21    |      | .10   | 1.1   | .50   |       | 0    |       |     |       | 0     | 0    |       |
| 22    |      | 2.3   | 1.2   | .20   |       | 0    |       |     |       | 0     | 0    |       |
| 23    |      | 7.4   | 1.1   | 0     |       | 0    |       |     |       | 2.2   | 0    |       |
| 24    |      | 1.8   | 1.1   | 0     |       | 0    |       |     |       | 1.4   | 0    |       |
| 25    |      | 1.2   | 1.0   | 0     |       | 0    |       |     |       | .10   | 0    |       |
| 26    |      | 1.1   | .90   | 0     |       | .10  |       |     |       | 5.6   | 0    |       |
| 27    |      | 1.0   | .90   | 0     |       | .10  |       |     |       | .40   | 0    |       |
| 28    |      | .90   | .80   | 0     |       | .10  |       |     |       | .20   | 0    |       |
| 29    |      | .80   | .50   | 0     | ----- | 0    |       |     |       | .10   | 0    |       |
| 30    |      | .80   | .35   | 0     | ----- | 0    |       |     |       | 0     | 0    |       |
| 31    |      | ----- | .30   | 0     | ----- | 0    | ----- |     | ----- | 0     | 0    | ----- |
| Total | 0    | 20.00 | 39.30 | 11.50 | 0     | 0.30 | 0     | 0   | 0     | 10.00 | 0.70 | 0     |
| Mean  | 0    | 0.67  | 1.27  | 0.37  | 0     | 0.01 | 0     | 0   | 0     | 0.32  | 0.02 | 0     |
| Ac-ft | 0    | 40    | 78    | 23    | 0     | 0.6  | 0     | 0   | 0     | 20    | 1.4  | 0     |

Calendar year 1965 Max 11 Min 0 Mean 0.301 Ac-ft 218  
 Water year 1965-66 Max 7.4 Min 0 Mean 0.224 Ac-ft 162

Peak discharge (base, 10 cfs, revised)

| Date  | Time    | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|---------|-------------|-----------|------|------|-------------|-----------|
| 11-23 | 0030    | 1.98        | 24        | 7-23 | 1430 | 2.40        | 49        |
| 12-29 | Unknown | 2.28        | 45        | 7-26 | 1830 | 3.46        | 174       |

## DANBY LAKE BASIN

10-2530.8, Sunflower Wash near Essex, Calif.

Location.--Lat 34°33'00", long 115°06'25", in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.5, T.5 N., R.18 E., on left bank about 0.3 mile downstream from road crossing and 14.9 miles southeast of Essex.

Drainage area.--3.04 sq mi.

Records available.--October 1962 to September 1966.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 3,040 ft (from topographic map). Recording rain gage 2.3 miles upstream.

Extremes.--No flow during year.

1962-66: Maximum discharge, 972 cfs Sept. 18, 1963 (gage height, 4.17 ft), on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--No flow since Sept. 18, 1963. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 2.40; December, 2.28; February, 0.84; March, 0.72; August, 0.60; the water year, 6.84.

## DALE LAKE BASIN

10-2533.2, Quail Wash near Joshua Tree, Calif.

Location.--Lat 34°07'05", long 116°18'30", in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.1, T.1 S., R.6 E., on right bank 0.2 mile downstream from Coyote Hole Spring and 1.1 miles south of Joshua Tree.

Drainage area.--100 sq mi.

Records available.--March 1964 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,920 ft (from topographic map).

Remarks.--No flow since Mar. 16, 1964, date of establishment. No regulation or diversion above station.

10-2533.5, Fortynine Palms Creek near Twentynine Palms, Calif.

Location.--Lat 34°07'15", long 116°05'45", in Joshua Tree National Monument, on left bank 50 ft upstream from North Monument boundary, 1.1 miles downstream from Fortynine Palms Oasis, and 2.6 miles southwest of Twentynine Palms, San Bernardino County.

Drainage area.--8.55 sq mi.

Records available.--October 1962 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment. Altitude of gage is 2,260 ft (from topographic map).

Extremes.--Maximum discharge during year, 17 cfs Dec. 22 (gage height, 1.30 ft), from rating curve extended same as below; no flow all year except Dec. 22.

1962-66: Maximum discharge, 1,240 cfs Aug. 7, 1963 (gage height, 4.55 ft from crest-stage gage), from rating curve extended above 0.2 cfs on basis of slope-area measurement at gage heights 2.55 and 4.55 ft; no flow for most of each year.

Flood in August 1961 reached a stage of 4.9 ft, from profile of floodmarks on left bank (discharge, 1,240 cfs from slope-area measurement).

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.4; December, 2.5; January, 0.3; February, 0.8; March, 0.8; April, 1.0; May, 0.3; July, 0.1; August, 0.3; the water year, 7.5.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Dec. 22..... 3.3

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| December 1965.....      | 3.3      | 3.3     | 0       | 0.11 | 6.5       |
| Calendar year 1965..... | -        | 50      | 0       | .146 | 106       |
| Water year 1965-66..... | -        | 3.3     | 0       | .009 | 6.5       |

Note.--Flow occurred only on day listed above.

10-2535.4. Corn Springs Wash near Desert Center, Calif.

Location.--Lat 33°37'30", long 115°19'20", on right bank 0.1 mile downstream from unnamed tributary and 7.6 miles southeast of Desert Center, Riverside County.

Drainage area.--24.1 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Flood-hydrograph recorder. Recording rain gage at site 3.2 miles upstream. Altitude of gage is 1,600 ft (from topographic map).

Extremes.--No flow during year.

1963-66: Maximum discharge, 600 cfs Aug. 2, 1964 (gage height, 4.02 ft), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--No flow since Aug. 2, 1964. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.20; December, 2.00; January, 0.16; February, 0.09; March, 0.18; April to August, no record; September, 0.34; the water year, incomplete.

10-2536. Eagle Creek at Eagle Mountain, Calif.

Location.--Lat 33°51'50", long 115°29'50", on right bank in Joshua Tree National Monument, 0.6 mile from Eagle Mountain and 11.8 miles northwest of Desert Center, Riverside County.

Drainage area.--7.63 sq mi.

Records available.--October 1960 to September 1966 (discontinued).

Gage.--Graphic water-stage recorder with rain-gage attachment. Datum of gage is 1,514.97 ft above mean sea level (levels by Kaiser Industries). Prior to Mar. 12, 1962, at site 0.2 mile downstream at datum 39.77 ft lower.

Average discharge.--6 years, 0.012 cfs (8.7 acre-ft per year).

Extremes.--No flow during year.

1960-66: Maximum discharge, about 380 cfs Aug. 23, 1961 (gage height, 3.19 ft, present datum), on basis of field estimate of maximum flow; no flow for all or most of each year.

Remarks.--No flow since Aug. 16, 1965. No regulation or diversion above station. Discharge for calendar year 1965 is as follows: maximum daily, 7.5 cfs; minimum, zero; mean, 0.021 cfs; total, 15 acre-ft. Monthly precipitation, in inches, is as follows: November, 1.0; December, 1.6; January, 0.3; February, 0.2; March, 0.5; August, 0.6; September, 0.1; the water year, 4.3.

## SALTON SEA BASIN

10-2540.05, Salton Sea near Westmoreland, Calif.

Location.--Lat 33°11'37", long 115°49'54", in NE 1/4 SW 1/4 sec.21, T.11 S., R.11 E., at outer end of third mooring pier from western shore at Sandy Beach 15.5 miles northwest of Westmoreland.

Drainage area.--8,360 sq mi, approximately.

Records available.--November 1904 to September 1966. Records prior to 1932 are published in WSP 735.

Gage.--Graphic water-stage recorder. Datum of gage is 250.00 ft below mean sea level, datum of 1929, adjustment of 1934; gage readings have been converted to elevations below mean sea level. Prior to January 1925, staff gages at various sites along eastern shore, but all elevations have been converted to datum of 1901. January 1925 to Oct. 22, 1951, staff gages and reference marks at site on western shore 22 miles northwest originally set to 1901 datum and on Mar. 2, 1956, found at mean-sea-level datum 0.91 ft lower than 1929 datum, adjustment of 1934 (levels by U.S.C. & G.S.).

Extremes.--Maximum elevation during year, 232.1 ft below mean sea level Apr. 23 to May 8; minimum, 233.3 ft below mean sea level Oct. 1-4.  
1904-66: Maximum elevation, 195.9 ft below mean sea level (present datum) in February and March 1907; minimum since 1906, 251.6 ft below mean sea level (present datum) in November 1924.

Remarks.--Bottom of sea is 277.7 ft below mean sea level. See WSP 300, 735, and 918 for condensed history of Salton Sea. Corrected area and capacity tables for sea dated Jan. 8, 1965, based on resurveys made in 1957 above elevation -240 ft and in 1962 below -236 ft. is given below.

| Elevation<br>(feet below<br>mean sea<br>level) | Area<br>(acres) | Capacity<br>(acre-feet) | Elevation<br>(feet below<br>mean sea<br>level) | Area<br>(acres) | Capacity<br>(acre-feet) |
|--|-----------------|-------------------------|--|-----------------|-------------------------|
| 277.7  | 0               | 0                       | 252  | 148,800         | 2,250,000               |
| 276  | 3,800           | 2,300                   | 248  | 163,700         | 2,874,000               |
| 274  | 20,600          | 25,700                  | 244  | 179,700         | 3,562,000               |
| 272  | 40,300          | 86,000                  | 240  | 196,900         | 4,315,000               |
| 270  | 62,900          | 188,700                 | 235  | 221,800         | 5,360,000               |
| 268  | 81,600          | 334,100                 | 230  | 235,800         | 6,504,000               |
| 266  | 94,600          | 510,600                 | 225  | 249,000         | 7,716,000               |
| 264  | 105,600         | 711,000                 | 220  | 262,000         | 8,993,000               |
| 262  | 114,800         | 932,000                 | 215  | 275,000         | 10,340,000              |
| 260  | 122,600         | 1,170,000               | 210  | 288,500         | 11,740,000              |
| 256  | 134,700         | 1,684,000               | 200  | 315,500         | 14,760,000              |

Month-end elevations, in feet below mean sea level, water year October 1965 to September 1966

| Date          | Elevation<br>(feet) | Date          | Elevation<br>(feet) |
|---------------|---------------------|---------------|---------------------|
| Sept. 30..... | 233.3               | Apr. 30.....  | 232.1               |
| Oct. 31.....  | 233.1               | May 31.....   | 232.2               |
| Nov. 30.....  | 233.1               | June 30.....  | 232.3               |
| Dec. 31.....  | 232.9               | July 31.....  | 232.5               |
| Jan. 31.....  | 232.7               | Aug. 31.....  | 232.8               |
| Feb. 28.....  | 232.5               | Sept. 30..... | 233.0               |
| Mar. 31.....  | 232.2               |               |                     |

## Inflow to Salton Sea, Calif.

Salton Sea, located near the northwest corner of Imperial County, is a closed basin consisting of 8,360 sq mi. A systematic record of inflow was not attempted until the fall of 1960. The following table shows monthly and annual inflow, in acre-feet, for the water year October 1965 to September 1966. Inflow from Imperial Valley is the sum of flows in Alamo River (see Sta. No. 2547.3), New River (see Sta. No. 2555.5), and 21 drains and waterways. Inflow from Coachella Valley is the sum of flows in Whitewater River and 20 drains. Flow in the river was measured by a gaging station (see Sta. No. 2595.4), but that for the drains was furnished by Coachella Valley County Water District. (See Salton Sea Basin for other flows to the sea.) Table also shows amount of flow in Alamo and New Rivers contributed by Mexico as furnished by Imperial Irrigation District.

| Inflow from      | Oct.           | Nov.          | Dec.          | Jan.          | Feb.          | Mar.           | Apr.           | May            | June           | July           | Aug.           | Sept.          | Total            |
|------------------|----------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Imperial Valley  | 97,380         | 66,080        | 65,960        | 64,750        | 72,010        | 103,000        | 101,900        | 96,460         | 95,600         | 95,190         | 96,930         | 97,980         | 1,053,300        |
| Coachella Valley | 11,200         | 12,820        | 10,530        | 10,370        | 9,300         | 11,080         | 11,110         | 10,810         | 11,290         | 11,720         | 12,940         | 11,700         | 134,000          |
| <b>Total</b>     | <b>108,580</b> | <b>78,900</b> | <b>76,490</b> | <b>75,120</b> | <b>81,310</b> | <b>114,080</b> | <b>113,010</b> | <b>107,270</b> | <b>106,890</b> | <b>106,910</b> | <b>109,870</b> | <b>109,680</b> | <b>1,188,000</b> |

Flow from Mexico at International Boundary

|             |       |       |        |        |       |        |       |       |       |       |       |       |         |
|-------------|-------|-------|--------|--------|-------|--------|-------|-------|-------|-------|-------|-------|---------|
| Alamo River | 168   | 115   | 124    | 129    | 118   | 139    | 128   | 126   | 101   | 119   | 122   | 130   | 1,520   |
| New River   | 7,150 | 7,710 | 16,120 | 10,200 | 9,590 | 10,800 | 9,820 | 7,770 | 6,120 | 6,170 | 8,770 | 8,310 | 108,500 |

10-2540.5. Salt Creek near Mecca, Calif.

Location.--Lat 33°26'50", long 115°50'35", in NE 1/4 SW 1/4 sec. 28, T.8 S., R.11 E., on pier of Southern Pacific Railroad bridge, 0.3 mile upstream from mouth and 16 miles southeast of Mecca.

Drainage area.--269 sq mi.

Records available.--January 1961 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 230 ft below mean sea level (from topographic map).

Extremes.--Maximum discharge during year, 82 cfs Dec. 16 (gage height, 3.75 ft); minimum daily, 0.40 cfs Aug. 10.  
1961-66: Maximum discharge, about 200 cfs Oct. 17, 1963 (gage height, 6.54 ft); minimum daily, that of Aug. 10, 1966.

Remarks.--Records good. No regulation or diversion above station. Flow sustained by irrigation seepage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 4.2   | 4.2   | 9.8   | 8.6   | 10    | 12    | 7.4   | 3.9   | 3.8   | 2.9  | 2.0   | 2.4   |
| 2     | 4.6   | 4.4   | 9.2   | 8.4   | 10    | 13    | 6.4   | 3.9   | 3.8   | 2.6  | 1.9   | 1.4   |
| 3     | 4.8   | 4.8   | 8.9   | 7.8   | 8.9   | 8.4   | 6.2   | 3.9   | 3.8   | 2.5  | 1.7   | 1.0   |
| 4     | 5.2   | 4.8   | 10    | 8.6   | 8.6   | 7.4   | 6.2   | 3.9   | 3.8   | 2.4  | 1.5   | 1.1   |
| 5     | 1.8   | 4.8   | 9.8   | 8.9   | 9.2   | 7.4   | 5.6   | 3.9   | 3.8   | 2.4  | 1.5   | 2.0   |
| 6     | 4.2   | 5.0   | 9.8   | 8.6   | 11    | 8.6   | 5.0   | 3.8   | 3.8   | 2.3  | 1.6   | 2.6   |
| 7     | 3.2   | 5.0   | 10    | 8.9   | 15    | 9.5   | 5.2   | 3.8   | 3.8   | 2.2  | 1.6   | 4.8   |
| 8     | 3.0   | 5.0   | 10    | 9.5   | 18    | 9.5   | 5.4   | 3.8   | 3.7   | 2.1  | .80   | 4.4   |
| 9     | 3.2   | 5.2   | 18    | 9.8   | 20    | 8.9   | 5.2   | 3.8   | 3.7   | 2.1  | .50   | 2.8   |
| 10    | 3.2   | 5.4   | 35    | 9.2   | 9.5   | 8.9   | 5.0   | 3.8   | 3.7   | 2.1  | .40   | 2.4   |
| 11    | 3.2   | 5.6   | 21    | 9.2   | 8.4   | 8.9   | 5.0   | 3.8   | 3.7   | 2.0  | .50   | 2.4   |
| 12    | 3.2   | 5.6   | 14    | 9.5   | 7.6   | 8.9   | 4.8   | 3.9   | 3.7   | 1.8  | .50   | 2.3   |
| 13    | 3.2   | 5.8   | 12    | 8.4   | 7.2   | 8.6   | 4.8   | 3.9   | 3.6   | 1.7  | .60   | 2.3   |
| 14    | 3.8   | 6.4   | 11    | 7.4   | 6.6   | 8.9   | 6.2   | 3.9   | 3.6   | 1.7  | .60   | 5.2   |
| 15    | 3.6   | 7.4   | 12    | 8.4   | 7.2   | 8.9   | 4.4   | 3.8   | 3.6   | 1.7  | .70   | 3.9   |
| 16    | 3.4   | 12    | 29    | 8.6   | 9.8   | 8.4   | 4.2   | 3.6   | 3.6   | 1.7  | .70   | 3.2   |
| 17    | 3.0   | 22    | 46    | 7.4   | 11    | 8.1   | 4.2   | 3.6   | 3.6   | 1.6  | .80   | 3.0   |
| 18    | 3.2   | 22    | 20    | 7.8   | 10    | 7.8   | 4.2   | 3.6   | 3.6   | 1.6  | .90   | 3.2   |
| 19    | 3.6   | 11    | 12    | 8.9   | 8.1   | 7.4   | 4.2   | 3.6   | 3.4   | 1.6  | .90   | 5.2   |
| 20    | 4.4   | 8.6   | 14    | 8.9   | 7.6   | 7.8   | 4.2   | 3.8   | 3.4   | 1.7  | 1.2   | 10    |
| 21    | 7.4   | 8.4   | 14    | 9.8   | 7.4   | 7.8   | 4.1   | 3.9   | 3.4   | 1.7  | 1.6   | 1.3   |
| 22    | 3.4   | 9.2   | 17    | 7.4   | 7.4   | 7.4   | 4.1   | 5.0   | 3.3   | 1.7  | 1.7   | 11    |
| 23    | 3.3   | 20    | 22    | 8.4   | 7.0   | 7.0   | 4.1   | 4.2   | 3.2   | 1.7  | 1.8   | 4.2   |
| 24    | 3.8   | 31    | 13    | 9.2   | 10    | 6.8   | 4.1   | 3.9   | 3.2   | 1.6  | 2.0   | 3.0   |
| 25    | 3.9   | 14    | 10    | 8.6   | 9.5   | 11    | 4.0   | 3.8   | 3.2   | 1.7  | 2.0   | 2.1   |
| 26    | 6.2   | 11    | 11    | 8.6   | 8.4   | 14    | 4.0   | 3.8   | 3.0   | 1.9  | 1.9   | 1.8   |
| 27    | 3.9   | 8.9   | 10    | 8.9   | 7.8   | 9.5   | 3.9   | 3.8   | 3.0   | 1.9  | 1.6   | 1.6   |
| 28    | 3.9   | 9.2   | 10    | 9.5   | 7.0   | 9.2   | 3.9   | 3.8   | 3.0   | 1.7  | 1.7   | 1.9   |
| 29    | 4.0   | 9.2   | 10    | 8.9   | ----- | 7.8   | 3.9   | 3.8   | 3.0   | 1.8  | 1.9   | 2.4   |
| 30    | 4.0   | 9.2   | 11    | 8.9   | ----- | 12    | 3.9   | 3.6   | 3.0   | 2.0  | 1.9   | 2.5   |
| 31    | 4.0   | ----- | 9.8   | 10    | ----- | 13    | ----- | 3.6   | ----- | 2.1  | 2.8   | ----- |
| Total | 136.0 | 285.1 | 459.3 | 271.0 | 268.2 | 282.8 | 143.8 | 119.2 | 104.8 | 60.5 | 41.80 | 109.1 |
| Mean  | 4.39  | 9.50  | 14.8  | 8.74  | 9.58  | 9.12  | 4.79  | 3.85  | 3.49  | 1.95 | 1.35  | 3.64  |
| Ac-ft | 270   | 565   | 911   | 538   | 532   | 561   | 285   | 236   | 208   | 120  | 83    | 216   |

Calendar year 1965 Max 46 Min 1.9 Mean 6.39 Ac-ft 4,630  
Water year 1965-66 Max 46 Min 0.40 Mean 6.25 Ac-ft 4,530

## SALTON SEA BASIN

10-2547.3. Alamo River near Niland, Calif.

Location.--Lat 33°12'03", long 115°36'07", in NE 1/4 sec. 22, T.11 S., R.13 E., on left bank 0.6 mile upstream from mouth and 5.8 miles southwest of Niland.

Records available.--January 1943 to September 1966. Monthly discharge only for January 1943 to September 1960, published in WSP 1734.

Gage.--Graphic water-stage recorder. Altitude of gage is 235 ft below mean sea level (from topographic map).

Extremes.--1960-66: Maximum daily discharge, 1,770 cfs Sept. 18, 1963; minimum daily, 288 cfs Jan. 2, 1966.

Remarks.--Discharge represents seepage and return flow from irrigated areas.

Cooperation.--Records furnished by Imperial Irrigation District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 990    | 771    | 488    | 298    | 563    | 899    | 829    | 946    | 894    | 894    | 946    | 871    |
| 2     | 1,050  | 762    | 478    | 288    | 497    | 866    | 866    | 908    | 903    | 903    | 927    | 908    |
| 3     | 1,120  | 705    | 502    | 326    | 516    | 752    | 875    | 894    | 889    | 975    | 1,020  | 932    |
| 4     | 1,110  | 691    | 521    | 359    | 535    | 771    | 894    | 866    | 913    | 970    | 965    | 922    |
| 5     | 1,160  | 672    | 563    | 407    | 539    | 819    | 932    | 875    | 911    | 889    | 955    | 913    |
| 6     | 1,120  | 680    | 601    | 455    | 558    | 849    | 936    | 875    | 880    | 894    | 913    | 871    |
| 7     | 1,050  | 705    | 611    | 483    | 630    | 899    | 984    | 875    | 852    | 875    | 922    | 903    |
| 8     | 1,070  | 714    | 558    | 464    | 672    | 894    | 1,020  | 889    | 861    | 885    | 960    | 885    |
| 9     | 1,070  | 733    | 577    | 511    | 663    | 913    | 1,050  | 917    | 871    | 833    | 917    | 866    |
| 10    | 1,100  | 663    | 658    | 563    | 653    | 965    | 1,060  | 899    | 932    | 875    | 829    | 838    |
| 11    | 1,040  | 625    | 582    | 525    | 705    | 941    | 1,080  | 889    | 946    | 927    | 819    | 866    |
| 12    | 1,060  | 592    | 521    | 530    | 719    | 932    | 1,120  | 861    | 893    | 875    | 819    | 833    |
| 13    | 994    | 620    | 493    | 497    | 762    | 953    | 1,020  | 861    | 894    | 871    | 908    | 842    |
| 14    | 922    | 672    | 493    | 507    | 729    | 951    | 975    | 866    | 941    | 927    | 927    | 875    |
| 15    | 889    | 644    | 483    | 582    | 733    | 880    | 946    | 871    | 903    | 871    | 975    | 927    |
| 16    | 842    | 677    | 592    | 568    | 653    | 842    | 975    | 917    | 955    | 922    | 1,040  | 932    |
| 17    | 833    | 677    | 1,010  | 558    | 597    | 800    | 995    | 871    | 903    | 965    | 960    | 970    |
| 18    | 823    | 635    | 700    | 663    | 625    | 809    | 1,020  | 861    | 908    | 965    | 899    | 1,040  |
| 19    | 795    | 620    | 440    | 714    | 667    | 847    | 970    | 852    | 923    | 975    | 951    | 1,350  |
| 20    | 795    | 568    | 392    | 672    | 724    | 861    | 894    | 852    | 1,040  | 880    | 1,010  | 1,220  |
| 21    | 805    | 558    | 364    | 587    | 762    | 856    | 880    | 856    | 1,040  | 894    | 955    | 1,110  |
| 22    | 762    | 554    | 440    | 502    | 762    | 866    | 922    | 899    | 970    | 903    | 880    | 1,120  |
| 23    | 757    | 577    | 507    | 483    | 800    | 861    | 989    | 875    | 903    | 946    | 955    | 975    |
| 24    | 757    | 521    | 387    | 488    | 838    | 979    | 936    | 899    | 979    | 1,000  | 946    | 965    |
| 25    | 719    | 507    | 354    | 469    | 842    | 1,130  | 970    | 899    | 946    | 955    | 951    | 1,010  |
| 26    | 733    | 469    | 335    | 478    | 838    | 1,200  | 970    | 885    | 936    | 899    | 847    | 941    |
| 27    | 729    | 435    | 326    | 497    | 842    | 1,120  | 861    | 875    | 913    | 847    | 894    | 917    |
| 28    | 757    | 426    | 335    | 563    | 838    | 979    | 927    | 875    | 885    | 814    | 922    | 903    |
| 29    | 771    | 464    | 340    | 587    | -----  | 913    | 932    | 885    | 880    | 833    | 885    | 941    |
| 30    | 781    | 535    | 359    | 554    | -----  | 842    | 970    | 889    | 908    | 970    | 856    | 946    |
| 31    | 757    | -----  | 317    | 554    | -----  | 838    | -----  | 889    | -----  | 955    | 871    | -----  |
| Total | 28,161 | 18,472 | 15,327 | 15,732 | 19,262 | 28,027 | 28,798 | 27,371 | 27,572 | 28,187 | 28,624 | 28,592 |
| Mean  | 908    | 616    | 494    | 507    | 688    | 904    | 960    | 883    | 919    | 909    | 923    | 953    |
| Ac-ft | 55,860 | 36,640 | 30,400 | 31,200 | 38,210 | 55,590 | 57,120 | 54,290 | 54,690 | 55,910 | 56,770 | 56,710 |

Calendar year 1965 Max 1,160 Min 317 Mean 739 Ac-ft 535,100  
 Water year 1965-66 Max 1,350 Min 288 Mean 806 Ac-ft 583,400



Location.--Lat 33°06'17", long 115°39'49", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.19, T.12 S., R.13 E., on right bank 3.5 miles upstream from mouth and 5.2 miles northwest of Westmoreland.

Gage.--Graphic water-stage recorder. Altitude of gage is 220 ft below mean sea level (from topographic map).

Remarks.--Discharge represents seepage and return flow from irrigated areas.

Cooperation.--Records furnished by Imperial Irrigation District and reviewed by Geological Survey.

|       | Discharge, in cubic feet per second, water year October 1905 to September 1906 |        |        |        |        |        |        |        |        |        |        |        |
|-------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Day   | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
| 1     | 551  | 455    | 371    | 404    | 427    | 598    | 576    | 592    | 515    | 470    | 553    | 502    |
| 2     | 611  | 466    | 388    | 394    | 413    | 598    | 621    | 551    | 542    | 490    | 513    | 487    |
| 3     | 609  | 448    | 409    | 373    | 457    | 634    | 640    | 564    | 525    | 461    | 511    | 502    |
| 4     | 598  | 411    | 433    | 379    | 438    | 592    | 645    | 523    | 547    | 451    | 500    | 502    |
| 5     | 590  | 413    | 415    | 375    | 424    | 598    | 626    | 526    | 525    | 488    | 475    | 543    |
| 6     | 590  | 438    | 422    | 396    | 438    | 588    | 603    | 528    | 521    | 481    | 470    | 561    |
| 7     | 611  | 440    | 415    | 426    | 472    | 628    | 586    | 540    | 551    | 481    | 479    | 551    |
| 8     | 624  | 413    | 433    | 436    | 488    | 630    | 624    | 543    | 521    | 459    | 504    | 553    |
| 9     | 601  | 400    | 470    | 422    | 470    | 607    | 653    | 507    | 540    | 481    | 492    | 586    |
| 10    | 607  | 424    | 477    | 413    | 457    | 636    | 622    | 530    | 513    | 498    | 517    | 557    |
| 11    | 594  | 440    | 457    | 431    | 487    | 609    | 601    | 513    | 511    | 498    | 525    | 519    |
| 12    | 580  | 418    | 420    | 463    | 511    | 630    | 636    | 534    | 545    | 511    | 542    | 500    |
| 13    | 568  | 420    | 409    | 448    | 494    | 609    | 561    | 502    | 526    | 511    | 526    | 455    |
| 14    | 572  | 424    | 388    | 459    | 459    | 588    | 559    | 490    | 559    | 492    | 543    | 523    |
| 15    | 566  | 431    | 382    | 494    | 470    | 624    | 549    | 511    | 545    | 498    | 542    | 580    |
| 16    | 553  | 463    | 436    | 525    | 463    | 561    | 603    | 511    | 549    | 515    | 540    | 517    |
| 17    | 540  | 451    | 640    | 521    | 479    | 553    | 619    | 542    | 530    | 513    | 519    | 528    |
| 18    | 509  | 411    | 672    | 691    | 477    | 542    | 580    | 547    | 564    | 521    | 555    | 509    |
| 19    | 504  | 415    | 677    | 451    | 494    | 563    | 586    | 563    | 570    | 472    | 528    | 649    |
| 20    | 466  | 384    | 677    | 388    | 475    | 641    | 621    | 586    | 551    | 492    | 532    | 630    |
| 21    | 461  | 392    | 547    | 392    | 505    | 588    | 586    | 580    | 511    | 483    | 532    | 601    |
| 22    | 448  | 402    | 536    | 424    | 549    | 613    | 594    | 582    | 525    | 463    | 543    | 598    |
| 23    | 464  | 438    | 568    | 449    | 601    | 640    | 657    | 543    | 547    | 466    | 534    | 611    |
| 24    | 483  | 422    | 574    | 464    | 530    | 601    | 621    | 525    | 519    | 464    | 517    | 619    |
| 25    | 487  | 375    | 617    | 453    | 494    | 655    | 613    | 528    | 515    | 461    | 538    | 603    |
| 26    | 509  | 348    | 615    | 420    | 578    | 638    | 592    | 563    | 511    | 538    | 538    | 628    |
| 27    | 487  | 346    | 511    | 444    | 590    | 617    | 568    | 549    | 563    | 538    | 551    | 588    |
| 28    | 448  | 357    | 553    | 444    | 578    | 601    | 609    | 538    | 553    | 505    | 566    | 532    |
| 29    | 422  | 355    | 624    | 461    | -----  | 605    | 553    | 549    | 517    | 502    | 545    | 596    |
| 30    | 436  | 361    | 534    | 449    | -----  | 601    | 582    | 553    | 494    | 564    | 574    | 574    |
| 31    | 440  | -----  | 426    | 457    | -----  | 607    | -----  | 521    | -----  | 570    | 513    | -----  |
| Total | 16,529   | 12,361 | 15,496 | 13,746 | 13,718 | 18,795 | 18,086 | 16,734 | 16,005 | 15,337 | 16,317 | 16,704 |
| Mean  | 533  | 412    | 500    | 443    | 490    | 606    | 603    | 540    | 534    | 495    | 526    | 557    |
| Ac-ft | 32,780   | 24,520 | 30,740 | 27,260 | 27,210 | 37,280 | 35,870 | 33,190 | 31,750 | 30,420 | 32,360 | 33,130 |

|                    |     |     |     |     |      |     |       |         |
|--------------------|-----|-----|-----|-----|------|-----|-------|---------|
| Calendar year 1965 | Max | 718 | Min | 346 | Mean | 494 | Ac-ft | 357.800 |
| Water year 1965-66 | Max | 691 | Min | 346 | Mean | 520 | Ac-ft | 376.500 |

## SALTON SEA BASIN

10-2557. San Felipe Creek near Julian, Calif.

Location.--Lat 33°07'07", long 116°26'04", in Anza Borrego State Park, on left bank at bridge on State Highway 78, in Sentenac Canyon 1.0 mile upstream from Grapevine Canyon and 10 miles northeast of Julian, San Diego County.

Drainage area.--89.2 sq mi.

Records available.--August 1958 to September 1966.

Gage.--Graphic water-stage recorder and concrete low-water control. Datum of gage is 1,872.69 ft above mean sea level (datum of 1929).

Average discharge.--8 years, 0.246 cfs (178 acre-ft per year).

Extremes.--Maximum discharge during year, 45 cfs Dec. 30 (gage height, 2.15 ft); no flow Oct. 1 to Nov. 22, May 18, 19, May 25 to Sept. 30.

1958-66: Maximum discharge, 16 cfs Sept. 13, 1961, and Oct. 18, 1964 (gage height, 1.85 ft); no flow for many days each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.10  | 0.40  | 0.60  | 0.50  | 0.30  | 0.10 |       |      |      |       |
| 2     |      | 0     | .10   | .40   | .60   | 1.0   | .30   | .10  |       |      |      |       |
| 3     |      | 0     | .10   | .40   | .50   | .70   | .30   | .10  |       |      |      |       |
| 4     |      | 0     | .10   | .40   | .60   | .50   | .30   | .10  |       |      |      |       |
| 5     |      | 0     | .10   | .40   | .60   | .50   | .30   | .10  |       |      |      |       |
| 6     |      | 0     | .10   | .40   | .70   | .40   | .30   | .10  |       |      |      |       |
| 7     |      | 0     | .20   | .40   | .80   | .40   | .30   | .10  |       |      |      |       |
| 8     |      | 0     | .20   | .40   | .70   | .40   | .20   | .10  |       |      |      |       |
| 9     |      | 0     | .30   | .40   | .60   | .40   | .30   | .10  |       |      |      |       |
| 10    |      | 0     | .20   | .40   | .60   | .40   | .30   | .20  |       |      |      |       |
| 11    |      | 0     | .20   | .40   | .70   | .40   | .30   | .20  |       |      |      |       |
| 12    |      | 0     | .20   | .40   | .60   | .40   | .30   | .20  |       |      |      |       |
| 13    |      | 0     | .20   | .40   | .50   | .40   | .30   | .10  |       |      |      |       |
| 14    |      | 0     | .30   | .40   | .50   | .40   | .30   | .10  |       |      |      |       |
| 15    |      | 0     | .70   | .40   | .50   | .40   | .20   | .10  |       |      |      |       |
| 16    |      | 0     | 2.5   | .60   | .50   | .40   | .20   | .10  |       |      |      |       |
| 17    |      | 0     | 1.2   | .60   | .50   | .40   | .20   | .10  |       |      |      |       |
| 18    |      | 0     | .40   | .70   | .50   | .40   | .20   | 0    |       |      |      |       |
| 19    |      | 0     | .40   | .50   | .50   | .40   | .30   | 0    |       |      |      |       |
| 20    |      | 0     | .30   | .50   | .50   | .40   | .30   | .10  |       |      |      |       |
| 21    |      | 0     | .30   | .40   | .50   | .30   | .30   | .20  |       |      |      |       |
| 22    |      | 0     | .60   | .40   | .50   | .30   | .20   | .10  |       |      |      |       |
| 23    |      | .70   | .60   | .50   | .50   | .40   | .20   | .10  |       |      |      |       |
| 24    |      | .30   | .40   | .40   | .50   | .40   | .20   | .10  |       |      |      |       |
| 25    |      | .10   | .40   | .40   | .50   | .60   | .20   | 0    |       |      |      |       |
| 26    |      | .20   | .30   | .40   | .50   | .50   | .20   | 0    |       |      |      |       |
| 27    |      | .10   | .30   | .50   | .50   | .50   | .10   | 0    |       |      |      |       |
| 28    |      | .10   | .30   | .50   | .50   | .40   | .20   | 0    |       |      |      |       |
| 29    |      | .10   | .40   | .50   | ----- | .40   | .20   | 0    |       |      |      |       |
| 30    |      | .10   | .91   | .11   | ----- | .40   | .10   | 0    |       |      |      |       |
| 31    |      | ----- | .70   | .80   | ----- | .40   | ----- | 0    | ----- |      |      | ----- |
| Total | 0    | 1.70  | 21.30 | 14.80 | 15.60 | 13.80 | 7.40  | 2.60 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0.06  | 0.69  | 0.48  | 0.56  | 0.45  | 0.25  | 0.08 | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 3.4   | 42    | 29    | 31    | 27    | 15    | 5.2  | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 9.1 Min 0 Mean 0.169 Ac-ft 123

Water year 1965-66 Max 9.1 Min 0 Mean 0.212 Ac-ft 153

Peak discharge (base, 50 cfs).--No peak above base.

## SALTON SEA BASIN

49

10-2558, Coyote Creek near Borrego Springs, Calif.

Location.--Lat 33°22'25", long 116°25'39", in SE 1/4 SW 1/4 sec.23, T.9 S., R.5 E., on right bank 500 ft upstream from Box Canyon and 8.5 miles northwest of Borrego Springs.

Drainage area.--144 sq mi.

Records available.--October 1950 to September 1966. Monthly discharge only for October and November 1950, published in WSP 1734.

Gage.--Digital water-stage recorder. Altitude of gage is 1,250 ft (from topographic map). Prior to Mar. 4, 1965, graphic water-stage recorder.

Average discharge.--16 years, 2.20 cfs (1,590 acre-ft per year).

Extremes.--Maximum discharge during year, 600 cfs Aug. 2 (gage height, 11.30 ft, from floodmarks), on basis of field estimate of maximum flow; minimum daily, 0.80 cfs July 6, 26-28.

1950-66: Maximum discharge, 3,800 cfs July 28, 1951 (gage height, 14.14 ft, from floodmark), on basis of slope-area measurement of maximum flow; minimum daily, 0.70 cfs, July 25, 26, 1965.

Remarks.--Records good except those for Nov. 23, 24, and Aug. 2, 3, which are poor. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC. | JAN. | FEB.  | MAR. | APR.  | MAY  | JUNE  | JULY  | AUG. | SEPT. |
|-------|------|-------|------|------|-------|------|-------|------|-------|-------|------|-------|
| 1     | 1.3  | 1.2   | 1.1  | 1.6  | 1.7   | 1.3  | 1.3   | 1.1  | 1.2   | 0.90  | 1.0  | 1.1   |
| 2     | 1.3  | 1.2   | 1.0  | 1.4  | 1.7   | 1.7  | 1.3   | 1.1  | 1.2   | .90   | 42   | 1.1   |
| 3     | 1.3  | 1.2   | 1.1  | 1.4  | 1.6   | 1.6  | 1.3   | 1.2  | 1.2   | .90   | 3.0  | 1.1   |
| 4     | 1.3  | 1.2   | 1.0  | 1.4  | 1.6   | 1.6  | 1.3   | 1.2  | 1.1   | .90   | 1.2  | 1.1   |
| 5     | 1.3  | 1.2   | 1.0  | 1.4  | 1.5   | 1.7  | 1.3   | 1.2  | 1.2   | .90   | 1.1  | 1.1   |
| 6     | 1.4  | 1.2   | 1.0  | 1.4  | 1.6   | 1.6  | 1.4   | 1.2  | 1.2   | .80   | 1.1  | 1.1   |
| 7     | 1.4  | 1.3   | 1.1  | 1.4  | 1.5   | 1.6  | 1.4   | 1.2  | 1.2   | .90   | 1.1  | 1.1   |
| 8     | 1.3  | 1.3   | 1.1  | 1.3  | 1.6   | 1.6  | 1.4   | 1.3  | 1.2   | .90   | 1.1  | 1.1   |
| 9     | 1.3  | 1.3   | 3.2  | 1.4  | 1.6   | 1.6  | 1.4   | 1.4  | 1.3   | .90   | 1.1  | 1.1   |
| 10    | 1.3  | 1.3   | 1.5  | 1.4  | 1.6   | 1.6  | 1.7   | 1.3  | 1.2   | .90   | 1.1  | 1.1   |
| 11    | 1.3  | 1.3   | 1.2  | 1.4  | 1.4   | 1.7  | 1.8   | 1.4  | 1.2   | .90   | 1.1  | 1.1   |
| 12    | 1.3  | 1.4   | 1.3  | 1.3  | 1.5   | 1.7  | 1.4   | 1.7  | 1.2   | .90   | 1.1  | 1.2   |
| 13    | 1.3  | 1.4   | 1.4  | 1.4  | 1.5   | 1.7  | 1.2   | 1.3  | 1.2   | .90   | 1.1  | 1.2   |
| 14    | 1.4  | 1.4   | 1.3  | 1.4  | 1.5   | 1.8  | 1.2   | 1.3  | 1.2   | .90   | 1.1  | 1.2   |
| 15    | 1.4  | 1.4   | 1.1  | 1.4  | 1.5   | 1.6  | 1.2   | 1.3  | 1.2   | .90   | 1.1  | 1.3   |
| 16    | 1.3  | 1.6   | 2.0  | 1.4  | 1.5   | 1.8  | 1.2   | 1.4  | 1.1   | .90   | 1.1  | 1.2   |
| 17    | 1.4  | 1.4   | 1.4  | 1.4  | 1.5   | 1.8  | 1.2   | 1.4  | 1.1   | .90   | 1.1  | 1.2   |
| 18    | 1.4  | 1.4   | 1.2  | 1.4  | 1.4   | 1.8  | 1.4   | 1.2  | 1.1   | .90   | 1.1  | 1.2   |
| 19    | 1.4  | 1.4   | 1.1  | 1.4  | 1.4   | 1.9  | 1.4   | 1.3  | 1.2   | .90   | 1.1  | 1.2   |
| 20    | 1.3  | 1.4   | 1.1  | 1.4  | 1.4   | 1.8  | 1.4   | 1.4  | 1.2   | .90   | 1.1  | 1.2   |
| 21    | 1.3  | 1.4   | 1.1  | 1.5  | 1.4   | 1.4  | 1.4   | 1.3  | 1.1   | .90   | 1.1  | 1.2   |
| 22    | 1.3  | 45    | 1.1  | 1.5  | 1.4   | 1.6  | 1.4   | 1.3  | 1.1   | .90   | 1.1  | 1.2   |
| 23    | 1.3  | 186   | 1.1  | 1.5  | 1.4   | 1.9  | 1.4   | 1.4  | 1.1   | .90   | 1.1  | 1.2   |
| 24    | 1.2  | 3.0   | 1.1  | 1.5  | 1.4   | 1.8  | 1.2   | 1.3  | 1.1   | .80   | 1.1  | 1.2   |
| 25    | 1.2  | 1.2   | 1.1  | 1.5  | 1.4   | 1.6  | 1.2   | 1.3  | 1.1   | .90   | 1.1  | 1.2   |
| 26    | 1.2  | 1.0   | 1.1  | 1.6  | 1.3   | 1.5  | 1.2   | 1.3  | .90   | .80   | 1.1  | 1.2   |
| 27    | 1.2  | 1.0   | 1.1  | 1.6  | 1.4   | 1.6  | 1.2   | 1.3  | .90   | .80   | 1.1  | 1.2   |
| 28    | 1.2  | 1.0   | 1.1  | 1.6  | 1.3   | 1.7  | 1.2   | 1.2  | .90   | .80   | 1.1  | 1.3   |
| 29    | 1.3  | 1.0   | 2.2  | 1.6  | ----- | 1.6  | 1.2   | 1.3  | .90   | 1.0   | 1.1  | 1.3   |
| 30    | 1.3  | 1.0   | 1.3  | 1.7  | ----- | 1.5  | 1.2   | 1.3  | .90   | 1.1   | 1.1  | 1.3   |
| 31    | 1.3  | ----- | 2.0  | 1.7  | ----- | 1.4  | ----- | 1.3  | ----- | 1.0   | 1.1  | ----- |
| TOTAL | 40.5 | 268.1 | 52.2 | 45.3 | 41.6  | 51.1 | 39.8  | 40.2 | 33.70 | 27.80 | 76.9 | 35.3  |
| MEAN  | 1.31 | 8.94  | 1.68 | 1.46 | 1.49  | 1.65 | 1.33  | 1.30 | 1.12  | .90   | 2.48 | 1.18  |
| AC-FT | 80   | 532   | 104  | 90   | 83    | 101  | 79    | 80   | 67    | 55    | 153  | 70    |

CALENDAR YEAR 1965 MAX 186 MIN .70 MEAN 2.18 AC-FT 1,580  
 WATER YEAR 1965-66 MAX 186 MIN .80 MEAN 2.06 AC-FT 1,490

Peak discharge (base, 50 cfs).--Nov. 23 (0430 hrs) 573 cfs (12.50 ft); Aug 2 (1645 hrs) 600 cfs (11.30 ft).

## SALTON SEA BASIN

10-2558.1. Borrego Palm Creek near Borrego Springs, Calif.

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

Drainage area.--21.8 sq mi.

Records available.--October 1950 to September 1966. Prior to October 1960, published as "Palm Canyon Creek near Borrego Springs". Monthly discharge only for October to November 1950, published in WSP 1734.

Gage.--Graphic water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

Average discharge.--16 years, 0.362 cfs (262 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

Extremes.--Maximum discharge during year, 9.1 cfs Dec. 30 (gage height, 2.50 ft); no flow Oct. 1 to Nov. 22, May 2 to Sept. 30. 1950-66: Maximum discharge, about 2,000 cfs Aug. 23, 1955 (gage height, 9.9 ft, from floodmarks), on basis of velocity-area study; no flow for several months in each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 0.10  | 1.9   | 0.90  | 0.80  | 0.40  | 0.10  |       |      |      |       |
| 2     |      | 0     | .10   | 1.4   | .80   | 1.1   | .30   | 0     |       |      |      |       |
| 3     |      | 0     | .10   | 1.2   | .70   | .80   | .30   | 0     |       |      |      |       |
| 4     |      | 0     | .10   | 1.1   | .60   | .70   | .20   | 0     |       |      |      |       |
| 5     |      | 0     | .10   | 1.0   | .60   | .60   | .20   | 0     |       |      |      |       |
| 6     |      | 0     | .10   | 1.0   | .80   | .50   | .20   | 0     |       |      |      |       |
| 7     |      | 0     | .10   | .90   | 2.0   | .50   | .20   | 0     |       |      |      |       |
| 8     |      | 0     | .10   | .80   | 1.6   | .50   | .20   | 0     |       |      |      |       |
| 9     |      | 0     | .70   | .80   | 1.2   | .50   | .20   | 0     |       |      |      |       |
| 10    |      | 0     | .70   | .80   | 1.2   | .50   | .20   | 0     |       |      |      |       |
| 11    |      | 0     | .60   | .80   | 1.2   | .50   | .20   | 0     |       |      |      |       |
| 12    |      | 0     | .50   | .80   | 1.1   | .50   | .20   | 0     |       |      |      |       |
| 13    |      | 0     | .60   | .70   | 1.1   | .50   | .20   | 0     |       |      |      |       |
| 14    |      | 0     | .70   | .60   | 1.0   | .50   | .10   | 0     |       |      |      |       |
| 15    |      | 0     | .80   | .60   | 1.0   | .40   | .10   | 0     |       |      |      |       |
| 16    |      | 0     | 2.8   | .80   | 1.0   | .40   | .10   | 0     |       |      |      |       |
| 17    |      | 0     | 2.3   | .80   | 1.0   | .40   | .10   | 0     |       |      |      |       |
| 18    |      | 0     | 1.9   | .80   | .90   | .40   | .10   | 0     |       |      |      |       |
| 19    |      | 0     | 1.7   | .70   | .90   | .40   | .20   | 0     |       |      |      |       |
| 20    |      | 0     | 1.5   | .60   | .80   | .40   | .20   | 0     |       |      |      |       |
| 21    |      | 0     | 1.4   | .60   | .80   | .40   | .10   | 0     |       |      |      |       |
| 22    |      | 0     | 2.0   | .60   | .80   | .40   | .10   | 0     |       |      |      |       |
| 23    |      | 3.4   | 1.8   | .60   | .70   | .40   | .10   | 0     |       |      |      |       |
| 24    |      | .50   | 1.5   | .60   | .70   | .60   | .10   | 0     |       |      |      |       |
| 25    |      | .40   | 1.4   | .50   | .60   | .60   | .10   | 0     |       |      |      |       |
| 26    |      | .60   | 1.3   | .50   | .70   | .60   | .10   | 0     |       |      |      |       |
| 27    |      | .20   | 1.2   | .80   | .70   | .60   | .10   | 0     |       |      |      |       |
| 28    |      | .10   | 1.2   | .60   | .70   | .50   | .10   | 0     |       |      |      |       |
| 29    |      | .10   | 1.2   | .50   | ----- | .50   | .10   | 0     |       |      |      |       |
| 30    |      | .10   | 5.7   | 1.0   | ----- | .40   | .10   | 0     |       |      |      |       |
| 31    |      | ----- | 2.7   | 1.2   | ----- | .40   | ----- | 0     | ----- |      |      | ----- |
| Total | 0    | 5.40  | 37.00 | 25.60 | 26.10 | 16.30 | 4.90  | 0.10  | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0.18  | 1.19  | 0.83  | 0.93  | 0.53  | 0.16  | 0.003 | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 11    | 73    | 51    | 52    | 32    | 9.7   | 0.2   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 5.7 Min 0 Mean 0.240 Ac-ft 174

Water year 1965-66 Max 5.7 Min 0 Mean 0.316 Ac-ft 229

Peak discharge (base, 15 cfs).--No peak above base.

10-2558.2. Yaqui Pass Wash near Borrego, Calif.

Location.--Lat 33°08'50", long 116°21'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 9, T.12 S., R.6 E., at culvert on county road, 5.1 miles southwest of Borrego, and 7.6 miles south of Borrego Springs.

Drainage area.--0.041 sq mi.

Records available.--Water years 1960-65 (annual maximum), February 1965 to September 1966.

Gage.--Flood-hydrograph recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 1,720 ft (from topographic map). Jan. 28, 1960, to Feb. 24, 1965, crest-stage gage at same site and datum.

Extremes.--Maximum discharge during year, 0.90 cfs Nov. 15 (gage height, 2.84 ft); no flow all year including maximum day, which was less than 0.05 cfs.

1960-66: Maximum discharge, 28 cfs Oct. 18, 1963 (gage height, 5.67 ft), on basis of computation of maximum flow through culvert; no flow for most of each year.

Remarks.--No flow since Feb. 24, 1965, date of establishment. No regulation or diversion above station. Precipitation records were unreliable and should not be used.

10-2558.5. Vallecito Creek near Julian, Calif.

Location.--Lat 32°59'10", long 116°25'10", in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T.14 S., R.5 E., on right bank 0.2 mile downstream from Cottonwood Wash, and 12.6 southeast of Julian.

Drainage area.--39.7 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 1,950 ft above mean sea level (from topographic map). U. S. Weather Bureau non-recording rain gage at site 2.0 miles upstream. Prior to June 1, 1966, graphic water-stage recorder.

Extremes.--Maximum discharge during year, 46 cfs Nov. 23 (gage height, 1.53 ft); no flow Aug. 2 to Sept. 26.

1963-66: Maximum discharge, 73 cfs July 31, 1964 (gage height, 3.20 ft in gage well, 3.48 ft from floodmark), on basis of slope-area measurement of maximum flow; no flow Aug. 2 to Sept. 26, 1966.

Remarks.--Records poor. No regulation or diversion above station. Flow is diverted for irrigation 300 ft below gage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May  | June  | July | Aug.  | Sept. |
|-------|------|-------|------|------|-------|------|-------|------|-------|------|-------|-------|
| 1     | 0.10 | 0.10  | 0.20 | 0.10 | 0.20  | 0.10 | 0.20  | 0.10 | 0.10  | 0.10 | 0.10  | 0     |
| 2     | .10  | .10   | .20  | .10  | .10   | .20  | .20   | .10  | .10   | .10  | 0     | 0     |
| 3     | .10  | .10   | .20  | .10  | .10   | .20  | .20   | .10  | .10   | .10  | 0     | 0     |
| 4     | .10  | .10   | .20  | .10  | .20   | .20  | .20   | .10  | .10   | .10  | 0     | 0     |
| 5     | .10  | .10   | .20  | .10  | .20   | .20  | .20   | .10  | .10   | .10  | 0     | 0     |
| 6     | .10  | .10   | .20  | .10  | .20   | .20  | .20   | .10  | .10   | .10  | 0     | 0     |
| 7     | .10  | .10   | .20  | .10  | .20   | .20  | .20   | .10  | .10   | .10  | 0     | 0     |
| 8     | .10  | .10   | .20  | .10  | .20   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 9     | .10  | .10   | .20  | .20  | .20   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 10    | .10  | .10   | .20  | .20  | .20   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 11    | .10  | .10   | .20  | .20  | .20   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 12    | .10  | .10   | .20  | .20  | .20   | .20  | .20   | .10  | .20   | .10  | 0     | 0     |
| 13    | .10  | .10   | .20  | .20  | .20   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 14    | .10  | .10   | .20  | .20  | .10   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 15    | .10  | 1.9   | .20  | .20  | .10   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 16    | .10  | .20   | .50  | .20  | .20   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 17    | .10  | .20   | .20  | .20  | .10   | .10  | .20   | .10  | .10   | .10  | 0     | 0     |
| 18    | .10  | .20   | .20  | .20  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 19    | .10  | .20   | .20  | .30  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 20    | .10  | .20   | .20  | .30  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 21    | .10  | .20   | .20  | .30  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 22    | .10  | 3.8   | .20  | .30  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 23    | .10  | 13    | .10  | .30  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 24    | .10  | .20   | .10  | .30  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 25    | .10  | .10   | .10  | .20  | .10   | .10  | .10   | .10  | .10   | .10  | 0     | 0     |
| 26    | .10  | .10   | .10  | .20  | .20   | .20  | .10   | .10  | .10   | .10  | 0     | 0     |
| 27    | .10  | .10   | .10  | .20  | .10   | .20  | .10   | .10  | .10   | .10  | 0     | .10   |
| 28    | .10  | .10   | .10  | .20  | .10   | .20  | .10   | .10  | .10   | .10  | 0     | .10   |
| 29    | .10  | .10   | .10  | .20  | ----- | .20  | .10   | .10  | .20   | .10  | 0     | .10   |
| 30    | .10  | .20   | .10  | .20  | ----- | .20  | .10   | .10  | .10   | .10  | 0     | .10   |
| 31    | .10  | ----- | .20  | .20  | ----- | .20  | ----- | .10  | ----- | .10  | 0     | ----- |
| Total | 3.10 | 22.20 | 6.60 | 6.00 | 4.10  | 4.40 | 4.70  | 3.10 | 3.20  | 3.10 | 0.10  | 0.40  |
| Mean  | 0.10 | 0.74  | 0.21 | 0.19 | 0.15  | 0.14 | 0.16  | 0.10 | 0.11  | 0.10 | 0.003 | 0.01  |
| Ac-ft | 6.1  | 44    | 13   | 12   | 8.1   | 8.7  | 9.3   | 6.1  | 6.3   | 6.1  | 0.2   | 0.8   |
| (†)   | 0    | 5.67  | 3.30 | 1.18 | 0.20  | 0.88 | 0     | 0.15 | 0     | 0    | 0     | 0     |

Calendar year 1965 Max 13 Min 0.10 Mean 0.214 Ac-ft 155

Water year 1965-66 Max 13 Min 0 Mean 0.167 Ac-ft 121

Peak discharge (base, 15 cfs).--Nov. 15 (1600 hrs) 39 cfs (1.40 ft); Nov. 23 (0030 hrs) 46 cfs (1.53 ft).

† Precipitation, in inches.

10-2558.85. San Felipe Creek near Westmoreland, Calif.

Location.--Lat 33°07'25", long 115°51'05", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.17, T.12 S., R.11 E., on left bank 320 ft downstream from U.S. Highway 99 and 14.6 miles northwest of Westmoreland.

Drainage area.--1,693 sq mi.

Records available.--December 1960 to September 1966.

Gage.--Graphic water-stage recorder and crest-stage gage. Altitude of gage is 190 ft below mean sea level (from topographic map).

Average discharge.--5 years (1961-66), 3.01 cfs (2,180 acre-ft per year).

Extremes.--Maximum discharge during year, 4,680 cfs July 30 (gage height, 9.54 ft) from rating curve extended above 6.0 cfs on basis of slope-area measurements at gage heights 6.56, 10.18, and 10.75 ft; no flow for most of year.

1960-66: Maximum discharge, 7,230 cfs Oct. 19, 1963 (gage height, 11.85 ft, from profile of floodmarks), from rating curve extended above 260 cfs on basis of slope-area measurement of maximum flow; no flow for some months in each year.

Remarks.--Records poor. No regulation above station. Diversion and pumping for domestic use and irrigation in Borrego Valley 25 miles upstream.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan. | Feb.  | Mar. | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|------|-------|--------|------|-------|------|-------|------|-------|-------|------|-------|
| 1     |      | 0     | 0.10   | 0.30 | 0.30  | 0.30 | 0.20  | 0    |       | 0     |      |       |
| 2     |      | 0     | .10    | .30  | .30   | .30  | .20   | 0    |       | 0     |      |       |
| 3     |      | 0     | .10    | .30  | .30   | .30  | .20   | 0    |       | 0     |      |       |
| 4     |      | 0     | .10    | .30  | .30   | .30  | .20   | 0    |       | 0     |      |       |
| 5     |      | 0     | .10    | .30  | .30   | .30  | .10   | 0    |       | 0     |      |       |
| 6     |      | 0     | .10    | .30  | .30   | .30  | .10   | 0    |       | 0     |      |       |
| 7     |      | 0     | .10    | .30  | .30   | .30  | .10   | 0    |       | 0     |      |       |
| 8     |      | 0     | .10    | .30  | .30   | .30  | .10   | 0    |       | 14    |      |       |
| 9     |      | 0     | .10    | .30  | .30   | .30  | 0     | 0    |       | 2.1   |      |       |
| 10    |      | 0     | 1.0    | .30  | .30   | .30  | .10   | 0    |       | 0     |      |       |
| 11    |      | 0     | .30    | .30  | .30   | .30  | 0     | 0    |       | 0     |      |       |
| 12    |      | 0     | .30    | .30  | .30   | .30  | 0     | 0    |       | 0     |      |       |
| 13    |      | 0     | .10    | .30  | .30   | .30  | 0     | 0    |       | 0     |      |       |
| 14    |      | 0     | .10    | .30  | .30   | .30  | 0     | 0    |       | 0     |      |       |
| 15    |      | .20   | .10    | .30  | .30   | .30  | 0     | 0    |       | 0     |      |       |
| 16    |      | 2.6   | 200    | .30  | .30   | .30  | 0     | 0    |       | 0     |      |       |
| 17    |      | .40   | 5.0    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 18    |      | .10   | .50    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 19    |      | .10   | .40    | .30  | .30   | .20  | 0     | 15   |       | 0     |      |       |
| 20    |      | .10   | .40    | .30  | .30   | .20  | 0     | 23   |       | 0     |      |       |
| 21    |      | .10   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 22    |      | .10   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 23    |      | .20   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 24    |      | 2.8   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 25    |      | .30   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 26    |      | .20   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 27    |      | .20   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 28    |      | .10   | .40    | .30  | .30   | .20  | 0     | 0    |       | 0     |      |       |
| 29    |      | .10   | .40    | .30  | ----- | .20  | 0     | 0    |       | 0     |      |       |
| 30    |      | .10   | .40    | .30  | ----- | .20  | 0     | 0    |       | 127   |      |       |
| 31    |      | ----- | .30    | .30  | ----- | .20  | ----- | 0    | ----- | 183   |      | ----- |
| Total | 0    | 7.70  | 213.40 | 9.30 | 8.40  | 7.80 | 1.30  | 38   | 0     | 326.1 | 0    | 0     |
| Mean  | 0    | 0.26  | 6.88   | 0.30 | 0.30  | 0.25 | 0.04  | 1.23 | 0     | 10.5  | 0    | 0     |
| Ac-ft | 0    | 15    | 423    | 17   | 18    | 15   | 2.6   | 75   | 0     | 647   | 0    | 0     |

Calendar year 1965 Max 200 Min 0 Mean 1.15 Ac-ft 832

Water year 1965-66 Max 200 Min 0 Mean 1.68 Ac-ft 1,210

Peak discharge (base, 200 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-16 | 0700 | 9.00        | 3,600     | 7-30 | 2400 | 9.54        | 4,680     |
| 7-8   | 2200 | 6.39        | 372       |      |      |             |           |

10-2560. Whitewater River at White Water, Calif.

Location.--Lat 33°56'48", long 116°38'24", in NW¼NE¼ sec.2, T.3 S., R.3 E., on right bank 1.5 miles north of White Water and 3½ miles upstream from San Geronio River.

Drainage area.--57.4 sq mi.

5500 Dec. 6 3.30

Records available.--October 1948 to September 1966.

Gage.--Graphic water-stage recorder on river; digital water-stage recorder and Cipolletti weir on diversion 500 ft downstream. Datum of gage is 1,610.98 ft above mean sea level, datum of 1929, supplementary adjustment of 1934. Feb. 24, 1950, to Sept. 30, 1952, and since Apr. 13, 1960, supplementary gages at different sites and datums within 200 ft of base gage. Prior to July 17, 1964, graphic water-stage recorder on diversion.

Average discharge (river only).--18 years, 10.2 cfs (7,380 acre-ft per year).  
(combined).--17 years (1949-66), 11.7 cfs (8,470 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 24,000 cfs Nov. 22 (gage height, 13.60 ft, from high-water mark in gage well), from rating curve extended above 190 cfs on basis of field estimate of maximum flow; no flow Nov. 26 to Dec. 10, Jan. 1-3, 1948-66: Maximum discharge, that of Nov. 22, 1965; no flow Jan. 9, 11, 1957, Nov. 26 to Dec. 10, 1965, Jan. 1-3, 1966. Maximum discharge known, 42,000 cfs Mar. 2, 1938, from slope-area measurement of maximum flow, at site 2.5 miles upstream (drainage area, 51.4 sq mi).

Remarks.--Records good except those for Nov. 22 to Dec. 31, which are poor. Monthly discharge is combined with flow from infiltration line that bypasses station. No regulation above station. Water is diverted out of basin about 15 miles upstream to powerplants in San Geronio River basin and thence to an area north of Banning for irrigation. One small diversion for domestic use and one for irrigation are made 2 to 3 miles upstream.

Cooperation.--Records of bypass in infiltration line furnished by Whitewater Mutual Water Co.; records of diversion, 15 miles upstream, furnished by Southern California Edison Co.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day     | Oct.  | Nov.    | Dec.   | Jan. | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|---------|-------|---------|--------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1       | 7.9   | 7.2     | 0      | 0    | 3.2   | 4.0   | 4.9   | 6.1   | 9.5   | 14   | 12   | 17    |
| 2       | 4.0   | 7.2     | 0      | 0    | 3.0   | 3.2   | 5.6   | 7.3   | 9.2   | 14   | 12   | 17    |
| 3       | 5.3   | 7.3     | 0      | 0    | 2.6   | 3.2   | 4.4   | 7.9   | 9.5   | 14   | 12   | 17    |
| 4       | 6.4   | 6.8     | 0      | .4   | 2.6   | 3.6   | 6.1   | 8.1   | 9.5   | 14   | 12   | 17    |
| 5       | 1.7   | 6.8     | 0      | 1.3  | 1.9   | 2.8   | 5.1   | 8.1   | 9.8   | 14   | 12   | 17    |
| 6       | 6.2   | 5.3     | 0      | 1.7  | 2.6   | 2.8   | 5.6   | 7.6   | 9.8   | 13   | 12   | 17    |
| 7       | 6.9   | 4.8     | 0      | 2.8  | 1.4   | 4.6   | 6.8   | 6.6   | 9.5   | 14   | 12   | 17    |
| 8       | 7.2   | 5.9     | 0      | 2.6  | 2.1   | 4.4   | 7.3   | 7.3   | 9.5   | 14   | 12   | 16    |
| 9       | 6.4   | 6.4     | 0      | 2.2  | 2.6   | 4.0   | 6.6   | 9.2   | 9.2   | 14   | 12   | 16    |
| 10      | 5.6   | 6.5     | 0      | 2.2  | 2.8   | 3.8   | 5.6   | 9.0   | 9.5   | 14   | 12   | 16    |
| 11      | 6.5   | 6.2     | .10    | 2.8  | 2.2   | 4.2   | 5.6   | 7.9   | 9.5   | 14   | 12   | 16    |
| 12      | 7.1   | 6.9     | .10    | 2.8  | 2.6   | 2.8   | 5.3   | 6.6   | 9.8   | 14   | 12   | 17    |
| 13      | 7.0   | 5.8     | .10    | 2.8  | 3.0   | 3.0   | 5.1   | 6.3   | 10    | 14   | 12   | 17    |
| 14      | 6.5   | 4.6     | .10    | 3.0  | 3.4   | 5.1   | 6.3   | 6.3   | 10    | 14   | 12   | 16    |
| 15      | 6.6   | 6.3     | .20    | 3.0  | 3.2   | 4.6   | 5.6   | 5.6   | 10    | 14   | 12   | 16    |
| 16      | 6.8   | 20      | .20    | 3.2  | 2.8   | 4.9   | 5.6   | 6.6   | 11    | 14   | 12   | 16    |
| 17      | 5.9   | 7.3     | .30    | 3.6  | 4.0   | 4.6   | 5.6   | 7.6   | 12    | 14   | 17   | 15    |
| 18      | 6.7   | 25      | .30    | 3.4  | 4.6   | 4.2   | 5.6   | 6.6   | 13    | 14   | 19   | 15    |
| 19      | 7.2   | 8.8     | .40    | 3.0  | 4.6   | 3.8   | 6.8   | 6.8   | 14    | 14   | 18   | 15    |
| 20      | 7.0   | 4.3     | .40    | 3.6  | 4.6   | 3.8   | 5.6   | 7.6   | 14    | 14   | 18   | 15    |
| 21      | 6.6   | 3.1     | .50    | 3.8  | 4.0   | 4.2   | 6.8   | 6.1   | 14    | 14   | 17   | 14    |
| 22      | 6.5   | 2,540   | .60    | 2.8  | 4.6   | 4.2   | 6.3   | 6.6   | 15    | 14   | 17   | 14    |
| 23      | 7.1   | 3,000   | .60    | 1.9  | 4.6   | 4.4   | 5.1   | 6.8   | 15    | 14   | 17   | 14    |
| 24      | 6.0   | 3.0     | .60    | 2.6  | 2.8   | 4.2   | 4.9   | 7.1   | 15    | 11   | 17   | 14    |
| 25      | 6.8   | 1.0     | .50    | 2.6  | 3.4   | 4.2   | 7.3   | 8.1   | 15    | 11   | 17   | 13    |
| 26      | 7.1   | 0       | .40    | 3.4  | 3.4   | 4.0   | 6.3   | 8.4   | 15    | 11   | 17   | 13    |
| 27      | 7.0   | 0       | .30    | 2.8  | 3.0   | 3.8   | 6.8   | 8.7   | 15    | 11   | 17   | 13    |
| 28      | 6.6   | 0       | .20    | 3.6  | 4.0   | 4.0   | 6.3   | 8.7   | 14    | 11   | 17   | 13    |
| 29      | 6.7   | 0       | 200    | 2.8  | ----- | 5.1   | 5.6   | 8.4   | 14    | 11   | 17   | 13    |
| 30      | 6.2   | 0       | 40     | 3.2  | ----- | 5.1   | 4.4   | 8.4   | 15    | 12   | 17   | 12    |
| 31      | 4.7   | -----   | 1.0    | 3.2  | ----- | 5.6   | ----- | 9.0   | ----- | 12   | 17   | ----- |
| Total   | 196.2 | 5,772.2 | 246.90 | 77.1 | 89.6  | 126.2 | 174.9 | 231.4 | 355.3 | 411  | 451  | 458   |
| Mean    | 6.33  | 192     | 7.96   | 2.49 | 3.20  | 4.07  | 5.83  | 7.46  | 11.8  | 13.3 | 14.5 | 15.3  |
| Ac-ft   | 389   | 11,450  | 490    | 153  | 178   | 250   | 347   | 459   | 705   | 815  | 895  | 908   |
| Ac-ft † | 403   | 11,470  | 560    | 228  | 239   | 264   | 365   | 544   | 780   | 895  | 969  | 971   |
| Ac-ft ‡ | 53    | 52      | 72     | 170  | 5.0   | 0     | 0     | 170   | 186   | 189  | 147  | 121   |

|                    |     |       |     |   |      |      |       |        |       |      |        |        |
|--------------------|-----|-------|-----|---|------|------|-------|--------|-------|------|--------|--------|
| Calendar year 1965 | Max | 3,000 | Min | 0 | Mean | 21.7 | Ac-ft | 15,730 | Mean† | 22.2 | Ac-ft† | 16,080 |
| Water year 1965-66 | Max | 3,000 | Min | 0 | Mean | 23.5 | Ac-ft | 17,040 | Mean† | 24.4 | Ac-ft† | 17,690 |

Peak discharge (base, 100 cfs)

| Date  | Time       | Gage height | Discharge | Date  | Time    | Gage height | Discharge |
|-------|------------|-------------|-----------|-------|---------|-------------|-----------|
| 11-17 | 0200 about | 7.13        | 182       | 12-29 | Unknown | Unknown     | 1,500     |
| 11-22 | 2400       | 13.60       | 24,000    |       |         |             |           |

† Combined discharge of river and infiltration line.

‡ Discharge diverted from basin 15 miles upstream.

## SALTON SEA BASIN

10-2564. San Geronio River near White Water, Calif.

Location.--Lat 33°55'14", long 116°41'45", in NW<sup>1</sup>SE<sup>1</sup>SW<sup>1</sup> sec.8, T.3 S., R.3 E., on right bank 0.25 mile south of Interstate Highway 10 and 3.4 miles west of town of White Water.

Drainage area.-- 154 sq mi.

Records available.--February to September 1966.

Gage.--Flood-hydrograph recorder. Altitude of gage is 1,320 ft (from topographic map).

Extremes.--1966: No flow during period February to September.

Flood of Nov. 23, 1965, reached a stage of 6.10 ft, from floodmarks (discharge, 4,500 cfs on basis of slope-area measurement of maximum flow).

Remarks.--No flow since Feb. 27, 1966, date of establishment. No regulation or diversion above station.



10-2565. Snow Creek near White Water, Calif.

Location.--Lat 33°52'10", long 116°40'50", in NW¼ sec. 33, T.3 S., R.3 E., on left bank 50 ft upstream from Southern Pacific Railroad diversion dam, 500 ft downstream from unnamed tributary, 2.8 miles upstream from mouth, and 4.5 miles southwest of White Water.

Drainage area.--10.8 sq mi.

Records available.--July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to September 1966. Yearly discharge only for 1930, published in WSP 1314.

Gage.--Digital water-stage recorder. Altitude of gage is 2,100 ft (from topographic map). Prior to Dec. 16, 1927, at site 500 ft upstream at different datum. Dec. 16, 1927, to Nov. 19, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--14 years (1922-26, 1928-31, 1959-66), 6.88 cfs (4,980 acre-ft per year).

Extremes.--Maximum discharge during year, 4,200 cfs Nov. 22 (gage height, 12.1 ft, from floodmarks), on basis of velocity-area measurement of maximum flow; minimum daily, 2.5 cfs Aug. 5, 9.  
1921-31, 1959-66: Maximum discharge, that of Nov. 22, 1965; minimum daily, 2.1 cfs June 23-27, Sept. 5-11, 1961.

Remarks.--Records good below 50 cfs and poor above. No regulation or diversion above station. Palm Springs Water Company diverts flow 50 ft downstream, generally taking the entire base flow.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 3.0  | 2.8     | 22    | 17    | 6.5   | 7.9   | 11    | 8.3   | 5.1   | 4.4   | 3.7  | 3.6   |
| 2     | 2.9  | 2.8     | 20    | 14    | 6.5   | 8.5   | 12    | 8.4   | 5.0   | 4.4   | 3.0  | 3.4   |
| 3     | 2.8  | 2.8     | 19    | 13    | 6.0   | 8.1   | 13    | 9.2   | 5.0   | 4.5   | 2.9  | 3.4   |
| 4     | 2.8  | 2.8     | 18    | 11    | 6.0   | 8.0   | 12    | 9.7   | 4.8   | 4.4   | 2.7  | 3.3   |
| 5     | 2.8  | 2.8     | 18    | 10    | 6.0   | 8.1   | 11    | 9.5   | 4.9   | 4.0   | 2.5  | 3.2   |
| 6     | 2.8  | 2.8     | 16    | 10    | 11    | 8.2   | 11    | 9.9   | 5.1   | 3.9   | 2.9  | 3.2   |
| 7     | 2.8  | 2.8     | 16    | 11    | 12    | 8.5   | 10    | 9.9   | 5.6   | 3.9   | 2.7  | 3.2   |
| 8     | 2.8  | 2.8     | 16    | 10    | 9.8   | 8.4   | 9.8   | 10    | 5.6   | 4.2   | 2.6  | 3.0   |
| 9     | 2.8  | 2.8     | 26    | 10    | 9.0   | 8.6   | 9.5   | 9.8   | 5.6   | 4.1   | 2.5  | 3.0   |
| 10    | 2.8  | 2.8     | 27    | 9.3   | 8.9   | 8.7   | 9.6   | 9.3   | 5.6   | 3.8   | 2.6  | 3.0   |
| 11    | 2.8  | 2.8     | 21    | 9.1   | 8.5   | 9.3   | 9.7   | 8.8   | 5.6   | 3.7   | 2.7  | 2.9   |
| 12    | 2.8  | 2.8     | 20    | 8.6   | 8.7   | 10    | 9.2   | 8.4   | 5.6   | 3.7   | 2.7  | 2.9   |
| 13    | 2.8  | 2.8     | 19    | 8.4   | 8.3   | 11    | 8.9   | 7.9   | 5.5   | 3.7   | 2.8  | 2.9   |
| 14    | 2.8  | 3.5     | 17    | 8.3   | 8.0   | 11    | 8.7   | 7.6   | 5.4   | 3.7   | 2.9  | 3.1   |
| 15    | 2.8  | 16      | 17    | 8.1   | 8.3   | 11    | 8.6   | 7.3   | 5.4   | 3.7   | 2.9  | 3.3   |
| 16    | 2.8  | 52      | 18    | 8.0   | 8.2   | 11    | 8.8   | 7.1   | 5.6   | 3.5   | 3.1  | 3.4   |
| 17    | 2.8  | 67      | 18    | 7.8   | 8.1   | 11    | 8.9   | 6.9   | 5.4   | 3.5   | 3.4  | 3.4   |
| 18    | 2.8  | 13      | 16    | 8.0   | 8.1   | 10    | 10    | 6.7   | 5.1   | 3.4   | 3.3  | 3.4   |
| 19    | 2.8  | 7.9     | 15    | 7.7   | 8.1   | 10    | 10    | 7.1   | 5.1   | 3.4   | 3.1  | 3.5   |
| 20    | 2.8  | 6.4     | 15    | 7.5   | 8.1   | 10    | 9.8   | 7.5   | 5.3   | 3.6   | 2.9  | 3.4   |
| 21    | 2.8  | 5.9     | 14    | 7.0   | 8.1   | 9.9   | 9.3   | 6.8   | 5.2   | 3.7   | 2.8  | 3.2   |
| 22    | 2.8  | 670     | 16    | 6.8   | 8.1   | 9.5   | 9.1   | 6.7   | 5.2   | 4.0   | 3.0  | 3.1   |
| 23    | 2.8  | 954     | 15    | 6.8   | 8.1   | 9.2   | 8.6   | 6.5   | 5.0   | 4.0   | 2.9  | 3.4   |
| 24    | 2.8  | 349     | 14    | 6.5   | 8.1   | 11    | 8.5   | 6.4   | 4.9   | 3.7   | 3.0  | 3.5   |
| 25    | 2.8  | 125     | 14    | 6.4   | 8.1   | 13    | 8.4   | 6.5   | 4.8   | 3.6   | 2.8  | 3.2   |
| 26    | 2.8  | 50      | 14    | 6.4   | 8.1   | 12    | 8.5   | 6.5   | 4.8   | 3.5   | 2.9  | 2.9   |
| 27    | 2.8  | 38      | 14    | 6.4   | 7.9   | 12    | 8.9   | 6.3   | 4.7   | 3.6   | 2.8  | 3.0   |
| 28    | 2.8  | 31      | 14    | 6.0   | 7.9   | 12    | 8.5   | 6.0   | 4.6   | 3.5   | 2.8  | 3.1   |
| 29    | 2.8  | 26      | 186   | 6.0   | ----- | 12    | 8.4   | 5.9   | 4.6   | 3.8   | 2.8  | 3.4   |
| 30    | 2.8  | 23      | 81    | 7.7   | ----- | 12    | 8.4   | 5.4   | 4.5   | 4.7   | 3.4  | 3.6   |
| 31    | 2.8  | -----   | 28    | 6.9   | ----- | 11    | ----- | 5.2   | ----- | 4.7   | 3.5  | ----- |
| Total | 87.1 | 2,474.1 | 784   | 269.7 | 228.5 | 310.9 | 288.1 | 237.5 | 154.6 | 120.3 | 90.6 | 96.9  |
| Mean  | 2.81 | 82.5    | 25.3  | 8.70  | 8.16  | 10.0  | 9.60  | 7.66  | 5.15  | 3.88  | 2.92 | 3.23  |
| Ac-ft | 17.3 | 4,910   | 1,560 | 535   | 453   | 617   | 571   | 471   | 307   | 239   | 180  | 192   |

Calendar year 1965 Max 954 Min 2.7 Mean 13.2 Ac-ft 9,590  
Water year 1965-66 Max 954 Min 2.5 Mean 14.1 Ac-ft 10,220

Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2330 | 4.11        | 315       | 12-29 | 1945 | 5.62        | 948       |
| 11-22 | 2030 | 12.1        | 4,200     |       |      |             |           |

## SALTON SEA BASIN

10-2578. Long Creek near Desert Hot Springs, Calif.

Location.--Lat 33°57'55", long 116°26'35", in SW 1/4 sec. 27, T.2 S., R.5 E., on left bank 0.4 mile downstream from Metropolitan Water District aqueduct, and 3.3 miles east of Desert Hot Springs.

Drainage area.--19.4 sq mi.

Records available.--April 1963 to September 1966

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 1,520 ft (from topographic map).

Extremes.--Maximum discharge during year, about 20 cfs Dec. 10 (gage height, 0.80 ft); maximum gage height, 0.90 ft Mar. 25; no flow most of year.

1963-66: Maximum discharge, 9,270 cfs Aug. 7, 1963 (gage height, 8.0 ft, from floodmarks), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Nov. 22..... 0.10  
Dec. 10..... .80  
29..... .20  
Mar. 25..... .10

| Month                   | Cfs-days | Maximum | Minimum | Mean  | Acre-feet |
|-------------------------|----------|---------|---------|-------|-----------|
| November 1965.....      | 0.10     | 0.10    | 0       | 0.003 | 0.2       |
| December.....           | 1.00     | .80     | 0       | .03   | 2.0       |
| March 1966.....         | .10      | .10     | 0       | .003  | .2        |
| Calendar year 1965..... | -        | .80     | 0       | .003  | 2.2       |
| Water year 1965-66..... | -        | .80     | 0       | .003  | 2.4       |

Note.--Flow occurred only on days listed above.

## SALTON SEA BASIN

57

10-2580. Tahquitz Creek near Palm Springs, Calif.

Location.---Lat 33°48'18", long 116°33'30", in NE 1/4 SW 1/4 sec. 22, T.4 S., R.4 E., on left bank 2.2 miles southwest of Palm Springs and 7 miles upstream from mouth.

Drainage area.---16.8 sq mi (revised).

Records available.---October 1947 to September 1966.

Gage.---Graphic water-stage recorder. Datum of gage is 764.5 ft above mean sea level (levels by Riverside County Flood Control and Water Conservation District).

Average discharge.---19 years, 2.67 cfs (1,930 acre-ft per year); median of yearly mean discharges, 1.3 cfs (940 acre-ft per year).

Extremes.---Maximum discharge during year, 2,900 cfs Nov. 22 (gage height, 10.34 ft); no flow Oct. 1 to Nov. 15, Aug. 27 to Sept. 30. 1947-66: Maximum discharge, that of Nov. 22, 1965; no flow for parts of each year.

Remarks.---Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     |      | 0       | 18    | 26    | 8.7   | 6.6   | 16    | 9.1   | 3.9   | 1.2   | 0.40  |       |
| 2     |      | 0       | 16    | 22    | 8.2   | 5.4   | 17    | 9.0   | 3.7   | 1.1   | 1.3   |       |
| 3     |      | 0       | 15    | 20    | 8.0   | 6.1   | 18    | 8.8   | 3.6   | 1.1   | 3.1   |       |
| 4     |      | 0       | 14    | 18    | 8.0   | 6.1   | 18    | 8.8   | 3.4   | 1.0   | 1.3   |       |
| 5     |      | 0       | 13    | 16    | 8.0   | 6.4   | 17    | 8.8   | 3.3   | .90   | .80   |       |
| 6     |      | 0       | 12    | 15    | 9.5   | 6.4   | 17    | 8.7   | 3.2   | .80   | .60   |       |
| 7     |      | 0       | 11    | 15    | 8.7   | 6.7   | 16    | 8.7   | 3.3   | .80   | .60   |       |
| 8     |      | 0       | 11    | 14    | 8.2   | 7.2   | 16    | 8.7   | 3.3   | .80   | .50   |       |
| 9     |      | 0       | 17    | 14    | 6.9   | 7.9   | 16    | 8.7   | 3.2   | .90   | .40   |       |
| 10    |      | 0       | 15    | 14    | 7.5   | 8.3   | 16    | 8.5   | 3.1   | .90   | .30   |       |
| 11    |      | 0       | 12    | 14    | 7.2   | 9.1   | 15    | 8.2   | 3.0   | .70   | .30   |       |
| 12    |      | 0       | 12    | 13    | 7.2   | 9.8   | 14    | 7.7   | 2.9   | .60   | .20   |       |
| 13    |      | 0       | 11    | 13    | 6.6   | 10    | 14    | 7.4   | 2.7   | .60   | .20   |       |
| 14    |      | 0       | 11    | 12    | 6.6   | 11    | 14    | 7.2   | 2.5   | .50   | .20   |       |
| 15    |      | 0       | 10    | 12    | 6.6   | 11    | 13    | 6.7   | 2.5   | .40   | .20   |       |
| 16    |      | .40     | 14    | 12    | 6.6   | 13    | 13    | 6.6   | 2.4   | .40   | .20   |       |
| 17    |      | 4.7     | 12    | 11    | 6.6   | 13    | 13    | 6.1   | 2.3   | .40   | .20   |       |
| 18    |      | 3.4     | 12    | 11    | 6.4   | 13    | 14    | 5.8   | 2.1   | .30   | .20   |       |
| 19    |      | 1.9     | 11    | 11    | 6.4   | 13    | 13    | 5.7   | 2.0   | .30   | .10   |       |
| 20    |      | 1.3     | 11    | 11    | 6.3   | 13    | 12    | 5.5   | 2.1   | .20   | .10   |       |
| 21    |      | 1.0     | 11    | 10    | 6.4   | 13    | 12    | 5.5   | 2.1   | .20   | .10   |       |
| 22    |      | 424     | 11    | 9.8   | 6.6   | 13    | 11    | 5.4   | 1.9   | .20   | .10   |       |
| 23    |      | 572     | 10    | 9.6   | 6.6   | 12    | 11    | 5.1   | 1.9   | .20   | .10   |       |
| 24    |      | 79      | 9.5   | 9.5   | 6.7   | 13    | 10    | 5.0   | 1.9   | .20   | .10   |       |
| 25    |      | 60      | 9.6   | 9.3   | 6.6   | 14    | 10    | 4.7   | 1.8   | .20   | .10   |       |
| 26    |      | 39      | 9.5   | 9.1   | 6.4   | 13    | 10    | 4.6   | 1.6   | .20   | .10   |       |
| 27    |      | 33      | 9.5   | 9.0   | 6.1   | 12    | 10    | 4.5   | 1.5   | .20   | 0     |       |
| 28    |      | 28      | 9.5   | 8.8   | 6.1   | 12    | 9.8   | 4.3   | 1.4   | .30   | 0     |       |
| 29    |      | 24      | 4.2   | 8.7   | ----- | 14    | 9.5   | 4.2   | 1.3   | .30   | 0     |       |
| 30    |      | 21      | 6.4   | 8.8   | ----- | 14    | 9.3   | 4.1   | 1.3   | .30   | 0     |       |
| 31    |      | -----   | 3.4   | 9.0   | ----- | 15    | ----- | 4.0   | ----- | .30   | 0     | ----- |
| Total | 0    | 1292.70 | 477.6 | 395.6 | 199.7 | 328.0 | 404.6 | 206.1 | 75.2  | 16.50 | 11.80 | 0     |
| Mean  | 0    | 43.1    | 15.4  | 12.8  | 7.13  | 10.6  | 13.5  | 6.65  | 2.51  | 0.53  | 0.38  | 0     |
| Ac-ft | 0    | 2560    | 947   | 785   | 396   | 651   | 803   | 409   | 149   | 33    | 23    | 0     |

Calendar year 1965 Max 572 Min 0 Mean 6.06 Ac-ft 4,390  
 Water year 1965-66 Max 572 Min 0 Mean 9.34 Ac-ft 6,760

Peak discharge (base, 50 cfs revised).---Nov. 22 (2300 hrs) 2,900 cfs (10.34 ft); Dec. 29 (2200 hrs) 169 cfs (3.92 ft).

10-2585. Palm Canyon Creek near Palm Springs, Calif.

Location.--Lat 33°44'55", long 116°32'15", in S $\frac{1}{2}$  sec. 11, T.5 S., R.4 E., on right bank three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs.

Drainage area.--93.3 sq mi.

Records available.--January 1930 to January 1942, October 1947 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 700 ft (from topographic map). Prior to Jan. 14, 1942, at datum 0.2 ft higher.

Average discharge.--30 years (1930-41, 1947-66), 3.80 cfs (2,750 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

Extremes.--Maximum discharge during year, 1,520 cfs Nov. 22 (gage height, 5.61 ft in gage well, 6.01 ft from profile of floodmarks), from rating curve extended above 500 cfs on basis of slope-area measurement of maximum flow; no flow for much of year. 1930-42, 1947-66; Maximum discharge, 3,850 cfs Feb. 6, 1937 (gage height, 5.80 ft, present datum), from rating curve extended above 120 cfs on basis of velocity-area study; no flow for several months in most years.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May | June | July | Aug.  | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-----|------|------|-------|-------|
| 1     |      | 0      | 2.6    | 14    | 3.7   | 2.4   | 0.60  |     |      | 0    | 0.10  |       |
| 2     |      | 0      | 2.4    | 12    | 3.2   | 3.2   | .60   |     |      | 0    | 12    |       |
| 3     |      | 0      | 1.9    | 9.7   | 2.8   | 2.8   | .60   |     |      | 0    | .40   |       |
| 4     |      | 0      | 1.9    | 7.3   | 2.6   | 2.4   | .50   |     |      | 0    | 0     |       |
| 5     |      | 0      | 1.6    | 5.7   | 2.6   | 2.4   | .40   |     |      | 0    | 0     |       |
| 6     |      | 0      | 1.4    | 6.7   | 5.0   | 2.2   | .30   |     |      | 0    | 0     |       |
| 7     |      | 0      | .90    | 6.3   | 10    | 2.2   | .30   |     |      | 0    | 0     |       |
| 8     |      | 0      | .60    | 6.0   | 6.3   | 2.2   | .20   |     |      | 0    | 0     |       |
| 9     |      | 0      | .60    | 5.7   | 5.1   | 2.2   | .30   |     |      | 0    | 0     |       |
| 10    |      | 0      | .60    | 5.1   | 4.8   | 2.4   | .20   |     |      | 0    | 0     |       |
| 11    |      | 0      | .60    | 4.5   | 4.3   | 2.6   | .20   |     |      | 0    | 0     |       |
| 12    |      | 0      | .60    | 4.3   | 4.0   | 2.8   | .20   |     |      | 0    | 0     |       |
| 13    |      | 0      | .60    | 4.0   | 3.5   | 2.6   | .10   |     |      | 0    | 0     |       |
| 14    |      | 0      | 7.9    | 4.0   | 3.2   | 2.6   | .10   |     |      | 0    | 0     |       |
| 15    |      | 0      | 29     | 3.7   | 3.0   | 2.6   | .10   |     |      | 0    | 0     |       |
| 16    |      | 0      | 88     | 3.5   | 3.0   | 2.4   | .10   |     |      | 0    | 0     |       |
| 17    |      | 3.0    | 50     | 3.2   | 3.0   | 2.4   | .10   |     |      | 0    | 0     |       |
| 18    |      | .10    | 24     | 3.2   | 3.0   | 2.2   | .10   |     |      | 0    | 0     |       |
| 19    |      | 0      | 20     | 3.2   | 2.8   | 2.2   | .40   |     |      | 0    | 0     |       |
| 20    |      | 0      | 18     | 3.2   | 2.6   | 2.0   | .30   |     |      | 0    | 0     |       |
| 21    |      | 0      | 16     | 3.0   | 2.6   | 1.9   | .20   |     |      | 0    | 0     |       |
| 22    |      | 263    | 22     | 3.0   | 2.6   | 1.7   | .10   |     |      | 0    | 0     |       |
| 23    |      | 303    | 16     | 3.0   | 2.6   | 1.9   | 0     |     |      | 0    | 0     |       |
| 24    |      | 14     | 12     | 2.8   | 2.6   | 2.2   | 0     |     |      | 0    | 0     |       |
| 25    |      | 13     | 10     | 2.6   | 2.6   | 2.4   | 0     |     |      | 0    | 0     |       |
| 26    |      | 7.6    | 9.7    | 2.6   | 2.6   | 1.9   | 0     |     |      | 0    | 0     |       |
| 27    |      | 4.5    | 9.3    | 2.6   | 2.4   | 1.9   | 0     |     |      | 0    | 0     |       |
| 28    |      | 3.7    | 9.3    | 2.4   | 2.4   | 1.4   | 0     |     |      | 0    | 0     |       |
| 29    |      | 3.0    | 21     | 2.2   | ----- | 1.3   | 0     |     |      | 0    | 0     |       |
| 30    |      | 3.0    | 46     | 5.9   | ----- | .90   | 0     |     |      | 49   | 0     |       |
| 31    |      | -----  | 19     | 5.7   | ----- | .80   | ----- |     |      | 43   | 0     | ----- |
| Total | 0    | 617.90 | 443.50 | 151.1 | 98.9  | 67.10 | 6.00  | 0   | 0    | 53.3 | 12.50 | 0     |
| Mean  | 0    | 20.6   | 14.3   | 4.87  | 3.53  | 2.16  | 0.20  | 0   | 0    | 1.72 | 0.40  | 0     |
| Ac-ft | 0    | 1,230  | 880    | 300   | 196   | 133   | 12    | 0   | 0    | 106  | 25    | 0     |

Calendar year 1965 Max 303 Min 0 Mean 3.17 Ac-ft 2,300  
 Water year 1965-66 Max 303 Min 0 Mean 3.97 Ac-ft 2,880

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-22 | 2400 | 5.61        | 1,520     | 7-30 | 1530 | 4.40        | 660       |
| 12-16 | 1600 | 3.28        | 190       | 8-2  | 1400 | 3.08        | 151       |
| 12-30 | 0030 | 2.87        | 109       |      |      |             |           |

10-2590, Andreas Creek near Palm Springs, Calif.

Location.--Lat 33°45'36", long 116°32'57", in NW 1/4 SE 1/4 sec. 3, T. 5 S., R. 4 E., on left bank at Bureau of Indian Affairs diversion dam, 1.1 miles above mouth and 5.1 miles south of Palm Springs.

Drainage area.--8.61 sq mi.

Records available.--October 1948 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 800 ft (from topographic map). Prior to Mar. 25, 1949, reference point at same site at different datum. Prior to Sept. 27, 1963, graphic water-stage recorder.

Average discharge.--18 years, 1.82 cfs (1,320 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

Extremes.--Maximum discharge during year, 1,000 cfs Nov. 22 (gage height, 3.74 ft), on basis of velocity-area measurement of maximum flow; minimum daily, 0.20 cfs Oct. 7-9, 12, 13, Sept. 8, 12, 13, 24-26.

1948-66: Maximum discharge, 1,960 cfs Aug. 31, 1954 (gage height, 7.11 ft), from rating curve extended above 80 cfs on basis of slope-area measurement of maximum flow; no flow at times in 1961, 1963, 1965.

Remarks.--Records good. No regulation above station. One small diversion for domestic use about 1 mile above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| DAY   | OCT.  | NOV.   | DEC.  | JAN.  | FEB.  | MAR. | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| 1     | 0.60  | 0.50   | 4.2   | 7.1   | 3.5   | 2.7  | 2.2   | 1.3  | 1.0   | 0.50  | 0.70  | 0.50  |
| 2     | .50   | .70    | 3.7   | 6.4   | 3.5   | 3.1  | 2.2   | 1.2  | 1.0   | .50   | 7.6   | .50   |
| 3     | .40   | .60    | 3.5   | 6.0   | 3.4   | 2.9  | 2.3   | 1.2  | 1.0   | .50   | 2.0   | .40   |
| 4     | .40   | .50    | 3.4   | 5.6   | 3.4   | 2.8  | 2.4   | 1.2  | .90   | .50   | .70   | .40   |
| 5     | .40   | .50    | 3.3   | 5.4   | 3.4   | 2.7  | 2.3   | 1.2  | .80   | .50   | .60   | .30   |
| 6     | .30   | .60    | 3.2   | 5.2   | 4.7   | 2.7  | 2.3   | 1.2  | .90   | .40   | .80   | .30   |
| 7     | .20   | .60    | 3.1   | 5.0   | 4.3   | 2.6  | 2.2   | 1.2  | 1.1   | .40   | .80   | .30   |
| 8     | .20   | .60    | 3.2   | 4.5   | 3.8   | 2.6  | 2.0   | 1.3  | 1.1   | .50   | .70   | .20   |
| 9     | .20   | .60    | 4.2   | 4.3   | 3.6   | 2.6  | 2.0   | 1.3  | 1.2   | .60   | .60   | .30   |
| 10    | .30   | .60    | 3.7   | 4.0   | 3.6   | 2.6  | 2.0   | 1.4  | 1.1   | .50   | .60   | .30   |
| 11    | .40   | .60    | 3.4   | 3.8   | 3.5   | 2.7  | 1.9   | 1.3  | 1.1   | .40   | .70   | .30   |
| 12    | .20   | 1.0    | 3.3   | 3.8   | 3.4   | 2.6  | 1.6   | 1.3  | 1.0   | .40   | .60   | .20   |
| 13    | .20   | .90    | 3.2   | 4.3   | 3.3   | 2.7  | 1.5   | 1.2  | .90   | .40   | .70   | .20   |
| 14    | .30   | 1.6    | 3.2   | 4.4   | 3.3   | 2.7  | 1.4   | 1.2  | .80   | .30   | .70   | .40   |
| 15    | .40   | 3.3    | 3.1   | 4.4   | 3.3   | 2.5  | 1.4   | 1.2  | .80   | .30   | .60   | .50   |
| 16    | .50   | 8.9    | 4.7   | 4.2   | 3.1   | 2.6  | 1.6   | 1.3  | .80   | .30   | .60   | .50   |
| 17    | .50   | 14     | 4.3   | 4.1   | 3.1   | 2.5  | 1.9   | 1.2  | .80   | .30   | .80   | .50   |
| 18    | .50   | 2.8    | 3.8   | 4.0   | 3.0   | 2.5  | 2.0   | 1.2  | .80   | .30   | .80   | .40   |
| 19    | .50   | 2.4    | 3.5   | 4.2   | 3.0   | 2.5  | 2.2   | 1.1  | .90   | .30   | .70   | .50   |
| 20    | .40   | 2.2    | 3.4   | 4.3   | 2.8   | 2.5  | 2.1   | 1.2  | .90   | .40   | .60   | .50   |
| 21    | .40   | 2.2    | 3.4   | 4.2   | 2.7   | 2.6  | 2.0   | 1.1  | .80   | .50   | .40   | .40   |
| 22    | .40   | 230    | 4.1   | 4.0   | 2.8   | 2.6  | 1.9   | 1.1  | .80   | .70   | .40   | .30   |
| 23    | .40   | 220    | 3.7   | 3.8   | 2.9   | 2.6  | 1.8   | 1.1  | .80   | .60   | .50   | .30   |
| 24    | .40   | 36     | 3.5   | 3.6   | 2.9   | 2.9  | 1.5   | 1.1  | .70   | .40   | .60   | .20   |
| 25    | .40   | 18     | 3.4   | 3.6   | 2.9   | 2.8  | 1.4   | 1.0  | .70   | .40   | .50   | .20   |
| 26    | .40   | 6.9    | 3.3   | 3.5   | 2.8   | 2.6  | 1.5   | 1.1  | .70   | .50   | .40   | .20   |
| 27    | .40   | 5.5    | 3.2   | 3.4   | 2.7   | 2.6  | 1.5   | 1.1  | .70   | .40   | .40   | .30   |
| 28    | .40   | 5.2    | 3.3   | 3.4   | 2.7   | 2.5  | 1.5   | 1.1  | .60   | .40   | .40   | .60   |
| 29    | .40   | 4.7    | 16    | 3.3   | ----- | 2.3  | 1.5   | 1.1  | .60   | .80   | .50   | .80   |
| 30    | .40   | 4.5    | 19    | 4.4   | ----- | 2.3  | 1.3   | 1.0  | .60   | 1.1   | .30   | .80   |
| 31    | .40   | -----  | 8.7   | 3.7   | ----- | 2.2  | ----- | 1.0  | ----- | 1.0   | .40   | ----- |
| TOTAL | 11.80 | 576.50 | 143.0 | 135.9 | 91.4  | 81.1 | 55.4  | 36.5 | 25.90 | 15.10 | 26.70 | 11.60 |
| MEAN  | .38   | 19.2   | 4.61  | 4.38  | 3.26  | 2.62 | 1.85  | 1.18 | .86   | .49   | .86   | .39   |
| AC-FT | 23    | 1,140  | 284   | 270   | 181   | 161  | 110   | 72   | 51    | 30    | 53    | 23    |

CALENDAR YEAR 1965 MAX 230 MIN 0 MEAN 2.93 AC-FT 2,120  
 WATER YEAR 1965-66 MAX 230 MIN .20 MEAN 3.32 AC-FT 2,400

Peak discharge (base, 30 cfs)

| Date  | Time    | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|---------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0145    | 2.51        | 62        | 12-29 | 2115 | 2.48        | 57        |
| 11-22 | Unknown | 3.74        | 1,000     | 8-2   | 1345 | 2.51        | 59        |

## SALTON SEA BASIN

10-2592. Deep Creek near Palm Desert, Calif.

Location.--Lat 33°37'50", long 116°23'30", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T.6 S., R.6 E., on left bank 500 ft downstream from unnamed tributary, and 6.3 miles south of Palm Desert.

Drainage area.--30.6 sq mi.

Records available.--May 1962 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 1,440 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,300 cfs Nov. 23 (gage height, 5.15 ft in gage well, 6.15 ft from profile of floodmarks), on basis of slope-area measurement of maximum flow; no flow for some of year.  
1962-66: Maximum discharge, that of Nov. 23, 1965; no flow for much of each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan. | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|--------|------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0      | 0.70   | 1.3  | 1.1   | 0.90  | 0.90  | 0.20 | 0     | 0    | 0.10 |       |
| 2     |      | 0      | .50    | 8.3  | 1.0   | 1.2   | .90   | .20  | 0     | 0    | 1.1  |       |
| 3     |      | 0      | .50    | 6.6  | 1.0   | 1.0   | .90   | .20  | 0     | 0    | .40  |       |
| 4     |      | 0      | .50    | 5.2  | 1.0   | .90   | .80   | .20  | 0     | 0    | .10  |       |
| 5     |      | 0      | .50    | 4.4  | 1.0   | .90   | .80   | .20  | 0     | 0    | .10  |       |
| 6     |      | 0      | .50    | 3.9  | 1.3   | .90   | .70   | .20  | 0     | 0    | .10  |       |
| 7     |      | 0      | .50    | 3.6  | 5.1   | .80   | .70   | .20  | 0     | 0    | .10  |       |
| 8     |      | 0      | .50    | 3.3  | 3.7   | .80   | .60   | .20  | 0     | 0    | 0    |       |
| 9     |      | 0      | 1.2    | 2.7  | 3.2   | .80   | .60   | .20  | 0     | 0    | 0    |       |
| 10    |      | 0      | 2.1    | 2.6  | 2.7   | 1.0   | .60   | .20  | 0     | 0    | 0    |       |
| 11    |      | 0      | 2.0    | 2.4  | 2.5   | 1.5   | .50   | .20  | 0     | 0    | 0    |       |
| 12    |      | 0      | 1.7    | 2.1  | 2.2   | 1.8   | .50   | .20  | 0     | 0    | 0    |       |
| 13    |      | 0      | 1.5    | 2.0  | 2.0   | 2.0   | .50   | .20  | 0     | 0    | 0    |       |
| 14    |      | 0      | 1.5    | 1.8  | 1.9   | 2.0   | .40   | .10  | 0     | 0    | 0    |       |
| 15    |      | 0      | 2.1    | 1.6  | 1.7   | 2.0   | .40   | .10  | 0     | 0    | 0    |       |
| 16    |      | .20    | 5.6    | 1.7  | 1.6   | 1.8   | .40   | .10  | 0     | 0    | 0    |       |
| 17    |      | 0      | 4.9    | 1.7  | 1.5   | 1.6   | .40   | .10  | 0     | 0    | 0    |       |
| 18    |      | 0      | 4.0    | 1.7  | 1.4   | 1.5   | .40   | .10  | 0     | 0    | 0    |       |
| 19    |      | 0      | 3.7    | 1.5  | 1.3   | 1.4   | .40   | .10  | 0     | 0    | 0    |       |
| 20    |      | 0      | 3.7    | 1.5  | 1.2   | 1.2   | .40   | .10  | 0     | 0    | 0    |       |
| 21    |      | 0      | 4.2    | 1.4  | 1.2   | 1.2   | .40   | .10  | 0     | 0    | 0    |       |
| 22    |      | 122    | 7.0    | 1.3  | 1.2   | 1.2   | .30   | .10  | 0     | 0    | 0    |       |
| 23    |      | 342    | 6.6    | 1.2  | 1.2   | 1.1   | .30   | .10  | 0     | 0    | 0    |       |
| 24    |      | 8.0    | 5.1    | 1.2  | 1.1   | 1.2   | .30   | .10  | 0     | 0    | 0    |       |
| 25    |      | 6.0    | 4.3    | 1.1  | 1.1   | 1.9   | .30   | .10  | 0     | 0    | 0    |       |
| 26    |      | 4.0    | 3.9    | 1.0  | 1.2   | 1.3   | .30   | .10  | 0     | 0    | 0    |       |
| 27    |      | 3.4    | 3.7    | 1.0  | 1.0   | 1.2   | .30   | .10  | .10   | 0    | 0    |       |
| 28    |      | 2.1    | 3.7    | 1.0  | 1.0   | 1.1   | .30   | .10  | 0     | 0    | 0    |       |
| 29    |      | 1.5    | 4.0    | 1.0  | ----- | 1.0   | .20   | .10  | 0     | 0    | 0    |       |
| 30    |      | 1.0    | 8.3    | 1.5  | ----- | .90   | .20   | .10  | 0     | 2.6  | 0    |       |
| 31    |      | -----  | 24     | 1.2  | ----- | .90   | ----- | 0    | ----- | .30  | 0    | ----- |
| Total | 0    | 490.20 | 223.70 | 84.5 | 47.4  | 39.00 | 14.70 | 4.30 | 0.10  | 2.90 | 2.00 | 0     |
| Mean  | 0    | 16.3   | 7.22   | 2.73 | 1.69  | 1.26  | 0.49  | 0.14 | 0.003 | 0.10 | 0.06 | 0     |
| Ac-ft | 0    | 972    | 444    | 168  | 94    | 77    | 29    | 8.5  | 0.2   | 5.8  | 4.0  | 0     |

Calendar year 1965 Max 342 Min 0 Mean 1.97 Ac-ft 1,430

Water year 1965-66 Max 342 Min 0 Mean 2.49 Ac-ft 1,800

Peak discharge (base, 20 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-23 | 0030 | 5.15        | 1,300     | 7-30 | 1500 | 2.53        | 38        |
| 12-29 | 2300 | 3.65        | 270       |      |      |             |           |

10-2593. Whitewater River at Indio, Calif.

Location.--Lat 33°44'06", long 116°14'39", in NW 1/4 sec. 15, T.5 S., R.7 E., on downstream side of center bridge pier on Interstate Highway 10, 2 miles northwest of Indio.

Drainage area.--1,073 sq mi.

Records available.--March to September 1966.

Gage.--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 5 ft (from topographic map).

Extremes.--1966: Maximum discharge during period, 712 cfs July 30 (gage height, 8.61 ft); no flow for most of period.

Flood of Nov. 22, 1965 reach a stage of 15.3 ft, from floodmarks (discharge, 14,100 cfs, on basis of slope-area measurement of maximum flow).

Remarks.--Records poor. No regulation above station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs.

Discharge, in cubic feet per second, period March to September 1966.

July 30.....25  
31.....35

| Month                               | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------------------|----------|---------|---------|------|-----------|
| July 1966.....                      | 60       | 35      | 0       | 1.94 | 119       |
| Calendar year 1965.....             | -        | -       | -       | -    | -         |
| Period March to September 1966..... | -        | 35      | 0       | .164 | 119       |

Peak discharge (base, 200 cfs).--July 30 (time unknown) 712 cfs (8.61 ft).

Note.--Flow occurred only on days listed above.

## SALTON SEA BASIN

10-2595.4. Whitewater River near Mecca, Calif.

Location.--Lat 33°30'39", long 116°03'35", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.33, T.7 S., R.9 E., on left bank 0.3 mile upstream from mouth and 4.3 miles south of Mecca.

Drainage area.--1,299 sq mi.

Records available.--October 1960 to September 1966 in reports of Geological Survey. May 1957 to September 1960 in reports of Coachella Valley County Water District.

Gage.--Graphic water-stage recorder. Datum of gage is at mean sea level (levels by Coachella Valley County Water District).

Extremes.--1960-66: Maximum daily discharge, about 1,300 cfs Nov. 23, 1965; minimum daily, 37 cfs Nov. 25-29, 1960.

Remarks.--Records poor. Most of the flow represents seepage and return flow from irrigated areas.

Cooperation.--Fifty-seven discharge measurements furnished by Coachella Valley County Water District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 115   | 108   | 118   | 113   | 100   | 113   | 120   | 104   | 102   | 143   | 119   | 119   |
| 2     | 117   | 108   | 117   | 113   | 100   | 112   | 120   | 103   | 102   | 127   | 123   | 121   |
| 3     | 123   | 108   | 115   | 112   | 100   | 112   | 120   | 102   | 103   | 123   | 123   | 121   |
| 4     | 117   | 103   | 114   | 111   | 100   | 111   | 120   | 101   | 103   | 119   | 119   | 121   |
| 5     | 108   | 112   | 112   | 110   | 100   | 110   | 120   | 100   | 104   | 115   | 123   | 125   |
| 6     | 110   | 119   | 110   | 110   | 101   | 110   | 120   | 99    | 105   | 112   | 121   | 129   |
| 7     | 115   | 110   | 110   | 110   | 101   | 110   | 120   | 98    | 105   | 112   | 123   | 117   |
| 8     | 110   | 105   | 110   | 110   | 102   | 110   | 120   | 97    | 105   | 112   | 127   | 115   |
| 9     | 117   | 101   | 110   | 110   | 103   | 110   | 120   | 96    | 103   | 110   | 129   | 108   |
| 10    | 121   | 103   | 110   | 110   | 104   | 110   | 120   | 95    | 108   | 110   | 133   | 106   |
| 11    | 119   | 100   | 109   | 110   | 105   | 110   | 120   | 95    | 115   | 110   | 143   | 105   |
| 12    | 119   | 100   | 108   | 110   | 106   | 110   | 120   | 95    | 112   | 112   | 137   | 105   |
| 13    | 119   | 100   | 107   | 109   | 107   | 110   | 120   | 94    | 112   | 119   | 139   | 108   |
| 14    | 119   | 100   | 107   | 109   | 108   | 110   | 120   | 93    | 112   | 119   | 143   | 105   |
| 15    | 119   | 103   | 107   | 108   | 109   | 110   | 120   | 92    | 112   | 119   | 139   | 105   |
| 16    | 119   | 101   | 107   | 107   | 110   | 110   | 119   | 91    | 112   | 119   | 115   | 105   |
| 17    | 119   | 98    | 107   | 105   | 111   | 110   | 118   | 92    | 108   | 121   | 108   | 105   |
| 18    | 119   | 88    | 108   | 104   | 112   | 110   | 118   | 93    | 115   | 129   | 131   | 112   |
| 19    | 115   | 89    | 109   | 104   | 112   | 110   | 117   | 94    | 127   | 133   | 131   | 110   |
| 20    | 115   | 90    | 110   | 104   | 113   | 110   | 115   | 95    | 137   | 119   | 149   | 108   |
| 21    | 113   | 94    | 110   | 104   | 113   | 110   | 114   | 96    | 117   | 117   | 137   | 110   |
| 22    | 113   | 100   | 110   | 104   | 114   | 110   | 113   | 97    | 106   | 110   | 127   | 110   |
| 23    | 112   | 1,300 | 110   | 104   | 114   | 111   | 112   | 98    | 96    | 113   | 131   | 110   |
| 24    | 110   | 150   | 110   | 104   | 115   | 112   | 111   | 98    | 106   | 123   | 129   | 113   |
| 25    | 100   | 140   | 110   | 104   | 115   | 113   | 110   | 99    | 110   | 133   | 123   | 121   |
| 26    | 108   | 135   | 111   | 103   | 116   | 114   | 109   | 100   | 113   | 133   | 123   | 110   |
| 27    | 106   | 130   | 112   | 103   | 115   | 115   | 108   | 100   | 115   | 131   | 121   | 117   |
| 28    | 105   | 125   | 113   | 102   | 114   | 116   | 107   | 100   | 115   | 121   | 119   | 121   |
| 29    | 103   | 120   | 114   | 102   | ----- | 117   | 106   | 100   | 131   | 127   | 119   | 119   |
| 30    | 101   | 119   | 114   | 101   | ----- | 118   | 105   | 100   | 133   | 129   | 127   | 117   |
| 31    | 106   | ----- | 114   | 100   | ----- | 119   | ----- | 101   | ----- | 118   | 119   | ----- |
| Total | 3,512 | 4,459 | 3,433 | 3,310 | 3,020 | 3,463 | 3,482 | 3,018 | 3,344 | 3,738 | 3,950 | 3,398 |
| Mean  | 113   | 149   | 111   | 107   | 108   | 112   | 116   | 97.4  | 111   | 121   | 127   | 113   |
| Ac-ft | 6,970 | 8,840 | 6,810 | 6,570 | 5,990 | 6,870 | 6,910 | 5,990 | 6,630 | 7,410 | 7,830 | 6,740 |

Calendar year 1965 Max 1,300 Min 88 Mean 122 Ac-ft 83,070  
 Water year 1965-66 Max 1,300 Min 88 Mean 115 Ac-ft 83,560

Note.--No gage-height record or stage-discharge relation indefinite Nov. 23 to June 7.



10-2596. Cottonwood Wash near Cottonwood Spring, Calif.

Location.--Lat 33°44'40", long 115°49'35", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.10, T.5 S., R.11 E., on right bank on Cottonwood Spring road, one mile northwest of Cottonwood Spring.

Drainage area.--0.71 sq mi.

Records available.--October 1959 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and arch concrete-pipe culvert control. Altitude of gage is 3,100 ft (from topographic map).

Average discharge.--7 years, 0.0001 cfs (0.1 acre-ft per year).

Extremes.--No flow during year.

1959-66: Maximum discharge, 11 cfs Oct. 17, 1963 (gage height, 3.80 ft, from crest-stage gage), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--No flow since Oct. 17, 1963. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 2.8; December, 2.0; February, 0.3; March, 0.3; August, 0.3; September, 0.1; the water year, 5.8.

10-2599.2. Wasteway No. 1 near Mecca, Calif.

Location.--Lat 33°31'40", long 115°58'23", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.29, T.7 S., R.10 E., on right bank of channel, 1,000 ft upstream from mouth, 2,250 ft downstream from State Highway 111, and 6.6 miles southeast of Mecca.

Records available.--February to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 220 ft below mean sea level (from topographic map).

Extremes.--1966: Maximum daily discharge during period February to September, 55 cfs Mar. 29; minimum daily, 3.0 cfs Feb. 25.

Remarks.--Records good. Discharge represents seepage and return flows from irrigated areas. At times water is wasted from Coachella Canal.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov. | Dec. | Jan. | Feb.   | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|--------|------|------|------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     |        |      |      |      | -      | 3.5   | 5.0   | 4.7   | 5.5   | 6.5   | 12    | 6.5   |
| 2     |        |      |      |      | -      | 3.5   | 5.7   | 4.7   | 5.5   | 6.5   | 6.1   | 6.9   |
| 3     |        |      |      |      | -      | 3.5   | 5.7   | 4.7   | 5.5   | 6.5   | 6.1   | 6.9   |
| 4     |        |      |      |      | -      | 3.5   | 5.7   | 4.7   | 5.5   | 6.1   | 6.1   | 6.5   |
| 5     | † 4.56 |      |      |      | -      | 3.8   | 5.7   | 4.7   | 5.5   | 5.7   | 6.1   | 5.4   |
| 6     |        |      |      |      | -      | 3.8   | 6.1   | 4.8   | 5.6   | 6.1   | 6.5   | 5.7   |
| 7     |        |      |      |      | -      | 3.5   | 6.9   | 4.8   | 5.6   | 5.7   | 5.7   | 6.5   |
| 8     |        |      |      |      | -      | 3.5   | 6.5   | 4.8   | 5.6   | 5.7   | 5.7   | 6.9   |
| 9     |        |      |      |      | -      | 3.5   | 5.7   | 4.8   | 5.6   | 6.1   | 5.7   | 6.5   |
| 10    |        |      |      |      | -      | 3.5   | 5.0   | 4.8   | 5.6   | 6.9   | 5.7   | 6.1   |
| 11    |        |      |      |      | -      | 3.5   | 4.7   | 4.9   | 5.7   | 5.7   | 5.7   | 6.1   |
| 12    |        |      |      |      | -      | 3.5   | 4.7   | 4.9   | 5.7   | 5.4   | 8.6   | 5.7   |
| 13    |        |      |      |      | -      | 3.5   | 4.4   | 4.9   | 5.7   | 5.4   | 8.1   | 5.7   |
| 14    |        |      |      |      | -      | 3.5   | 3.8   | 4.9   | 5.7   | 5.4   | 6.1   | 7.3   |
| 15    |        |      |      |      | -      | 3.8   | 3.5   | 4.9   | 5.7   | 5.4   | 5.7   | 8.1   |
| 16    |        |      |      |      | -      | 4.1   | 3.2   | 5.0   | 5.7   | 5.7   | 6.1   | 6.9   |
| 17    |        |      |      |      | † 3.81 | 4.4   | 3.2   | 5.0   | 6.1   | 5.4   | 6.1   | 6.5   |
| 18    |        |      |      |      | -      | 4.4   | 3.2   | 5.0   | 6.1   | 5.4   | 6.1   | 6.5   |
| 19    |        |      |      |      | -      | 4.7   | 3.2   | 5.1   | 5.7   | 6.9   | 6.5   | 6.5   |
| 20    |        |      |      |      | -      | 4.7   | 3.2   | 5.2   | 5.7   | 6.1   | 6.5   | 6.5   |
| 21    |        |      |      |      | -      | 12    | 3.2   | 5.2   | 6.1   | 5.4   | 6.9   | 6.5   |
| 22    |        |      |      |      | -      | 4.7   | 3.8   | 5.2   | 6.5   | 5.4   | 6.5   | 6.5   |
| 23    |        |      |      |      | -      | 4.7   | 3.8   | 5.3   | 5.7   | 5.7   | 6.1   | 6.5   |
| 24    |        |      |      |      | -      | 5.0   | 3.8   | 5.3   | 5.7   | 6.9   | 6.1   | 6.9   |
| 25    |        |      |      |      | 3.0    | 5.0   | 3.8   | 5.3   | 6.1   | 6.5   | 6.5   | 6.1   |
| 26    |        |      |      |      | 3.2    | 5.4   | 4.1   | 5.4   | 5.7   | 6.5   | 7.7   | 6.1   |
| 27    |        |      |      |      | 3.5    | 5.4   | 4.4   | 5.4   | 5.7   | 6.5   | 7.3   | 6.1   |
| 28    |        |      |      |      | 3.5    | 18    | 4.4   | 5.4   | 5.7   | 5.7   | 6.5   | 6.1   |
| 29    |        |      |      |      | -----  | 55    | 4.4   | 5.4   | 6.5   | 6.9   | 6.1   | 6.9   |
| 30    |        |      |      |      | -----  | 29    | 4.7   | 5.4   | 6.5   | 7.7   | 5.7   | 6.1   |
| 31    |        |      |      |      | -----  | 4.7   | ----- | 5.4   | ----- | 20    | 6.5   | ----- |
| Total |        |      |      |      |        | 224.6 | 135.5 | 156.0 | 173.5 | 201.8 | 203.1 | 193.5 |
| Mean  |        |      |      |      |        | 7.25  | 4.52  | 5.03  | 5.78  | 6.51  | 6.55  | 6.45  |
| Ac-ft |        |      |      |      |        | 445   | 269   | 309   | 344   | 400   | 403   | 384   |

Calendar year 1965 Max Min Mean Ac-ft  
Feb. to Sept. 1966 Max 55 Min 3.0 Mean Ac-ft 2550

† Result of discharge measurement.

## EMERSON LAKE BASIN

10-2602, Pipes Creek near Yucca Valley, Calif.

Location.--Lat 34°10'20", long 116°32'45", in NE $\frac{1}{4}$  sec.15, T.1 N., R.4 E., on left bank 2.8 miles upstream from Antelope Wash and 6.8 miles northwest of Yucca Valley.

Drainage area.--15.1 sq mi.

Records available.--September 1958 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 4,435.40 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 0.012 cfs (8.7 acre-feet per year).

Extremes.--Maximum discharge during year, 350 cfs Dec. 29 (gage height, 3.52 ft), on basis of field estimate of maximum flow; no flow for most of year.

1958-66: Maximum discharge, that of Dec. 29, 1965; no flow for all or most of each year.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Nov. 22..... 0.10                      Dec. 29.....34  
23..... 1.7                              30..... .10

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 1.80     | 1.7     | 0       | 0.06 | 3.6       |
| December.....           | 34.10    | 34      | 0       | 1.10 | 68        |
| Calendar year 1965..... | -        | 34      | 0       | .098 | 71        |
| Water year 1965-66..... | -        | 34      | 0       | .098 | 71        |

Note.--Flow occurred only on days listed above.

## LUCERNE DRY LAKE BASIN

10-2604, Cushenbury Creek near Lucerne Valley, Calif.

Location.--Lat 34°21'50", long 116°50'35", in NE $\frac{1}{4}$  sec.14, T.3 N., R.1 E., on right bank 0.3 mile upstream from San Bernardino National Forest boundary and 9 miles southeast of Lucerne Valley.

Drainage area.--6.36 sq mi.

Records available.--August 1957 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 4,750 ft (from topographic map).

Average discharge.--9 years, 0.006 cfs (4.3 acre-ft per year).

Extremes.--Maximum discharge during year, 180 cfs Nov. 23 (gage height, 2.27 ft), from rating curve extended above 35 cfs; maximum gage height, 2.92 ft Dec. 29 (due to debris); no flow for most of year.

1957-66: Maximum discharge, that of Nov. 23, 1965; no flow in most years.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Nov. 22..... 0.20                      Dec. 29..... 2.2  
23..... 8.0                              30..... .70

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 8.20     | 8.0     | 0       | 0.27 | 16        |
| December.....           | 2.90     | 2.2     | 0       | .09  | 5.8       |
| Calendar year 1965..... | -        | 8.0     | 0       | .032 | 23        |
| Water year 1965-66..... | -        | 8.0     | 0       | .030 | 22        |

Note.--Flow occurred only on days listed above.

10-2605. Deep Creek near Hesperia, Calif.

Location.--Lat 34°20'30", long 117°13'40", in SE $\frac{1}{4}$  sec.18, T.3 N., R.3 W., on right bank 0.5 mile upstream from confluence with West Fork Mojave River and 7 miles southeast of Hesperia.

Drainage area.--136 sq mi.

Records available.--October 1904 to September 1922, October 1929 to September 1966. Monthly discharge only prior to January 1930, published in WSP 1314. Combined creek and canal, October 1950 to September 1966.

Gage.--Digital water-stage recorder and broad-crested weir since December 1938. Altitude of gage is 3,050 ft (from topographic map). Prior to Sept. 30, 1922, staff gage and water-stage recorder at same site at different datum. December 1929 to Apr. 20, 1938, at same site at different datum. Apr. 21 to Dec. 10, 1938, at site 0.25 mile downstream at different datum. Prior to Sept. 26, 1963, graphic water-stage recorder.

Average discharge.--55 years, 66.2 cfs (47,930 acre-ft per year); median of yearly mean discharges, 45 cfs (32,600 acre-ft per year).

Extremes.--Maximum discharge during year, 21,700 cfs Nov. 22 (gage height, 12.34 ft, from inside high-water mark), from rating curve extended above 3,400 cfs on basis of slope-area measurement at gage-height 11.3 ft; minimum daily, 0.70 cfs Oct. 13, 14. 1904-22, 1929-66: Maximum discharge, 46,600 cfs Mar. 2, 1938, based on slope-area measurement of maximum flow; no flow July 17, 18, 1961.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft), used principally for recreation. Hesperia Water Co.'s canal, which diverted water about 2 $\frac{1}{2}$  miles above station, has not been used since May 9, 1959.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|-------|----------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 0.80  | 1.7      | 77     | 474   | 56    | 57    | 57    | 24    | 11    | 5.0  | 1.6   | 1.2   |
| 2     | .80   | 1.8      | 65     | 312   | 49    | 65    | 58    | 24    | 11    | 4.8  | 4.0   | 1.3   |
| 3     | .90   | 1.8      | 57     | 252   | 30    | 77    | 61    | 23    | 11    | 4.7  | 2.3   | 1.5   |
| 4     | .90   | 1.8      | 53     | 191   | 41    | 140   | 58    | 23    | 10    | 4.5  | 1.9   | 1.4   |
| 5     | .90   | 1.9      | 47     | 140   | 39    | 60    | 53    | 22    | 10    | 4.4  | 1.7   | 1.0   |
| 6     | 1.0   | 1.9      | 44     | 106   | 284   | 60    | 50    | 22    | 9.8   | 4.2  | 1.5   | 1.1   |
| 7     | .80   | 2.0      | 40     | 102   | 496   | 68    | 46    | 22    | 9.4   | 4.0  | 1.4   | 1.4   |
| 8     | .80   | 2.1      | 37     | 107   | 192   | 77    | 43    | 22    | 9.2   | 3.8  | 1.3   | 1.2   |
| 9     | .80   | 2.1      | 90     | 104   | 137   | 82    | 40    | 22    | 9.0   | 3.6  | 1.2   | 1.1   |
| 10    | .80   | 2.2      | 162    | 95    | 124   | 86    | 38    | 22    | 8.6   | 3.4  | 1.1   | 1.1   |
| 11    | .90   | 2.3      | 113    | 88    | 188   | 103   | 36    | 21    | 8.5   | 3.2  | 1.0   | 1.1   |
| 12    | .90   | 2.3      | 94     | 83    | 118   | 115   | 34    | 21    | 8.3   | 3.1  | 1.0   | 1.1   |
| 13    | .70   | 2.3      | 86     | 75    | 118   | 129   | 33    | 20    | 8.2   | 2.9  | .90   | 1.1   |
| 14    | .70   | 2.6      | 74     | 75    | 115   | 131   | 32    | 19    | 8.0   | 2.8  | .90   | 1.2   |
| 15    | .90   | 3.0      | 64     | 75    | 118   | 121   | 31    | 19    | 7.8   | 2.7  | .90   | 1.2   |
| 16    | 1.0   | 5.3      | 61     | 76    | 106   | 115   | 31    | 18    | 7.6   | 2.5  | .90   | 1.2   |
| 17    | 1.1   | 356      | 52     | 68    | 106   | 107   | 31    | 18    | 7.5   | 2.4  | .90   | 1.2   |
| 18    | 1.5   | 889      | 45     | 66    | 109   | 97    | 30    | 17    | 7.3   | 2.3  | 1.0   | 1.2   |
| 19    | 1.6   | 134      | 41     | 62    | 109   | 89    | 29    | 17    | 7.2   | 2.2  | 1.0   | 1.2   |
| 20    | 1.6   | 47       | 44     | 63    | 100   | 87    | 28    | 16    | 7.0   | 2.1  | 1.0   | 1.2   |
| 21    | 1.5   | 34       | 44     | 47    | 103   | 80    | 28    | 15    | 6.8   | 2.1  | 1.0   | 1.2   |
| 22    | 1.5   | 4,780    | 47     | 51    | 86    | 74    | 27    | 15    | 6.7   | 2.0  | .90   | 1.2   |
| 23    | 1.5   | 6,480    | 44     | 49    | 72    | 59    | 27    | 15    | 6.6   | 2.0  | 1.0   | 1.2   |
| 24    | 1.5   | 1,460    | 42     | 44    | 70    | 57    | 26    | 14    | 6.4   | 1.9  | 1.0   | 1.2   |
| 25    | 1.6   | 1,340    | 44     | 47    | 65    | 69    | 26    | 14    | 6.2   | 1.9  | 1.0   | 1.2   |
| 26    | 1.7   | 1,070    | 41     | 48    | 63    | 61    | 26    | 14    | 6.0   | 1.8  | 1.0   | 1.2   |
| 27    | 1.6   | 812      | 40     | 48    | 59    | 53    | 25    | 13    | 5.7   | 1.8  | 1.0   | 1.2   |
| 28    | 1.6   | 425      | 45     | 36    | 56    | 51    | 25    | 13    | 5.5   | 1.7  | 1.0   | 1.2   |
| 29    | 1.7   | 212      | 6,640  | 38    | ----- | 51    | 25    | 12    | 5.4   | 1.7  | 1.0   | 1.2   |
| 30    | 1.8   | 115      | 3,400  | 59    | ----- | 51    | 24    | 12    | 5.2   | 1.7  | .90   | 1.2   |
| 31    | 1.6   | -----    | 767    | 57    | ----- | 51    | ----- | 12    | ----- | 1.6  | 1.1   | ----- |
| TOTAL | 37.00 | 18,191.1 | 12,500 | 3,138 | 3,209 | 2,523 | 1,078 | 561   | 236.9 | 88.8 | 38.40 | 36.0  |
| MEAN  | 1.19  | 606      | 403    | 101   | 115   | 81.4  | 35.9  | 18.1  | 7.90  | 2.87 | 1.24  | 1.20  |
| AC-FT | 73    | 36,080   | 24,790 | 6,220 | 6,360 | 5,000 | 2,140 | 1,110 | 470   | 176  | 76    | 71    |

|                    |     |       |     |     |      |     |       |        |
|--------------------|-----|-------|-----|-----|------|-----|-------|--------|
| CALENDAR YEAR 1965 | MAX | 6,640 | MIN | .20 | MEAN | 104 | AC-FT | 75,090 |
| WATER YEAR 1965-66 | MAX | 6,640 | MIN | .70 | MEAN | 114 | AC-FT | 82,570 |

## Peak discharge (base, 400 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-18 | 0100 | 4.21        | 1,940     | 12-29 | 1930 | 11.99       | 20,800    |
| 11-22 | 2030 | 12.34       | 21,700    | 2-6   | 1930 | 3.02        | 900       |

## MOJAVE RIVER BASIN

10-2610. West Fork Mojave River near Hesperia, Calif.

Location.--Lat 34°20'27", long 117°14'24", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.18, T.3 N., R.3 W., on left bank at highway bridge, 0.5 mile upstream from confluence with Deep Creek and 6.5 miles southeast of Hesperia.

Drainage area.--74.6 sq mi.

Records available.--October 1904 to September 1922, October 1929 to September 1966. Prior to February 1930, monthly discharge only, published in WSP 1314.

Gage.--Graphic water-stage recorder. Altitude of gage is 3,050 ft (from topographic map). Prior to June 30, 1922, staff gage and graphic water-stage recorder several hundred feet downstream at different datum. June 30, 1942, to Apr. 14, 1966, at datum 2.00 ft higher.

Average discharge.--55 years, 38.2 cfs (27,660 acre-ft per year); median of yearly mean discharges, 23 cfs (16,700 acre-ft per year).

Extremes.--Maximum discharge during year, 21,200 cfs Dec. 29 (gage height, 16.20 ft, present datum), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 17, May 25 to Sept. 30.  
1904-22, 1929-66: Maximum discharge, 26,100 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records poor. No regulation above station. Water diverted from Lake Gregory for domestic use and fire protection. One small diversion for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar.  | Apr.   | May  | June | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|-------|--------|------|------|------|------|-------|
| 1     |      | 0     | 61     | 275   | 47    | 31    | 10     | 0.70 |      |      |      |       |
| 2     |      | 0     | 44     | 215   | 45    | 30    | 9.0    | .60  |      |      |      |       |
| 3     |      | 0     | 42     | 176   | 44    | 29    | 8.0    | .60  |      |      |      |       |
| 4     |      | 0     | 41     | 152   | 43    | 28    | 7.5    | .50  |      |      |      |       |
| 5     |      | 0     | 40     | 130   | 42    | 27    | 7.0    | .50  |      |      |      |       |
| 6     |      | 0     | 38     | 115   | 78    | 26    | 6.5    | .40  |      |      |      |       |
| 7     |      | 0     | 35     | 106   | 113   | 25    | 6.0    | .40  |      |      |      |       |
| 8     |      | 0     | 24     | 96    | 104   | 25    | 5.6    | .40  |      |      |      |       |
| 9     |      | 0     | 58     | 88    | 88    | 25    | 5.3    | .40  |      |      |      |       |
| 10    |      | 0     | 150    | 82    | 81    | 25    | 5.0    | .40  |      |      |      |       |
| 11    |      | 0     | 96     | 76    | 70    | 24    | 4.7    | .40  |      |      |      |       |
| 12    |      | 0     | 109    | 73    | 68    | 24    | 4.4    | .40  |      |      |      |       |
| 13    |      | 0     | 109    | 70    | 63    | 24    | 4.2    | .40  |      |      |      |       |
| 14    |      | 0     | 94     | 67    | 58    | 24    | 4.0    | .30  |      |      |      |       |
| 15    |      | 0     | 76     | 64    | 54    | 22    | 3.8    | .30  |      |      |      |       |
| 16    |      | 0     | 70     | 61    | 51    | 20    | 3.6    | .30  |      |      |      |       |
| 17    |      | 0     | 60     | 58    | 48    | 18    | 3.5    | .20  |      |      |      |       |
| 18    |      | 196   | 46     | 56    | 46    | 17    | 3.5    | .20  |      |      |      |       |
| 19    |      | 39    | 37     | 54    | 44    | 16    | 3.4    | .10  |      |      |      |       |
| 20    |      | 19    | 32     | 52    | 42    | 15    | 3.3    | .10  |      |      |      |       |
| 21    |      | 16    | 32     | 50    | 40    | 14    | 3.3    | .10  |      |      |      |       |
| 22    |      | 1,130 | 31     | 48    | 38    | 14    | 3.4    | .10  |      |      |      |       |
| 23    |      | 1,230 | 28     | 46    | 37    | 14    | 3.0    | .10  |      |      |      |       |
| 24    |      | 586   | 21     | 45    | 36    | 13    | 2.5    | .10  |      |      |      |       |
| 25    |      | 472   | 19     | 44    | 35    | 13    | 1.9    | 0    |      |      |      |       |
| 26    |      | 212   | 15     | 43    | 34    | 13    | 1.4    | 0    |      |      |      |       |
| 27    |      | 141   | 14     | 42    | 33    | 12    | 1.3    | 0    |      |      |      |       |
| 28    |      | 106   | 12     | 41    | 32    | 12    | 1.2    | 0    |      |      |      |       |
| 29    |      | 78    | 4,910  | 40    | ----- | 12    | 1.1    | 0    |      |      |      |       |
| 30    |      | 68    | 1,130  | 38    | ----- | 11    | .90    | 0    |      |      |      |       |
| 31    |      | ----- | 394    | 49    | ----- | 10    | -----  | 0    |      |      |      |       |
| Total | 0    | 4,293 | 7,868  | 2,552 | 1,514 | 613   | 128.30 | 8.00 | 0    | 0    | 0    | 0     |
| Mean  | 0    | 143   | 254    | 82.3  | 54.1  | 19.8  | 4.28   | 0.26 | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 8,520 | 15,610 | 5,060 | 3,000 | 1,220 | 254    | 16   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 4,910 Min 0 Mean 42.1 Ac-ft 30,460

Water year 1965-66 Max 4,910 Min 0 Mean 46.5 Ac-ft 33,680

Peak discharge (base, 500 cfs).--Nov. 22 (2030 hrs) 8,420 cfs (13.20 ft, present datum); Dec. 29 (1700 hrs) 21,200 cfs (16.20 ft, present datum).

10-2615. Mojave River at lower narrows, near Victorville, Calif.

Location.--Lat 34°34'22", long 117°19'08", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 29, T. 6 N., R. 4 W., on left bank 1,000 ft upstream from bridge on county road, formerly U.S. Highway 66, 2,500 ft downstream from Atchison, Topeka and Santa Fe Railway bridge, and 3 miles northwest of Victorville.

Drainage area.--514 sq mi.

Records available.--February 1899 to September 1906, October 1930 to September 1966. 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.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,650 ft (from topographic map). Prior to Aug. 1, 1906, staff gage and Nov. 12, 1930, to Dec. 8, 1936, water-stage recorder, at site 3.8 miles upstream at different datum. Dec. 9, 1936, to Mar. 28, 1938, at present site at datum 4.00 ft higher. Mar. 28, 1938, to Apr. 14, 1966, at present site at datum 2.00 ft higher.

Average discharge.--43 years, 70.9 cfs (51,330 acre-ft per year); median of yearly mean discharges, 39 cfs (28,200 acre-ft per year).

Extremes.--Maximum discharge during year, 32,800 cfs Dec. 29 (gage height, 14.16 ft, present datum), on basis of slope-area measurement of maximum flow; minimum daily, 6.7 cfs Aug. 21-23, 27-31.

1930-66: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 20.7 ft, present datum), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow, minimum daily, 6 cfs Aug. 19, 21, 26, 1951.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Periodic regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 5,000 acres above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 17    | 20     | 36     | 383   | 32    | 30    | 27    | 22    | 17    | 11   | 10    | 8.1   |
| 2     | 18    | 20     | 34     | 287   | 32    | 29    | 27    | 22    | 17    | 11   | 11    | 8.1   |
| 3     | 18    | 20     | 34     | 244   | 32    | 29    | 26    | 22    | 17    | 11   | 9.7   | 8.1   |
| 4     | 17    | 20     | 34     | 213   | 32    | 30    | 26    | 22    | 16    | 11   | 9.2   | 8.1   |
| 5     | 17    | 20     | 32     | 180   | 50    | 31    | 25    | 21    | 16    | 11   | 9.0   | 8.1   |
| 6     | 17    | 20     | 34     | 152   | 100   | 31    | 25    | 20    | 16    | 11   | 10    | 8.1   |
| 7     | 18    | 20     | 32     | 125   | 80    | 32    | 25    | 21    | 16    | 11   | 11    | 8.1   |
| 8     | 18    | 20     | 34     | 98    | 70    | 32    | 26    | 20    | 16    | 11   | 11    | 8.5   |
| 9     | 18    | 20     | 34     | 75    | 62    | 31    | 26    | 20    | 16    | 11   | 10    | 8.7   |
| 10    | 18    | 20     | 42     | 58    | 54    | 30    | 26    | 18    | 16    | 10   | 10    | 8.7   |
| 11    | 18    | 20     | 30     | 56    | 48    | 29    | 27    | 18    | 16    | 10   | 9.7   | 8.5   |
| 12    | 18    | 20     | 32     | 54    | 44    | 29    | 27    | 18    | 15    | 10   | 9.7   | 8.5   |
| 13    | 18    | 20     | 32     | 52    | 41    | 28    | 27    | 18    | 15    | 10   | 9.4   | 8.7   |
| 14    | 20    | 20     | 32     | 48    | 39    | 28    | 27    | 17    | 14    | 10   | 9.2   | 9.4   |
| 15    | 18    | 20     | 29     | 48    | 39    | 28    | 26    | 17    | 15    | 10   | 8.7   | 10    |
| 16    | 18    | 24     | 32     | 46    | 39    | 28    | 25    | 17    | 15    | 10   | 8.7   | 10    |
| 17    | 18    | 26     | 34     | 44    | 38    | 28    | 26    | 17    | 15    | 10   | 8.5   | 10    |
| 18    | 18    | 21     | 34     | 44    | 38    | 28    | 26    | 17    | 14    | 10   | 7.9   | 10    |
| 19    | 18    | 24     | 34     | 43    | 38    | 28    | 25    | 17    | 15    | 10   | 7.3   | 11    |
| 20    | 18    | 21     | 34     | 42    | 37    | 28    | 25    | 17    | 14    | 10   | 6.9   | 11    |
| 21    | 18    | 21     | 36     | 41    | 37    | 28    | 26    | 17    | 14    | 10   | 6.7   | 11    |
| 22    | 18    | 861    | 34     | 40    | 37    | 28    | 24    | 18    | 14    | 11   | 6.7   | 12    |
| 23    | 18    | 4,180  | 30     | 39    | 36    | 28    | 23    | 18    | 14    | 10   | 6.7   | 12    |
| 24    | 18    | 219    | 30     | 38    | 35    | 28    | 23    | 17    | 14    | 11   | 6.9   | 12    |
| 25    | 18    | 612    | 30     | 37    | 34    | 28    | 23    | 18    | 14    | 10   | 7.1   | 12    |
| 26    | 20    | 190    | 30     | 37    | 33    | 28    | 23    | 17    | 13    | 10   | 7.3   | 12    |
| 27    | 20    | 52     | 29     | 36    | 32    | 28    | 23    | 17    | 12    | 11   | 6.7   | 13    |
| 28    | 20    | 42     | 27     | 35    | 31    | 28    | 22    | 17    | 13    | 11   | 6.7   | 13    |
| 29    | 20    | 36     | 5,060  | 34    | ----- | 28    | 23    | 17    | 12    | 11   | 6.7   | 13    |
| 30    | 20    | 36     | 4,400  | 33    | ----- | 28    | 22    | 17    | 12    | 10   | 6.7   | 14    |
| 31    | 20    | -----  | 645    | 33    | ----- | 27    | ----- | 17    | ----- | 10   | 6.7   | ----- |
| Total | 568   | 6,665  | 11,020 | 2,695 | 1,220 | 894   | 752   | 571   | 443   | 324  | 261.8 | 303.7 |
| Mean  | 18.3  | 222    | 355    | 86.9  | 43.6  | 28.8  | 25.1  | 18.4  | 14.8  | 10.5 | 8.44  | 10.1  |
| Ac-ft | 1,130 | 13,220 | 21,860 | 5,350 | 2,420 | 1,770 | 1,490 | 1,130 | 879   | 643  | 519   | 602   |

Calendar year 1965 Max 5,060 Min 8.1 Mean 67.9 Ac-ft 49,130

Water year 1965-66 Max 5,060 Min 6.7 Mean 70.5 Ac-ft 51,010

Peak discharge (base, 200 cfs).--Nov. 23 (0100 hrs) 17,100 cfs (12.57 ft); Dec. 29 (2215 hrs) 32,800 cfs (14.16 ft), both at present datum.

Note.--No gage-height record Jan. 1 to Apr. 14, Aug. 11-22, Sept. 18-30.

## MOJAVE RIVER BASIN

10-2618. Beacon Creek at Helendale, Calif.

Location.--Lat 34°45'00", long 117°18'53", in SE $\frac{1}{4}$  sec.29, T.8 N., R.4 W., on county road (formerly U.S. Highway 66 and 91), 0.6 mile northeast of Helendale.

Drainage area.--0.72 sq mi.

Records available.--Water year 1959-60 (annual maximum), October 1960 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 2,470 ft (from topographic map). Jan. 13, 1959, to Sept. 30, 1960, crest-stage gage at same site and datum.

Average discharge.--6 years, 0.0009 cfs (0.7 acre-ft per year).

Extremes.--No flow during year.

1959-66: Maximum discharge, 43 cfs Aug. 17, 1965 (gage height, 14.06 ft), from rating curve extended above computation of flow through culvert at gage height 13.12 ft; no flow for most of each year.

Remarks.--No flow since Aug. 17, 1965. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 1.6; December, 1.9; January, 0.1; February, 0.4; March, 0.1; the water year, 4.1.

10-2619. Mojave River at Wild Crossing, near Helendale, Calif.

Location.--Lat 34°46'58", long 117°16'35", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.15, T.8 N., R.4 W., on downstream wingwall of bridge on Indian Trail road at Wild Crossing, 4.7 miles northeast of Helendale.

Drainage area.--960 sq mi.

Records available.--March to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,360 ft (from topographic map).

Extremes.--1966: Maximum discharge during period March to September, 13 cfs Mar. 11 (gage height 1.80 ft); no flow for most of period.

Remarks.--Records good. Slight regulation by Lake Arrowhead (capacity, 48 000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 10,000 acres above station.

Discharge, in cubic feet per second, period March to September 1966

|             |      |              |     |              |      |
|-------------|------|--------------|-----|--------------|------|
| Mar. 3..... | †8.9 | Mar. 15..... | 3.8 | Mar. 20..... | 0.40 |
| 11.....     | 9.2  | 16.....      | 3.8 | 24.....      | .20  |
| 12.....     | 6.8  | 17.....      | 1.3 | 25.....      | 6.0  |
| 13.....     | 6.0  | 18.....      | 1.0 | 26.....      | 5.4  |
| 14.....     | 4.8  | 19.....      | .60 | 27.....      | .20  |

| Month                               | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------------------|----------|---------|---------|------|-----------|
| March 1966.....                     | -        | -       | -       | -    | -         |
| Period March to September 1966..... | -        | -       | -       | -    | 98        |

Note.--Recorder started Mar. 11, 1966. Thereafter, flow occurred only on days listed above.

† Result of discharge measurement.

10-2625, Mojave River at Barstow, Calif.

Location.--Lat  $34^{\circ}54'25''$ , long  $117^{\circ}01'20''$ , in SE  $\frac{1}{4}$  sec. 31, T.10 N., R.1 W., on left bank 75 ft upstream from bridge on U. S. Highway 91 at Barstow.

Drainage area.--1,290 sq mi.

Records available.--October 1930 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 2,089.80 ft above mean sea level, unadjusted.

Average discharge.--36 years, 22.3 cfs (16,140 acre-ft per year); median of yearly mean discharges, zero.

Extremes.--Maximum discharge during year, 8,970 cfs Dec. 30 (gage height, 5.97 ft), on basis of slope-area measurement of maximum flow; no flow for most of year.

1930-66: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), by slope area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair above 500 cfs and poor below. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 15,000 acres above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|              |     |             |       |
|--------------|-----|-------------|-------|
| Nov. 23..... | 576 | Dec. 9..... | 3.0   |
| 24.....      | 23  | 29.....     | 1.0   |
| 26.....      | 7.4 | 30.....     | 2,460 |
|              |     | 31.....     | 132   |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 606.4    | 576     | 0       | 20.2 | 1,200     |
| December.....           | 2,596.0  | 2,460   | 0       | 83.7 | 5,150     |
| Calendar year 1965..... | -        | 2,460   | 0       | 8.78 | 6,360     |
| Water year 1965-66..... | -        | 2,460   | 0       | 8.77 | 6,350     |

Peak discharge (base, 100 cfs).--Nov. 23 (1100 hrs) 3,180 cfs (4.56 ft); Dec. 30 (0700 hrs) 8,970 cfs (5.97 ft).

Note.--Flow occurred only on days listed above.

## MOJAVE RIVER BASIN

10-2630, Mojave River at Afton, Calif.

Location.--Lat 35°02'15", long 116°23'00", in SE $\frac{1}{4}$  sec.18, T.11 N., R.6 E., on downstream end of right pier of Union Pacific Railroad bridge, 0.3 mile west of Afton.

Drainage area.--2,120 sq mi.

Records available.--October 1929 to September 1932, October 1952 to September 1966. Records for the water year 1930 incomplete, yearly estimate published in WSP 1314.

Gage.--Graphic water-stage recorder. Datum of gage is 1,400.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1943. Dec. 21, 1929, to Sept. 30, 1932, water-stage recorder at site 1.7 miles downstream at different datum.

Average discharge.--17 years, 2.15 cfs (1,560 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

Extremes.--Maximum discharge during year, 4,150 cfs Dec. 31 (gage height, 7.92 ft), from rating curve extended above 920 cfs on basis of slope-area measurement of maximum flow; no flow June 14 to Sept. 30.  
1929-32, 1952-66: Maximum discharge, that of Dec. 31, 1965; no flow for some days in 1961-66.

Remarks.--Records fair. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in two small reservoirs.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|-------|-------|---------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.40  | 0.60  | 1.1     | 1.37  | 1.0   | 0.70  | 1.0   | 0.40 | 0.10  |      |      |       |
| 2     | .40   | .40   | 1.1     | .96   | 1.1   | .70   | .80   | .40  | .10   |      |      |       |
| 3     | .40   | .40   | 1.1     | 2.0   | 1.1   | .70   | .80   | .30  | .10   |      |      |       |
| 4     | .40   | .40   | 1.1     | 1.5   | 1.1   | .70   | .80   | .20  | .10   |      |      |       |
| 5     | .40   | .60   | 1.1     | 1.3   | 1.1   | .70   | .70   | .20  | .20   |      |      |       |
| 6     | .40   | .60   | 1.3     | 1.3   | 1.3   | .70   | .70   | .20  | .30   |      |      |       |
| 7     | .40   | .60   | 1.3     | 1.8   | 1.3   | .70   | .70   | .20  | .40   |      |      |       |
| 8     | .40   | .60   | 1.3     | 2.6   | 1.0   | .70   | .70   | .20  | .60   |      |      |       |
| 9     | .40   | .60   | 328     | 2.3   | 1.0   | .70   | .80   | .20  | 1.0   |      |      |       |
| 10    | .40   | .60   | 120     | 2.3   | 1.0   | .70   | 1.0   | .20  | .70   |      |      |       |
| 11    | .40   | .60   | 32      | 2.0   | 1.0   | .70   | 1.1   | .20  | .30   |      |      |       |
| 12    | .40   | .70   | 14      | 2.0   | 1.0   | .80   | 1.3   | .20  | .20   |      |      |       |
| 13    | .40   | .70   | 12      | 2.0   | 1.0   | .80   | 1.3   | .20  | .10   |      |      |       |
| 14    | .40   | .80   | 36      | 2.0   | 1.0   | .80   | 1.3   | .20  | 0     |      |      |       |
| 15    | .40   | 1.3   | 28      | 2.0   | 1.1   | .70   | 1.3   | .10  | 0     |      |      |       |
| 16    | .40   | 1.0   | 2.3     | 1.8   | 1.9   | .70   | 1.5   | .10  | 0     |      |      |       |
| 17    | .40   | 1.8   | 1.5     | 1.8   | 2.9   | .70   | 1.3   | .10  | 0     |      |      |       |
| 18    | .40   | .80   | 1.5     | 1.8   | 2.6   | .70   | 1.1   | .10  | 0     |      |      |       |
| 19    | .40   | .70   | 1.4     | 1.8   | 2.3   | .70   | 1.3   | .20  | 0     |      |      |       |
| 20    | .40   | .70   | 1.4     | 1.8   | 1.5   | .70   | 1.3   | .20  | 0     |      |      |       |
| 21    | .40   | .7    | 1.3     | 1.8   | 1.3   | .60   | 1.5   | .20  | 0     |      |      |       |
| 22    | .40   | 1.1   | 1.3     | 1.8   | 1.3   | .60   | 1.3   | .20  | 0     |      |      |       |
| 23    | .40   | .64   | 1.2     | 1.8   | 1.3   | .60   | 1.1   | .20  | 0     |      |      |       |
| 24    | .40   | 1.3   | 1.2     | 1.8   | 1.1   | .70   | 1.0   | .20  | 0     |      |      |       |
| 25    | .40   | 1.0   | 1.1     | 1.8   | 1.0   | .80   | .70   | .20  | 0     |      |      |       |
| 26    | .40   | 3.2   | 1.0     | 1.8   | 1.0   | .80   | .40   | .20  | 0     |      |      |       |
| 27    | .40   | 1.1   | 1.0     | 1.8   | .80   | .70   | .40   | .10  | 0     |      |      |       |
| 28    | .40   | 1.1   | 1.0     | 1.8   | .80   | .80   | .40   | .10  | 0     |      |      |       |
| 29    | .40   | 1.1   | 1.1     | 1.3   | ----- | 1.1   | .40   | .10  | 0     |      |      |       |
| 30    | .60   | 1.1   | 214     | 1.1   | ----- | 1.1   | .40   | .10  | 0     |      |      |       |
| 31    | .60   | ----- | 1,170   | 1.0   | ----- | 1.0   | ----- | .10  | ----- |      |      |       |
| Total | 12.80 | 33.40 | 1,981.7 | 284.9 | 35.90 | 23.10 | 29.00 | 5.80 | 4.20  | 0    | 0    | 0     |
| Mean  | 0.41  | 1.11  | 63.9    | 9.19  | 1.28  | 0.75  | 0.97  | 0.19 | 0.14  | 0    | 0    | 0     |
| Ac-ft | 25    | 66    | 1,930   | 565   | 71    | 46    | 58    | 12   | 8.3   | 0    | 0    | 0     |

Calendar year 1965 Max 1.170 Min 0 Mean 6.16 Ac-ft 4,450

Water year 1965-66 Max 1.170 Min 0 Mean 6.60 Ac-ft 4,780

Peak discharge (base, 100 cfs).--Dec. 9 (1230 hrs) 820 cfs (5.30 ft); Dec. 31 (0015 hrs) 4,150 cfs (7.92 ft).



10-2635. Big Rock Creek near Valyermo, Calif.

Location.--Lat 34°25'15", long 117°50'19", in NW 1/4 sec. 20, T.4 N., R.9 W., on left bank 0.1 mile upstream from Punchbowl Canyon and 1.9 miles southwest of Valyermo.

Drainage area.--22.9 sq mi.

Records available.--January 1923 to September 1966. Monthly discharge only for October 1937 to January 1939, published in WSP 1314. Prior to October 1954, published as Rock Creek near Valyermo.

Gage.--Digital water-stage recorder. Altitude of gage is 4,050 ft (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 mile downstream (below Punchbowl Canyon) at different datum. Prior to Apr. 21, 1966, graphic water-stage recorder.

Average discharge.--43 years, 15.1 cfs (10,930 acre-ft per year); median of yearly mean discharges, 8.5 cfs (6,200 acre-ft per year).

Extremes.--Maximum discharge during year, 2,100 cfs Dec. 29 (gage height, 6.70 ft), from rating curve extended above 470 cfs on basis of slope-area measurements at gage heights 5.68 and 7.03 ft; maximum gage height, 7.10 ft Nov. 22; minimum daily, 2.6 cfs Oct. 18-21, 1923-66; Maximum discharge, 8,300 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.7 cfs Nov. 5, 1951.

Remarks.--Records fair except those for period of no gage-height record, which are poor. No regulation or diversion above station. Some infiltration into the streambed in the immediate vicinity of station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Cooperation.--Fourteen discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 3.6  | 2.8     | 6.0   | 191   | 4.6   | 3.0   | 22    | 19    | 16    | 13    | 8.6   | 6.5   |
| 2     | 3.6  | 2.8     | 5.5   | 167   | 4.5   | 2.9   | 22    | 20    | 15    | 13    | 8.7   | 6.4   |
| 3     | 3.6  | 2.8     | 5.0   | 115   | 4.4   | 2.8   | 22    | 20    | 15    | 13    | 8.6   | 6.3   |
| 4     | 3.4  | 2.8     | 4.5   | 99    | 4.3   | 2.8   | 22    | 19    | 16    | 12    | 8.0   | 6.2   |
| 5     | 3.2  | 2.8     | 4.0   | 94    | 4.3   | 2.8   | 22    | 19    | 16    | 12    | 7.9   | 6.2   |
| 6     | 3.2  | 2.8     | 4.0   | 89    | 6.4   | 2.8   | 22    | 19    | 15    | 12    | 7.9   | 6.1   |
| 7     | 3.2  | 2.8     | 4.0   | 87    | 5.8   | 2.8   | 22    | 19    | 16    | 12    | 7.8   | 6.1   |
| 8     | 3.0  | 2.8     | 4.1   | 86    | 5.1   | 2.8   | 22    | 19    | 16    | 12    | 7.8   | 6.1   |
| 9     | 3.0  | 2.8     | 4.2   | 83    | 4.8   | 2.7   | 22    | 19    | 16    | 11    | 7.7   | 6.0   |
| 10    | 3.0  | 2.8     | 4.2   | 76    | 4.5   | 2.7   | 22    | 19    | 15    | 11    | 7.7   | 6.0   |
| 11    | 2.8  | 2.8     | 4.1   | 68    | 4.1   | 2.7   | 21    | 19    | 15    | 11    | 7.6   | 6.0   |
| 12    | 2.8  | 2.8     | 4.0   | 64    | 3.9   | 2.7   | 21    | 18    | 16    | 11    | 7.6   | 6.3   |
| 13    | 2.8  | 2.8     | 3.0   | 61    | 3.7   | 2.7   | 21    | 18    | 16    | 11    | 7.5   | 6.4   |
| 14    | 2.8  | 2.8     | 3.2   | 60    | 3.6   | 2.7   | 21    | 18    | 14    | 11    | 7.5   | 6.3   |
| 15    | 2.8  | 2.8     | 3.4   | 60    | 3.6   | 2.6   | 21    | 18    | 13    | 11    | 7.6   | 5.9   |
| 16    | 2.8  | 4.0     | 3.3   | 58    | 3.6   | 2.5   | 20    | 17    | 13    | 10    | 7.5   | 5.0   |
| 17    | 2.8  | 10.4    | 3.3   | 55    | 3.5   | 2.4   | 21    | 17    | 14    | 10    | 7.4   | 4.9   |
| 18    | 2.6  | 8.6     | 3.2   | 59    | 3.2   | 2.4   | 21    | 17    | 14    | 10    | 7.4   | 4.9   |
| 19    | 2.6  | 5.2     | 3.0   | 7.5   | 3.2   | 2.4   | 21    | 17    | 14    | 10    | 7.3   | 4.9   |
| 20    | 2.6  | 4.1     | 2.9   | 7.8   | 3.1   | 2.3   | 21    | 17    | 14    | 10    | 7.3   | 4.9   |
| 21    | 2.6  | 3.5     | 2.8   | 7.5   | 3.1   | 2.3   | 20    | 17    | 14    | 9.5   | 7.1   | 4.8   |
| 22    | 2.8  | 35.6    | 2.7   | 9.2   | 3.1   | 2.3   | 20    | 16    | 14    | 9.5   | 7.1   | 4.7   |
| 23    | 2.8  | 84.3    | 2.6   | 10.5  | 3.0   | 2.2   | 20    | 16    | 14    | 9.4   | 7.1   | 4.7   |
| 24    | 2.8  | 88.2    | 2.5   | 10.7  | 3.0   | 2.2   | 20    | 16    | 14    | 9.2   | 7.0   | 4.9   |
| 25    | 2.8  | 55.0    | 2.5   | 10.7  | 3.0   | 2.4   | 20    | 16    | 13    | 9.1   | 6.9   | 4.7   |
| 26    | 2.8  | 17.0    | 2.6   | 11.0  | 3.0   | 2.3   | 19    | 16    | 13    | 9.0   | 7.0   | 4.7   |
| 27    | 2.8  | 10.0    | 2.6   | 9.4   | 2.9   | 2.3   | 20    | 16    | 13    | 9.0   | 6.9   | 4.7   |
| 28    | 2.8  | 8.0     | 2.7   | 5.7   | 3.0   | 2.2   | 19    | 16    | 13    | 8.8   | 6.8   | 4.7   |
| 29    | 2.8  | 7.0     | 5.4   | 5.1   | ----- | 2.2   | 19    | 16    | 13    | 8.8   | 6.5   | 4.7   |
| 30    | 2.8  | 6.5     | 30.8  | 5.2   | ----- | 2.2   | 19    | 16    | 13    | 8.8   | 6.5   | 4.7   |
| 31    | 2.8  | -----   | 18.6  | 4.7   | ----- | 2.2   | ----- | 16    | ----- | 8.8   | 6.5   | ----- |
| Total | 90.8 | 3,480.0 | 2,039 | 2,622 | 1,083 | 783   | 625   | 545   | 433   | 325.9 | 2,308 | 1,647 |
| Mean  | 2.93 | 116     | 65.8  | 84.6  | 38.7  | 25.3  | 20.8  | 17.6  | 14.4  | 10.5  | 7.45  | 5.49  |
| Ac-ft | 180  | 6,900   | 4,040 | 5,200 | 2,150 | 1,550 | 1,240 | 1,080 | 859   | 646   | 458   | 327   |

Calendar year 1965 Max 882 Min 2.6 Mean 20.3 Ac-ft 14,730  
 Water year 1965-66 Max 882 Min 2.6 Mean 34.0 Ac-ft 24,640

Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 2230 | 3.67        | 193       | 1-26 | 1000 | 2.00        | 133       |
| 11-22 | 2400 | 7.10        | 1,270     | 2-6  | 1000 | 1.82        | 89        |
| 12-29 | 1600 | 6.70        | 2,100     |      |      |             |           |

Note.--No gage-height record Nov. 26 to Dec. 22.

## ANTELOPE VALLEY

10-2639, Buckhorn Creek near Valyermo, Calif.

Location.--Lat 34°20'35", long 117°55'13", in SW $\frac{1}{4}$  sec.15, T.3 N., R.10 W., on right bank at culvert on State Highway 2, 8.1 miles southwest of Valyermo.

Drainage area.--0.48 sq mi.

Records available.--October 1960 to September 1966 (discontinued as a continuous-record station; converted to a crest-stage partial record station).

Gage.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 6,720 ft (from topographic map).

Average discharge.--6 years, 0.233 cfs (169 acre-ft per year).

Extremes.--Maximum discharge during year, 120 cfs Nov. 22 (gage height, 4.73 ft), from rating curve extended above 27 cfs; no flow for most of year.  
1960-66: Maximum discharge, that of Nov. 22, 1965; no flow for most of each year.

Remarks.--Records poor. No regulation above station. Flow of spring above station diverted to ranger station for domestic use. Rainfall records, incomplete.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan. | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|--------|-------|------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      | 0      | 0.20  | 0.50 | 0.10  | 0    |       |     |       |      |      |       |
| 2     |      | 0      | .20   | .40  | .10   | 0    |       |     |       |      |      |       |
| 3     |      | 0      | .20   | .30  | .10   | 0    |       |     |       |      |      |       |
| 4     |      | 0      | .10   | .30  | .10   | 0    |       |     |       |      |      |       |
| 5     |      | 0      | .10   | .30  | .10   | 0    |       |     |       |      |      |       |
| 6     |      | 0      | .10   | .20  | 1.0   | 0    |       |     |       |      |      |       |
| 7     |      | 0      | .10   | .20  | 0     | 0    |       |     |       |      |      |       |
| 8     |      | 0      | .10   | .20  | 0     | 0    |       |     |       |      |      |       |
| 9     |      | 0      | .10   | .20  | 0     | .10  |       |     |       |      |      |       |
| 10    |      | 0      | .20   | .20  | 0     | .20  |       |     |       |      |      |       |
| 11    |      | 0      | .20   | .20  | 0     | .30  |       |     |       |      |      |       |
| 12    |      | 0      | .10   | .20  | 0     | .40  |       |     |       |      |      |       |
| 13    |      | 0      | .10   | .20  | 0     | .50  |       |     |       |      |      |       |
| 14    |      | 0      | .10   | .20  | 0     | .60  |       |     |       |      |      |       |
| 15    |      | 0      | .10   | .20  | 0     | .60  |       |     |       |      |      |       |
| 16    |      | 4.8    | .10   | .20  | 0     | .60  |       |     |       |      |      |       |
| 17    |      | 45     | .10   | .20  | 0     | .50  |       |     |       |      |      |       |
| 18    |      | 16     | .10   | .20  | 0     | .40  |       |     |       |      |      |       |
| 19    |      | 3.0    | 0     | .20  | 0     | .30  |       |     |       |      |      |       |
| 20    |      | 1.2    | 0     | .20  | 0     | .20  |       |     |       |      |      |       |
| 21    |      | .60    | 0     | .10  | 0     | .10  |       |     |       |      |      |       |
| 22    |      | 42     | 0     | .10  | 0     | .10  |       |     |       |      |      |       |
| 23    |      | 15     | 0     | .10  | 0     | .10  |       |     |       |      |      |       |
| 24    |      | 23     | 0     | .10  | 0     | .10  |       |     |       |      |      |       |
| 25    |      | 3.0    | 0     | .10  | 0     | .20  |       |     |       |      |      |       |
| 26    |      | 1.0    | 0     | .10  | 0     | .20  |       |     |       |      |      |       |
| 27    |      | .50    | 0     | .10  | 0     | .10  |       |     |       |      |      |       |
| 28    |      | .40    | 0     | .10  | 0     | .10  |       |     |       |      |      |       |
| 29    |      | .30    | .24   | .10  | ----- | .10  |       |     |       |      |      |       |
| 30    |      | .30    | .59   | .30  | ----- | .10  |       |     |       |      |      |       |
| 31    |      | -----  | 1.0   | .20  | ----- | .10  | ----- |     | ----- |      |      | ----- |
| Total | 0    | 156.10 | 33.20 | 6.20 | 1.50  | 6.00 | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 5.20   | 1.07  | 0.20 | 0.05  | 0.19 | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 310    | 66    | 12   | 3.0   | 12   | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 45 Min 0 Mean 0.710 Ac-ft 514  
Water year 1965-66 Max 45 Min 0 Mean 0.556 Ac-ft 403

Note.--Ice effect Nov. 25 to Dec. 20, Dec. 23-28, Dec. 31 to Mar. 31.

10-2640. Little Rock Creek near Little Rock, Calif.

Location.--Lat 34°27'47", long 118°01'04", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.3, T.4 N., R.11 W., on right bank 0.3 mile upstream from Santiago Creek, 1.65 miles upstream from Little Rock Palmdale Irrigation District's dam, and 5 miles south of Little Rock.

Drainage area.--49.0 sq mi.

Records available.--October 1930 to February 1938, May to September 1938, April 1939 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 3,290 ft (from topographic map). Prior to May 1943, at site 500 ft downstream at different datums (datum changed in March 1939).

Average discharge.--34 years (1930-37, 1939-66), 16.0 cfs (11,580 acre-ft per year); median of yearly mean discharges, 7.6 cfs (5,500 acre-ft per year).

Extremes.--Maximum discharge during year, 5,740 cfs Dec. 29 (gage height, 11.30 ft); no flow Oct. 1 to Nov. 15, Aug. 8 to Sept. 30. 1930-66: Maximum discharge, 17,000 cfs (estimated) Mar. 2, 1938; no flow at times in most years.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     |      | 0      | 55    | 157   | 23    | 21    | 16    | 7.9   | 2.8   | 0.60  | 0.10 |       |
| 2     |      | 0      | 48    | 113   | 21    | 21    | 15    | 7.3   | 2.8   | .60   | .10  |       |
| 3     |      | 0      | 42    | 98    | 20    | 19    | 15    | 6.7   | 2.2   | .60   | .10  |       |
| 4     |      | 0      | 37    | 96    | 19    | 19    | 14    | 6.2   | 2.2   | .60   | .10  |       |
| 5     |      | 0      | 33    | 95    | 19    | 18    | 14    | 5.6   | 2.2   | .60   | .10  |       |
| 6     |      | 0      | 30    | 90    | 60    | 18    | 14    | 5.6   | 2.2   | .60   | .10  |       |
| 7     |      | 0      | 26    | 84    | 68    | 18    | 14    | 5.0   | 1.7   | .60   | .10  |       |
| 8     |      | 0      | 24    | 69    | 53    | 19    | 13    | 5.6   | 2.2   | .60   | 0    |       |
| 9     |      | 0      | 25    | 64    | 43    | 19    | 13    | 6.2   | 3.4   | .60   | 0    |       |
| 10    |      | 0      | 32    | 58    | 41    | 19    | 13    | 7.3   | 2.2   | .60   | 0    |       |
| 11    |      | 0      | 30    | 53    | 40    | 21    | 13    | 7.3   | 1.7   | .60   | 0    |       |
| 12    |      | 0      | 30    | 46    | 44    | 21    | 13    | 6.2   | 1.7   | .60   | 0    |       |
| 13    |      | 0      | 29    | 41    | 42    | 23    | 12    | 6.2   | .60   | .60   | 0    |       |
| 14    |      | 0      | 26    | 37    | 39    | 23    | 11    | 6.2   | 1.1   | .50   | 0    |       |
| 15    |      | 0      | 28    | 35    | 34    | 23    | 11    | 6.2   | 1.1   | .40   | 0    |       |
| 16    |      | 18     | 29    | 33    | 27    | 23    | 10    | 6.2   | .60   | .40   | 0    |       |
| 17    |      | 679    | 26    | 31    | 27    | 22    | 10    | 5.6   | .60   | .30   | 0    |       |
| 18    |      | 528    | 24    | 30    | 27    | 21    | 10    | 5.0   | .60   | .30   | 0    |       |
| 19    |      | 104    | 23    | 31    | 26    | 21    | 11    | 5.0   | .60   | .20   | 0    |       |
| 20    |      | 54     | 23    | 29    | 25    | 20    | 11    | 5.0   | 1.1   | .20   | 0    |       |
| 21    |      | 37     | 23    | 28    | 25    | 20    | 11    | 5.6   | 1.1   | .20   | 0    |       |
| 22    |      | 912    | 23    | 27    | 25    | 20    | 10    | 5.6   | 1.1   | .20   | 0    |       |
| 23    |      | 960    | 23    | 26    | 25    | 20    | 9.6   | 5.0   | 1.1   | .20   | 0    |       |
| 24    |      | 891    | 22    | 25    | 27    | 20    | 9.0   | 5.0   | 1.1   | .20   | 0    |       |
| 25    |      | 399    | 22    | 24    | 26    | 27    | 8.4   | 4.5   | 1.1   | .10   | 0    |       |
| 26    |      | 215    | 22    | 24    | 26    | 25    | 8.4   | 3.9   | .60   | .10   | 0    |       |
| 27    |      | 140    | 23    | 24    | 24    | 23    | 8.4   | 3.9   | .60   | .10   | 0    |       |
| 28    |      | 101    | 23    | 23    | 22    | 21    | 8.4   | 3.4   | .60   | .10   | 0    |       |
| 29    |      | 71     | 1700  | 22    | ----- | 19    | 8.4   | 3.4   | .60   | .10   | 0    |       |
| 30    |      | 64     | 798   | 25    | ----- | 17    | 8.4   | 3.4   | .60   | .10   | 0    |       |
| 31    |      | -----  | 234   | 25    | ----- | 16    | ----- | 3.4   | ----- | .10   | 0    | ----- |
| Total | 0    | 5,173  | 3,533 | 1,563 | 898   | 637   | 343.0 | 169.4 | 42.10 | 11.60 | 0.70 | 0     |
| Mean  | 0    | 172    | 114   | 50.4  | 32.1  | 20.5  | 11.4  | 5.46  | 1.40  | 0.37  | 0.02 | 0     |
| Ac-ft | 0    | 10,260 | 7,010 | 3,100 | 1,780 | 1,260 | 680   | 336   | 84    | 23    | 1.4  | 0     |

Calendar year 1965 Max 1,700 Min 0 Mean 30.7 Ac-ft 22,200  
 Water year 1965-66 Max 1,700 Min 0 Mean 33.9 Ac-ft 24,540

10-2645.6. Spencer Canyon Creek near Fairmont, Calif.

Location--Lat 34°46'33", long 118°34'08", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.15, T.8 N., R.16 W., on county road culvert, 8.5 miles northwest of Fairmont.

Drainage area--3.60 sq mi.

Records available--Water years 1959-64 (annual maximum), August 1964 to September 1966.

Gage--Flood-hydrograph recorder and crest-stage gage. Altitude of gage is 2,950 ft (from topographic map). Jan. 19, 1959, to Aug. 26, 1964, crest-stage gage at same site and datum.

Extremes--1964-65: Maximum discharge during water year, 13 cfs Mar. 31 (gage height, 9.95 ft), from rating curve extended as explained below; no flow all year except that of Mar. 31.

1965-66: Maximum discharge during water year, 85 cfs Dec. 29 (gage height, 10.71 ft), from rating curve extended as explained below; no flow for most of year.

1959-66: Maximum discharge, 215 cfs Feb. 11, 1962 (gage height, 11.90 ft), from rating curve based on computation of flow through culvert at gage heights 11.11 and 11.90 ft.

Remarks--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water years October 1964 to September 1966

Mar. 31, 1965..... 0.50  
Nov. 22..... 1.0  
24..... 1.5  
Dec. 29..... 3.5

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| March 1965.....         | 0.50     | 0.50    | 0       | 0.02 | 1.0       |
| November.....           | 2.5      | 1.5     | 0       | .08  | 5.0       |
| December.....           | 3.5      | 3.5     | 0       | .11  | 6.9       |
| Calendar year 1964..... | -        | -       | -       | -    | -         |
| Water year 1964-65..... | -        | .50     | 0       | .001 | 1.0       |
| Calendar year 1965..... | -        | 3.5     | 0       | .018 | 13        |
| Water year 1965-66..... | -        | 3.5     | 0       | .016 | 12        |

Note--Flow occurred only on days listed above.

10-2646. Oak Creek near Mojave, Calif.

Location.--Lat 35°03'00", long 118°21'25", in NW $\frac{1}{4}$  sec.15, T.11 N., R.14 W., on upstream right wingwall of culvert, 100 ft downstream from unnamed tributary, 0.1 mile west of junction of Oak Creek and Willow Springs Roads and 10.5 miles west of Mojave.

Drainage area.--15.8 sq mi.

Records available.--August 1957 to September 1966.

Gage.--Graphic water-stage recorder and concrete control. Altitude of gage is 4,100 ft (from topographic map).

Average discharge.--9 years, 0.61 cfs (442 acre-ft per year).

Extremes.--Maximum discharge during year, 8.2 cfs Dec. 29 (gage height, 1.25 ft); no flow Oct. 1 to Nov. 15, July 5 to Sept. 30.  
1957-66: Maximum discharge, 63 cfs Aug. 16, 1965 (gage height, 2.09 ft), from rating curve extended above 14 cfs; no flow for some months in each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | .40   | 1.0   | 0.70  | 0.90  | 1.1   | 1.0   | 0.60  | 0.10 |      |       |
| 2     |      | 0     | .40   | .80   | .70   | .80   | 1.1   | 1.0   | .60   | .10  |      |       |
| 3     |      | 0     | .30   | .80   | .70   | 1.0   | 1.1   | 1.0   | .60   | .10  |      |       |
| 4     |      | 0     | .30   | .80   | .70   | 1.0   | 1.1   | 1.0   | .60   | .10  |      |       |
| 5     |      | 0     | .30   | .80   | .80   | 1.1   | 1.1   | 1.0   | .50   | 0    |      |       |
| 6     |      | 0     | .30   | .80   | 1.0   | 1.1   | 1.0   | 1.0   | .50   | 0    |      |       |
| 7     |      | 0     | .30   | .80   | .90   | 1.1   | 1.0   | 1.0   | .60   | 0    |      |       |
| 8     |      | 0     | .40   | .80   | .80   | 1.1   | 1.0   | 1.0   | .60   | 0    |      |       |
| 9     |      | 0     | .40   | .70   | .90   | 1.1   | 1.0   | 1.0   | .50   | 0    |      |       |
| 10    |      | 0     | .40   | .70   | .80   | 1.1   | 1.0   | 1.0   | .40   | 0    |      |       |
| 11    |      | 0     | .40   | .70   | .70   | 1.1   | 1.0   | 1.0   | .40   | 0    |      |       |
| 12    |      | 0     | .40   | .70   | .80   | 1.2   | 1.0   | 1.0   | .30   | 0    |      |       |
| 13    |      | 0     | .40   | .70   | .70   | 1.2   | 1.0   | 1.0   | .20   | 0    |      |       |
| 14    |      | 0     | .40   | .70   | .70   | 1.2   | 1.0   | 1.0   | .20   | 0    |      |       |
| 15    |      | 0     | .40   | .70   | .80   | 1.2   | 1.0   | 1.0   | .20   | 0    |      |       |
| 16    |      | .20   | .40   | .70   | .80   | 1.2   | 1.0   | .90   | .20   | 0    |      |       |
| 17    |      | .50   | .30   | .70   | .80   | 1.2   | 1.0   | .90   | .20   | 0    |      |       |
| 18    |      | .20   | .30   | .60   | .80   | 1.2   | 1.0   | .90   | .20   | 0    |      |       |
| 19    |      | .10   | .30   | .60   | .80   | 1.2   | 1.0   | .70   | .20   | 0    |      |       |
| 20    |      | .10   | .30   | .60   | .80   | 1.2   | 1.0   | .70   | .20   | 0    |      |       |
| 21    |      | .10   | .30   | .40   | .80   | 1.2   | 1.0   | .70   | .20   | 0    |      |       |
| 22    |      | .40   | .30   | .40   | .80   | 1.2   | 1.0   | .70   | .20   | 0    |      |       |
| 23    |      | .50   | .20   | .60   | .80   | 1.2   | 1.0   | .60   | .20   | 0    |      |       |
| 24    |      | 1.2   | .20   | .60   | .80   | 1.2   | 1.0   | .60   | .20   | 0    |      |       |
| 25    |      | .60   | .30   | .60   | .80   | 1.2   | 1.0   | .60   | .20   | 0    |      |       |
| 26    |      | .50   | .30   | .60   | .90   | 1.2   | 1.0   | .50   | .10   | 0    |      |       |
| 27    |      | .50   | .30   | .60   | .90   | 1.2   | 1.0   | .50   | .10   | 0    |      |       |
| 28    |      | .40   | .30   | .60   | .90   | 1.2   | 1.0   | .50   | .10   | 0    |      |       |
| 29    |      | .40   | 3.5   | .60   | ----- | 1.1   | 1.0   | .60   | .10   | 0    |      |       |
| 30    |      | .40   | 1.4   | .70   | ----- | 1.1   | 1.0   | .70   | .10   | 0    |      |       |
| 31    |      | ----- | 1.2   | .60   | ----- | 1.1   | ----- | .70   | ----- | 0    |      | ----- |
| Total | 0    | 6.10  | 15.40 | 21.00 | 22.40 | 35.10 | 30.5  | 25.80 | 9.30  | 0.40 | 0    | 0     |
| Mean  | 0    | 0.20  | 0.50  | 0.68  | 0.80  | 1.13  | 1.02  | 0.83  | 0.31  | 0.01 | 0    | 0     |
| Ac-ft | 0    | 12    | 31    | 42    | 44    | 70    | 60    | 51    | 18    | 0.8  | 0    | 0     |

Calendar year 1965 Max 3.5 Min 0 Mean 0.11 Ac-ft 78  
Water year 1965-66 Max 3.5 Min 0 Mean 0.45 Ac-ft 329

Peak discharge (base, 10 cfs).--No peak above base.

## KOEHN LAKE BASIN

10-2647.1. Goler Gulch near Randsburg, Calif.

Location.--Lat 35°23'34", long 117°47'43", in SW¼SE¼ sec.21, T.29 S., R.39 E., on Garlock Road, 500 ft east of Southern Pacific Railroad and 8.0 miles west of Randsburg.

Drainage area.--41.3 sq mi (including 3.03 sq mi in closed dry lake basin).

Gage.--Flood hydrograph recorder and crest-stage gage. Altitude of gage is 2,100 ft (from topographic map).

Records available.--March to September 1966.

Extremes.--1966: No flow for period March to September.

Flood of Sept. 19, 1963 reached a stage of 46.18 ft, from floodmarks (discharge, 972 cfs, based on computation of flow through culvert and road overflow).

Remarks.--No flow since Mar. 14, 1966, date of establishment. No regulation or diversion above station.

10-2647.4. Cache Creek near Mojave, Calif.

Location.--Lat 35°07'01", long 118°12'05", in NE¼NE¼SE¼ sec.27, T.32 S., R.35 E., on left wingwall of Cache Creek bridge on State Highway 58, 4.7 miles northwest of Mojave.

Drainage area.--96.5 sq mi.

Records available.--January 1965 to September 1966.

Gage.--Flood-hydrograph recorder. Altitude of gage is 3,280 ft (from topographic map). Recording rain gage at site 12 miles upstream.

Extremes.--1965: Maximum discharge during period January to September, about 25 cfs Mar. 31 (gage height, 8.51 ft); no flow for most of period.  
1965-66: Maximum discharge during water year, about 50 cfs Dec. 29 (gage height, unknown); no flow for most of year.

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, January to September 1965, is as follows: February, 0.10; March, 1.54; April, 3.57; July, 0.48; the period, 5.69. The water year, 1965-66: November, 3.46; December, 2.51; January, 0.42; February, 0.30; March, 0.80; April, 0.28; May, June, incomplete; the water year, incomplete.

Discharge, in cubic feet per second, January to September 1965, water year October 1965 to September 1966

|                     |                 |                  |                  |
|---------------------|-----------------|------------------|------------------|
| Mar. 11, 1965...2.7 | Apr. 2.....0.50 | Apr. 10.....0.10 | Apr. 17.....0.10 |
| 12......90          | 3.....3.0       | 11.....3.0       | Aug. 16.....1.0  |
| 13......30          | 4.....2.0       | 12.....2.0       | Nov. 16......50  |
| 14......20          | 5.....1.0       | 13.....1.0       | 17......50       |
| 15......10          | 6......50       | 14......50       | Dec. 29.....12   |
| 16......10          | 7......30       | 15......30       | 30......5.0      |
| 31.....3.3          | 8......10       | 16......10       | 31......10       |
| Apr. 1.....2.8      | 9......10       |                  |                  |

| Month                                 | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|---------------------------------------|----------|---------|---------|------|-----------|
| March 1965.....                       | 7.60     | 3.3     | 0       | 0.25 | 15        |
| April.....                            | 17.4     | 3.0     | 0       | .58  | 35        |
| August.....                           | 1.0      | 1.0     | 0       | .03  | 2.0       |
| November.....                         | 1.0      | .50     | 0       | .03  | 2.0       |
| December.....                         | 17.10    | 12      | 0       | .55  | 34        |
| Calendar Year 1964.....               | -        | -       | -       | -    | -         |
| Period January to September 1965..... | -        | 3.3     | 0       | -    | 52        |
| Calendar year 1965.....               | -        | 12      | 0       | .121 | 87        |
| Water year 1965-66.....               | -        | 12      | 0       | .050 | 36        |

Note.--Flow occurred only on days listed above.

10-2647.5. Pine Tree Creek near Mojave, Calif.

Location.--Lat 35°13'50", long 118°05'05", in SE¼ sec.14, T.31 S., R.36 E., on downstream side of city of Los Angeles aqueduct-siphon pier near right bank, 0.5 mile downstream from unnamed tributary, and 13 miles northeast of Mojave.

Drainage area.--33.5 sq mi.

Records available.--July 1958 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment. Altitude of gage is 2,700 ft (from topographic map). Prior to Oct. 1, 1961, at datum 3.0 ft higher.

Average discharge.--8 years, 0.35 cfs (253 acre-ft per year).

Extremes.--Maximum discharge during year, 660 cfs Dec. 29 (gage height, 4.58 ft), on basis of field estimate of maximum flow; no flow all year except Dec. 29, 30.

1958-66: Maximum discharge, about 30,000 cfs Aug. 23, 1961, on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 3.6; December, 2.4; the water year, 6.0.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Dec. 29..... 160  
30..... .10

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| December 1965.....      | 160.10   | 160     | 0       | 5.16 | 318       |
| Calendar year 1965..... | -        | 160     | 0       | .441 | 320       |
| Water year 1965-66..... | -        | 160     | 0       | .439 | 318       |

Peak discharge (base, 10 cfs).--Dec. 29 (1300 hrs) 660 cfs (4.58 ft).

Note.--Flow occurred only on days listed above.

10-2647.7. Cottonwood Creek near Cantil, Calif.

Location.--Lat 35°18'50", long 118°02'38", in NE¼ sec.19, T.30 S., R.36 E., on downstream side of city of Los Angeles aqueduct-siphon pier, 4.3 miles west of Cantil.

Drainage area.--163 sq mi.

Records available.--March 1966 to September 1966.

Gage.--Graphic water-stage recorder and crest-stage gage. Altitude of gage is 2,400 ft (from topographic map).

Extremes.--1966: No flow during period March to September.

Flood of August 8, 1963, 5,150 cfs, from slope-area measurement.

Remarks.--No flow since Mar. 12, 1966, date of establishment. No regulation or diversion above station.

## INDIAN WELLS VALLEY

10-2648.7. Little Lake Creek near Little Lake, Calif.

Location.--Lat 35°57'35", long 117°54'50", in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.6, T.23 S., R.38 E., on upstream end of right wingwall of culvert on U.S. Highway 395, 1.5 miles north of Little Lake.

Drainage area.--8.60 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage and multiple culvert control. Altitude of gage is 3,260 ft (from topographic map).

Extremes.--Maximum discharge during year, 6.9 cfs Dec. 29 (gage height, 2.95 ft); no flow for most of year.  
1963-66: Maximum discharge, 7.0 cfs Aug. 4, 1964 (gage height 2.96 ft), on basis of field estimate of maximum flow; no flow for most of each year.

Remarks.--Records fair. No regulation or diversion above station. At times water is released from Los Angeles aqueduct to creek at site 1.0 mile upstream. Monthly precipitation, in inches, is as follows: November, 0.1; December, 2.5; the water year, 2.6.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|              |      |              |      |
|--------------|------|--------------|------|
| Oct. 19..... | 0.20 | Oct. 22..... | 0.10 |
| 20.....      | .60  | Nov. 16..... | .10  |
| 21.....      | .30  | Dec. 29..... | .30  |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| October 1965.....       | 1.20     | 0.60    | 0       | 0.04 | 2.4       |
| November.....           | .10      | .10     | 0       | .003 | .2        |
| December.....           | .30      | .30     | 0       | .01  | .6        |
| Calendar year 1965..... | -        | .60     | 0       | .005 | 3.4       |
| Water year 1965-66..... | -        | .60     | 0       | .004 | 3.2       |

Note.--Flow occurred only on days listed above.



INDIAN WELLS VALLEY

79

10-2648.78. Ninemile Creek near Brown, Calif.

Location.--Lat 35°50'35", long 117°55'35", on left bank 600 ft upstream from Los Angeles aqueduct and 6.4 miles northwest of Brown, Inyo County.

Drainage area.--10.4 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 3,350 ft (from topographic map).

Average discharge.--5 years, 0.282 cfs (204 acre-ft per year).

Extremes.--Maximum discharge during year, 38 cfs Feb. 2 (gage height, 4.07 ft); no flow for most of year.  
1961-66: Maximum discharge, 437 cfs Oct. 17, 1963 (gage height, 6.50 ft), from rating curve extended above 20 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station.

| Discharge, in cubic feet per second, water year October 1965 to September 1966 |      |       |      |        |        |      |       |     |       |      |      |       |
|--|------|-------|------|--------|--------|------|-------|-----|-------|------|------|-------|
| Day  | Oct. | Nov.  | Dec. | Jan.   | Feb.   | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
| 1  |      | 0     | 0    | 0.50   | 31     | 0.10 | 0.40  |     |       |      |      |       |
| 2  |      | 0     | 0    | .40    | 35     | .10  | .50   |     |       |      |      |       |
| 3  |      | 0     | 0    | 1.0    | 28     | .10  | .80   |     |       |      |      |       |
| 4  |      | 0     | 0    | 1.3    | 9.5    | .10  | .80   |     |       |      |      |       |
| 5  |      | 0     | 0    | 1.6    | 1.0    | .10  | .90   |     |       |      |      |       |
| 6  |      | 0     | 0    | 1.8    | .80    | .10  | 1.0   |     |       |      |      |       |
| 7  |      | 0     | 0    | 2.0    | .60    | .10  | 1.1   |     |       |      |      |       |
| 8  |      | 0     | 0    | 2.3    | .50    | .10  | 2.0   |     |       |      |      |       |
| 9  |      | 0     | 0    | 2.2    | .40    | .10  | 1.0   |     |       |      |      |       |
| 10   |      | 0     | 0    | 2.2    | .30    | .10  | 1.0   |     |       |      |      |       |
| 11   |      | 0     | 0    | 2.2    | .20    | .10  | 1.0   |     |       |      |      |       |
| 12   |      | 0     | 0    | 2.0    | .20    | .10  | 1.0   |     |       |      |      |       |
| 13   |      | 0     | 0    | 1.9    | .10    | .10  | 1.0   |     |       |      |      |       |
| 14   |      | 0     | 0    | 2.3    | .10    | .10  | 1.0   |     |       |      |      |       |
| 15   |      | 0     | 0    | 3.0    | .10    | .10  | 1.0   |     |       |      |      |       |
| 16   |      | 1.0   | 0    | 3.1    | .10    | .10  | 1.0   |     |       |      |      |       |
| 17   |      | .50   | 0    | 2.6    | .40    | .10  | 1.0   |     |       |      |      |       |
| 18   |      | .30   | 0    | 2.6    | .80    | .10  | 1.0   |     |       |      |      |       |
| 19   |      | 0     | .10  | 2.6    | .20    | .10  | 1.0   |     |       |      |      |       |
| 20   |      | 0     | .50  | 2.6    | .10    | .10  | 1.0   |     |       |      |      |       |
| 21   |      | 0     | .30  | 3.0    | .10    | .10  | 1.0   |     |       |      |      |       |
| 22   |      | .80   | 0    | 4.4    | .10    | .10  | 1.0   |     |       |      |      |       |
| 23   |      | .30   | .20  | 5.6    | .10    | .10  | 1.0   |     |       |      |      |       |
| 24   |      | .50   | .80  | 7.3    | .10    | .10  | 1.0   |     |       |      |      |       |
| 25   |      | 0     | .70  | 8.8    | .10    | .10  | 1.0   |     |       |      |      |       |
| 26   |      | 0     | .30  | 11     | .10    | .10  | 1.0   |     |       |      |      |       |
| 27   |      | 0     | .50  | 15     | .10    | .10  | 1.0   |     |       |      |      |       |
| 28   |      | 0     | .30  | 16     | .10    | .10  | 1.0   |     |       |      |      |       |
| 29   |      | 0     | .30  | 18     | -----  | .30  | 1.0   |     |       |      |      |       |
| 30   |      | 0     | 1.0  | 23     | -----  | .10  | 1.0   |     |       |      |      |       |
| 31   |      | ----- | .80  | 25     | -----  | .30  | ----- |     | ----- |      |      | ----- |
| Total  | 0    | 7.90  | 8.50 | 177.30 | 110.20 | 3.50 | 10.60 | 0   | 0     | 0    | 0    | 0     |
| Mean   | 0    | 0.26  | 0.27 | 5.72   | 3.94   | 0.11 | 0.35  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft  | 0    | 16    | 17   | 352    | 219    | 6.9  | 21    | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 10 Min 0 Mean 0.092 Ac-ft 67

Water year 1965-66 Max 35 Min 0 Mean 0.871 Ac-ft 631

Peak discharge (base, 10 cfs).--Dec. 29 (1730 hrs) 25 cfs (3.66 ft); Feb. 2 (2330 hrs) 38 cfs (4.07 ft).

## OWENS LAKE BASIN

10-2652. Convict Creek near Mammoth Lakes, Calif.

Location.--Lat 37°36'30", long 118°50'55", in NE $\frac{1}{4}$  sec.14, T.4 S., R.28 E., on right bank 1.1 miles downstream from Convict Lake, 2.0 miles upstream from U.S. Highway 395, and 7.0 miles southeast of Mammoth Lakes (Ranger Station).

Drainage area.--18.7 sq mi.

Records available.--July 1925 to September 1966. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and wood control. Altitude of gage is 7,450 ft (from topographic map). Prior to Nov. 15, 1926, staff gage at same site and datum.

Average discharge.--41 years, 23.4 cfs (16,940 acre-ft per year).

Extremes.--Maximum discharge during year, 70 cfs May 29 (gage height, 2.00 ft); minimum daily, 7.5 cfs Mar. 10-12, 1925-66; Maximum discharge, 290 cfs June 29, 1932 (gage height, 4.43 ft); minimum daily, 1.3 cfs Jan. 10, 1951.

Remarks.--Some regulation by Convict Lake above station. No diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 20    | 13    | 20    | 16    | 9.4   | 7.8   | 9.4   | 18    | 52    | 50    | 29    | 15    |
| 2     | 20    | 13    | 19    | 17    | 9.4   | 8.2   | 9.9   | 20    | 50    | 49    | 29    | 14    |
| 3     | 20    | 13    | 18    | 17    | 9.4   | 8.5   | 11    | 24    | 48    | 48    | 29    | 14    |
| 4     | 19    | 13    | 17    | 15    | 9.4   | 8.5   | 11    | 26    | 46    | 46    | 28    | 14    |
| 5     | 18    | 13    | 16    | 16    | 9.4   | 8.5   | 12    | 29    | 44    | 44    | 27    | 14    |
| 6     | 18    | 12    | 16    | 16    | 9.4   | 8.2   | 12    | 32    | 44    | 43    | 26    | 14    |
| 7     | 18    | 12    | 15    | 15    | 9.4   | 8.2   | 13    | 35    | 43    | 42    | 25    | 14    |
| 8     | 18    | 12    | 15    | 13    | 9.4   | 7.8   | 14    | 37    | 43    | 40    | 25    | 13    |
| 9     | 18    | 12    | 15    | 14    | 9.4   | 7.8   | 15    | 40    | 44    | 39    | 24    | 13    |
| 10    | 17    | 12    | 15    | 12    | 9.4   | 7.5   | 16    | 42    | 43    | 38    | 24    | 12    |
| 11    | 17    | 11    | 14    | 13    | 12    | 7.5   | 16    | 41    | 42    | 37    | 23    | 12    |
| 12    | 17    | 11    | 14    | 13    | 9.0   | 7.5   | 16    | 40    | 43    | 36    | 22    | 12    |
| 13    | 17    | 12    | 13    | 12    | 10    | 7.8   | 15    | 40    | 44    | 34    | 22    | 10    |
| 14    | 16    | 14    | 13    | 12    | 8.5   | 7.8   | 15    | 40    | 46    | 32    | 22    | 10    |
| 15    | 16    | 16    | 13    | 11    | 8.5   | 7.8   | 16    | 40    | 47    | 32    | 21    | 10    |
| 16    | 17    | 17    | 12    | 11    | 8.5   | 7.8   | 16    | 40    | 49    | 31    | 20    | 10    |
| 17    | 17    | 18    | 12    | 11    | 8.5   | 7.8   | 16    | 42    | 50    | 30    | 20    | 10    |
| 18    | 17    | 18    | 12    | 11    | 8.5   | 7.8   | 16    | 44    | 50    | 29    | 20    | 11    |
| 19    | 17    | 17    | 12    | 10    | 8.2   | 7.8   | 17    | 47    | 51    | 28    | 20    | 12    |
| 20    | 17    | 17    | 12    | 9.9   | 7.8   | 7.8   | 17    | 48    | 52    | 28    | 20    | 12    |
| 21    | 17    | 17    | 12    | 9.9   | 7.8   | 8.2   | 17    | 50    | 52    | 29    | 20    | 12    |
| 22    | 17    | 17    | 12    | 9.9   | 7.8   | 8.2   | 17    | 52    | 52    | 29    | 19    | 12    |
| 23    | 16    | 20    | 11    | 9.4   | 7.8   | 8.2   | 17    | 54    | 51    | 29    | 19    | 12    |
| 24    | 16    | 22    | 12    | 9.4   | 7.8   | 8.5   | 16    | 58    | 50    | 30    | 19    | 12    |
| 25    | 16    | 20    | 12    | 9.4   | 7.8   | 8.5   | 14    | 60    | 49    | 30    | 19    | 11    |
| 26    | 16    | 18    | 9.9   | 9.4   | 7.8   | 8.5   | 10    | 62    | 48    | 30    | 18    | 11    |
| 27    | 16    | 18    | 10    | 9.0   | 7.8   | 8.5   | 12    | 64    | 47    | 30    | 18    | 11    |
| 28    | 15    | 18    | 9.4   | 9.0   | 7.8   | 8.5   | 14    | 66    | 47    | 30    | 18    | 11    |
| 29    | 15    | 19    | 14    | 9.0   | ----- | 8.5   | 16    | 69    | 48    | 30    | 17    | 11    |
| 30    | 15    | 20    | 14    | 9.9   | ----- | 8.5   | 17    | 68    | 48    | 30    | 17    | 11    |
| 31    | 14    | ----- | 15    | 9.9   | ----- | 9.0   | ----- | 64    | ----- | 30    | 16    | ----- |
| Total | 527   | 465   | 424.3 | 369.1 | 245.9 | 251.5 | 433.3 | 1,392 | 1,423 | 1,083 | 676   | 360   |
| Mean  | 17.0  | 15.5  | 13.7  | 11.9  | 8.78  | 8.11  | 14.4  | 44.9  | 47.4  | 34.9  | 21.8  | 12.0  |
| Ac-ft | 1,050 | 922   | 842   | 732   | 488   | 499   | 859   | 2,760 | 2,820 | 2,150 | 1,340 | 714   |

Calendar year 1965 Max 1,050 Min 6.4 Mean 30.4 Ac-ft 22,030  
 Water year 1965-66 Max 69 Min 7.5 Mean 21.0 Ac-ft 15,170

10-2657. Rock Creek at Little Round Valley, near Bishop, Calif.

Location.--Lat 37°33'10", long 118°41'00", in SE $\frac{1}{4}$  sec. 32, T.4 S., R.30 E., on right bank just upstream from diversion to Little Round Valley, 0.6 mile south of Toms Place, and 20 miles northwest of Bishop, Mono County.

Drainage area.--35.8 sq mi.

Records available.--January to December 1918, January 1920 to September 1966. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and Parshall flume since May 1953. Altitude of gage is 7,450 ft (from topographic map). Prior to May 24, 1926, staff gage at same site at different datums. May 24, 1926, to May 28, 1953, water-stage recorder at same site at different datums.

Average discharge.--46 years (1920-66), 29.6 cfs (21,430 acre-ft per year).

Extremes.--Maximum discharge during year, 59 cfs June 20 (gage height, 1.76 ft); minimum daily, 9.0 cfs Sept. 6, 13.  
1926-66: Maximum discharge, 270 cfs July 26, 1952 (gage height, 2.93 ft, datum then in use); minimum daily, 3.2 cfs Mar. 11, 1926.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|-------|------|------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 19   | 12    | 16   | 14   | 11    | 11   | 15    | 24    | 43    | 46    | 28    | 11    |
| 2     | 19   | 11    | 15   | 14   | 12    | 13   | 16    | 26    | 39    | 45    | 29    | 11    |
| 3     | 19   | 11    | 15   | 14   | 11    | 12   | 16    | 28    | 35    | 42    | 28    | 10    |
| 4     | 19   | 11    | 14   | 14   | 11    | 12   | 16    | 30    | 32    | 40    | 28    | 9.8   |
| 5     | 19   | 11    | 14   | 14   | 11    | 12   | 17    | 31    | 31    | 36    | 26    | 9.3   |
| 6     | 18   | 11    | 14   | 14   | 11    | 12   | 19    | 33    | 30    | 32    | 24    | 9.0   |
| 7     | 17   | 11    | 14   | 14   | 12    | 12   | 20    | 35    | 30    | 31    | 21    | 9.8   |
| 8     | 16   | 11    | 13   | 14   | 12    | 12   | 21    | 36    | 30    | 31    | 20    | 9.8   |
| 9     | 15   | 11    | 12   | 14   | 12    | 12   | 21    | 37    | 31    | 31    | 18    | 9.5   |
| 10    | 14   | 11    | 12   | 14   | 11    | 12   | 21    | 38    | 31    | 29    | 16    | 9.3   |
| 11    | 13   | 11    | 12   | 13   | 11    | 11   | 20    | 34    | 30    | 27    | 16    | 9.3   |
| 12    | 12   | 11    | 12   | 14   | 11    | 11   | 19    | 32    | 30    | 24    | 16    | 9.3   |
| 13    | 11   | 11    | 14   | 12   | 11    | 12   | 18    | 30    | 32    | 22    | 17    | 9.0   |
| 14    | 11   | 13    | 14   | 12   | 11    | 12   | 19    | 31    | 37    | 20    | 16    | 9.5   |
| 15    | 11   | 14    | 14   | 12   | 11    | 12   | 19    | 33    | 46    | 19    | 16    | 9.5   |
| 16    | 11   | 15    | 14   | 12   | 11    | 11   | 19    | 34    | 51    | 18    | 15    | 9.3   |
| 17    | 12   | 16    | 14   | 12   | 11    | 11   | 20    | 36    | 51    | 18    | 15    | 9.3   |
| 18    | 13   | 16    | 14   | 12   | 11    | 11   | 21    | 37    | 50    | 18    | 16    | 9.3   |
| 19    | 13   | 15    | 14   | 12   | 11    | 11   | 21    | 39    | 53    | 18    | 15    | 10    |
| 20    | 13   | 15    | 14   | 12   | 11    | 11   | 20    | 40    | 58    | 19    | 16    | 11    |
| 21    | 13   | 14    | 14   | 11   | 11    | 11   | 19    | 41    | 57    | 20    | 16    | 10    |
| 22    | 13   | 15    | 14   | 11   | 11    | 11   | 19    | 41    | 53    | 22    | 16    | 9.8   |
| 23    | 12   | 15    | 14   | 11   | 11    | 11   | 19    | 42    | 49    | 23    | 15    | 9.8   |
| 24    | 12   | 16    | 14   | 11   | 11    | 11   | 20    | 43    | 44    | 24    | 14    | 9.5   |
| 25    | 12   | 16    | 14   | 11   | 11    | 11   | 20    | 44    | 40    | 25    | 13    | 9.3   |
| 26    | 12   | 19    | 14   | 11   | 11    | 12   | 20    | 47    | 39    | 25    | 12    | 9.3   |
| 27    | 12   | 17    | 14   | 11   | 11    | 13   | 20    | 48    | 39    | 25    | 12    | 9.3   |
| 28    | 12   | 17    | 14   | 11   | 11    | 13   | 21    | 47    | 43    | 25    | 11    | 9.3   |
| 29    | 12   | 17    | 14   | 11   | ----- | 14   | 22    | 46    | 45    | 24    | 11    | 9.3   |
| 30    | 12   | 16    | 14   | 11   | ----- | 14   | 23    | 45    | 46    | 25    | 11    | 9.3   |
| 31    | 12   | ----- | 14   | 11   | ----- | 13   | ----- | 45    | ----- | 26    | 11    | ----- |
| Total | 429  | 410   | 429  | 384  | 312   | 367  | 581   | 1,153 | 1,225 | 830   | 538   | 288.9 |
| Mean  | 13.8 | 13.7  | 13.8 | 12.4 | 11.1  | 11.8 | 19.4  | 37.2  | 40.8  | 26.8  | 17.4  | 9.63  |
| Ac-ft | 851  | 813   | 851  | 762  | 619   | 728  | 1,150 | 2,290 | 2,430 | 1,650 | 1,070 | 573   |

Calendar year 1965 Max 110 Min 7.7 Mean 30.1 Ac-ft 21,770  
Water year 1965-66 Max 58 Min 9.0 Mean 19.0 Ac-ft 13,780

## OWENS LAKE BASIN

10-2670. Pine Creek at division box, near Bishop, Calif.

Location.--Lat 37°25'00", long 118°37'15", in NW $\frac{1}{4}$  sec.19, T.6 S., R.31 E., on right bank 0.25 mile upstream from division box (at Rovana), 1.9 miles west of Round Valley schoolhouse, and 13 miles northwest of Bishop.

Drainage area.--37.9 sq mi.

Records available.--October 1921 to September 1966. Prior to October 1959 monthly discharge only, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and Parshall flume since November 1938. Altitude of gage is 5,280 ft (from topographic map).

Average discharge.--45 years, 43.5 cfs (31,490 acre-ft per year).

Extremes.--Maximum discharge during year, 156 cfs May 27 (gage height, 3.24 ft); minimum daily, 20 cfs Sept. 17, 18.  
1921-66: Maximum discharge, 356 cfs June 4, 1957; minimum daily, 10 cfs Jan. 8, 1930, Jan. 21, 1935.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 26    | 27    | 32    | 29    | 29    | 30    | 31    | 60    | 84    | 81    | 44    | 26    |
| 2     | 26    | 27    | 31    | 30    | 29    | 30    | 33    | 66    | 71    | 75    | 47    | 25    |
| 3     | 25    | 28    | 31    | 30    | 29    | 29    | 35    | 74    | 69    | 66    | 46    | 24    |
| 4     | 24    | 27    | 31    | 30    | 29    | 29    | 36    | 73    | 67    | 62    | 44    | 24    |
| 5     | 23    | 29    | 31    | 30    | 29    | 29    | 37    | 80    | 71    | 60    | 42    | 23    |
| 6     | 23    | 30    | 31    | 30    | 28    | 29    | 40    | 86    | 74    | 61    | 41    | 23    |
| 7     | 23    | 30    | 31    | 30    | 28    | 29    | 42    | 89    | 72    | 62    | 39    | 22    |
| 8     | 23    | 30    | 31    | 30    | 28    | 29    | 43    | 90    | 72    | 60    | 39    | 22    |
| 9     | 23    | 30    | 31    | 29    | 28    | 29    | 44    | 79    | 71    | 58    | 38    | 22    |
| 10    | 23    | 30    | 31    | 29    | 29    | 29    | 44    | 69    | 71    | 52    | 38    | 21    |
| 11    | 22    | 30    | 30    | 29    | 29    | 29    | 41    | 65    | 82    | 48    | 37    | 21    |
| 12    | 22    | 30    | 30    | 29    | 29    | 29    | 38    | 63    | 88    | 46    | 36    | 21    |
| 13    | 22    | 30    | 30    | 29    | 29    | 29    | 37    | 68    | 99    | 45    | 35    | 21    |
| 14    | 22    | 31    | 30    | 29    | 30    | 29    | 36    | 75    | 107   | 47    | 34    | 21    |
| 15    | 23    | 31    | 30    | 29    | 30    | 29    | 37    | 79    | 110   | 46    | 34    | 21    |
| 16    | 24    | 32    | 30    | 29    | 30    | 29    | 39    | 90    | 101   | 45    | 34    | 21    |
| 17    | 24    | 31    | 29    | 29    | 30    | 29    | 43    | 102   | 94    | 43    | 35    | 20    |
| 18    | 24    | 31    | 29    | 29    | 30    | 29    | 44    | 110   | 91    | 43    | 37    | 20    |
| 19    | 24    | 31    | 29    | 29    | 30    | 29    | 42    | 107   | 100   | 42    | 39    | 21    |
| 20    | 26    | 31    | 29    | 30    | 30    | 29    | 39    | 106   | 104   | 42    | 38    | 22    |
| 21    | 30    | 31    | 29    | 30    | 30    | 29    | 37    | 109   | 96    | 44    | 37    | 22    |
| 22    | 29    | 31    | 30    | 30    | 30    | 29    | 36    | 115   | 84    | 47    | 36    | 21    |
| 23    | 29    | 33    | 29    | 30    | 30    | 29    | 35    | 118   | 75    | 47    | 34    | 21    |
| 24    | 29    | 33    | 29    | 30    | 30    | 29    | 35    | 121   | 71    | 45    | 31    | 21    |
| 25    | 29    | 33    | 30    | 29    | 30    | 29    | 38    | 128   | 71    | 45    | 30    | 21    |
| 26    | 29    | 33    | 29    | 29    | 30    | 29    | 44    | 141   | 80    | 45    | 31    | 21    |
| 27    | 28    | 33    | 29    | 29    | 30    | 29    | 48    | 143   | 83    | 46    | 28    | 22    |
| 28    | 28    | 32    | 29    | 29    | 30    | 29    | 49    | 132   | 85    | 45    | 26    | 23    |
| 29    | 28    | 32    | 31    | 29    | ----- | 29    | 50    | 130   | 84    | 44    | 26    | 23    |
| 30    | 28    | 32    | 30    | 29    | ----- | 30    | 53    | 116   | 83    | 44    | 25    | 23    |
| 31    | 28    | ----- | 30    | 29    | ----- | 30    | ----- | 96    | ----- | 43    | 26    | ----- |
| Total | 787   | 919   | 932   | 911   | 823   | 903   | 1,206 | 2,980 | 2,510 | 1,579 | 1,107 | 659   |
| Mean  | 25.4  | 30.6  | 30.1  | 29.4  | 29.4  | 29.1  | 40.2  | 96.1  | 83.7  | 50.9  | 35.7  | 22.0  |
| Ac-ft | 1,560 | 1,820 | 1,850 | 1,810 | 1,630 | 1,790 | 2,390 | 5,910 | 4,980 | 3,130 | 2,200 | 1,310 |

Calendar year 1965 Max 194 Min 22 Mean 52.4 Ac-ft 37,920  
Water year 1965-66 Max 143 Min 20 Mean 42.0 Ac-ft 30,380

Location.--Lat 37°24'15", long 116°18'30", in NW $\frac{1}{4}$  sec.25, T. 6 S., R.33 E., on right bank at mouth of canyon, 2.0 miles east of Laws.

Records available.--March 1930 to September 1966. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and Parshall flume (Cipolletti weir used Mar. 31 to Sept. 30). Altitude of gage is 4,600 ft (from topographic map). Prior to Feb. 24, 1943, staff gage and Cipolletti weir at site  $1\frac{1}{2}$  miles downstream at different datum.

Average discharge.--36 years, 1.54 cfs (1,110 acre-ft per year).

Extremes---Maximum discharge during year, 1.9 cfs Dec. 29 (gage height, 0.62 ft); minimum daily, 1.1 cfs July 28, 29, 1930-66; Maximum discharge, 8.4 cfs Oct. 19, 1958 (gage height, 1.63 ft); no flow at times in some years.

Remarks.--No regulation; occasional diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

| Discharge, in cubic feet per second, water year October 1965 to September 1966 |            |            |            |      |            |            |            |            |            |            |      |       |
|--|------------|------------|------------|------|------------|------------|------------|------------|------------|------------|------|-------|
| Day  | Oct.       | Nov.       | Dec.       | Jan. | Feb.       | Mar.       | Apr.       | May        | June       | July       | Aug. | Sept. |
| 1  | <u>1.5</u> | <u>1.6</u> | <u>1.7</u> | 1.7  | <u>1.7</u> | <u>1.7</u> | <u>1.3</u> | 1.4        | <u>1.3</u> | 1.2        | 1.2  | 1.2   |
| 2  | 1.5        | 1.6        | 1.7        | 1.7  | <u>1.7</u> | <u>1.7</u> | <u>1.3</u> | 1.4        | <u>1.3</u> | 1.2        | 1.2  | 1.2   |
| 3  | <u>1.5</u> | 1.6        | 1.7        | 1.7  | <u>1.7</u> | <u>1.7</u> | <u>1.4</u> | 1.4        | <u>1.3</u> | 1.2        | 1.2  | 1.2   |
| 4  | 1.5        | 1.6        | 1.7        | 1.7  | <u>1.7</u> | 1.6        | 1.4        | 1.4        | <u>1.3</u> | 1.2        | 1.2  | 1.2   |
| 5  | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.7        | 1.4        | <u>1.3</u> | 1.3        | <u>1.3</u> | 1.2  | 1.2   |
| 6  | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.7        | 1.4        | 1.4        | 1.3        | 1.2        | 1.2  | 1.2   |
| 7  | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.7        | 1.4        | 1.4        | 1.3        | 1.2        | 1.2  | 1.2   |
| 8  | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.7        | 1.4        | 1.4        | 1.3        | 1.2        | 1.2  | 1.2   |
| 9  | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.7        | 1.4        | 1.3        | 1.3        | 1.3        | 1.2  | 1.2   |
| 10   | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.4        | 1.3        | 1.3        | 1.2  | 1.2   |
| 11   | 1.5        | 1.6        | 1.7        | 1.7  | 1.6        | 1.6        | 1.4        | 1.5        | 1.3        | 1.3        | 1.2  | 1.2   |
| 12   | 1.5        | 1.6        | 1.7        | 1.7  | 1.6        | 1.6        | 1.4        | <u>1.7</u> | 1.3        | 1.3        | 1.2  | 1.2   |
| 13   | 1.5        | 1.6        | 1.7        | 1.7  | 1.6        | 1.6        | 1.4        | 1.6        | 1.3        | 1.2        | 1.2  | 1.2   |
| 14   | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.5        | 1.3        | 1.3        | 1.2  | 1.2   |
| 15   | 1.5        | 1.6        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.5        | 1.3        | 1.3        | 1.2  | 1.2   |
| 16   | 1.5        | <u>1.7</u> | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.5        | <u>1.2</u> | 1.3        | 1.2  | 1.2   |
| 17   | 1.5        | <u>1.7</u> | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.4        | <u>1.2</u> | 1.3        | 1.2  | 1.2   |
| 18   | 1.6        | 1.7        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.4        | 1.2        | 1.3        | 1.2  | 1.2   |
| 19   | <u>1.6</u> | 1.6        | 1.7        | 1.7  | <u>1.4</u> | 1.6        | 1.4        | 1.4        | 1.2        | 1.3        | 1.2  | 1.2   |
| 20   | 1.6        | 1.6        | 1.7        | 1.7  | 1.4        | 1.6        | 1.4        | 1.4        | 1.2        | 1.2        | 1.2  | 1.2   |
| 21   | 1.6        | 1.6        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.4        | 1.2        | 1.2        | 1.2  | 1.2   |
| 22   | 1.6        | 1.7        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.4        | 1.2        | 1.2        | 1.2  | 1.2   |
| 23   | 1.6        | 1.7        | 1.7        | 1.7  | 1.6        | 1.6        | 1.4        | 1.4        | 1.2        | 1.2        | 1.2  | 1.2   |
| 24   | 1.6        | 1.7        | 1.7        | 1.7  | 1.6        | 1.6        | 1.4        | 1.4        | 1.2        | 1.2        | 1.2  | 1.2   |
| 25   | 1.6        | 1.7        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.3        | 1.2        | 1.2        | 1.2  | 1.2   |
| 26   | 1.6        | 1.7        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.4        | 1.2        | 1.2        | 1.2  | 1.2   |
| 27   | 1.6        | 1.7        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.3        | 1.2        | 1.2        | 1.2  | 1.2   |
| 28   | 1.6        | 1.7        | 1.7        | 1.7  | 1.7        | 1.6        | 1.4        | 1.3        | 1.2        | <u>1.1</u> | 1.2  | 1.2   |
| 29   | 1.6        | 1.7        | <u>1.8</u> | 1.7  | -----      | 1.6        | 1.4        | 1.3        | 1.2        | 1.1        | 1.2  | 1.2   |
| 30   | 1.6        | 1.7        | <u>1.7</u> | 1.7  | -----      | 1.6        | 1.4        | 1.3        | 1.2        | 1.2        | 1.2  | 1.2   |
| 31   | 1.6        | -----      | 1.7        | 1.7  | -----      | <u>1.5</u> | -----      | 1.3        | -----      | 1.2        | 1.2  | ----- |
| Total  | 47.9       | 49.2       | 52.8       | 52.7 | 46.5       | 50.3       | 41.8       | 43.5       | 37.5       | 38.1       | 37.2 | 36.0  |
| Mean   | 1.55       | 1.64       | 1.70       | 1.70 | 1.66       | 1.62       | 1.39       | 1.40       | 1.25       | 1.23       | 1.20 | 1.20  |
| Ac-ft  | 95         | 98         | 105        | 105  | 92         | 100        | 83         | 86         | 74         | 76         | 74   | 71    |

|                    |     |     |     |      |      |      |       |       |
|--------------------|-----|-----|-----|------|------|------|-------|-------|
| Calendar year 1965 | Max | 1.9 | Min | 0.70 | Mean | 1.62 | Ac-ft | 1.170 |
| Water year 1965-66 | Max | 1.8 | Min | 1.1  | Mean | 1.46 | Ac-ft | 1.060 |

## OWENS LAKE BASIN

10-2760. Big Pine Creek near Big Pine, Calif.

Location.--Lat 37°08'40", long 118°18'55", in NW $\frac{1}{4}$  sec.25, T.9 S., R.33 E., on left bank 0.3 mile downstream from Little Pine Creek, 0.5 mile downstream from powerhouse No. 3, and 2.2 miles southwest of Big Pine.

Drainage area.--39.0 sq mi.

Records available.--November 1907 to February 1911, January 1920 to September 1966; combined records of creek and diversions, June 1930 to September 1966. Monthly discharge only for some periods, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and Parshall flume since April 1949 on creek; graphic water-stage recorder and Parshall flume on each diversion. Altitude of gage is 4,550 ft (from topographic map). Prior to January 1923, staff gage at same site and datum.

Average combined discharge.--36 years (1930-66), 40.1 cfs (29,030 acre-ft per year), including diversion to upper and lower Giroux ditches.

Extremes (creek only).--Maximum discharge during year, 114 cfs June 28 (gage height, 2.66 ft); minimum daily, 8.2 cfs Dec. 17.

1907-11, 1920-66: Maximum discharge, 458 cfs July 3, 1932 (gage height, 6.55 ft); no flow Dec. 3-12, 1935.

(combined).--Maximum discharge during year, 127 cfs June 28; minimum daily, 11 cfs Dec. 17.

1907-11, 1920-66: Maximum discharge, 458 cfs July 3, 1932; minimum daily, 6.4 cfs Dec. 11, 12, 1935.

Remarks.--No regulation above station. Diversions above station for power and irrigation. For records of combined discharge of Big Pine Creek and Giroux ditches which divert above station, see following page.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.  | Dec.  | Jan. | Feb.  | Mar. | Apr.  | May    | June  | July  | Aug.  | Sept. |
|--------------------|------|-------|-------|------|-------|------|-------|--------|-------|-------|-------|-------|
| 1                  | 11   | 13    | 15    | 15   | 12    | 11   | 18    | 22     | 37    | 86    | 66    | 18    |
| 2                  | 11   | 13    | 15    | 15   | 12    | 11   | 17    | 25     | 33    | 75    | 80    | 17    |
| 3                  | 11   | 13    | 15    | 14   | 12    | 11   | 17    | 27     | 31    | 65    | 73    | 18    |
| 4                  | 11   | 13    | 14    | 14   | 12    | 12   | 17    | 27     | 33    | 64    | 66    | 18    |
| 5                  | 11   | 13    | 14    | 13   | 12    | 11   | 17    | 27     | 35    | 62    | 65    | 18    |
| 6                  | 11   | 13    | 14    | 14   | 13    | 11   | 18    | 29     | 39    | 65    | 64    | 17    |
| 7                  | 13   | 12    | 14    | 14   | 12    | 12   | 19    | 31     | 38    | 60    | 54    | 17    |
| 8                  | 16   | 12    | 14    | 13   | 12    | 12   | 20    | 33     | 38    | 55    | 55    | 16    |
| 9                  | 16   | 12    | 14    | 13   | 12    | 11   | 20    | 30     | 33    | 46    | 54    | 15    |
| 10                 | 16   | 12    | 14    | 13   | 12    | 12   | 20    | 27     | 30    | 38    | 51    | 14    |
| 11                 | 16   | 12    | 14    | 15   | 13    | 12   | 19    | 25     | 41    | 36    | 51    | 15    |
| 12                 | 16   | 12    | 14    | 15   | 11    | 12   | 18    | 24     | 49    | 34    | 48    | 14    |
| 13                 | 16   | 13    | 12    | 14   | 12    | 13   | 18    | 26     | 58    | 34    | 47    | 13    |
| 14                 | 15   | 15    | 12    | 14   | 11    | 12   | 17    | 29     | 63    | 36    | 48    | 11    |
| 15                 | 15   | 17    | 10    | 14   | 11    | 12   | 17    | 30     | 65    | 37    | 47    | 10    |
| 16                 | 15   | 17    | 9.0   | 14   | 12    | 12   | 19    | 40     | 62    | 40    | 46    | 10    |
| 17                 | 15   | 16    | 8.2   | 15   | 12    | 12   | 20    | 38     | 61    | 46    | 46    | 13    |
| 18                 | 15   | 15    | 9.0   | 15   | 11    | 12   | 20    | 40     | 68    | 48    | 42    | 15    |
| 19                 | 15   | 14    | 9.8   | 16   | 11    | 12   | 18    | 38     | 84    | 50    | 45    | 15    |
| 20                 | 15   | 14    | 12    | 16   | 11    | 12   | 17    | 42     | 86    | 53    | 61    | 15    |
| 21                 | 15   | 14    | 15    | 14   | 11    | 12   | 16    | 44     | 86    | 58    | 54    | 13    |
| 22                 | 14   | 15    | 13    | 15   | 11    | 12   | 15    | 42     | 74    | 61    | 44    | 13    |
| 23                 | 14   | 16    | 14    | 14   | 11    | 12   | 15    | 43     | 65    | 63    | 42    | 14    |
| 24                 | 14   | 17    | 13    | 14   | 11    | 12   | 15    | 43     | 60    | 67    | 40    | 16    |
| 25                 | 14   | 16    | 13    | 13   | 11    | 12   | 16    | 47     | 62    | 71    | 40    | 16    |
| 26                 | 14   | 15    | 13    | 13   | 11    | 12   | 19    | 53     | 67    | 65    | 36    | 14    |
| 27                 | 14   | 15    | 13    | 13   | 11    | 13   | 19    | 55     | 77    | 66    | 32    | 14    |
| 28                 | 14   | 15    | 13    | 13   | 11    | 13   | 19    | 58     | 82    | 68    | 30    | 12    |
| 29                 | 14   | 15    | 13    | 12   | ----- | 14   | 20    | 58     | 86    | 68    | 28    | 12    |
| 30                 | 13   | 14    | 12    | 12   | ----- | 14   | 21    | 49     | 86    | 72    | 24    | 14    |
| 31                 | 13   | ----- | 14    | 12   | ----- | 18   | ----- | 42     | ----- | 71    | 22    | ----- |
| Total              | 433  | 423   | 399.0 | 431  | 324   | 379  | 541   | 1,144  | 1,729 | 1,760 | 1,501 | 437   |
| Mean               | 14.0 | 14.1  | 12.9  | 13.9 | 11.6  | 12.2 | 18.0  | 36.9   | 57.6  | 56.8  | 48.4  | 14.6  |
| Ac-ft              | 859  | 839   | 791   | 855  | 643   | 752  | 1,070 | 2,270  | 3,430 | 3,490 | 2,980 | 867   |
| Calendar year 1965 | Max  | 202   | Min   | 8.2  | Mean  | 29.9 | Ac-ft | 21,670 |       |       |       |       |
| Water year 1965-66 | Max  | 86    | Min   | 8.2  | Mean  | 26.0 | Ac-ft | 18,840 |       |       |       |       |

10-2760. Big Pine Creek near Big Pine, Calif.--Continued.

Combined discharge, in cubic feet per second, of Big Pine Creek and upper and lower Giroux ditches,  
near Big Pine, Calif., water year October 1965 to September 1966

| Day                | Oct.  | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May    | June  | July  | Aug.  | Sept. |
|--------------------|-------|-------|------|------|-------|------|-------|--------|-------|-------|-------|-------|
| 1                  | 19    | 16    | 18   | 18   | 14    | 13   | 22    | 29     | 52    | 101   | 81    | 32    |
| 2                  | 19    | 16    | 18   | 18   | 14    | 13   | 23    | 32     | 48    | 90    | 95    | 30    |
| 3                  | 19    | 16    | 18   | 17   | 14    | 13   | 23    | 34     | 46    | 80    | 88    | 31    |
| 4                  | 19    | 16    | 17   | 17   | 14    | 14   | 23    | 34     | 48    | 79    | 81    | 31    |
| 5                  | 19    | 16    | 17   | 16   | 14    | 13   | 23    | 34     | 50    | 77    | 80    | 31    |
| 6                  | 19    | 16    | 17   | 17   | 15    | 13   | 24    | 36     | 54    | 80    | 79    | 30    |
| 7                  | 19    | 16    | 17   | 17   | 14    | 14   | 25    | 38     | 53    | 75    | 69    | 30    |
| 8                  | 20    | 16    | 17   | 16   | 14    | 14   | 26    | 41     | 53    | 70    | 70    | 29    |
| 9                  | 20    | 16    | 17   | 16   | 14    | 13   | 26    | 38     | 48    | 61    | 69    | 28    |
| 10                 | 20    | 16    | 17   | 15   | 14    | 14   | 26    | 35     | 45    | 53    | 66    | 27    |
| 11                 | 20    | 15    | 17   | 16   | 15    | 14   | 25    | 33     | 56    | 51    | 66    | 28    |
| 12                 | 20    | 15    | 17   | 16   | 13    | 14   | 24    | 32     | 64    | 49    | 63    | 27    |
| 13                 | 20    | 16    | 15   | 15   | 14    | 15   | 24    | 34     | 73    | 49    | 62    | 26    |
| 14                 | 19    | 18    | 15   | 15   | 13    | 14   | 23    | 36     | 78    | 51    | 63    | 24    |
| 15                 | 19    | 20    | 13   | 15   | 13    | 14   | 23    | 37     | 80    | 52    | 62    | 23    |
| 16                 | 19    | 20    | 12   | 15   | 14    | 14   | 25    | 48     | 77    | 55    | 61    | 22    |
| 17                 | 19    | 19    | 11   | 16   | 14    | 14   | 26    | 46     | 76    | 61    | 61    | 25    |
| 18                 | 19    | 18    | 12   | 16   | 13    | 14   | 26    | 51     | 73    | 63    | 57    | 26    |
| 19                 | 19    | 17    | 13   | 17   | 13    | 14   | 24    | 53     | 99    | 65    | 60    | 26    |
| 20                 | 19    | 17    | 15   | 17   | 13    | 14   | 23    | 57     | 101   | 68    | 76    | 26    |
| 21                 | 19    | 17    | 18   | 16   | 13    | 14   | 22    | 59     | 101   | 73    | 69    | 23    |
| 22                 | 18    | 18    | 16   | 17   | 13    | 14   | 21    | 57     | 89    | 76    | 59    | 24    |
| 23                 | 18    | 19    | 17   | 16   | 13    | 14   | 21    | 58     | 80    | 78    | 57    | 25    |
| 24                 | 18    | 20    | 16   | 17   | 13    | 14   | 21    | 58     | 75    | 82    | 55    | 27    |
| 25                 | 18    | 19    | 16   | 16   | 13    | 14   | 22    | 62     | 77    | 86    | 55    | 27    |
| 26                 | 18    | 18    | 16   | 15   | 13    | 14   | 25    | 68     | 82    | 80    | 51    | 24    |
| 27                 | 18    | 18    | 16   | 15   | 13    | 15   | 25    | 70     | 92    | 81    | 47    | 24    |
| 28                 | 18    | 18    | 16   | 15   | 13    | 15   | 26    | 73     | 95    | 83    | 44    | 22    |
| 29                 | 18    | 18    | 16   | 14   | ----- | 16   | 27    | 73     | 101   | 83    | 42    | 22    |
| 30                 | 16    | 17    | 16   | 14   | ----- | 16   | 28    | 64     | 101   | 87    | 38    | 22    |
| 31                 | 16    | ----- | 17   | 14   | ----- | 20   | ----- | 57     | ----- | 86    | 36    | ----- |
| Total              | 581   | 517   | 493  | 494  | 380   | 441  | 722   | 1,477  | 2,167 | 2,225 | 1,962 | 792   |
| Mean               | 18.7  | 17.2  | 15.9 | 15.9 | 13.6  | 14.2 | 24.1  | 47.6   | 72.2  | 71.8  | 63.3  | 26.4  |
| Ac-ft              | 1,150 | 1,030 | 978  | 980  | 754   | 875  | 1,430 | 2,930  | 4,300 | 4,410 | 3,890 | 1,570 |
| Calendar year 1965 | Max   | 216   | Min  | 11   | Mean  | 36.5 | Ac-ft | 26,400 |       |       |       |       |
| Water year 1965-66 | Max   | 101   | Min  | 11   | Mean  | 33.6 | Ac-ft | 24,300 |       |       |       |       |

## OWENS LAKE BASIN

10-2775. Owens River near Big Pine, Calif.

Location.--Lat 37°00'55", long 118°13'30", in SE¼ sec.2, T.11 S., R.34 E., on left bank 0.1 mile downstream from Little Seeley Spring, 0.15 mile downstream from Charles Butte, and 10.8 miles southeast of Big Pine.

Drainage area.--1,930 sq mi, approximately.

Records available.--January 1906 to September 1966. Monthly discharge only for some periods, published in WSP 1314. Published as "near Tinemaha" prior to 1912.

Gage.--Graphic water-stage recorder and rock control since October 1958. Altitude of gage is 3,800 ft (from topographic map). Prior to Oct. 8, 1922, staff gage at same site and datum.

Extremes.--Maximum daily discharge during year, 556 cfs Oct. 5; minimum daily, 165 cfs Oct. 26.

1906-66: Maximum discharge, about 3,220 cfs Jan. 26, 1914 (gage height, 11.2 ft), from rating curve extended above 1,100 cfs; no flow Jan. 9-13, 21-26, 1937.

Remarks.--Flow regulated since 1941 by Lake Crowley (capacity, 183,500 acre-ft), and several small reservoirs (combined capacity, 41,400 acre-ft). Diversions from both main stream and tributaries. Water imported from Mono Lake basin since 1941 for diversion to Los Angeles aqueduct which diverts 4 miles downstream.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May     | June   | July   | Aug.   | Sept.  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|
| 1                  | 486    | 169    | 452    | 458    | 471    | 460    | 442    | 503     | 503    | 511    | 516    | 507    |
| 2                  | 497    | 170    | 451    | 470    | 468    | 463    | 396    | 512     | 504    | 514    | 512    | 507    |
| 3                  | 522    | 171    | 454    | 472    | 471    | 465    | 382    | 514     | 504    | 512    | 518    | 506    |
| 4                  | 545    | 173    | 457    | 468    | 471    | 466    | 380    | 502     | 504    | 514    | 515    | 506    |
| 5                  | 556    | 173    | 457    | 459    | 470    | 466    | 368    | 484     | 503    | 511    | 513    | 504    |
| 6                  | 552    | 249    | 457    | 460    | 470    | 465    | 352    | 487     | 504    | 511    | 513    | 498    |
| 7                  | 514    | 335    | 456    | 461    | 471    | 465    | 382    | 494     | 504    | 514    | 513    | 485    |
| 8                  | 516    | 338    | 455    | 462    | 477    | 466    | 384    | 520     | 504    | 512    | 512    | 482    |
| 9                  | 537    | 340    | 454    | 462    | 476    | 466    | 382    | 524     | 504    | 512    | 511    | 479    |
| 10                 | 546    | 319    | 455    | 464    | 474    | 466    | 383    | 524     | 504    | 514    | 510    | 484    |
| 11                 | 551    | 301    | 456    | 466    | 471    | 466    | 390    | 520     | 503    | 511    | 509    | 497    |
| 12                 | 547    | 300    | 456    | 461    | 472    | 465    | 390    | 506     | 504    | 511    | 507    | 502    |
| 13                 | 546    | 301    | 457    | 457    | 471    | 464    | 387    | 504     | 504    | 509    | 506    | 502    |
| 14                 | 551    | 304    | 457    | 458    | 470    | 464    | 384    | 505     | 506    | 504    | 505    | 503    |
| 15                 | 452    | 327    | 460    | 460    | 469    | 399    | 408    | 506     | 505    | 492    | 504    | 506    |
| 16                 | 278    | 359    | 459    | 459    | 463    | 374    | 392    | 509     | 506    | 486    | 501    | 507    |
| 17                 | 275    | 377    | 460    | 458    | 462    | 474    | 377    | 504     | 505    | 490    | 497    | 510    |
| 18                 | 272    | 396    | 462    | 459    | 462    | 475    | 380    | 502     | 505    | 494    | 497    | 509    |
| 19                 | 263    | 416    | 459    | 460    | 460    | 458    | 390    | 502     | 509    | 492    | 503    | 509    |
| 20                 | 251    | 437    | 461    | 459    | 464    | 409    | 423    | 502     | 508    | 383    | 504    | 509    |
| 21                 | 250    | 438    | 460    | 458    | 468    | 404    | 444    | 502     | 506    | 406    | 500    | 507    |
| 22                 | 220    | 440    | 459    | 459    | 468    | 395    | 455    | 502     | 511    | 504    | 498    | 508    |
| 23                 | 171    | 443    | 461    | 459    | 465    | 389    | 458    | 502     | 510    | 506    | 501    | 508    |
| 24                 | 169    | 445    | 463    | 460    | 465    | 391    | 458    | 502     | 506    | 505    | 500    | 510    |
| 25                 | 166    | 447    | 462    | 460    | 468    | 395    | 473    | 503     | 509    | 508    | 497    | 508    |
| 26                 | 165    | 452    | 461    | 462    | 468    | 381    | 494    | 499     | 510    | 508    | 497    | 509    |
| 27                 | 167    | 453    | 462    | 465    | 468    | 387    | 501    | 498     | 510    | 509    | 498    | 509    |
| 28                 | 167    | 454    | 463    | 463    | 464    | 380    | 495    | 498     | 510    | 510    | 500    | 510    |
| 29                 | 169    | 453    | 474    | 463    | -----  | 373    | 494    | 499     | 509    | 510    | 503    | 510    |
| 30                 | 171    | 453    | 469    | 462    | -----  | 377    | 500    | 499     | 511    | 510    | 503    | 509    |
| 31                 | 170    | -----  | 466    | 463    | -----  | 427    | -----  | 499     | -----  | 510    | 501    | -----  |
| Total              | 11,242 | 10,433 | 14,235 | 14,317 | 13,117 | 13,395 | 12,544 | 15,627  | 15,185 | 15,483 | 15,664 | 15,100 |
| Mean               | 363    | 348    | 459    | 462    | 468    | 432    | 418    | 504     | 506    | 499    | 505    | 503    |
| Ac-ft              | 22,300 | 20,690 | 28,230 | 28,400 | 26,020 | 26,570 | 24,880 | 31,000  | 30,120 | 30,710 | 31,070 | 29,950 |
| Calendar year 1965 | Max    | 569    | Min    | 165    | Mean   | 439    | Ac-ft  | 318,100 |        |        |        |        |
| Water year 1965-66 | Max    | 556    | Min    | 165    | Mean   | 456    | Ac-ft  | 329,900 |        |        |        |        |



Location.--Lat 36°46'45", long 118°15'45", in NE  $\frac{1}{4}$  sec.27, T.13 S., R.34 E., on right bank 0.2 mile downstream from Pinyon Creek and 4.0 miles southwest of Independence.

Records available.--January 1923 to September 1966. Prior to October 1959, monthly discharge only, published in WSP 1734.

Gage.--Graphic water-stage recorder and Parshall flume (Cipolletti weir used during low flow each year). Altitude of gage is 5,300 ft (from topographic map). Prior to Sept. 12, 1934, graphic water-stage recorder; Sept. 12, 1934, to Dec. 13, 1936, graphic water-stage recorder and Cipolletti weir (removed during high water), at same site and datum.

Average discharge.--43 years, 12.6 cfs (9,120 acre-ft per year).

Extremes.--Maximum discharge during year, 23 cfs June 21 (gage height, 1.25 ft); minimum daily, 2.3 cfs Dec. 16.  
1923-66: Maximum discharge, 138 cfs June 21, 1963 (gage height 3.98 ft); minimum daily, 0.7 cfs Jan. 25, 1926, Dec. 15, 1935.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 5.9   | 5.4   | 3.6   | 5.5   | 3.6   | 3.0   | 4.7   | 9.7   | 19    | 18    | 11    | 4.9   |
| 2     | 5.7   | 5.4   | 3.6   | 6.0   | 3.6   | 3.0   | 5.2   | 11    | 19    | 17    | 12    | 4.9   |
| 3     | 5.5   | 5.4   | 3.5   | 4.8   | 3.6   | 3.5   | 5.5   | 12    | 18    | 17    | 11    | 4.4   |
| 4     | 5.4   | 5.4   | 3.4   | 4.9   | 3.5   | 3.4   | 5.8   | 13    | 18    | 16    | 11    | 4.2   |
| 5     | 5.4   | 5.3   | 3.4   | 4.7   | 3.5   | 3.2   | 6.0   | 13    | 17    | 15    | 10    | 4.1   |
| 6     | 5.2   | 5.3   | 3.4   | 4.7   | 3.6   | 3.2   | 6.3   | 15    | 17    | 15    | 10    | 3.9   |
| 7     | 5.2   | 5.3   | 3.2   | 4.6   | 3.5   | 3.2   | 6.7   | 16    | 18    | 14    | 10    | 3.8   |
| 8     | 5.0   | 5.3   | 3.2   | 4.5   | 3.6   | 3.2   | 7.1   | 17    | 18    | 14    | 9.5   | 3.8   |
| 9     | 4.9   | 5.2   | 3.4   | 4.2   | 4.0   | 3.2   | 7.6   | 16    | 18    | 14    | 9.1   | 3.6   |
| 10    | 4.9   | 5.2   | 3.2   | 4.2   | 3.8   | 3.4   | 7.8   | 15    | 17    | 13    | 8.7   | 3.5   |
| 11    | 4.7   | 5.2   | 3.2   | 4.1   | 4.2   | 3.4   | 7.3   | 14    | 16    | 12    | 8.3   | 3.5   |
| 12    | 4.5   | 5.2   | 3.2   | 4.1   | 3.6   | 3.5   | 6.6   | 13    | 17    | 12    | 7.9   | 3.3   |
| 13    | 4.4   | 5.2   | 3.4   | 4.0   | 4.4   | 3.4   | 6.4   | 13    | 18    | 11    | 7.7   | 3.3   |
| 14    | 4.4   | 6.0   | 4.6   | 3.9   | 3.6   | 3.2   | 6.2   | 14    | 19    | 11    | 7.5   | 3.3   |
| 15    | 4.4   | 5.9   | 4.2   | 3.9   | 3.8   | 3.2   | 6.2   | 14    | 19    | 11    | 7.2   | 3.3   |
| 16    | 4.2   | 6.8   | 2.3   | 4.0   | 4.1   | 3.2   | 6.4   | 15    | 19    | 10    | 7.0   | 3.2   |
| 17    | 4.2   | 6.6   | 3.0   | 5.5   | 3.6   | 3.2   | 6.6   | 17    | 19    | 10    | 6.8   | 3.2   |
| 18    | 4.2   | 5.9   | 3.5   | 5.3   | 3.2   | 3.2   | 6.6   | 18    | 20    | 9.5   | 7.0   | 3.2   |
| 19    | 4.2   | 5.5   | 4.0   | 4.1   | 3.2   | 3.2   | 6.8   | 18    | 21    | 10    | 6.6   | 3.6   |
| 20    | 4.1   | 5.5   | 4.6   | 4.2   | 3.2   | 3.2   | 6.6   | 18    | 22    | 10    | 6.6   | 4.1   |
| 21    | 4.1   | 5.5   | 4.6   | 4.6   | 3.2   | 3.2   | 6.2   | 18    | 22    | 9.7   | 6.4   | 3.8   |
| 22    | 4.1   | 6.0   | 4.5   | 5.0   | 3.2   | 3.4   | 5.9   | 19    | 21    | 9.7   | 6.2   | 3.5   |
| 23    | 4.1   | 5.8   | 4.8   | 5.3   | 3.2   | 3.4   | 5.7   | 20    | 20    | 9.7   | 6.0   | 3.5   |
| 24    | 4.1   | 5.5   | 4.6   | 3.9   | 3.2   | 3.4   | 5.9   | 20    | 18    | 9.7   | 5.9   | 3.3   |
| 25    | 4.1   | 4.9   | 4.5   | 3.9   | 3.2   | 3.4   | 6.0   | 20    | 18    | 9.5   | 5.7   | 3.2   |
| 26    | 4.1   | 4.7   | 4.2   | 3.7   | 3.2   | 3.4   | 6.6   | 21    | 18    | 9.5   | 5.4   | 3.1   |
| 27    | 4.1   | 4.5   | 4.1   | 3.7   | 3.4   | 3.6   | 7.2   | 21    | 17    | 9.5   | 5.4   | 3.2   |
| 28    | 4.7   | 4.2   | 4.1   | 3.8   | 3.2   | 3.7   | 7.7   | 22    | 18    | 9.1   | 5.2   | 3.1   |
| 29    | 5.5   | 4.2   | 4.5   | 3.6   | ----- | 3.8   | 8.3   | 22    | 18    | 9.1   | 5.0   | 2.9   |
| 30    | 5.5   | 3.7   | 5.4   | 3.6   | ----- | 4.0   | 8.7   | 21    | 18    | 9.7   | 5.0   | 2.9   |
| 31    | 5.5   | ----- | 5.2   | 3.6   | ----- | 4.4   | ----- | 21    | ----- | 10    | 4.9   | ----- |
| Total | 146.3 | 160.0 | 120.4 | 135.9 | 99.0  | 104.7 | 196.6 | 516.7 | 557   | 364.7 | 236.0 | 107.6 |
| Mean  | 4.72  | 5.33  | 3.88  | 4.38  | 3.54  | 3.38  | 6.55  | 16.7  | 18.6  | 11.8  | 7.61  | 3.59  |
| Ac-Ft | 290   | 317   | 239   | 270   | 196   | 208   | 390   | 1,020 | 1,100 | 723   | 468   | 213   |

|                    |     |    |     |     |      |      |       |        |
|--------------------|-----|----|-----|-----|------|------|-------|--------|
| Calendar year 1965 | Max | 85 | Min | 2.3 | Mean | 18.6 | Ac-ft | 13,500 |
| Water year 1965-66 | Max | 22 | Min | 2.3 | Mean | 7.52 | Ac-ft | 5,440  |

10-2824.8. Mazourka Creek near Independence, Calif.

Location.--Lat 36°50'50", long 118°05'05", in NE $\frac{1}{4}$  lot 19, N $\frac{1}{2}$  sec.5, T.13 S., R.36 E., on right bank 7 miles northeast of Independence.

Drainage area.--15.6 sq mi.

Records available.--October 1960 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 4,800 ft (from topographic map).

Average discharge.--6 years, 0.00005 cfs (0.04 acre-ft per year).

Extremes.--No flow during year.

1960-66: Maximum discharge, 1.0 cfs July 26, 1964 (gage height, 1.37 ft), on basis of area-velocity study; no flow for all or most of each year.

Remarks.--No flow since July 26, 1964. No regulation or diversion above station.

10-2857. Owens River at Keeler Bridge, near Lone Pine, Calif.

Location.--Lat 36°34'30", long 118°00'45", in NW $\frac{1}{4}$  sec.1, T.16 S., R.36 E., on left bank under old timber bridge, 0.5 mile upstream from bridge on State Highway 190 and 3.4 miles southeast of Lone Pine.

Records available.--January 1927 to September 1966. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Staff gage read weekly and Cipolletti weir. Altitude of gage is 3,600 ft (from topographic map). Prior to Oct. 19, 1930, staff gage, and Oct. 20, 1930, to Feb. 14, 1935, staff gage and Cipolletti weir, all at present site at different datum. Feb. 14, 1935, to Nov. 22, 1964, graphic water-stage recorder and Cipolletti weir at same site and datum.

Extremes.--Maximum discharge observed during year, 8.2 cfs Feb. 18 (gage height 0.39 ft); no flow July 22-29, Aug. 19-27.

1927-66: Maximum daily discharge, 1,200 cfs July 9, 1938 (gage height, 7.06 ft); no flow at times in some years.

Remarks.--Natural flow affected by storage in several reservoirs, many natural lakes, diversions for irrigation, and return flow from irrigated areas. Major portion of discharge from drainage is diverted out of basin above gage through Los Angeles aqueduct. Discharge reported herein is wasted into Owens Lake.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 2.0  | 2.9   | 4.4   | 5.0   | 6.4   | 7.4   | 6.7   | 4.8   | 2.2   | 0.60 | 0.20 | 0.20  |
| 2     | 1.9  | 2.9   | 4.4   | 5.0   | 6.5   | 7.4   | 6.7   | 4.7   | 2.1   | .60  | .30  | .20   |
| 3     | 1.8  | 3.0   | 4.5   | 5.0   | 6.6   | 7.3   | 6.8   | 4.5   | 2.0   | .60  | .40  | .20   |
| 4     | 1.7  | 3.0   | 4.5   | 5.0   | 6.7   | 7.3   | 6.8   | 4.4   | 2.0   | .50  | .40  | .30   |
| 5     | 1.6  | 3.0   | 4.5   | 5.0   | 6.8   | 7.3   | 6.8   | 4.3   | 2.0   | .50  | .50  | .30   |
| 6     | 1.6  | 3.0   | 4.5   | 5.1   | 6.8   | 7.4   | 6.9   | 4.2   | 2.0   | .40  | .50  | .40   |
| 7     | 1.5  | 3.1   | 4.5   | 5.3   | 6.9   | 7.4   | 6.9   | 4.2   | 2.0   | .40  | .50  | .40   |
| 8     | 1.4  | 3.1   | 4.5   | 5.3   | 7.0   | 7.4   | 7.0   | 4.2   | 2.0   | .40  | .50  | .40   |
| 9     | 1.4  | 3.1   | 4.5   | 5.3   | 7.1   | 7.5   | 6.8   | 4.2   | 2.0   | .40  | .50  | .50   |
| 10    | 1.5  | 3.2   | 4.5   | 5.3   | 7.2   | 7.5   | 6.7   | 4.2   | 2.0   | .30  | .50  | .50   |
| 11    | 1.6  | 3.2   | 4.5   | 5.3   | 7.3   | 7.6   | 6.6   | 4.2   | 1.9   | .30  | .50  | .60   |
| 12    | 1.6  | 3.2   | 4.5   | 5.3   | 7.4   | 7.6   | 6.5   | 4.2   | 1.8   | .30  | .50  | .60   |
| 13    | 1.6  | 3.4   | 4.5   | 5.3   | 7.5   | 7.6   | 6.3   | 4.2   | 1.8   | .20  | .40  | .60   |
| 14    | 1.7  | 3.7   | 4.5   | 5.3   | 7.7   | 7.6   | 6.2   | 4.0   | 1.8   | .20  | .40  | .70   |
| 15    | 1.8  | 3.9   | 4.5   | 5.2   | 7.8   | 7.6   | 6.1   | 3.8   | 1.7   | .20  | .30  | .70   |
| 16    | 1.8  | 4.1   | 4.5   | 5.2   | 7.9   | 7.6   | 6.0   | 3.6   | 1.6   | .20  | .20  | .80   |
| 17    | 1.9  | 4.3   | 4.5   | 5.2   | 8.1   | 7.6   | 5.9   | 3.4   | 1.6   | .10  | .10  | .80   |
| 18    | 1.9  | 4.5   | 4.5   | 5.1   | 8.2   | 7.6   | 5.8   | 3.2   | 1.5   | .10  | .10  | .90   |
| 19    | 2.0  | 4.7   | 4.5   | 5.1   | 8.1   | 7.6   | 5.8   | 3.0   | 1.4   | .10  | 0    | 1.0   |
| 20    | 2.0  | 4.6   | 4.5   | 5.0   | 8.0   | 7.6   | 5.7   | 2.8   | 1.3   | .10  | 0    | 1.1   |
| 21    | 2.1  | 4.6   | 4.5   | 5.0   | 7.9   | 7.6   | 5.6   | 2.8   | 1.2   | .10  | 0    | 1.2   |
| 22    | 2.2  | 4.5   | 4.5   | 5.1   | 7.8   | 7.6   | 5.5   | 2.8   | 1.1   | 0    | 0    | 1.3   |
| 23    | 2.2  | 4.4   | 4.5   | 5.3   | 7.8   | 7.6   | 5.4   | 2.8   | 1.0   | 0    | 0    | 1.4   |
| 24    | 2.3  | 4.4   | 4.6   | 5.5   | 7.7   | 7.6   | 5.4   | 2.8   | .90   | 0    | 0    | 1.4   |
| 25    | 2.4  | 4.3   | 4.7   | 5.6   | 7.6   | 7.6   | 5.3   | 2.8   | .90   | 0    | 0    | 1.5   |
| 26    | 2.5  | 4.2   | 4.8   | 5.8   | 7.5   | 7.4   | 5.2   | 2.8   | .80   | 0    | 0    | 1.6   |
| 27    | 2.6  | 4.2   | 4.8   | 5.9   | 7.5   | 7.3   | 5.1   | 2.8   | .80   | 0    | 0    | 1.6   |
| 28    | 2.7  | 4.3   | 4.9   | 6.1   | 7.4   | 7.2   | 5.1   | 2.7   | .70   | 0    | .10  | 1.7   |
| 29    | 2.8  | 4.3   | 5.0   | 6.2   | ----- | 7.1   | 5.0   | 2.6   | .70   | 0    | .10  | 1.7   |
| 30    | 2.8  | 4.4   | 5.0   | 6.3   | ----- | 6.9   | 4.9   | 2.4   | .70   | .10  | .10  | 1.8   |
| 31    | 2.9  | ----- | 5.0   | 6.3   | ----- | 6.8   | ----- | 2.3   | ----- | .20  | .10  | ----- |
| Total | 61.8 | 113.5 | 142.1 | 166.4 | 207.2 | 230.6 | 181.5 | 109.7 | 45.50 | 6.90 | 7.20 | 26.40 |
| Mean  | 1.99 | 3.78  | 4.58  | 5.37  | 7.40  | 7.44  | 6.05  | 3.54  | 1.52  | 0.22 | 0.23 | 0.88  |
| Ac-ft | 123  | 225   | 282   | 330   | 411   | 457   | 360   | 218   | 90    | 14   | 14   | 52    |

Calendar year 1965 Max 6.7 Min 0.30 Mean 3.16 Ac-ft 2,290  
 Water year 1965-66 Max 8.2 Min 0 Mean 3.56 Ac-ft 2,580

10-2860. Cottonwood Creek near Olancho, Calif.

Location.--Lat 36°26'20", long 118°04'40", in Inyo National Forest, just downstream from intake to Cottonwood powerhouse, and 11.2 miles north of Olancho, Inyo County.

Drainage area.--39.9 sq mi.

Records available.--January 1906 to March 1911, January 1914 to September 1966; combined records of creek and flow through powerhouse, November 1938 to September 1966. January 1914 to September 1959 monthly discharge only, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and Parshall flume (Cipolletti weir used during low flow each year) on creek; graphic water-stage and Cipolletti weir on powerhouse diversion. Prior to Sept. 9, 1908, staff gage at site about 2 miles downstream at different datum. Sept. 9, 1908, to Mar. 31, 1911, and Jan. 1, 1914, to Mar. 6, 1921, staff gage and Mar. 7, 1921, to Oct. 31, 1938, graphic water-stage recorder, at site just upstream from intake to Cottonwood powerhouse at different datum.

Average combined discharge.--56 years (1906-10, 1914-66), 22.0 cfs (15,930 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 27 cfs Apr. 15 (gage height, 1.59 ft); minimum daily, 0.10 cfs for many days. 1906-11, 1914-66: Maximum discharge observed, 434 cfs June 13, 1906 (discharge measurement); no flow for some days in 1959, 1961, 1964.

(combined).--Maximum discharge during year, 49 cfs Dec. 26; minimum daily, 3.4 cfs Sept. 11-13.

1906-11, 1914-66: Maximum discharge observed, 434 cfs June 13, 1906; minimum daily, 1.0 cfs July 22, 23, 1961.

Remarks.--No regulation above station. Cottonwood powerhouse (maximum capacity, 22 cfs) has diverted since Nov. 13, 1908. For records of combined discharge of Cottonwood Creek and powerhouse, see following page.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0.10  | 0.70 | 0.20 | 0.20  | 2.4   | 2.7   | 5.6   | 2.6   | 0.10 | 0.10 | 0.10  |
| 2     | .10  | .10   | .10  | .20  | .20   | .40   | 4.3   | 5.6   | 1.7   | .10  | .10  | .10   |
| 3     | .10  | .10   | .10  | .20  | .20   | .30   | 5.6   | 5.8   | 1.3   | .10  | .20  | .10   |
| 4     | .10  | .10   | .10  | .10  | .20   | .20   | 8.2   | 5.6   | 1.2   | .10  | .20  | .10   |
| 5     | .10  | .10   | .10  | .10  | .20   | .20   | 10    | 5.8   | 1.1   | .10  | .20  | .10   |
| 6     | .10  | .10   | .10  | .10  | .20   | .20   | 11    | 6.0   | 1.1   | .10  | .10  | .10   |
| 7     | .10  | .10   | .10  | .10  | .20   | .20   | 11    | 6.7   | 1.0   | .10  | .10  | .10   |
| 8     | .10  | .10   | .10  | .10  | .20   | .20   | 12    | 6.4   | 1.1   | .10  | .10  | .10   |
| 9     | .20  | .10   | .10  | .10  | .20   | .20   | 14    | 6.7   | 1.2   | .10  | .10  | .10   |
| 10    | .20  | .10   | .10  | .10  | .20   | .20   | 13    | 10    | 1.0   | .10  | .10  | .10   |
| 11    | .20  | .10   | .10  | .10  | .20   | .20   | 13    | 12    | 1.0   | .10  | .10  | .10   |
| 12    | .20  | .10   | .10  | .10  | .20   | .20   | 12    | 8.0   | 1.0   | .10  | .10  | .10   |
| 13    | .20  | .10   | .10  | .10  | .10   | .20   | 10    | 8.2   | 1.0   | .10  | .10  | .10   |
| 14    | .20  | .10   | .20  | .10  | .10   | .20   | 12    | 7.1   | 1.0   | .10  | .10  | .10   |
| 15    | .20  | .10   | .20  | .10  | .10   | .20   | 14    | 6.7   | 1.0   | .10  | .10  | .10   |
| 16    | .10  | .10   | .20  | .10  | .10   | .20   | 15    | 6.4   | 1.3   | .10  | .10  | .10   |
| 17    | .10  | .10   | .20  | .10  | .10   | .20   | 12    | 6.2   | .80   | .10  | .10  | .10   |
| 18    | .10  | .10   | .20  | .10  | .10   | .20   | 8.9   | 6.2   | .20   | .10  | .10  | .10   |
| 19    | .10  | .10   | .20  | .10  | .10   | .20   | 6.0   | 5.8   | .10   | .20  | .10  | .10   |
| 20    | .10  | .10   | .20  | .10  | .10   | .20   | 5.2   | 5.8   | .10   | .20  | .10  | .10   |
| 21    | .10  | .10   | .20  | .10  | .10   | .20   | 5.2   | 6.7   | .10   | .20  | .10  | .10   |
| 22    | .10  | .20   | .20  | .10  | .10   | .20   | 5.4   | 5.4   | .30   | .20  | .10  | .10   |
| 23    | .10  | .20   | .20  | .10  | .10   | .20   | 5.8   | 5.2   | .20   | .20  | .10  | .10   |
| 24    | .10  | .20   | .20  | .10  | .10   | .20   | 7.3   | 4.9   | .20   | .20  | .10  | .10   |
| 25    | .10  | .20   | .20  | .10  | .10   | .20   | 8.9   | 4.7   | .20   | .10  | .10  | .10   |
| 26    | .10  | .10   | .30  | .10  | .10   | .10   | 9.4   | 4.9   | .20   | .10  | .10  | .10   |
| 27    | .10  | .10   | .30  | .10  | .10   | .10   | 8.2   | 5.0   | .20   | .10  | .10  | .10   |
| 28    | .10  | .10   | .20  | .10  | .10   | .20   | 7.1   | 4.7   | .20   | .10  | .10  | .10   |
| 29    | .10  | .10   | .20  | .10  | ----- | .40   | 6.7   | 3.9   | .10   | .10  | .10  | .10   |
| 30    | .10  | .20   | .20  | .10  | ----- | 1.2   | 5.8   | 3.6   | .10   | .10  | .10  | .10   |
| 31    | .10  | ----- | .20  | .10  | ----- | 1.6   | ----- | 3.3   | ----- | .10  | .10  | ----- |
| Total | 3.80 | 3.50  | 5.70 | 3.40 | 4.00  | 11.10 | 269.7 | 188.9 | 22.60 | 3.70 | 3.40 | 3.00  |
| Mean  | 0.12 | 0.12  | 0.18 | 0.11 | 0.14  | 0.36  | 8.99  | 6.09  | 0.75  | 0.12 | 0.11 | 0.10  |
| Ac-ft | 7.5  | 6.9   | 11   | 6.7  | 7.9   | 22    | 535   | 375   | 45    | 7.3  | 6.7  | 6.0   |

Calendar year 1965 Max 77 Min 0.10 Mean 9.02 Ac-ft 6,530  
 Water year 1965-66 Max 15 Min 0.10 Mean 1.43 Ac-ft 1,040

## OWENS LAKE BASIN

10-2860. Cottonwood Creek near Olancho, Calif.--Continued.

Combined discharge, in cubic feet per second, of Cottonwood Creek and powerhouse near Olancho, Calif., water year October 1965 to September 1966

| Day                | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July  | Aug.  | Sept. |
|--------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1                  | 9.3   | 7.5   | 17    | 9.4   | 7.6   | 9.2   | 23    | 27     | 23    | 12    | 7.8   | 4.1   |
| 2                  | 9.3   | 7.5   | 13    | 10    | 7.6   | 6.9   | 25    | 27     | 22    | 11    | 8.1   | 4.3   |
| 3                  | 8.9   | 7.2   | 12    | 9.4   | 7.6   | 6.8   | 27    | 27     | 22    | 11    | 12    | 4.1   |
| 4                  | 8.9   | 7.2   | 11    | 9.3   | 7.6   | 6.7   | 29    | 27     | 22    | 10    | 8.2   | 3.9   |
| 5                  | 8.9   | 7.5   | 11    | 8.9   | 7.6   | 6.5   | 30    | 27     | 21    | 9.9   | 8.7   | 3.9   |
| 6                  | 8.9   | 7.5   | 11    | 9.3   | 7.6   | 6.5   | 31    | 27     | 21    | 9.5   | 7.5   | 3.9   |
| 7                  | 8.6   | 7.5   | 10    | 9.5   | 7.6   | 6.5   | 31    | 28     | 21    | 8.9   | 6.6   | 3.9   |
| 8                  | 8.6   | 7.2   | 10    | 9.3   | 7.6   | 6.5   | 32    | 28     | 21    | 9.3   | 6.4   | 3.7   |
| 9                  | 8.4   | 6.9   | 10    | 9.3   | 7.6   | 6.7   | 34    | 29     | 22    | 12    | 6.1   | 3.7   |
| 10                 | 8.2   | 6.9   | 10    | 9.5   | 7.6   | 7.3   | 33    | 32     | 21    | 10    | 5.8   | 3.7   |
| 11                 | 8.2   | 6.6   | 10    | 9.3   | 7.3   | 7.6   | 33    | 33     | 20    | 9.3   | 5.6   | 3.4   |
| 12                 | 8.2   | 7.5   | 10    | 9.3   | 7.6   | 7.9   | 33    | 29     | 20    | 8.9   | 5.3   | 3.4   |
| 13                 | 8.2   | 7.8   | 10    | 9.3   | 7.2   | 7.9   | 31    | 28     | 19    | 8.6   | 5.3   | 3.4   |
| 14                 | 7.6   | 6.6   | 9.6   | 9.3   | 7.2   | 8.2   | 33    | 27     | 18    | 8.3   | 5.1   | 3.7   |
| 15                 | 7.6   | 7.2   | 8.4   | 9.3   | 7.2   | 7.9   | 36    | 27     | 20    | 8.1   | 5.1   | 3.7   |
| 16                 | 7.5   | 9.3   | 8.2   | 8.9   | 7.2   | 8.2   | 37    | 26     | 21    | 7.5   | 5.1   | 3.9   |
| 17                 | 7.8   | 8.1   | 8.7   | 8.9   | 7.2   | 8.2   | 33    | 26     | 21    | 7.2   | 5.1   | 3.7   |
| 18                 | 7.8   | 8.6   | 8.7   | 8.6   | 7.2   | 9.0   | 30    | 27     | 19    | 7.2   | 5.1   | 3.7   |
| 19                 | 7.8   | 10    | 9.0   | 8.6   | 6.9   | 9.4   | 27    | 27     | 18    | 7.0   | 5.3   | 4.3   |
| 20                 | 7.8   | 11    | 9.4   | 8.3   | 6.9   | 9.6   | 25    | 27     | 17    | 7.0   | 5.1   | 5.1   |
| 21                 | 7.8   | 12    | 9.4   | 8.3   | 6.9   | 10    | 26    | 28     | 16    | 6.7   | 5.1   | 4.3   |
| 22                 | 8.1   | 13    | 9.0   | 8.3   | 6.9   | 10    | 25    | 26     | 13    | 6.5   | 5.1   | 3.9   |
| 23                 | 8.1   | 12    | 9.4   | 8.1   | 6.9   | 11    | 26    | 25     | 15    | 8.4   | 4.8   | 4.1   |
| 24                 | 7.8   | 10    | 9.4   | 7.8   | 6.9   | 11    | 27    | 25     | 14    | 8.7   | 4.6   | 4.8   |
| 25                 | 7.8   | 11    | 18    | 7.8   | 6.9   | 11    | 29    | 26     | 14    | 7.5   | 4.3   | 3.9   |
| 26                 | 7.8   | 10    | 19    | 7.8   | 6.9   | 11    | 28    | 27     | 13    | 6.9   | 4.3   | 3.9   |
| 27                 | 8.1   | 11    | 8.8   | 7.8   | 6.9   | 13    | 27    | 26     | 13    | 6.9   | 4.1   | 3.9   |
| 28                 | 7.8   | 11    | 8.4   | 7.5   | 6.9   | 14    | 27    | 26     | 13    | 6.6   | 4.1   | 3.9   |
| 29                 | 7.8   | 12    | 9.0   | 7.5   | ----- | 15    | 27    | 26     | 12    | 6.4   | 3.9   | 3.9   |
| 30                 | 7.5   | 14    | 8.7   | 7.8   | ----- | 17    | 27    | 25     | 13    | 8.1   | 3.7   | 3.7   |
| 31                 | 7.5   | ----- | 9.0   | 7.5   | ----- | 20    | ----- | 23     | ----- | 8.1   | 3.7   | ----- |
| Total              | 252.6 | 271.6 | 325.1 | 269.9 | 203.1 | 296.5 | 882   | 839    | 545   | 263.5 | 177.0 | 117.8 |
| Mean               | 8.15  | 9.05  | 10.5  | 8.71  | 7.25  | 9.56  | 29.4  | 27.1   | 18.2  | 8.50  | 5.71  | 3.93  |
| Ac-ft              | 501   | 539   | 645   | 535   | 403   | 588   | 1,750 | 1,660  | 1,080 | 523   | 351   | 234   |
| Calendar year 1965 | Max   | 95    | Min   | 5.4   | Mean  | 21.7  | Ac-ft | 15,680 |       |       |       |       |
| Water year 1965-66 | Max   | 37    | Min   | 3.4   | Mean  | 12.2  | Ac-ft | 8,810  |       |       |       |       |

## MONO LAKE BASIN

10-2870. Mono Lake near Mono Lake, Calif.

Location.--Lat 37°58'46", long 119°08'11", in NW¼ sec. 5, T.2 N., R.26 E., on west bank 1 mile south of town of Mono Lake.

Records available.--June 1912 to September 1966. Records prior to September 1934 are published in WSP 765.

Gage.--Staff gage or reference point read once a week. Gage heights prior to October 1944 are converted to elevations above mean sea level in WSP 1314. Gage readings have been reduced to elevations above mean sea level, datum of 1929.

Extremes.--1912-66: Maximum elevation observed, 6,428.1 ft July 18, 1919, present datum; minimum observed, 6,387.42 ft Sept. 29, 1966.

Remarks.--Since 1941 water diverted to Owens Lake basin via Mono tunnel (capacity, 200 cfs).

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power.

Elevation, in feet, water year October 1965 to September 1966

| Date   | Elevation | Date    | Elevation | Date    | Elevation | Date    | Elevation |
|--------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Oct. 4 | 6,389.05  | Jan. 3  | 6,389.09  | Apr. 14 | 6,389.27  | July 8  | 6,388.50  |
| 11     | 6,389.02  | 14      | 6,389.17  | 18      | 6,389.25  | 14      | 6,388.39  |
| 18     | 6,388.99  | 24      | 6,389.19  | 25      | 6,389.23  | 25      | 6,388.30  |
| 25     | 6,388.95  | 31      | 6,389.21  | May 5   | 6,389.12  | Aug. 5  | 6,388.23  |
| Nov. 1 | 6,388.95  | Feb. 7  | 6,389.21  | 9       | 6,389.13  | 11      | 6,388.13  |
| 8      | 6,388.95  | 14      | 6,389.19  | 16      | 6,389.07  | 18      | 6,388.08  |
| 15     | 6,388.95  | 21      | 6,389.22  | 23      | 6,389.03  | 25      | 6,388.01  |
| 22     | 6,388.95  | 28      | 6,389.33  | 31      | 6,388.93  | Sept. 1 | 6,387.78  |
| 29     | 6,388.94  | Mar. 11 | 6,389.35  | June 10 | 6,388.90  | 8       | 6,387.67  |
| Dec. 6 | 6,388.93  | 14      | 6,389.38  | 17      | 6,388.82  | 15      | 6,387.59  |
| 13     | 6,388.98  | 21      | 6,389.48  | 23      | 6,388.78  | 22      | 6,387.51  |
| 20     | 6,388.95  | 28      | 6,389.40  | 30      | 6,388.63  | 29      | 6,387.42  |
| 29     | 6,388.97  | Apr. 7  | 6,389.33  |         |           |         |           |

10-2874. Rush Creek above Grant Lake, near June Lake, Calif.

Location.--Lat 37°48'20", long 119°06'30", in NE $\frac{1}{4}$  sec. 4, T.2 S., R.26 E., on left bank in narrows, 0.6 mile upstream from Grant Lake, and 2.7 miles northwest of town of June Lake.

Drainage area.--51.2 sq mi.

Records available.--December 1936 to September 1966. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and Parshall flume. Altitude of gage is 7,200 ft (from topographic map).

Average discharge.--29 years (1937-66), 79.8 cfs (57,770 acre-ft per year).

Extremes.--Maximum discharge during year, 181 cfs May 22 (gage height, 2.04); minimum daily, 15 cfs Aug. 31.  
1936-66: Maximum daily discharge, 711 cfs June 28, 1938; minimum daily, 5.5 cfs Sept. 6-8, 1954.

Remarks.--Flow regulated by Gem Lake, Lake Agnew, and Waugh Lake (combined capacity, 23,400 acre-ft), and by many natural lakes. No diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 97    | 35    | 53    | 53    | 49    | 50    | 69    | 128   | 144   | 120   | 105   | 18    |
| 2     | 97    | 35    | 51    | 53    | 48    | 51    | 74    | 130   | 142   | 119   | 108   | 45    |
| 3     | 98    | 34    | 49    | 53    | 48    | 52    | 76    | 135   | 134   | 117   | 107   | 52    |
| 4     | 98    | 36    | 49    | 55    | 49    | 51    | 77    | 139   | 131   | 114   | 106   | 52    |
| 5     | 97    | 35    | 50    | 53    | 49    | 52    | 77    | 144   | 133   | 112   | 104   | 54    |
| 6     | 97    | 30    | 50    | 54    | 51    | 54    | 80    | 149   | 131   | 111   | 104   | 62    |
| 7     | 96    | 27    | 50    | 55    | 50    | 54    | 89    | 152   | 130   | 111   | 101   | 66    |
| 8     | 96    | 78    | 50    | 55    | 49    | 53    | 115   | 153   | 129   | 109   | 100   | 54    |
| 9     | 96    | 90    | 50    | 55    | 48    | 55    | 120   | 153   | 130   | 111   | 100   | 50    |
| 10    | 96    | 91    | 49    | 54    | 49    | 60    | 124   | 131   | 133   | 108   | 99    | 48    |
| 11    | 96    | 91    | 48    | 52    | 50    | 61    | 120   | 76    | 131   | 107   | 99    | 49    |
| 12    | 95    | 89    | 47    | 52    | 48    | 61    | 118   | 62    | 131   | 105   | 98    | 42    |
| 13    | 95    | 90    | 47    | 54    | 50    | 64    | 117   | 60    | 133   | 105   | 98    | 33    |
| 14    | 96    | 108   | 47    | 54    | 48    | 64    | 115   | 60    | 134   | 106   | 98    | 32    |
| 15    | 96    | 102   | 47    | 53    | 51    | 61    | 117   | 60    | 130   | 105   | 98    | 31    |
| 16    | 94    | 104   | 46    | 52    | 51    | 61    | 119   | 83    | 136   | 105   | 97    | 19    |
| 17    | 94    | 109   | 47    | 52    | 51    | 61    | 120   | 146   | 142   | 105   | 101   | 22    |
| 18    | 94    | 118   | 47    | 50    | 52    | 60    | 121   | 161   | 140   | 106   | 92    | 29    |
| 19    | 94    | 112   | 47    | 51    | 52    | 60    | 123   | 163   | 138   | 107   | 34    | 32    |
| 20    | 94    | 108   | 46    | 52    | 52    | 61    | 121   | 160   | 138   | 107   | 23    | 31    |
| 21    | 94    | 105   | 47    | 52    | 52    | 62    | 119   | 174   | 130   | 106   | 20    | 30    |
| 22    | 72    | 105   | 47    | 52    | 53    | 61    | 118   | 175   | 128   | 105   | 20    | 30    |
| 23    | 33    | 111   | 45    | 48    | 52    | 61    | 117   | 171   | 128   | 105   | 45    | 29    |
| 24    | 80    | 100   | 47    | 49    | 52    | 60    | 117   | 168   | 124   | 105   | 52    | 28    |
| 25    | 75    | 96    | 51    | 48    | 52    | 59    | 118   | 166   | 123   | 104   | 52    | 29    |
| 26    | 65    | 89    | 47    | 49    | 52    | 57    | 120   | 166   | 121   | 104   | 40    | 28    |
| 27    | 64    | 101   | 45    | 49    | 52    | 59    | 123   | 168   | 120   | 104   | 22    | 29    |
| 28    | 40    | 102   | 46    | 49    | 51    | 61    | 124   | 168   | 121   | 102   | 18    | 28    |
| 29    | 38    | 83    | 56    | 48    | ----- | 64    | 124   | 166   | 123   | 102   | 16    | 21    |
| 30    | 37    | 64    | 51    | 52    | ----- | 64    | 126   | 159   | 121   | 102   | 16    | 20    |
| 31    | 32    | ----- | 53    | 49    | ----- | 67    | ----- | 152   | ----- | 104   | 15    | ----- |
| Total | 2,546 | 2,478 | 1,505 | 1,607 | 1,411 | 1,821 | 3,298 | 4,278 | 3,929 | 3,333 | 2,188 | 1,093 |
| Mean  | 82.1  | 82.6  | 48.5  | 51.8  | 50.4  | 58.7  | 110   | 138   | 131   | 108   | 70.6  | 36.4  |
| Ac-ft | 5,050 | 4,920 | 2,990 | 3,190 | 2,800 | 3,610 | 6,540 | 8,490 | 7,790 | 6,610 | 4,340 | 2,170 |

Calendar year 1965 Max 254 Min 24 Mean 97.7 Ac-ft 70,740  
Water year 1965-66 Max 175 Min 15 Mean 80.8 Ac-ft 58,490

10-2879, Lee Vining Creek near Lee Vining, Calif.

Location.--Lat 37°55'45", long 119°10'10", in SW¼ sec.24, T.1 N., R.25 E., on right bank 0.8 mile upstream from Gibbs Canyon and 3.3 miles southwest of Lee Vining.

Drainage area.--35.2 sq mi.

Records available.--April 1934 to September 1966. Monthly discharge only prior to October 1959, published in WSP 1314 and 1734.

Gage.--Graphic water-stage recorder and partial concrete control. Altitude of gage is 7,400 ft (from topographic map). Prior to Aug. 6, 1944, staff gage at same site at different datum. Aug. 6, 1944, to Oct. 17, 1955, graphic water-stage recorder at same site at different datum.

Average discharge.--32 years, 65.8 cfs (47,640 acre-ft per year).

Extremes.--Maximum discharge during year, 163 cfs May 22 (gage height, 2.65 ft); minimum daily, 13 cfs Nov. 12.

1934-66: Maximum discharge observed, 503 cfs June 9, 1938 (gage height, 3.07 ft, datum then in use); no flow Nov. 29, 1935.

Remarks.--Flow regulated by Ellery, Saddlebag, and Tioga Lakes (combined capacity, 13,269 acre-ft) and several small natural lakes. No diversion above station.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power, and reviewed by Geological Survey; furnished figures rounded by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July  | Aug.  | Sept. |
|--------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1                  | 33    | 55    | 38    | 32    | 34    | 22    | 54    | 102    | 84    | 76    | 48    | 26    |
| 2                  | 38    | 56    | 29    | 32    | 34    | 24    | 73    | 107    | 81    | 59    | 48    | 25    |
| 3                  | 65    | 56    | 39    | 45    | 34    | 24    | 73    | 136    | 60    | 56    | 47    | 24    |
| 4                  | 59    | 56    | 76    | 43    | 34    | 25    | 59    | 143    | 44    | 55    | 49    | 24    |
| 5                  | 34    | 58    | 33    | 41    | 34    | 25    | 65    | 131    | 68    | 54    | 55    | 24    |
| 6                  | 66    | 75    | 30    | 33    | 34    | 25    | 67    | 122    | 90    | 54    | 55    | 24    |
| 7                  | 66    | 89    | 30    | 39    | 34    | 26    | 96    | 146    | 104   | 54    | 44    | 24    |
| 8                  | 49    | 64    | 37    | 39    | 33    | 26    | 103   | 148    | 72    | 54    | 35    | 24    |
| 9                  | 32    | 15    | 66    | 32    | 32    | 28    | 81    | 148    | 69    | 53    | 28    | 27    |
| 10                 | 66    | 14    | 34    | 38    | 32    | 32    | 79    | 108    | 82    | 52    | 27    | 31    |
| 11                 | 61    | 14    | 28    | 32    | 32    | 34    | 76    | 104    | 103   | 53    | 27    | 31    |
| 12                 | 78    | 13    | 28    | 35    | 32    | 36    | 56    | 118    | 118   | 52    | 27    | 31    |
| 13                 | 41    | 14    | 37    | 37    | 31    | 38    | 54    | 119    | 103   | 42    | 30    | 30    |
| 14                 | 21    | 15    | 38    | 35    | 30    | 39    | 45    | 131    | 110   | 42    | 30    | 30    |
| 15                 | 28    | 14    | 31    | 36    | 29    | 34    | 47    | 148    | 130   | 41    | 30    | 27    |
| 16                 | 29    | 14    | 35    | 35    | 29    | 33    | 66    | 134    | 109   | 41    | 30    | 24    |
| 17                 | 39    | 15    | 66    | 36    | 29    | 32    | 64    | 130    | 112   | 40    | 33    | 23    |
| 18                 | 75    | 15    | 36    | 37    | 27    | 32    | 112   | 149    | 112   | 39    | 51    | 24    |
| 19                 | 72    | 15    | 31    | 38    | 25    | 32    | 78    | 149    | 112   | 45    | 45    | 25    |
| 20                 | 34    | 16    | 38    | 38    | 24    | 32    | 56    | 152    | 112   | 41    | 39    | 25    |
| 21                 | 29    | 18    | 37    | 39    | 23    | 31    | 55    | 155    | 96    | 51    | 35    | 24    |
| 22                 | 48    | 68    | 32    | 38    | 23    | 30    | 48    | 156    | 82    | 60    | 27    | 24    |
| 23                 | 63    | 79    | 32    | 38    | 22    | 49    | 43    | 155    | 75    | 53    | 29    | 31    |
| 24                 | 68    | 59    | 56    | 38    | 22    | 46    | 50    | 154    | 44    | 44    | 29    | 31    |
| 25                 | 51    | 47    | 35    | 37    | 22    | 56    | 64    | 150    | 60    | 40    | 29    | 31    |
| 26                 | 46    | 58    | 32    | 37    | 21    | 45    | 84    | 154    | 78    | 39    | 29    | 26    |
| 27                 | 54    | 67    | 42    | 38    | 21    | 37    | 87    | 155    | 78    | 39    | 29    | 22    |
| 28                 | 61    | 46    | 42    | 39    | 21    | 73    | 102   | 155    | 93    | 39    | 27    | 24    |
| 29                 | 59    | 28    | 36    | 38    | ----- | 41    | 81    | 155    | 103   | 38    | 25    | 23    |
| 30                 | 56    | 63    | 32    | 38    | ----- | 42    | 89    | 150    | 78    | 39    | 25    | 23    |
| 31                 | 58    | ----- | 56    | 38    | ----- | 45    | ----- | 120    | ----- | 40    | 25    | ----- |
| Total              | 1,579 | 1,216 | 1,212 | 1,151 | 798   | 1,094 | 2,107 | 4,284  | 2,662 | 1,485 | 1,087 | 782   |
| Mean               | 50.9  | 40.5  | 39.1  | 37.1  | 28.5  | 35.3  | 70.2  | 138    | 88.7  | 47.9  | 35.1  | 26.1  |
| Ac-ft              | 3,130 | 2,410 | 2,400 | 2,280 | 1,580 | 2,170 | 4,180 | 8,500  | 5,280 | 2,950 | 2,160 | 1,550 |
| Calendar year 1965 | Max   | 297   | Min   | 13    | Mean  | 80.1  | Ac-ft | 57,990 |       |       |       |       |
| Water year 1965-66 | Max   | 156   | Min   | 13    | Mean  | 53.3  | Ac-ft | 38,590 |       |       |       |       |

11-0100. Cottonwood Creek at Morena Dam, Calif.

Location.--Lat 32°41'01", long 116°32'45", in NE $\frac{1}{4}$  sec.23, T.17 S., R.4 E., on Morena Dam outlet tower.Drainage area.--114 sq mi (revised).Records available.--January 1916, October 1936 to September 1966.Gage.--Staff gage read once daily. Datum of gage is 2,882.4 ft above mean sea level.Average discharge.--30 years (1936-66), 10.3 cfs (7,440 acre-ft per year); median of yearly mean discharges, 2.3 cfs (1,700 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Morena Reservoir, including precipitation on reservoir surface. Discharge computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 1.00 excepting the period January 1962 to June 1963, when the mass-transfer method was used. Prior to October 1963 a coefficient of 0.80 was used. Area and capacity tables for reservoir are based on a survey made in 1948. Dam completed and storage began in 1910. Capacity of reservoir at permanent spillway level (gage height, 157.00 ft), 50,210 acre-ft. Dead storage, 654 acre-ft below outlet No. 3 at gage height 70.5 ft. No regulation or diversion above reservoir. Water is released down Cottonwood Creek to Barrett Reservoir as required.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly discharge, water year October 1965 to September 1966

| Month                   | Gage height<br>(feet)† | Contents<br>(acre-feet) | Change<br>in<br>contents<br>(acre-feet) | Draft<br>(acre-feet) | Evapo-<br>ration<br>(acre-feet) | Spill<br>plus<br>leakage<br>(acre-feet) | Discharge<br>(acre-feet) |
|-------------------------|------------------------|-------------------------|---|----------------------|---------------------------------|---|--------------------------|
|                         | Morena Reservoir       |                         |   |                      |                                 |   |                          |
| Sept. 30.....           | 62.8                   | 222                     | -                                       | -                    | -                               | -                                       | -                        |
| Oct. 31.....            | 62.3                   | 203                     | -19                                     | 0                    | 17                              | 1                                       | -1                       |
| Nov. 30.....            | 66.0                   | 374                     | +171                                    | 0                    | 5                               | 1                                       | 177                      |
| Dec. 31.....            | 67.8                   | 476                     | +102                                    | 0                    | 6                               | 2                                       | 110                      |
| Calendar year 1965..... | -                      | -                       | +233                                    | 0                    | 196                             | 19                                      | 448                      |
| Jan. 31.....            | 69.3                   | 572                     | +96                                     | 0                    | 9                               | 2                                       | 107                      |
| Feb. 28.....            | 70.8                   | 676                     | +104                                    | 0                    | 14                              | 2                                       | 120                      |
| Mar. 31.....            | 71.6                   | 734                     | +58                                     | 0                    | 20                              | 2                                       | 80                       |
| Apr. 30.....            | 71.4                   | 719                     | -15                                     | 0                    | 33                              | 2                                       | 20                       |
| May 31.....             | 71.0                   | 690                     | -29                                     | 0                    | 39                              | 2                                       | 12                       |
| June 30.....            | 70.4                   | 647                     | -43                                     | 0                    | 47                              | 2                                       | 6                        |
| July 31.....            | 69.7                   | 599                     | -48                                     | 0                    | 53                              | 1                                       | 6                        |
| Aug. 31.....            | 68.9                   | 546                     | -53                                     | 0                    | 46                              | 1                                       | -6                       |
| Sept. 30.....           | 68.3                   | 507                     | -39                                     | 0                    | 32                              | 1                                       | -6                       |
| Water year 1965-66..... | -                      | -                       | +285                                    | 0                    | 321                             | 19                                      | 625                      |

† Gage height at 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

## TIA JUANA RIVER BASIN

11-0110. Cottonwood Creek at Barrett Dam, near Dulzura, Calif.

Location.--Lat 32°40'46", long 116°40'11", in SE 1/4 of NW 1/4 sec. 22, T.17 S., R.3 E., on Barrett Dam outlet tower, 7.0 miles northeast of Dulzura.

Drainage area.--245 sq mi (revised).

Records available.--January 1906 to December 1915, October 1945 to September 1966 (discontinued). Published as "near Jamul" prior to October 1912 and as "near Dulzura" October 1912 to December 1915. October 1936 to September 1945, published as "near Dulzura"; records not equivalent, as they were computed to represent runoff from Cottonwood Creek basin below Morena Dam (drainage area, 130 sq mi).

Gage.--Staff gage read once daily. Datum of gage is 1,446.12 ft above mean sea level. January 1906 to December 1915, staff gage at same site at different datum (prior to completion of dam).

Remarks.--Records of inflow represent all water reaching Barrett Reservoir, including precipitation on the reservoir and water passing down Cottonwood Creek from Morena Reservoir. Inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 0.76. Prior to October 1964 a coefficient of 0.80 was used excepting the period January 1962 to June 1963, when the mass-transfer method was used. Area-capacity tables for reservoir are based on a resurvey made in 1948, 1951, and 1955. Barrett Dam was completed and storage began in 1922. Capacity of reservoir at top of flash gates on spillway (gage height, 168.88 ft), 44,760 acre-ft. Dead storage, 719 acre-ft below lowest outlet at gage height 58.88 ft, included in these records. Flow partly regulated by Morena Reservoir (see Sta. No. 0100). Water drawn from Barrett Reservoir is diverted out of drainage basin to Lower Otay Reservoir by Dulzura conduit for municipal use.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly inflow, water year October 1965 to September 1966

| Month                   | Gage height (feet)† | Contents (acre-feet) | Change in contents (acre-feet) | Draft (acre-feet) | Evaporation (acre-feet) | Spill plus leakage (acre-feet) | Inflow (acre-feet) |
|-------------------------|---------------------|----------------------|--------------------------------|-------------------|-------------------------|--------------------------------|--------------------|
|                         | Barrett Reservoir   |                      |                                |                   |                         |                                |                    |
| Sept. 30.....           | 68.1                | 1,367                | -                              | -                 | -                       | -                              | -                  |
| Oct. 31.....            | 67.7                | 1,335                | -32                            | 0                 | 31                      | 0                              | -1                 |
| Nov. 30.....            | 75.7                | 2,094                | +759                           | 0                 | 11                      | 0                              | 770                |
| Dec. 31.....            | 79.0                | 2,477                | +383                           | 0                 | 7                       | .5                             | 390                |
| Calendar year 1965..... | -                   | -                    | +1,434                         | 0                 | 290                     | 0.5                            | 1,724              |
| Jan. 31.....            | 82.8                | 2,986                | +509                           | 0                 | 14                      | .6                             | 524                |
| Feb. 28.....            | 88.1                | 3,832                | +846                           | 0                 | 19                      | .5                             | 866                |
| Mar. 31.....            | 90.5                | 4,274                | +442                           | 0                 | 40                      | .3                             | 482                |
| Apr. 30.....            | 90.9                | 4,351                | +77                            | 0                 | 63                      | .1                             | 140                |
| May 31.....             | 87.4                | 3,711                | -640                           | 545               | 68                      | .1                             | -27                |
| June 30.....            | 69.2                | 1,460                | -2,251                         | 2,450             | 58                      | .1                             | 257                |
| July 31.....            | 60.9                | 841                  | -619                           | 660               | 37                      | 0                              | 78                 |
| Aug. 31.....            | 60.5                | 816                  | -25                            | 0                 | 34                      | 0                              | 9                  |
| Sept. 30.....           | 60.2                | 798                  | -18                            | 0                 | 25                      | 0                              | 7                  |
| Water year 1965-66..... | -                   | -                    | -569                           | 3,655             | 407                     | 2.2                            | 3,495              |

† Gage height 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of inflow may appear. This arises primarily from the difficulty of computing inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.



11-0120. Cottonwood Creek above Tecate Creek, near Dulzura, Calif.

Location.--Lat 32°34'30", long 116°45'10", in SW<sup>1</sup>/<sub>4</sub> sec.26, T.18 S., R.2 E., on right bank 0.8 mile upstream from confluence with Tecate Creek and 5.1 miles south of Dulzura.

Drainage area.--310 sq mi (revised).

Records available.--October 1936 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 569.40 ft above mean sea level (levels by International Boundary and Water Commission).

Average discharge.--30 years, 7.34 cfs (5,310 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 238 cfs Nov. 23 (gage height, 3.90 ft); no flow Oct. 1 to Nov. 21, Apr. 6 to Sept. 30. 1936-66: Maximum discharge, 4,340 cfs Feb. 7, 1937 (gage height, 9.65 ft), from rating curve extended above 1,500 cfs; no flow for part of each year.

Remarks.--Records good. Flow regulated by Morena Reservoir (see Sta. No. 0100) and Barrett Reservoir (see Sta. No. 0110). Water released from Barrett Reservoir through Dulzura conduit is diverted to Lower Otay Reservoir.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May | June | July | Aug. | Sept. |
|--------------------|------|-------|-------|-------|-------|------|-------|-----|------|------|------|-------|
| 1                  |      | 0     | 2.8   | 7.6   | 0.90  | 0.70 | 0.10  |     |      |      |      |       |
| 2                  |      | 0     | 2.2   | 6.1   | .60   | 1.2  | .10   |     |      |      |      |       |
| 3                  |      | 0     | 1.7   | 5.1   | .50   | .80  | .10   |     |      |      |      |       |
| 4                  |      | 0     | 1.5   | 4.4   | .40   | .50  | .10   |     |      |      |      |       |
| 5                  |      | 0     | 1.5   | 3.7   | .40   | .50  | .10   |     |      |      |      |       |
| 6                  |      | 0     | 1.3   | 3.2   | .70   | .50  | 0     |     |      |      |      |       |
| 7                  |      | 0     | 1.2   | 2.7   | .25   | .40  | 0     |     |      |      |      |       |
| 8                  |      | 0     | 1.1   | 2.3   | .23   | .30  | 0     |     |      |      |      |       |
| 9                  |      | 0     | 1.2   | 2.0   | 1.7   | .30  | 0     |     |      |      |      |       |
| 10                 |      | 0     | 1.5   | 1.9   | 2.0   | .30  | 0     |     |      |      |      |       |
| 11                 |      | 0     | 1.1   | 1.6   | 2.0   | .30  | 0     |     |      |      |      |       |
| 12                 |      | 0     | 1.1   | 1.5   | 1.6   | .30  | 0     |     |      |      |      |       |
| 13                 |      | 0     | 1.3   | 1.3   | 1.5   | .30  | 0     |     |      |      |      |       |
| 14                 |      | 0     | 3.0   | 1.3   | 1.3   | .30  | 0     |     |      |      |      |       |
| 15                 |      | 0     | 3.9   | 1.3   | 1.2   | .30  | 0     |     |      |      |      |       |
| 16                 |      | 0     | 15    | 1.2   | 1.1   | .20  | 0     |     |      |      |      |       |
| 17                 |      | 0     | 16    | 1.1   | 1.1   | .20  | 0     |     |      |      |      |       |
| 18                 |      | 0     | 11    | 1.1   | 1.1   | .20  | 0     |     |      |      |      |       |
| 19                 |      | 0     | 8.0   | 1.0   | 1.0   | .10  | 0     |     |      |      |      |       |
| 20                 |      | 0     | 6.1   | 1.2   | 1.0   | .10  | 0     |     |      |      |      |       |
| 21                 |      | 0     | 5.1   | 1.2   | .90   | .10  | 0     |     |      |      |      |       |
| 22                 |      | 3.1   | 8.0   | .90   | .70   | .10  | 0     |     |      |      |      |       |
| 23                 |      | 127   | 6.4   | .80   | .60   | .10  | 0     |     |      |      |      |       |
| 24                 |      | 28    | 5.6   | .70   | .70   | .10  | 0     |     |      |      |      |       |
| 25                 |      | 23    | 4.9   | .60   | .70   | .20  | 0     |     |      |      |      |       |
| 26                 |      | 16    | 4.4   | .50   | .90   | .20  | 0     |     |      |      |      |       |
| 27                 |      | 10    | 3.7   | .70   | .80   | .20  | 0     |     |      |      |      |       |
| 28                 |      | 6.4   | 3.5   | .50   | .60   | .20  | 0     |     |      |      |      |       |
| 29                 |      | 4.7   | 6.8   | ----- | ----- | .20  | 0     |     |      |      |      |       |
| 30                 |      | 3.5   | 16    | .40   | ----- | .10  | 0     |     |      |      |      |       |
| 31                 |      | ----- | 8.3   | 1.4   | ----- | .10  | ----- |     |      |      |      |       |
| Total              | 0    | 221.7 | 155.2 | 60.90 | 30.80 | 9.40 | 0.50  | 0   | 0    | 0    | 0    | 0     |
| Mean               | 0    | 7.39  | 5.01  | 1.96  | 1.10  | 0.30 | 0.02  | 0   | 0    | 0    | 0    | 0     |
| Ac-ft              | 0    | 440   | 308   | 121   | 61    | 19   | 1.0   | 0   | 0    | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 127   | Min   | 0     | Mean  | 1.23 | Ac-ft | 890 |      |      |      |       |
| Water year 1965-66 | Max  | 127   | Min   | 0     | Mean  | 1.31 | Ac-ft | 949 |      |      |      |       |

## TIA JUANA RIVER BASIN

11-0125. Campo Creek near Campo, Calif.

Location.--Lat 32°35'25", long 116°31'30", in SE $\frac{1}{4}$  sec.24, T.18 S., R.4 E., on left bank just upstream from bridge on State Highway 94, about 3.5 miles southwest of Campo.

Drainage area.--85.0 sq mi, of which 3 sq mi are in Mexico (revised).

Records available.--October 1936 to September 1966.

Gage.--Graphic water-stage recorder and broad-crested weir. Datum of gage is 2,178.92 ft above mean sea level, datum of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

Average discharge.--30 years, 2.10 cfs (1,520 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year).

Extremes.--Maximum discharge during year, 1.0 cfs Nov. 22 (gage height, 1.31 ft); no flow for most of year.

1936-66: Maximum discharge, 880 cfs Feb. 6, 1937 (gage height, 4.80 ft, present datum) from rating curve extended above 110 cfs on basis of velocity mean-depth relation and cross-sectional area at control; no flow for part of most years.

Remarks.--Records poor. Flow partly regulated since August 1956 by small conservation reservoir. No diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Nov. 22..... 0.30  
 23..... .10  
 Dec. 16..... .10  
 29..... .10  
 Jan. 30..... .10

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 0.40     | 0.30    | 0       | 0.01 | 0.8       |
| December.....           | .20      | .10     | 0       | .006 | .4        |
| January 1966.....       | .10      | .10     | 0       | .003 | .2        |
| Calendar year 1965..... | -        | .30     | 0       | .003 | 2.2       |
| Water year 1965-66..... | -        | .30     | 0       | .002 | 1.4       |

Peak discharge (base, 20 cfs).--No peak above base.

Note.--Flow occurred only on days listed above.

11-0130. Tia Juana River near Dulzura, Calif.

Location.--Lat 32°33'50". long 116°46'25", in sec.33, T.18 S., R.2 E., on left bank 0.5 mile downstream from confluence of Cottonwood and Tecate Creeks and 5.5 miles south of Dulzura.

Drainage area.--481 sq mi, of which 70 sq mi are in Mexico (revised).

Records available.--October 1936 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 542.42 ft above mean sea level (levels by International Boundary and Water Commission). Prior to Sept. 19, 1939, at datum 2.00 ft higher.

Average discharge.--30 years, 11.8 cfs (8,540 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--Maximum discharge during year, 251 cfs Nov. 23 (gage height, 3.67 ft); no flow Oct. 1 to Nov. 22, Apr. 12 to Sept. 30. 1936-66: Maximum discharge, 4,700 cfs Feb. 7, 1937 (gage height, 8.50 ft, present datum), from rating curve extended above 300 cfs on basis of velocity, mean-depth and area studies; no flow for part of most years.

Remarks.--Records good. Flow regulated by Morena Reservoir (see Sta. No. 0100) and Barrett Reservoir (see Sta. No. 0110). Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek.

Cooperation.--One discharge measurement furnished by International Boundary and Water Commission.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May | June | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|-------|-------|-----|------|------|------|-------|
| 1     |      | 0     | 3.1    | 9.0   | 3.2   | 2.0   | 0.30  |     |      |      |      |       |
| 2     |      | 0     | 2.4    | 7.8   | 2.4   | 2.7   | .30   |     |      |      |      |       |
| 3     |      | 0     | 1.9    | 6.9   | 1.9   | 2.3   | .20   |     |      |      |      |       |
| 4     |      | 0     | 1.6    | 5.5   | 1.7   | 1.7   | .20   |     |      |      |      |       |
| 5     |      | 0     | 1.2    | 5.1   | 1.8   | 1.7   | .20   |     |      |      |      |       |
| 6     |      | 0     | .80    | 4.6   | 2.4   | 1.6   | .20   |     |      |      |      |       |
| 7     |      | 0     | .70    | 3.9   | 5.3   | 1.3   | .10   |     |      |      |      |       |
| 8     |      | 0     | .60    | 3.5   | 6.0   | 1.1   | .10   |     |      |      |      |       |
| 9     |      | 0     | 1.1    | 3.4   | 4.4   | 1.1   | .10   |     |      |      |      |       |
| 10    |      | 0     | 1.3    | 3.2   | 5.1   | 1.1   | .10   |     |      |      |      |       |
| 11    |      | 0     | .80    | 2.9   | 4.8   | 1.1   | .10   |     |      |      |      |       |
| 12    |      | 0     | .70    | 2.6   | 3.9   | 1.1   | 0     |     |      |      |      |       |
| 13    |      | 0     | 1.1    | 2.4   | 3.5   | 1.1   | 0     |     |      |      |      |       |
| 14    |      | 0     | 3.4    | 2.3   | 3.2   | 1.1   | 0     |     |      |      |      |       |
| 15    |      | 0     | 5.1    | 2.3   | 2.9   | 1.1   | 0     |     |      |      |      |       |
| 16    |      | 0     | 14     | 1.9   | 2.7   | 1.0   | 0     |     |      |      |      |       |
| 17    |      | 0     | 15     | 1.9   | 2.7   | 1.0   | 0     |     |      |      |      |       |
| 18    |      | 0     | 11     | 1.9   | 2.6   | .90   | 0     |     |      |      |      |       |
| 19    |      | 0     | 8.1    | 1.9   | 2.6   | .80   | 0     |     |      |      |      |       |
| 20    |      | 0     | 6.9    | 2.3   | 2.6   | .70   | 0     |     |      |      |      |       |
| 21    |      | 0     | 5.5    | 2.6   | 2.4   | .70   | 0     |     |      |      |      |       |
| 22    |      | 0     | 7.8    | 2.0   | 1.8   | .60   | 0     |     |      |      |      |       |
| 23    |      | 14.2  | 6.9    | 2.0   | 1.7   | .40   | 0     |     |      |      |      |       |
| 24    |      | 28    | 5.5    | 1.8   | 1.8   | .40   | 0     |     |      |      |      |       |
| 25    |      | 21    | 4.8    | 1.7   | 2.0   | .60   | 0     |     |      |      |      |       |
| 26    |      | 16    | 4.2    | 1.8   | 2.7   | .40   | 0     |     |      |      |      |       |
| 27    |      | 11    | 3.7    | 2.4   | 2.3   | .40   | 0     |     |      |      |      |       |
| 28    |      | 7.2   | 3.4    | 2.1   | 2.1   | .40   | 0     |     |      |      |      |       |
| 29    |      | 5.1   | 5.7    | 2.0   | ----- | .40   | 0     |     |      |      |      |       |
| 30    |      | 3.9   | 20     | 4.2   | ----- | .40   | 0     |     |      |      |      |       |
| 31    |      | ----- | 9.4    | 5.3   | ----- | .30   | ----- |     |      |      |      |       |
| Total | 0    | 234.2 | 157.70 | 103.2 | 82.5  | 31.50 | 1.90  | 0   | 0    | 0    | 0    | 0     |
| Mean  | 0    | 7.81  | 5.09   | 3.33  | 2.95  | 1.02  | 0.06  | 0   | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 465   | 313    | 205   | 164   | 62    | 3.8   | 0   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 142 Min 0 Mean 1.19 Ac-ft 860

Water year 1965-66 Max 142 Min 0 Mean 1.67 Ac-ft 1,210

## TIA JUANA RIVER BASIN

11-0132. Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico

Location.--Lat 32°26'40", long 116°54'25", at Rodriguez Dam on Rio de las Palmas, a quarter of a mile upstream from Arroyo Matanuco and 10 miles southeast of Tijuana, Baja California, Mexico.

Drainage area.--977 sq mi, of which 10 sq mi are in the United States (revised).

Records available.--April 1937 to September 1966. Published with record for Tia Juana River near Nestor, Calif., October 1953 to September 1957. Month-end contents for April 1937 to September 1950 published in WSP 1315-B and for October 1950 to September 1960 in WSP 1735.

Gage.--Staff gage read once a day. Altitude of gage is 250 ft (from topographic map).

Extremes.--Maximum contents during year, 4,640 acre-ft Mar. 2-5; reservoir dry Oct. 1 to Nov. 22.

1937-66: Reservoir spilled during March 1938, September 1940, February to May 1941, March 1942, and February, March 1944; reservoir dry Apr. 2, 1964 to Apr. 9, 1965, Aug. 21 to Nov. 22, 1965.

Remarks.--Reservoir is formed by thin-shell concrete arch dam completed in 1936; storage began in 1937. Capacity table is based on surveys made in 1927. Maximum storage at top of spillway gates (elevation, 410.10 ft), 111,070 acre-ft; at spillway lip (elevation, 380.08 ft), 74,580 acre-ft; dead storage below outlet (elevation, 267.39 ft), 1,650 acre-ft included in contents. Reservoir is used to store water for irrigation of about 3,000 acres on both banks one-half to  $5\frac{1}{2}$  miles downstream and for municipal supply of city of Tijuana.

Cooperation.--Records furnished by Ministry of Hydraulic Resources, Government of Mexico, through International Boundary and Water Commission, United States Section.

Month-end contents, water year October 1965 to September 1966

| Month                   | Contents<br>(acre-<br>feet) | Change in<br>contents<br>(acre-feet) | Month                   | Contents<br>(acre-<br>feet) | Change in<br>contents<br>(acre-feet) |
|-------------------------|-----------------------------|--------------------------------------|-------------------------|-----------------------------|--------------------------------------|
| Sept. 30.....           | 0                           | -                                    | Apr. 30.....            | 4,293                       | -202                                 |
| Oct. 31.....            | 0                           | 0                                    | May 31.....             | 4,153                       | -140                                 |
| Nov. 30.....            | 1,785                       | +1,785                               | June 30.....            | 3,967                       | -186                                 |
| Dec. 31.....            | 4,122                       | +2,337                               | July 31.....            | 3,313                       | -654                                 |
| Calendar year 1965..... | -                           | +4,122                               | Aug. 31.....            | 2,759                       | -554                                 |
|                         |                             |                                      | Sept. 30.....           | 2,350                       | -409                                 |
| Jan. 31.....            | 4,324                       | +202                                 | Water year 1965-66..... | -                           | +2,350                               |
| Feb. 28.....            | 4,631                       | +307                                 |                         |                             |                                      |
| Mar. 31.....            | 4,495                       | -136                                 |                         |                             |                                      |

11-0135. Tia Juana River near Nestor, Calif.

Location.--Lat 32°33'05", long 117°05'00", on line between secs. 3 and 4, T.19 S., R.2 W., on downstream side of county highway bridge, 1.7 miles south of Nestor and 2.9 miles upstream from mouth.

Drainage area.--1,690 sq mi, of which 1,236 sq mi are in Mexico (revised).

Records available.--October 1914 to September 1915, October 1936 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 15.14 ft above mean sea level, datum of 1929. Oct. 1, 1914, to Sept. 30, 1915, reference point at same site at mean sea level datum. Oct. 1, 1936, to Apr. 9, 1953, graphic water-stage recorder at different datum. Apr. 10, 1953, to Aug. 5, 1958, at site 2 miles upstream at different datum.

Average discharge.--31 years, 35.9 cfs (25,990 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

Extremes.--Maximum discharge during year, 267 cfs Nov. 23 (gage height, 5.75 ft), from rating curve extended above 140 cfs on basis of slope-area measurement of maximum flow; no flow for most of year.  
1936-66: Maximum discharge, 17,700 cfs Feb. 7, 1937 (gage height, 8.20 ft, datum then in use), from rating curve extended above 2,000 cfs on basis of velocity-depth relation and cross section after peak; no flow in parts of each year.

Remarks.--Records good. Flow regulated by Morena Reservoir (see Sta. No. 0100) and Barrett Reservoir (see Sta. No. 0110) in the United States, and Rodriguez Reservoir (see Sta. No. 0132) in Mexico. Water diverted from Cottonwood Creek at Barrett Dam by Dulzura conduit to Jamul Creek. Average discharge represents flow to the ocean regardless of upstream development.

Cooperation.--Two discharge measurements furnished by International Boundary and Water Commission.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                |                |                  |
|----------------|----------------|------------------|
| Nov. 23.....91 | Dec. 16.....69 | Jan. 7.....1.4   |
| 24.....16      | 17.....16      | 17......10       |
| 26......20     | 22.....1.2     | 25......10       |
| Dec. 9.....8.7 | 23......50     | 30......30       |
| 10.....3.5     | 29......10     | 31......40       |
| 11.....1.6     | 30.....6.3     | Feb. 6......20   |
| 12......10     | 31......10     | 7.....2.8        |
| 13.....2.8     | Jan. 5.....2.9 | 8......10        |
| 14......14     | 6.....3.9      | Sept. 24......10 |
| 15......46     |                |                  |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 107.20   | 91      | 0       | 3.57 | 213       |
| December.....           | 169.90   | 69      | 0       | 5.48 | 337       |
| January 1966.....       | 8.10     | 3.9     | 0       | .26  | 16        |
| February.....           | 3.10     | 2.8     | 0       | .11  | 6.1       |
| September.....          | .10      | .10     | 0       | .003 | .2        |
| Calendar year 1965..... | -        | 91      | 0       | .764 | 553       |
| Water year 1965-66..... | -        | 91      | 0       | .790 | 572       |

Note.--Flow occurred only on days listed above.

## OTAY RIVER BASIN

11-0140. Jamul Creek near Jamul, Calif.

Location.---Lat 32°38'15", long 116°53'00", in NE $\frac{1}{4}$  sec.4, T.18 S., R.1 E., on right bank 300 ft upstream from county road crossing at upper end of Lower Otay Reservoir, 1.4 miles downstream from Dulzura Creek, and 5.5 miles south of Jamul.

Drainage area.---70.3 sq mi.

Records available.---April 1940 to September 1966.

Gage.---Graphic water-stage recorder and broad-crested weir control with low-water Parshall flume. Datum of gage is 511.64 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

Extremes.---Maximum discharge during year, 680 cfs Nov. 23 (gage height, 3.60 ft); no flow for much of year.

1940-66: Maximum discharge, 4,000 cfs Dec. 1, 1947 (gage height, 6.42 ft, present datum), from rating curve extended above 1,200 cfs; no flow at times in some years.

Remarks.---Records good. No regulation above station. Water diverted from Cottonwood Creek by Dulzura conduit discharges into Jamul Creek via Dulzura Creek and is included in discharge for this station (see Sta. No. 0120).

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.   | Feb.   | Mar.  | Apr.  | May   | June   | July   | Aug. | Sept. |
|-------|------|--------|--------|--------|--------|-------|-------|-------|--------|--------|------|-------|
| 1     |      | 0      | 1.5    | 19     | 2.3    | 2.5   | 0.20  | 0     | 17     | 40     |      |       |
| 2     |      | 0      | 1.5    | 14     | 1.7    | 3.2   | .20   | 0     | 37     | 40     |      |       |
| 3     |      | 0      | 1.5    | 11     | 1.2    | 3.6   | .20   | 0     | 39     | 38     |      |       |
| 4     |      | 0      | 1.5    | 9.2    | 1.0    | 2.6   | .20   | 0     | 39     | 39     |      |       |
| 5     |      | 0      | 1.9    | 6.8    | .90    | 2.3   | .20   | 0     | 39     | 41     |      |       |
| 6     |      | 0      | 1.9    | 6.4    | .80    | 2.2   | .20   | 0     | 39     | 37     |      |       |
| 7     |      | 0      | 1.9    | 5.1    | .40    | 1.8   | .20   | 0     | 39     | 30     |      |       |
| 8     |      | 0      | 1.8    | 4.4    | .35    | 1.7   | .20   | 0     | 41     | 22     |      |       |
| 9     |      | 0      | 4.4    | 4.1    | .22    | 1.7   | .20   | 0     | 41     | 15     |      |       |
| 10    |      | 0      | 1.7    | 3.6    | .23    | 1.5   | .10   | 0     | 40     | 12     |      |       |
| 11    |      | 0      | .90    | 3.2    | .23    | 1.5   | .10   | 0     | 39     | 9.4    |      |       |
| 12    |      | 0      | .80    | 2.9    | .15    | 1.4   | .10   | 0     | 39     | 6.6    |      |       |
| 13    |      | 0      | 2.5    | 2.5    | .13    | 1.3   | 0     | 0     | 38     | 4.5    |      |       |
| 14    |      | 0      | .22    | 2.0    | .10    | 1.3   | 0     | 0     | 39     | 3.0    |      |       |
| 15    |      | 0      | 14     | 1.9    | 8.2    | 1.3   | 0     | 0     | 28     | 2.2    |      |       |
| 16    |      | 0      | 38     | 1.7    | 7.1    | 1.2   | 0     | 0     | 4.4    | 1.2    |      |       |
| 17    |      | 0      | 15     | 1.7    | 6.0    | 1.2   | 0     | 0     | 2.3    | .50    |      |       |
| 18    |      | 0      | 9.4    | 1.5    | 5.3    | 1.0   | 0     | 6.4   | 28     | .30    |      |       |
| 19    |      | 0      | 6.6    | 1.4    | 4.8    | .90   | 0     | 15    | 35     | .20    |      |       |
| 20    |      | 0      | 4.6    | 1.8    | 4.2    | .80   | 0     | 12    | 39     | .10    |      |       |
| 21    |      | 0      | 5.1    | 1.4    | 3.9    | .70   | 0     | 3.7   | 44     | 0      |      |       |
| 22    |      | .10    | 7.3    | 1.2    | 3.2    | .60   | 0     | 2.8   | 46     | 0      |      |       |
| 23    |      | 193    | 5.7    | 1.0    | 3.1    | .50   | 0     | 2.8   | 45     | 0      |      |       |
| 24    |      | 18     | 4.4    | .90    | 2.8    | .50   | 0     | 1.9   | 44     | 0      |      |       |
| 25    |      | 9.2    | 3.9    | .80    | 2.6    | .70   | 0     | 1.9   | 43     | 0      |      |       |
| 26    |      | 7.3    | 3.9    | .70    | 2.9    | .70   | 0     | 31    | 41     | 0      |      |       |
| 27    |      | 4.4    | 3.9    | .90    | 2.8    | .70   | 0     | 39    | 41     | 0      |      |       |
| 28    |      | 2.5    | 3.6    | .70    | 2.5    | .60   | 0     | 40    | 45     | 0      |      |       |
| 29    |      | 2.0    | 6.2    | .60    | -----  | .40   | 0     | 35    | 43     | 0      |      |       |
| 30    |      | 1.7    | 39     | 1.5    | -----  | .40   | 0     | 5.3   | 41     | 0      |      |       |
| 31    |      | -----  | 21     | 3.6    | -----  | .30   | ----- | 3.2   | -----  | 0      |      | ----- |
| Total | 0    | 238.20 | 237.40 | 117.50 | 248.30 | 41.10 | 2.10  | 200.0 | 1095.7 | 342.00 | 0    | 0     |
| Mean  | 0    | 7.94   | 7.66   | 3.79   | 8.87   | 1.33  | 0.07  | 6.45  | 36.5   | 11.0   | 0    | 0     |
| Ac-ft | 0    | 472    | 471    | 233    | 492    | 82    | 4.2   | 397.0 | 2,170  | 678    | 0    | 0     |

Calendar year 1965 Max 193 Min 0 Mean 1.47 Ac-ft 1,060  
 Water year 1965-66 Max 193 Min 0 Mean 6.91 Ac-ft 5,000

## SWEETWATER RIVER BASIN

101

11-0148.5. Japacha Creek near Descanso, Calif.

Location.--Lat 32°55'04", long 116°34'14", in Cuyamaca State Park on right side of culvert on State Highway 79, 5.1 miles northeast of Descanso, San Diego County.

Drainage area.--2.40 sq mi.

Records available.--Water years 1962-64 (annual maximum), October 1964 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment. Altitude of gage is 4,070 ft (from topographic map). Prior to Dec. 24, 1964, crest-stage gage only.

Extremes.--Maximum discharge during year, 35 cfs Nov. 23 (gage height, 3.80 ft), from rating curve extended above 11 cfs; no flow Oct. 1 to Nov. 21, June 16 to Sept. 30.

1962-66: Maximum discharge, that of Nov. 23, 1965; no flow for much of each year.

Remarks.--Records good. No regulation above station. Ranger station diverts water from Japacha Spring.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.10  | 2.2   | 0.60  | 1.5   | 0.50  | 0.30 | 0.10  |      |      |       |
| 2     |      | 0     | .10   | 1.6   | .70   | 1.7   | .50   | .30  | .10   |      |      |       |
| 3     |      | 0     | .10   | 1.4   | .70   | 1.7   | .50   | .30  | .10   |      |      |       |
| 4     |      | 0     | .10   | 1.2   | .70   | 1.7   | .50   | .30  | .10   |      |      |       |
| 5     |      | 0     | .10   | 1.1   | .70   | 1.7   | .40   | .30  | .10   |      |      |       |
| 6     |      | 0     | .10   | 1.0   | 1.6   | 1.7   | .40   | .30  | .10   |      |      |       |
| 7     |      | 0     | .10   | .90   | 3.9   | 1.7   | .40   | .30  | .10   |      |      |       |
| 8     |      | 0     | .10   | .80   | 2.8   | 1.5   | .40   | .30  | .10   |      |      |       |
| 9     |      | 0     | .20   | .70   | 2.4   | 1.4   | .40   | .30  | .10   |      |      |       |
| 10    |      | 0     | .30   | .60   | 2.4   | 1.3   | .40   | .30  | .10   |      |      |       |
| 11    |      | 0     | .30   | .60   | 2.1   | 1.3   | .40   | .30  | .10   |      |      |       |
| 12    |      | 0     | .30   | .50   | 2.2   | 1.2   | .40   | .30  | .10   |      |      |       |
| 13    |      | 0     | .60   | .50   | 2.0   | 1.2   | .40   | .20  | .10   |      |      |       |
| 14    |      | 0     | .50   | .50   | 2.0   | 1.2   | .40   | .20  | .10   |      |      |       |
| 15    |      | 0     | .50   | .50   | 1.8   | 1.2   | .40   | .20  | .10   |      |      |       |
| 16    |      | 0     | .50   | .50   | 1.8   | 1.1   | .40   | .20  | 0     |      |      |       |
| 17    |      | 0     | .40   | .50   | 1.7   | 1.0   | .40   | .20  | 0     |      |      |       |
| 18    |      | 0     | .40   | .50   | 1.6   | 1.0   | .40   | .20  | 0     |      |      |       |
| 19    |      | 0     | .40   | .50   | 1.5   | 1.0   | .40   | .20  | 0     |      |      |       |
| 20    |      | 0     | .40   | .50   | 1.5   | .80   | .40   | .20  | 0     |      |      |       |
| 21    |      | 0     | .40   | .50   | 1.5   | .80   | .40   | .20  | 0     |      |      |       |
| 22    |      | 1.6   | 1.2   | .50   | 1.4   | .80   | .40   | .20  | 0     |      |      |       |
| 23    |      | 9.8   | .90   | .50   | 1.4   | .80   | .40   | .20  | 0     |      |      |       |
| 24    |      | .40   | .70   | .40   | 1.4   | .90   | .40   | .20  | 0     |      |      |       |
| 25    |      | 2.1   | .60   | .40   | 1.4   | .80   | .40   | .20  | 0     |      |      |       |
| 26    |      | .70   | .60   | .40   | 1.6   | .80   | .40   | .10  | 0     |      |      |       |
| 27    |      | .40   | .50   | .40   | 1.5   | .70   | .40   | .10  | 0     |      |      |       |
| 28    |      | .40   | .50   | .40   | 1.5   | .60   | .30   | .10  | 0     |      |      |       |
| 29    |      | .20   | 3.8   | .40   | ----- | .60   | .30   | .10  | 0     |      |      |       |
| 30    |      | .20   | 6.7   | .70   | ----- | .50   | .30   | .10  | 0     |      |      |       |
| 31    |      | ----- | 2.7   | .60   | ----- | .50   | ----- | .10  | ----- |      |      |       |
| Total | 0    | 15.80 | 24.20 | 21.80 | 46.40 | 34.70 | 12.10 | 6.80 | 1.50  | 0    | 0    | 0     |
| Mean  | 0    | 0.53  | 0.78  | 0.70  | 1.66  | 1.12  | 0.40  | 0.22 | 0.05  | 0    | 0    | 0     |
| Ac-ft | 0    | 31    | 48    | 43    | 92    | 69    | 24    | 13   | 3.0   | 0    | 0    | 0     |
| (+)   | 0    | 13.1  | 8.1   | 2.0   | 3.4   | 2.0   | 0.4   | 0.1  | 0     | 0    | 0.3  | 0     |

Calendar year 1965 Max 9.8 Min 0 Mean 0.355 Ac-ft 256  
 Water year 1965-66 Max 9.8 Min 0 Mean 0.447 Ac-ft 324

† Precipitation, in inches.

## SWEETWATER RIVER BASIN

11-0150. Sweetwater River near Descanso, Calif.

Location.--Lat 32°50'05", long 116°37'20", in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.25, T.15 S., R.3 E., on right bank at county road bridge, 0.7 mile downstream from unnamed tributary and 1.3 miles south of Descanso.

Drainage area.--45.5 sq mi.

Records available.--October 1905 to September 1927, October 1956 to September 1966. Monthly discharge only for October to December 1905, January to February 1916, February, March, June to September 1927, published in WSP 1315-B. Combined records of river and diversion, October 1956 to September 1966.

Gage.--Graphic water-stage recorder on river; graphic water-stage recorder on concrete diversion. Datum of gage is 3,269.24 ft above mean sea level, datum of 1929. Prior to June 25, 1927, staff gages at several sites within 0.1 mile upstream at various datums.

Average discharge (creek only).--32 years, 11.5 cfs (8,330 acre-ft per year); median of yearly mean discharges, 6.9 cfs (5,000 acre-ft per year).  
(combined).--10 years, 2.56 cfs (1,850 acre-ft per year); median of yearly mean discharge, 0.6 cfs (430 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 1,230 cfs Nov. 23 (gage height, 6.53 ft), from rating curve extended above 530 cfs; no flow Oct. 1 to Nov. 21, July 7 to Sept. 30.

1905-27, 1956-66: Maximum discharge, 11,200 cfs Feb. 16, 1927 (gage height, 13.2 ft, from floodmark, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for many days in most years.

(combined).--Maximum discharge during year, 1,230 cfs Nov. 23; no flow Oct. 1 to Nov. 21, July 7 to Sept. 30.  
1956-66: Maximum discharge, 1,290 cfs Apr. 3, 1958; no flow for many days in each year.

Remarks.--Records good. No regulation above station. Sweetwater River diversion diverts about 0.3 mile above station for irrigation below. For records of combined discharge of river and diversion, see following page.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 1.1    | 91    | 11    | 8.4   | 6.4   | 2.4  | 1.4   | 0.10 |      |       |
| 2     |      | 0     | 1.0    | 59    | 9.2   | 14    | 6.0   | 2.2  | 1.3   | .10  |      |       |
| 3     |      | 0     | .80    | 41    | 9.2   | 12    | 5.2   | 2.1  | 1.1   | .10  |      |       |
| 4     |      | 0     | .80    | 30    | 7.3   | 12    | 4.7   | 2.1  | 1.0   | .10  |      |       |
| 5     |      | 0     | .70    | 24    | 6.4   | 12    | 4.2   | 2.1  | .90   | .10  |      |       |
| 6     |      | 0     | .70    | 21    | 13    | 12    | 4.2   | 2.4  | .90   | .10  |      |       |
| 7     |      | 0     | .50    | 18    | 58    | 12    | 4.2   | 2.4  | .90   | 0    |      |       |
| 8     |      | 0     | .50    | 16    | 40    | 12    | 4.2   | 2.7  | 1.1   | 0    |      |       |
| 9     |      | 0     | 1.8    | 14    | 33    | 10    | 4.2   | 2.9  | 1.4   | 0    |      |       |
| 10    |      | 0     | 1.8    | 12    | 39    | 9.5   | 4.2   | 2.9  | 1.4   | 0    |      |       |
| 11    |      | 0     | 2.1    | 12    | 37    | 8.8   | 4.5   | 3.1  | 1.3   | 0    |      |       |
| 12    |      | 0     | 2.1    | 10    | 33    | 8.0   | 4.5   | 2.7  | .90   | 0    |      |       |
| 13    |      | 0     | 3.8    | 8.0   | 32    | 7.3   | 4.2   | 2.6  | .80   | 0    |      |       |
| 14    |      | 0     | 5.8    | 6.7   | 28    | 7.3   | 4.0   | 2.0  | .70   | 0    |      |       |
| 15    |      | 0     | 5.8    | 6.4   | 27    | 6.4   | 3.4   | 2.1  | .40   | 0    |      |       |
| 16    |      | 0     | 8.0    | 6.7   | 24    | 5.8   | 3.2   | 1.8  | .40   | 0    |      |       |
| 17    |      | 0     | 5.8    | 7.6   | 22    | 5.0   | 3.8   | 1.7  | .30   | 0    |      |       |
| 18    |      | 0     | 4.5    | 8.4   | 20    | 4.7   | 4.5   | 1.5  | .30   | 0    |      |       |
| 19    |      | 0     | 4.0    | 8.8   | 18    | 4.2   | 5.0   | 1.5  | .70   | 0    |      |       |
| 20    |      | 0     | 3.8    | 11    | 18    | 3.8   | 4.5   | 1.7  | .40   | 0    |      |       |
| 21    |      | 0     | 3.8    | 10    | 14    | 3.4   | 4.5   | 1.7  | .20   | 0    |      |       |
| 22    |      | 67    | 11     | 8.4   | 12    | 3.2   | 4.2   | 1.7  | .20   | 0    |      |       |
| 23    |      | 548   | 13     | 8.4   | 10    | 3.1   | 3.2   | 1.7  | .20   | 0    |      |       |
| 24    |      | 15    | 7.3    | 7.6   | 8.8   | 13    | 3.2   | 1.7  | .20   | 0    |      |       |
| 25    |      | 33    | 6.0    | 7.0   | 8.4   | 19    | 3.2   | 1.5  | .20   | 0    |      |       |
| 26    |      | 36    | 5.0    | 7.0   | 11    | 16    | 3.2   | 1.4  | .20   | 0    |      |       |
| 27    |      | 10    | 4.2    | 8.4   | 12    | 14    | 3.2   | 1.4  | .20   | 0    |      |       |
| 28    |      | 5.5   | 4.0    | 8.0   | 8.8   | 10    | 3.1   | 1.4  | .10   | 0    |      |       |
| 29    |      | 3.4   | 2.6    | 6.7   | ----- | 8.4   | 2.7   | 1.4  | .10   | 0    |      |       |
| 30    |      | 2.1   | 3.1    | 14    | ----- | 7.3   | 2.7   | 1.4  | .10   | 0    |      |       |
| 31    |      | ----- | 111    | 16    | ----- | 6.7   | ----- | 1.4  | ----- | 0    |      |       |
| Total | 0    | 720.0 | 577.70 | 513.1 | 570.1 | 279.3 | 122.3 | 61.6 | 19.30 | 0.60 | 0    | 0     |
| Mean  | 0    | 24.0  | 18.6   | 16.6  | 20.4  | 9.01  | 4.08  | 1.99 | 0.64  | 0.02 | 0    | 0     |
| Ac-ft | 0    | 1,430 | 1,150  | 1,020 | 1,130 | 554   | 243   | 122  | 38    | 1.2  | 0    | 0     |

Calendar year 1965 Max 548 Min 0 Mean 5.08 Ac-ft 3,680

Water year 1965-66 Max 548 Min 0 Mean 7.85 Ac-ft 5,680

Peak discharge (base, 100 cfs).--Nov. 23 (0700 hrs) 1,230 cfs (6.53 ft); Dec. 30 (0500 hrs) 700 cfs (5.70 ft).



## SWEETWATER RIVER BASIN

103

11-0150, Sweetwater River near Descanso, Calif.--Continued.

Combined discharge, in cubic feet per second, of Sweetwater River and Sweetwater River diversion near Descanso, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 1.1    | 91    | 11    | 8.4   | 6.4   | 2.7  | 1.4   | 0.10 |      |       |
| 2     |      | 0     | 1.0    | 59    | 9.2   | 14    | 6.0   | 2.6  | 1.3   | .10  |      |       |
| 3     |      | 0     | .80    | 41    | 9.2   | 12    | 5.2   | 2.5  | 1.1   | .10  |      |       |
| 4     |      | 0     | .80    | 30    | 7.3   | 12    | 4.7   | 2.4  | 1.0   | .10  |      |       |
| 5     |      | 0     | .70    | 24    | 6.4   | 12    | 4.2   | 2.3  | .90   | .10  |      |       |
| 6     |      | 0     | .70    | 21    | 13    | 12    | 4.2   | 2.6  | .90   | .10  |      |       |
| 7     |      | 0     | .50    | 18    | 58    | 12    | 4.2   | 2.7  | .90   | 0    |      |       |
| 8     |      | 0     | .50    | 16    | 40    | 12    | 4.2   | 3.1  | 1.1   | 0    |      |       |
| 9     |      | 0     | 1.8    | 14    | 33    | 10    | 4.3   | 3.2  | 1.4   | 0    |      |       |
| 10    |      | 0     | 1.8    | 12    | 39    | 9.5   | 4.5   | 3.1  | 1.4   | 0    |      |       |
| 11    |      | 0     | 2.1    | 12    | 37    | 8.8   | 4.7   | 3.2  | 1.3   | 0    |      |       |
| 12    |      | 0     | 2.1    | 10    | 33    | 8.0   | 4.6   | 2.9  | .90   | 0    |      |       |
| 13    |      | 0     | 3.8    | 8.0   | 32    | 7.3   | 4.3   | 2.7  | .80   | 0    |      |       |
| 14    |      | 0     | 5.8    | 6.7   | 28    | 7.3   | 4.1   | 2.1  | .70   | 0    |      |       |
| 15    |      | 0     | 5.8    | 6.4   | 27    | 6.4   | 3.5   | 2.2  | .40   | 0    |      |       |
| 16    |      | 0     | 8.0    | 6.7   | 24    | 5.8   | 3.3   | 1.9  | .40   | 0    |      |       |
| 17    |      | 0     | 5.8    | 7.6   | 22    | 5.0   | 3.9   | 1.8  | .30   | 0    |      |       |
| 18    |      | 0     | 4.5    | 8.4   | 20    | 4.7   | 4.5   | 1.5  | .30   | 0    |      |       |
| 19    |      | 0     | 4.0    | 8.8   | 18    | 4.2   | 5.1   | 1.5  | .70   | 0    |      |       |
| 20    |      | 0     | 3.8    | 11    | 18    | 3.8   | 4.6   | 1.7  | .40   | 0    |      |       |
| 21    |      | 0     | 3.8    | 10    | 14    | 3.4   | 4.6   | 1.7  | .20   | 0    |      |       |
| 22    |      | 67    | 11     | 8.4   | 12    | 3.2   | 4.2   | 1.7  | .20   | 0    |      |       |
| 23    |      | 548   | 13     | 8.4   | 10    | 3.1   | 3.4   | 1.7  | .20   | 0    |      |       |
| 24    |      | 15    | 7.3    | 7.6   | 8.8   | 13    | 3.4   | 1.7  | .20   | 0    |      |       |
| 25    |      | 33    | 6.0    | 7.0   | 8.4   | 19    | 3.4   | 1.5  | .20   | 0    |      |       |
| 26    |      | 36    | 5.0    | 7.0   | 11    | 16    | 3.4   | 1.4  | .20   | 0    |      |       |
| 27    |      | 10    | 4.2    | 8.4   | 12    | 14    | 3.4   | 1.4  | .20   | 0    |      |       |
| 28    |      | 5.5   | 4.0    | 8.0   | 8.8   | 10    | 3.3   | 1.4  | .10   | 0    |      |       |
| 29    |      | 3.4   | 26     | 6.7   | ----- | 8.4   | 2.9   | 1.4  | .10   | 0    |      |       |
| 30    |      | 2.1   | 331    | 14    | ----- | 7.3   | 3.0   | 1.4  | .10   | 0    |      |       |
| 31    |      | ----- | 111    | 16    | ----- | 6.7   | ----- | 1.4  | ----- | 0    |      | ----- |
| Total | 0    | 720.0 | 577.70 | 513.1 | 570.1 | 279.3 | 125.5 | 65.4 | 19.30 | 0.60 | 0    | 0     |
| Mean  | 0    | 24.0  | 18.6   | 16.6  | 20.4  | 9.01  | 4.18  | 2.11 | 0.64  | 0.02 | 0    | 0     |
| Ac-ft | 0    | 1,430 | 1,150  | 1,020 | 1,130 | 554   | 249   | 130  | 38    | 1.2  | 0    | 0     |

Calendar year 1965 Max 548 Min 0 Mean 5.14 Ac-ft 3,720

Water year 1965-66 Max 548 Min 0 Mean 7.87 Ac-ft 5,690

Peak discharge (base, 100 cfs).--Nov. 23 (0700 hrs) 1,230 cfs; Dec. 30 (0500 hrs) 700 cfs.

## SWEETWATER RIVER BASIN

11-0155. Sweetwater River at Loveland Dam, near Alpine, Calif.

Location.--Lat 32°46'54", long 116°47'35", in SE 1/4 sec. 17, T.16 S., R.2 E., on upstream face near center of Loveland Dam, 4 miles southwest of Alpine.

Drainage area.--98.1 sq mi.

Records available.--October 1944 to September 1966 (discontinued).

Gage.--Staff gage read once daily. Datum of gage is 1,215 ft above mean sea level, datum of 1929.

Average discharge.--22 years, 4.50 cfs (3,260 acre-ft per year); median of yearly mean discharges, 1.2 cfs (900 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Loveland Reservoir, including precipitation on the reservoir. Discharge computed on the basis of records of storage, release (draft), spill, leakage, and evaporation. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 0.66, excepting the period October 1960 to June 1963, when the mass-transfer method was used, and prior to October 1960 when a coefficient of 0.80 was used. Area and capacity tables for the reservoir are dated April 1946. Loveland Dam was completed in July 1945; storage began in March 1945. Capacity of reservoir at spillway level (gage height, 140.00 ft), 25,387 acre-ft. Dead storage, 125 acre-ft below lowest outlet at gage height -1.25 ft, included in these records. One small diversion for irrigation. Water is released down Sweetwater River to Sweetwater Reservoir as required.

Cooperation.--Records of stage, draft and spill plus leakage furnished by California-American Water Co.

| Month                   | Monthly discharge, water year October 1965 to September 1966 |                             |   |                          |                                     |   |                              |
|-------------------------|--|-----------------------------|---|--------------------------|-------------------------------------|---|------------------------------|
|                         | Elevation<br>(feet)†   | Contents<br>(acre-<br>feet) | Change<br>in<br>contents<br>(acre-<br>feet) | Draft<br>(acre-<br>feet) | Evapo-<br>ration<br>(acre-<br>feet) | Spill<br>plus<br>leakage<br>(acre-<br>feet) | Discharge<br>(acre-<br>feet) |
|                         | Lake Loveland  |                             |   |                          |                                     |   |                              |
| October.....            | 1,259.91   | 1,980                       | -37   | 0                        | 31                                  | 0   | -6                           |
| November.....           | 1,259.47   | 1,943                       | +438  | 0                        | 13                                  | 0   | 451                          |
| December.....           | 1,264.20   | 2,381                       | +586  | 0                        | 13                                  | 0   | 599                          |
| Calendar year 1965..... | -  | -                           | +1,601                                      | 0                        | 271                                 | 0   | 1,872                        |
| January.....            | 1,269.42   | 2,967                       | +616  | 0                        | 19                                  | 0   | 635                          |
| February.....           | 1,274.10   | 3,583                       | +1,217                                      | 0                        | 23                                  | 0   | 1,240                        |
| March.....              | 1,282.16   | 4,800                       | +663  | 0                        | 40                                  | 0   | 703                          |
| April.....              | 1,286.08   | 5,463                       | -5,284                                      | 5,516                    | 31                                  | 0   | 263                          |
| May.....                | 1,218.40   | 179                         | +184  | 0                        | 7                                   | 0   | 191                          |
| June.....               | 1,228.37   | 363                         | +20   | 0                        | 9                                   | 0   | 29                           |
| July.....               | 1,229.24   | 383                         | +8  | 0                        | 10                                  | 0   | 18                           |
| August.....             | 1,229.54   | 391                         | -4  | 0                        | 11                                  | 0   | 7                            |
| September.....          | 1,229.40   | 387                         | +5  | 0                        | 9                                   | 0   | 14                           |
| October.....            | 1,229.58   | 392                         | -   | -                        | -                                   | -   | -                            |
| Water year 1965-66..... | -  | -                           | -1,588                                      | 5,516                    | 216                                 | 0   | 4,144                        |

† On first day of month.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-0165. Sweetwater River at Sweetwater Dam, Calif.

Location.--Lat 32°41'20", long 117°00'35", in La Nacion Grant, at Sweetwater Dam, 6 miles east of National City, San Diego County, and 8 miles upstream from mouth.

Drainage area.--182 sq mi.

Records available.--October 1887 to September 1966 (discontinued).

Gage.--Staff gage read once daily. Datum of gage is 149.12 ft above mean sea level, datum of 1929.

Remarks.--Records of total inflow represent all water reaching Sweetwater Reservoir, including precipitation on reservoir and supplemental Colorado River water delivered through aqueduct of San Diego County Water Authority. Total inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Records of net inflow exclude supplemental water from Colorado River. Monthly evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Area and capacity tables for reservoir are dated December 1947. Capacity of reservoir at spillway level (gage height, 89.70 ft), 27,690 acre-ft. Dead storage, 4 acre-ft below lowest outlet at gage height 19.7 ft, included in these records. Diversions for irrigation. Regulation at Loveland Reservoir (see Sta. No. 0155). Water is released as required for irrigation and domestic use in Chula Vista, National City, and contiguous areas.

Cooperation.--Records furnished by California-American Water Company.

Monthly net inflow, water year October 1965 to September 1966

|                         | Gage<br>height<br>(feet)† | Contents<br>in<br>(acre-<br>feet) | Change<br>in<br>contents<br>(acre-<br>feet) | Draft<br>(acre-<br>feet) | Evapo-<br>ration<br>(acre-<br>feet) | Spill<br>plus<br>leakage<br>(acre-<br>feet) | Total<br>inflow<br>(acre-<br>feet) | Colorado<br>River<br>water<br>imported<br>(acre-<br>feet) | Net<br>inflow<br>(acre-<br>feet) |
|-------------------------|---------------------------|-----------------------------------|---|--------------------------|-------------------------------------|---|------------------------------------|---|----------------------------------|
|                         | Sweetwater Reservoir      |                                   |   |                          |                                     |   |                                    |   |                                  |
| October.....            | 43.55                     | 2,672                             | -293  | 339                      | 117                                 | 0   | 163                                | 71  | 92                               |
| November.....           | 42.31                     | 2,379                             | +559  | 51                       | 32                                  | 0   | 642                                | 102   | 540                              |
| December.....           | 44.63                     | 2,938                             | +496  | 277                      | 32                                  | 0   | 805                                | 95  | 710                              |
| Calendar year 1965..... | -                         | -                                 | +960  | 1,490                    | 1,017                               | 0   | 3,467                              | 1,811   | 1,656                            |
| January.....            | 46.56                     | 3,434                             | -281  | 576                      | 47                                  | 0   | 342                                | 152   | 190                              |
| February.....           | 45.48                     | 3,153                             | +13   | 390                      | 39                                  | 0   | 442                                | 90  | 352                              |
| March.....              | 45.53                     | 3,166                             | -367  | 505                      | 75                                  | 0   | 213                                | 99  | 114                              |
| April.....              | 44.07                     | 2,799                             | +549  | 504                      | 105                                 | 0   | 1,158                              | 82  | 1,076                            |
| May.....                | 46.23                     | 3,348                             | -494  | 621                      | 98                                  | 0   | 225                                | 184   | 41                               |
| June.....               | 44.29                     | 2,854                             | -424  | 525                      | 128                                 | 0   | 229                                | 178   | 51                               |
| July.....               | 42.53                     | 2,430                             | -39   | 79                       | 143                                 | 0   | 183                                | 145   | 38                               |
| August.....             | 42.36                     | 2,391                             | -12   | 10                       | 145                                 | 0   | 143                                | 119   | 24                               |
| September.....          | 42.31                     | 2,379                             | -43   | 41                       | 121                                 | 0   | 119                                | 93  | 26                               |
| October.....            | 42.12                     | 2,336                             | -   | -                        | -                                   | -   | -                                  | -   | -                                |
| Water year 65-66.....   | -                         | -                                 | -336  | 3,918                    | 1,082                               | 0   | 4,664                              | 1,410   | 3,254                            |

† On first day of month.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

## SAN DIEGO RIVER BASIN

11-0170. Boulder Creek at Cuyamaca Reservoir, near Julian, Calif.

Location.--Lat 32°59'20", long 116°35'10", in NE $\frac{1}{4}$  sec.5, T.14 S., R.4 E., on outlet tower at Cuyamaca Dam, 7 miles south of Julian.Drainage area.--12.1 sq mi.Records available.--October 1935 to September 1966 (inflow to Cuyamaca Reservoir; precipitation on water surface deducted October 1939 to September 1944). June 1912 to September 1926, records not equivalent as they represent only outflow (draft) from Cuyamaca Reservoir.Gage.--Staff gage read periodically. Datum of gage is 4,600.2 ft above mean sea level (Helix Irrigation District bench mark).Average discharge.--26 years (1935-39, 1944-66), 4.16 cfs (3,010 acre-ft per year); median of yearly mean discharges, 1.2 cfs (900 acre-ft per year).Remarks.--Records of discharge represent all water reaching Cuyamaca Reservoir, including precipitation on reservoir. Discharge computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Area and capacity tables for reservoir are based on a resurvey made in the fall of 1949. Capacity of reservoir at spillway level (gage height, 35.4 ft), 11,540 acre-ft. No dead storage. Small diversions for local use near dam. Water is released down Boulder Creek to El Capital Reservoir.Cooperation.--Records of reservoir operation furnished by Helix Irrigation District.

Monthly runoff, water year October 1965 to September 1966

|                         | Gage<br>height<br>(feet)† | Contents<br>(acre-ft)<br>Cuyamaca Reservoir | Change<br>in<br>contents<br>(acre-<br>feet) | Draft<br>(acre-<br>feet) | Evapo-<br>ration<br>(acre-<br>feet) | Spill<br>plus<br>leakage<br>(acre-<br>feet) | Discharge<br>(acre-<br>feet) |
|-------------------------|---------------------------|---|---|--------------------------|-------------------------------------|---|------------------------------|
| Sept. 30.....           | -                         | 0   | -   | -                        | -                                   | -   | -                            |
| Oct. 31.....            | -                         | 0   | 0   | 0                        | 0                                   | 0   | 0                            |
| Nov. 30.....            | 17.7                      | 667   | +667  | 0                        | 0                                   | 0   | 667                          |
| Dec. 31.....            | 21.6                      | 1,928                                       | +1,261                                      | 0                        | 154                                 | 0   | 1,415                        |
| Calendar year 1965..... | -                         | -   | +1,897                                      | 1,100                    | 309                                 | 0   | 3,306                        |
| Jan. 31.....            | 23.0                      | 2,537                                       | +609  | 0                        | 79                                  | 0   | 688                          |
| Feb. 28.....            | 24.8                      | 3,459                                       | +922  | 0                        | 167                                 | 0   | 1,089                        |
| Mar. 31.....            | 25.2                      | 3,685                                       | +226  | 0                        | 160                                 | 0   | 386                          |
| Apr. 30.....            | 21.6                      | 1,928                                       | -1,757                                      | 1,615                    | 186                                 | 0   | 44                           |
| May 31.....             | -                         | 0   | -1,928                                      | 1,804                    | 109                                 | 0   | -15                          |
| June 30.....            | -                         | 0   | 0   | 0                        | 0                                   | 0   | 0                            |
| July 31.....            | -                         | 0   | 0   | 0                        | 0                                   | 0   | 0                            |
| Aug. 31.....            | -                         | 0   | 0   | 0                        | 0                                   | 0   | 0                            |
| Sept. 30.....           | -                         | 0   | 0   | 0                        | 0                                   | 0   | 0                            |
| Water year 1965-66..... | -                         | -   | 0   | 3,419                    | 853                                 | 0   | 4,274                        |

† Gage height at 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-0205. San Diego River at El Capitan Dam, Calif.

Location.--Lat 32°53'00", long 116°48'25", in NE 1/4 sec. 7, T.15 S., R.2 E., on outlet tower of El Capitan Dam, 7 miles east of Lakeside.

Drainage area.--188 sq mi.

Records available.--October 1945 to September 1966 (discontinued). October 1936 to September 1945, records not equivalent owing to exclusion of greater part of flow released from Cuyamaca Reservoir.

Gage.--Staff gage read daily. Datum of gage is 553.0 ft above mean sea level.

Remarks.--Records of total inflow represent all water reaching El Capitan Reservoir, including precipitation on reservoir, water passing down Boulder Creek from Cuyamaca Reservoir, and supplemental Colorado River water delivered through aqueduct of San Diego County Water Authority. Total inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Records of net inflow exclude the supplemental Colorado River water. October 1957 to June 1963 and since October 1964 evaporation from reservoir surface computed by mass-transfer method. At other times a Colorado land pan was used. Area and capacity tables for reservoir are based on a resurvey completed in 1955. Dam was completed in 1935. Capacity of reservoir at spillway level (gage height, 197.00 ft), 112,810 acre-ft. Dead storage, 59.2 acre-ft below outlet at gage height 21.0 ft, included in these records. No significant diversion above reservoir. Flow partly regulated by Cuyamaca Reservoir (see Sta. No. 0170). Water is released as required for municipal use and irrigation.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly net inflow, water year October 1965 to September 1966

| Month                   | Gage height (feet)†  | Contents (acre-feet) | Change in contents (acre-feet) | Draft (acre-feet) | Evaporation (acre-feet) | Spill plus leakage (acre-feet) | Total inflow (acre-feet) | Colorado River Water included (acre-feet) | Net inflow (acre-feet) |
|-------------------------|----------------------|----------------------|--------------------------------|-------------------|-------------------------|--------------------------------|--------------------------|---|------------------------|
|                         | El Capitan Reservoir |                      |                                |                   |                         |                                |                          |   |                        |
| Sept. 30.....           | 94.47                | 14,373               | -                              | -                 | -                       | -                              | -                        | -   | -                      |
| Oct. 31.....            | 93.38                | 13,895               | -478                           | 281               | 280                     | 0                              | 83                       | 15  | 68                     |
| Nov. 30.....            | 97.73                | 15,873               | +1,978                         | 2                 | 134                     | 0                              | 2,114                    | 0   | 2,114                  |
| Dec. 31.....            | 101.68               | 17,820               | +1,947                         | 252               | 154                     | 0                              | 2,353                    | 0   | 2,353                  |
| Calendar year 1965..... | -                    | -                    | +9,180                         | 645               | 2,357                   | 0                              | 12,182                   | 2,697                                     | 9,485                  |
| Jan. 31.....            | 98.31                | 16,150               | -1,670                         | 3,707             | 140                     | 0                              | 2,177                    | 0   | 2,177                  |
| Feb. 28.....            | 105.86               | 20,026               | +3,876                         | 733               | 115                     | 0                              | 4,724                    | 2,109                                     | 2,615                  |
| Mar. 31.....            | 113.04               | 24,179               | +4,153                         | 1,095             | 174                     | 0                              | 5,422                    | 2,952                                     | 2,470                  |
| Apr. 30.....            | 113.74               | 24,612               | +433                           | 1,971             | 238                     | 0                              | 2,642                    | 484                                       | 2,158                  |
| May 31.....             | 113.18               | 24,265               | -347                           | 2,378             | 289                     | 0                              | 2,320                    | *1,680                                    | 640                    |
| June 30.....            | 108.84               | 21,691               | -2,574                         | 2,303             | 308                     | 0                              | 37                       | 0   | 37                     |
| July 31.....            | 103.92               | 18,984               | -2,707                         | 2,350             | 364                     | 0                              | 7                        | 0   | 7                      |
| Aug. 31.....            | 99.99                | 16,969               | -2,015                         | 1,612             | 390                     | 0                              | -13                      | 0   | -13                    |
| Sept. 30.....           | 99.48                | 16,719               | -250                           | 6                 | 339                     | 0                              | 95                       | 0   | 95                     |
| Water year 1965-66..... | -                    | -                    | +2,346                         | 16,690            | 2,925                   | 0                              | 21,961                   | 7,240                                     | 14,721                 |

† Gage height at 0800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of inflow may appear. This arises primarily from the difficulty of computing inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

\* Release from Cuyamaca Reservoir.

## SAN DIEGO RIVER BASIN

11-0225, San Diego River near Santee, Calif.

Location.--Lat 32°49'29", long 117°03'17", in Ex Mission San Diego Grant, on right bank in Mission Gorge, 0.2 mile upstream from left tributary and 6 miles west of Santee, San Diego County.

Drainage area.--377 sq mi.

Records available.--May 1912 to December 1915, March 1916 to September 1966. Monthly discharge only for some periods and yearly estimates only for 1924-25, published in WSP 1315-B.

Gage.--Digital water-stage recorder and unfinished rubble dam control. Altitude of gage is 180 ft (from topographic map). Prior to Nov. 10, 1920, staff gage at site  $1\frac{1}{2}$  miles upstream at different datum. Nov. 10, 1920, to Dec. 1, 1954, graphic water-stage recorder at present site at datum 1.0 ft higher. Dec. 1, 1954, to Oct. 1, 1962, graphic water-stage recorder.

Average discharge.--53 years, 24.2 cfs (17,520 acre-ft per year); median of yearly mean discharges, 4.7 cfs (3,400 acre-ft per year).

Extremes.--Maximum discharge during year, 1,800 cfs Nov. 23 (gage height, 7.55 ft); no flow for much of year. 1912-66; Maximum discharge, 70,200 cfs Jan. 27, 1916 (gage height, 25.1 ft, site and datum then in use), based on slope-conveyance computation; no flow at times in most years.

Remarks.--Records fair except those for period of no gage-height record, which are poor. Flow regulated by Cuyamaca, El Capitan (see Sta. Nos. 0170, 0205) and San Vicente Reservoirs. Diversions by city of San Diego for municipal supply and by Helix Irrigation District. Average discharge represents flow to ocean during period of record, regardless of upstream development.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|---------|---------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0       | 12      | 57    | 12    | 7.1   | 2.9   | 0.70  | 0.80  |      |      |       |
| 2     |      | 0       | 9.4     | 38    | 8.0   | 9.4   | 2.7   | .60   | .50   |      |      |       |
| 3     |      | 0       | 7.5     | 31    | 6.4   | 8.1   | 2.5   | .60   | .30   |      |      |       |
| 4     |      | 0       | 6.9     | 26    | 6.3   | 6.9   | 3.2   | .60   | .10   |      |      |       |
| 5     |      | 0       | 6.7     | 20    | 5.5   | 5.6   | 2.2   | .60   | .10   |      |      |       |
| 6     |      | 0       | 6.5     | 17    | 101   | 5.7   | 2.2   | .80   | 0     |      |      |       |
| 7     |      | 0       | 5.9     | 16    | 96    | 6.6   | 2.8   | .90   | 0     |      |      |       |
| 8     |      | 0       | 7.1     | 14    | 57    | 5.9   | 2.5   | 1.0   | .30   |      |      |       |
| 9     |      | 0       | 375     | 12    | 26    | 6.4   | 2.3   | 1.1   | .30   |      |      |       |
| 10    |      | 0       | 392     | 11    | 25    | 5.9   | 2.3   | 1.1   | .40   |      |      |       |
| 11    |      | 0       | 190     | 11    | 31    | 5.5   | 2.2   | .70   | .30   |      |      |       |
| 12    |      | 0       | 90      | 10    | 18    | 5.2   | 2.3   | .90   | .30   |      |      |       |
| 13    |      | 0       | 158     | 8.6   | 17    | 5.0   | 2.0   | .80   | .20   |      |      |       |
| 14    |      | 0       | 356     | 8.4   | 15    | 5.4   | 1.7   | .80   | .50   |      |      |       |
| 15    |      | 0       | 227     | 7.3   | 13    | 4.0   | 1.3   | .90   | .50   |      |      |       |
| 16    |      | 24      | 357     | 6.9   | 12    | 3.8   | 1.2   | 1.3   | .30   |      |      |       |
| 17    |      | 78      | 163     | 8.4   | 11    | 4.6   | 1.6   | 1.1   | .10   |      |      |       |
| 18    |      | 27      | 84      | 6.8   | 11    | 4.6   | 2.0   | 1.1   | 0     |      |      |       |
| 19    |      | 10      | 57      | 6.4   | 9.7   | 4.2   | 1.4   | .80   | 0     |      |      |       |
| 20    |      | 4.3     | 45      | 16    | 8.9   | 4.1   | .70   | .70   | .10   |      |      |       |
| 21    |      | 2.8     | 35      | 7.6   | 9.0   | 4.9   | 1.1   | .50   | .50   |      |      |       |
| 22    |      | 130     | 70      | 5.9   | 8.3   | 4.1   | .90   | .30   | .30   |      |      |       |
| 23    |      | 872     | 40      | 5.8   | 7.8   | 4.6   | .80   | .60   | .20   |      |      |       |
| 24    |      | 147     | 30      | 5.5   | 7.4   | 3.5   | 1.2   | .80   | .10   |      |      |       |
| 25    |      | 110     | 25      | 5.8   | 7.4   | 5.0   | 1.1   | .70   | 0     |      |      |       |
| 26    |      | 57      | 19      | 5.5   | 8.2   | 3.9   | .50   | .60   | 0     |      |      |       |
| 27    |      | 36      | 16      | 14    | 8.3   | 4.1   | .70   | .90   | 0     |      |      |       |
| 28    |      | 27      | 15      | 9.4   | 7.4   | 4.4   | .80   | .50   | 0     |      |      |       |
| 29    |      | 20      | 30      | 5.0   | ----- | 4.2   | .70   | .20   | 0     |      |      |       |
| 30    |      | 16      | 113     | 31    | ----- | 4.5   | .80   | .10   | 0     |      |      |       |
| 31    |      | -- --   | 39      | 44    | ----- | 3.5   | ----- | .50   | ----- |      |      |       |
| TOTAL | 0    | 1,561.1 | 2,988.0 | 471.3 | 553.6 | 160.7 | 51.60 | 22.80 | 6.20  | 0    | 0    | 0     |
| MEAN  | 0    | 52.0    | 96.4    | 15.2  | 19.8  | 5.18  | 1.72  | .74   | .21   | 0    | 0    | 0     |
| AC-FT | 0    | 3,100   | 5,930   | 935   | 1,100 | 319   | 102   | 45    | 12    | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 872 MIN 0 MEAN 14.8 AC-FT 10,700  
 WATER YEAR 1965-66 MAX 872 MIN 0 MEAN 15.9 AC-FT 11,540

Note.--No gage-height record Dec. 21-29.

## LOS PENASQUITOS CREEK BASIN

109

11-0233.4, Los Penasquitos Creek near Poway, Calif.

Location.--Lat 32°56'35", long 117°07'15", in Los Penasquitos Grant, on left bank 1.0 mile downstream from Cypress Creek and 5.5 miles southwest of Poway, San Diego County.

Drainage area.--42.1 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 260 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,610 cfs Nov. 23 (gage height, 6.23 ft, in gage well, 7.40 ft, from crest-stage gage), on basis of slope-area measurement of maximum flow; minimum daily, 0.20 cfs Dec. 8.  
1964-66: Maximum discharge, that of Nov. 23, 1965; minimum daily, 0.10 cfs Jan. 5-9, 1965.

Remarks.--Records good. Flow partly regulated by several conservation reservoirs above station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.     | JAN.  | FEB.  | MAR. | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|----------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 0.40  | 0.50   | 2.5      | 50    | 4.0   | 2.8  | 1.5   | 0.90  | 0.50  | 0.60  | 0.60  | 0.50  |
| 2     | .50   | .50    | 1.5      | 33    | 2.6   | 3.9  | 1.5   | .90   | .50   | .60   | .50   | .50   |
| 3     | .50   | .50    | 1.0      | 27    | 2.0   | 3.3  | 1.4   | .80   | .50   | .60   | .40   | .50   |
| 4     | .50   | .50    | .70      | 23    | 1.6   | 2.7  | 1.5   | .90   | .50   | .50   | .40   | .50   |
| 5     | .60   | .50    | .50      | 20    | 1.6   | 2.6  | 1.4   | .80   | .50   | .60   | .40   | .50   |
| 6     | .50   | .40    | .40      | 17    | 3.6   | 2.9  | 1.3   | .90   | .50   | .60   | .50   | .70   |
| 7     | .60   | .40    | .30      | 14    | 2.5   | 2.8  | 1.2   | .80   | .50   | .50   | .50   | .50   |
| 8     | .70   | .30    | .20      | 12    | 3.5   | 2.7  | 1.2   | .80   | .80   | .60   | .50   | .50   |
| 9     | .70   | .40    | 2.85     | 9.8   | 1.2   | 2.2  | 1.3   | .80   | .60   | .60   | .60   | .50   |
| 10    | .80   | .30    | 2.43     | 8.6   | 1.6   | 2.2  | 1.3   | .90   | .70   | .50   | .50   | .50   |
| 11    | .70   | .30    | 6.2      | 7.8   | 1.9   | 2.2  | 1.2   | .90   | .60   | .50   | .40   | .50   |
| 12    | .70   | .30    | 4.0      | 6.6   | 1.1   | 2.4  | 1.2   | .80   | .60   | .60   | .40   | .50   |
| 13    | .60   | .30    | 7.7      | 5.2   | 8.6   | 2.4  | 1.2   | .80   | .60   | .60   | .50   | .60   |
| 14    | .60   | .40    | 20.1     | 4.3   | 6.7   | 2.4  | 1.0   | .80   | .70   | .50   | .50   | .50   |
| 15    | .60   | 1.5    | 7.9      | 4.0   | 5.5   | 2.4  | 1.0   | .70   | .60   | .60   | .40   | .50   |
| 16    | .50   | 3.4    | 16.9     | 3.3   | 4.6   | 2.3  | 1.1   | .70   | .60   | .60   | .50   | .50   |
| 17    | .60   | 2.2    | 6.3      | 2.3   | 4.2   | 2.3  | 1.2   | .70   | .50   | .60   | .40   | .40   |
| 18    | .50   | 5.0    | 4.0      | 2.2   | 3.7   | 2.5  | 1.2   | .60   | .50   | .50   | .40   | .50   |
| 19    | .50   | 2.4    | 2.9      | 2.4   | 3.5   | 2.1  | 1.0   | .60   | .60   | .60   | .40   | .60   |
| 20    | .50   | .80    | 2.3      | 3.9   | 3.1   | 1.7  | 1.0   | .60   | .50   | .60   | .50   | .60   |
| 21    | .40   | .40    | 1.8      | 2.8   | 3.0   | 1.8  | 1.0   | .50   | .60   | .60   | .50   | .60   |
| 22    | .40   | 4.4    | 3.2      | 2.2   | 2.8   | 1.7  | 1.0   | .50   | .40   | .60   | .40   | .50   |
| 23    | .40   | 4.17   | 2.3      | 2.5   | 2.7   | 1.7  | .90   | .50   | .50   | .50   | .50   | .50   |
| 24    | .40   | 4.9    | 1.6      | 3.2   | 2.7   | 2.3  | .90   | .50   | .40   | .50   | .50   | .50   |
| 25    | .40   | 4.9    | 1.4      | 1.9   | 3.5   | 2.8  | 1.0   | .50   | .50   | .40   | .50   | .60   |
| 26    | .40   | 3.0    | 1.3      | 1.6   | 4.1   | 1.8  | .90   | .60   | .50   | .60   | .40   | .60   |
| 27    | .40   | 1.7    | 1.1      | 2.7   | 3.4   | 1.7  | .90   | .60   | .50   | .50   | .40   | .60   |
| 28    | .40   | 1.1    | 1.1      | 2.3   | 2.7   | 1.8  | .90   | .50   | .50   | .50   | .50   | .60   |
| 29    | .40   | 6.8    | 3.0      | 1.6   | ----- | 1.6  | .90   | .50   | .70   | .70   | .50   | .60   |
| 30    | .40   | 4.3    | 7.2      | 1.2   | ----- | 1.6  | .80   | .40   | .80   | .70   | .60   | .60   |
| 31    | .40   | -----  | 4.2      | 1.5   | ----- | 1.5  | ----- | .60   | ----- | .70   | .50   | ----- |
| TOTAL | 16.00 | 649.40 | 1,600.10 | 304.2 | 230.6 | 71.1 | 33.90 | 21.40 | 16.60 | 17.70 | 14.60 | 16.10 |
| MEAN  | .52   | 21.6   | 51.6     | 9.81  | 8.24  | 2.29 | 1.13  | .69   | .55   | .57   | .47   | .54   |
| AC-FT | 32    | 1,290  | 3,170    | 603   | 457   | 141  | 67    | 42    | 33    | 35    | 29    | 32    |

CALENDAR YEAR 1965 MAX 417 MIN .10 MEAN 6.88 AC-FT 4,980  
WATER YEAR 1965-66 MAX 417 MIN .20 MEAN 8.20 AC-FT 5,930

## Peak discharge (base, 60 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-23 | 0500 | 6.23        | 1,610     | 12-30 | 0030 | 2.94        | 202       |
| 12-9  | 1000 | 4.62        | 676       | 2-6   | 1515 | 2.59        | 101       |
| 12-14 | 1700 | 4.11        | 523       |       |      |             |           |

## SAN DIEGUITO RIVER BASIN

11-0240. Santa Ysabel Creek at Sutherland Dam, Calif.

Location.--Lat 33°07'05", long 116°47'10", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.21, T.12 S., R.2 E., on face of Sutherland Dam, 1.6 miles upstream from Black Canyon Creek and 7 miles northeast of Ramona.

Drainage area.--53.9 sq mi.

Records available.--December 1912 to September 1928, October 1936 to September 1966. Prior to October 1953, published as "near Mesa Grande."

Gage.--Graphic water-stage recorder. Datum of gage is 1,912.00 ft above mean sea level (levels by city of San Diego). Prior to Oct. 1, 1936, graphic water-stage recorder at same site at various datums. Oct. 1, 1936, to Sept. 30, 1953, at site 1 mile downstream at different datum. Mar. 7 to Nov. 29, 1954, staff gage at present site and datum.

Average discharge.--45 years (1913-28, 1936-66), 17.5 cfs (12,670 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Sutherland Reservoir including precipitation on reservoir. Discharge computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Sutherland Dam was completed and storage began in October 1953. Area and capacity tables for the reservoir are based on an aerial survey made in 1949. Capacity of reservoir at spillway level (gage height, 145.00 ft), 29,680 acre-ft. Dead storage, 176 acre-ft below lowest outlet at gage height 28.00 ft, included in these records. Small diversion above reservoir. Water is released as required for municipal use.

Cooperation.--Records computed in cooperation with city of San Diego.

## Monthly discharge, water year October 1965 to September 1966

| Month                   | Gage height<br>(feet)† | Contents<br>(acre-feet) | Change in<br>contents<br>(acre-feet) | Draft<br>(acre-feet) | Evapo-<br>ration<br>(acre-feet) | Spill<br>plus<br>leakage<br>(acre-feet) | Discharge<br>(acre-feet) |
|-------------------------|------------------------|-------------------------|--------------------------------------|----------------------|---------------------------------|---|--------------------------|
|                         | Sutherland Reservoir   |                         |                                      |                      |                                 |   |                          |
| Sept. 30.....           | 69.65                  | 3,331                   | -                                    | -                    | -                               | -                                       | -                        |
| Oct. 31.....            | 69.23                  | 3,266                   | -65                                  | 0                    | 80                              | 0                                       | 15                       |
| Nov. 30.....            | 75.15                  | 4,264                   | +998                                 | 0                    | 34                              | 0                                       | 1,032                    |
| Dec. 31.....            | 79.47                  | 5,102                   | +838                                 | 0                    | 32                              | 0                                       | 870                      |
| Calendar year 1965..... | -                      | -                       | +2,308                               | 0.1                  | 704                             | 0                                       | 3,012                    |
| Jan. 31.....            | 83.39                  | 5,947                   | +845                                 | 0                    | 44                              | 0                                       | 889                      |
| Feb. 28.....            | 87.29                  | 6,868                   | +921                                 | 0                    | 52                              | 0                                       | 973                      |
| Mar. 31.....            | 86.38                  | 6,646                   | -222                                 | 597                  | 84                              | 0                                       | 459                      |
| Apr. 30.....            | 85.83                  | 6,514                   | -132                                 | 199                  | 94                              | 0                                       | 161                      |
| May 31.....             | 71.79                  | 3,676                   | -2,838                               | 2,840                | 97                              | 0                                       | 99                       |
| June 30.....            | 59.95                  | 2,019                   | -1,657                               | 1,671                | 66                              | 0                                       | 80                       |
| July 31.....            | 59.49                  | 1,967                   | -52                                  | 0                    | 78                              | 0                                       | 26                       |
| Aug. 31.....            | 58.91                  | 1,902                   | -65                                  | 0                    | 72                              | 0                                       | 7                        |
| Sept. 30.....           | 58.47                  | 1,855                   | -47                                  | 0                    | 54                              | 0                                       | 7                        |
| Water year 1965-66..... | -                      | -                       | -1,476                               | 5,307                | 787                             | 0                                       | 4,618                    |

† Gage height at 0800 hours.

Note.--For months when discharge to the reservoir was small and other elements were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as a residual of several larger quantities which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.



11-0255. Santa Ysabel Creek near Ramona, Calif.

Location.--Lat 33°06'25", long 116°51'55", in SW 1/4 sec. 27, T.12 S., R.1 E., on left bank 1.6 miles downstream from Temescal Creek and 4.5 miles north of Ramona.

Drainage area.--112 sq mi.

Records available.--February 1912 to February 1923, October 1943 to September 1966. Monthly discharge only for February 1912, published in WSP 1315-B.

Gage.--Graphic water-stage recorder and concrete cutoff wall, repaired at times. Datum of gage is 847.88 ft above mean sea level (levels by city of San Diego Water Department). Prior to Jan. 31, 1916, staff gage at site 0.5 mile upstream at different datum. Jan. 31, 1916, to Feb. 3, 1923, staff gage or graphic water-stage recorder at present site at datum 0.3 ft higher.

Extremes.--Maximum discharge during year, 4,570 cfs Nov. 23 (gage height, 10.06 ft), from rating curve extended above 1,300 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 17, May 31 to Sept. 30.  
1912-23, 1943-66: Maximum discharge, 28,400 cfs Jan. 27, 1916 (gage height, 14.0 ft, datum then in use), from rating curve extended above 1,500 cfs based on slope-conveyance computation of maximum flow; no flow for parts of some years.

Remarks.--Records good. Flow regulated since July 1954 by Sutherland Reservoir (see Sta. No. 0240). Some small diversions above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|----------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0        | 2.8   | 25    | 8.5   | 5.8   | 2.6   | 1.4   |       |      |      |       |
| 2     |      | 0        | 2.4   | 16    | 7.0   | 11    | 2.6   | 1.1   |       |      |      |       |
| 3     |      | 0        | 2.0   | 13    | 6.0   | 8.7   | 2.6   | 1.0   |       |      |      |       |
| 4     |      | 0        | 1.6   | 12    | 5.0   | 5.8   | 2.4   | .90   |       |      |      |       |
| 5     |      | 0        | 1.4   | 10    | 5.0   | 4.9   | 2.2   | .90   |       |      |      |       |
| 6     |      | 0        | 1.2   | 9.5   | 8.0   | 4.6   | 2.2   | .80   |       |      |      |       |
| 7     |      | 0        | 1.1   | 8.3   | 31    | 4.3   | 2.2   | .60   |       |      |      |       |
| 8     |      | 0        | 1.1   | 7.9   | 24    | 4.0   | 2.0   | .60   |       |      |      |       |
| 9     |      | 0        | 7.1   | 7.5   | 16    | 3.8   | 2.0   | .90   |       |      |      |       |
| 10    |      | 0        | 18    | 7.1   | 15    | 3.3   | 2.0   | 1.1   |       |      |      |       |
| 11    |      | 0        | 14    | 6.8   | 12    | 3.3   | 2.2   | 1.2   |       |      |      |       |
| 12    |      | 0        | 9.1   | 6.4   | 9.9   | 3.3   | 2.2   | 1.1   |       |      |      |       |
| 13    |      | 0        | 13    | 5.8   | 9.1   | 3.3   | 2.2   | .90   |       |      |      |       |
| 14    |      | 0        | 15    | 5.5   | 8.3   | 3.3   | 2.0   | .70   |       |      |      |       |
| 15    |      | 0        | 13    | 5.5   | 7.9   | 3.0   | 1.7   | .60   |       |      |      |       |
| 16    |      | 0        | 15    | 5.2   | 7.1   | 3.0   | 1.6   | .50   |       |      |      |       |
| 17    |      | 0        | 10    | 5.2   | 6.8   | 2.8   | 1.4   | .40   |       |      |      |       |
| 18    |      | .10      | 8.3   | 5.2   | 6.4   | 2.6   | 1.9   | .30   |       |      |      |       |
| 19    |      | .20      | 6.8   | 4.9   | 6.1   | 2.4   | 2.6   | .20   |       |      |      |       |
| 20    |      | .10      | 6.1   | 5.5   | 5.8   | 2.4   | 2.6   | .20   |       |      |      |       |
| 21    |      | .10      | 5.8   | 5.2   | 5.5   | 2.4   | 2.2   | .10   |       |      |      |       |
| 22    |      | 170      | 9.5   | 5.0   | 4.2   | 2.2   | 2.0   | .10   |       |      |      |       |
| 23    |      | 1,060    | 9.9   | 5.0   | 4.9   | 2.0   | 1.9   | .10   |       |      |      |       |
| 24    |      | 22       | 6.4   | 4.9   | 4.9   | 6.9   | 1.6   | .10   |       |      |      |       |
| 25    |      | 19       | 6.1   | 4.6   | 6.1   | 7.9   | 1.4   | .10   |       |      |      |       |
| 26    |      | 14       | 5.8   | 4.3   | 7.5   | 6.8   | 1.4   | .10   |       |      |      |       |
| 27    |      | 6.8      | 5.2   | 4.5   | 6.4   | 5.5   | 1.4   | .10   |       |      |      |       |
| 28    |      | 4.9      | 4.9   | 4.6   | 5.5   | 4.6   | 1.4   | .10   |       |      |      |       |
| 29    |      | 4.0      | 7.1   | 4.2   | ----- | 4.0   | 1.4   | .10   |       |      |      |       |
| 30    |      | 3.3      | 8.3   | 7.0   | ----- | 3.5   | 1.4   | .10   |       |      |      |       |
| 31    |      | -----    | 18    | 17    | ----- | 3.0   | ----- | 0     | ----- |      |      | ----- |
| Total | 0    | 1,304.50 | 310.7 | 238.6 | 250.6 | 134.4 | 59.3  | 16.40 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 43.5     | 10.0  | 7.70  | 8.95  | 4.34  | 1.98  | 0.53  | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 2,590    | 616   | 473   | 497   | 267   | 118   | 33    | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 1,060 Min 0 Mean 5.07 Ac-ft 3,670  
 Water year 1965-66 Max 1,060 Min 0 Mean 6.34 Ac-ft 4,590

## SAN DIEGUITO RIVER BASIN

11-0260, Santa Ysabel Creek near San Pasqual, Calif.

Location.--Lat 33°05'10", long 116°54'56", in NE 1/4 sec. 31, T.12 S., R.1 E., on left bank 1.1 miles downstream from Clevenger Canyon and 2 miles east of San Pasqual.

Drainage area.--128 sq mi.

Records available.--December 1905 to September 1910 and May 1911 to September 1912 (published as "near Escondido"), April 1947 to November 1955 (irrigation seasons only), April 1956 to September 1966. Records for October to December 1910, published in WSP 447, have been found to be in error and should not be used.

Gage.--Graphic water-stage recorder and concrete control since April 1947. Altitude of gage is 510 ft (from topographic map). Dec. 17, 1905, to Sept. 30, 1912, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--14 years (1906-10, 1912, 1957-66), 16.4 cfs (11,870 acre-ft per year); median of yearly mean discharges, 4.0 cfs (2,900 acre-ft per year).

Extremes.--Maximum discharge during year, 5,260 cfs Nov. 23 (gage height, 10.98 ft), from rating curve extended above 600 cfs on basis of slope-area measurements at gage heights 9.78 ft and 10.98 ft; no flow Oct. 1 to Nov. 21, May 24 to Sept. 30. 1905-12, 1947-66; Maximum discharge observed, 8,000 cfs Mar. 24, 1906 (gage height, 6.3 ft, site and datum then in use); no flow at times in most years.

Remarks.-- Records good. Flow regulated since July 1954 by Sutherland Reservoir (see Sta. No. 0240). Small diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.    | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June | July | Aug. | Sept. |
|--------------------|------|---------|--------|-------|-------|-------|-------|-------|------|------|------|-------|
| 1                  |      | 0       | 3.2    | 2.6   | 8.9   | 5.7   | 2.6   | 0.80  |      |      |      |       |
| 2                  |      | 0       | 2.6    | 1.8   | 7.2   | 9.2   | 2.5   | .80   |      |      |      |       |
| 3                  |      | 0       | 2.0    | 1.3   | 6.3   | 1.0   | 2.4   | .70   |      |      |      |       |
| 4                  |      | 0       | 1.3    | 1.1   | 5.5   | 5.9   | 2.4   | .50   |      |      |      |       |
| 5                  |      | 0       | .90    | 1.0   | 5.3   | 5.2   | 2.3   | .50   |      |      |      |       |
| 6                  |      | 0       | .80    | 8.9   | 8.2   | 4.8   | 2.2   | .40   |      |      |      |       |
| 7                  |      | 0       | .80    | 8.3   | 3.7   | 4.6   | 2.1   | .40   |      |      |      |       |
| 8                  |      | 0       | .70    | 7.7   | 2.7   | 4.3   | 2.1   | .40   |      |      |      |       |
| 9                  |      | 0       | 3.6    | 7.5   | 1.8   | 4.1   | 2.2   | .40   |      |      |      |       |
| 10                 |      | 0       | 3.2    | 7.0   | 1.6   | 3.9   | 2.2   | .60   |      |      |      |       |
| 11                 |      | 0       | 1.6    | 6.8   | 1.3   | 4.0   | 2.3   | .90   |      |      |      |       |
| 12                 |      | 0       | 8.0    | 6.5   | 1.0   | 3.9   | 2.3   | 1.0   |      |      |      |       |
| 13                 |      | 0       | 1.1    | 5.9   | 9.6   | 3.6   | 2.2   | .80   |      |      |      |       |
| 14                 |      | 0       | 1.5    | 5.7   | 8.6   | 3.7   | 1.9   | .60   |      |      |      |       |
| 15                 |      | 0       | 1.3    | 5.7   | 8.3   | 3.4   | 1.6   | .40   |      |      |      |       |
| 16                 |      | 0       | 1.5    | 5.3   | 7.7   | 3.1   | 1.4   | .30   |      |      |      |       |
| 17                 |      | 0       | 9.2    | 5.3   | 7.2   | 3.0   | 1.2   | .20   |      |      |      |       |
| 18                 |      | 0       | 7.5    | 5.3   | 7.2   | 2.7   | 1.3   | .20   |      |      |      |       |
| 19                 |      | 0       | 6.8    | 5.2   | 6.5   | 2.6   | 2.1   | .10   |      |      |      |       |
| 20                 |      | 0       | 6.5    | 5.3   | 6.1   | 2.5   | 2.3   | .10   |      |      |      |       |
| 21                 |      | 0       | 6.1    | 5.3   | 5.9   | 2.4   | 1.9   | .10   |      |      |      |       |
| 22                 |      | 3.4     | 7.7    | 5.0   | 5.5   | 2.3   | 1.6   | .10   |      |      |      |       |
| 23                 |      | 1.330   | 8.9    | 5.0   | 5.2   | 2.0   | 1.4   | .10   |      |      |      |       |
| 24                 |      | 3.1     | 6.3    | 5.0   | 5.3   | 5.2   | 1.2   | 0     |      |      |      |       |
| 25                 |      | 2.1     | 6.1    | 4.6   | 5.9   | 8.9   | 1.0   | 0     |      |      |      |       |
| 26                 |      | 1.6     | 5.9    | 4.3   | 7.0   | 7.2   | 1.0   | 0     |      |      |      |       |
| 27                 |      | 1.0     | 5.7    | 4.6   | 7.0   | 6.5   | 1.0   | 0     |      |      |      |       |
| 28                 |      | 6.0     | 5.5    | 4.6   | 5.7   | 5.7   | .90   | 0     |      |      |      |       |
| 29                 |      | 4.5     | 6.8    | 4.2   | ----- | 4.7   | .90   | 0     |      |      |      |       |
| 30                 |      | 3.9     | 8.7    | 7.3   | ----- | 3.7   | .80   | 0     |      |      |      |       |
| 31                 |      | -----   | 2.2    | 2.0   | ----- | 3.0   | ----- | 0     |      |      |      | ----- |
| Total              | 0    | 1.425.8 | 323.90 | 244.3 | 271.1 | 141.8 | 53.30 | 10.40 | 0    | 0    | 0    | 0     |
| Mean               | 0    | 47.5    | 10.4   | 7.88  | 9.68  | 4.57  | 1.78  | 0.34  | 0    | 0    | 0    | 0     |
| Ac-ft              | 0    | 2.830   | 642    | 485   | 538   | 281   | 106   | 21    | 0    | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 1.330   | Min    | 0     | Mean  | 5.41  | Ac-ft | 3.910 |      |      |      |       |
| Water year 1965-66 | Max  | 1.330   | Min    | 0     | Mean  | 6.77  | Ac-ft | 4.900 |      |      |      |       |

11-0270. Guejito Creek near San Pasqual, Calif.

Location--Lat 33°06'57", long 116°57'08", in NW 1/4 sec. 23, T.12 S., R.1 W., on left bank 0.3 mile upstream from Rockwood Canyon Creek and 1.8 miles north of San Pasqual.

Drainage area--22.5 sq mi.

Records available--December 1946 to September 1966.

Gage--Digital water-stage recorder and concrete control. Altitude of gage is 560 ft (from topographic map). Prior to Oct. 1, 1963, graphic water-stage recorder.

Average discharge--19 years (1947-66), 0.979 cfs (709 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes--Maximum discharge during year, 2,550 cfs Nov. 22 (gage height, 7.45 ft, from crest-stage gage), on basis of slope-area measurement of maximum flow; no flow for much of year.

1946-66: Maximum discharge, that of Nov. 22, 1965; no flow at times in most years.

Remarks--Records good except those for period of no gage-height record, which are poor. No regulation above station. Diversion for irrigation about a quarter of a mile upstream.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0      | 0.30   | 9.1   | 1.5   | 0.90  | 0.40  | 0.10 | 0     |      |      |       |
| 2     |      | 0      | .20    | 3.9   | 1.2   | 1.4   | .30   | .10  | 0     |      |      |       |
| 3     |      | 0      | .20    | 3.1   | 1.0   | 1.4   | .40   | .10  | 0     |      |      |       |
| 4     |      | 0      | .20    | 2.6   | .80   | .90   | .40   | .10  | 0     |      |      |       |
| 5     |      | 0      | .10    | 2.3   | .80   | .70   | .30   | .10  | .10   |      |      |       |
| 6     |      | 0      | .10    | 2.1   | 3.8   | .80   | .30   | .10  | .10   |      |      |       |
| 7     |      | 0      | .10    | 1.9   | 8.6   | .70   | .30   | .10  | .10   |      |      |       |
| 8     |      | 0      | .10    | 1.8   | 6.8   | .70   | .30   | .10  | .10   |      |      |       |
| 9     |      | 0      | 9.6    | 1.7   | 2.8   | .70   | .30   | .10  | .10   |      |      |       |
| 10    |      | 0      | 25     | 1.5   | 2.4   | .70   | .30   | .10  | .10   |      |      |       |
| 11    |      | 0      | 6.6    | 1.5   | 2.1   | .70   | .30   | .10  | .10   |      |      |       |
| 12    |      | 0      | 2.5    | 1.3   | 1.7   | .60   | .20   | .20  | 0     |      |      |       |
| 13    |      | 0      | 4.7    | 1.1   | 1.6   | .60   | .20   | .10  | 0     |      |      |       |
| 14    |      | 0      | 4.0    | 1.1   | 1.4   | .60   | .20   | .10  | 0     |      |      |       |
| 15    |      | 0      | 3.3    | 1.1   | 1.3   | .60   | .10   | .10  | 0     |      |      |       |
| 16    |      | 0      | 10     | .90   | 1.1   | .60   | .10   | .10  | 0     |      |      |       |
| 17    |      | 0      | 3.6    | .90   | 1.1   | .60   | .10   | .10  | 0     |      |      |       |
| 18    |      | 0      | 2.2    | .90   | 1.1   | .50   | .10   | .10  | 0     |      |      |       |
| 19    |      | 0      | 1.7    | .90   | 1.0   | .50   | .30   | .10  | 0     |      |      |       |
| 20    |      | 0      | 1.6    | 1.0   | 1.0   | .50   | .20   | .10  | 0     |      |      |       |
| 21    |      | 0      | 1.4    | .90   | .90   | .40   | .20   | .10  | 0     |      |      |       |
| 22    |      | 176    | 2.4    | .80   | .80   | .40   | .10   | .10  | 0     |      |      |       |
| 23    |      | 249    | 2.1    | .90   | .70   | .30   | .10   | 0    | 0     |      |      |       |
| 24    |      | 4.6    | 1.3    | .80   | .80   | .50   | .10   | 0    | 0     |      |      |       |
| 25    |      | 12     | 1.2    | .80   | 1.0   | 1.6   | .10   | 0    | 0     |      |      |       |
| 26    |      | 4.5    | 1.1    | .70   | 1.0   | .90   | .10   | 0    | 0     |      |      |       |
| 27    |      | 1.2    | 1.0    | .90   | 1.0   | .80   | .10   | 0    | 0     |      |      |       |
| 28    |      | .70    | .90    | .80   | .80   | .70   | .10   | 0    | 0     |      |      |       |
| 29    |      | .50    | 5.9    | .70   | ----- | .70   | .10   | 0    | 0     |      |      |       |
| 30    |      | .40    | 2.6    | 2.3   | ----- | .60   | .10   | .10  | 0     |      |      |       |
| 31    |      | --- -- | 5.4    | 3.2   | ----- | .50   | ----- | 0    | ----- |      |      |       |
| TOTAL | 0    | 448.90 | 124.80 | 53.50 | 50.10 | 22.10 | 6.20  | 2.40 | .70   | 0    | 0    | 0     |
| MEAN  | 0    | 15.0   | 4.03   | 1.73  | 1.79  | .71   | .21   | .08  | .02   | 0    | 0    | 0     |
| AC-FT | 0    | 890    | 248    | 106   | 99    | 44    | 12    | 4.8  | 1.4   | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 249 MIN 0 MEAN 1.71 AC-FT 1,240  
 WATER YEAR 1965-66 MAX 249 MIN 0 MEAN 1.94 AC-FT 1,410

Peak discharge (base, 30 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-22 | 2300 | 7.45        | 2,550     | 12-29 | 2400 | 2.95        | 110       |
| 12-10 | 1100 | 2.70        | 66        |       |      |             |           |

Note.--No gage height record Nov. 22-24.

## SAN DIEGUITO RIVER BASIN

11-0285, Santa Maria Creek near Ramona, Calif.

Location.--Lat 33°03'08", long 116°56'41", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.11, T.13 S., R.1 W., on left bank 3.75 miles northwest of Ramona and 4.6 miles upstream from mouth.

Drainage area.--57.6 sq mi.

Records available.--November 1912 to September 1920, October 1946 to September 1966.

Gage.--Graphic water-stage recorder and concrete control since October 1946. Datum of gage is 1,294.44 ft mean sea level, datum of 1927. Prior to Oct. 1, 1946, at datum 1.78 ft lower.

Average discharge.--27 years (1913-20, 1946-66), 3.89 cfs (2,830 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year).

Extremes.--Maximum discharge during year, 1,170 cfs Nov. 23 (gage height, 4.56 ft), on basis of slope-area measurement of maximum flow; no flow for most of year.

1912-20, 1946-66: Maximum discharge, 7,140 cfs Jan. 27, 1916 (gage height, 14.1 ft, from floodmarks, present datum), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records good. City of Ramona pumps water from stream above station for municipal supply.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May | June | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|------|-------|-----|------|------|------|-------|
| 1     |      | 0      | 0.20   | 2.8   | 1.6   | 0.40 | 0     |     |      |      |      |       |
| 2     |      | 0      | .20    | 3.4   | 1.2   | .70  | 0     |     |      |      |      |       |
| 3     |      | 0      | .10    | 2.2   | 1.0   | .60  | 0     |     |      |      |      |       |
| 4     |      | 0      | .10    | 2.0   | .90   | .30  | 0     |     |      |      |      |       |
| 5     |      | 0      | .10    | 7.5   | .80   | .20  | 0     |     |      |      |      |       |
| 6     |      | 0      | .10    | 2.0   | 3.9   | .20  | 0     |     |      |      |      |       |
| 7     |      | 0      | 0      | 1.6   | 8.0   | .20  | 0     |     |      |      |      |       |
| 8     |      | 0      | 0      | 1.3   | 5.3   | .20  | 0     |     |      |      |      |       |
| 9     |      | 0      | 3.3    | 1.2   | 2.5   | .10  | 0     |     |      |      |      |       |
| 10    |      | 0      | 4.2    | 1.1   | 1.6   | .10  | 0     |     |      |      |      |       |
| 11    |      | 0      | 11     | 1.0   | 1.2   | .10  | 0     |     |      |      |      |       |
| 12    |      | 0      | 3.3    | 1.0   | 1.0   | .10  | 0     |     |      |      |      |       |
| 13    |      | 0      | 13     | .90   | .80   | .10  | 0     |     |      |      |      |       |
| 14    |      | 0      | 22     | .80   | .60   | .10  | 0     |     |      |      |      |       |
| 15    |      | 0      | 10     | .80   | .60   | .10  | 0     |     |      |      |      |       |
| 16    |      | 0      | 20     | .80   | .50   | .10  | 0     |     |      |      |      |       |
| 17    |      | 0      | 10     | .60   | .40   | .10  | 0     |     |      |      |      |       |
| 18    |      | 0      | 7.5    | .60   | .40   | .10  | 0     |     |      |      |      |       |
| 19    |      | 0      | 2.0    | .60   | .40   | 0    | .10   |     |      |      |      |       |
| 20    |      | 0      | 2.0    | .80   | .40   | 0    | 0     |     |      |      |      |       |
| 21    |      | 0      | 1.5    | .70   | .40   | 0    | 0     |     |      |      |      |       |
| 22    |      | 3.5    | 1.5    | .70   | .30   | 0    | 0     |     |      |      |      |       |
| 23    |      | 280    | 3.0    | .70   | .30   | 0    | 0     |     |      |      |      |       |
| 24    |      | 8.8    | 2.0    | .70   | .30   | 0    | 0     |     |      |      |      |       |
| 25    |      | 22     | 1.5    | .60   | .40   | .10  | 0     |     |      |      |      |       |
| 26    |      | 10     | 1.1    | .60   | .50   | .10  | 0     |     |      |      |      |       |
| 27    |      | 1.8    | .90    | .80   | .40   | .10  | 0     |     |      |      |      |       |
| 28    |      | .80    | .80    | .70   | .30   | .10  | 0     |     |      |      |      |       |
| 29    |      | .50    | 12     | .60   | ----- | .10  | 0     |     |      |      |      |       |
| 30    |      | .40    | 40     | 3.1   | ----- | 0    | 0     |     |      |      |      |       |
| 31    |      | -----  | 6.1    | 3.3   | ----- | 0    | ----- |     |      |      |      |       |
| Total | 0    | 327.80 | 247.00 | 52.50 | 36.00 | 4.30 | 0.10  | 0   | 0    | 0    | 0    | 0     |
| Mean  | 0    | 10.9   | 7.97   | 1.69  | 1.29  | 0.14 | 0.003 | 0   | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 650    | 490    | 104   | 71    | 8.5  | 0.2   | 0   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 280 Min 0 Mean 1.61 Ac-ft 1,170  
 Water year 1965-66 Max 280 Min 0 Mean 1.83 Ac-ft 1,320

Peak discharge (base, 20 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-23 | 0630 | 4.56        | 1,170     | 12-30 | 0100 | 2.54        | 120       |
| 12-10 | 1330 | 2.29        | 72        | 1-5   | 1100 | 2.18        | 62        |

11-0290. San Dieguito River near San Pasqual, Calif.

Location.--Lat 33°04'00", long 117°02'05", in San Bernardo Grant, on right bank 1.5 miles downstream from Bach Creek, 4.5 miles southeast of Escondido, and 5 miles west of San Pasqual, San Diego County.

Drainage area.--249 sq mi.

Records available.--April 1947 to April 1956 (irrigation seasons only), May 1956 to September 1966 (discontinued).

Gage.--Graphic water-stage recorder. Altitude of gage is 325 ft (from topographic map).

Extremes.--Maximum discharge during year, 4,160 cfs Nov. 23 (gage height, 7.40 ft), from rating curve extended above 1,000 cfs on basis of field estimate of peak flow at gage height 7.35 ft; no flow for most of year.  
1956-66: Maximum discharge, that of Nov. 23, 1965; no flow in most months each year.

Remarks.--Records poor. Flow regulated since July 1954 by Sutherland Reservoir (see Sta. No. 0240). Diversions for irrigation and pumping from wells along river in San Pasqual Valley above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                   |                   |                   |
|-------------------|-------------------|-------------------|
| Nov. 23.....1,380 | Dec. 14..... 0.80 | Dec. 20..... 0.20 |
| Dec. 9..... 1.8   | 15.....74         | 30.....130        |
| 10..... 50        | 16.....66         | 31..... 20        |
| 11..... 48        | 17.....34         | Jan. 1..... 4.1   |
| 12..... 7.0       | 18..... 8.0       | 2..... 1.0        |
| 13..... 2.8       | 19..... 2.4       |                   |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 1,380    | 1,380   | 0       | 46.0 | 2,740     |
| December.....           | 445.00   | 130     | 0       | 14.4 | 883       |
| January 1966.....       | 5.1      | 4.1     | 0       | .16  | 10        |
| Calendar year 1965..... | -        | 1,380   | 0       | 5.00 | 3,620     |
| Water year 1965-66..... | -        | 1,380   | 0       | 5.01 | 3,630     |

Note.--Flow occurred only on days listed above.

## SAN DIEGUITO RIVER BASIN

11-0300. San Dieguito River at Lake Hodges, Calif.

Location.--Lat 33°02'48", long 117°07'33", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.18, T.13 S., R.2 W., on right bank 800 ft upstream from Lake Hodges Dam and 6.2 miles southwest of Escondido.

Drainage area.--303 sq mi.

Records available.--January 1916 to September 1966. Published as "near Bernardo" prior to October 1920 and as "near Escondido" October 1920 to September 1925.

Gage.--Staff gage read once daily. Datum of gage is 200.0 ft above sea level. Prior to January 1919, at different datum (prior to completion of dam).

Remarks.--Records of total inflow represent all the water reaching Lake Hodges, including precipitation on the lake and supplemental water from Colorado River delivered through aqueduct of San Diego County Water Authority. Total inflow computed on basis of records of storage, release (draft), spill, leakage, and evaporation. Records of net inflow exclude supplemental water from Colorado River. Area and capacity tables for lake are based on a resurvey in 1948. Evaporation from reservoir surface computed on basis of evaporation from Colorado land pan using a coefficient of 0.80, excepting the period October 1957 to June 1953, when the mass-transfer method was used. Lake Hodges Dam was completed and storage began Feb. 1, 1919. Capacity of lake at spillway level (gage height, 115.00 ft), 33,550 acre-ft. Dead storage, 1,160 acre-ft below lowest outlet at gage height 54.0 ft, included in these records. Water drawn from Lake Hodges passes through a conduit to San Dieguito re-regulating reservoir, from which it is released as required for municipal use. Flow regulated since July 1954 by Sutherland Reservoir (Sta. No. 0240). Diversions for irrigation above Lake Hodges.

Cooperation.--Records computed in cooperation with city of San Diego.

Monthly net inflow, water year October 1965 to September 1966

| Month                   | Gage height<br>(feet)† | Contents<br>(acre-feet) | Change<br>in<br>contents<br>(acre-feet) | Draft<br>(acre-feet) | Evapo-<br>ration<br>(acre-feet) | Spill<br>plus<br>leakage<br>(acre-feet) | Total<br>inflow<br>(acre-feet) | Colorado<br>River<br>water<br>included<br>(acre-feet) | Net<br>inflow<br>(acre-feet) |
|-------------------------|------------------------|-------------------------|---|----------------------|---------------------------------|---|--------------------------------|---|------------------------------|
|                         | Lake Hodges            |                         |   |                      |                                 |   |                                |   |                              |
| Sept. 30.....           | 53.92                  | 1,148                   | -                                       | -                    | -                               | -                                       | -                              | -   | -                            |
| Oct. 31.....            | 53.50                  | 1,100                   | -48                                     | 0                    | 52                              | 0                                       | 4                              | 0   | 4                            |
| Nov. 30.....            | 68.20                  | 3,738                   | +2,638                                  | 31                   | 24                              | 1                                       | 2,694                          | 0   | 2,694                        |
| Dec. 31.....            | 71.80                  | 4,656                   | +918                                    | 24                   | 34                              | 1                                       | 977                            | 0   | 977                          |
| Calendar year 1965..... | -                      | -                       | +2,000                                  | 1,838                | 614                             | 2.2                                     | 4,454                          | 622   | 3,832                        |
| Jan. 31.....            | 71.30                  | 4,521                   | -135                                    | 283                  | 42                              | 0                                       | 190                            | 0   | 190                          |
| Feb. 28.....            | 71.25                  | 4,508                   | -13                                     | 273                  | 47                              | 1                                       | 308                            | 0   | 308                          |
| Mar. 31.....            | 69.24                  | 3,990                   | -518                                    | 541                  | 73                              | 0                                       | 96                             | 0   | 96                           |
| Apr. 30.....            | 65.80                  | 3,186                   | -804                                    | 811                  | 96                              | 0                                       | 103                            | 0   | 103                          |
| May 31.....             | 60.95                  | 2,207                   | -979                                    | 904                  | 91                              | 0                                       | 16                             | 0   | 16                           |
| June 30.....            | 56.54                  | 1,488                   | -719                                    | 637                  | 82                              | 0                                       | 0                              | 0   | 0                            |
| July 31.....            | 51.98                  | 933                     | -555                                    | 483                  | 72                              | 0                                       | 0                              | 0   | 0                            |
| Aug. 31.....            | 46.06                  | 459                     | -474                                    | 426                  | 48                              | 0                                       | 0                              | 0   | 0                            |
| Sept. 30.....           | 39.66                  | 198                     | -261                                    | 245                  | 16                              | 0                                       | 0                              | 0   | 0                            |
| Water year 1965-66..... | -                      | -                       | -950                                    | 4,658                | 677                             | 3                                       | 4,388                          | 0   | 4,388                        |

† Gage height at 0800 hours.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-0315. Agua Caliente Creek near Warner Springs, Calif.

Location (revised).--Lat 33°17'19", long 116°39'11", in San Jose del Valle Grant, on downstream end of right pier of bridge on State Highway 79, 1.2 miles upstream from Canada Verde Creek and 1.2 miles northwest of Warner Springs, San Diego County.

Drainage area.--19.0 sq mi.

Records available.--February 1961 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,950 ft (from topographic map). Prior to Jan. 29, 1966, at site 120 ft upstream at same datum.

Average discharge.--5 years, 0.546 cfs (395 acre-ft per year).

Extremes.--Maximum discharge during year, 740 cfs Nov. 23 (gage height, 5.60 ft present site), from rating curve extended above 40 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 21, July 1 to Sept. 30, 1961-66; Maximum discharge, that of Nov. 23, 1965; no flow for most of each year.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 1.0   | 5.0   | 0.40  | 1.4   | 0.40  | 0.30 | 0.20  |      |      |       |
| 2     |      | 0     | 1.0   | 4.5   | .50   | 1.4   | .30   | .30  | .20   |      |      |       |
| 3     |      | 0     | 1.0   | 4.0   | .60   | 1.4   | .40   | .30  | .10   |      |      |       |
| 4     |      | 0     | 1.0   | 3.7   | .50   | 1.4   | .40   | .40  | .10   |      |      |       |
| 5     |      | 0     | 1.0   | 3.3   | .70   | 1.4   | .40   | .40  | .10   |      |      |       |
| 6     |      | 0     | 1.0   | 2.5   | 1.4   | 1.3   | .30   | .40  | .10   |      |      |       |
| 7     |      | 0     | 1.0   | 2.2   | 3.4   | 1.3   | .30   | .40  | .10   |      |      |       |
| 8     |      | 0     | 1.0   | 2.1   | 1.4   | 1.2   | .30   | .40  | .10   |      |      |       |
| 9     |      | 0     | 4.5   | 2.0   | .80   | 1.2   | .20   | .40  | .10   |      |      |       |
| 10    |      | 0     | 5.0   | 1.7   | .70   | 1.1   | .20   | .30  | .10   |      |      |       |
| 11    |      | 0     | 2.5   | 1.5   | .70   | 1.1   | .20   | .30  | .10   |      |      |       |
| 12    |      | 0     | 1.5   | 1.4   | .70   | 1.1   | .20   | .30  | .10   |      |      |       |
| 13    |      | 0     | 1.2   | 1.2   | .70   | 1.0   | .20   | .30  | .10   |      |      |       |
| 14    |      | 0     | 1.0   | 1.1   | 1.1   | 1.0   | .20   | .30  | .10   |      |      |       |
| 15    |      | 0     | .90   | 1.0   | 1.3   | 1.0   | .20   | .30  | .10   |      |      |       |
| 16    |      | 0     | .90   | .90   | 2.0   | .90   | .20   | .20  | .10   |      |      |       |
| 17    |      | 0     | .90   | .80   | 2.0   | .90   | .20   | .20  | .10   |      |      |       |
| 18    |      | 0     | .90   | .80   | 2.0   | .80   | .20   | .20  | .10   |      |      |       |
| 19    |      | 0     | .90   | .70   | 2.0   | .80   | .30   | .20  | .10   |      |      |       |
| 20    |      | 0     | .90   | .70   | 1.9   | .80   | .30   | .20  | .10   |      |      |       |
| 21    |      | 0     | .90   | .60   | 1.9   | .70   | .30   | .10  | .10   |      |      |       |
| 22    |      | 81    | .90   | .60   | 1.9   | .70   | .30   | .10  | .10   |      |      |       |
| 23    |      | 164   | .90   | .50   | 1.7   | .60   | .30   | .10  | .10   |      |      |       |
| 24    |      | 7.0   | .90   | .50   | 1.7   | .60   | .30   | .10  | .10   |      |      |       |
| 25    |      | 3.7   | .90   | .50   | 1.7   | .60   | .40   | .10  | .10   |      |      |       |
| 26    |      | 2.4   | .90   | .50   | 1.6   | .60   | .40   | .10  | .10   |      |      |       |
| 27    |      | 1.4   | .90   | .50   | 1.6   | .60   | .40   | .30  | .10   |      |      |       |
| 28    |      | 1.2   | .90   | .50   | 1.4   | .60   | .40   | .20  | .10   |      |      |       |
| 29    |      | 1.1   | 40    | .50   | ----- | .50   | .40   | .20  | .10   |      |      |       |
| 30    |      | 1.0   | 10    | .50   | ----- | .50   | .40   | .20  | .10   |      |      |       |
| 31    |      | ----- | 6.0   | .30   | ----- | .40   | ----- | .20  | ----- |      |      |       |
| Total | 0    | 262.8 | 92.30 | 46.60 | 38.30 | 28.90 | 9.00  | 7.80 | 3.20  | 0    | 0    | 0     |
| Mean  | 0    | 8.76  | 2.98  | 1.50  | 1.37  | 0.93  | 0.30  | 0.25 | 0.11  | 0    | 0    | 0     |
| Ac-ft | 0    | 521   | 183   | 92    | 76    | 57    | 18    | 15   | 6.3   | 0    | 0    | 0     |

Calendar year 1965 Max 164 Min 0 Mean 1.37 Ac-ft 994

Water year 1965-66 Max 164 Min 0 Mean 1.34 Ac-ft 970

Peak discharge (base, 50 cfs)--Nov. 23 (0030 hrs) 740 cfs (5.60 ft, present site); Dec. 29 (time unknown) 136 cfs (4.78 ft).

Note.--No gage-height record Nov. 24 to Jan. 29, Mar. 10-30, June 24-29.

11-0330. West Fork San Luis Rey River near Warner Springs, Calif.

Location.--Lat 33°17'50", long 116°45'30", in San Jose del Valle Grant, on left bank 0.1 mile downstream from small unnamed tributary, 2.5 miles upstream from mouth, and 7.5 miles west of Warner Springs, San Diego County.

Drainage area.--25.5 sq mi.

Records available.--January 1913 to November 1915, October 1956 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 2,800 ft (from topographic map). Prior to Oct. 1, 1956, at different datum. Prior to Oct. 1, 1963, graphic water-stage recorder.

Average discharge.--11 years (1913-15, 1957-66), 6.65 cfs (4,810 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 1,690 cfs Nov. 22 (gage height, 10.25 ft, from profile of floodmarks), from rating curve extended as explained below; minimum daily, 0.10 cfs for many days.

1913-15, 1956-66; Maximum discharge, 2,060 cfs Mar. 16, 1958 (gage height, 10.77 ft), from rating curve extended above 400 cfs on basis of slope-area measurement of maximum flow; no flow at times in most years.

Remarks.--Records good except those above 50 cfs and those for periods of no gage-height record, which are poor. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0.10   | 10    | 34    | 13    | 9.4   | 4.6   | 1.9   | 0.70  | 0.30 | 0.20 | 0.20  |
| 2     | .10  | .10    | 10    | 24    | 12    | 10    | 4.3   | 1.8   | .60   | .30  | .20  | .20   |
| 3     | .10  | .10    | 9.0   | 22    | 11    | 11    | 4.2   | 1.7   | .60   | .30  | .20  | .20   |
| 4     | .10  | .10    | 9.0   | 21    | 11    | 11    | 4.0   | 1.6   | .60   | .30  | .20  | .10   |
| 5     | .10  | .10    | 9.0   | 20    | 11    | 12    | 3.8   | 1.5   | .60   | .30  | .20  | .10   |
| 6     | .10  | .10    | 9.0   | 18    | 10    | 11    | 3.7   | 1.5   | .60   | .30  | .20  | .10   |
| 7     | .10  | .10    | 9.0   | 16    | 10    | 10    | 3.7   | 1.4   | .50   | .30  | .20  | .10   |
| 8     | .10  | .10    | 9.0   | 15    | 20    | 9.1   | 3.5   | 1.5   | .60   | .30  | .20  | .10   |
| 9     | .10  | .10    | 20    | 14    | 18    | 8.9   | 3.4   | 1.5   | .60   | .30  | .20  | .10   |
| 10    | .10  | .10    | 27    | 13    | 17    | 8.4   | 3.5   | 1.6   | .60   | .30  | .20  | .10   |
| 11    | .10  | .20    | 20    | 12    | 16    | 8.2   | 3.3   | 1.7   | .50   | .30  | .20  | .10   |
| 12    | .10  | .20    | 18    | 11    | 14    | 7.8   | 3.3   | 1.7   | .50   | .30  | .20  | .10   |
| 13    | .10  | .20    | 16    | 10    | 13    | 7.4   | 3.2   | 1.5   | .50   | .40  | .20  | .10   |
| 14    | .20  | .20    | 14    | 9.4   | 12    | 7.4   | 3.0   | 1.4   | .40   | .40  | .10  | .20   |
| 15    | .20  | .30    | 13    | 9.2   | 12    | 7.2   | 3.0   | 1.3   | .40   | .40  | .10  | .20   |
| 16    | .20  | .40    | 13    | 9.2   | 12    | 6.8   | 2.8   | 1.2   | .40   | .40  | .10  | .20   |
| 17    | .20  | .50    | 12    | 9.0   | 12    | 6.8   | 2.8   | 1.1   | .40   | .30  | .10  | .20   |
| 18    | .20  | .50    | 12    | 9.0   | 12    | 6.5   | 2.9   | 1.0   | .40   | .30  | .10  | .20   |
| 19    | .20  | .50    | 11    | 9.0   | 11    | 6.4   | 3.6   | 1.0   | .40   | .30  | .10  | .20   |
| 20    | .20  | .40    | 11    | 8.9   | 11    | 6.1   | 3.7   | 1.0   | .40   | .30  | .10  | .20   |
| 21    | .10  | .40    | 10    | 8.8   | 11    | 6.1   | 3.1   | .90   | .40   | .30  | .10  | .20   |
| 22    | .10  | 346    | 12    | 8.4   | 10    | 6.1   | 3.2   | .90   | .40   | .30  | .10  | .20   |
| 23    | .10  | 236    | 11    | 8.2   | 10    | 5.6   | 3.0   | .90   | .40   | .30  | .10  | .20   |
| 24    | .20  | 28     | 11    | 8.0   | 10    | 6.8   | 2.7   | .90   | .40   | .30  | .10  | .20   |
| 25    | .20  | 63     | 10    | 7.5   | 9.8   | 9.5   | 2.4   | .80   | .40   | .30  | .10  | .20   |
| 26    | .20  | 20     | 10    | 7.2   | 9.7   | 7.3   | 2.3   | .80   | .40   | .30  | .20  | .10   |
| 27    | .10  | 12     | 10    | 7.0   | 9.5   | 6.9   | 2.2   | .80   | .30   | .30  | .10  | .10   |
| 28    | .10  | 11     | 10    | 6.8   | 9.3   | 6.3   | 2.1   | .80   | .30   | .30  | .10  | .10   |
| 29    | .10  | 10     | 102   | 6.6   | ----- | 5.9   | 2.0   | .70   | .30   | .30  | .10  | .10   |
| 30    | .10  | 10     | 94    | 11    | ----- | 5.4   | 2.0   | .70   | .30   | .30  | .10  | .10   |
| 31    | .10  | -----  | 41    | 15    | ----- | 4.9   | ----- | .70   | ----- | .30  | .20  | ----- |
| TOTAL | 4.10 | 740.80 | 582.0 | 388.2 | 337.3 | 242.2 | 95.3  | 37.80 | 13.90 | 9.70 | 4.60 | 4.50  |
| MEAN  | .13  | 24.7   | 18.8  | 12.5  | 12.0  | 7.81  | 3.18  | 1.22  | .46   | .31  | .15  | .15   |
| AC-FT | 8.1  | 1,470  | 1,150 | 770   | 669   | 480   | 189   | 75    | 28    | 19   | 9.1  | 8.9   |

CALENDAR YEAR 1965 MAX 346 MIN .10 MEAN 6.13 AC-FT 4,440  
 WATER YEAR 1965-66 MAX 346 MIN .10 MEAN 6.74 AC-FT 4,880

Peak discharge (base, 100 cfs).--Nov. 22 (2200 hrs) 1,690 cfs (10.25 ft); Dec. 29 (2200 hrs) 442 cfs (7.13 ft).

Note.--No gage-height record Nov. 24, Nov. 26 to Dec. 9, Jan. 3 to Feb. 17.



11-0350. San Luis Rey River at Lake Henshaw, near Mesa Grande, Calif.

Location.--Lat 33°14'20", long 116°45'43", in Valle de San Jose Grant, at Henshaw Dam, 4 miles north of Mesa Grande, San Diego County.

Drainage area.--206 sq mi.

Records available.--October 1922 to September 1966. October 1911 to September 1922 at site 1 mile downstream published as "near Mesa Grande"; records not equivalent owing to change in natural water losses resulting from creation of Lake Henshaw. Monthly net runoff only October to December 1922, published in WSP 1315-B.

Gage.--Staff gage read once daily; Datum of gage is 2,620 ft above mean sea level. Prior to June 14, 1912, staff gage at same site at different datum. June 14, 1912, to Oct. 7, 1922, water-stage recorder at site 1 mile downstream at different datum.

Average discharge.--11 years (1911-22), 59.6 cfs (43,160 acre-ft per year), below damsite; 44 years (1922-66), 24.7 cfs (17,880 acre-ft per year), discharge at Lake Henshaw, exclusive of 90 percent of precipitation on lake surface; median of yearly mean discharges, 14 cfs (10,000 acre-ft per year).

Remarks.--Records of net discharge represent all water reaching Lake Henshaw, exclusive of 90 percent of rainfall on water surface of lake and supplemental water obtained by pumping ground water from lake bed. Net discharge computed on basis of records of storage, release (draft), spill, leakage, evaporation, precipitation, and ground-water pumpage. Monthly evaporation from lake surface computed on basis of evaporation from a floating pan using a coefficient of 0.87, except during periods when winds swamp the floating pan. Net evaporation for these periods is computed on basis of Colorado land pan using coefficient of 0.80. Storage began on Oct. 7, 1922. Area and capacity tables for lake are based on resurvey made in October 1951. Capacity of lake at spillway level (gage height, 107.00 ft), 194,300 acre-ft. No dead storage. No flow over spillway since dam was completed. Water is released down San Luis Rey River for diversion downstream for irrigation, power, and domestic use. No diversion above Lake Henshaw.

Cooperation.--Records furnished by Vista Irrigation District.

Monthly net discharge, water year October 1965 to September 1966

| Month                   | Gage height (feet) | Contents (acre-feet) | Change in contents (acre-feet) | Draft (acre-feet) | Net evaporation (acre-feet)† | Spill plus leakage (acre-feet) | Pumped ground water (acre-feet) | Net discharge (acre-feet) |
|-------------------------|--------------------|----------------------|--------------------------------|-------------------|------------------------------|--------------------------------|---------------------------------|---------------------------|
|                         | Lake Henshaw       |                      |                                |                   |                              |                                |                                 |                           |
| Sept. 30.....           | 38.15              | 4,886                | -                              | -                 | -                            | -                              | -                               | -                         |
| Oct. 31.....            | 38.40              | 5,060                | +174                           | 221               | 283                          | 0                              | 762                             | -84                       |
| Nov. 30.....            | 42.96              | 9,072                | +4,012                         | 12                | -728                         | 0                              | 593                             | 2,703                     |
| Dec. 31.....            | 44.90              | 11,293               | +2,221                         | 0                 | -433                         | 0                              | 192                             | 1,596                     |
| Calendar year 1965..... | -                  | -                    | +4,623                         | 6,181             | 1,685                        | 0                              | 6,698                           | 5,791                     |
| Jan. 31.....            | 45.83              | 12,441               | +1,148                         | 0                 | 22                           | 0                              | 201                             | 969                       |
| Feb. 28.....            | 46.98              | 13,917               | +1,476                         | 0                 | 19                           | 0                              | 233                             | 1,262                     |
| Mar. 31.....            | 47.41              | 14,482               | +565                           | 0                 | 239                          | 0                              | 277                             | 527                       |
| Apr. 30.....            | 45.96              | 12,605               | -1,877                         | 1,640             | 515                          | 0                              | 184                             | 94                        |
| May 31.....             | 44.75              | 11,112               | -1,493                         | 959               | 711                          | 0                              | 49                              | 128                       |
| June 30.....            | 42.89              | 8,998                | -2,114                         | 1,487             | 801                          | 0                              | 36                              | 138                       |
| July 31.....            | 40.85              | 7,011                | -1,987                         | 1,411             | 721                          | 0                              | 37                              | 108                       |
| Aug. 31.....            | 39.25              | 5,686                | -1,325                         | 838               | 630                          | 0                              | 110                             | 33                        |
| Sept. 30.....           | 37.87              | 4,696                | -990                           | 765               | 436                          | 0                              | 222                             | -11                       |
| Water year 1965-66..... | -                  | -                    | -190                           | 7,333             | 3,216                        | 0                              | 2,896                           | 7,463                     |

† During the year the amount of precipitation excluded was 1,862 acre-ft.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of net discharge may appear. This arises primarily from the difficulty of computing net discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

## SAN LUIS REY RIVER BASIN

11-0377. Pauma Creek near Pauma Valley, Calif.

Location.--Lat 33°20'10", long 116°58'25", in Pauma Grant, on right bank 0.3 mile downstream from unnamed tributary, and 2.2 miles north of Pauma Valley, San Diego County.

Drainage area.--11.0 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Graphic water-stage recorder; digital water-stage recorder and Parshall Flume on diversion. Altitude of gage is 1,240 ft (from topographic map).

Extremes (creek only).--Maximum discharge during year, 620 cfs Nov. 22 (gage height, 6.12 ft), from rating curve extended above 110 cfs on basis of field estimate of maximum flow; no flow Oct. 1 to Nov. 14, May 30 to Sept. 30.

1964-66: Maximum discharge, that of Nov. 22, 1965; no flow for much of each year.

(combined)--Maximum discharge during year, 620 cfs Nov. 22; minimum daily, 0.10 cfs for many days.

1964-66: Maximum discharge, that of Nov. 22, 1965; minimum daily, 0.10 cfs for some days in each year.

Remarks.--Records fair. No regulation above station. Pauma Valley Water Co. diverts from a site 0.25 mile upstream. For records of combined discharge of Pauma Creek and Pauma Valley Water Co.'s diversion, see following page.

Discharge, in cubic feet per second; water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 5.5   | 18    | 6.8   | 4.8   | 2.2   | .60   |       |      |      |       |
| 2     |      | 0      | 5.0   | 13    | 7.1   | 5.8   | 2.1   | .40   |       |      |      |       |
| 3     |      | 0      | 4.5   | 12    | 7.1   | 5.5   | 2.1   | .40   |       |      |      |       |
| 4     |      | 0      | 3.9   | 10    | 7.5   | 5.5   | 2.0   | .40   |       |      |      |       |
| 5     |      | 0      | 3.9   | 9.5   | 6.8   | 5.6   | 1.7   | .40   |       |      |      |       |
| 6     |      | 0      | 3.9   | 9.1   | 22    | 5.8   | 1.6   | .40   |       |      |      |       |
| 7     |      | 0      | 3.8   | 8.6   | 24    | 5.2   | 1.5   | .30   |       |      |      |       |
| 8     |      | 0      | 3.3   | 8.2   | 13    | 4.1   | 1.4   | .50   |       |      |      |       |
| 9     |      | 0      | 8.7   | 7.7   | 9.8   | 4.1   | 1.4   | .60   |       |      |      |       |
| 10    |      | 0      | 16    | 7.3   | 9.3   | 3.8   | 1.4   | .70   |       |      |      |       |
| 11    |      | 0      | 9.3   | 7.1   | 7.9   | 3.6   | 1.4   | .80   |       |      |      |       |
| 12    |      | 0      | 9.1   | 6.8   | 7.3   | 3.7   | 1.4   | .80   |       |      |      |       |
| 13    |      | 0      | 9.8   | 6.6   | 6.9   | 3.7   | 1.4   | .60   |       |      |      |       |
| 14    |      | 0      | 9.5   | 6.4   | 6.4   | 3.6   | 1.2   | .50   |       |      |      |       |
| 15    |      | .10    | 8.4   | 6.2   | 6.4   | 3.6   | 1.0   | .50   |       |      |      |       |
| 16    |      | .80    | 8.6   | 6.8   | 5.8   | 3.3   | 1.0   | .40   |       |      |      |       |
| 17    |      | 5.0    | 7.3   | 7.5   | 5.8   | 3.0   | 1.0   | .30   |       |      |      |       |
| 18    |      | 4.8    | 7.1   | 7.7   | 5.8   | 2.8   | 1.2   | .20   |       |      |      |       |
| 19    |      | 3.4    | 6.6   | 7.1   | 5.6   | 2.7   | 1.8   | .20   |       |      |      |       |
| 20    |      | 1.2    | 6.9   | 7.1   | 5.5   | 2.7   | 1.6   | .10   |       |      |      |       |
| 21    |      | .90    | 7.3   | 6.6   | 5.2   | 2.7   | 1.2   | .10   |       |      |      |       |
| 22    |      | 80     | 11    | 6.4   | 5.2   | 2.7   | 1.1   | .10   |       |      |      |       |
| 23    |      | 142    | 8.8   | 6.2   | 5.2   | 2.5   | 1.0   | .10   |       |      |      |       |
| 24    |      | 17     | 7.3   | 6.6   | 4.8   | 5.5   | 1.1   | .10   |       |      |      |       |
| 25    |      | 29     | 7.3   | 5.8   | 5.2   | 5.8   | .90   | .10   |       |      |      |       |
| 26    |      | 16     | 7.3   | 5.6   | 5.2   | 5.3   | .80   | .10   |       |      |      |       |
| 27    |      | 9.3    | 6.9   | 5.6   | 5.0   | 4.4   | .80   | .10   |       |      |      |       |
| 28    |      | 7.9    | 6.8   | 5.8   | 5.0   | 3.4   | .80   | .10   |       |      |      |       |
| 29    |      | 6.9    | 22    | 5.5   | ----- | 2.8   | .70   | .10   |       |      |      |       |
| 30    |      | 6.0    | 40    | 7.3   | ----- | 2.7   | .60   | .10   |       |      |      |       |
| 31    |      | -----  | 22    | 7.1   | ----- | 2.2   | ----- | 0     | ----- |      |      | ----- |
| Total | 0    | 330.30 | 287.8 | 241.2 | 217.6 | 122.9 | 39.40 | 10.00 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 11.0   | 9.28  | 7.78  | 7.77  | 3.96  | 1.31  | 0.32  | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 655    | 571   | 478   | 432   | 244   | 78    | 20    | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 142 Min 0 Mean 3.27 Ac-ft 2,370

Water year 1965-66 Max 142 Min 0 Mean 3.42 Ac-ft 2,480

Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-22 | 0100 | 6.12        | 620       | 2-6  | 1800 | 3.36        | 52        |
| 12-29 | 2300 | 3.62        | 74        |      |      |             |           |

11-0377. Pauma Creek near Pauma Valley, Calif.--Continued.

Combined discharge, in cubic feet per second, of Pauma Creek and Pauma Valley Water Co.'s diversion near Pauma Valley, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.20 | 0.30   | 5.9   | 18    | 7.4   | 5.1   | 3.3   | 2.2  | 1.1   | 0.40 | 0.10 | 0.10  |
| 2     | .20  | .30    | 5.2   | 14    | 7.7   | 6.1   | 3.1   | 2.0  | 1.1   | .30  | .10  | .10   |
| 3     | .20  | .30    | 4.8   | 12    | 7.7   | 5.8   | 3.1   | 2.0  | 1.0   | .30  | .10  | .10   |
| 4     | .20  | .30    | 4.4   | 11    | 8.1   | 5.8   | 3.1   | 2.0  | 1.0   | .30  | .10  | .10   |
| 5     | .20  | .30    | 4.4   | 10    | 7.4   | 5.9   | 3.1   | 2.0  | .90   | .30  | .10  | .10   |
| 6     | .20  | .30    | 4.4   | 9.8   | 22    | 6.1   | 3.0   | 2.0  | .90   | .20  | .10  | .10   |
| 7     | .20  | .30    | 4.5   | 9.3   | 24    | 5.7   | 3.0   | 1.9  | .90   | .20  | .10  | .10   |
| 8     | .20  | .40    | 4.3   | 8.9   | 14    | 5.2   | 3.0   | 2.0  | 1.1   | .20  | .10  | .10   |
| 9     | .30  | .40    | 9.5   | 8.3   | 10    | 5.2   | 3.0   | 2.1  | 1.4   | .30  | .10  | .10   |
| 10    | .30  | .40    | 16    | 7.9   | 9.8   | 5.1   | 3.0   | 2.2  | 1.3   | .30  | .10  | .10   |
| 11    | .30  | .40    | 9.7   | 7.7   | 8.2   | 5.0   | 3.0   | 2.3  | .90   | .30  | .10  | .10   |
| 12    | .20  | .40    | 9.5   | 7.4   | 7.6   | 4.8   | 3.0   | 2.2  | .90   | .20  | .10  | .10   |
| 13    | .20  | .40    | 10    | 7.2   | 7.2   | 4.7   | 3.0   | 2.0  | .80   | .20  | .10  | .10   |
| 14    | .30  | .60    | 9.9   | 7.0   | 6.7   | 4.6   | 2.8   | 1.9  | .70   | .20  | .10  | .10   |
| 15    | .30  | .90    | 8.8   | 6.8   | 6.7   | 4.6   | 2.6   | 1.9  | .70   | .20  | .10  | .10   |
| 16    | .30  | 1.2    | 9.0   | 7.2   | 6.1   | 4.3   | 2.6   | 1.9  | .70   | .20  | .10  | .10   |
| 17    | .30  | 5.2    | 7.7   | 7.8   | 6.1   | 4.1   | 2.6   | 1.9  | .70   | .10  | .10  | .10   |
| 18    | .30  | 4.9    | 7.5   | 7.9   | 6.1   | 3.9   | 2.8   | 1.8  | .60   | .10  | .10  | .10   |
| 19    | .30  | 3.5    | 7.0   | 7.3   | 5.9   | 3.8   | 3.3   | 1.8  | .60   | .10  | .10  | .10   |
| 20    | .30  | 1.3    | 7.4   | 7.3   | 5.8   | 3.8   | 3.2   | 1.7  | .60   | .10  | .10  | .20   |
| 21    | .20  | 1.0    | 8.0   | 6.7   | 5.5   | 3.8   | 2.8   | 1.7  | .60   | .10  | .10  | .10   |
| 22    | .10  | .80    | 12    | 6.5   | 5.5   | 3.8   | 2.7   | 1.6  | .60   | .10  | .10  | .10   |
| 23    | .10  | 142    | 9.4   | 6.3   | 5.5   | 3.6   | 2.6   | 1.6  | .60   | .10  | .10  | .10   |
| 24    | .10  | 17     | 7.9   | 6.6   | 5.1   | 6.2   | 2.3   | 1.5  | .60   | .10  | .10  | .10   |
| 25    | .10  | 29     | 7.9   | 6.2   | 5.5   | 6.0   | 2.3   | 1.5  | .60   | .10  | .10  | .10   |
| 26    | .10  | 16     | 7.9   | 6.3   | 5.5   | 5.5   | 2.4   | 1.4  | .50   | .10  | .10  | .10   |
| 27    | .20  | 9.8    | 7.5   | 6.3   | 5.3   | 4.6   | 2.4   | 1.4  | .50   | .10  | .10  | .10   |
| 28    | .20  | 8.4    | 7.4   | 6.5   | 5.3   | 4.3   | 2.4   | 1.3  | .40   | .10  | .10  | .10   |
| 29    | .20  | 7.3    | 22    | 6.2   | ----- | 3.9   | 2.3   | 1.3  | .40   | .20  | .10  | .10   |
| 30    | .20  | 6.4    | 40    | 8.0   | ----- | 3.8   | 2.2   | 1.1  | .40   | .20  | .10  | .20   |
| 31    | .20  | -----  | 22    | 7.7   | ----- | 3.3   | ----- | 1.1  | ----- | .20  | .10  | ----- |
| Total | 6.70 | 339.00 | 301.9 | 256.1 | 227.7 | 148.4 | 84.0  | 55.3 | 23.10 | 5.90 | 3.10 | 3.20  |
| Mean  | 0.22 | 11.3   | 9.74  | 8.26  | 8.13  | 4.79  | 2.80  | 1.78 | 0.77  | 0.19 | 0.10 | 0.11  |
| Ac-ft | 13   | 672    | 599   | 508.0 | 452   | 294   | 167   | 110  | 46    | 12   | 6.1  | 6.3   |

Calendar year 1965 Max 142 Min 0.10 Mean 3.80 Ac-ft 2,750  
 Water year 1965-66 Max 142 Min 0.10 Mean 3.98 Ac-ft 2,880

Peak discharge (base, 50 cfs).

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-22 | 0100 | -           | 620       | 2-6  | 1800 | -           | 52        |
| 12-29 | 2300 | -           | 74        |      |      |             |           |

## SAN LUIS REY RIVER BASIN

11-0391. San Luis Rey River tributary near Pala, Calif.

Location.--Lat 33°21'37", long 117°02'33", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.25, T.9 S., R.2 W., on upstream right bank at culvert on State Highway 76, 1.9 miles east of Pala.

Drainage area.--1.01 sq mi.

Records available.--Water years 1962-65 (annual maximum), September 1965 to September 1966.

Gage.--Water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated pipe control. Altitude of gage is 520 ft (from topographic map). Dec. 8, 1961, to Sept. 20, 1965, crest-stage gage only at same site and datum.

Extremes.--Maximum discharge during year, 25 cfs Nov. 22 (gage height, 16.77 ft), from rating curve defined by computation of flow through culvert; no flow all year except Nov. 22, 23.  
1961-65: Maximum discharge, that of Nov. 22, 1965; no flow for most of each year.

Remarks.--Records good. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November 8.8; December, 3.7; March 0.6; the water year, 13.1.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Nov. 22..... 2.1  
23..... 1.1

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 3.2      | 2.1     | 0       | 0.11 | 6.3       |
| Calendar year 1965..... | -        | -       | -       | -    | -         |
| Water year 1965-66..... | -        | 2.1     | 0       | .009 | 6.3       |

Note.--Flow occurred only on days listed above.

11-0400. San Luis Rey River at Monserate Narrows, near Pala, Calif.

Location.--Lat 33°20'15", long 117°08'10", in NE¼ sec.6, T.10 S., R.2 W., on left bank 4 miles southwest of Pala and 6 miles north-east of Bonsall.

Drainage area.--373 sq mi.

Records available.--December 1935 to March 1938 (fragmentary), April 1938 to November 1941, October 1946 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 270.82 ft above mean sea level (levels by State of California). Prior to October 1946, at same site at different datum. Oct. 22, 1946, to Nov. 30, 1954, at datum 1.0 ft higher.

Average discharge.--23 years (1938-41, 1946-66), 7.47 cfs (5,410 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

Extremes.--Maximum discharge during year, 2,850 cfs Nov. 23 (gage height, 4.80 ft, from outside gage), from rating curve extended above 1,200 cfs; no flow for most of year.

1935-41, 1946-66: Maximum gage height, 8.7 ft Feb. 7, 1937, datum then in use (discharge not determined); no flow at times in 1948-66.

Remarks.--Records poor. Flow regulated by Lake Henshaw (see Sta. No. 0350). Several diversions above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|--------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1     |      | 0      | 0    |      | 0     | 0.10  | 0.70  |     |       |      |      |       |
| 2     |      | 0      | 0    |      | 0     | 1.0   | .70   |     |       |      |      |       |
| 3     |      | 0      | 0    |      | 0     | .50   | .60   |     |       |      |      |       |
| 4     |      | 0      | 0    |      | 0     | .50   | .50   |     |       |      |      |       |
| 5     |      | 0      | 0    |      | 0     | .50   | .50   |     |       |      |      |       |
| 6     |      | 0      | 0    |      | 2.2   | .50   | .40   |     |       |      |      |       |
| 7     |      | 0      | 0    |      | 12    | .50   | .40   |     |       |      |      |       |
| 8     |      | 0      | 0    |      | 1.0   | .50   | .40   |     |       |      |      |       |
| 9     |      | 0      | 0    |      | .50   | .50   | .40   |     |       |      |      |       |
| 10    |      | 0      | 0    |      | .50   | .50   | .40   |     |       |      |      |       |
| 11    |      | 0      | 0    |      | .40   | .40   | .40   |     |       |      |      |       |
| 12    |      | 0      | 0    |      | .40   | .40   | .30   |     |       |      |      |       |
| 13    |      | 0      | 0    |      | .40   | .40   | .30   |     |       |      |      |       |
| 14    |      | 0      | 0    |      | .40   | .40   | .30   |     |       |      |      |       |
| 15    |      | 0      | 0    |      | .40   | .40   | .30   |     |       |      |      |       |
| 16    |      | 0      | 0    |      | .30   | .30   | .30   |     |       |      |      |       |
| 17    |      | 0      | 0    |      | .30   | .30   | .20   |     |       |      |      |       |
| 18    |      | 0      | 0    |      | .30   | .30   | .20   |     |       |      |      |       |
| 19    |      | 0      | 0    |      | .30   | .30   | .20   |     |       |      |      |       |
| 20    |      | 0      | 0    |      | .30   | .30   | .10   |     |       |      |      |       |
| 21    |      | 0      | 0    |      | .20   | .30   | 0     |     |       |      |      |       |
| 22    |      | 0      | 0    |      | .20   | .30   | 0     |     |       |      |      |       |
| 23    |      | 705    | 0    |      | .20   | .30   | 0     |     |       |      |      |       |
| 24    |      | .90    | 0    |      | .20   | 1.0   | 0     |     |       |      |      |       |
| 25    |      | 0      | 0    |      | .10   | 2.0   | 0     |     |       |      |      |       |
| 26    |      | 0      | 0    |      | .10   | 1.1   | 0     |     |       |      |      |       |
| 27    |      | 0      | 0    |      | .10   | 1.1   | 0     |     |       |      |      |       |
| 28    |      | 0      | 0    |      | .10   | 1.0   | 0     |     |       |      |      |       |
| 29    |      | 0      | 0    |      | ----- | .90   | 0     |     |       |      |      |       |
| 30    |      | 0      | 3.6  |      | ----- | .90   | 0     |     |       |      |      |       |
| 31    |      | -----  | 3.7  |      | ----- | .80   | ----- |     | ----- |      |      | ----- |
| Total | 0    | 705.90 | 39.7 | 0    | 20.90 | 18.30 | 7.60  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 23.5   | 1.28 | 0    | 0.75  | 0.59  | 0.25  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 1,400  | 79   | 0    | 41    | 36    | 15    | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 705 Min 0 Mean 2.04 Ac-ft 1,480  
 Water year 1965-66 Max 705 Min 0 Mean 2.17 Ac-ft 1,570

## SAN LUIS REY RIVER BASIN

11-0410. San Luis Rey River near Bonsall, Calif.

Location.--Lat 33°15'13", long 117°14'48", in SW 1/4 NE 1/4 sec.1, T.11 S., R.4 W., on left bank 0.7 mile downstream from bridge on State Highway 76 and 2.8 miles southwest of Bonsall.

Drainage area.--512 sq mi.

Records available.--July 1916 to September 1918 (gage heights and discharge measurements only), October 1929 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 108.10 ft above mean sea level, datum of 1929. July 1916 to September 1918, staff gages at site 0.8 mile upstream at different datums. October 1929 to Nov. 15, 1945, graphic water-stage recorder at present site at datum 3.44 ft higher and Nov. 16, 1945, to Sept. 16, 1946, at datum 1.44 ft higher.

Average discharge.--37 years (1929-66), 19.0 cfs (13,760 acre-ft per year); median of yearly mean discharges, 4.3 cfs (3,100 acre-ft per year).

Extremes.--Maximum discharge during year, 2,560 cfs Nov. 23 (gage height, 9.63 ft); no flow for most of year.

1929-66; Maximum discharge, 18,100 cfs Mar. 3, 1938 (gage height, 16.04 ft, present datum), from rating curve extended above 2,400 cfs; no flow for part of each year.

Remarks.--Records poor. Flow regulated by Lake Henshaw (see Sta. No. 0350). Several diversions above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 3.0    | 7.0   | 5.5   | 3.8  | 2.0   | 0.20 |       |      |      |       |
| 2     |      | 0     | 2.0    | 7.0   | 5.0   | 4.1  | 1.9   | .10  |       |      |      |       |
| 3     |      | 0     | 1.0    | 6.5   | 5.0   | 3.6  | 1.9   | .20  |       |      |      |       |
| 4     |      | 0     | .50    | 6.5   | 4.5   | 3.4  | 1.8   | .20  |       |      |      |       |
| 5     |      | 0     | 2.0    | 6.1   | 4.5   | 3.4  | 1.6   | .20  |       |      |      |       |
| 6     |      | 0     | 0      | 6.1   | 7.9   | 3.6  | 1.5   | .10  |       |      |      |       |
| 7     |      | 0     | 0      | 5.8   | 1.5   | 3.3  | 1.4   | .10  |       |      |      |       |
| 8     |      | 0     | 0      | 5.8   | 8.8   | 3.0  | 1.2   | .10  |       |      |      |       |
| 9     |      | 0     | 0      | 5.8   | 7.6   | 3.0  | .90   | 0    |       |      |      |       |
| 10    |      | 0     | 1.5    | 5.8   | 7.5   | 2.8  | .90   | 0    |       |      |      |       |
| 11    |      | 0     | 7.5    | 5.6   | 7.0   | 2.8  | .90   | 0    |       |      |      |       |
| 12    |      | 0     | 5.0    | 5.6   | 6.5   | 2.8  | .90   | 0    |       |      |      |       |
| 13    |      | 0     | 4.0    | 4.9   | 6.0   | 2.7  | .80   | 0    |       |      |      |       |
| 14    |      | 0     | 16     | 4.7   | 5.5   | 2.7  | .70   | 0    |       |      |      |       |
| 15    |      | 0     | 9.0    | 4.9   | 5.4   | 2.5  | .70   | 0    |       |      |      |       |
| 16    |      | 0     | 8.0    | 4.5   | 5.1   | 2.0  | .70   | 0    |       |      |      |       |
| 17    |      | 0     | 7.0    | 4.3   | 4.9   | 1.5  | .60   | 0    |       |      |      |       |
| 18    |      | 0     | 6.5    | 3.9   | 4.7   | 1.4  | .60   | 0    |       |      |      |       |
| 19    |      | 0     | 6.5    | 3.9   | 4.7   | 1.4  | .70   | 0    |       |      |      |       |
| 20    |      | 0     | 6.0    | 3.9   | 4.5   | 1.4  | .70   | 0    |       |      |      |       |
| 21    |      | 0     | 6.0    | 4.0   | 4.3   | 1.4  | .60   | 0    |       |      |      |       |
| 22    |      | 0     | 6.5    | 4.0   | 4.1   | 1.1  | .50   | 0    |       |      |      |       |
| 23    |      | 832   | 7.0    | 4.0   | 3.9   | 1.0  | .50   | 0    |       |      |      |       |
| 24    |      | 10    | 6.5    | 4.0   | 3.9   | 1.0  | .40   | 0    |       |      |      |       |
| 25    |      | 9.0   | 6.0    | 4.0   | 3.8   | 6.9  | .30   | 0    |       |      |      |       |
| 26    |      | 8.0   | 6.0    | 4.1   | 3.8   | 2.5  | .30   | 0    |       |      |      |       |
| 27    |      | 7.0   | 6.0    | 4.1   | 3.6   | 2.8  | .20   | 0    |       |      |      |       |
| 28    |      | 6.0   | 5.5    | 4.1   | 3.6   | 2.7  | .20   | 0    |       |      |      |       |
| 29    |      | 5.0   | 5.0    | 4.1   | ----- | 2.5  | .20   | 0    |       |      |      |       |
| 30    |      | 4.0   | 5.4    | 5.0   | ----- | 2.4  | .20   | 0    |       |      |      |       |
| 31    |      | ----- | 7.5    | 6.0   | ----- | 2.4  | ----- | 0    | ----- |      |      | ----- |
| Total | 0    | 881.0 | 207.20 | 156.0 | 156.6 | 81.9 | 25.80 | 1.20 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 29.4  | 6.68   | 5.03  | 5.59  | 2.64 | 0.86  | 0.04 | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 1750  | 411    | 309   | 311   | 162  | 51    | 2.4  | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 832 Min 0 Mean 2.98 Ac-ft 2150  
 Water year 1965-66 Max 832 Min 0 Mean 4.14 Ac-ft 2990

11-0420. San Luis Rey River at Oceanside, Calif.

Location.--Lat 33°12'48", long 117°22'33", in SW 1/4 Sec. 14, T.11 S., R.5 W., on right bank 0.7 mile upstream from bridge on U.S. Highway 101, 1.1 miles upstream from mouth, and 1.2 miles north of Oceanside.

Drainage area.--557 sq mi.

Records available.--April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 20 ft (from topographic map). April 1912 to September 1914, staff gage at site three-quarters of a mile upstream at different datum. January 1916, staff gage a quarter of a mile downstream at different datum.

Average discharge.--34 years (1912-14, 1929-41, 1946-66), 15.7 cfs (11,370 acre-ft per year); median of yearly mean discharges, zero.

Extremes.--Maximum discharge during year, 624 cfs Nov. 23 (gage height, 13.31 ft); no flow for most of year.  
1912-14, 1916, 1929-42, 1946-66: Maximum discharge, 95,600 cfs Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in each year.

Remarks.--Records good. Flow regulated by Lake Henshaw (see Sta. No. 0350). Several diversions for irrigation and domestic use above station. Average discharge represents flow to ocean during period of record, regardless of upstream development.

| Discharge, in cubic feet per second, water year October 1965 to September 1966 |      |        |        |       |       |      |       |     |       |      |      |       |
|--|------|--------|--------|-------|-------|------|-------|-----|-------|------|------|-------|
| Day  | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
| 1  |      | 0      | 0.10   | 4.7   | 1.5   |      |       |     |       |      |      |       |
| 2  |      | 0      | .10    | 3.8   | 1.6   |      |       |     |       |      |      |       |
| 3  |      | 0      | 0      | 3.4   | 1.6   |      |       |     |       |      |      |       |
| 4  |      | 0      | 0      | 3.2   | 1.5   |      |       |     |       |      |      |       |
| 5  |      | 0      | 0      | 2.6   | 1.2   |      |       |     |       |      |      |       |
| 6  |      | 0      | 0      | 2.6   | 1.5   |      |       |     |       |      |      |       |
| 7  |      | 0      | 0      | 2.6   | 3.8   |      |       |     |       |      |      |       |
| 8  |      | 0      | 0      | 2.4   | 5.3   |      |       |     |       |      |      |       |
| 9  |      | 0      | 0      | 2.2   | 3.6   |      |       |     |       |      |      |       |
| 10   |      | 0      | .80    | 1.8   | 2.2   |      |       |     |       |      |      |       |
| 11   |      | 0      | 3.4    | 1.6   | 1.5   |      |       |     |       |      |      |       |
| 12   |      | 0      | 4.7    | 1.5   | 1.4   |      |       |     |       |      |      |       |
| 13   |      | 0      | 4.7    | 1.4   | .90   |      |       |     |       |      |      |       |
| 14   |      | 0      | 5.0    | 1.2   | .60   |      |       |     |       |      |      |       |
| 15   |      | 0      | 7.3    | 1.2   | .30   |      |       |     |       |      |      |       |
| 16   |      | 0      | 15     | 1.1   | .30   |      |       |     |       |      |      |       |
| 17   |      | 0      | 16     | 1.0   | .20   |      |       |     |       |      |      |       |
| 18   |      | 0      | 12     | .90   | .20   |      |       |     |       |      |      |       |
| 19   |      | 0      | 8.9    | .90   | .10   |      |       |     |       |      |      |       |
| 20   |      | 0      | 6.9    | 1.1   | .10   |      |       |     |       |      |      |       |
| 21   |      | 0      | 4.7    | 1.2   | .10   |      |       |     |       |      |      |       |
| 22   |      | 0      | 4.4    | 1.1   | .10   |      |       |     |       |      |      |       |
| 23   |      | 139    | 3.6    | 1.1   | .10   |      |       |     |       |      |      |       |
| 24   |      | 46     | 2.8    | 1.1   | .10   |      |       |     |       |      |      |       |
| 25   |      | 12     | 2.6    | .90   | .10   |      |       |     |       |      |      |       |
| 26   |      | 5.8    | 2.0    | .70   | .10   |      |       |     |       |      |      |       |
| 27   |      | 2.8    | 1.6    | .60   | 0     |      |       |     |       |      |      |       |
| 28   |      | 1.0    | 1.4    | .30   | 0     |      |       |     |       |      |      |       |
| 29   |      | .60    | 1.5    | .20   | ----- |      |       |     |       |      |      |       |
| 30   |      | .30    | 3.4    | .30   | ----- |      |       |     |       |      |      |       |
| 31   |      | -----  | 6.2    | 1.5   | ----- |      | ----- |     | ----- |      |      | ----- |
| Total  | 0    | 207.50 | 119.10 | 50.40 | 30.20 | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean   | 0    | 6.92   | 3.84   | 1.63  | 1.08  | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft  | 0    | 412    | 236    | 100   | 60    | 0    | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 139 Min 0 Mean 0.895 Ac-ft 648  
 Water year 1965-66 Max 139 Min 0 Mean 1.12 Ac-ft 808

## SANTA MARGARITA RIVER BASIN

11-0424. Temecula Creek near Aguanga, Calif.

Location.--Lat 33°27'33", long 116°55'22", in NE 1/4 SW 1/4 sec. 19, T.8 S., R.1 E., on right bank 1.6 miles downstream from Long Canyon, and 3.5 miles northwest of Aguanga.

Drainage area.--131 sq mi.

Records available.--August 1957 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 1,590 ft (from topographic map). Prior to Mar. 8, 1965, graphic water-stage recorder.

Average discharge.--9 years, 2.92 cfs (2,110 acre-ft per year).

Extremes.--Maximum discharge during year, 2,320 cfs Nov. 22 (gage height, 6.37 ft), from rating curve extended above 800 cfs; no flow Oct. 1 to Nov. 21, June 20 to Sept. 30.

1957-66: Maximum discharge, 3,540 cfs Apr. 3, 1958 (gage height, 6.57 ft), from rating curve extended above 800 cfs; no flow for several months each year.

Remarks.--Records good except those above 100 cfs, which are poor. No regulation above station. Pumping for irrigation above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0       | 6.8   | 26    | 6.6   | 4.1   | 2.2   | 0.90  | 0.20  |      |      |       |
| 2     |      | 0       | 5.6   | 18    | 5.9   | 5.4   | 2.2   | .70   | .10   |      |      |       |
| 3     |      | 0       | 4.8   | 15    | 5.2   | 5.4   | 2.2   | .70   | .10   |      |      |       |
| 4     |      | 0       | 4.5   | 13    | 5.0   | 4.7   | 2.1   | .70   | .10   |      |      |       |
| 5     |      | 0       | 4.0   | 11    | 4.7   | 4.1   | 1.8   | .60   | .10   |      |      |       |
| 6     |      | 0       | 3.4   | 9.7   | 14    | 4.4   | 1.7   | .50   | .10   |      |      |       |
| 7     |      | 0       | 2.9   | 8.5   | 29    | 4.3   | 1.7   | .40   | .10   |      |      |       |
| 8     |      | 0       | 2.7   | 7.8   | 19    | 4.1   | 1.7   | .50   | .10   |      |      |       |
| 9     |      | 0       | 6.7   | 7.0   | 14    | 3.9   | 1.7   | .90   | .10   |      |      |       |
| 10    |      | 0       | 13    | 6.3   | 12    | 3.7   | 1.7   | .90   | .10   |      |      |       |
| 11    |      | 0       | 11    | 6.0   | 10    | 3.6   | 1.7   | .90   | .10   |      |      |       |
| 12    |      | 0       | 8.9   | 5.9   | 9.0   | 3.5   | 1.7   | .90   | .10   |      |      |       |
| 13    |      | 0       | 9.4   | 5.4   | 7.8   | 3.4   | 1.6   | .70   | .10   |      |      |       |
| 14    |      | 0       | 8.6   | 5.0   | 7.3   | 3.3   | 1.4   | .60   | .10   |      |      |       |
| 15    |      | 0       | 7.8   | 4.7   | 6.9   | 3.2   | 1.3   | .50   | .10   |      |      |       |
| 16    |      | 0       | 7.8   | 4.6   | 6.3   | 3.4   | 1.3   | .40   | .10   |      |      |       |
| 17    |      | 0       | 7.2   | 4.5   | 5.9   | 3.4   | 1.4   | .40   | .10   |      |      |       |
| 18    |      | 0       | 5.9   | 4.2   | 5.8   | 3.2   | 1.6   | .30   | .10   |      |      |       |
| 19    |      | 0       | 5.1   | 4.1   | 5.3   | 3.1   | 1.7   | .20   | .10   |      |      |       |
| 20    |      | 0       | 4.6   | 4.1   | 4.8   | 3.0   | 1.7   | .20   | 0     |      |      |       |
| 21    |      | 0       | 4.1   | 3.7   | 4.3   | 2.8   | 1.4   | .20   | 0     |      |      |       |
| 22    |      | 587     | 6.3   | 3.6   | 4.1   | 2.7   | 1.4   | .20   | 0     |      |      |       |
| 23    |      | 635     | 6.6   | 3.5   | 4.2   | 2.6   | 1.3   | .20   | 0     |      |      |       |
| 24    |      | 100     | 5.5   | 3.5   | 4.1   | 2.5   | 1.2   | .20   | 0     |      |      |       |
| 25    |      | 50      | 5.3   | 3.4   | 4.3   | 2.7   | 1.0   | .20   | 0     |      |      |       |
| 26    |      | 20      | 5.0   | 3.5   | 4.1   | 2.8   | .80   | .20   | 0     |      |      |       |
| 27    |      | 15      | 4.5   | 3.7   | 4.1   | 2.6   | 1.0   | .20   | 0     |      |      |       |
| 28    |      | 11      | 4.2   | 3.8   | 4.0   | 2.5   | 1.0   | .20   | 0     |      |      |       |
| 29    |      | 9.6     | 3.2   | 3.6   | ----- | 2.4   | 1.0   | .20   | 0     |      |      |       |
| 30    |      | 8.3     | 9.2   | 8.5   | ----- | 2.4   | 1.0   | .20   | 0     |      |      |       |
| 31    |      | -----   | 3.6   | 8.7   | ----- | 2.4   | ----- | .20   | ----- |      |      |       |
| TOTAL | 0    | 1,435.9 | 332.2 | 220.3 | 217.7 | 104.2 | 45.50 | 14.10 | 2.00  | 0    | 0    | 0     |
| MEAN  | 0    | 47.9    | 10.7  | 7.11  | 7.78  | 3.36  | 1.52  | .46   | .07   | 0    | 0    | 0     |
| AC-FT | 0    | 2,850   | 659   | 437   | 432   | 207   | 90    | 28    | 4.0   | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 635 MIN 0 MEAN 6.42 Ac-ft 3,510  
 WATER YEAR 1965-66 MAX 635 MIN 0 MEAN 6.50 Ac-ft 4,700

Peak discharge (base, 50 cfs).--Nov. 22 (2130 hrs) 3,200 cfs (6.37 ft); Dec. 29 (2300 hrs) 295 cfs (2.80 ft).



11-0425, Temecula Creek at Vail Dam, Calif.

Location.--Lat 33°29'44", long 116°58'33", in Pauba Grant, at Vail Dam 0.2 mile downstream from Arroyo Seco, and 10 miles east of Temecula, Riverside County.

Drainage area.--320 sq mi.

Records available.--October 1948 to September 1966. January 1923 to October 1930 at site 200 ft downstream and October 1930 to September 1948 at site 500 ft downstream, published as "at Nigger Canyon, near Temecula"; records not equivalent owing to change in natural water loss resulting from creation of Vail Lake. October 1948 to September 1951, published as "at Nigger Canyon, near Temecula"; records are for draft and spill only from Vail Lake. October 1951 to September 1955, published as "at Vail Dam, near Temecula".

Gage.--Graphic water stage recorder with rain-gage attachment. U. S. Weather Bureau non-recording rain gage one-fourth mile upstream. Datum of gage is 1,350.0 ft above mean sea level (levels by Bureau of Reclamation). Graphic water-stage recorder at site 500 ft downstream measures release and spill.

Average discharge.--25 years (1923-48), 14.5 cfs (10,500 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year), see records available; 18 years (1948-66), 4.16 cfs (3,010 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

Remarks.--Records of discharge represent all water reaching Vail Lake, including precipitation on lake surface. Discharge computed on basis of records of storage, release (draft), spill and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from a class A evaporation pan using coefficient of 0.77, excepting the period June 1964 to September 1965, when a 24-inch diameter sunken screen pan with a coefficient of 0.98 was used. Area-capacity tables for lake are based on a survey made in 1947. Vail Dam completed in June 1949. Capacity of lake at spillway level (gage height, 120.00 ft), 49,370 acre-ft. Dead storage, 2.4 acre-ft below lowest outlet at gage height 2.5 ft included in these records. Water is released down Temecula Creek for diversion about 1 mile below dam as required. Monthly precipitation, in inches, from U. S. Weather Bureau non-recording rain gage is as follows: November, 2.45; December, 3.79; January, 1.08; March, 0.73; April, 0.03; May, 0.03; the water year, 9.19.

Monthly discharge, water year October 1965 to September 1966

|                         | Elevation<br>(feet)† | Contents<br>(acre-<br>feet) | Change<br>in<br>contents<br>(acre-<br>feet) | Draft<br>(acre-<br>feet) | Evapo-<br>ration<br>(acre-<br>feet) | Discharge<br>(acre-<br>feet) |
|-------------------------|----------------------|-----------------------------|---|--------------------------|-------------------------------------|------------------------------|
|                         | Vail Lake            |                             |   |                          |                                     |                              |
| Sept. 30.....           | 1,387.53             | 2,017                       | -   | -                        | -                                   | -                            |
| Oct. 31.....            | 1,387.29             | 1,982                       | -35   | 0                        | 79                                  | 44                           |
| Nov. 30.....            | 1,399.69             | 4,444                       | +2,462                                      | 0                        | 51                                  | 2,513                        |
| Dec. 31.....            | 1,401.44             | 4,922                       | +478  | 0                        | 54                                  | 532                          |
| Calendar year 1965..... | -                    | -                           | +3,400                                      | 10                       | 838                                 | 4,248                        |
| Jan. 31.....            | 1,402.50             | 5,223                       | +301  | 0                        | 55                                  | 356                          |
| Feb. 28.....            | 1,404.13             | 5,700                       | +477  | 0                        | 62                                  | 539                          |
| Mar. 31.....            | 1,404.74             | 5,883                       | +183  | 0                        | 104                                 | 287                          |
| Apr. 30.....            | 1,404.66             | 5,859                       | -24   | 0                        | 130                                 | 106                          |
| May 31.....             | 1,404.49             | 5,808                       | -51   | 0                        | 133                                 | 82                           |
| June 30.....            | 1,404.14             | 5,703                       | -105  | 0                        | 171                                 | 66                           |
| July 31.....            | 1,402.96             | 5,355                       | -348  | 182                      | 217                                 | 51                           |
| Aug. 31.....            | 1,402.27             | 5,157                       | -198  | 3                        | 215                                 | 20                           |
| Sept. 30.....           | 1,401.86             | 5,040                       | -117  | 0                        | 156                                 | 39                           |
| Water year 1965-66..... | -                    | -                           | +3,023                                      | 185                      | 1,427                               | 4,635                        |

† Elevation at 2400 hours.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of discharge may appear. This arises primarily from the difficulty of computing discharge as a residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-0430. Murrieta Creek at Temecula, Calif.

Location.--Lat 33°28'47", long 117°08'35", in Temecula Grant, on right bank 0.4 mile upstream from mouth and 1.0 mile south of Temecula, Riverside County.

Drainage area.--222 sq mi.

Records available.--October 1924 to September 1966. Monthly discharge only October 1924 to September 1930, published in WSP 1315-B.

Gage.--Graphic water-stage recorder and concrete low-water control since August 1962. Altitude of gage is 970 ft (from topographic map). Prior to Jan. 6, 1931, staff gage and sharp-crested weir at site 0.4 mile downstream at different datum. Jan. 6, 1931, to Dec. 16, 1938, supplemental graphic water-stage recorder and sharp-crested weir at site 0.4 mile downstream at different datum used to record low flows.

Average discharge.--42 years, 8.61 cfs (6,230 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

Extremes.--Maximum discharge during year, 5,020 cfs Dec. 29 (gage height, 7.78 ft); minimum daily, 0.20 cfs for several months.

1930-66: Maximum discharge, 17,500 cfs Jan. 23, 1943 (gage height, 13.82 ft); minimum daily, 0.10 cfs for several days in some years.

Remarks.--Records good. No regulation above station. Pumping above station for irrigation of about 2,500 acres.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.     | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|----------|----------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.20 | 0.30     | 0.60     | 4.8   | 0.60  | 0.40  | 0.40  | 0.20 | 0.20  | 0.20 | 0.20 | 0.20  |
| 2     | .20  | .30      | .50      | 2.0   | .60   | .40   | .40   | .20  | .20   | .20  | .20  | .20   |
| 3     | .20  | .70      | .50      | 1.5   | .60   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 4     | .20  | .60      | .40      | 1.3   | .50   | .30   | .30   | .40  | .20   | .20  | .20  | .20   |
| 5     | .20  | .40      | .40      | 1.0   | .50   | .30   | .30   | .60  | .20   | .20  | .20  | .20   |
| 6     | .20  | .40      | .30      | .80   | .80   | .30   | .30   | .40  | .20   | .20  | .20  | .20   |
| 7     | .20  | .60      | .30      | .80   | 2.1   | .30   | .30   | .30  | .20   | .20  | .20  | .20   |
| 8     | .20  | .40      | .30      | .70   | 1.2   | .30   | .30   | .30  | .20   | .20  | .20  | .20   |
| 9     | .20  | .30      | 1.0      | .60   | .80   | .30   | .30   | .30  | .20   | .20  | .20  | .20   |
| 10    | .20  | .60      | .40      | .60   | .60   | .30   | .30   | .30  | .20   | .20  | .20  | .20   |
| 11    | .20  | .70      | 1.3      | .60   | .60   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 12    | .20  | .60      | 2.3      | .60   | .50   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 13    | .20  | .70      | 1.4      | .50   | .50   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 14    | .20  | .80      | 2.6      | .50   | .40   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 15    | .30  | .90      | 1.7      | .50   | .40   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 16    | .40  | 1.3      | 5.8      | .50   | .50   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 17    | .30  | 2.0      | 4.8      | .50   | .50   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 18    | .20  | 1.0      | 1.8      | .50   | .50   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 19    | .30  | .50      | 1.0      | .50   | .50   | .30   | .30   | .20  | .20   | .20  | .20  | .20   |
| 20    | .30  | .30      | .80      | .50   | .50   | .30   | .30   | .20  | .20   | .30  | .20  | .20   |
| 21    | .40  | .20      | .60      | .50   | .40   | .30   | .30   | .20  | .20   | .30  | .20  | .20   |
| 22    | .40  | 4.7      | .60      | .50   | .40   | .30   | .30   | .50  | .20   | .20  | .20  | .20   |
| 23    | .30  | 9.40     | .60      | .40   | .40   | .30   | .30   | .30  | .20   | .20  | .20  | .20   |
| 24    | .30  | 8.4      | .60      | .40   | .40   | .30   | .30   | .30  | .20   | .20  | .20  | .20   |
| 25    | .20  | 4.1      | .60      | .40   | .40   | 1.9   | .30   | .40  | .20   | .20  | .20  | .20   |
| 26    | .30  | .30      | .60      | .40   | .40   | 5.7   | .30   | .30  | .20   | .20  | .20  | .20   |
| 27    | .30  | 1.7      | .60      | .40   | .40   | 1.2   | .30   | .30  | .20   | .20  | .20  | .20   |
| 28    | .20  | 1.0      | .60      | .40   | .40   | .60   | .20   | .20  | .20   | .20  | .20  | .20   |
| 29    | .30  | .80      | 7.98     | .40   | ----- | .40   | .20   | .20  | .20   | .20  | .20  | .20   |
| 30    | .20  | .60      | 2.95     | 1.0   | ----- | .40   | .20   | .20  | .20   | .20  | .20  | .20   |
| 31    | .20  | -----    | 9.7      | 1.0   | ----- | .40   | ----- | .20  | ----- | .20  | .20  | ----- |
| Total | 7.70 | 1.420.20 | 1.196.00 | 25.10 | 16.40 | 18.00 | 8.90  | 8.30 | 6.00  | 6.40 | 6.20 | 6.00  |
| Mean  | 0.25 | 47.3     | 38.6     | 0.81  | 0.59  | 0.58  | 0.30  | 0.27 | 0.20  | 0.21 | 0.20 | 0.20  |
| Ac-ft | 15   | 2.820    | 2.370    | 50    | 33    | 36    | 18    | 16   | 12    | 13   | 12   | 12    |

Calendar year 1965 Max 940 Min 0.10 Mean 7.72 Ac-ft 5,590  
 Water year 1965-66 Max 940 Min 0.20 Mean 7.47 Ac-ft 5,410

Peak discharge (base, 55 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-23 | 0100 | 6.87        | 3,710     | 12-29 | 2100 | 7.78        | 5,020     |
| 12-10 | 1400 | 2.06        | 112       |       |      |             |           |

11-0440. Santa Margarita River near Temecula, Calif.

Location.--Lat 33°28'26", long 117°08'30", in Temecula Grant, on left bank at upper end of Temecula Canyon, 0.1 mile downstream from Murrieta Creek and 1.4 miles south of Temecula, Riverside County.

Drainage area.--588 sq mi.

Records available.--January 1923 to September 1966. Prior to October 1952, published as Temecula Creek at Railroad Canyon, near Temecula.

Gage.--Graphic water-stage recorder. Altitude of gage is 950 ft (from topographic map).

Average discharge.--25 years (1923-48), 28.2 cfs (20,420 acre-ft per year), 18 years (1948-66), 8.98 cfs (6,500 acre-ft per year); median of yearly mean discharges (1923-48), 13 cfs (9,400 acre-ft per year); (1948-66), 5.4 cfs (3,900 acre-ft per year).

Extremes.--Maximum discharge during year, 5,040 cfs Dec. 29 (gage height, 8.00 ft), on basis of field estimate of maximum flow; minimum daily, 0.30 cfs Aug. 18-22.

1923-66: Maximum discharge, 25,000 cfs Feb. 16, 1927 (gage height, 14.6 ft), from rating curve extended above 10,000 cfs; minimum daily, 0.3 cfs Aug. 18-22, 1965, regulation by construction work above station.

Remarks.--Records good except those above 100 cfs, which are poor. Flow partly regulated since November 1948 by Vail Lake (see Sta. No. 0425). Pumping above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 3.0  | 2.4    | 3.8    | 1.9   | 4.4   | 3.7   | 3.5   | 2.8   | 2.2   | 2.4  | 2.4   | 2.3   |
| 2     | 3.0  | 2.4    | 3.5    | 1.1   | 4.2   | 3.7   | 3.3   | 3.0   | 2.4   | 2.2  | 2.3   | 2.2   |
| 3     | 2.4  | 2.7    | 3.2    | 6.2   | 4.6   | 3.5   | 3.3   | 3.3   | 2.3   | 2.0  | 2.9   | 2.1   |
| 4     | 2.4  | 2.7    | 3.2    | 5.2   | 4.8   | 3.5   | 3.2   | 3.5   | 2.9   | 2.4  | 2.2   | 2.1   |
| 5     | 2.4  | 2.6    | 3.2    | 5.0   | 4.2   | 3.5   | 3.0   | 4.2   | 3.2   | 2.3  | 2.2   | 2.1   |
| 6     | 2.4  | 2.6    | 3.0    | 4.4   | 5.7   | 3.5   | 2.8   | 3.3   | 2.3   | 2.6  | 2.6   | 2.1   |
| 7     | 2.3  | 2.6    | 3.0    | 4.2   | 6.5   | 3.5   | 2.8   | 2.8   | 3.0   | 2.1  | 2.2   | 2.1   |
| 8     | 2.3  | 2.4    | 3.0    | 4.2   | 5.0   | 3.7   | 2.8   | 2.7   | 3.4   | 2.2  | 2.2   | 2.1   |
| 9     | 2.3  | 2.3    | 1.4    | 4.0   | 4.2   | 3.8   | 2.8   | 2.6   | 3.2   | 2.2  | 2.3   | 2.2   |
| 10    | 2.3  | 2.6    | 3.8    | 3.8   | 4.0   | 3.8   | 2.8   | 2.4   | 2.8   | 2.1  | 2.2   | 2.2   |
| 11    | 2.3  | 2.7    | 1.7    | 3.8   | 3.8   | 3.8   | 2.8   | 2.3   | 2.3   | 2.1  | 2.2   | 2.2   |
| 12    | 2.3  | 2.7    | 7.6    | 3.8   | 3.8   | 3.8   | 2.8   | 2.3   | 2.2   | 2.1  | 2.2   | 2.2   |
| 13    | 2.3  | 2.8    | 5.7    | 3.7   | 3.7   | 3.8   | 2.7   | 2.1   | 2.2   | 2.2  | 2.0   | 2.0   |
| 14    | 2.4  | 3.2    | 7.7    | 3.7   | 3.7   | 3.8   | 2.6   | 2.1   | 2.6   | 2.6  | 2.1   | 2.0   |
| 15    | 2.4  | 3.5    | 5.7    | 3.7   | 3.5   | 3.8   | 2.6   | 2.0   | 2.6   | 2.4  | 2.1   | 2.0   |
| 16    | 2.4  | 4.0    | 1.1    | 3.8   | 3.5   | 3.8   | 2.7   | 1.5   | 2.4   | 2.4  | 2.1   | 2.0   |
| 17    | 2.3  | 4.8    | 1.0    | 3.8   | 3.7   | 3.8   | 2.8   | 6.0   | 2.3   | 2.2  | 1.6   | 2.0   |
| 18    | 2.1  | 3.5    | 5.2    | 3.7   | 3.7   | 3.8   | 2.7   | 1.8   | 2.3   | 2.1  | 3.0   | 2.0   |
| 19    | 2.1  | 2.8    | 4.2    | 3.7   | 3.7   | 4.0   | 3.0   | 2.1   | 2.2   | 2.2  | 3.0   | 2.0   |
| 20    | 2.3  | 2.7    | 4.0    | 4.0   | 3.7   | 4.0   | 3.0   | 2.3   | 2.2   | 2.4  | 3.0   | 2.0   |
| 21    | 2.8  | 2.6    | 4.0    | 3.7   | 3.7   | 3.8   | 3.3   | 2.4   | 2.0   | 2.4  | 3.0   | 2.0   |
| 22    | 3.2  | 3.0    | 4.0    | 3.5   | 3.7   | 3.8   | 3.8   | 2.7   | 2.0   | 2.4  | 3.0   | 2.0   |
| 23    | 3.0  | 1.150  | 3.8    | 3.5   | 3.8   | 3.8   | 3.3   | 2.3   | 2.2   | 2.4  | 1.6   | 2.0   |
| 24    | 2.6  | 2.5    | 3.8    | 3.5   | 3.8   | 4.4   | 3.2   | 2.3   | 2.2   | 2.3  | 1.8   | 2.0   |
| 25    | 2.1  | 1.1    | 3.8    | 3.5   | 3.8   | 6.2   | 3.0   | 2.7   | 2.3   | 2.3  | 2.0   | 2.0   |
| 26    | 2.3  | 4.4    | 3.8    | 3.5   | 3.7   | 1.7   | 3.3   | 2.6   | 2.3   | 2.2  | 2.6   | 2.0   |
| 27    | 2.6  | 4.0    | 3.8    | 3.5   | 3.7   | 6.0   | 3.7   | 2.4   | 2.3   | 2.2  | 2.0   | 2.0   |
| 28    | 2.3  | 4.2    | 3.7    | 3.3   | 3.7   | 4.6   | 4.0   | 2.4   | 2.3   | 3.0  | 2.3   | 2.0   |
| 29    | 2.4  | 4.4    | 7.50   | 3.3   | ----- | 4.2   | 3.2   | 2.4   | 2.2   | 2.8  | 2.4   | 2.1   |
| 30    | 2.4  | 4.2    | 3.18   | 5.1   | ----- | 4.6   | 2.8   | 2.3   | 2.2   | 2.6  | 2.3   | 2.1   |
| 31    | 2.4  | -----  | 3.0    | 5.0   | ----- | 3.7   | ----- | 2.4   | ----- | 3.0  | 2.8   | ----- |
| Total | 75.8 | 1597.8 | 1284.7 | 146.1 | 114.3 | 136.7 | 91.6  | 766.0 | 73.0  | 72.8 | 59.10 | 62.1  |
| Mean  | 2.45 | 5.33   | 4.14   | 4.71  | 4.08  | 4.41  | 3.05  | 2.47  | 2.43  | 2.35 | 1.91  | 2.07  |
| Ac-ft | 150  | 3170   | 2550   | 290   | 227   | 271   | 182   | 152   | 145   | 144  | 117   | 123   |

Calendar year 1965 Max 1.150 Min 1.6 Mean 10.6 Ac-ft 7,680  
 Water year 1965-66 Max 1.150 Min 0.30 Mean 10.4 Ac-ft 7,520

## SANTA MARGARITA RIVER BASIN

11-0445. Santa Margarita River near Fallbrook, Calif.

Location.--Lat 33°23'54" (revised), long 117°15'44", in NE¼SE¼NE¼ sec.14, T.9 S., R.4 W., on right bank 180 ft upstream from De Luz Road, 1.3 miles northwest of Fallbrook, and 1.9 miles downstream from Sandia Canyon.

Drainage area.--644 sq mi.

Records available.--October 1924 to September 1966. Monthly discharge only for October to November 1924, published in WSP 1315-B.

Gage.--Digital water-stage recorder and concrete-road control since October 1955. Altitude of gage is 280 ft (from topographic map).

Prior to Oct. 1, 1955, at site 1.7 miles upstream at different datum. Records equivalent except those for extreme low flows.

Prior to Mar. 3, 1965, graphic water-stage recorder.

Average discharge.--24 years (1924-48), 35.4 cfs (25,630 acre-ft per year), 18 years (1948-66), 9.41 cfs (6,810 acre-ft per year); median of yearly mean discharges (1924-48), 17 cfs (12,300 acre-ft per year); (1948-66), 4.8 cfs (3,500 acre-ft per year).

Extremes.--Maximum discharge during year, 4,750 cfs Nov. 23 (gage height, 8.87 ft); no flow for many days.

1924-66: Maximum discharge, 33,100 cfs Feb. 16, 1927 (gage height, 15.6 ft, site and datum then in use), from rating curve extended above 8,800 cfs on basis of slope-area measurement of maximum flow; no flow at times in recent years.

Remarks.--Records fair. Flow partly regulated since November 1948 by Vail Lake (see Sta. No. 0425). Several small diversions above station for irrigation. The Fallbrook Public Utility District pumped 240 acre-ft of water from a well in the streambed 2.1 miles upstream from the station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT.  | NOV.     | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|--------------------|-------|----------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1                  | 1.5   | 1.3      | 11      | 40    | 12    | 6.8   | 4.5   | 3.2   | 0.60  | 0.40  | 2.0   | 0     |
| 2                  | 1.3   | 1.5      | 9.7     | 30    | 11    | 8.2   | 4.2   | 3.5   | .60   | .50   | 2.0   | 0     |
| 3                  | 1.0   | 1.6      | 8.1     | 24    | 9.5   | 7.2   | 4.0   | 3.3   | .60   | .60   | 1.7   | 0     |
| 4                  | 1.0   | .60      | 7.8     | 21    | 9.6   | 6.8   | 3.8   | 3.7   | .50   | .60   | 1.5   | 0     |
| 5                  | .80   | .30      | 7.5     | 19    | 9.4   | 6.8   | 3.6   | 3.2   | .60   | .50   | 1.4   | 0     |
| 6                  | .80   | 1.0      | 6.7     | 17    | 15    | 6.8   | 2.9   | 3.1   | .60   | .60   | 1.4   | 0     |
| 7                  | .90   | 1.5      | 6.8     | 17    | 23    | 7.1   | 3.0   | 2.9   | .60   | .40   | 1.0   | 0     |
| 8                  | 1.0   | 1.9      | 6.3     | 15    | 18    | 7.3   | 3.0   | 2.9   | .50   | .40   | .60   | 0     |
| 9                  | 1.1   | 2.3      | 13      | 14    | 14    | 7.4   | 3.1   | 3.1   | .80   | .60   | .60   | 0     |
| 10                 | 1.2   | 2.1      | 45      | 15    | 13    | 7.4   | 3.2   | 2.8   | 1.0   | .50   | .50   | 0     |
| 11                 | 1.3   | 2.0      | 58      | 12    | 12    | 7.5   | 3.3   | 2.8   | .90   | .50   | .20   | 0     |
| 12                 | 1.3   | 2.3      | 30      | 12    | 11    | 7.6   | 3.5   | 2.7   | .70   | .40   | .20   | 0     |
| 13                 | 1.3   | 2.6      | 24      | 13    | 11    | 7.7   | 3.6   | 2.4   | .50   | .20   | .50   | 0     |
| 14                 | 1.3   | 3.2      | 21      | 13    | 10    | 7.5   | 3.4   | 2.4   | .50   | .10   | .70   | 0     |
| 15                 | 1.3   | 5.5      | 22      | 12    | 9.8   | 7.8   | 3.3   | 2.1   | .50   | 0     | .70   | 0     |
| 16                 | 1.1   | 7.4      | 26      | 11    | 11    | 7.9   | 3.3   | 2.0   | .40   | 0     | .30   | 0     |
| 17                 | 1.0   | 8.9      | 28      | 11    | 9.2   | 8.1   | 3.5   | 2.1   | .40   | 0     | .10   | 0     |
| 18                 | .90   | 7.5      | 21      | 11    | 8.5   | 8.2   | 3.8   | 1.9   | .40   | 0     | 0     | 0     |
| 19                 | .80   | 6.1      | 17      | 9.9   | 9.2   | 8.2   | 3.8   | 1.4   | .40   | 0     | 0     | 0     |
| 20                 | .70   | 4.7      | 15      | 11    | 9.6   | 8.1   | 3.9   | 1.0   | .30   | 0     | 0     | 0     |
| 21                 | .70   | 3.8      | 14      | 12    | 9.3   | 7.9   | 3.8   | 1.7   | .30   | .40   | 0     | 0     |
| 22                 | .80   | 30       | 16      | 11    | 8.9   | 8.0   | 3.7   | 1.8   | .30   | .90   | 0     | 0     |
| 23                 | 1.0   | 1,700    | 15      | 12    | 9.6   | 7.3   | 3.8   | 2.0   | .30   | 1.0   | 0     | 0     |
| 24                 | 1.1   | 78       | 13      | 12    | 8.6   | 6.9   | 3.1   | 2.0   | .20   | .70   | 0     | 0     |
| 25                 | 1.1   | 39       | 12      | 10    | 8.2   | 8.2   | 2.9   | 1.6   | .20   | .40   | 0     | 0     |
| 26                 | .90   | 28       | 11      | 11    | 8.5   | 12    | 3.0   | 1.8   | .20   | .10   | 0     | 0     |
| 27                 | 2.1   | 20       | 10      | 12    | 8.3   | 11    | 3.5   | 1.9   | .20   | 0     | 0     | .40   |
| 28                 | 1.7   | 15       | 9.9     | 12    | 7.5   | 7.3   | 3.2   | 1.8   | .10   | 0     | 0     | .60   |
| 29                 | 1.3   | 12       | 94      | 12    | ----- | 6.1   | 4.1   | 1.4   | .10   | .10   | 0     | .70   |
| 30                 | 1.0   | 11       | 839     | 12    | ----- | 5.6   | 3.7   | .80   | 0     | 2.1   | 0     | .80   |
| 31                 | 1.0   | -----    | 63      | 11    | ----- | 5.4   | ----- | .70   | ----- | 2.2   | 0     | ----- |
| TOTAL              | 34.30 | 2,001.10 | 1,480.8 | 454.9 | 304.7 | 236.1 | 105.5 | 70.00 | 13.30 | 14.20 | 15.40 | 2.50  |
| MEAN               | 1.11  | 66.7     | 47.8    | 14.7  | 10.9  | 7.62  | 3.52  | 2.26  | .44   | .46   | .50   | .08   |
| AC-FT              | 68    | 3,970    | 2,940   | 902   | 604   | 468   | 209   | 139   | 26    | 28    | 31    | 5.0   |
| CALENDAR YEAR 1965 | MAX   | 1,700    | MIN     | 0     | MEAN  | 12.0  | AC-FT | 6,980 |       |       |       |       |
| WATER YEAR 1965-66 | MAX   | 1,700    | MIN     | 0     | MEAN  | 13.0  | AC-FT | 9,390 |       |       |       |       |

11-0449. De Luz Creek near Fallbrook, Calif.

Location.--Lat 33°22'10", long 117°19'15", in NW 1/4 sec 29, T.9 S., R.4 W., on left bank 0.65 mile upstream from mouth and 4.2 miles west of Fallbrook.

Drainage area.--47.5 sq mi.

Records available.--February 1951 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 150 ft (from topographic map). Prior to Dec. 23, 1958, at site 750 ft upstream at same datum.

Average discharge.--15 years, 4.49 cfs (3,250 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 1,930 cfs Nov. 22 (gage height, 9.10 ft), from rating curve extended same as below; no flow Oct. 1 to Nov. 21, May 31 to Sept. 30.

1951-66: Maximum discharge, 2,800 cfs Apr. 1, 1958 (gage height, 9.95 ft, at present site, from floodmarks), from rating curve extended above 300 cfs on basis of slope-area measurement of maximum flow; no flow for several months of each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 3.7   | 5.2   | 8.6   | 5.1  | 1.1   | 0.30 |       |      |      |       |
| 2     |      | 0     | 3.7   | 4.4   | 8.2   | 5.1  | 1.1   | .30  |       |      |      |       |
| 3     |      |       | 4.0   | 4.0   | 8.6   | 5.1  | 1.1   | .30  |       |      |      |       |
| 4     |      | 0     | 3.4   | 3.5   | 8.2   | 4.8  | 1.1   | .30  |       |      |      |       |
| 5     |      | 0     | 3.2   | 2.9   | 8.2   | 4.8  | 1.1   | .20  |       |      |      |       |
| 6     |      | 0     | 2.8   | 2.8   | 1.2   | 4.2  | .80   | .20  |       |      |      |       |
| 7     |      | 0     | 2.4   | 2.6   | 1.5   | 3.7  | .80   | .20  |       |      |      |       |
| 8     |      | 0     | 2.2   | 2.5   | 1.2   | 3.0  | .70   | .20  |       |      |      |       |
| 9     |      | 0     | 3.0   | 2.3   | 9.9   | 2.8  | .70   | .20  |       |      |      |       |
| 10    |      | 0     | 1.4   | 2.2   | 9.0   | 2.8  | .60   | .20  |       |      |      |       |
| 11    |      | 0     | 1.3   | 2.2   | 8.2   | 3.0  | .40   | .20  |       |      |      |       |
| 12    |      | 0     | 1.1   | 2.0   | 8.2   | 3.4  | .30   | .20  |       |      |      |       |
| 13    |      | 0     | 1.1   | 1.9   | 8.2   | 3.4  | .30   | .20  |       |      |      |       |
| 14    |      | 0     | 1.3   | 1.8   | 7.4   | 3.2  | .30   | .20  |       |      |      |       |
| 15    |      | 0     | 1.7   | 1.8   | 7.4   | 2.8  | .40   | .20  |       |      |      |       |
| 16    |      | 0     | 2.6   | 1.6   | 7.4   | 2.8  | .40   | .20  |       |      |      |       |
| 17    |      | 0     | 2.2   | 1.6   | 7.0   | 2.8  | .40   | .10  |       |      |      |       |
| 18    |      | 0     | 1.7   | 1.5   | 6.7   | 2.6  | .40   | .10  |       |      |      |       |
| 19    |      | 0     | 1.6   | 1.5   | 6.4   | 2.4  | .40   | .10  |       |      |      |       |
| 20    |      | 0     | 1.6   | 1.4   | 6.4   | 2.2  | .40   | .10  |       |      |      |       |
| 21    |      | 0     | 1.6   | 1.3   | 6.4   | 1.8  | .40   | .10  |       |      |      |       |
| 22    |      | 2.44  | 1.6   | 1.3   | 6.0   | 2.0  | .30   | .10  |       |      |      |       |
| 23    |      | 1.64  | 1.5   | 1.2   | 5.7   | 1.6  | .30   | .10  |       |      |      |       |
| 24    |      | 3.0   | 1.4   | 1.2   | 5.4   | 1.8  | .30   | .10  |       |      |      |       |
| 25    |      | 2.2   | 1.5   | 1.1   | 5.4   | 1.9  | .30   | .10  |       |      |      |       |
| 26    |      | 1.9   | 1.3   | 1.1   | 5.4   | 1.9  | .30   | .10  |       |      |      |       |
| 27    |      | 1.5   | 1.4   | 1.0   | 5.1   | 1.8  | .30   | .10  |       |      |      |       |
| 28    |      | 1.2   | 1.3   | 9.0   | 5.1   | 1.6  | .30   | .10  |       |      |      |       |
| 29    |      | 8.6   | 1.88  | 8.6   | ----- | 1.5  | .20   | .10  |       |      |      |       |
| 30    |      | 5.7   | 6.7   | 1.1   | ----- | 1.5  | .30   | .10  |       |      |      |       |
| 31    |      | ----- | 5.3   | 1.0   | ----- | 1.2  | ----- | 0    | ----- |      |      | ----- |
| Total | 0    | 520.3 | 628.4 | 617.6 | 217.5 | 88.6 | 15.80 | 5.00 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 17.3  | 20.3  | 19.9  | 7.77  | 2.86 | 0.53  | 0.16 | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 1,030 | 1,250 | 1,220 | 431   | 176  | 31    | 9.9  | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 2.44 Min 0 Mean 3.30 Ac-ft 2,390

Water year 1965-66 Max 2.44 Min 0 Mean 5.73 Ac-ft 4,150

Peak discharge (base, 200 cfs).--Nov. 22 (about 2300 hrs) 1,930 cfs (9.10 ft); Dec. 29 (2000 hrs) 1,030 cfs (7.94 ft).

## SANTA MARGARITA RIVER BASIN

11-0460. Santa Margarita River at Ysidora, Calif.

Location.--Lat 33°14'38", long 117°22'56", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.3, T.11 S., R.5 W., on right bank 1 mile downstream from Ysidora and about 2.5 miles upstream from mouth.

Drainage area.--739 sq mi.

Records available.--February 1923 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 10 ft (from topographic map). Prior to Feb. 16, 1927, at site 1 mile upstream at different datum (destroyed by flood). Feb. 16, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Nov. 27, 1935, at same site at datum 1.00 ft higher.

Average discharge.--43 years, 27.5 cfs (19,910 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

Extremes.--Maximum discharge during year, 8,400 cfs Nov. 23 (gage height, 12.25 ft), from rating curve extended above 24 cfs on basis of field estimate of maximum flow; no flow Oct. 1 to Nov. 22, June 1 to Sept. 30.  
1923-66: Maximum discharge, 33,600 cfs Feb. 16, 1927 (gage height, 18.00 ft, site and datum then in use), on basis of slope-area measurement of maximum flow; no flow for part of most years.

Remarks.--Records fair. Flow partly regulated by Vail Lake since November 1948 (see Sta. No. 0425). Diversions for irrigation on Rancho California (formerly Santa Margarita Ranch and Pauba Ranch). Average discharge represents flow to ocean during period of record, regardless of upstream development.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|---------|---------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0       | 1.6     | 105   | 13    | 3.6   | 0.70  | 0.20 |       |      |      |       |
| 2     |      | 0       | 1.4     | 70    | 11    | 3.6   | .70   | .20  |       |      |      |       |
| 3     |      | 0       | 1.4     | 37    | 9.3   | 3.2   | .70   | .20  |       |      |      |       |
| 4     |      | 0       | 1.2     | 33    | 7.4   | 2.6   | .60   | .20  |       |      |      |       |
| 5     |      | 0       | 1.2     | 24    | 5.2   | 2.0   | .60   | .20  |       |      |      |       |
| 6     |      | 0       | 1.2     | 26    | 7.4   | 1.8   | .50   | .20  |       |      |      |       |
| 7     |      | 0       | 1.1     | 22    | 30    | 1.6   | .50   | .20  |       |      |      |       |
| 8     |      | 0       | 1.1     | 22    | 48    | 1.4   | .50   | .20  |       |      |      |       |
| 9     |      | 0       | 1.4     | 18    | 30    | 1.2   | .50   | .20  |       |      |      |       |
| 10    |      | 0       | 1.6     | 8.6   | 33    | 1.2   | .50   | .20  |       |      |      |       |
| 11    |      | 0       | 1.2     | 11    | 20    | 1.2   | .50   | .20  |       |      |      |       |
| 12    |      | 0       | 1.2     | 14    | 24    | 2.0   | .40   | .10  |       |      |      |       |
| 13    |      | 0       | 1.4     | 14    | 28    | 3.2   | .40   | .10  |       |      |      |       |
| 14    |      | 0       | 1.4     | 14    | 24    | 2.6   | .40   | .20  |       |      |      |       |
| 15    |      | 0       | 1.0     | 14    | 16    | 1.8   | .40   | .20  |       |      |      |       |
| 16    |      | 0       | 1.2     | 12    | 9.3   | 1.2   | .40   | .10  |       |      |      |       |
| 17    |      | 0       | 1.1     | 10    | 6.2   | 1.2   | .40   | .10  |       |      |      |       |
| 18    |      | 0       | 1.4     | 8.6   | 4.3   | 1.1   | .40   | .10  |       |      |      |       |
| 19    |      | 0       | 2.0     | 8.0   | 3.2   | 1.0   | .30   | .10  |       |      |      |       |
| 20    |      | 0       | 2.0     | 8.6   | 2.6   | 1.0   | .30   | .10  |       |      |      |       |
| 21    |      | 0       | 2.6     | 8.0   | 2.3   | 1.0   | .30   | .10  |       |      |      |       |
| 22    |      | 0       | 4.3     | 7.4   | 2.3   | .80   | .30   | .10  |       |      |      |       |
| 23    |      | 1.020   | 4.3     | 6.8   | 3.6   | .80   | .30   | .10  |       |      |      |       |
| 24    |      | 199     | 4.7     | 6.2   | 2.9   | .80   | .30   | .10  |       |      |      |       |
| 25    |      | 19      | 3.9     | 5.2   | 2.6   | .70   | .30   | .10  |       |      |      |       |
| 26    |      | 4.3     | 3.2     | 4.7   | 6.2   | .70   | .20   | .10  |       |      |      |       |
| 27    |      | 2.6     | 2.6     | 5.2   | 4.3   | .70   | .20   | .10  |       |      |      |       |
| 28    |      | 2.3     | 2.0     | 6.2   | 3.6   | .70   | .20   | .10  |       |      |      |       |
| 29    |      | 2.3     | 2.3     | 5.7   | ----- | .70   | .20   | .10  |       |      |      |       |
| 30    |      | 1.8     | 1.020   | 13    | ----- | .70   | .20   | .10  |       |      |      |       |
| 31    |      | -----   | 124     | 18    | ----- | .70   | ----- | .10  | ----- |      |      | ----- |
| Total | 0    | 1,251.3 | 1,201.0 | 566.2 | 359.7 | 46.80 | 12.20 | 4.40 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 41.7    | 38.7    | 18.3  | 12.8  | 1.51  | 0.41  | 0.14 | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 2,480   | 2,380   | 1,120 | 713   | 93    | 24    | 8.7  | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 1.020 Min 0 Mean 6.37 Ac-ft 4,610  
 Water year 1965-66 Max 1.020 Min 0 Mean 9.43 Ac-ft 6,830

11-0461. Las Flores Creek near Oceanside, Calif.

Location.--Lat 33°17'32", long 117°27'21", in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T.10 S., R.6 W., on upstream side and at center of bridge on Atchison, Topeka and Santa Fe Railway, 0.5 mile upstream from mouth and 8.5 miles northwest of Oceanside.

Drainage area.--26.6 sq mi.

Records available.--May 1951 to September 1966.

Gage.--Graphic water-stage recorder and multiple concrete culvert control. Altitude of gage is 35 ft (from topographic map).

Average discharge.--15 years, 0.711 cfs (515 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 421 cfs Nov. 22 (gage height, 2.27 ft); no flow for most of year.

1951-66: Maximum discharge, 960 cfs Jan. 16, 1952 (gage height, 4.75 ft), based on critical-depth determination of maximum flow; no flow for most of each year.

Remarks.--Records fair. Rising water from area, which bypasses the station 1,000 ft to the northwest, amounted to 38 acre-ft this year. No regulation above station. Some pumping above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                   |                   |                   |                 |
|-------------------|-------------------|-------------------|-----------------|
| Nov. 16..... 0.30 | Dec. 11..... 0.40 | Dec. 22..... 0.70 | Jan. 1..... 1.6 |
| 17..... .10       | 12..... .40       | 23..... .60       | 2..... .30      |
| 18..... .10       | 13..... .40       | 24..... .60       | 3..... .20      |
| 19..... .10       | 14..... 32        | 25..... .60       | 4..... .10      |
| 20..... .10       | 15..... 11        | 26..... .60       | 30..... .30     |
| 21..... .10       | 16..... 55        | 27..... .60       | 31..... .20     |
| 22..... 27        | 17..... 6.9       | 28..... .60       | Feb. 1..... .10 |
| 23..... 114       | 18..... .80       | 29..... 16        | 6..... 20       |
| 24..... 2.0       | 19..... .70       | 30..... 22        | 7..... 2.5      |
| 25..... .40       | 20..... .60       | 31..... .70       | 8..... .20      |
| Dec. 10..... 16   |                   |                   |                 |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 144.20   | 114     | 0       | 4.81 | 286       |
| December.....           | 167.80   | 55      | 0       | 5.41 | 333       |
| January 1966.....       | 2.70     | 1.6     | 0       | .09  | 5.4       |
| February.....           | 22.80    | 20      | 0       | .81  | 45        |
| Calendar year 1965..... | -        | 114     | 0       | .884 | 640       |
| Water year 1965-66..... | -        | 114     | 0       | .925 | 669       |

Peak discharge (base, 100 cfs).--Nov. 22 (2300 hrs) 421 cfs (2.27 ft); Dec. 29 (2300 hrs) 102 cfs (0.88 ft).

Note.--Flow occurred only on days listed above.

## SAN ONOFRE CREEK BASIN

11-0462, San Onofre Creek near San Onofre, Calif.

Location.--Lat 33°23'23", long 117°30'50", in SE  $\frac{1}{4}$  sec. 16, T.9 S., R.6 W., on left bank 0.3 mile southwest of Tent Camp No. 2, 0.5 mile downstream from ford on Basilone Road, 4 miles east of San Onofre, and 5 miles upstream from mouth.

Drainage area.--34.6 sq mi.

Records available.--October 1950 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 170 ft (from topographic map). Prior to June 22, 1957, at datum 1.00 ft higher. June 22, 1957, to Oct. 7, 1960, at site 50 ft upstream at same datum.

Average discharge.--16 years, 2.29 cfs (1,660 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 1,310 cfs Nov. 22 (gage height 5.55 ft), from rating curve extended above 370 cfs; no flow Oct. 1 to Nov. 21, Aug. 10 to Sept. 30.

1950-66: Maximum discharge, 2,680 cfs Apr. 1, 1958 (gage height, 5.90 ft), from rating curve extended above 370 cfs on basis of maximum flows for station at San Onofre; no flow for several months in each year.

Remarks.--Records good. No regulation or diversion above station. Since November 1954, U.S. Navy Sewage Disposal Plant has discharged into creek  $1\frac{1}{2}$  miles above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 0.60   | 35    | 3.6   | 1.6   | 0.80  | 0.70  | 0.20  | 0.20 | 0.20 |       |
| 2     |      | 0      | .30    | 32    | 3.1   | 1.8   | .80   | .70   | .20   | .20  | .20  |       |
| 3     |      | 0      | .20    | 28    | 2.6   | 1.4   | .80   | .70   | .20   | .20  | .10  |       |
| 4     |      | 0      | .20    | 17    | 2.4   | 1.4   | .80   | .70   | .20   | .20  | .10  |       |
| 5     |      | 0      | .20    | 11    | 2.2   | 1.4   | .80   | .70   | .20   | .20  | .10  |       |
| 6     |      | 0      | .20    | 9.1   | 25    | 1.4   | .80   | .70   | .20   | .20  | .10  |       |
| 7     |      | 0      | .20    | 8.2   | 20    | 1.2   | .80   | .70   | .20   | .20  | .10  |       |
| 8     |      | 0      | .20    | 7.7   | 12    | 1.1   | .80   | .60   | .20   | .20  | .10  |       |
| 9     |      | 0      | .30    | 6.4   | 8.6   | .90   | .80   | .60   | .20   | .20  | .10  |       |
| 10    |      | 0      | 17     | 5.6   | 7.2   | .90   | .80   | .60   | .20   | .20  | 0    |       |
| 11    |      | 0      | 9.6    | 4.9   | 6.0   | .90   | .80   | .60   | .20   | .20  | 0    |       |
| 12    |      | 0      | 11     | 4.2   | 4.9   | .90   | .80   | .60   | .20   | .20  | 0    |       |
| 13    |      | 0      | 11     | 3.6   | 4.2   | .80   | .80   | .50   | .20   | .20  | 0    |       |
| 14    |      | 0      | 21     | 3.4   | 3.6   | .80   | .80   | .50   | .20   | .20  | 0    |       |
| 15    |      | 0      | 17     | 3.1   | 3.4   | .70   | .80   | .50   | .20   | .20  | 0    |       |
| 16    |      | 0      | 57     | 2.8   | 3.1   | .70   | .80   | .50   | .20   | .20  | 0    |       |
| 17    |      | 0      | 32     | 2.6   | 2.8   | .70   | .80   | .50   | .20   | .20  | 0    |       |
| 18    |      | 0      | 28     | 2.2   | 2.8   | .70   | .80   | .40   | .20   | .20  | 0    |       |
| 19    |      | 0      | 18     | 2.4   | 2.6   | .70   | .80   | .40   | .20   | .20  | 0    |       |
| 20    |      | 0      | 17     | 3.1   | 2.4   | .70   | .80   | .40   | .20   | .20  | 0    |       |
| 21    |      | 0      | 15     | 2.2   | 2.2   | .70   | .80   | .40   | .20   | .20  | 0    |       |
| 22    |      | 305    | 13     | 2.0   | 2.0   | .70   | .80   | .40   | .20   | .20  | 0    |       |
| 23    |      | 163    | 11     | 2.0   | 2.0   | .70   | .70   | .30   | .20   | .20  | 0    |       |
| 24    |      | 19     | 9.1    | 1.8   | 2.0   | .70   | .70   | .30   | .20   | .20  | 0    |       |
| 25    |      | 21     | 8.6    | 1.6   | 1.8   | .70   |       | .30   | .20   | .20  | 0    |       |
| 26    |      | 7.7    | 8.2    | 1.6   | 1.8   | .70   | .70   | .30   | .20   | .20  | 0    |       |
| 27    |      | 3.1    | 7.7    | 1.8   | 1.6   | .80   | .70   | .30   | .20   | .20  | 0    |       |
| 28    |      | 1.2    | 7.2    | 1.6   | 1.6   | .80   | .70   | .20   | .20   | .20  | 0    |       |
| 29    |      | .80    | 122    | 1.6   | ----- | .80   | .70   | .20   | .20   | .20  | 0    |       |
| 30    |      | .80    | 80     | 11    | ----- | .80   | .70   | .20   | .20   | .20  | 0    |       |
| 31    |      | -----  | 39     | 6.4   | ----- | .80   | ----- | .20   | ----- | .20  | 0    | ----- |
| Total | 0    | 521.60 | 568.80 | 225.9 | 137.5 | 28.90 | 23.30 | 14.70 | 6.00  | 6.20 | 1.10 | 0     |
| Mean  | 0    | 17.4   | 18.3   | 7.29  | 4.91  | 0.93  | 0.78  | 0.47  | 0.20  | 0.20 | 0.04 | 0     |
| Ac-ft | 0    | 1,030  | 1,130  | 448   | 273   | 57    | 46    | 29    | 12    | 12   | 2.2  | 0     |

Calendar year 1965 Max 305 Min 0 Mean 3.28 Ac-ft 2,380

Water year 1965-66 Max 305 Min 0 Mean 4.20 Ac-ft 3,040

Peak discharge (base, 150 cfs).--Nov. 22 (1730 hrs) 1,310 cfs (5.55 ft); Dec. 29 (1930 hrs) 790 cfs (4.20 ft).



11-0462.5. San Onofre Creek at San Onofre, Calif.

Location.--Lat 33°23'00", long 117°34'22", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.14, T.9 S., R.7 W., on left bank 0.2 mile north of San Onofre, 0.3 mile upstream from U.S. Highway 101, and 0.5 mile upstream from mouth.

Drainage area.--42.2 sq mi.

Records available.--October 1946 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 15 ft (from topographic map).

Average discharge.--20 years, 1.19 cfs (862 acre-ft per year); median of yearly mean discharges, 0.03 cfs (22 acre-ft per year).

Extremes.--Maximum discharge during year, caused by failure of detention basin, 2,410 cfs Dec. 29 (gage height, 9.14 ft), from rating curve extended above 180 cfs on basis of slope-area measurement at gage height 6.92 ft; no flow for most of year.

1946-66: Maximum discharge, 2,600 cfs Apr. 1, 1958 (gage height, 6.90 ft); no flow for most or all of each year.

Remarks.--Records fair. No regulation above station. Pumping above station for irrigation and water supply.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                 |               |
|-----------------|---------------|
| Nov. 22.....182 | Jan. 2.....26 |
| 23.....186      | 3.....23      |
| 24..... 50      | 4.....20      |
| Dec. 10..... 80 | 5.....20      |
| 16..... 12      | 6.....12      |
| 17..... 9.4     | 11..... 1.9   |
| 29.....116      | 31..... 6.7   |
| 30..... 91      | Feb. 6.....19 |
| 31..... 52      | 7.....28      |
| Jan. 1..... 36  | 8.....20      |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 368.50   | 186     | 0       | 12.3 | 731       |
| December.....           | 281.20   | 116     | 0       | 9.07 | 558       |
| January 1966.....       | 145.6    | 36      | 0       | 4.70 | 289       |
| February.....           | 67       | 28      | 0       | 2.39 | 133       |
| Calendar year 1965..... | -        | 186     | 0       | 2.06 | 1,490     |
| Water year 1965-66..... | -        | 186     | 0       | 2.36 | 1,710     |

Peak discharge (base, 150 cfs).--Nov. 22 (2400 hrs) 1,500 cfs (7.83 ft); Dec 29 (2030 hrs) 2,410 cfs (9.14 ft), result of failure of detention dam.

## SAN MATEO CREEK BASIN

11-0463. San Mateo Creek near San Clemente, Calif.

Location.--Lat 33°28'15", long 117°28'20", in SE  $\frac{1}{4}$  sec. 23, T.8 S., R.6 W., on left bank 0.4 mile downstream from mouth of Devil Canyon and 8.6 miles northeast of San Clemente.

Drainage area.--80.8 sq mi.

Records available.--October 1952 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment. Altitude of gage is 405 ft (from topographic map).

Average discharge.--14 years, 6.17 cfs (4,470 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

Extremes.--Maximum discharge during year, 5,070 cfs Nov. 22 (gage height, 10.14 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 21, June 1 to Sept. 30.  
1952-66: Maximum discharge, that of Nov. 22, 1965; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 11    | 84    | 16    | 11    | 4.9   | 1.6   |       |      |      |       |
| 2     |      | 0     | 11    | 76    | 16    | 12    | 4.9   | 1.4   |       |      |      |       |
| 3     |      |       | 10    | 69    | 16    | 11    | 4.9   | 1.4   |       |      |      |       |
| 4     |      | 0     | 8.9   | 60    | 14    | 10    | 4.9   | 1.4   |       |      |      |       |
| 5     |      | 0     | 7.8   | 56    | 14    | 10    | 4.9   | 1.4   |       |      |      |       |
| 6     |      | 0     | 6.6   | 55    | 26    | 9.6   | 4.5   | 1.3   |       |      |      |       |
| 7     |      | 0     | 5.5   | 51    | 32    | 9.6   | 4.5   | 1.3   |       |      |      |       |
| 8     |      | 0     | 5.2   | 48    | 27    | 9.3   | 4.2   | 1.3   |       |      |      |       |
| 9     |      | 0     | 6.4   | 45    | 22    | 8.9   | 4.2   | 1.6   |       |      |      |       |
| 10    |      | 0     | 33    | 43    | 21    | 8.5   | 4.0   | 1.6   |       |      |      |       |
| 11    |      | 0     | 22    | 41    | 20    | 8.5   | 4.0   | 1.6   |       |      |      |       |
| 12    |      | 0     | 24    | 38    | 19    | 8.2   | 3.8   | 1.6   |       |      |      |       |
| 13    |      | 0     | 31    | 35    | 18    | 8.2   | 3.8   | 1.4   |       |      |      |       |
| 14    |      | 0     | 33    | 34    | 18    | 7.8   | 3.4   | 1.2   |       |      |      |       |
| 15    |      | 0     | 44    | 33    | 18    | 7.8   | 3.1   | 1.1   |       |      |      |       |
| 16    |      | 0     | 60    | 31    | 18    | 7.5   | 3.1   | .90   |       |      |      |       |
| 17    |      | 0     | 48    | 30    | 17    | 7.2   | 3.1   | .80   |       |      |      |       |
| 18    |      | 0     | 36    | 28    | 17    | 7.2   | 3.1   | .60   |       |      |      |       |
| 19    |      | 0     | 24    | 27    | 16    | 6.9   | 3.1   | .50   |       |      |      |       |
| 20    |      | 0     | 16    | 27    | 16    | 6.6   | 2.9   | .40   |       |      |      |       |
| 21    |      | 0     | 12    | 25    | 15    | 6.6   | 2.7   | .40   |       |      |      |       |
| 22    |      | 1.180 | 12    | 24    | 14    | 6.6   | 2.6   | .30   |       |      |      |       |
| 23    |      | 690   | 10    | 23    | 14    | 6.1   | 2.4   | .30   |       |      |      |       |
| 24    |      | 83    | 8.5   | 22    | 13    | 6.4   | 2.2   | .20   |       |      |      |       |
| 25    |      | 55    | 8.2   | 22    | 13    | 6.6   | 1.9   | .20   |       |      |      |       |
| 26    |      | 22    | 7.8   | 21    | 13    | 6.6   | 1.9   | .30   |       |      |      |       |
| 27    |      | 14    | 7.2   | 20    | 12    | 6.4   | 1.9   | .40   |       |      |      |       |
| 28    |      | 14    | 6.9   | 20    | 11    | 6.4   | 1.9   | .30   |       |      |      |       |
| 29    |      | 13    | 6.46  | 18    | ----- | 6.1   | 1.8   | .20   |       |      |      |       |
| 30    |      | 12    | 208   | 26    | ----- | 5.8   | 1.8   | .20   |       |      |      |       |
| 31    |      | ----- | 74    | 20    | ----- | 5.5   | ----- | .10   | ----- |      |      |       |
| Total | 0    | 2.083 | 1.444 | 1.152 | 486   | 244.9 | 100.4 | 27.30 | 0     | 0    | 0    | 0     |
| Mean  | 0    | 69.4  | 46.6  | 37.2  | 17.4  | 7.90  | 3.35  | 0.88  | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 4.130 | 2.860 | 2.280 | 964   | 486   | 199   | 54    | 0     | 0    | 0    | 0     |
| (†)   | 0    | 9.0   | 3.2   | 0.8   | 1.6   | 0.1   | 0     | 0     | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 1.180 Min 0 Mean 11.2 Ac-ft 8,090 † 18.7

Water year 1965-66 Max 1.180 Min 0 Mean 15.2 Ac-ft 10,980 † 14.7

Peak discharge (base, 200 cfs).--Nov. 22 (2230 hrs) 5,070 cfs (10.14 ft); Dec. 29 (2100 hrs) 3,460 cfs (9.24 ft).

† Precipitation, in inches.

11-0463.5. Cristianitos Creek near San Clemente, Calif.

Location.--Lat 33°26'57", long 117°34'13", in SW¼NW¼ sec.25, T.8 S., R.7 W., on right bank 900 ft downstream from Talenga Canyon, 2.3 miles upstream from mouth, and 2.8 miles northeast of San Clemente.

Drainage area.--29.0 sq mi.

Records available.--October 1950 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 165 ft (from topographic map). Prior to Sept. 19, 1952, at datum 3.92 ft higher.

Average discharge.--16 years, 1.43 cfs (1,040 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 1,060 cfs Nov. 22 (gage height, 7.50 ft), from rating curve extended as explained below; no flow for much of year.

1950-66: Maximum discharge, 1,800 cfs Jan. 16, 1952 (gage height, 8.86 ft, present datum), from rating curve extended above 360 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan. | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|-------|------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0      | 0     | 14   | 3.8   | 2.5   | 0.60  | 0.10 | 0.10  |      |      |       |
| 2     |      | 0      | 0     | 8.0  | 3.2   | 2.1   | .50   | .10  | 0     |      |      |       |
| 3     |      | 0      | 0     | 4.3  | 3.0   | 1.7   | .40   | .10  | 0     |      |      |       |
| 4     |      | 0      | 0     | 2.8  | 2.8   | 1.9   | .40   | .20  | 0     |      |      |       |
| 5     |      | 0      | 0     | 1.9  | 2.8   | 1.9   | .30   | .10  | 0     |      |      |       |
| 6     |      | 0      | 0     | 1.6  | 2.3   | 1.7   | .30   | .10  | 0     |      |      |       |
| 7     |      | 0      | 0     | 1.2  | 1.2   | 1.6   | .20   | .10  | 0     |      |      |       |
| 8     |      | 0      | 0     | 1.0  | 5.3   | 1.6   | .20   | .20  | 0     |      |      |       |
| 9     |      | 0      | 0     | 1.0  | 3.8   | 1.7   | .20   | .20  | 0     |      |      |       |
| 10    |      | 0      | 9.9   | 1.0  | 3.8   | 1.7   | .20   | .20  | 0     |      |      |       |
| 11    |      | 0      | .70   | 1.1  | 3.0   | 1.7   | .10   | .20  | 0     |      |      |       |
| 12    |      | 0      | .30   | 1.1  | 2.8   | 1.6   | .10   | .20  | 0     |      |      |       |
| 13    |      | 0      | .70   | 1.1  | 2.5   | 1.6   | 0     | .10  | 0     |      |      |       |
| 14    |      | 0      | .30   | 1.2  | 2.5   | 1.4   | 0     | .20  | 0     |      |      |       |
| 15    |      | 0      | .20   | 1.4  | 2.5   | 1.1   | 0     | .10  | 0     |      |      |       |
| 16    |      | 0      | 5.7   | 1.4  | 2.8   | 1.1   | 0     | .10  | 0     |      |      |       |
| 17    |      | .10    | 1.4   | 1.4  | 2.8   | 1.2   | 0     | .10  | 0     |      |      |       |
| 18    |      | 0      | .80   | 1.4  | 2.8   | 1.2   | 0     | .10  | 0     |      |      |       |
| 19    |      | 0      | .50   | 1.7  | 2.8   | 1.1   | 0     | .10  | 0     |      |      |       |
| 20    |      | 0      | .30   | 2.3  | 2.8   | 1.0   | 0     | .10  | 0     |      |      |       |
| 21    |      | 0      | .30   | 1.7  | 3.0   | .80   | 0     | .10  | 0     |      |      |       |
| 22    |      | 216    | .30   | 2.3  | 3.0   | .80   | 0     | .10  | 0     |      |      |       |
| 23    |      | 103    | .20   | 1.9  | 3.0   | .80   | 0     | .10  | 0     |      |      |       |
| 24    |      | 21     | .10   | 1.9  | 3.0   | .80   | 0     | .20  | 0     |      |      |       |
| 25    |      | 12     | .10   | 1.9  | 2.8   | .70   | 0     | .20  | 0     |      |      |       |
| 26    |      | .50    | .10   | 2.5  | 2.8   | .70   | 0     | .20  | 0     |      |      |       |
| 27    |      | 0      | .10   | 2.5  | 2.5   | .70   | 0     | .30  | 0     |      |      |       |
| 28    |      | 0      | .10   | 1.7  | 2.5   | .70   | 0     | .20  | 0     |      |      |       |
| 29    |      | 0      | 4.1   | 1.9  | ----- | .80   | 0     | .20  | 0     |      |      |       |
| 30    |      | 0      | 8.4   | 1.6  | ----- | .80   | 0     | .10  | 0     |      |      |       |
| 31    |      | -----  | 1.4   | 4.9  | ----- | .70   | ----- | .10  | ----- |      |      | ----- |
| Total | 0    | 352.60 | 72.90 | 90.1 | 113.4 | 39.70 | 3.50  | 4.50 | 0.10  | 0    | 0    | 0     |
| Mean  | 0    | 11.8   | 2.35  | 2.91 | 4.05  | 1.28  | 0.12  | 0.15 | 0.003 | 0    | 0    | 0     |
| Ac-ft | 0    | 699    | 145   | 179  | 225   | 79    | 6.9   | 8.9  | 0.2   | 0    | 0    | 0     |

Calendar year 1965 Max 216 Min 0 Mean 1.24 Ac-ft 897

Water year 1965-66 Max 216 Min 0 Mean 1.85 Ac-ft 1,340

Peak discharge (base, 100 cfs).--Nov. 22 (2300 hrs) 1,060 cfs (7.50 ft); Dec. 29 (2130 hrs) 450 cfs (6.20 ft).

11-0463.7. San Mateo Creek at San Onofre, Calif.

Location--Lat 33°23'46", long 117°35'21", in NW¼NW¼ sec. 14, T.9 S., R.7 W., on right bank 0.3 mile upstream from U.S. Highway 101, 0.8 mile upstream from mouth, 1.3 miles northwest of San Onofre, and 2.25 miles downstream from Cristianitos Creek.

Drainage area--132 sq mi.

Records available--October 1946 to September 1966.

Gage---Graphic water-stage recorder. Altitude of gage is 20 ft (from topographic map).

Average discharge--20 years, 4.46 cfs (3,230 acre-ft per year); median of yearly mean discharges, 0.02 cfs (14 acre-ft per year).

Extremes--Maximum discharge during year, about 5,500 cfs Nov. 22 (gage height, 8.13 ft), result of failure of detention dam; no flow for most of year.

1946-66: Maximum discharge, that of Nov. 22, 1965; no flow for all or several months in each year.

Remarks--Records fair except those for periods of no gage-height record, which are poor. Minor flows regulated by percolation basins. No diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.   | Jan.   | Feb.   | Mar.  | Apr.  | May | June | July | Aug. | Sept. |
|-------|------|---------|--------|--------|--------|-------|-------|-----|------|------|------|-------|
| 1     |      | 0       | 0      | 90     | 4.8    | 3.5   | 0.30  |     |      |      |      |       |
| 2     |      | 0       | 0      | 80     | 2.4    | 3.7   | .40   |     |      |      |      |       |
| 3     |      | 0       | 0      | 70     | .90    | 3.5   | .40   |     |      |      |      |       |
| 4     |      | 0       | 0      | 60     | .40    | 3.3   | .30   |     |      |      |      |       |
| 5     |      | 0       | 0      | 50     | .30    | 3.1   | .30   |     |      |      |      |       |
| 6     |      | 0       | 0      | 45     | 14     | 2.9   | .20   |     |      |      |      |       |
| 7     |      | 0       | 0      | 40     | 38     | 2.7   | .20   |     |      |      |      |       |
| 8     |      | 0       | 0      | 33     | 14     | 2.4   | .20   |     |      |      |      |       |
| 9     |      | 0       | 0      | 30     | 7.6    | 2.2   | .20   |     |      |      |      |       |
| 10    |      | 0       | 13     | 27     | 11     | 2.2   | .20   |     |      |      |      |       |
| 11    |      | 0       | 4.2    | 26     | 11     | 2.0   | .20   |     |      |      |      |       |
| 12    |      | 0       | .80    | 24     | 9.4    | 1.8   | .30   |     |      |      |      |       |
| 13    |      | 0       | .50    | 20     | 7.6    | 1.6   | .10   |     |      |      |      |       |
| 14    |      | 0       | .50    | 17     | 3.6    | 1.6   | .10   |     |      |      |      |       |
| 15    |      | 0       | 5.3    | 14     | .50    | 1.5   | .10   |     |      |      |      |       |
| 16    |      | 0       | 31     | 11     | .50    | 1.4   | .10   |     |      |      |      |       |
| 17    |      | 0       | 43     | 8.0    | .50    | .90   | .10   |     |      |      |      |       |
| 18    |      | 0       | 20     | 5.0    | .50    | .80   | .10   |     |      |      |      |       |
| 19    |      | 0       | 13     | 2.0    | 1.3    | .70   | .10   |     |      |      |      |       |
| 20    |      | 0       | 11     | 2.0    | 1.4    | .60   | .10   |     |      |      |      |       |
| 21    |      | 0       | 9.4    | 1.0    | 2.7    | .60   | .10   |     |      |      |      |       |
| 22    |      | 268     | 8.7    | 1.0    | 2.7    | .50   | .10   |     |      |      |      |       |
| 23    |      | 911     | 7.9    | .50    | 2.7    | .60   | .10   |     |      |      |      |       |
| 24    |      | 59      | 6.1    | .50    | 3.3    | .50   | 0     |     |      |      |      |       |
| 25    |      | 65      | 4.5    | .40    | 3.3    | .50   | 0     |     |      |      |      |       |
| 26    |      | 23      | 3.3    | .40    | 3.3    | .40   | 0     |     |      |      |      |       |
| 27    |      | 3.0     | 1.9    | .40    | 3.3    | .40   | 0     |     |      |      |      |       |
| 28    |      | .30     | 1.3    | .30    | 3.3    | .30   | .10   |     |      |      |      |       |
| 29    |      | 0       | 290    | .30    | -----  | .40   | .10   |     |      |      |      |       |
| 30    |      | 0       | 373    | 10     | -----  | .30   | 0     |     |      |      |      |       |
| 31    |      | -----   | 100    | 10     | -----  | .20   | ----- |     |      |      |      |       |
| Total | 0    | 1329.30 | 948.40 | 678.80 | 154.30 | 47.10 | 4.50  | 0   | 0    | 0    | 0    | 0     |
| Mean  | 0    | 44.3    | 30.6   | 21.9   | 5.51   | 1.52  | 0.15  | 0   | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 2640    | 1880   | 1350   | 306    | 93    | 8.9   | 0   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 911 Min 0 Mean 6.24 Ac-ft 4,520

Water year 1965-66 Max 911 Min 0 Mean 8.66 Ac-ft 6,270

Peak discharge (base, 150 cfs)--Nov. 22 (2300 hrs) about 5,500 cfs (8.13 ft); Dec. 29 (2030 hrs) 3,840 cfs (6.22 ft), both peaks result of failure of detention dam.

Note---No gage-height record Dec. 31 to Jan. 6, Jan. 13-29.

11-0465. San Juan Creek near San Juan Capistrano, Calif.

Location.--Lat 33°31'08", long 117°37'27", in NE 1/4 SE 1/4 sec. 32, T.7 S., R.7 W., on right pier of bridge on State Highway 74, 2.5 miles northeast of San Juan Capistrano.

Drainage area.--106 sq mi.

Records available.--October 1928 to September 1966. Combined records of creek and diversion, October 1954 to September 1966.

Gage.--Digital water-stage recorder on creek; digital water-stage recorder and Parshall flume on diversion. Altitude of gage is 150 ft (from topographic map). Prior to Feb. 28, 1934, at site 2 1/2 miles downstream at different datum. Feb. 28, 1934, to Dec. 10, 1938, at present site at different datum. Dec. 11, 1938, to Dec. 17, 1941, at present site at datum 2.00 ft higher. Prior to Mar. 31, 1966, graphic water-stage recorders used.

Average discharge (creek only).--38 years, 11.3 cfs (8,180 acre-ft per year); median of yearly mean discharges, 2.5 cfs (1,800 acre-ft per year).

(combined).--12 years, 6.93 cfs (5,020 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

Extremes.--(creek only).--Maximum discharge during year, 4,080 cfs Nov. 22 (gage height, 6.60 ft), from rating curve extended above 450 cfs on basis of slope-area measurements at gage heights 4.13 and 6.50 ft and contracted-opening of maximum flow; no flow for many days.

1929-66: Maximum discharge, 13,000 cfs Mar. 2, 1938, slope-area measurement, by Corps of Engineers; no flow at times in most years.

(combined).--Maximum discharge during year; same as that for creek; no flow for many days.

1954-66: Maximum discharge, 3,920 cfs Mar. 16, 1958; no flow for many days in 1961-66.

Remarks.--Records poor prior to Mar. 10 and good thereafter. No regulation above station. See following page for records of combined discharge of creek and Capistrano Water Co.'s canal, which diverts 500 ft upstream from station.

Cooperation.--Twenty-three discharge measurements furnished by Orange County Flood Control District.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG. | SEPT. |
|-------|------|---------|---------|-------|-------|-------|-------|------|-------|-------|------|-------|
| 1     |      | 0       | 3.2     | 90    | 20    | 14    | 5.1   | 2.1  | 2.2   | 0.90  | 0.30 | 0     |
| 2     |      | 0       | 3.0     | 50    | 40    | 18    | 4.9   | 2.2  | 2.4   | 1.0   | .20  | 0     |
| 3     |      | 0       | 2.8     | 45    | 30    | 13    | 4.6   | 2.1  | 2.2   | 1.0   | 0    | 0     |
| 4     |      | 0       | 2.6     | 42    | 25    | 12    | 4.5   | 2.1  | 2.4   | 1.0   | 0    | 0     |
| 5     |      | 0       | 2.4     | 40    | 20    | 11    | 4.0   | 2.0  | 2.6   | 1.0   | .10  | 0     |
| 6     |      | 0       | 2.2     | 38    | 40    | 10    | 3.8   | 1.9  | 1.8   | .90   | .10  | 0     |
| 7     |      | 0       | 2.0     | 35    | 35    | 10    | 3.8   | 1.5  | 1.7   | .90   | .10  | 0     |
| 8     |      | 0       | 1.8     | 32    | 30    | 10    | 3.8   | 1.4  | 1.7   | .80   | .10  | 0     |
| 9     |      | 0       | 2.0     | 28    | 25    | 10    | 3.7   | 1.4  | 1.6   | .80   | .20  | 0     |
| 10    |      | 0       | 8.0     | 22    | 20    | 10    | 3.6   | 1.6  | 1.4   | .80   | .20  | 0     |
| 11    |      | 0       | 4.8     | 19    | 18    | 9.8   | 4.0   | 1.6  | 1.6   | .70   | .30  | 0     |
| 12    |      | 0       | 4.1     | 17    | 18    | 9.8   | 3.9   | 1.7  | 1.2   | .70   | .30  | 0     |
| 13    |      | 0       | 6.0     | 15    | 17    | 9.8   | 3.7   | 1.8  | 1.3   | .60   | .30  | 0     |
| 14    |      | 0       | 5.2     | 14    | 17    | 8.6   | 3.4   | 1.7  | 1.2   | .50   | .30  | 0     |
| 15    |      | 0       | 4.8     | 13    | 17    | 8.1   | 2.9   | 1.8  | 1.2   | .40   | .10  | 0     |
| 16    |      | 0       | 9.4     | 12    | 16    | 7.6   | 2.7   | 1.8  | 1.1   | .30   | 0    | 0     |
| 17    |      | 0       | 5.6     | 11    | 16    | 8.4   | 2.7   | 1.9  | 1.1   | .50   | 0    | 0     |
| 18    |      | 0       | 5.6     | 10    | 16    | 8.1   | 2.6   | 1.4  | 1.2   | .60   | 0    | 0     |
| 19    |      | 0       | 5.6     | 10    | 15    | 7.2   | 2.3   | 1.1  | 1.2   | .60   | 0    | 0     |
| 20    |      | 0       | 6.0     | 9.5   | 15    | 7.7   | 2.8   | 1.2  | 1.1   | .50   | 0    | 0     |
| 21    |      | 0       | 4.8     | 9.0   | 15    | 7.7   | 2.8   | 1.3  | 1.1   | .30   | 0    | 0     |
| 22    |      | 251     | 5.6     | 8.5   | 15    | 7.7   | 3.0   | 1.6  | 1.0   | .40   | 0    | 0     |
| 23    |      | 927     | 4.4     | 8.0   | 14    | 7.2   | 3.1   | 1.8  | 1.0   | .40   | 0    | 0     |
| 24    |      | 104     | 4.4     | 7.5   | 14    | 6.8   | 2.7   | 1.7  | 1.0   | .30   | 0    | 0     |
| 25    |      | 97      | 4.1     | 7.0   | 14    | 7.2   | 2.9   | 1.6  | .90   | .20   | 0    | .10   |
| 26    |      | 36      | 4.1     | 7.0   | 14    | 7.2   | 3.0   | 1.9  | 1.0   | .20   | 0    | .10   |
| 27    |      | 14      | 4.1     | 7.0   | 14    | 7.2   | 2.8   | 1.8  | .90   | .20   | 0    | .20   |
| 28    |      | 6.4     | 3.8     | 6.7   | 14    | 7.2   | 2.4   | 1.7  | .80   | .20   | 0    | .10   |
| 29    |      | 4.8     | 205     | 50    | ----- | 6.8   | 1.9   | 2.2  | .80   | .30   | 0    | .10   |
| 30    |      | 4.4     | 617     | 30    | ----- | 5.9   | 1.9   | 2.1  | .80   | .30   | 0    | .10   |
| 31    |      | -----   | 162     | 20    | ----- | 5.6   | ----- | 2.0  | ----- | .30   | 0    | ----- |
| TOTAL | 0    | 1,514.6 | 1,106.4 | 713.2 | 564   | 279.6 | 99.3  | 54.0 | 41.50 | 17.60 | 2.60 | .70   |
| MEAN  | 0    | 50.5    | 35.7    | 23.0  | 20.1  | 9.02  | 3.31  | 1.74 | 1.38  | .57   | .08  | .02   |
| AC-FT | 0    | 3,000   | 2,190   | 1,410 | 1,120 | 555   | 197   | 107  | 82    | 35    | 5.2  | 1.4   |

CALENDAR YEAR 1965 MAX 997 MIN 0 MEAN 7.36 AC-FT 5,330  
 WATER YEAR 1965-66 MAX 997 MIN 0 MEAN 12.0 AC-FT 8,700

Peak discharge (base, 200 cfs).--Nov. 22 (2330 hrs) 4,080 cfs (6.60 ft); Dec. 29 (2230 hrs) 1,950 cfs (4.20 ft).

## SAN JUAN CREEK BASIN

11-0465, San Juan Creek near San Juan Capistrano, Calif.--Continued.

Combined discharge, in cubic feet per second, of San Juan Creek and Capistrano Water Co.'s canal near San Juan Capistrano, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|------|-------|-------|------|-------|
| 1     | 0    | 0      | 3.2    | 20    | 20    | 14    | 5.6   | 3.6  | 3.2   | 1.8   | 0.30 | 0     |
| 2     | .10  | 0      | 3.0    | 50    | 40    | 18    | 5.5   | 3.3  | 3.3   | 2.2   | .20  | 0     |
| 3     | 0    | 0      | 2.8    | 45    | 30    | 13    | 5.2   | 3.1  | 3.0   | 2.0   | 0    | 0     |
| 4     | 0    | 0      | 2.6    | 42    | 25    | 12    | 5.1   | 3.3  | 3.1   | 1.9   | 0    | 0     |
| 5     | .10  | 0      | 2.4    | 40    | 20    | 11    | 4.7   | 3.0  | 3.5   | 2.2   | .20  | 0     |
| 6     | .20  | 0      | 2.2    | 38    | 40    | 10    | 4.6   | 2.5  | 3.0   | 1.1   | .10  | 0     |
| 7     | 0    | 0      | 2.0    | 35    | 35    | 10    | 4.7   | 2.3  | 2.9   | 1.0   | .10  | 0     |
| 8     | 0    | 0      | 1.8    | 32    | 30    | 10    | 4.7   | 2.4  | 2.9   | .80   | .10  | 0     |
| 9     | 0    | 0      | 2.0    | 28    | 25    | 10    | 4.6   | 2.8  | 3.0   | 1.2   | .20  | 0     |
| 10    | 0    | 0      | 8.0    | 22    | 20    | 10    | 4.6   | 2.8  | 2.8   | .90   | .20  | 0     |
| 11    | 0    | 0      | 4.8    | 19    | 18    | 9.8   | 4.6   | 3.0  | 2.7   | .80   | .30  | 0     |
| 12    | 0    | 0      | 4.1    | 17    | 18    | 9.8   | 4.8   | 3.1  | 2.9   | .70   | .30  | 0     |
| 13    | 0    | 0      | 6.0    | 15    | 17    | 9.8   | 4.6   | 2.6  | 2.7   | .60   | .40  | 0     |
| 14    | 0    | 0      | 5.2    | 14    | 17    | 9.0   | 4.2   | 2.6  | 2.2   | .50   | .30  | .20   |
| 15    | 0    | 0      | 4.8    | 13    | 17    | 8.7   | 4.1   | 2.6  | 2.0   | .40   | .10  | .20   |
| 16    | 0    | 0      | 9.4    | 12    | 16    | 8.1   | 3.3   | 2.5  | 1.6   | .30   | .70  | 0     |
| 17    | 0    | 0      | 5.6    | 11    | 16    | 8.9   | 3.6   | 2.7  | 1.8   | .50   | 0    | 0     |
| 18    | 0    | 0      | 5.6    | 10    | 16    | 8.6   | 3.6   | 2.2  | 2.2   | .60   | 0    | 0     |
| 19    | 0    | 0      | 5.6    | 10    | 15    | 7.7   | 3.6   | 2.0  | 2.8   | .60   | 0    | 0     |
| 20    | 0    | 0      | 6.0    | 9.5   | 15    | 8.2   | 3.0   | 2.2  | 2.2   | .50   | 0    | 0     |
| 21    | 0    | 0      | 4.8    | 9.0   | 15    | 8.2   | 3.3   | 2.3  | 2.3   | .30   | 0    | 0     |
| 22    | 0    | 251    | 5.6    | 8.5   | 15    | 8.2   | 3.6   | 2.4  | 1.8   | .40   | 0    | 0     |
| 23    | 0    | 997    | 4.4    | 8.0   | 14    | 8.0   | 3.7   | 2.6  | 1.4   | .40   | 0    | 0     |
| 24    | 0    | 104    | 4.4    | 7.5   | 14    | 7.9   | 3.6   | 2.5  | 1.5   | .30   | 0    | 0     |
| 25    | 0    | 97     | 4.1    | 7.0   | 14    | 7.8   | 3.7   | 2.5  | 1.9   | .20   | 0    | .10   |
| 26    | 0    | 36     | 4.1    | 7.0   | 14    | 7.7   | 3.5   | 2.7  | 2.5   | .20   | 0    | .10   |
| 27    | 0    | 14     | 4.1    | 7.0   | 14    | 7.6   | 3.2   | 2.7  | 2.3   | .20   | 0    | .20   |
| 28    | 0    | 6.4    | 3.8    | 6.7   | 14    | 7.6   | 3.2   | 2.8  | 1.7   | .20   | 0    | .10   |
| 29    | 0    | 4.8    | 205    | 50    | ----- | 7.1   | 3.1   | 3.2  | 1.3   | .30   | 0    | .10   |
| 30    | 0    | 4.4    | 617    | 30    | ----- | 6.2   | 3.1   | 4.2  | 1.3   | .30   | 0    | .10   |
| 31    | 0    | -----  | 162    | 20    | ----- | 6.0   | ----- | 3.7  | ----- | .30   | 0    | ----- |
| Total | 0.40 | 1514.6 | 1106.4 | 713.2 | 564   | 288.9 | 122.7 | 86.2 | 71.8  | 23.70 | 3.50 | 1.10  |
| Mean  | 0.01 | 50.5   | 35.7   | 23.0  | 20.1  | 9.32  | 4.09  | 2.78 | 2.39  | 0.76  | 0.11 | 0.04  |
| Ac-ft | 0.8  | 3.000  | 2.190  | 1.410 | 1.120 | 57.3  | 24.3  | 17.1 | 14.2  | 4.7   | 6.9  | 2.2   |

Calendar year 1965 Max 997 Min 0 Mean 7.50 Ac-ft 5.430  
 Water year 1965-66 Max 997 Min 0 Mean 12.3 Ac-ft 8.920

Peak discharge (base, 200 cfs).--Same as those for creek.

## SAN JUAN CREEK BASIN

141

11-0470. Arroyo Trabuco near San Juan Capistrano, Calif.

Location.--Lat 33°31'36", long 117°40'08", in NE 1/4 NW 1/4 sec. 36, T. 7 S., R. 8 W., on downstream side of right pier of county road bridge (formerly U.S. Highway 101), 1.8 miles north of San Juan Capistrano.

Drainage area.--35.7 sq mi.

Records available.--October 1930 to September 1966. Prior to October 1956, published as Trabuco Creek near San Juan Capistrano.

Gage.--Graphic water-stage recorder. Altitude of gage is 180 ft (from topographic map).

Average discharge (combined).--36 years, 4.37 cfs (3,160 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

Extremes.--Maximum discharge during year, 1,000 cfs Nov. 23 (gage height, 3.50 ft); no flow for many days.

1930-66: Maximum discharge, 9,240 cfs Feb. 6, 1937; no flow at times in each year.

Remarks.--No regulation above station. Diversion to spreading grounds by Orange County Flood Control District, at site 0.8 mile upstream, began in February 1966.

Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr. | May  | June | July | Aug.  | Sept. |
|-------|------|--------|--------|-------|-------|------|------|------|------|------|-------|-------|
| 1     | 0    | 1.1    | 0      | 78    | 9.2   |      |      | 0    |      | 0    | 0     | 0     |
| 2     | 0    | .10    | 0      | 57    | 9.2   |      |      | 0    |      | 0    | 0     | 0     |
| 3     | 0    | .50    | 0      | 39    | 8.8   |      |      | 0    |      | 0    | 0     | 0     |
| 4     | 0    | 0      | 0      | 28    | 8.4   |      |      | 0    |      | 0    | 0     | 0     |
| 5     | 0    | 0      | 0      | 21    | 7.6   |      |      | 0    |      | 0    | 0     | 0     |
| 6     | .10  | 0      | 0      | 18    | 20    |      |      | 0    |      | 0    | 0     | 0     |
| 7     | .60  | 0      | 0      | 15    | 19    |      |      | 0    |      | .20  | 0     | 0     |
| 8     | .50  | 0      | 0      | 13    | 14    |      |      | 0    |      | 1.1  | 0     | 0     |
| 9     | 1.4  | 0      | .40    | 13    | 13    |      |      | 0    |      | .90  | 0     | 1.8   |
| 10    | .70  | 0      | 3.4    | 13    | 13    |      |      | 0    |      | 2.1  | 0     | 0     |
| 11    | 0    | .10    | 0      | 11    | 12    |      |      | 0    |      | 2.9  | .50   | 0     |
| 12    | 0    | .10    | .20    | 10    | 9.2   |      |      | 0    |      | 2.4  | 1.4   | 0     |
| 13    | 0    | 0      | .50    | 8.4   | 9.2   |      |      | 0    |      | 0    | 3.4   | 0     |
| 14    | 0    | 1.6    | 1.2    | 7.6   | 9.2   |      |      | 0    |      | 0    | 3.7   | 0     |
| 15    | 0    | 1.5    | .20    | 6.2   | 9.2   |      |      | 0    |      | 0    | 5.3   | 0     |
| 16    | 0    | 5.5    | 8.4    | 5.6   | 9.2   |      |      | 0    |      | 0    | 6.2   | 0     |
| 17    | 0    | .10    | 5.3    | 6.2   | 10    |      |      | 0    |      | 0    | 6.9   | 3.8   |
| 18    | 0    | .10    | 3.4    | 6.2   | 8.4   |      |      | 0    |      | 0    | 2.7   | 6.2   |
| 19    | 0    | 0      | 2.7    | 5.0   | 8.4   |      |      | 0    |      | 0    | 0     | 5.4   |
| 20    | 0    | 0      | 2.9    | 5.0   | 7.6   |      |      | 0    |      | 0    | 0     | 6.2   |
| 21    | 0    | 0      | 2.5    | 4.4   | 3.3   |      |      | 0    |      | 0    | 0     | 6.5   |
| 22    | 0    | 13     | 1.7    | 3.8   | 0     |      |      | 0    |      | 0    | 0     | 2.7   |
| 23    | 0    | 245    | 1.4    | 3.8   | 0     |      |      | .20  |      | 0    | 0     | 0     |
| 24    | 0    | 16     | .20    | 4.7   | 0     |      |      | 1.0  |      | 0    | 0     | 0     |
| 25    | 0    | 18     | 0      | 5.0   | 0     |      |      | .80  |      | 0    | 0     | 0     |
| 26    | 0    | 4.1    | 0      | 5.0   | 0     |      |      | .10  |      | 0    | 0     | 0     |
| 27    | 0    | 0      | .20    | 5.6   | 0     |      |      | 0    |      | 0    | 0     | 0     |
| 28    | 0    | 0      | .40    | 5.6   | 0     |      |      | 0    |      | 0    | 0     | 0     |
| 29    | 0    | 0      | 7.9    | 6.2   | ----- |      |      | 0    |      | 0    | 0     | 0     |
| 30    | 0    | 0      | 206    | 9.4   | ----- |      |      | 0    |      | 0    | 0     | 0     |
| 31    | 1.2  | -----  | 113    | 9.2   | ----- |      |      | 0    |      | 0    | 0     | ----- |
| Total | 4.50 | 306.80 | 433.00 | 428.9 | 217.9 | 0    | 0    | 2.10 | 0    | 9.60 | 30.10 | 32.6  |
| Mean  | 0.15 | 10.2   | 14.0   | 13.8  | 7.78  | 0    | 0    | 0.07 | 0    | 0.31 | 0.97  | 1.09  |
| Ac-ft | 8.9  | 609    | 859    | 851   | 432   | 0    | 0    | 4.2  | 0    | 19   | 60    | 65    |
| (†)   | 8.9  | 609    | 859    | 851   | 551   | 324  | 21   | 4.2  | 0    | 19   | 60    | 65    |

Calendar year 1965 Max 245 Min 0 Mean 2.07 Ac-ft 1,500

Water year 1965-66 Max 245 Min 0 Mean 4.02 Ac-ft 2,910

† Combined discharge, in acre-ft, of creek and diversion.

## ALISO CREEK BASIN

11-0475. Aliso Creek at El Toro, Calif.

Location.--Lat 33°37'34", long 117°41'03", in Canada de los Alisos Grant, near center of channel on upstream side of Second Street Bridge at El Toro, Orange County.

Drainage area.--7.97 sq mi.

Records available.--October 1930 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 440 ft (from topographic map). Prior to July 1962, at different datum.

Extremes.--Maximum discharge during year, 277 cfs Dec. 29 (gage height, 4.51 ft); no flow for many days.  
1930-66: Maximum discharge, 1,950 cfs Feb. 6, 1937; no flow for most of each year.

Remarks.--No regulation or diversion above station; some pumping from wells along stream. At times since 1964, Metropolitan Water District water has been released to creek.

Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.  | Nov.  | Dec.  | Jan. | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug.  | Sept. |
|--------------------|-------|-------|-------|------|-------|-------|-------|------|-------|------|-------|-------|
| 1                  | 0.10  | 0     | 0.40  | 0.20 | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 2                  | 0     | .10   | .40   | .10  | 0     | 0     | 0     | .50  |       |      | 0     | 0     |
| 3                  | .20   | .10   | .20   | .10  | 0     | 0     | 0     | 1.2  |       |      | 0     | 0     |
| 4                  | .10   | 0     | .20   | .10  | 0     | 0     | 0     | 1.0  |       |      | 0     | 0     |
| 5                  | .10   | 0     | .20   | .10  | .20   | 0     | 0     | 1.0  |       |      | 0     | 1.0   |
| 6                  | .20   | 0     | .20   | .10  | .80   | 0     | 0     | 0    |       |      | 0     | 0     |
| 7                  | .20   | 0     | .10   | .10  | .10   | 0     | 0     | 0    |       |      | 0     | 0     |
| 8                  | .20   | 0     | .10   | 0    | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 9                  | .70   | 0     | .10   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 10                 | 1.3   | .20   | 1.6   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 11                 | 1.8   | .10   | .10   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 12                 | 2.8   | .10   | .10   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 13                 | 2.6   | 0     | .30   | 0    | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 14                 | 2.2   | .10   | 3.7   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 15                 | 2.1   | .20   | 2.4   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 16                 | 1.6   | 1.4   | 6.5   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 17                 | .40   | .40   | .20   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 18                 | .30   | .40   | .10   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 19                 | .20   | .10   | .10   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 20                 | 0     | .10   | .20   | .10  | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 21                 | 0     | .10   | .20   | .10  | .10   | 0     | 0     | 0    |       |      | 0     | 0     |
| 22                 | 0     | 51    | .30   | .10  | .10   | 0     | 0     | 0    |       |      | 10    | 0     |
| 23                 | .60   | 20    | .20   | .10  | .10   | 0     | 0     | 0    |       |      | 0     | 0     |
| 24                 | 1.2   | 15    | .30   | 0    | .10   | 0     | 0     | 0    |       |      | 0     | 0     |
| 25                 | .90   | 2.1   | .40   | 0    | 0     | .10   | 0     | 0    |       |      | 0     | 0     |
| 26                 | .20   | .90   | .30   | 0    | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 27                 | .10   | .70   | .30   | 0    | 0     | 0     | 0     | 0    |       |      | 0     | 0     |
| 28                 | .20   | .80   | .30   | 0    | 0     | 0     | .10   | 0    |       |      | .10   | 0     |
| 29                 | .10   | .60   | 3.8   | 0    | ----- | 0     | .10   | 0    |       |      | 0     | 0     |
| 30                 | .10   | .50   | 3.8   | .10  | ----- | 0     | .10   | 0    |       |      | 0     | 0     |
| 31                 | .10   | ----- | .30   | 0    | ----- | 0     | ----- | 0    | ----- |      | 0     | ----- |
| Total              | 20.60 | 95.00 | 61.60 | 2.30 | 1.50  | 0.10  | 0.30  | 3.70 | 0     | 0    | 0.20  | 0.10  |
| Mean               | 0.66  | 3.17  | 1.99  | 0.07 | 0.05  | 0.003 | 0.01  | 0.12 | 0     | 0    | 0.006 | 0.003 |
| Ac-ft              | 41    | 188   | 122   | 4.6  | 3.0   | 0.2   | 0.6   | 7.3  | 0     | 0    | 0.4   | 0.2   |
| Calendar year 1965 | Max   | 51    | Min   | 0    | Mean  | 0.70  | Ac-ft | 506  |       |      |       |       |
| Water year 1965-66 | Max   | 51    | Min   | 0    | Mean  | 0.51  | Ac-ft | 368  |       |      |       |       |



11-0485, San Diego Creek near Irvine, Calif.

Location.--Lat 33°40'20", long 117°47'10", in San Joaquin Grant, on left bank 200 ft downstream from Jeffrey Road Bridge and 1.5 miles west of Irvine, Orange County.

Drainage area.--40.3 sq mi.

Records available.--October 1949 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 102.86 ft above mean sea level (levels by Orange County Flood Control District). Prior to Nov. 9, 1965, graphic water-stage recorder.

Average discharge.--17 years, 1.89 cfs (1,370 acre-ft per year); median of yearly mean discharges, 1.0 cfs (720 acre-ft per year).

Extremes.--Maximum discharge during year, 2,550 cfs Dec. 29 (gage height, 6.15 ft, from inside gage), from rating curve extended as explained below; no flow for some days.

1949-66: Maximum discharge, 4,040 cfs Jan. 18, 1952 (gage height, 7.70 ft), from rating curve extended above 1,000 cfs on basis of slope-area measurement of maximum flow; no flow for most of each year.

Remarks.--Records good except those above 300 cfs and those for period of no gage-height record, which are poor. Pumping from wells along stream causes low-flow fluctuation in discharge.

Cooperation.--Thirteen discharge measurements furnished by Orange County Flood Control District.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.  | FEB.  | MAR. | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|-------|--------|--------|-------|-------|------|-------|-------|-------|-------|------|-------|
| 1     | 0.40  | 1.0    | 1.5    | 22    | 0.50  | 0.30 | 0     | 0.40  | 0.10  | 0.20  | 0.10 | 0     |
| 2     | .60   | .60    | 1.5    | 15    | .40   | .40  | 0     | .30   | .30   | .60   | .20  | 0     |
| 3     | .50   | .30    | 1.6    | 9.8   | 0     | .50  | 0     | .20   | .20   | .50   | .20  | 0     |
| 4     | .70   | .60    | 1.7    | 6.0   | 0     | .30  | 0     | .20   | .40   | .50   | .30  | 0     |
| 5     | .70   | .80    | .80    | 2.0   | 0     | .10  | 0     | .20   | .60   | .40   | .40  | 0     |
| 6     | .80   | .80    | .10    | 0     | 49    | 0    | 0     | .40   | .50   | .50   | .60  | .10   |
| 7     | .80   | .60    | 0      | 0     | 7.1   | 0    | 0     | .50   | .10   | .40   | .60  | .10   |
| 8     | .60   | .30    | 0      | 0     | .10   | .10  | 0     | .50   | .30   | .20   | .50  | .10   |
| 9     | .40   | .60    | .10    | 0     | .20   | .40  | 0     | .50   | .60   | .40   | .50  | .10   |
| 10    | .50   | 1.0    | 83     | 0     | 1.6   | 0    | 0     | .70   | .40   | .40   | .20  | .10   |
| 11    | .60   | 1.0    | 2.1    | 0     | 1.9   | .10  | 0     | .60   | .70   | .50   | .20  | 0     |
| 12    | .50   | .90    | 5.4    | 0     | .10   | .30  | 0     | .60   | .60   | .50   | .20  | 0     |
| 13    | .30   | .70    | 13     | 0     | .20   | .20  | 0     | .50   | .40   | .40   | .10  | 0     |
| 14    | .40   | 1.9    | 76     | 0     | .70   | .30  | 0     | .70   | .50   | .80   | .10  | 0     |
| 15    | .60   | 13     | 8.6    | 0     | 1.1   | 0    | 0     | .70   | .40   | .40   | .10  | 0     |
| 16    | .60   | 58     | 87     | 0     | 1.1   | 0    | .10   | .30   | .50   | .40   | 0    | .10   |
| 17    | .60   | 21     | 9.9    | 0     | 0     | 0    | .50   | .30   | .50   | .40   | .10  | .10   |
| 18    | .60   | 2.7    | 3.9    | 0     | 0     | 0    | .40   | .40   | .60   | .30   | .20  | .10   |
| 19    | .70   | .30    | 1.5    | 0     | .40   | 0    | .70   | .80   | .90   | .10   | .10  | .10   |
| 20    | .50   | .10    | .60    | 0     | .60   | 0    | .90   | .90   | .80   | 0     | .10  | .10   |
| 21    | .60   | .10    | .30    | .20   | 0     | 0    | .40   | .60   | .60   | .10   | 0    | 0     |
| 22    | .70   | 331    | .10    | .50   | 0     | .10  | .30   | .30   | .50   | .10   | 0    | 0     |
| 23    | 1.1   | 196    | 0      | .50   | .10   | .30  | .50   | .20   | .20   | .10   | 0    | 0     |
| 24    | .80   | 93     | 0      | .40   | .10   | .20  | 1.0   | .10   | 1.0   | .20   | 0    | 0     |
| 25    | .60   | 46     | 0      | 0     | .30   | 0    | .50   | .10   | 1.1   | .20   | 0    | 0     |
| 26    | .50   | 1.5    | 0      | 0     | .90   | 0    | .20   | .40   | 1.0   | .20   | .10  | .10   |
| 27    | .50   | 0      | 0      | .20   | 0     | 0    | .40   | .40   | .70   | .20   | .10  | .10   |
| 28    | .50   | 0      | 0      | .10   | .10   | 0    | .50   | .20   | .60   | .50   | .10  | .10   |
| 29    | .60   | 0      | 401    | 0     | ----- | 0    | .50   | .30   | .50   | .60   | .10  | .10   |
| 30    | 1.2   | .70    | 106    | 14    | ----- | 0    | .80   | .20   | .50   | .10   | .10  | .10   |
| 31    | 1.0   | -----  | 27     | .10   | ----- | 0    | ----- | .10   | ----- | .10   | .10  | ----- |
| TOTAL | 19.50 | 774.50 | 832.70 | 70.80 | 66.50 | 3.60 | 7.70  | 12.60 | 15.80 | 10.30 | 5.40 | 1.50  |
| MEAN  | .63   | 25.8   | 26.9   | 2.28  | 2.38  | .12  | .26   | .41   | .53   | .33   | .17  | .05   |
| AC-FT | 39    | 1,540  | 1,650  | 140   | 132   | 7.1  | 15    | 25    | 31    | 20    | 11   | 3.0   |

CALENDAR YEAR 1965 MAX 401 MIN 0 MEAN 5.57 AC-FT 4,030  
 WATER YEAR 1965-66 MAX 401 MIN 0 MEAN 4.99 AC-FT 3,610

## Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 1930 | 3.09        | 386       | 12-16 | 1115 | 2.57        | 201       |
| 11-22 | 2115 | 4.88        | 1,440     | 12-29 | 1900 | 6.15        | 2,550     |
| 12-10 | 0745 | 3.12        | 398       | 2-6   | 1115 | 2.44        | 163       |
| 12-14 | 1330 | 3.12        | 398       |       |      |             |           |

Note.--No gage-height record Aug. 23 to Sept. 30.

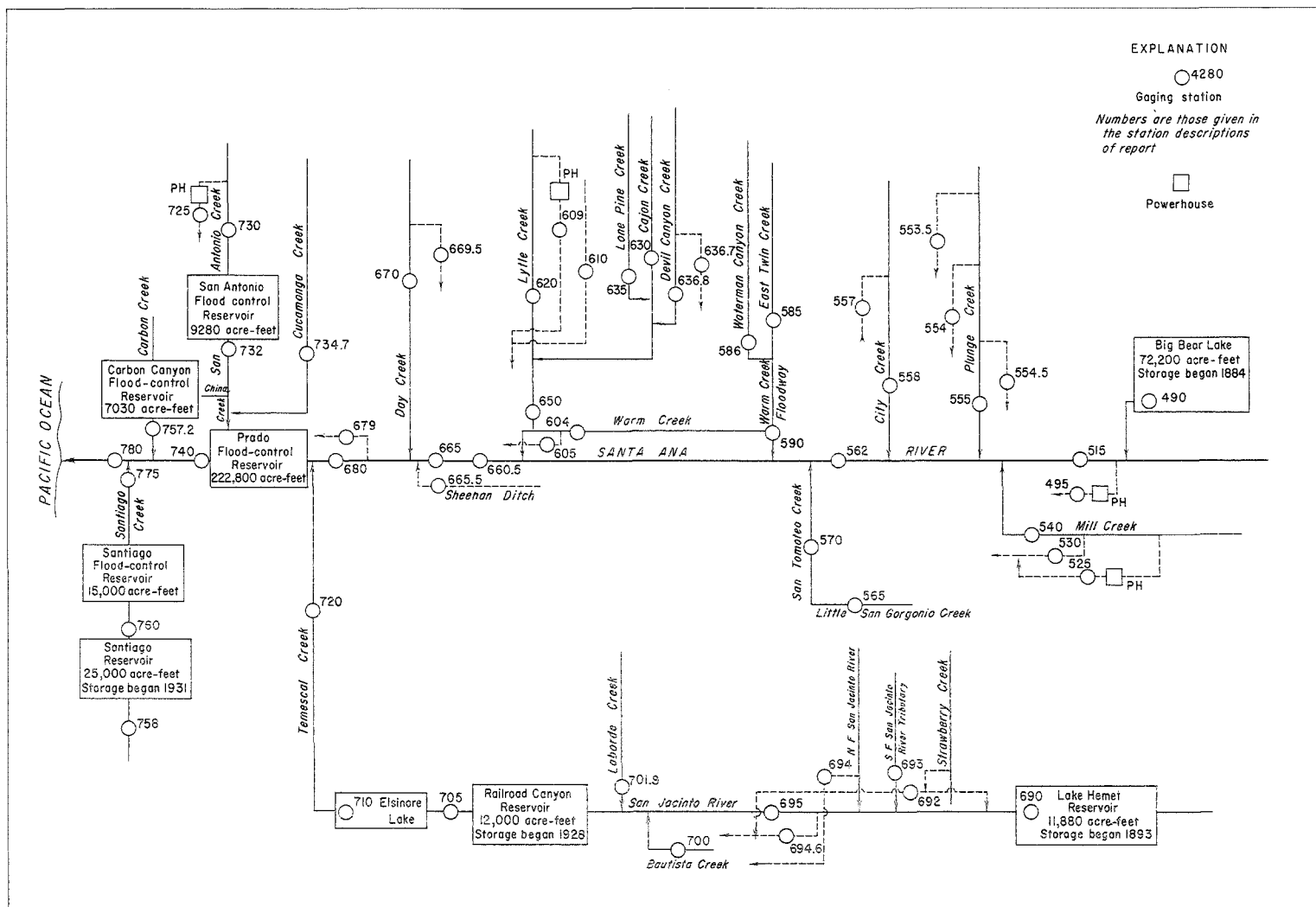


Figure 3-- Schematic diagram showing diversions and storage in Santa Ana River basin.

11-0490. Big Bear Lake near Big Bear Lake, Calif.

Location.--Lat  $34^{\circ}14'20''$ , long  $116^{\circ}58'50''$ , in SW $\frac{1}{4}$  sec.22, T.2 N., R.1 W., at Big Bear Lake Dam on Bear Creek, 4 miles west of town of Big Bear Lake and  $7\frac{1}{2}$  miles upstream from mouth.

Drainage area.--71.5 sq mi.

Records available.--October 1950 to September 1966 in reports of Geological Survey. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

Gage.--Staff gage read once daily. Datum of gage is 6,670.9 ft above mean sea level (levels by Bear Valley Mutual Water Co.). Prior to 1912, staff gage at old dam 200 ft upstream at same datum (spillway at gage height 52.4 ft).

Extremes.--Maximum contents observed during year, 23,948 acre-ft Apr. 30; minimum contents, 6,020 acre-ft Oct. 31.

1884-1966: Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939; lake dry October, November 1898, August to November 1899, October, November 1904.

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, 72,200 acre-ft at elevation 6,743.2 ft (top of dam). Capacity table based on survey made in 1883. No dead storage. Water used for irrigation only. See schematic diagram of Santa Ana River basin.

Cooperation.--Record of contents furnished by Bear Valley Mutual Water Co.

| Month-end contents, water year October 1965 to September 1966 |                         |                                   |
|---|-------------------------|-----------------------------------|
| Month   | Contents<br>(acre-feet) | Change in contents<br>(acre-feet) |
| Sept. 30.....   | 6,402                   | ~                                 |
| Oct. 31.....  | 6,020                   | -382                              |
| Nov. 30.....  | 14,135                  | +8,115                            |
| Dec. 31.....  | 18,286                  | +4,151                            |
| Calendar year 1965.....                                       | ~                       | +15,505                           |
| Jan. 31.....  | 19,583                  | +1,297                            |
| Feb. 28.....  | 20,879                  | +1,296                            |
| Mar. 31.....  | 23,652                  | +2,773                            |
| Apr. 30.....  | 23,948                  | +296                              |
| May 31.....   | 23,504                  | -444                              |
| June 30.....  | 22,470                  | -1,034                            |
| July 31.....  | 21,730                  | -740                              |
| Aug. 31.....  | 20,749                  | -981                              |
| Sept. 30.....   | 19,842                  | -907                              |
| Water year 1965-66.....                                       | ~                       | +13,440                           |

## SANTA ANA RIVER BASIN

11-0515. Santa Ana River near Mentone, Calif.

Location.--Lat 34°06'40", long 117°05'54", in NW 1/4 sec. 4, T.1 S., R.2 W., on left bank near mouth of canyon, 1.8 miles upstream from Mill Creek and 3.5 miles northeast of Mentone.

Drainage area.--209 sq mi, including area tributary to Baldwin Lake at head of Bear Valley.

Records available.--July 1896 to September 1966. Prior to October 1914, observed records not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January, February 1916, published in WSP 1315-B.

Gage.--Graphic water-stage recorder on river; graphic water-stage recorder on powerhouse diversion. Datum of gage is 1,984.28 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1914, staff gages at various sites within 1,000 ft of point 1 1/2 miles upstream at various datums. Oct. 1, 1914, to Jan. 17, 1916, staff gage at site 10 ft upstream at different datum. Jan. 18, 1916, to Sept. 2, 1917, staff gage at same site and datum.

Average discharge (river only).--52 years (1914-66), 28.2 cfs (20,420 acre-ft per year); median of yearly mean discharges, 8.5 cfs (6,200 acre-ft per year).  
(combined).--70 years, 80.0 cfs (57,920 acre-ft per year); median of yearly mean discharges, 66 cfs (48,000 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 8,000 cfs Nov. 22 (gage height 14.4 ft, from outside gage), on basis of field estimate of maximum flow; no flow Oct. 1 to Nov. 15, Nov. 20, 21, Sept. 15-30.  
1896-1966: Maximum discharge, 52,300 cfs Mar. 2, 1938 (gage height, 14.3 ft), on basis of slope-area measurement of maximum flow; no flow at times in some years.  
(combined).--Maximum discharge during year, 8,000 cfs Nov. 22; minimum daily, 15 cfs for some days.  
1896-1966: Maximum discharge, 52,300 cfs Mar. 2, 1938; minimum daily, 3 cfs Nov. 21, 22, 1909.

Remarks.--Records good except those prior to Jan. 5, which are poor. Flow partly regulated by Big Bear Lake (see Sta. No. 0490). For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below powerplant No. 2, which diverts above station, see following page. Bear Valley Mutual Water Company pumped 438 acre-ft into canal below canal gage. Prior to Oct. 1, 1952, pumped water entered canal above gage. See schematic diagram of Santa Ana River basin.

Cooperation.--Ten discharge measurements on Southern California Edison Co.'s canal below powerplant No. 2 furnished by that agency in connection with a Federal Power Commission project.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     |      | 0      | 95     | 300   | 50    | 6.6   | 3.2   | 2.2   | 0.80  | 0.70  | 0.30 | 0.10  |
| 2     |      | 0      | 90     | 250   | 48    | 7.4   | 3.2   | 2.0   | .80   | .70   | .30  | .10   |
| 3     |      | 0      | 85     | 175   | 47    | 7.0   | 3.2   | 2.0   | .80   | .70   | .30  | .10   |
| 4     |      | 0      | 80     | 130   | 45    | 6.0   | 3.2   | 2.0   | .80   | .70   | .20  | .10   |
| 5     |      | 0      | 75     | 124   | 44    | 5.2   | 3.0   | 2.0   | .90   | .70   | .20  | .10   |
| 6     |      | 0      | 70     | 127   | 110   | 4.7   | 2.9   | 2.0   | .90   | .70   | .20  | .10   |
| 7     |      | 0      | 65     | 124   | 73    | 4.7   | 2.9   | 2.2   | .90   | .60   | .20  | .10   |
| 8     |      | 0      | 60     | 104   | 30    | 4.4   | 2.8   | 2.3   | .90   | .60   | .20  | .10   |
| 9     |      | 0      | 55     | 86    | 30    | 4.4   | 2.8   | 2.3   | .90   | .60   | .20  | .10   |
| 10    |      | 0      | 100    | 79    | 26    | 4.2   | 2.8   | 2.3   | .90   | .60   | .20  | .10   |
| 11    |      | 0      | 95     | 79    | 30    | 4.2   | 2.8   | 2.3   | .80   | .60   | .20  | .10   |
| 12    |      | 0      | 90     | 83    | 22    | 4.0   | 2.8   | 2.2   | .80   | .60   | .20  | .10   |
| 13    |      | 0      | 85     | 83    | 20    | 4.0   | 2.8   | 2.0   | .80   | .60   | .20  | .10   |
| 14    |      | 0      | 80     | 88    | 22    | 4.0   | 2.6   | 2.0   | .80   | .60   | .20  | .10   |
| 15    |      | 0      | 75     | 86    | 22    | 4.0   | 2.4   | 2.0   | .80   | .60   | .20  | 0     |
| 16    |      | 5.0    | 130    | 76    | 21    | 3.8   | 2.4   | 2.0   | .80   | .50   | .20  | 0     |
| 17    |      | 20     | 100    | 74    | 20    | 3.6   | 2.6   | 2.0   | .80   | .50   | .10  | 0     |
| 18    |      | 77     | 90     | 74    | 14    | 3.4   | 2.8   | 2.0   | .80   | .50   | .10  | 0     |
| 19    |      | 19     | 80     | 72    | 12    | 3.6   | 3.0   | 1.8   | .80   | .50   | .10  | 0     |
| 20    |      | 0      | 75     | 70    | 10    | 3.4   | 2.8   | 1.8   | .80   | .50   | .10  | 0     |
| 21    |      | 0      | 70     | 63    | 10    | 3.4   | 2.8   | 1.7   | .80   | .50   | .10  | 0     |
| 22    |      | 1,480  | 65     | 63    | 10    | 3.4   | 2.6   | 1.5   | .80   | .40   | .10  | 0     |
| 23    |      | 2,900  | 60     | 62    | 9.6   | 3.6   | 2.4   | 1.1   | .80   | .40   | .10  | 0     |
| 24    |      | 400    | 60     | 63    | 8.8   | 3.6   | 2.3   | 1.1   | .80   | .40   | .10  | 0     |
| 25    |      | 450    | 55     | 56    | 8.0   | 4.0   | 2.3   | .90   | .80   | .40   | .10  | 0     |
| 26    |      | 250    | 55     | 56    | 7.7   | 3.6   | 2.3   | .90   | .80   | .40   | .10  | 0     |
| 27    |      | 200    | 50     | 50    | 7.4   | 3.4   | 2.3   | .90   | .80   | .40   | .10  | 0     |
| 28    |      | 150    | 50     | 40    | 6.9   | 3.2   | 2.3   | .90   | .80   | .40   | .10  | 0     |
| 29    |      | 125    | 1,500  | 30    | ----- | 3.0   | 2.3   | .90   | .80   | .40   | .10  | 0     |
| 30    |      | 100    | 1,000  | 50    | ----- | 2.9   | 2.3   | .90   | .80   | .40   | .10  | 0     |
| 31    |      | -----  | 500    | 60    | ----- | 2.8   | ----- | .90   | ----- | .40   | .10  | ----- |
| Total | 0    | 6,176  | 5,140  | 2,877 | 76,44 | 129,5 | 80,9  | 53,10 | 24,60 | 16,60 | 5,00 | 1,40  |
| Mean  | 0    | 206    | 166    | 92.8  | 27.3  | 4.18  | 2.70  | 1.71  | 0.82  | 0.54  | 0.16 | 0.05  |
| Ac-ft | 0    | 12,250 | 10,200 | 5,710 | 1,520 | 257   | 160   | 105   | 49    | 33    | 9.9  | 2.8   |

Calendar year 1965 Max 2,900 Min 0 Mean 33.3 Ac-ft 24,090  
Water year 1965-66 Max 2,900 Min 0 Mean 41.8 Ac-ft 30,280

Peak discharge (base 150 cfs).--Nov. 22 (2300 hrs) 8,000 cfs (14.4 ft from outside gage); Dec. 10, 16, 29 (time and discharge unknown)

Note.--No gage height record Nov. 16, 17, Nov. 23 to Jan. 3.

## SANTA ANA RIVER BASIN

147

11-0515. Santa Ana River near Mentone, Calif.--Continued.

Combined discharge, in cubic feet per second, of Santa Ana River and Southern California Edison Co.'s canal near Mentone, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 15   | 15     | 95     | 300   | 98    | 62    | 59    | 48    | 49    | 37    | 33    | 29    |
| 2     | 15   | 15     | 90     | 250   | 96    | 63    | 60    | 47    | 49    | 37    | 33    | 28    |
| 3     | 15   | 15     | 85     | 175   | 94    | 60    | 60    | 47    | 48    | 36    | 32    | 28    |
| 4     | 15   | 15     | 80     | 130   | 86    | 60    | 60    | 47    | 48    | 35    | 31    | 27    |
| 5     | 19   | 15     | 75     | 124   | 92    | 60    | 60    | 48    | 47    | 35    | 31    | 27    |
| 6     | 20   | 15     | 70     | 127   | 138   | 60    | 58    | 48    | 47    | 35    | 31    | 27    |
| 7     | 20   | 16     | 65     | 124   | 117   | 60    | 58    | 48    | 48    | 35    | 31    | 26    |
| 8     | 19   | 16     | 60     | 104   | 105   | 59    | 57    | 50    | 49    | 35    | 31    | 26    |
| 9     | 19   | 16     | 55     | 86    | 94    | 59    | 56    | 53    | 49    | 35    | 30    | 26    |
| 10    | 19   | 17     | 100    | 79    | 91    | 59    | 56    | 53    | 47    | 34    | 29    | 26    |
| 11    | 18   | 17     | 95     | 79    | 83    | 59    | 56    | 52    | 45    | 34    | 29    | 26    |
| 12    | 15   | 17     | 90     | 83    | 81    | 61    | 56    | 51    | 44    | 34    | 29    | 26    |
| 13    | 15   | 17     | 85     | 83    | 76    | 62    | 56    | 50    | 43    | 34    | 29    | 26    |
| 14    | 15   | 19     | 80     | 88    | 69    | 64    | 56    | 51    | 42    | 34    | 29    | 26    |
| 15    | 16   | 28     | 75     | 86    | 70    | 63    | 54    | 50    | 43    | 33    | 30    | 26    |
| 16    | 17   | 38     | 130    | 76    | 69    | 62    | 54    | 51    | 43    | 32    | 30    | 26    |
| 17    | 17   | 55     | 100    | 74    | 70    | 62    | 55    | 50    | 42    | 32    | 29    | 26    |
| 18    | 17   | 78     | 90     | 74    | 70    | 60    | 57    | 50    | 43    | 32    | 29    | 26    |
| 19    | 17   | 23     | 80     | 72    | 68    | 62    | 57    | 49    | 43    | 32    | 29    | 28    |
| 20    | 15   | 14     | 75     | 70    | 66    | 61    | 55    | 49    | 43    | 30    | 29    | 29    |
| 21    | 15   | 28     | 70     | 63    | 66    | 61    | 55    | 50    | 42    | 30    | 28    | 27    |
| 22    | 15   | 1,500  | 65     | 63    | 66    | 60    | 54    | 50    | 42    | 33    | 28    | 26    |
| 23    | 15   | 2,900  | 60     | 62    | 66    | 61    | 53    | 50    | 42    | 39    | 28    | 25    |
| 24    | 15   | 400    | 60     | 63    | 66    | 61    | 52    | 49    | 40    | 38    | 28    | 25    |
| 25    | 15   | 450    | 55     | 56    | 64    | 61    | 51    | 49    | 40    | 37    | 28    | 25    |
| 26    | 15   | 250    | 55     | 56    | 61    | 59    | 51    | 50    | 39    | 36    | 28    | 26    |
| 27    | 15   | 200    | 50     | 62    | 62    | 59    | 51    | 49    | 39    | 34    | 28    | 26    |
| 28    | 15   | 150    | 50     | 88    | 61    | 58    | 50    | 50    | 38    | 34    | 28    | 26    |
| 29    | 15   | 125    | 1,500  | 78    | ----- | 59    | 49    | 48    | 38    | 35    | 28    | 27    |
| 30    | 15   | 100    | 1,000  | 106   | ----- | 59    | 49    | 49    | 38    | 36    | 28    | 28    |
| 31    | 15   | -----  | 500    | 108   | ----- | 59    | ----- | 49    | ----- | 36    | 29    | ----- |
| Total | 503  | 6,564  | 5,140  | 3,089 | 2,245 | 1,875 | 1,655 | 1,535 | 1,310 | 1,069 | 913   | 796   |
| Mean  | 16.2 | 219    | 166    | 99.6  | 80.2  | 60.5  | 55.2  | 49.5  | 43.7  | 34.5  | 29.5  | 26.5  |
| Ac-ft | 998  | 13,020 | 10,200 | 6,130 | 4,450 | 3,720 | 3,280 | 3,040 | 2,600 | 2,120 | 1,810 | 1,580 |

Calendar year 1965 Max 2,900 Min 14 Mean 56.9 Ac-ft 41,170

Water year 1965-66 Max 2,900 Min 15 Mean 73.1 Ac-ft 52,950

Peak discharge (base, 150 cfs)--Nov. 22 (2300 hrs) 8,000 cfs; Dec. 10, 16, 29 (time and discharge unknown).

## SANTA ANA RIVER BASIN

11-0540. Mill Creek near Yucaipa, Calif.

Location.--Lat 34°05'27", long 117°02'12", in NW 1/4 sec. 13, T.1 S., R.2 W., on left bank 50 ft downstream from bridge on State Highway 190-D, 3.9 miles north of Yucaipa, and 5.3 miles upstream from mouth.

Drainage area.--38.1 sq mi.

Records available.--January 1919 to September 1938, October 1947 to September 1966. Monthly figures only for April and May 1923, published in WSP-1315-B. Prior to October 1954, published as "near Craftonville."

Gage.--Graphic water-stage recorder on creek; graphic water-stage recorder and sharp-crested weir on power canal No. 1; graphic water-stage recorder and Parshall flume on power canals Nos. 2 and 3. Datum of gage is 2,916.36 ft above mean sea level (Southern California Edison Co. bench mark). Prior to August 1926, at site 100 ft upstream at different datums. August 1926 to Mar, 1938, at site 500 ft downstream at different datum (destroyed by flood).

Average discharge (creek only).--38 years, 10.0 cfs (7,240 acre-ft per year); median of yearly mean discharges, 1.0 cfs (720 acre-ft per year).  
(combined).--38 years, 30.3 cfs (21,940 acre-ft per year); median of yearly mean discharges, 21 cfs (15,200 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 10,000 cfs Nov. 22 (gage height, 17.70 ft from inside gage, 14.35 ft at orifice) from rating curve extended above 700 cfs on basis of field estimate of maximum flow; no flow for many days.

1919-38, 1947-66; Maximum discharge, 18,100 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in some years.

(combined).--Maximum discharge during year, 10,000 cfs Nov. 22; minimum daily, 8.6 cfs Nov. 19.

1919-38, 1947-66; Maximum discharge, 18,100 cfs Mar. 2, 1938; minimum daily, 2.7 cfs Feb. 23, 1949.

Remarks.--Records good except those for the period Nov. 23 to Mar. 27, which are poor. No regulation above station. Mill Creek power canals Nos. 1, 2, and 3 divert from points 100 ft, 3 miles, and 6 miles above station, respectively. Combined flow of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3 is given on following page. See schematic diagram of Santa Ana River basin.

Cooperation.--Water-stage recorder graph and 11 discharge measurements for Mill Creek power canals Nos. 2 and 3 furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|------|----------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 0.10 | 0.10     | 37    | 56    | 9.0   | 7.0   | 4.4   | 1.8   | 0.10  | 0.10 | 0     | 0     |
| 2     | .10  | .10      | 35    | 54    | 10    | 5.0   | 2.5   | 2.5   | .10   | .30  | 0     | 0     |
| 3     | .10  | .10      | 34    | 42    | 9.0   | 6.6   | 2.4   | 2.4   | .10   | .30  | 0     | .30   |
| 4     | .10  | .10      | 33    | 40    | 9.0   | 7.0   | 2.5   | 2.8   | .10   | 0    | 0     | .50   |
| 5     | .10  | .10      | 31    | 47    | 9.0   | 6.0   | 2.8   | 3.1   | .10   | 0    | 0     | .10   |
| 6     | .10  | .10      | 30    | 46    | 7.3   | 7.0   | 2.8   | 2.8   | .10   | 0    | 0     | .10   |
| 7     | .10  | .10      | 29    | 45    | 4.4   | 6.0   | 3.1   | 1.0   | .10   | 0    | 0     | 0     |
| 8     | .10  | .10      | 28    | 44    | 2.2   | 5.0   | 2.8   | .10   | .10   | 0    | 0     | 0     |
| 9     | .10  | .10      | 26    | 29    | 14    | 5.0   | 2.5   | 0     | .10   | 0    | 0     | 0     |
| 10    | .10  | .10      | 24    | 20    | 14    | 6.0   | 5.5   | 5.8   | .10   | 0    | 0     | 0     |
| 11    | .10  | .10      | 23    | 18    | 14    | 6.0   | 9.1   | 6.8   | .10   | 0    | 0     | 0     |
| 12    | 0    | .10      | 21    | 18    | 12    | 6.0   | 9.2   | 6.0   | .10   | 0    | 0     | 0     |
| 13    | 0    | .10      | 20    | 15    | 13    | 6.0   | 1.3   | 4.6   | .10   | 0    | 0     | 0     |
| 14    | 0    | .10      | 26    | 11    | 12    | 6.0   | .30   | .90   | .10   | 0    | 0     | 0     |
| 15    | 0    | .30      | 18    | 9.0   | 13    | 6.0   | .30   | .10   | .10   | 0    | 0     | 0     |
| 16    | .10  | 16       | 17    | 10    | 12    | 6.0   | .40   | .10   | .10   | 0    | 0     | 0     |
| 17    | .10  | 64       | 17    | 10    | 12    | 9.0   | .90   | 0     | .10   | 0    | 7.0   | 0     |
| 18    | .10  | 20       | 17    | 8.0   | 12    | 6.0   | 2.2   | 0     | .10   | 0    | .12   | 0     |
| 19    | .10  | 8.6      | 17    | 10    | 9.5   | 1.0   | 3.9   | 0     | .10   | 0    | 3.1   | 0     |
| 20    | .10  | 7.1      | 18    | 8.0   | 9.0   | 1.0   | 3.1   | .10   | .10   | 0    | .20   | 0     |
| 21    | .10  | 1.5      | 19    | 28    | 9.0   | 1.0   | 2.6   | .10   | .10   | 0    | .10   | 0     |
| 22    | .10  | 2,290    | 19    | 27    | 7.0   | 0     | 2.6   | 0     | .10   | .30  | .10   | 0     |
| 23    | .10  | 500      | 19    | 27    | 7.0   | 4.0   | 2.0   | .10   | .10   | .10  | .10   | 0     |
| 24    | .10  | 300      | 19    | 25    | 7.0   | 10    | 1.9   | 0     | 0     | 0    | .10   | 0     |
| 25    | .10  | 150      | 19    | 26    | 7.0   | 10    | 1.9   | 0     | 0     | 0    | .10   | 0     |
| 26    | .10  | 59       | 19    | 25    | 8.0   | 7.0   | 1.6   | 0     | 0     | 0    | .10   | 0     |
| 27    | .10  | 49       | 20    | 25    | 7.0   | 6.0   | 3.7   | 0     | 0     | 0    | .30   | 0     |
| 28    | .10  | 44       | 19    | 24    | 7.0   | 5.5   | 6.8   | 0     | 0     | 0    | .20   | 0     |
| 29    | .10  | 41       | 487   | 24    | ----- | 8.4   | 6.8   | 0     | .10   | 0    | .10   | 0     |
| 30    | .10  | 39       | 100   | 15    | ----- | 5.0   | 3.6   | 0     | .10   | 0    | .30   | 0     |
| 31    | .10  | -----    | 60    | 20    | ----- | 4.7   | ----- | .10   | ----- | 0    | 0     | ----- |
| Total | 2.70 | 3,590.90 | 1,301 | 806.0 | 390.5 | 175.2 | 94.50 | 41.20 | 2.50  | 0.70 | 23.80 | 1.00  |
| Mean  | 0.09 | 120      | 42.0  | 26.0  | 13.9  | 5.65  | 3.15  | 1.33  | 0.08  | 0.02 | 0.77  | 0.03  |
| Ac-ft | 5.4  | 7,120    | 2,580 | 1,600 | 775   | 348   | 187   | 82    | 5.0   | 1.4  | 47    | 2.0   |

Calendar year 1965 Max 2,290 Min 0 Mean 14.2 Ac-ft 10,280  
Water year 1965-66 Max 2,290 Min 0 Mean 17.6 Ac-ft 12,750

Peak discharge (base, 50 cfs)

| Date  | Time    | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|---------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 0800    | 6.90        | 180       | 2-6  | 1400 | 7.75        | 130       |
| 11-22 | 1900    | 14.35       | 10,000    | 8-18 | 0400 | 8.23        | 70        |
| 12-29 | Unknown | Unknown     | † 5,000   |      |      |             |           |

† Note.--No gage-height record or stage-discharge relation indefinite Nov. 23 to Mar. 27.

† About

## 11-0540. Mill Creek near Yucaipa, Calif.--Continued.

Combined discharge, in cubic feet per second, of Mill Creek and Mill Creek power canals Nos. 1, 2, and 3, near Yucaipa, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec. | Jan. | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1     | 13   | 12     | 58   | 56   | 39    | 47   | 44    | 38   | 32    | 28   | 26   | 23    |
| 2     | 13   | 12     | 56   | 54   | 40    | 47   | 43    | 34   | 32    | 28   | 25   | 24    |
| 3     | 13   | 12     | 55   | 50   | 40    | 47   | 43    | 34   | 31    | 27   | 25   | 24    |
| 4     | 13   | 12     | 54   | 48   | 40    | 47   | 43    | 35   | 31    | 27   | 24   | 23    |
| 5     | 13   | 12     | 52   | 47   | 40    | 46   | 44    | 35   | 30    | 27   | 25   | 24    |
| 6     | 13   | 12     | 51   | 46   | 100   | 46   | 44    | 35   | 30    | 28   | 26   | 24    |
| 7     | 13   | 12     | 50   | 45   | 70    | 45   | 44    | 37   | 29    | 27   | 25   | 24    |
| 8     | 13   | 12     | 49   | 44   | 50    | 44   | 44    | 39   | 31    | 27   | 25   | 25    |
| 9     | 13   | 12     | 47   | 43   | 44    | 44   | 44    | 39   | 31    | 28   | 24   | 26    |
| 10    | 13   | 13     | 45   | 42   | 44    | 45   | 44    | 37   | 30    | 28   | 24   | 26    |
| 11    | 12   | 13     | 44   | 41   | 44    | 45   | 44    | 34   | 30    | 28   | 24   | 26    |
| 12    | 12   | 12     | 42   | 41   | 44    | 45   | 42    | 32   | 28    | 28   | 26   | 26    |
| 13    | 13   | 12     | 41   | 41   | 44    | 46   | 41    | 33   | 28    | 28   | 26   | 26    |
| 14    | 13   | 13     | 40   | 41   | 44    | 46   | 40    | 36   | 29    | 28   | 25   | 26    |
| 15    | 13   | 16     | 39   | 40   | 44    | 46   | 40    | 36   | 28    | 28   | 24   | 26    |
| 16    | 13   | 31     | 38   | 40   | 44    | 46   | 39    | 35   | 28    | 27   | 24   | 26    |
| 17    | 13   | 64     | 38   | 39   | 44    | 47   | 39    | 35   | 28    | 26   | 25   | 25    |
| 18    | 13   | 20     | 38   | 38   | 45    | 47   | 39    | 35   | 28    | 26   | 31   | 26    |
| 19    | 13   | 86     | 38   | 38   | 45    | 47   | 37    | 37   | 28    | 26   | 23   | 26    |
| 20    | 13   | 93     | 39   | 37   | 45    | 47   | 36    | 35   | 27    | 26   | 18   | 25    |
| 21    | 13   | 12     | 39   | 37   | 46    | 47   | 36    | 35   | 27    | 24   | 21   | 25    |
| 22    | 13   | 2310   | 39   | 36   | 46    | 47   | 36    | 35   | 27    | 28   | 24   | 25    |
| 23    | 12   | 520    | 40   | 36   | 46    | 46   | 35    | 34   | 27    | 33   | 25   | 25    |
| 24    | 12   | 320    | 40   | 34   | 46    | 46   | 36    | 34   | 26    | 30   | 27   | 23    |
| 25    | 12   | 170    | 40   | 35   | 46    | 46   | 36    | 34   | 26    | 28   | 27   | 20    |
| 26    | 12   | 80     | 40   | 34   | 47    | 46   | 37    | 34   | 26    | 27   | 27   | 19    |
| 27    | 12   | 70     | 40   | 34   | 46    | 44   | 40    | 34   | 26    | 26   | 26   | 22    |
| 28    | 12   | 65     | 40   | 33   | 46    | 44   | 40    | 33   | 28    | 26   | 26   | 25    |
| 29    | 12   | 62     | 500  | 33   | ----- | 46   | 40    | 33   | 29    | 27   | 26   | 25    |
| 30    | 12   | 60     | 100  | 45   | ----- | 44   | 39    | 32   | 28    | 28   | 26   | 24    |
| 31    | 12   | -----  | 60   | 50   | ----- | 43   | ----- | 32   | ----- | 27   | 24   | ----- |
| Total | 392  | 3988.9 | 1892 | 1278 | 1319  | 1419 | 1209  | 1081 | 859   | 850  | 774  | 734   |
| Mean  | 12.6 | 133    | 61.0 | 41.2 | 47.1  | 45.8 | 40.3  | 34.9 | 28.6  | 27.4 | 25.0 | 24.5  |
| Ac-ft | 778  | 7910   | 3750 | 2530 | 2620  | 2810 | 2400  | 2140 | 1700  | 1690 | 1540 | 1460  |

Calendar year 1965 Max 2,310 Min 8.0 Mean 30.2 Ac-ft 21,830  
 Water year 1965-66 Max 2,310 Min 8.6 Mean 43.3 Ac-ft 31,330

## Peak discharge (base, 50 cfs)

| Date  | Time    | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|---------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 0800    |             | 180       | 2-26 | 1400 |             | 130       |
| 11-22 | 1900    |             | 10,000    | 8-18 | 0400 |             | 70        |
| 12-29 | Unknown |             | + 5,000   |      |      |             |           |

† About

## SANTA ANA RIVER BASIN

11-0555. Plunge Creek near East Highlands, Calif.

Location.--Lat  $34^{\circ}07'06''$ , long  $117^{\circ}08'27''$ , in SW  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec. 1, T. 1 S., R. 3 W., on left bank at mouth of canyon at crossing of North Fork ditch siphon, 1.8 miles northeast of East Highlands.

Drainage area.--16.9 sq mi.

Records available.--January 1919 to September 1966; combined records of creek and diversions, March 1951 to September 1966.

Gage.--Graphic water-stage recorder and since December 1938 broad-crested weir on creek; digital water-stage recorder and weir on upper diversion; graphic water-stage recorder and concrete-lined canal on middle diversion; graphic water-stage recorder and sharp-crested weir on lower diversion. Altitude of gage is 1,590 ft (from topographic map). Prior to Oct. 1, 1964, graphic water-stage recorder on upper diversion.

Average discharge (creek only).--47 years, 5.40 cfs (3,910 acre-ft per year); median of yearly mean discharges, 3.6 cfs (2,600 acre-ft per year).

(combined).--15 years, 5.40 cfs (3,910 acre-ft per year); median of yearly mean discharges, 3.5 cfs (2,500 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 4,200 cfs Nov. 22 (gage height, 6.07 ft from inside gage, 7.03 ft from profile of floodmarks), on basis of field estimate of maximum flow; no flow for much of year.

1919-66: Maximum discharge, 5,340 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for part of each year.

(combined).--Maximum discharge during year, 4,200 cfs Nov. 22; minimum daily, 0.30 cfs Sept. 17-20.

1951-66: Maximum discharge, that of Nov. 22, 1965; no flow Nov. 12, 1964, Sept. 29, 1965.

Remarks.--Records good except those for Nov. 23 to Jan. 3, which are poor. No regulation above station. Diversions for irrigation are made at sites 0.5, 1.0, and 2.5 miles above station. Water has been diverted above station for irrigation during entire period of record. Combined discharge of Plunge Creek and upper, middle, and lower diversions is given on following page. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May | June | July | Aug. | Sept. |
|-------|------|----------|-------|-------|-------|-------|-------|-----|------|------|------|-------|
| 1     |      | 0        | 15    | 50    | 8.4   | 5.2   | 0     |     |      |      |      |       |
| 2     |      | 0        | 10    | 40    | 7.8   | 5.7   | 0     |     |      |      |      |       |
| 3     |      | 0        | 8.0   | 30    | 7.5   | 4.7   | 0     |     |      |      |      |       |
| 4     |      | 0        | 6.0   | 25    | 7.5   | 4.0   | .10   |     |      |      |      |       |
| 5     |      | 0        | 4.0   | 24    | 7.2   | 4.0   | 0     |     |      |      |      |       |
| 6     |      | 0        | 3.0   | 19    | 25    | 3.7   | 0     |     |      |      |      |       |
| 7     |      | 0        | 3.0   | 14    | 21    | 3.4   | 0     |     |      |      |      |       |
| 8     |      | 0        | 3.0   | 13    | 17    | 3.2   | 0     |     |      |      |      |       |
| 9     |      | 0        | 10    | 13    | 15    | 3.0   | .10   |     |      |      |      |       |
| 10    |      | 0        | 35    | 12    | 14    | 1.6   | .10   |     |      |      |      |       |
| 11    |      | 0        | 25    | 11    | 13    | 1.0   | .10   |     |      |      |      |       |
| 12    |      | 0        | 24    | 10    | 12    | 1.0   | .10   |     |      |      |      |       |
| 13    |      | 0        | 23    | 9.4   | 9.8   | 1.1   | 0     |     |      |      |      |       |
| 14    |      | 0        | 23    | 9.0   | 9.4   | 1.1   | 0     |     |      |      |      |       |
| 15    |      | 0        | 22    | 8.7   | 9.4   | .90   | 0     |     |      |      |      |       |
| 16    |      | .40      | 21    | 8.7   | 9.4   | 1.2   | 0     |     |      |      |      |       |
| 17    |      | 33       | 18    | 8.7   | 9.0   | .60   | .10   |     |      |      |      |       |
| 18    |      | 26       | 16    | 7.8   | 8.4   | .50   | .10   |     |      |      |      |       |
| 19    |      | 5.3      | 14    | 6.6   | 8.1   | .50   | .40   |     |      |      |      |       |
| 20    |      | 2.2      | 13    | 6.0   | 8.1   | .40   | .10   |     |      |      |      |       |
| 21    |      | 1.2      | 12    | 6.6   | 7.8   | .40   | .10   |     |      |      |      |       |
| 22    |      | 577      | 10    | 7.5   | 7.5   | .40   | .10   |     |      |      |      |       |
| 23    |      | 250      | 9.2   | 7.2   | 6.6   | .10   | 0     |     |      |      |      |       |
| 24    |      | 150      | 8.4   | 6.0   | 6.0   | 2.8   | 0     |     |      |      |      |       |
| 25    |      | 100      | 7.6   | 5.7   | 6.0   | 4.2   | 0     |     |      |      |      |       |
| 26    |      | 60       | 7.0   | 6.0   | 5.7   | 4.2   | 0     |     |      |      |      |       |
| 27    |      | 45       | 6.2   | 6.9   | 5.7   | 1.4   | 0     |     |      |      |      |       |
| 28    |      | 40       | 5.8   | 6.9   | 5.4   | 1.2   | 0     |     |      |      |      |       |
| 29    |      | 30       | 250   | 6.9   | ----- | .80   | 0     |     |      |      |      |       |
| 30    |      | 20       | 150   | 11    | ----- | .10   | 0     |     |      |      |      |       |
| 31    |      | -----    | 100   | 9.8   | ----- | 0     | ----- |     |      |      |      |       |
| Total | 0    | 1,340.10 | 862.2 | 406.4 | 277.7 | 62.40 | 1.40  | 0   | 0    | 0    | 0    | 0     |
| Mean  | 0    | 44.7     | 27.8  | 13.1  | 9.92  | 2.01  | 0.05  | 0   | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 2,660    | 1,710 | 806   | 551   | 124   | 2.8   | 0   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 577 Min 0 Mean 8.52 Ac-ft 6,170  
 Water year 1965-66 Max 577 Min 0 Mean 8.08 Ac-ft 5,850

Peak discharge (base, 130 cfs).--Nov. 22 (2030 hrs) 4,200 cfs (6.07 ft); Dec. 29 (1900 hrs) 1,090 cfs (2.53 ft).

Note.--No gage-height record or stage-discharge relation indefinite Nov. 23 to Jan. 3.



11-0555. Plunge Creek near East Highlands, Calif.--Continued.

Combined discharge, in cubic feet per second, of Plunge Creek and diversions  
near East Highlands, Calif., water year October 1965 to September 1966

| Day   | Oct.        | Nov.        | Dec.       | Jan.       | Feb.       | Mar.       | Apr.       | May        | June       | July       | Aug.       | Sept.       |
|-------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| 1     | <u>0.40</u> | <u>0.40</u> | 15         | <u>50</u>  | 8.4        | 6.7        | <u>4.3</u> | 2.9        | 2.2        | <u>1.2</u> | 0.60       | <u>0.40</u> |
| 2     | .40         | .50         | 10         | 40         | 7.8        | <u>7.6</u> | 4.3        | 2.9        | 2.2        | <u>1.2</u> | .70        | .40         |
| 3     | .40         | .50         | 8.0        | 30         | 7.5        | 6.4        | 4.3        | 2.7        | 2.2        | 1.0        | .70        | .40         |
| 4     | .40         | .40         | 6.0        | 25         | 7.5        | 5.7        | 4.0        | 2.7        | 2.2        | 1.0        | <u>.80</u> | .40         |
| 5     | .40         | .50         | 4.0        | 24         | 7.2        | 5.6        | 4.1        | 2.7        | 2.2        | .90        | <u>.70</u> | .40         |
| 6     | .40         | .40         | <u>3.6</u> | 19         | 25         | 5.2        | 4.1        | 2.7        | 2.2        | .90        | .70        | .40         |
| 7     | .40         | .50         | 4.8        | 14         | 21         | 4.9        | 4.1        | 2.6        | 2.1        | .90        | .70        | .40         |
| 8     | .40         | .50         | 5.6        | 13         | 17         | 4.7        | 4.1        | 3.3        | 2.3        | 1.0        | .70        | .40         |
| 9     | .40         | .50         | 11         | 13         | 15         | 4.6        | 4.2        | 3.3        | <u>2.5</u> | 1.0        | .70        | .40         |
| 10    | .40         | .50         | 35         | 12         | 14         | 4.0        | 3.4        | <u>3.4</u> | <u>2.3</u> | .90        | .70        | .40         |
| 11    | .40         | .50         | 25         | 11         | 13         | 4.1        | 4.0        | 3.1        | 1.9        | .90        | .70        | .40         |
| 12    | .40         | .50         | 24         | 10         | 12         | 4.0        | 4.2        | 2.9        | 1.7        | .90        | .70        | .40         |
| 13    | .40         | .50         | 24         | 9.4        | 9.8        | 3.9        | 3.9        | 2.5        | 1.5        | .90        | .70        | .40         |
| 14    | .40         | .60         | 24         | 9.0        | 9.4        | 4.0        | 3.7        | 2.4        | 1.5        | .90        | .70        | .40         |
| 15    | .40         | .60         | 22         | 8.7        | 9.4        | 4.0        | 3.5        | 2.4        | 1.4        | .80        | .60        | .40         |
| 16    | .40         | 1.0         | 21         | 8.7        | 9.4        | 4.4        | 3.4        | 2.3        | 1.5        | .70        | .60        | .40         |
| 17    | .40         | 33          | 18         | 8.7        | 9.0        | 4.2        | 3.8        | 2.3        | 1.4        | .70        | .60        | <u>.30</u>  |
| 18    | .40         | 26          | 16         | 8.5        | 8.4        | 4.1        | 3.8        | 2.2        | 1.3        | .70        | .50        | .30         |
| 19    | .40         | 5.3         | 14         | 8.6        | 8.1        | 4.0        | 3.7        | 2.2        | 1.3        | .70        | .50        | .30         |
| 20    | <u>.50</u>  | 2.2         | 15         | 8.2        | 8.1        | 3.9        | 4.0        | 2.2        | 1.3        | .80        | .50        | .30         |
| 21    | .50         | 1.2         | 14         | 8.8        | 7.8        | 3.9        | 3.8        | 2.2        | 1.2        | .70        | .50        | .40         |
| 22    | .50         | <u>57.8</u> | 12         | 9.7        | 7.5        | 4.0        | 3.8        | 2.2        | 1.3        | .60        | .50        | .40         |
| 23    | .50         | 254         | 9.2        | 9.4        | 7.4        | 5.2        | 3.6        | <u>2.1</u> | 1.4        | .70        | .50        | .40         |
| 24    | .50         | 152         | 8.4        | 8.2        | 7.3        | 7.0        | 3.4        | 2.1        | 1.4        | .80        | .50        | .40         |
| 25    | .50         | 101         | 7.6        | 7.6        | 7.3        | 6.2        | 3.4        | 2.1        | 1.4        | .80        | .50        | .40         |
| 26    | .40         | 60          | 7.0        | 7.0        | 7.0        | 6.7        | 3.4        | 2.3        | 1.4        | .70        | .50        | .40         |
| 27    | .40         | 45          | 6.2        | <u>6.9</u> | 7.0        | 3.8        | <u>3.2</u> | 2.3        | 1.3        | .70        | .50        | .40         |
| 28    | .40         | 40          | 5.8        | 6.9        | <u>6.6</u> | <u>3.4</u> | 3.4        | 2.3        | 1.2        | .60        | .50        | .40         |
| 29    | .40         | 30          | <u>250</u> | 6.9        | -----      | <u>3.6</u> | 3.4        | 2.3        | <u>1.1</u> | .80        | <u>.40</u> | .40         |
| 30    | .40         | 20          | 150        | 11         | -----      | 4.5        | 3.2        | 2.2        | <u>1.1</u> | .80        | .40        | .40         |
| 31    | .40         | -----       | 100        | 9.8        | -----      | 4.5        | -----      | 2.2        | -----      | <u>.50</u> | .40        | -----       |
| Total | 13.00       | 1,356.10    | 876.2      | 423.0      | 284.9      | 148.8      | 113.5      | 78.0       | 50.0       | 25.70      | 18.30      | 11.60       |
| Mean  | 0.42        | 45.2        | 28.3       | 13.6       | 10.2       | 4.80       | 3.78       | 2.52       | 1.67       | 0.83       | 0.59       | 0.39        |
| Ac-ft | 26          | 2,690       | 1,740      | 839        | 565        | 295        | 225        | 155        | 99         | 51         | 36         | 23          |

Calendar year 1965 Max 578 Min 0 Mean 9.72 Ac-ft 7,040

Water year 1965-66 Max 578 Min 0.30 Mean 9.31 Ac-ft 6,740

Peak discharge (base, 130 cfs).--Nov. 22 (2030 hrs) 4,200 cfs; Dec. 29 (1900 hrs) 1,090 cfs.

11-0558. City Creek near Highland, Calif.

Location.--Lat 34°08'38", long 117°11'16", in SE 1/4 sec. 27, T.1 N., R.3 W., on right bank 0.6 mile upstream from Highland Avenue and 1.5 miles northeast of Highland.

Drainage area.--19.6 sq mi.

Records available.--October 1919 to September 1966; combined records of creek and canal, June 1924 to September 1966.

Gage.--Digital water-stage recorder on creek; digital water-stage recorder on canal. Altitude of gage is 1,580 ft (from topographic map). Prior to Mar. 1, 1939, at site a quarter of a mile downstream at different datum. Prior to Oct. 1, 1964, graphic water-stage recorder on creek. Prior to Apr. 13, 1966, graphic water-stage recorder on canal.

Average discharge (creek only).--47 years, 7.61 cfs (5,510 acre-ft per year); median of yearly mean discharges, 4.9 cfs (3,600 acre-ft per year).  
(combined).--42 years, 9.14 cfs (6,620 acre-ft per year); median of yearly mean discharges, 6.4 cfs (4,600 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 1,310 cfs Nov. 22 (gage height, 5.86 ft), from rating curve extended above 180 cfs; no flow for many days.

1919-66: Maximum discharge, 6,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for several months in some years.

(combined).--Maximum discharge during year, 1,310 cfs Nov. 22; minimum daily, 0.20 cfs Sept. 23, 24.  
1924-66: Maximum discharge, 6,900 cfs Mar. 2, 1938; no flow at times in some years.

Remarks.--Records good. No regulation above station. City Creek Water Co.'s canal has diverted above station for irrigation throughout period of record. Combined discharge of City Creek and canal is given on following page. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.    | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|----------|---------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0.10     | 17      | 192     | 14    | 8.1   | 1.8   | 0.40  | 0.20  | 0.20 | 0.20 | 0     |
| 2     | 0    | 0.10     | 14      | 197     | 14    | 6.8   | 1.8   | 0.40  | 0.30  | 0.20 | 0.20 | 0     |
| 3     | 0    | 0.10     | 12      | 98      | 15    | 6.1   | 1.7   | 0.40  | 0.30  | 0.20 | 0.20 | 0     |
| 4     | 0    | 0.10     | 11      | 68      | 15    | 5.9   | 1.7   | 0.40  | 0.30  | 0.20 | 0.20 | 0     |
| 5     | 0    | 0.10     | 11      | 38      | 16    | 5.7   | 1.9   | 0.40  | 0.30  | 0.10 | 0.20 | 0     |
| 6     | 0    | 0.10     | 11      | 32      | 30    | 5.7   | 2.1   | 0.40  | 0.20  | 0    | 0.20 | 0.10  |
| 7     | 0    | 0.10     | 11      | 30      | 34    | 5.7   | 1.4   | 0.30  | 0.30  | 0    | 0.20 | 0     |
| 8     | 0.10 | 0.10     | 10      | 27      | 28    | 5.8   | 0.90  | 0.40  | 0.30  | 0    | 0.20 | 0     |
| 9     | 0.10 | 0.10     | 18      | 25      | 29    | 5.9   | 0.70  | 0.40  | 0.30  | 0    | 0.20 | 0     |
| 10    | 0.10 | 0.10     | 34      | 23      | 22    | 5.8   | 0.60  | 0.40  | 0.30  | 0    | 0.30 | 0     |
| 11    | 0.10 | 0.10     | 19      | 21      | 18    | 6.0   | 0.60  | 0.30  | 0.20  | 0    | 0.30 | 0     |
| 12    | 0    | 0.10     | 20      | 20      | 15    | 6.1   | 0.60  | 3.8   | 0.20  | 0    | 0.30 | 0.10  |
| 13    | 0.10 | 0.10     | 20      | 19      | 14    | 6.1   | 0.60  | 4.7   | 0.20  | 0.10 | 0.30 | 0     |
| 14    | 0.10 | 0.10     | 19      | 17      | 14    | 5.9   | 0.60  | 4.5   | 0.20  | 0.20 | 0.30 | 0     |
| 15    | 0.10 | 0.40     | 18      | 16      | 13    | 5.9   | 0.50  | 4.6   | 0.20  | 0.20 | 0.20 | 0     |
| 16    | 0.10 | 4.9      | 16      | 16      | 12    | 5.8   | 0.50  | 4.6   | 0.20  | 0.20 | 0.10 | 0     |
| 17    | 0.10 | 39       | 14      | 14      | 12    | 5.7   | 0.60  | 4.2   | 0.10  | 0.10 | 0.10 | 0     |
| 18    | 0    | 32       | 13      | 14      | 12    | 5.8   | 0.70  | 4.0   | 0.10  | 0.10 | 0.10 | 0     |
| 19    | 0    | 7.2      | 12      | 15      | 12    | 5.9   | 1.2   | 3.9   | 0.20  | 0.10 | 0.10 | 0.10  |
| 20    | 0    | 3.9      | 12      | 14      | 12    | 5.9   | 0.70  | 1.4   | 0.20  | 0.10 | 0.10 | 0.10  |
| 21    | 0    | 2.8      | 11      | 13      | 11    | 5.8   | 0.50  | 0.50  | 0.30  | 0.10 | 0.10 | 0     |
| 22    | 0    | 322      | 11      | 13      | 11    | 5.7   | 0.50  | 0.40  | 0.30  | 0.10 | 0.10 | 0     |
| 23    | 0    | 409      | 10      | 13      | 10    | 4.2   | 0.50  | 0.40  | 0.30  | 0.10 | 0.10 | 0     |
| 24    | 0.10 | 144      | 9.9     | 10      | 11    | 2.0   | 2.2   | 0.40  | 0.20  | 0.10 | 0.10 | 0     |
| 25    | 0.10 | 137      | 9.5     | 8.8     | 11    | 1.3   | 3.7   | 0.40  | 0.20  | 0.10 | 0.10 | 0     |
| 26    | 0.10 | 82       | 9.2     | 9.2     | 11    | 1.6   | 1.7   | 0.30  | 0.30  | 0.10 | 0.10 | 0.10  |
| 27    | 0.10 | 39       | 8.7     | 11      | 10    | 1.7   | 0.60  | 0.30  | 0.30  | 0.10 | 0.10 | 0.10  |
| 28    | 0.10 | 32       | 7.8     | 8.6     | 9.9   | 1.8   | 0.50  | 0.30  | 0.29  | 0.10 | 0.10 | 0.10  |
| 29    | 0.10 | 25       | 276     | 10      | ----- | 1.8   | 0.50  | 0.20  | 0.20  | 0.20 | 0.10 | 0.10  |
| 30    | 0.10 | 20       | 210     | 20      | ----- | 1.9   | 0.50  | 0.20  | 0.20  | 0.20 | 0.10 | 0.10  |
| 31    | 0.10 | -----    | 158     | 15      | ----- | 1.8   | ----- | 0.20  | ----- | 0.20 | 0    | ----- |
| TOTAL | 1.70 | 1,301.60 | 1,033.1 | 1,027.6 | 431.9 | 150.2 | 32.40 | 43.50 | 7.10  | 3.40 | 5.00 | .90   |
| MEAN  | 0.06 | 43.4     | 33.3    | 33.1    | 15.4  | 4.85  | 1.08  | 1.40  | .24   | .11  | .16  | .03   |
| AC-FT | 3.4  | 2,580    | 2,050   | 2,040   | 857   | 298   | 64    | 86    | 14    | 6.7  | 9.9  | 1.8   |

CALENDAR YEAR 1965 MAX 409 MIN 0 MEAN 9.18 AC-FT 6,650  
WATER YEAR 1965-66 MAX 409 MIN 0 MEAN 11.61 AC-FT 8,010

Peak discharge (base, 150 cfs).--Nov. 22 (2000 hrs) 1,310 cfs (5.86 ft); Dec. 29 (1915 hrs) 1,120 cfs (5.59 ft).

11-0558. City Creek near Highland, Calif.--Continued.

Combined discharge, in cubic feet per second, of City Creek and City Creek Water Co.'s canal near Highland, Calif., water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|-------|----------|---------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 0.40  | 0.70     | 17      | 192   | 14    | 14    | 8.1   | 6.8   | 5.0   | 2.2  | 1.4   | 0.60  |
| 2     | .40   | .70      | 14      | 197   | 14    | 15    | 8.3   | 6.6   | 5.1   | 2.2  | 1.3   | .60   |
| 3     | .40   | .80      | 12      | 98    | 15    | 14    | 8.2   | 6.7   | 4.9   | 2.2  | 1.3   | .60   |
| 4     | .40   | .80      | 11      | 68    | 15    | 13    | 8.1   | 7.0   | 4.7   | 2.0  | 1.2   | .60   |
| 5     | .40   | .80      | 11      | 38    | 16    | 13    | 7.6   | 7.2   | 4.5   | 1.8  | 1.1   | .60   |
| 6     | .40   | .80      | 11      | 32    | 30    | 13    | 7.4   | 7.2   | 4.1   | 1.6  | 1.1   | .60   |
| 7     | .40   | .90      | 11      | 30    | 34    | 12    | 7.6   | 7.1   | 3.9   | 1.6  | 1.0   | .60   |
| 8     | .60   | 1.1      | 10      | 27    | 28    | 13    | 7.9   | 8.0   | 3.8   | 1.4  | 1.0   | .60   |
| 9     | .70   | 1.1      | 18      | 25    | 25    | 12    | 8.2   | 8.5   | 3.7   | 1.8  | .90   | .60   |
| 10    | .80   | 1.2      | 34      | 23    | 22    | 12    | 8.2   | 8.0   | 3.6   | 1.8  | .90   | .60   |
| 11    | .70   | 1.2      | 19      | 21    | 21    | 12    | 8.2   | 8.6   | 3.4   | 1.4  | .90   | .60   |
| 12    | .50   | 1.2      | 20      | 20    | 20    | 12    | 8.2   | 5.9   | 3.2   | 1.4  | .80   | .80   |
| 13    | .60   | 1.3      | 20      | 19    | 19    | 12    | 7.8   | 4.7   | 3.2   | 1.5  | .80   | .70   |
| 14    | .80   | 1.8      | 19      | 17    | 19    | 12    | 7.5   | 4.5   | 3.1   | 1.7  | .80   | .60   |
| 15    | 1.1   | 4.5      | 18      | 16    | 18    | 12    | 7.3   | 4.6   | 3.1   | 1.7  | .70   | .60   |
| 16    | 1.1   | 7.4      | 16      | 16    | 16    | 11    | 7.3   | 4.8   | 3.4   | 1.7  | .70   | .60   |
| 17    | 1.0   | 4.1      | 14      | 14    | 16    | 11    | 8.5   | 4.2   | 3.2   | 1.4  | .70   | .70   |
| 18    | .90   | 3.2      | 13      | 14    | 16    | 11    | 10    | 4.0   | 2.9   | 1.3  | .70   | .80   |
| 19    | .80   | 7.2      | 12      | 15    | 16    | 11    | 1.1   | 3.9   | 3.0   | 1.3  | .70   | 1.1   |
| 20    | .60   | 3.9      | 12      | 14    | 16    | 10    | 9.6   | 5.0   | 2.9   | 1.4  | .70   | .90   |
| 21    | .50   | 2.9      | 11      | 13    | 15    | 10    | 9.0   | 5.4   | 2.8   | 1.4  | .70   | .40   |
| 22    | .50   | 3.22     | 11      | 13    | 15    | 10    | 8.8   | 5.3   | 3.0   | 1.4  | .70   | .40   |
| 23    | .50   | 4.09     | 10      | 13    | 14    | 10    | 8.1   | 5.3   | 3.1   | 1.3  | .60   | .20   |
| 24    | .60   | 144      | 9.9     | 12    | 15    | 9.6   | 6.9   | 5.1   | 2.9   | 1.2  | .60   | .20   |
| 25    | .60   | 137      | 9.5     | 12    | 14    | 9.4   | 7.1   | 4.9   | 2.8   | 1.2  | .60   | .40   |
| 26    | .60   | 82       | 9.2     | 12    | 14    | 9.2   | 7.2   | 5.0   | 2.9   | 1.3  | .60   | .60   |
| 27    | .60   | 39       | 8.7     | 11    | 13    | 9.1   | 7.3   | 4.9   | 2.7   | 1.2  | .60   | .70   |
| 28    | .60   | 32       | 7.8     | 10    | 13    | 8.9   | 7.3   | 4.9   | 2.4   | 1.0  | .60   | .70   |
| 29    | .60   | 25       | 280     | 11    | ----- | 8.7   | 7.5   | 5.0   | 2.3   | 1.6  | .60   | 1.1   |
| 30    | .60   | 20       | 212     | 20    | ----- | 8.6   | 7.3   | 5.0   | 2.3   | 1.9  | .60   | 1.6   |
| 31    | .70   | -----    | 158     | 15    | ----- | 8.2   | ----- | 5.2   | ----- | 1.6  | .60   | ----- |
| Total | 19.40 | 1.323.30 | 1.039.1 | 1.038 | 503   | 346.7 | 241.5 | 179.3 | 101.9 | 48.5 | 25.50 | 19.70 |
| Mean  | 0.63  | 44.1     | 33.5    | 33.5  | 18.0  | 11.2  | 8.05  | 5.78  | 3.40  | 1.56 | 0.82  | 0.66  |
| Ac-ft | 58    | 2,620    | 2,060   | 2,060 | 998   | 688   | 479   | 356   | 202   | 96   | 51    | 39    |

Calendar year 1965 Max 409 Min 0 Mean 10.5 Ac-ft 7,580

Water year 1965-66 Max 409 Min 0.20 Mean 13.4 Ac-ft 9,690

Peak discharge (base, 150 cfs).--Nov. 22 (2000 hrs) 1,310 cfs; Dec. 29 (1915 hrs) 1,130 cfs.

11-0562, Santa Ana River at Waterman Avenue, at San Bernardino, Calif.

Location.--Lat 34°04'14", long 117°16'41", in San Bernardino Grant, on downstream end of fifth pier from left bank of south bound traffic bridge on Waterman Avenue, 0.1 mile upstream from San Timoteo Creek and 2.7 miles southeast of San Bernardino, San Bernardino County.

Drainage area.--354 sq mi.

Records available.--October 1954 to December 1961, January 1964 to September 1966. Prior to January 1964, published as "near San Bernardino." Records, except Extremes, for October 1928 to September 1937 at site 1.6 miles upstream not equivalent owing to discharge of Mission ditch.

Gage.--Graphic water-stage recorder. Altitude of gage is 995 ft (from topographic map). Prior to Jan. 21, 1964, at different datum.

Average discharge.--9 years (1954-61, 1964-66), 7.26 cfs (5,260 acre-ft per year).

Extremes.--Maximum discharge during year, 17,200 cfs Nov. 22 (gage height, 7.94 ft), from rating curve extended above 140 cfs on basis of slope-area measurement for station at Colton; no flow for most of year.

1928-37, 1954-61, 1964-66: Maximum discharge, that of Nov. 22, 1965; no flow for most of each year.

Maximum discharge known, about 75,700 cfs Mar. 2, 1938, from combined discharges of Santa Ana River near Mentone, Mill Creek near Yucaipa, and Plunge Creek near East Highlands.

Remarks.--Records poor. Flow partly regulated by Big Bear Lake (see Sta. No. 0490). Natural flow of stream affected by ground-water withdrawals and diversions for domestic use and irrigation above station. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.  | Jan.   | Feb.  | Mar. | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|-------|--------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 8.2   | 0       | 0     | 58     | 0     | 0    |       | 0     | 1.7   | 0     | 1.3   | 1.6   |
| 2     | 2.1   | 0       | 0     | 27     | 0     | 0    |       | 0     | 0     | 1.5   | 0     | .60   |
| 3     | .50   | 0       | 0     | 4.2    | 0     | 0    |       | 0     | 0     | 3.1   | .90   | .90   |
| 4     | 0     | 0       | 0     | .80    | 0     | 0    |       | 0     | 0     | 9.3   | 0     | 1.3   |
| 5     | 0     | 0       | 0     | 0      | 0     | 0    |       | 0     | 0     | 2.6   | 0     | 1.6   |
| 6     | .20   | 0       | 0     | 0      | 269   | 0    |       | 0     | 0     | .40   | 0     | .50   |
| 7     | .90   | 0       | 0     | 0      | 52    | 0    |       | 0     | 0     | 1.2   | 0     | .40   |
| 8     | 0     | 0       | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | .30   | .80   |
| 9     | 0     | 0       | 110   | 0      | 0     | 0    |       | 0     | 0     | 0     | 0     | .40   |
| 10    | 0     | 0       | 168   | 0      | 0     | 0    |       | 0     | 0     | .40   | 0     | .10   |
| 11    | 0     | 0       | 0     | 0      | 0     | 0    |       | 0     | 0     | 1.4   | 2.2   | 1.0   |
| 12    | 0     | 0       | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 1.0   | 1.3   |
| 13    | 0     | 0       | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | .40   | 3.9   |
| 14    | 0     | 27      | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 1.7   | 8.4   |
| 15    | 0     | 47      | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 2.8   | 2.7   |
| 16    | 0     | 130     | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 0     | 1.1   |
| 17    | 0     | 4.5     | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 0     | .10   |
| 18    | 0     | 3.4     | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 0     | 1.6   |
| 19    | 0     | 0       | 0     | 0      | 0     | 0    |       | 1.6   | 0     | 0     | 0     | 2.1   |
| 20    | 0     | 0       | 0     | 0      | 0     | 0    |       | .50   | 0     | 0     | 0     | 1.5   |
| 21    | 0     | 0       | 0     | 0      | 0     | 0    |       | .70   | 0     | 0     | .20   | 1.0   |
| 22    | 0     | 2,420   | 0     | 0      | 0     | 0    |       | 0     | 0     | 0     | 0     | 0     |
| 23    | 0     | 5,000   | 0     | 0      | 0     | 0    |       | .40   | 0     | 0     | 0     | .60   |
| 24    | 0     | 700     | 0     | 0      | 0     | .20  |       | 1.5   | 0     | 0     | 0     | 0     |
| 25    | 0     | 550     | 0     | 0      | 0     | .20  |       | 3.5   | 0     | .10   | 0     | 0     |
| 26    | 0     | 35      | 0     | 0      | 0     | 0    |       | .40   | 0     | 0     | .50   | 0     |
| 27    | 0     | 10      | 0     | 0      | 0     | 0    |       | 1.3   | 0     | 0     | .70   | 1.3   |
| 28    | 0     | 5.0     | 0     | 0      | 0     | 0    |       | .50   | 0     | .20   | .20   | .50   |
| 29    | 0     | 3.0     | 715   | 0      | ----- | 0    |       | .60   | 0     | 1.6   | 1.2   | 3.8   |
| 30    | 0     | 1.0     | 878   | 301    | ----- | 0    |       | 1.1   | 0     | 1.0   | .40   | 1.2   |
| 31    | 0     | -----   | 100   | 7.1    | ----- | 0    | ----- | 3.3   | ----- | .70   | .70   | ----- |
| Total | 11.90 | 8,935.9 | 1,971 | 398.10 | 321   | 0.40 | 0     | 15.40 | 1.7   | 23.50 | 14.50 | 51.10 |
| Mean  | 0.38  | 298     | 63.6  | 12.8   | 11.5  | 0.01 | 0     | 0.50  | 0.06  | 0.76  | 0.47  | 1.70  |
| Ac-ft | 24    | 17,720  | 3,910 | 790    | 637   | 0.8  | 0     | 31    | 3.4   | 47    | 29    | 101   |

Calendar year 1965 Max 5,000 Min 0 Mean 30.9 Ac-ft 22,360  
 Water year 1965-66 Max 5,000 Min 0 Mean 32.2 Ac-ft 23,290

Peak discharge (base, 350 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-22 | 2130 | 7.94        | 17,200    | 1-30 | 2000 | 2.17        | 1,410     |
| 12-29 | 2230 | 3.40        | 3,140     | 2-6  | 2000 | 1.95        | 996       |

Note.--No gage-height record Nov. 23 to Dec. 23, Dec. 31 to Jan. 29, Jan. 31 to Feb. 3.

11-0565. Little San Geronio Creek near Beaumont, Calif.

Location.--Lat 34°01'45", long 116°56'40", in NW 1/4 sec. 1, T.2 S., R.1 W., on downstream side of left abutment of bridge on Oak Glen Road, 3.0 miles upstream from Wallace Creek and 7 miles north of Beaumont.

Drainage area.--3.23 sq mi.

Records available.--October 1948 to September 1966.

Gage.--Graphic water-stage recorder and concrete control. Altitude of gage is 4,320 ft (from topographic map).

Average discharge.--18 years, 0.063 cfs (46 acre-ft per year).

Extremes.--Maximum discharge during year, 229 cfs Dec. 29 (gage height, 2.07 ft), from rating curve extended above 1 cfs on basis of slope-area measurement of maximum flow; no flow for most of year.  
1948-66: Maximum discharge, 319 cfs Aug. 23, 1955 (gage height, 2.18 ft), from rating curve extended above 1 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records poor. No regulation above station. Several small diversions above station for irrigation. See schematic diagram of Santa Ana River basin.

Discharge, in cubic-foot per second, water year October 1965 to September 1966

|              |      |              |      |
|--------------|------|--------------|------|
| Nov. 22..... | 15   | Dec. 10..... | 0.80 |
| 23.....      | 9.4  | 29.....      | 8.5  |
| 24.....      | 1.2  | 30.....      | .30  |
| 25.....      | .20  | Feb. 6.....  | .30  |
| Dec. 9.....  | 0.60 | Mar. 3.....  | .60  |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 25.80    | 15      | 0       | 0.86 | 51        |
| December.....           | 10.20    | 8.5     | 0       | .33  | 20        |
| February 1966.....      | .30      | .30     | 0       | .01  | .6        |
| March.....              | .60      | .60     | 0       | .02  | 1.2       |
| Calendar year 1965..... | -        | 15      | 0       | .099 | 71        |
| Water year 1965-66..... | -        | 15      | 0       | .101 | 73        |

Peak discharge (base, 10 cfs).-- Nov. 22 (1900 hrs) 169 cfs (1.98 ft); Dec. 29 (1830 hrs) 229 cfs (2.07 ft).

Note.--Flow occurred only on days listed above.

11-0570. San Timoteo Creek near Redlands, Calif.

Location.--Lat 34°01'59", long 117°12'29", in NE 1/4 sec. 5, T.2 S., R.3 W., on downstream side of right abutment of county highway bridge, 2.0 miles southwest of Redlands and 3.4 miles downstream from Yucaipa Creek.

Drainage area.--119 sq mi.

Records available.--October 1926 to September 1966.

Gage.--Graphic water-stage recorder and concrete control. Altitude of gage is 1,280 ft (from topographic map). Prior to Oct. 30, 1934, at site 2 miles upstream at different datum.

Average discharge.--40 years, 1.30 cfs (941 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 1,360 cfs Nov. 22 (gage height, 4.22 ft); no flow for most of year.  
1926-66: Maximum discharge, 7,460 cfs Mar. 2, 1938, result of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation above station. Low flow normally diverted above station for irrigation. At times small amounts of irrigation waste water passes station. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|              |     |             |     |
|--------------|-----|-------------|-----|
| Nov. 16..... | 8.5 | Dec. 9..... | 13  |
| 17.....      | 5.3 | 10.....     | 38  |
| 18.....      | .20 | 27.....     | .10 |
| 22.....      | 282 | 28.....     | .20 |
| 23.....      | 357 | 29.....     | 46  |
| 24.....      | 6.7 | 30.....     | 9.1 |
| 25.....      | 4.0 | Feb. 6..... | 1.4 |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 663.7    | 357     | 0       | 22.1 | 1,320     |
| December.....           | 106.4    | 46      | 0       | 3.43 | 211       |
| February 1966.....      | 1.4      | 1.4     | 0       | .05  | 2.8       |
| Calendar year 1965..... | -        | 357     | 0       | 2.61 | 1,890     |
| Water year 1965-66..... | -        | 357     | 0       | 2.11 | 1,530     |

Peak discharge (base, 150 cfs).--Nov. 22 (2100 hrs) 1,360 cfs (4.22 ft); Dec. 9 (1300 hrs) 324 cfs (2.49 ft); Dec. 29 (2100 hrs) 500 cfs (2.87 ft).

Note.--Flow occurred only on days listed above.

## SANTA ANA RIVER BASIN

11-0585. East Twin Creek near Arrowhead Springs, Calif.

Location.--Lat 34°10'45", long 117°15'53", in NW 1/4 sec. 14, T.1 N., R.4 W., on right bank 100 ft upstream from Del Rosa Water Co.'s diversion dam, 0.5 mile south of Arrowhead Springs, and 1.0 mile downstream from Strawberry Creek.

Drainage area.--8.80 sq mi.

Records available.--December 1919 to September 1966. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

Gage.--Digital water-stage recorder and broad-crested weir since September 1938. Altitude of gage is 1,590 ft (from topographic map). Prior to Feb. 23, 1965, graphic water-stage recorder.

Average discharge.--46 years (1920-66), 4.25 cfs (3,080 acre-ft per year); median of yearly mean discharges, 2.9 cfs (2,100 acre-ft per year).

Extremes.--Maximum discharge during year, 830 cfs Nov. 22 (gage height, 5.41 ft), on basis of field estimate of maximum flow; minimum daily, 0.30 cfs Oct. 1-9, 12, 20, Sept. 25, 26.

1919-66: Maximum discharge, 3,360 cfs Mar. 2, 1938, based on rainfall-runoff studies; practically no flow at times in 1929, 1931-35.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 0.30  | 0.40   | 5.5   | 50    | 4.9   | 4.4   | 2.9   | 2.3  | 1.9   | 1.0   | 0.70  | 0.60  |
| 2     | .30   | .40    | 4.7   | 32    | 4.6   | 4.5   | 3.0   | 2.5  | 1.9   | .90   | .50   | .80   |
| 3     | .30   | .40    | 3.8   | 23    | 4.3   | 4.3   | 3.3   | 2.3  | 1.9   | .80   | .50   | .60   |
| 4     | .30   | .40    | 3.5   | 15    | 4.3   | 4.0   | 3.3   | 2.5  | 1.8   | .90   | .50   | .60   |
| 5     | .30   | .50    | 3.5   | 11    | 4.1   | 3.7   | 3.3   | 2.5  | 1.8   | .90   | .50   | .60   |
| 6     | .30   | .40    | 3.5   | 10    | 16    | 3.5   | 3.3   | 2.5  | 1.7   | .80   | .60   | .50   |
| 7     | .30   | .50    | 3.4   | 9.5   | 15    | 3.0   | 3.3   | 2.4  | 1.8   | .80   | .50   | .60   |
| 8     | .30   | .60    | 3.1   | 8.9   | 11    | 3.0   | 3.3   | 2.4  | 2.3   | .80   | .50   | .50   |
| 9     | .30   | .50    | 6.3   | 8.5   | 8.5   | 2.9   | 3.3   | 2.5  | 2.2   | .60   | .40   | .40   |
| 10    | .40   | .60    | 12    | 8.0   | 7.7   | 3.0   | 3.3   | 2.4  | 1.9   | .70   | .40   | .40   |
| 11    | .40   | .60    | 6.6   | 7.6   | 7.2   | 3.0   | 3.2   | 2.4  | 1.6   | .70   | .40   | .50   |
| 12    | .30   | .60    | 8.0   | 7.1   | 6.5   | 3.0   | 3.2   | 2.3  | 1.5   | .70   | .50   | .60   |
| 13    | .40   | .60    | 8.2   | 6.8   | 5.6   | 3.0   | 3.2   | 2.3  | 1.2   | .70   | .50   | .50   |
| 14    | .40   | .70    | 7.7   | 6.8   | 5.4   | 3.1   | 3.2   | 2.4  | 1.1   | .70   | .50   | .50   |
| 15    | .50   | 15     | 7.3   | 6.6   | 5.4   | 3.0   | 3.1   | 2.3  | 1.2   | .70   | .50   | .60   |
| 16    | .80   | 2.0    | 6.6   | 6.4   | 5.2   | 3.1   | 2.8   | 2.3  | 1.4   | .70   | .50   | .50   |
| 17    | .90   | 16     | 6.2   | 6.2   | 5.2   | 2.9   | 3.3   | 2.3  | 1.3   | .60   | .50   | .50   |
| 18    | .50   | 13     | 6.0   | 5.9   | 5.0   | 2.9   | 3.3   | 2.1  | 1.2   | .60   | .40   | .50   |
| 19    | .30   | 4.1    | 5.7   | 5.8   | 4.9   | 3.0   | 3.3   | 1.9  | 1.2   | .60   | .40   | .60   |
| 20    | .30   | 2.7    | 5.4   | 5.7   | 4.7   | 3.1   | 3.3   | 2.1  | 1.2   | .60   | .40   | .60   |
| 21    | .40   | 2.2    | 5.2   | 5.6   | 4.4   | 3.2   | 3.3   | 2.2  | 1.0   | .60   | .40   | .50   |
| 22    | .40   | 14.6   | 5.0   | 5.5   | 4.4   | 3.2   | 3.1   | 2.3  | 1.2   | .60   | .40   | .40   |
| 23    | .40   | 21.3   | 4.7   | 5.4   | 4.4   | 3.1   | 2.9   | 2.1  | 1.3   | .60   | .40   | .40   |
| 24    | .40   | 70     | 4.4   | 5.2   | 4.4   | 3.1   | 2.7   | 2.1  | 1.3   | .60   | .40   | .40   |
| 25    | .40   | 50     | 4.1   | 4.7   | 4.6   | 3.2   | 2.6   | 1.9  | 1.3   | .60   | .40   | .20   |
| 26    | .40   | 30     | 3.9   | 4.7   | 4.5   | 3.1   | 2.5   | 2.2  | 1.2   | .60   | .40   | .30   |
| 27    | .40   | 14     | 3.7   | 4.6   | 4.2   | 3.1   | 2.4   | 2.1  | 1.2   | .60   | .40   | .40   |
| 28    | .40   | 10     | 3.5   | 4.3   | 4.2   | 3.0   | 2.3   | 2.2  | 1.0   | .70   | .40   | .40   |
| 29    | .40   | 8.2    | 130   | 4.3   | ----- | 2.9   | 2.3   | 2.2  | 1.0   | .90   | .40   | .50   |
| 30    | .40   | 7.0    | 94    | 6.6   | ----- | 2.9   | 2.2   | 2.1  | 1.0   | .80   | .60   | .70   |
| 31    | .40   | -----  | 72    | 5.4   | ----- | 2.9   | ----- | 2.1  | ----- | .70   | .70   | ----- |
| TOTAL | 12.50 | 610.40 | 447.5 | 297.1 | 170.6 | 100.1 | 90.5  | 70.2 | 43.6  | 22.20 | 14.60 | 15.30 |
| MEAN  | .40   | 20.3   | 14.4  | 9.58  | 6.09  | 3.23  | 3.02  | 2.27 | 1.45  | .72   | .47   | .51   |
| AC-FT | 25    | 1,210  | 888   | 589   | 338   | 199   | 180   | 139  | 86    | 44    | 29    | 30    |

CALENDAR YEAR 1965 MAX 213 MIN .30 MEAN 4.37 AC-FT 3,160  
 WATER YEAR 1965-66 MAX 213 MIN .30 MEAN 5.19 AC-FT 3,760

Peak discharge (base, 40 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time    | Gage height | Discharge |
|-------|------|-------------|-----------|-------|---------|-------------|-----------|
| 11-17 | 2015 | 2.67        | 46        | 12-29 | Unknown | 5.15        | 700       |
| 11-22 | 1945 | 5.41        | 830       |       |         |             |           |

Note.--No gage-height record Nov. 29 to Dec. 5, Dec. 20 to Jan. 3.

11-0586, Waterman Canyon Creek near Arrowhead Springs, Calif.

Location.--Lat 34°11'35", long 117°16'25", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec. 11, T.1 N., R.4 W., on left bank 0.8 mile northwest of Arrowhead Springs and 1.3 miles north of San Bernardino National Forest boundary.

Drainage area.--4.65 sq mi.

Records available.--November 1911 to October 1914 (published as "near San Bernardino"), December 1919 to September 1966.

Gage.--Digital water-stage recorder and broad-crested weir since September 1938. Datum of gage is 2,045.46 ft above mean sea level, datum of 1929. Prior to December 1919, staff gage at site 300 ft downstream at different datum. Prior to Apr. 15, 1966, graphic water-stage recorder.

Average discharge.--48 years (1912-14, 1920-66), 2.44 cfs (1,770 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

Extremes.--Maximum discharge during year, 876 cfs Dec. 29 (gage height, 5.06 ft), from rating curve extended above 130 cfs on basis of slope-area measurement of maximum flow; no flow for some days.

1920-66; Maximum discharge, 2,350 cfs Mar. 2, 1938, based on rainfall-runoff studies; no flow at times in most years.

Remarks.--Records good. No regulation above station. One small diversion for domestic use above station. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.  | FEB.  | MAR. | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|-------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     | 0.10 | 0      | 4.2   | 9.2   | 2.9   | 2.9  | 1.8   | 1.4  | 1.1   | 0.50 | 0.20 | 0.20  |
| 2     | .10  | 0      | 3.9   | 8.6   | 2.7   | 3.0  | 1.8   | 1.2  | 1.0   | .50  | .20  | .20   |
| 3     | .10  | 0      | 3.4   | 8.0   | 2.7   | 2.9  | 1.8   | 1.0  | 1.0   | .50  | .20  | .10   |
| 4     | 0    | 0      | 3.4   | 7.7   | 2.7   | 2.7  | 1.8   | 1.0  | .90   | .40  | .20  | .10   |
| 5     | 0    | 0      | 3.2   | 7.4   | 2.6   | 2.7  | 1.7   | 1.1  | .90   | .40  | .20  | .10   |
| 6     | .10  | .10    | 3.1   | 7.4   | 6.1   | 2.6  | 1.8   | 1.1  | .80   | .40  | .10  | .10   |
| 7     | .10  | .10    | 2.8   | 7.1   | 5.4   | 2.5  | 1.8   | 1.0  | .90   | .40  | .20  | .10   |
| 8     | .10  | .10    | 2.7   | 6.8   | 4.6   | 2.4  | 1.8   | 1.3  | 1.0   | .40  | .10  | .10   |
| 9     | .10  | .10    | 8.8   | 6.5   | 4.0   | 2.3  | 1.8   | 1.6  | 1.1   | .40  | .10  | .10   |
| 10    | .10  | .10    | 7.1   | 5.8   | 4.0   | 2.3  | 1.9   | 1.6  | .90   | .40  | .10  | .10   |
| 11    | .10  | .10    | 4.2   | 5.6   | 3.9   | 2.2  | 1.9   | 1.6  | .80   | .30  | .10  | .10   |
| 12    | .10  | .10    | 5.9   | 5.2   | 3.8   | 2.2  | 1.9   | 1.4  | .70   | .30  | .10  | .10   |
| 13    | .10  | .20    | 4.2   | 5.0   | 3.6   | 2.2  | 1.8   | 1.2  | .60   | .30  | .10  | .10   |
| 14    | .10  | .30    | 4.8   | 5.0   | 3.4   | 2.1  | 1.7   | 1.2  | .50   | .30  | .10  | .10   |
| 15    | .10  | 1.1    | 4.6   | 5.0   | 3.3   | 2.1  | 1.6   | 1.2  | .50   | .30  | .10  | .10   |
| 16    | .10  | 4.4    | 4.4   | 5.0   | 3.3   | 2.1  | 1.6   | 1.2  | .50   | .30  | .10  | .10   |
| 17    | .10  | 13     | 4.0   | 5.0   | 3.3   | 2.0  | 1.8   | 1.2  | .50   | .20  | .10  | .10   |
| 18    | .10  | 4.0    | 3.8   | 5.0   | 3.3   | 2.0  | 2.0   | 1.1  | .50   | .20  | .10  | .10   |
| 19    | .10  | 1.8    | 3.6   | 4.8   | 3.2   | 1.9  | 2.1   | 1.0  | .50   | .20  | .10  | .20   |
| 20    | .10  | 1.3    | 3.2   | 4.6   | 3.2   | 1.9  | 1.8   | 1.0  | .50   | .20  | .10  | .20   |
| 21    | .10  | 1.1    | 3.2   | 4.4   | 3.1   | 1.8  | 1.6   | 1.0  | .50   | .20  | .10  | .10   |
| 22    | .10  | 106    | 3.3   | 4.0   | 3.1   | 1.8  | 1.5   | 1.1  | .60   | .20  | .10  | .10   |
| 23    | 0    | 65     | 3.1   | 3.8   | 3.1   | 1.8  | 1.2   | 1.1  | .60   | .20  | .10  | .10   |
| 24    | 0    | 32     | 3.0   | 3.4   | 3.1   | 2.7  | 1.3   | 1.1  | .60   | .20  | 0    | .10   |
| 25    | 0    | 26     | 2.9   | 3.3   | 3.1   | 2.8  | 1.3   | 1.1  | .60   | .20  | 0    | .10   |
| 26    | 0    | 17     | 2.8   | 3.3   | 3.1   | 2.4  | 1.3   | 1.1  | .60   | .20  | 0    | .10   |
| 27    | 0    | 9.2    | 2.7   | 3.2   | 3.0   | 2.3  | 1.4   | 1.1  | .50   | .20  | .10  | .10   |
| 28    | 0    | 6.8    | 2.7   | 3.2   | 2.9   | 2.2  | 1.4   | 1.1  | .50   | .20  | .10  | .10   |
| 29    | 0    | 5.6    | 69    | 3.2   | ----- | 2.1  | 1.5   | 1.2  | .50   | .30  | .10  | .20   |
| 30    | 0    | 4.4    | 13    | 4.0   | ----- | 1.9  | 1.5   | 1.1  | .50   | .30  | .10  | .30   |
| 31    | 0    | 11     | 11    | 2.1   | ----- | 1.8  | ----- | 1.1  | ----- | .20  | .10  | ----- |
| TOTAL | 2.00 | 299.90 | 202.0 | 163.6 | 96.5  | 71.6 | 50.3  | 36.5 | 20.70 | 9.30 | 3.40 | 3.80  |
| MEAN  | .07  | 10.0   | 6.52  | 5.28  | 3.45  | 2.31 | 1.68  | 1.18 | .69   | .30  | .11  | .13   |
| AC-FT | 4.0  | 595    | 401   | 324   | 191   | 142  | 100   | 72   | 41    | 18   | 6.7  | 7.5   |

CALENDAR YEAR 1965 MAX 106 MIN 0 MEAN 2.16 AC-FT 1,570  
 WATER YEAR 1965-66 MAX 106 MIN 0 MEAN 2.63 AC-FT 1,900

## Peak discharge (base, 35 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-23 | 0200 | 4.44        | 548       | 12-29 | 1730 | 5.06        | 876       |
| 12-9  | 2300 | 2.80        | 55        |       |      |             |           |

## SANTA ANA RIVER BASIN

11-0590. Warm Creek Floodway at San Bernardino, Calif.  
(formerly published as Warm Creek Floodway near San Bernardino, Calif.--Corrected)

Location.--Lat 34°05'30", long 117°16'50", in San Bernardino Grant, on left bank 250 ft downstream from Mill Street, and about 1.5 miles upstream from mouth, San Bernardino County.

Drainage area.--47.5 sq mi.

Records available.--January 1961 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 1,010 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,400 cfs Nov. 23 (gage height, 3.10 ft), from rating curve extended same as below; maximum gage height, 6.33 ft Nov. 14 (backwater from debris); no flow for most of year.  
1961-66: Maximum discharge, 3,420 cfs Apr. 9, 1965 (gage height, 3.86 ft), from rating curve extended above 180 cfs; no flow for most of each year.

Remarks.--Records poor. Flow partly regulated by percolation basins. Del Rosa Water Co. diverts from East Twin Creek for domestic use and irrigation. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.   | Jan.   | Feb.   | Mar.  | Apr.  | May | June | July | Aug. | Sept. |
|-------|------|---------|--------|--------|--------|-------|-------|-----|------|------|------|-------|
| 1     | 0    | 0       | 0      | 12     | 2.7    | 0     | 0     |     |      | 0    |      |       |
| 2     | 0    | 0       | 0      | 4.0    | .70    | 0     | 0     |     |      | .40  |      |       |
| 3     | 0    | 0       | 0      | 3.3    | .20    | 0     | 0     |     |      | 0    |      |       |
| 4     | 0    | 0       | 0      | 2.7    | .10    | 0     | 0     |     |      | 0    |      |       |
| 5     | 0    | 0       | 0      | 2.7    | .10    | 0     | 0     |     |      | 0    |      |       |
| 6     | 0    | 0       | 0      | 3.3    | 75     | 0     | 0     |     |      | 0    |      |       |
| 7     | 0    | 0       | 0      | 3.3    | 101    | 0     | 0     |     |      | 0    |      |       |
| 8     | 0    | 0       | 0      | 5.6    | 22     | 0     | 0     |     |      | 0    |      |       |
| 9     | 0    | 0       | 97     | 2.8    | 4.8    | 0     | 0     |     |      | 0    |      |       |
| 10    | 0    | 0       | 51     | 4.0    | 1.0    | 0     | 0     |     |      | 0    |      |       |
| 11    | 0    | 0       | 4.8    | 6.5    | 0      | 0     | 0     |     |      | 0    |      |       |
| 12    | 0    | 0       | 16     | 5.6    | 0      | 0     | 0     |     |      | 0    |      |       |
| 13    | .70  | 0       | 13     | 3.3    | .10    | 0     | 0     |     |      | 0    |      |       |
| 14    | .40  | 43      | 23     | .80    | 1.2    | 0     | 0     |     |      | 0    |      |       |
| 15    | .30  | 16      | 5.3    | 6.8    | 0      | 0     | 0     |     |      | 0    |      |       |
| 16    | .30  | 109     | .70    | 15     | .70    | 0     | 0     |     |      | 0    |      |       |
| 17    | 0    | 40      | .20    | 12     | 0      | 0     | .20   |     |      | 0    |      |       |
| 18    | .40  | 20      | .10    | 3.6    | 0      | 0     | 0     |     |      | 0    |      |       |
| 19    | 0    | 1.8     | .70    | 7.5    | 0      | 0     | .30   |     |      | 0    |      |       |
| 20    | 0    | 1.4     | 1.8    | 3.1    | 0      | 0     | 0     |     |      | 0    |      |       |
| 21    | 0    | .70     | .70    | 7.5    | .10    | 0     | 0     |     |      | 0    |      |       |
| 22    | 0    | 619     | 15     | 7.5    | 0      | 0     | 0     |     |      | 0    |      |       |
| 23    | 0    | 230     | 1.1    | 7.5    | 0      | .10   | 0     |     |      | 0    |      |       |
| 24    | 0    | 58      | 1.2    | 7.5    | 0      | .64   | 0     |     |      | 0    |      |       |
| 25    | .80  | 77      | 1.0    | 6.5    | 0      | 1.0   | 0     |     |      | 0    |      |       |
| 26    | .30  | 4.0     | 0      | 6.5    | 0      | 0     | 0     |     |      | 0    |      |       |
| 27    | 0    | 2.2     | 0      | 6.5    | 0      | 0     | 0     |     |      | 0    |      |       |
| 28    | 0    | 1.4     | 0      | 6.5    | 0      | 0     | 0     |     |      | 0    |      |       |
| 29    | 0    | .20     | 266    | 4.0    | -----  | 0     | 0     |     |      | 0    |      |       |
| 30    | 0    | 0       | 77     | 186    | -----  | 0     | 0     |     |      | 0    |      |       |
| 31    | 0    | -----   | 47     | 7.5    | -----  | 0     | ----- |     |      | 0    |      | ----- |
| Total | 3.20 | 1223.70 | 622.60 | 361.40 | 209.70 | 65.10 | 0.50  | 0   | 0    | 0.40 | 0    | 0     |
| Mean  | 0.10 | 40.8    | 20.1   | 11.7   | 7.49   | 2.10  | 0.02  | 0   | 0    | 0.01 | 0    | 0     |
| Ac-ft | 6.3  | 2,430   | 1,230  | 717    | 416    | 129   | 1.0   | 0   | 0    | 0.8  | 0    | 0     |

Calendar year 1965 Max 313 Min 0 Mean 8.79 Ac-ft 6,360  
Water year 1965-66 Max 266 Min 0 Mean 6.81 Ac-ft 4,930



11-0604, Warm Creek near San Bernardino, Calif.

Location.--Lat 34°04'50", long 117°17'50", in San Bernardino Grant, on right bank 265 ft downstream from State Highway 395 bridge, 0.1 mile downstream from Lytle Creek (east channel), and 1.9 miles southeast of San Bernardino, San Bernardino County.

Drainage area.--15.0 sq mi.

Records available.--February 1964 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 975 ft (from topographic map).

Extremes.--Maximum discharge during year, 606 cfs Nov. 22 (gage height, 6.33 ft), on basis of slope-area measurement of maximum flow; no flow for most of year.

1964-66: Maximum discharge, 732 cfs Mar. 22, 1964 (gage height, 5.82 ft); from rating curve extended above 320 cfs; no flow for most of each year.

Remarks.--Records poor. At times discharge diverted above station to Warm Creek floodway. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                 |               |                  |
|-----------------|---------------|------------------|
| Nov. 14..... 15 | Dec. 9.....32 | Dec. 31..... 3.0 |
| 15..... 8.2     | 10.....21     | Jan. 30.....13   |
| 16..... 56      | 12..... 5.3   | Feb. 6.....21    |
| 17..... 5.3     | 13..... 8.9   | 7.....14         |
| 22.....191      | 14..... 5.1   | 8..... .40       |
| 23..... 65      | 29.....35     | Mar. 24..... 7.9 |
| 24..... 28      | 30..... 1.1   | 25..... .40      |
| 25..... 25      |               |                  |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 393.5    | 191     | 0       | 13.1 | 780       |
| December.....           | 111.4    | 35      | 0       | 3.59 | 221       |
| January 1966.....       | 13       | 13      | 0       | .42  | 26        |
| February.....           | 35.4     | 21      | 0       | 1.26 | 70        |
| March.....              | 8.3      | 7.9     | 0       | .27  | 16        |
| Calendar year 1965..... | -        | 191     | 0       | 2.48 | 1,800     |
| Water year 1965-66..... | -        | 191     | 0       | 1.54 | 1,110     |

Note.--Flow occurred only on days listed above.

11-0605, Meeks and Daley Canal near Colton, Calif.

Location.--Lat 34°04'47", long 117°18'00", in San Bernardino Grant, at point of diversion from Warm Creek and 1.5 miles northeast of Colton, San Bernardino County.

Records available.--September 1920 to September 1966. Published as Warm Creek and Meeks and Daley Canal near Colton, October 1950 to September 1961.

Gage.--Graphic water-stage recorder. Altitude of gage is 965 ft (from topographic map).

Extremes,--1920-66: Maximum daily discharge, 25 cfs Mar. 2, 1938; no flow at times in most years.

Remarks.--Records good. Canal diverts water from right bank of Warm Creek 1.6 miles northeast of Colton for irrigation in vicinity of Colton, Riverside and Corona. All flow passing station this year was pumped from ground-water basin. See schematic diagram of Santa Ana River basin.

| Day                | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1                  | 9.5   | 8.7   | 0.50  | 0     | 2.2   | 0.80  | 6.9   | 5.9   | 7.3   | 8.4   | 7.6   | 6.9   |
| 2                  | 9.5   | 8.7   | 1.0   | 0     | 1.0   | .80   | 9.9   | 5.9   | 7.3   | 8.4   | 7.6   | 6.9   |
| 3                  | 9.5   | 8.0   | 2.0   | 0     | 0     | .80   | 9.5   | 5.9   | 7.3   | 8.4   | 7.6   | 6.9   |
| 4                  | 9.5   | 8.4   | 2.0   | 0     | 0     | .80   | 7.4   | 9.5   | 7.3   | 8.4   | 7.6   | 6.9   |
| 5                  | 9.5   | 8.4   | 2.0   | 0     | 0     | .30   | 4.4   | 10    | 7.3   | 8.4   | 7.6   | 6.9   |
| 6                  | 9.1   | 7.6   | 2.0   | 0     | 0     | 0     | 4.6   | 10    | 7.3   | 8.4   | 7.6   | 6.9   |
| 7                  | 9.1   | 5.8   | 2.0   | 0     | 0     | 1.0   | 4.4   | 10    | 7.3   | 8.4   | 7.6   | 6.9   |
| 8                  | 9.1   | 2.4   | 2.0   | 0     | 0     | 2.2   | 4.0   | 10    | 7.6   | 8.4   | 7.6   | 6.9   |
| 9                  | 9.1   | 2.7   | .70   | 0     | 0     | 2.2   | 4.0   | 10    | 7.6   | 8.4   | 7.6   | 6.9   |
| 10                 | 9.1   | 3.0   | 0     | 0     | 0     | 2.2   | 4.0   | 8.5   | 7.6   | 8.4   | 7.6   | 6.9   |
| 11                 | 9.1   | 4.6   | 0     | 0     | 0     | 2.4   | 4.0   | 7.3   | 5.6   | 8.0   | 7.6   | 6.6   |
| 12                 | 8.4   | 7.6   | 0     | 0     | 0     | 2.7   | 4.0   | 7.3   | 4.1   | 8.0   | 7.6   | 6.6   |
| 13                 | 8.0   | 7.6   | 0     | 0     | 0     | 2.7   | 4.0   | 7.3   | 7.3   | 8.0   | 7.6   | 6.6   |
| 14                 | 8.0   | 7.6   | 0     | 0     | 0     | 3.0   | 5.1   | 7.3   | 7.3   | 8.4   | 7.6   | 6.6   |
| 15                 | 8.0   | 3.7   | 0     | 1.8   | 0     | 3.0   | 6.6   | 7.3   | 7.3   | 8.4   | 7.3   | 6.6   |
| 16                 | 8.0   | .80   | 0     | .50   | 0     | 3.0   | 6.6   | 7.3   | 7.3   | 8.4   | 7.3   | 6.6   |
| 17                 | 8.0   | 0     | 0     | 0     | 0     | 3.0   | 6.6   | 7.3   | 6.9   | 8.4   | 7.3   | 5.9   |
| 18                 | 8.0   | 0     | 0     | 0     | 0     | 3.0   | 6.6   | 7.3   | 6.9   | 8.4   | 7.3   | 6.2   |
| 19                 | 8.0   | 0     | 0     | 0     | 0     | 3.0   | 6.6   | 7.3   | 6.9   | 8.4   | 7.3   | 6.6   |
| 20                 | 8.0   | 0     | 0     | 0     | 0     | 3.6   | 6.6   | 7.3   | 6.9   | 8.4   | 7.3   | 6.6   |
| 21                 | 8.0   | 0     | 0     | .80   | 0     | 3.6   | 9.4   | 7.3   | 6.9   | 8.4   | 7.3   | 6.6   |
| 22                 | 7.6   | 0     | 0     | 2.4   | 0     | 4.6   | 11    | 7.7   | 6.9   | 8.4   | 7.3   | 6.6   |
| 23                 | 8.0   | 0     | 0     | 2.2   | 0     | 4.6   | 8.9   | 8.4   | 6.9   | 8.4   | 6.2   | 6.6   |
| 24                 | 8.0   | 0     | 0     | 2.2   | 0     | 5.7   | 8.2   | 7.6   | 6.9   | 8.4   | 6.9   | 6.6   |
| 25                 | 8.0   | 0     | 0     | 2.2   | 0     | 4.6   | 11    | 7.6   | 6.9   | 8.4   | 6.9   | 6.6   |
| 26                 | 8.0   | 0     | 0     | 2.2   | 0     | 4.6   | 11    | 7.6   | 6.9   | 8.4   | 6.9   | 6.6   |
| 27                 | 8.0   | 0     | 0     | 2.2   | 0     | 5.0   | 11    | 7.6   | 8.0   | 8.4   | 6.9   | 6.6   |
| 28                 | 8.7   | 0     | 0     | 2.2   | 0     | 5.0   | 11    | 7.6   | 8.4   | 8.0   | 6.9   | 6.6   |
| 29                 | 2.2   | 0     | 0     | 2.0   | ----- | 4.6   | 11    | 7.3   | 8.4   | 8.0   | 6.9   | 6.2   |
| 30                 | 8.7   | 0     | 0     | 2.0   | ----- | 4.6   | 8.8   | 7.3   | 8.4   | 8.0   | 6.9   | 6.6   |
| 31                 | 8.4   | ----- | 0     | 1.8   | ----- | 4.6   | ----- | 7.3   | ----- | 8.0   | 6.9   | ----- |
| Total              | 265.8 | 956.0 | 14.20 | 24.50 | 3.2   | 92.00 | 217.1 | 242.0 | 215.0 | 256.8 | 226.9 | 199.5 |
| Mean               | 8.57  | 3.19  | 0.46  | 0.79  | 0.11  | 2.97  | 7.24  | 7.81  | 7.17  | 8.28  | 7.32  | 6.65  |
| Ac-ft              | 527   | 190   | 28    | 49    | 6.3   | 182   | 431   | 480   | 426   | 509   | 450   | 396   |
| Calendar year 1965 | Max   | 18    | Min   | 0     | Mean  | 7.71  | Ac-ft | 5.580 |       |       |       |       |
| Water year 1965-66 | Max   | 11    | Min   | 0     | Mean  | 5.08  | Ac-ft | 3.670 |       |       |       |       |

11-0620, Lytle Creek near Fontana, Calif.

Location.--Lat 34°12'44", long 117°27'26", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 36, T.2 N., R. 6 W., on right bank 75 ft upstream from highway bridge, 0.7 mile upstream from right tributary, and 8 miles north of Fontana.

Drainage area.--46.3 sq mi.

Records available.--October 1918 to September 1966. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to September 1966 (published as "at mouth of canyon near Rialto" 1898-99, as "near San Bernardino" 1904-18, and as Lytle Creek and Fontana Pipe line near Fontana 1919-31). Monthly discharge only for some periods published in WSP 1315-B.

Gage.--Graphic water-stage recorder on creek and dual arch-culvert control (since 1964), effective at higher stages; graphic water-stage recorders and sharp-crested weirs on conduit and infiltration line. Altitude of gage is 2,380 ft (from topographic map). October 1918 to Mar. 22, 1938, at site 1 mile downstream at different datum. Prior to Nov. 20, 1963, at site 75 feet downstream at datum 4.58 ft lower.

Average discharge (creek only).--48 years, 10.6 cfs (7,670 acre-ft per year); median of yearly mean discharges, 1.7 cfs (1,200 acre-ft per year).

(combined).--63 years, 40.8 cfs (29,540 acre-ft per year); median of yearly mean discharges, 32 cfs (23,200 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 9,120 cfs Dec. 29 (gage height, 10.78 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 15.

1918-66; Maximum discharge, 25,200 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow in parts of each year.

(combined).--Maximum discharge during year, 9,130 cfs Dec. 29; minimum daily, 9.1 cfs Oct. 26.

1898-99, 1904-66; Maximum discharge, 25,200 cfs Mar. 2, 1938; minimum daily, 6.0 cfs Nov. 7, 1963.

Remarks.--Records good except those above 100 cfs, which are poor. No regulation above station. Southern California Edison Co.'s Lytle Creek conduit diverts 2.3 miles upstream for power development, and Fontana Union Water Co. collects water from an infiltration line upstream for irrigation. For records of combined discharge of Lytle Creek and diversions, see following page. See schematic diagram of Santa Ana River basin.

Cooperation.--Records of discharge through infiltration line furnished by Fontana Union Water Co.; water-stage recorder graph for Lytle Creek conduit furnished by Southern California Edison Co. in connection with a Federal Power Commission project.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     |      | 0       | 18    | 350   | 47    | 28    | 27    | 15    | 15    | 7.6   | 3.6  | 2.3   |
| 2     |      | 0       | 65    | 300   | 43    | 28    | 27    | 14    | 15    | 7.6   | 4.0  | 2.0   |
| 3     |      | 0       | 41    | 260   | 38    | 27    | 30    | 15    | 14    | 6.5   | 4.0  | 2.0   |
| 4     |      | 0       | 51    | 185   | 38    | 26    | 30    | 21    | 14    | 5.5   | 5.5  | 2.0   |
| 5     |      | 0       | 43    | 170   | 36    | 23    | 30    | 21    | 12    | 5.0   | 3.2  | 2.0   |
| 6     |      | 0       | 40    | 131   | 53    | 22    | 30    | 21    | 12    | 4.5   | 3.2  | 1.8   |
| 7     |      | 0       | 38    | 123   | 51    | 21    | 30    | 21    | 12    | 4.5   | 3.6  | 1.5   |
| 8     |      | 0       | 38    | 108   | 49    | 21    | 33    | 21    | 12    | 4.5   | 4.0  | 1.1   |
| 9     |      | 0       | 45    | 102   | 49    | 20    | 32    | 21    | 12    | 4.0   | 4.0  | .90   |
| 10    |      | 0       | 43    | 92    | 47    | 18    | 32    | 21    | 11    | 3.2   | 5.0  | .90   |
| 11    |      | 0       | 41    | 85    | 45    | 18    | 30    | 22    | 10    | 2.9   | 5.0  | 1.1   |
| 12    |      | 0       | 43    | 84    | 45    | 17    | 27    | 18    | 9.5   | 2.9   | 5.0  | 1.1   |
| 13    |      | 0       | 39    | 82    | 45    | 16    | 26    | 18    | 8.2   | 3.2   | 4.0  | 1.3   |
| 14    |      | 0       | 39    | 79    | 41    | 16    | 26    | 18    | 8.2   | 3.2   | 3.9  | 1.3   |
| 15    |      | 0       | 39    | 70    | 38    | 16    | 26    | 17    | 8.2   | 2.9   | 3.6  | 1.3   |
| 16    |      | 20      | 39    | 63    | 36    | 16    | 27    | 16    | 8.8   | 2.9   | 3.6  | .80   |
| 17    |      | 429     | 36    | 59    | 34    | 17    | 28    | 17    | 8.2   | 2.6   | 2.9  | .60   |
| 18    |      | 168     | 33    | 59    | 34    | 18    | 30    | 16    | 8.2   | 3.2   | 2.6  | .90   |
| 19    |      | 29      | 32    | 57    | 33    | 18    | 30    | 16    | 7.6   | 3.6   | 2.6  | 1.8   |
| 20    |      | 16      | 28    | 55    | 32    | 20    | 28    | 16    | 7.6   | 5.5   | 2.3  | .90   |
| 21    |      | .5      | 24    | 53    | 30    | 23    | 28    | 15    | 7.6   | 8.2   | 2.3  | .80   |
| 22    |      | 2,370   | 24    | 51    | 28    | 26    | 27    | 16    | 8.2   | 7.0   | 2.3  | .60   |
| 23    |      | 3,000   | 22    | 49    | 28    | 27    | 26    | 15    | 8.2   | 6.5   | 2.0  | .40   |
| 24    |      | 1,200   | 20    | 49    | 28    | 28    | 23    | 15    | 8.2   | 6.0   | 2.0  | .40   |
| 25    |      | 500     | 20    | 49    | 28    | 33    | 21    | 15    | 7.6   | 6.0   | 2.0  | .30   |
| 26    |      | 150     | 17    | 45    | 28    | 33    | 21    | 15    | 7.6   | 6.5   | 2.3  | .30   |
| 27    |      | 131     | 15    | 41    | 28    | 32    | 20    | 17    | 7.6   | 4.0   | 2.3  | .20   |
| 28    |      | 112     | 15    | 39    | 28    | 28    | 20    | 15    | 7.6   | 3.2   | 2.0  | .10   |
| 29    |      | 70      | 1,540 | 39    | ----- | 26    | 18    | 15    | 7.6   | 5.5   | 2.0  | .20   |
| 30    |      | 65      | 465   | 52    | ----- | 26    | 17    | 15    | 7.6   | 5.0   | 2.0  | .10   |
| 31    |      | -----   | 400   | 45    | ----- | 28    | ----- | 15    | ----- | 4.5   | 2.6  | ----- |
| Total | 0    | 8,260.5 | 3,353 | 3,026 | 1,060 | 716   | 800   | 533   | 291.3 | 148.2 | 99.4 | 31.00 |
| Mean  | 0    | 275     | 108   | 97.6  | 37.9  | 23.1  | 26.7  | 17.2  | 9.71  | 4.78  | 3.21 | 1.03  |
| Ac-ft | 0    | 16,380  | 6,650 | 6,000 | 2,100 | 1,420 | 1,590 | 1,060 | 578   | 294   | 197  | 61    |

Calendar year 1965 Max 3,000 Min 0 Mean 32.3 Ac-ft 23,360  
 Water year 1965-66 Max 3,000 Min 0 Mean 50.2 Ac-ft 36,330

Peak discharge (base, 200 cfs)

| Date  | Time  | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|-------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0200  | 4.33        | 770       | 12-29 | 1600 | 10.78       | 9,120     |
| 11-22 | +1900 | 10.72       | 9,000     |       |      |             |           |

† about

## SANTA ANA RIVER BASIN

11-0620. Lytle Creek near Fontana, Calif.--Continued

Combined discharge, in cubic feet per second, of Lytle Creek, Southern California Edison Co.'s Lytle Creek conduit, and Fontana Union Water Co.'s infiltration line, near Fontana, Calif., water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 9.6   | 9.9     | 26    | 355   | 76    | 57    | 57    | 45    | 44    | 36    | 32    | 30    |
| 2     | 9.6   | 9.9     | 75    | 305   | 72    | 57    | 57    | 44    | 44    | 36    | 33    | 30    |
| 3     | 9.6   | 9.9     | 52    | 265   | 67    | 56    | 60    | 45    | 43    | 35    | 33    | 31    |
| 4     | 9.6   | 9.6     | 73    | 190   | 67    | 56    | 60    | 51    | 44    | 34    | 32    | 31    |
| 5     | 9.6   | 9.8     | 73    | 185   | 65    | 53    | 60    | 51    | 42    | 34    | 32    | 31    |
| 6     | 9.4   | 9.8     | 70    | 160   | 82    | 52    | 60    | 51    | 42    | 33    | 32    | 30    |
| 7     | 9.4   | 10      | 68    | 153   | 80    | 51    | 60    | 51    | 42    | 33    | 32    | 29    |
| 8     | 9.4   | 10      | 67    | 138   | 78    | 51    | 63    | 51    | 42    | 33    | 33    | 28    |
| 9     | 9.6   | 10      | 74    | 132   | 78    | 50    | 62    | 51    | 42    | 33    | 33    | 28    |
| 10    | 9.9   | 10      | 72    | 122   | 76    | 48    | 62    | 50    | 41    | 32    | 34    | 28    |
| 11    | 9.4   | 10      | 70    | 115   | 74    | 48    | 60    | 51    | 40    | 32    | 34    | 28    |
| 12    | 9.4   | 10      | 72    | 113   | 74    | 47    | 57    | 47    | 39    | 32    | 34    | 28    |
| 13    | 10    | 10      | 68    | 112   | 74    | 46    | 53    | 47    | 38    | 32    | 33    | 28    |
| 14    | 10    | 11      | 68    | 109   | 70    | 46    | 56    | 47    | 37    | 32    | 33    | 28    |
| 15    | 10    | 16      | 68    | 100   | 67    | 46    | 56    | 46    | 37    | 32    | 32    | 28    |
| 16    | 9.9   | 33      | 68    | 92    | 64    | 46    | 57    | 45    | 38    | 32    | 32    | 28    |
| 17    | 9.9   | 432     | 65    | 88    | 63    | 47    | 58    | 46    | 37    | 31    | 32    | 28    |
| 18    | 9.9   | 174     | 62    | 88    | 63    | 48    | 60    | 45    | 37    | 32    | 31    | 28    |
| 19    | 9.9   | 46      | 62    | 86    | 62    | 48    | 60    | 45    | 36    | 32    | 31    | 29    |
| 20    | 9.9   | 37      | 58    | 84    | 61    | 50    | 57    | 45    | 36    | 34    | 31    | 28    |
| 21    | 9.4   | 18      | 54    | 82    | 59    | 53    | 56    | 44    | 36    | 35    | 31    | 29    |
| 22    | 9.6   | 2,390   | 54    | 80    | 57    | 56    | 57    | 45    | 37    | 36    | 31    | 29    |
| 23    | 9.2   | 3,010   | 52    | 78    | 57    | 57    | 56    | 44    | 37    | 35    | 31    | 29    |
| 24    | 9.3   | 1,210   | 50    | 77    | 57    | 58    | 53    | 44    | 37    | 35    | 31    | 29    |
| 25    | 9.8   | 505     | 50    | 79    | 57    | 63    | 51    | 44    | 36    | 35    | 31    | 29    |
| 26    | 9.1   | 155     | 47    | 75    | 57    | 63    | 51    | 44    | 36    | 35    | 31    | 29    |
| 27    | 9.4   | 136     | 45    | 71    | 57    | 62    | 50    | 46    | 36    | 33    | 31    | 29    |
| 28    | 9.7   | 117     | 45    | 68    | 57    | 58    | 50    | 44    | 36    | 32    | 31    | 28    |
| 29    | 9.7   | 75      | 1,560 | 68    | ----- | 56    | 48    | 44    | 36    | 34    | 31    | 29    |
| 30    | 9.7   | 70      | 470   | 81    | ----- | 56    | 47    | 44    | 36    | 34    | 31    | 29    |
| 31    | 9.9   | -----   | 405   | 74    | ----- | 58    | ----- | 44    | ----- | 33    | 30    | ----- |
| Total | 298.8 | 8,563.9 | 4,143 | 3,825 | 1,871 | 1,643 | 1,694 | 1,441 | 1,164 | 1,037 | 989   | 866   |
| Mean  | 9.64  | 285     | 134   | 123   | 66.8  | 53.0  | 56.5  | 46.5  | 38.8  | 33.5  | 31.9  | 28.9  |
| Ac-ft | 593   | 16,990  | 8,220 | 7,590 | 3,710 | 3,260 | 3,360 | 2,860 | 2,310 | 2,060 | 1,960 | 1,720 |

Calendar year 1965 Max 3.010 Min 9.1 Mean 46.8 Ac-ft 33,900  
 Water year 1965-66 Max 3.010 Min 9.1 Mean 75.4 Ac-ft 54,620

Peak discharge (base, 200 cfs).

| Date  | Time  | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|-------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0200  | -           | 770       | 12-29 | 1600 | -           | 9,130     |
| 11-22 | †1900 | -           | 9,000     |       |      |             |           |

† about

11-0630. Cajon Creek near Keenbrook, Calif.

Location (revised).--Lat 34°16'01", long 117°27'33", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.12, T.2 N., R.6 W., on right bank 1,300 ft upstream from Lone Pine Creek and 1.2 miles north of Keenbrook. Prior to Jan. 26, 1966, at site 300 ft upstream.

Drainage area.--40.6 sq mi.

Records available.--December 1919 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 2,630 ft (from topographic map). Prior to Oct. 24, 1935, at site 1,000 ft downstream at different datum. Oct. 24, 1935, to Jan. 26, 1966, at site 300 ft upstream at datum 6.68 ft higher. Prior to Aug. 22, 1962, graphic water-stage recorder.

Average discharge.--46 years (1920-66), 8.66 cfs (6,270 acre-ft per year); median of yearly mean discharges, 5.5 cfs (4,000 acre-ft per year).

Extremes.--Maximum discharge during year, 12,700 cfs Dec. 29 (gage height, 16.48 ft, from profile of floodmarks, present site and datum), on basis of slope-area measurement of maximum flow; minimum daily, 1.3 cfs Oct. 21, 22.  
1919-66: Maximum discharge, 14,500 cfs Mar. 2, 1938 (gage height, 26.0 ft, present datum, at site then in use), result of slope-area measurement of maximum flow; minimum, 0.05 cfs June 25, 1920.

Remarks.--Records good below 10 cfs and poor above. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|---------|---------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 1.6  | 1.5     | 19      | 64    | 16    | 9.2   | 7.1   | 3.9   | 3.4   | 4.2  | 2.8  | 3.2   |
| 2     | 1.6  | 1.5     | 17      | 51    | 15    | 8.8   | 7.1   | 4.1   | 3.4   | 4.1  | 3.0  | 3.2   |
| 3     | 1.6  | 1.5     | 16      | 45    | 14    | 8.3   | 6.7   | 4.1   | 3.4   | 4.0  | 3.2  | 3.3   |
| 4     | 1.7  | 1.5     | 15      | 41    | 14    | 8.3   | 6.7   | 4.1   | 3.2   | 4.0  | 3.1  | 3.4   |
| 5     | 1.7  | 1.6     | 14      | 39    | 14    | 8.3   | 6.6   | 4.1   | 3.2   | 3.8  | 3.0  | 3.5   |
| 6     | 1.6  | 1.6     | 13      | 35    | 26    | 8.3   | 6.1   | 4.1   | 3.0   | 3.6  | 3.0  | 3.5   |
| 7     | 1.5  | 1.6     | 12      | 32    | 37    | 7.7   | 6.1   | 4.0   | 3.0   | 3.5  | 3.0  | 3.3   |
| 8     | 1.6  | 1.6     | 11      | 27    | 33    | 7.1   | 6.1   | 4.3   | 3.0   | 3.3  | 3.0  | 3.2   |
| 9     | 1.6  | 1.6     | 18      | 24    | 29    | 6.4   | 6.1   | 4.6   | 2.8   | 3.2  | 3.0  | 3.1   |
| 10    | 1.7  | 1.6     | 46      | 23    | 26    | 6.1   | 5.8   | 4.7   | 2.8   | 3.2  | 3.2  | 3.2   |
| 11    | 1.6  | 1.6     | 28      | 21    | 23    | 6.1   | 5.8   | 4.7   | 2.6   | 3.2  | 3.6  | 3.2   |
| 12    | 1.6  | 1.6     | 30      | 20    | 22    | 6.1   | 6.0   | 4.6   | 2.7   | 3.1  | 3.6  | 3.3   |
| 13    | 1.6  | 1.6     | 30      | 19    | 21    | 6.8   | 5.8   | 4.4   | 2.8   | 3.0  | 3.6  | 3.0   |
| 14    | 1.6  | 1.8     | 26      | 18    | 19    | 7.2   | 5.8   | 4.4   | 2.8   | 3.1  | 3.0  | 2.9   |
| 15    | 1.6  | 2.4     | 22      | 17    | 18    | 7.9   | 5.8   | 4.1   | 2.8   | 2.8  | 2.8  | 2.7   |
| 16    | 1.6  | 13      | 17      | 17    | 17    | 7.9   | 5.7   | 4.1   | 2.8   | 2.8  | 2.6  | 2.4   |
| 17    | 1.5  | 215     | 16      | 17    | 16    | 8.3   | 5.2   | 4.0   | 2.8   | 3.0  | 2.2  | 2.2   |
| 18    | 1.5  | 62      | 14      | 16    | 15    | 8.7   | 5.4   | 3.9   | 2.5   | 3.0  | 2.1  | 2.1   |
| 19    | 1.4  | 11      | 12      | 16    | 14    | 8.7   | 5.5   | 4.1   | 2.7   | 3.0  | 2.8  | 2.0   |
| 20    | 1.4  | 4.6     | 12      | 16    | 13    | 9.2   | 4.9   | 4.1   | 2.8   | 2.8  | 2.8  | 1.7   |
| 21    | 1.3  | 2.5     | 12      | 15    | 13    | 9.2   | 4.9   | 4.1   | 3.0   | 3.0  | 2.8  | 1.8   |
| 22    | 1.3  | 661     | 11      | 15    | 12    | 9.7   | 4.9   | 4.1   | 2.9   | 3.0  | 3.0  | 1.7   |
| 23    | 1.4  | 810     | 11      | 15    | 11    | 9.2   | 4.9   | 3.9   | 3.0   | 3.0  | 3.0  | 1.8   |
| 24    | 1.4  | 757     | 10      | 14    | 11    | 8.2   | 4.7   | 3.9   | 3.2   | 2.8  | 3.0  | 2.3   |
| 25    | 1.4  | 143     | 10      | 14    | 10    | 8.9   | 4.4   | 3.9   | 3.6   | 2.8  | 2.8  | 2.4   |
| 26    | 1.4  | 48      | 9.8     | 14    | 9.8   | 9.0   | 4.1   | 3.9   | 3.6   | 2.8  | 3.1  | 2.7   |
| 27    | 1.4  | 40      | 9.4     | 14    | 9.6   | 8.7   | 4.1   | 3.9   | 3.6   | 2.8  | 3.2  | 2.9   |
| 28    | 1.4  | 30      | 9.4     | 13    | 9.4   | 8.7   | 4.1   | 3.5   | 3.9   | 2.6  | 3.2  | 2.8   |
| 29    | 1.4  | 24      | 2,960   | 13    | ----- | 8.0   | 3.9   | 3.7   | 4.0   | 2.8  | 3.1  | 2.6   |
| 30    | 1.5  | 22      | 224     | 13    | ----- | 7.1   | 3.9   | 3.6   | 4.1   | 3.0  | 3.0  | 2.4   |
| 31    | 1.4  | -----   | 96      | 14    | ----- | 7.1   | ----- | 3.6   | ----- | 3.0  | 3.0  | ----- |
| TOTAL | 46.9 | 2,867.7 | 3,750.6 | 712   | 487.8 | 249.2 | 164.2 | 126.5 | 93.4  | 98.3 | 92.6 | 82.8  |
| MEAN  | 1.51 | 95.6    | 121     | 23.0  | 17.4  | 8.04  | 5.47  | 4.08  | 3.11  | 3.17 | 2.99 | 2.76  |
| AC-FT | 93   | 5,690   | 7,440   | 1,410 | 968   | 494   | 326   | 251   | 185   | 195  | 184  | 164   |

CALENDAR YEAR 1965 MAX 2,960 MIN 1.3 MEAN 21.4 AC-FT 15,470  
WATER YEAR 1965-66 MAX 2,960 MIN 1.3 MEAN 24.0 AC-FT 17,400

Peak discharge (base, 140 cfs)

| Date  | Time | Gage height† | Discharge | Date  | Time | Gage height† | Discharge |
|-------|------|--------------|-----------|-------|------|--------------|-----------|
| 11-17 | 0130 | 4.65         | 499       | 12-29 | 1530 | 16.00        | 12,700    |
| 11-22 | 1900 | 9.40         | 3,160     |       |      |              |           |

Note.--No gage-height record Nov. 25 to Dec. 28, Dec. 30 to Mar. 2.

† At site 300 ft upstream at datum 6.68 ft higher.

11-0635. Lone Pine Creek near Keenbrook, Calif.

Location.---Lat 34°15'59", long 117°27'47", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.12, T.2 N., R.6 W., on right bank 50 ft upstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 150 ft upstream from mouth, and 1.1 miles north of Keenbrook.

Drainage area.---15.1 sq mi.

Records available.---December 1919 to September 1938, June 1949 to September 1966.

Gage.---Graphic water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1946. Prior to Mar. 2, 1938, graphic water-stage recorder (destroyed by flood) and Mar. 2 to Sept. 30, 1938, staff gage, at same site at datum 0.98 ft higher.

Average discharge.---35 years (1920-38, 1949-66), 1.14 cfs (825 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

Extremes.---Maximum discharge during year, 1,900 cfs Dec. 29 (gage height, 9.07 ft), from rating curve extended above 320 cfs on basis of slope-conveyance measurement of maximum flow; minimum daily, 0.10 cfs for many days.  
1919-38, 1949-66: Maximum discharge, 6,180 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow Aug. 6-8, Sept. 29-30, 1965.

Remarks.---Records good. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.10 | 0.10   | 0.10   | 0.70  | 0.80  | 0.70  | 0.60  | 0.50  | 0.50  | 0.70  | 0.60  | 0.50  |
| 2     | .10  | .10    | .10    | .70   | .80   | .70   | .60   | .50   | .50   | .70   | .60   | .50   |
| 3     | .10  | .10    | .10    | .70   | .80   | .70   | .60   | .50   | .50   | .70   | .70   | .50   |
| 4     | .10  | .10    | .10    | .70   | .70   | .70   | .60   | .50   | .50   | .70   | .70   | .60   |
| 5     | .10  | .10    | .10    | .70   | .70   | .70   | .60   | .50   | .60   | .70   | .70   | .60   |
| 6     | .10  | .10    | .10    | .70   | .80   | .70   | .60   | .50   | .70   | .70   | .70   | .60   |
| 7     | .10  | .10    | .10    | .70   | .80   | .70   | .60   | .50   | .70   | .70   | .70   | .60   |
| 8     | .10  | .10    | .10    | .70   | .70   | .70   | .60   | .50   | .70   | .70   | .70   | .70   |
| 9     | .10  | .10    | .20    | .70   | .70   | .70   | .60   | .50   | .60   | .70   | .70   | .70   |
| 10    | .10  | .10    | .20    | .70   | .60   | .70   | .60   | .50   | .60   | .70   | .70   | .70   |
| 11    | .10  | .10    | .20    | .70   | .60   | .70   | .60   | .60   | .60   | .70   | .70   | .70   |
| 12    | .10  | .10    | .20    | .70   | .60   | .70   | .60   | .60   | .60   | .70   | .70   | .70   |
| 13    | .10  | .10    | .30    | .70   | .60   | .70   | .60   | .60   | .60   | .70   | .70   | .70   |
| 14    | .10  | .20    | .30    | .70   | .60   | .70   | .60   | .60   | .60   | .70   | .70   | .80   |
| 15    | .10  | .20    | .30    | .70   | .60   | .70   | .60   | .60   | .60   | .70   | .60   | .80   |
| 16    | .10  | 12     | .20    | .70   | .60   | .60   | .60   | .50   | .60   | .70   | .60   | .80   |
| 17    | .10  | 33     | .20    | .70   | .60   | .60   | .60   | .50   | .60   | .70   | .60   | .80   |
| 18    | .10  | 1.0    | .20    | .80   | .60   | .60   | .60   | .50   | .60   | .60   | .50   | .80   |
| 19    | .10  | .10    | .20    | .70   | .60   | .60   | .60   | .50   | .60   | .60   | .50   | .80   |
| 20    | .10  | .10    | .20    | .60   | .60   | .60   | .60   | .50   | .60   | .60   | .50   | .80   |
| 21    | .10  | .10    | .10    | .70   | .60   | .60   | .50   | .50   | .60   | .60   | .40   | .80   |
| 22    | .10  | 125    | .10    | .80   | .60   | .60   | .50   | .60   | .60   | .60   | .40   | .70   |
| 23    | .10  | 14     | .20    | .90   | .60   | .60   | .50   | .60   | .60   | .50   | .40   | .70   |
| 24    | .10  | 4.0    | .20    | .90   | .60   | .60   | .50   | .60   | .60   | .50   | .40   | .70   |
| 25    | .10  | 2.4    | .10    | .90   | .60   | .60   | .50   | .60   | .60   | .50   | .40   | .80   |
| 26    | .10  | .60    | .10    | .90   | .60   | .60   | .50   | .50   | .60   | .50   | .40   | .80   |
| 27    | .10  | .50    | .10    | .90   | .70   | .60   | .50   | .50   | .60   | .50   | .40   | .80   |
| 28    | .10  | .30    | .20    | .80   | .70   | .60   | .50   | .50   | .60   | .60   | .40   | .80   |
| 29    | .10  | .20    | 349    | .80   | ----- | .60   | .50   | .50   | .70   | .60   | .50   | .80   |
| 30    | .10  | .20    | 43     | .80   | ----- | .60   | .50   | .50   | .70   | .60   | .50   | .80   |
| 31    | .10  | -----  | .70    | .80   | ----- | .60   | ----- | .50   | ----- | .60   | .50   | ----- |
| Total | 310  | 195.20 | 358.60 | 23.20 | 18.40 | 20.10 | 17.00 | 16.40 | 18.10 | 19.80 | 17.60 | 21.40 |
| Mean  | 0.10 | 6.51   | 11.6   | 0.75  | 0.66  | 0.65  | 0.57  | 0.53  | 0.60  | 0.64  | 0.57  | 0.71  |
| Ac-ft | 6.2  | 387    | 711    | 46    | 36    | 40    | 34    | 33    | 36    | 39    | 35    | 42    |

Calendar year 1965 Max 349 Min 0 Mean 1.67 Ac-ft 1,210  
Water year 1965-66 Max 349 Min 0.10 Mean 2.00 Ac-ft 1,450

Peak discharge (base, 80 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0030 | 3.67        | 197       | 12-29 | 1600 | 9.07        | 1,900     |
| 11-22 | 1800 | 6.69        | 947       |       |      |             |           |

11-0636.8, Devil Canyon Creek near San Bernardino, Calif.

Location.--Lat 34°12'12", long 117°20'02", in Muscupiabe Grant, on right bank 1.0 mile downstream from confluence of East Fork and West Fork and 7.0 miles northwest of San Bernardino, San Bernardino County.

Drainage area.--5.61 sq mi.

Records available.--November 1911 to September 1912, October 1913 to September 1914, December 1919 to September 1966. Monthly figures only for January 1914, published in WSP 1315-B.

Gage.--Graphic water-stage recorder and broad-crested weir since July 1925 (affected by debris in most years) on creek; flow meter on diversion. Altitude of gage is 1,900 ft (from topographic map). Prior to December 1919, staff gage at site 500 ft downstream at different datum.

Average discharge (creek only).--47 years (1913-14, 1920-66), 1.55 cfs (1,120 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).  
(combined).--33 years (1913-14, 1934-66), 3.15 cfs (2,280 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

Extremes.--Maximum discharge during year, 480 cfs Nov. 22 (gage height, 3.96 ft), from rating curve extended above 30 cfs on basis of field estimate of maximum flow; no flow Oct. 1 to Nov. 15, July 21 to Sept. 30.  
1913-14, 1919-66; Maximum discharge, 3,320 cfs Mar. 2, 1938, by rainfall-runoff studies; no flow at times in most years.

Remarks.--Records good. No regulation above station. City of San Bernardino diverts above station for municipal supply. See schematic diagram of Santa Ana River basin.

Cooperation.--Records of diversion furnished by city of San Bernardino.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0      | 2.0   | 12    | 2.2   | 1.6   | 0.20  | 0.10 | 0.20  | 0.10 |      |       |
| 2     |      | 0      | 2.0   | 10    | 2.4   | 2.8   | .20   | .10  | .20   | .10  |      |       |
| 3     |      | 0      | 1.8   | 10    | 1.8   | 1.5   | .20   | .10  | .20   | .10  |      |       |
| 4     |      | 0      | 1.6   | 11    | 1.7   | .80   | .20   | .10  | .20   | .10  |      |       |
| 5     |      | 0      | 1.4   | 10    | 1.6   | .50   | .20   | .10  | .10   | .10  |      |       |
| 6     |      | 0      | 1.2   | 9.5   | 3.3   | .70   | .20   | .10  | .10   | .10  |      |       |
| 7     |      | 0      | 1.2   | 8.1   | 5.5   | 1.2   | .20   | .10  | .10   | .10  |      |       |
| 8     |      | 0      | 1.1   | 6.5   | 5.8   | 1.0   | .30   | .20  | .10   | .10  |      |       |
| 9     |      | 0      | 2.5   | 5.4   | 4.5   | 1.0   | .30   | .90  | .10   | .10  |      |       |
| 10    |      | 0      | 6.1   | 4.8   | 4.4   | 1.0   | .30   | .80  | .10   | .10  |      |       |
| 11    |      | 0      | 4.1   | 4.6   | 4.4   | 1.0   | .30   | 1.0  | .10   | .10  |      |       |
| 12    |      | 0      | 5.1   | 4.3   | 2.6   | .90   | .30   | .60  | .10   | .10  |      |       |
| 13    |      | 0      | 4.8   | 4.8   | 2.5   | .80   | .30   | .20  | .10   | .10  |      |       |
| 14    |      | 0      | 4.6   | 4.3   | 2.2   | .80   | .30   | .20  | .10   | .10  |      |       |
| 15    |      | 0      | 4.6   | 3.6   | 2.1   | .40   | .30   | .20  | .10   | .10  |      |       |
| 16    |      | .50    | 4.9   | 3.4   | 2.0   | .20   | .30   | .20  | .10   | .10  |      |       |
| 17    |      | 8.4    | 4.8   | 3.2   | 1.8   | .20   | .30   | .20  | .10   | .10  |      |       |
| 18    |      | 5.9    | 4.0   | 3.0   | 1.6   | .20   | .50   | .20  | .10   | .10  |      |       |
| 19    |      | 1.3    | 3.7   | 2.8   | 1.5   | .20   | .20   | .20  | .10   | .10  |      |       |
| 20    |      | 1.0    | 2.6   | 2.6   | 1.4   | .20   | .40   | .20  | .10   | .10  |      |       |
| 21    |      | .90    | 1.8   | 2.4   | 1.0   | .20   | .30   | .20  | .10   | 0    |      |       |
| 22    |      | 87     | 2.4   | 2.2   | .60   | .30   | .20   | .20  | .10   | 0    |      |       |
| 23    |      | 142    | 2.4   | 2.0   | .60   | .40   | .20   | .20  | .10   | 0    |      |       |
| 24    |      | 89     | 1.4   | 1.8   | .60   | 2.6   | .20   | .20  | .10   | 0    |      |       |
| 25    |      | 34     | 1.2   | 1.7   | .60   | 3.2   | .20   | .20  | .10   | 0    |      |       |
| 26    |      | 6.5    | 1.2   | 1.6   | .60   | 2.7   | .20   | .20  | .10   | 0    |      |       |
| 27    |      | 4.0    | 1.3   | 1.7   | .50   | 2.6   | .10   | .20  | .10   | 0    |      |       |
| 28    |      | 3.1    | 1.7   | 1.6   | .50   | 1.8   | .10   | .20  | .10   | 0    |      |       |
| 29    |      | 2.4    | 4.7   | 1.6   | ----- | .80   | .10   | .20  | .10   | 0    |      |       |
| 30    |      | 2.1    | 18    | 2.4   | ----- | .50   | .10   | .20  | .10   | 0    |      |       |
| 31    |      | -----  | 13    | 2.0   | ----- | .20   | ----- | .20  | ----- | 0    |      |       |
| Total | 0    | 388.10 | 155.5 | 144.9 | 60.30 | 32.30 | 7.90  | 8.00 | 3.40  | 2.00 | 0    | 0     |
| Mean  | 0    | 12.9   | 5.02  | 4.67  | 2.15  | 1.04  | 0.26  | 0.26 | 0.11  | 0.06 | 0    | 0     |
| Ac-ft | 0    | 770    | 308   | 287   | 120   | 64    | 16    | 16   | 6.7   | 4.0  | 0    | 0     |
| (+)   | 34   | 809    | 398   | 458   | 279   | 226   | 179   | 153  | 116   | 78   | 59   | 50    |

Calendar year 1965 Max 142 Min 0 Mean 1.84 Ac-ft 1,330 Ac-ft + 2,080  
Water year 1965-66 Max 142 Min 0 Mean 2.20 Ac-ft 1,590 Ac-ft + 2,840

Peak discharge (base, 25 cfs).--Nov. 22 (1930 hrs) 480 cfs (3.96 ft); Dec. 29 (1730 hrs) 295 cfs (3.65 ft).

+ Combined discharge of Devil Canyon Creek and city of San Bernardino diversion.





11-0660.5. Santa Ana River at Colton, Calif.

Location.--Lat 34°03'45", long 117°18'30", in San Bernardino Grant, on right bank 60 ft downstream from Southern Pacific Railroad bridge, 200 ft downstream from Warm Creek, and 1 mile southeast of Colton, San Bernardino County.

Drainage area.--721 sq mi.

Records available.--December 1961 to September 1966 (discontinued).

Gage.--Digital water-stage recorder. Altitude of gage is 940 ft (from topographic map). Prior to Mar. 5, 1963, graphic water-stage recorder.

Extremes.--Maximum discharge during year, 25,000 cfs Nov. 22 (gage height, 10.87 ft), on basis of slope-area measurement of maximum flow; minimum daily, 16 cfs Sept. 4.

1961-66: Maximum discharge, that of Nov. 22, 1965; minimum daily, 7.2 cfs Mar. 1-4, Apr. 7, 1962.

Remarks.--Records poor. Flow partly regulated by Big Bear Lake (see Sta. No. 0490). Natural streamflow affected by ground-water withdrawals or diversions for domestic use and irrigation above station. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 21    | 20     | 21     | 99    | 27    | 27    | 31    | 20    | 22    | 24    | 22    | 22    |
| 2     | 20    | 22     | 22     | 60    | 27    | 28    | 31    | 25    | 22    | 22    | 22    | 20    |
| 3     | 18    | 22     | 23     | 38    | 26    | 27    | 28    | 23    | 22    | 23    | 22    | 22    |
| 4     | 22    | 22     | 23     | 33    | 26    | 26    | 31    | 23    | 21    | 30    | 21    | 16    |
| 5     | 21    | 20     | 19     | 29    | 25    | 24    | 33    | 23    | 20    | 25    | 21    | 20    |
| 6     | 22    | 20     | 23     | 28    | 416   | 21    | 33    | 23    | 22    | 22    | 20    | 20    |
| 7     | 24    | 20     | 23     | 26    | 203   | 25    | 32    | 22    | 22    | 26    | 19    | 20    |
| 8     | 23    | 21     | 22     | 26    | 55    | 24    | 34    | 19    | 22    | 26    | 22    | 21    |
| 9     | 22    | 21     | 280    | 21    | 38    | 23    | 33    | 22    | 22    | 24    | 22    | 20    |
| 10    | 21    | 20     | 262    | 25    | 32    | 23    | 31    | 22    | 24    | 23    | 21    | 19    |
| 11    | 24    | 22     | 33     | 26    | 32    | 23    | 35    | 21    | 22    | 28    | 22    | 18    |
| 12    | 23    | 21     | 50     | 26    | 31    | 24    | 33    | 22    | 22    | 26    | 20    | 20    |
| 13    | 23    | 20     | 52     | 23    | 29    | 24    | 34    | 22    | 24    | 26    | 18    | 25    |
| 14    | 24    | 19     | 59     | 24    | 34    | 29    | 34    | 20    | 24    | 26    | 22    | 28    |
| 15    | 23    | 90     | 38     | 27    | 31    | 29    | 34    | 19    | 24    | 26    | 23    | 23    |
| 16    | 23    | 229    | 29     | 39    | 33    | 28    | 34    | 22    | 24    | 23    | 19    | 21    |
| 17    | 22    | 202    | 29     | 43    | 29    | 29    | 33    | 22    | 22    | 22    | 20    | 18    |
| 18    | 24    | 112    | 28     | 32    | 28    | 27    | 37    | 23    | 20    | 26    | 20    | 20    |
| 19    | 24    | 25     | 27     | 35    | 27    | 26    | 36    | 24    | 22    | 22    | 19    | 22    |
| 20    | 24    | 19     | 31     | 29    | 27    | 25    | 34    | 22    | 25    | 23    | 18    | 22    |
| 21    | 23    | 18     | 29     | 35    | 27    | 27    | 33    | 21    | 23    | 22    | 20    | 21    |
| 22    | 24    | 4,040  | 43     | 54    | 26    | 33    | 31    | 19    | 22    | 23    | 19    | 21    |
| 23    | 22    | 6,120  | 28     | 33    | 26    | 36    | 28    | 22    | 22    | 23    | 19    | 20    |
| 24    | 21    | 1,110  | 27     | 34    | 27    | 121   | 26    | 24    | 22    | 19    | 20    | 18    |
| 25    | 23    | 706    | 23     | 46    | 27    | 40    | 28    | 26    | 20    | 24    | 20    | 19    |
| 26    | 24    | 50     | 23     | 40    | 27    | 41    | 27    | 21    | 23    | 22    | 19    | 22    |
| 27    | 24    | 39     | 27     | 36    | 26    | 40    | 26    | 23    | 23    | 22    | 19    | 23    |
| 28    | 24    | 30     | 25     | 35    | 28    | 46    | 28    | 21    | 23    | 22    | 20    | 22    |
| 29    | 25    | 30     | 3,800  | 34    | ----- | 38    | 26    | 19    | 23    | 23    | 20    | 26    |
| 30    | 21    | 26     | 1,300  | 534   | ----- | 38    | 23    | 21    | 23    | 21    | 20    | 32    |
| 31    | 19    | -----  | 185    | 40    | ----- | 33    | ----- | 25    | ----- | 21    | 20    | ----- |
| Total | 698   | 13,136 | 6,604  | 1,610 | 1,390 | 1,005 | 937   | 681   | 672   | 735   | 629   | 641   |
| Mean  | 22.5  | 438    | 213    | 51.9  | 49.6  | 32.4  | 31.2  | 22.0  | 22.4  | 23.7  | 20.3  | 21.4  |
| Ac-ft | 1,380 | 26,050 | 13,100 | 3,190 | 2,760 | 1,990 | 1,860 | 1,350 | 1,330 | 1,460 | 1,250 | 1,270 |

Calendar year 1965 Max 6.120 Min 15 Mean 76.4 Ac-ft 55,330  
 Water year 1965-66 Max 6.120 Min 16 Mean 78.7 Ac-ft 57,000

Note.--Due to mining of 4 million yards of sand in vicinity of gage for most of the year, there was no gage-height record or stage-discharge relation was indefinite.

11-0665, Santa Ana River at Riverside Narrows, near Arlington, Calif.

Location.--Lat 33°57'53", long 117°27'55", in SW 1/4 sec. 25, T.2 S., R.6 W., on right bank at downstream side of bridge on Pedley Road, 1.8 miles downstream from Union Pacific Railroad bridge, 3.3 miles northwest of Arlington, and 12 miles upstream from Temescal Creek.

Drainage area.--850 sq mi.

Records available.--October 1927 to September 1966. Monthly discharge only for October 1927 to January 1929, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 666.87 ft above mean sea level (levels by Riverside County Engineer). Prior to Nov. 15, 1943, at site 1 1/4 miles upstream at different datum. During this period temporary stations were maintained at different sites and datums within a quarter of a mile of the permanent gage. Nov. 15, 1943, to Aug. 31, 1954, at datum 3.00 ft higher. Sept. 1, 1954, to Jan. 17, 1955, at datum 2.00 ft higher. Prior to Jan. 8, 1963, graphic water-stage recorder.

Extremes.--Maximum discharge during year, 18,500 cfs Nov. 23 (gage height, 13.52 ft), from rating curve extended above 4,700 cfs; minimum daily, 12 cfs Sept. 24.

1927-66: Maximum discharge, 100,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, that of Sept. 24, 1966.

Remarks.--Records poor. Flow partly regulated by Big Bear Lake (see Sta. No. 0490). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. At times, since April 1948, effluent from city of Riverside disposal plant is released to river 0.6 mile upstream. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 16   | 14     | 32     | 144   | 26    | 22    | 23    | 20    | 18    | 17   | 16   | 13    |
| 2     | 19   | 13     | 30     | 83    | 33    | 22    | 23    | 20    | 17    | 16   | 16   | 14    |
| 3     | 17   | 13     | 27     | 30    | 33    | 20    | 26    | 21    | 17    | 15   | 18   | 41    |
| 4     | 17   | 13     | 26     | 24    | 37    | 21    | 25    | 22    | 18    | 16   | 17   | 18    |
| 5     | 17   | 13     | 24     | 24    | 45    | 21    | 25    | 22    | 19    | 16   | 16   | 19    |
| 6     | 17   | 13     | 23     | 23    | 111   | 21    | 24    | 22    | 18    | 15   | 16   | 20    |
| 7     | 17   | 13     | 23     | 22    | 97    | 20    | 23    | 23    | 19    | 15   | 15   | 19    |
| 8     | 16   | 14     | 22     | 22    | 80    | 20    | 25    | 22    | 18    | 15   | 14   | 19    |
| 9     | 16   | 14     | 57     | 21    | 35    | 21    | 23    | 24    | 18    | 16   | 16   | 18    |
| 10    | 15   | 14     | 290    | 21    | 25    | 21    | 23    | 22    | 18    | 15   | 18   | 19    |
| 11    | 15   | 14     | 48     | 20    | 24    | 21    | 23    | 22    | 18    | 15   | 16   | 18    |
| 12    | 15   | 13     | 40     | 20    | 24    | 20    | 21    | 22    | 19    | 15   | 15   | 17    |
| 13    | 14   | 13     | 34     | 19    | 23    | 21    | 23    | 21    | 19    | 14   | 15   | 21    |
| 14    | 14   | 20     | 30     | 19    | 23    | 35    | 22    | 20    | 18    | 15   | 15   | 19    |
| 15    | 14   | 47     | 28     | 20    | 23    | 28    | 22    | 19    | 17    | 15   | 15   | 19    |
| 16    | 14   | 85     | 41     | 20    | 23    | 24    | 21    | 18    | 18    | 16   | 14   | 17    |
| 17    | 14   | 202    | 25     | 20    | 22    | 22    | 22    | 18    | 17    | 16   | 13   | 16    |
| 18    | 13   | 77     | 22     | 21    | 22    | 21    | 21    | 19    | 18    | 15   | 15   | 15    |
| 19    | 14   | 40     | 21     | 28    | 22    | 21    | 22    | 18    | 18    | 14   | 14   | 17    |
| 20    | 14   | 25     | 21     | 23    | 22    | 20    | 22    | 18    | 17    | 15   | 15   | 15    |
| 21    | 14   | 24     | 21     | 24    | 21    | 20    | 20    | 34    | 17    | 15   | 14   | 13    |
| 22    | 15   | 1,700  | 22     | 25    | 21    | 20    | 21    | 20    | 18    | 16   | 15   | 16    |
| 23    | 15   | 6,390  | 20     | 22    | 21    | 21    | 21    | 18    | 19    | 15   | 14   | 14    |
| 24    | 17   | 758    | 20     | 25    | 21    | 21    | 21    | 18    | 19    | 16   | 15   | 12    |
| 25    | 17   | 790    | 21     | 26    | 20    | 27    | 21    | 17    | 19    | 17   | 15   | 13    |
| 26    | 18   | 100    | 22     | 68    | 23    | 25    | 20    | 18    | 19    | 19   | 14   | 13    |
| 27    | 18   | 60     | 28     | 24    | 23    | 23    | 21    | 19    | 19    | 20   | 13   | 14    |
| 28    | 18   | 50     | 28     | 24    | 22    | 21    | 19    | 18    | 17    | 19   | 13   | 15    |
| 29    | 17   | 45     | 3,500  | 25    | ----- | 21    | 20    | 18    | 17    | 18   | 13   | 14    |
| 30    | 16   | 38     | 1,000  | 58    | ----- | 22    | 19    | 18    | 17    | 18   | 14   | 15    |
| 31    | 15   | -----  | 359    | 36    | ----- | 22    | ----- | 18    | ----- | 16   | 13   | ----- |
| TOTAL | 488  | 10,625 | 5,905  | 981   | 922   | 685   | 662   | 629   | 540   | 495  | 462  | 513   |
| MEAN  | 15.7 | 354    | 190    | 31.6  | 32.9  | 22.1  | 22.1  | 20.3  | 18.0  | 16.0 | 14.9 | 17.1  |
| AC-FT | 968  | 21,070 | 11,710 | 1,950 | 1,830 | 1,360 | 1,310 | 1,250 | 1,070 | 982  | 916  | 1,020 |

|               |         |     |       |     |    |      |      |       |        |
|---------------|---------|-----|-------|-----|----|------|------|-------|--------|
| CALENDAR YEAR | 1965    | MAX | 6,390 | MIN | 13 | MEAN | 65.9 | AC-FT | 47,710 |
| WATER YEAR    | 1965-66 | MAX | 6,390 | MIN | 12 | MEAN | 62.8 | AC-FT | 45,440 |

## Peak discharge (base, 500 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time    | Gage height | Discharge |
|-------|------|-------------|-----------|-------|---------|-------------|-----------|
| 11-17 | 0600 | 4.49        | 625       | 12-10 | 0315    | 5.22        | 840       |
| 11-23 | 0030 | 13.52       | 18,500    | 12-29 | Unknown | 11.2        | 11,600    |

11-0665.5. Sheehan ditch at Riverside Narrows, near Arlington, Calif.

Location--Lat 33°57'52", long 117°27'54", in Jurupa Grant, on left bank of ditch near left side of Santa Ana River channel, under northbound lane of highway bridge on Pedley Road, 0.6 mile downstream from sewage disposal plant, and 3.2 miles northwest of Arlington, Riverside County.

Records available--October 1947 to September 1966. Monthly discharge only for October 1947 to September 1963, published in WSP 1928.

Gage--Digital water-stage recorder. Datum of gage is 673.16 ft above mean sea level (levels by Riverside County engineer). Prior to Oct. 1, 1963, graphic water-stage recorder.

Extremes--1947-66: Maximum daily discharge, 25 cfs Aug. 8, 1966; no flow at times in some years.

Remarks--Records good except those for Nov. 22 to Mar. 15, which are poor. Ditch was destroyed by the high rise of Nov. 21 and was not restored until Mar. 15. Discharge reported herein is the effluent from city of Riverside sewage disposal plant and is used for irrigation of about 160 acres 1.5 miles downstream. Unused portion of flow is returned to the river. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec. | Jan. | Feb. | Mar. | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1     | 19    | 16    |      |      |      | 0    | 20    | 18    | 20    | 19    | 21    | 22    |
| 2     | 16    | 15    |      |      |      | 0    | 19    | 21    | 20    | 18    | 21    | 22    |
| 3     | 15    | 16    |      |      |      | 0    | 18    | 20    | 20    | 15    | 20    | 60    |
| 4     | 17    | 17    |      |      |      | 0    | 20    | 20    | 19    | 17    | 20    | 13    |
| 5     | 16    | 17    |      |      |      | 0    | 19    | 20    | 17    | 21    | 21    | 19    |
| 6     | 17    | 17    |      |      |      | 0    | 20    | 21    | 18    | 22    | 21    | 22    |
| 7     | 17    | 15    |      |      |      | 0    | 20    | 20    | 19    | 21    | 21    | 22    |
| 8     | 17    | 17    |      |      |      | 0    | 20    | 17    | 20    | 22    | 25    | 22    |
| 9     | 17    | 17    |      |      |      | 0    | 19    | 20    | 20    | 21    | 23    | 23    |
| 10    | 15    | 17    |      |      |      | 0    | 16    | 19    | 21    | 18    | 20    | 21    |
| 11    | 17    | 17    |      |      |      | 0    | 20    | 20    | 20    | 22    | 21    | 20    |
| 12    | 17    | 17    |      |      |      | 0    | 19    | 20    | 18    | 22    | 22    | 23    |
| 13    | 17    | 17    |      |      |      | 0    | 20    | 20    | 21    | 23    | 20    | 22    |
| 14    | 17    | 16    |      |      |      | 0    | 19    | 19    | 21    | 23    | 18    | 22    |
| 15    | 17    | 17    |      |      |      | 19   | 20    | 17    | 20    | 23    | 21    | 22    |
| 16    | 17    | 18    |      |      |      | 20   | 19    | 21    | 21    | 22    | 21    | 23    |
| 17    | 16    | 19    |      |      |      | 20   | 17    | 20    | 20    | 19    | 22    | 22    |
| 18    | 17    | 17    |      |      |      | 20   | 20    | 20    | 20    | 23    | 21    | 20    |
| 19    | 17    | 17    |      |      |      | 17   | 20    | 21    | 18    | 23    | 22    | 22    |
| 20    | 17    | 17    |      |      |      | 17   | 20    | 20    | 21    | 24    | 21    | 23    |
| 21    | 17    | 17    |      |      |      | 20   | 20    | 19    | 21    | 24    | 19    | 23    |
| 22    | 18    | 0     |      |      |      | 20   | 20    | 0     | 20    | 22    | 21    | 23    |
| 23    | 17    | 0     |      |      |      | 20   | 20    | 20    | 20    | 20    | 22    | 24    |
| 24    | 16    | 0     |      |      |      | 20   | 17    | 20    | 21    | 18    | 22    | 22    |
| 25    | 17    | 0     |      |      |      | 20   | 21    | 20    | 19    | 22    | 22    | 20    |
| 26    | 17    | 0     |      |      |      | 20   | 20    | 20    | 18    | 21    | 22    | 23    |
| 27    | 17    | 0     |      |      |      | 18   | 20    | 20    | 21    | 21    | 21    | 23    |
| 28    | 17    | 0     |      |      |      | 20   | 20    | 18    | 21    | 21    | 19    | 22    |
| 29    | 17    | 0     |      |      |      | 20   | 20    | 16    | 21    | 21    | 21    | 23    |
| 30    | 17    | 0     |      |      |      | 20   | 19    | 18    | 19    | 20    | 22    | 23    |
| 31    | 16    | ----- |      |      |      | 20   | ----- | 19    | ----- | 18    | 22    | ----- |
| Total | 521   | 353   | 0    | 0    | 0    | 331  | 582   | 584   | 595   | 646   | 655   | 637.0 |
| Mean  | 16.8  | 11.8  | 0    | 0    | 0    | 10.7 | 19.4  | 18.8  | 19.8  | 20.8  | 21.1  | 21.2  |
| Ac-ft | 1,030 | 700   | 0    | 0    | 0    | 657  | 1,150 | 1,160 | 1,180 | 1,280 | 1,300 | 1,260 |

Calendar year 1965 Max 20 Min 0 Mean 14.8 Ac-ft 10,690

Water year 1965-66 Max 25 Min 0 Mean 13.4 Ac-ft 9,730

Note--No gage-height record Nov. 22 to June 29, July 22 to Aug. 2.

## SANTA ANA RIVER BASIN

11-0670. Day Creek near Etiwanda, Calif.

Location.--Lat 34°11'05", long 117°32'20", in NW 1/4 sec. 8, T.1 N., R.6 W., on left bank 0.5 mile downstream from confluence of two main forks and 4 miles north of Etiwanda.

Drainage area.--4.59 sq mi.

Records available.--October 1927 to September 1966. Combined records of creek and diversion, October 1950 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder and broad-crested weir since September 1938 on creek; digital water-stage recorder and Parshall flume on diversion. Altitude of gage is 2,870 ft (from topographic map). Prior to Jan. 7, 1929, at site 125 ft downstream at different datum. Jan. 7, 1929, to Mar. 2, 1938, at site 200 ft upstream at different datum (destroyed by flood). May 2 to Sept. 2, 1938, at site 200 ft downstream at different datum. Prior to Oct. 1, 1964, graphic water-stage recorders.

Average discharge (creek only).--39 years, 3.32 cfs (2,400 acre-ft per year); median of yearly mean discharges, 1.8 cfs (1,300 acre-ft per year).

(combined).--16 years, 3.21 cfs (2,320 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 1,740 cfs Dec. 29 (gage height, 4.90 ft), from rating curve extended above 340 cfs on basis of field estimates of flow at gage heights 3.78, 4.90 ft; minimum daily, 0.10 cfs Oct. 1-7.

1927-66: Maximum discharge, 4,200 cfs Mar. 2, 1938, based on rainfall-runoff studies; no flow Oct. 5 to Nov. 1, 1950.

(combined).--Maximum discharge during year, 1,740 cfs Dec. 29; minimum daily, 0.60 cfs Oct. 2.

1950-66: Maximum discharge, that of Dec. 29, 1965; minimum daily, 0.30 cfs for several days in 1961 and 1963.

Remarks.--Records poor. No regulation above station. Etiwanda Water Co. has diverted water above station during entire period of record. For records of combined discharge of creek and Etiwanda Water Co.'s diversion, see following page. In addition, an infiltration gallery, unwatering the gravel in the bed of the stream at gaging station, produced 1,110 acre-ft during year. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.    | JAN.  | FEB.  | MAR. | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|--------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 0.10 | 0.30   | 12      | 87    | 4.9   | 2.5  | 1.7   | 0.70  | 0.80  | 0.50  | 0.70  | 0.60  |
| 2     | .10  | .30    | 10      | 56    | 4.9   | 2.6  | 1.7   | .70   | .80   | .50   | .70   | .60   |
| 3     | .10  | .30    | 9.0     | 32    | 4.8   | 2.6  | 1.6   | .70   | .80   | .50   | .70   | .70   |
| 4     | .10  | .30    | 8.2     | 24    | 4.6   | 2.5  | 1.6   | .70   | .80   | .60   | .70   | .70   |
| 5     | .10  | .30    | 7.6     | 18    | 4.8   | 2.4  | 2.3   | .70   | .70   | .60   | .70   | .70   |
| 6     | .10  | .30    | 6.6     | 15    | 10    | 2.3  | 1.9   | .70   | .80   | .60   | .70   | .70   |
| 7     | .10  | .30    | 5.4     | 14    | 11    | 2.3  | 1.3   | .80   | .80   | .60   | .60   | .60   |
| 8     | .20  | .30    | 5.5     | 12    | 9.9   | 2.3  | 1.3   | .80   | .70   | .60   | .60   | .60   |
| 9     | .20  | .30    | 6.3     | 11    | 5.6   | 2.3  | 1.2   | .80   | .70   | .60   | .60   | .60   |
| 10    | .20  | .40    | 7.0     | 9.8   | 4.9   | 2.3  | 1.2   | .80   | .70   | .60   | .60   | .60   |
| 11    | .20  | .40    | 6.2     | 8.8   | 4.6   | 2.3  | 1.1   | .80   | .70   | .60   | .60   | .60   |
| 12    | .20  | .40    | 5.8     | 8.0   | 4.3   | 2.2  | 1.1   | .80   | .60   | .60   | .60   | .60   |
| 13    | .20  | .40    | 6.7     | 7.4   | 4.2   | 2.2  | 1.1   | .80   | .60   | .60   | .60   | .60   |
| 14    | .20  | .50    | 6.5     | 6.6   | 2.4   | 2.1  | 1.0   | .80   | .60   | .60   | .60   | .60   |
| 15    | .20  | 1.7    | 6.2     | 6.3   | 2.4   | 1.6  | 1.0   | .80   | .60   | .60   | .60   | .60   |
| 16    | .20  | 15     | 5.9     | 6.5   | 2.4   | 1.6  | .90   | .80   | .60   | .50   | .60   | .60   |
| 17    | .20  | 73     | 4.5     | 6.9   | 2.4   | 1.6  | .90   | .80   | .60   | .50   | .60   | .60   |
| 18    | .20  | 32     | 3.1     | 5.9   | 2.4   | 1.6  | .90   | .80   | .60   | .50   | .60   | .60   |
| 19    | .20  | 16     | 2.8     | 4.9   | 2.4   | 1.6  | .90   | .80   | .60   | .60   | .60   | .70   |
| 20    | .20  | 11     | 2.2     | 4.4   | 2.4   | 1.6  | .80   | .80   | .50   | .60   | .60   | .70   |
| 21    | .20  | 9.2    | 1.7     | 4.5   | 2.3   | 1.6  | .80   | .80   | .50   | .60   | .60   | .60   |
| 22    | .20  | 236    | 1.4     | 4.5   | 2.3   | 1.5  | .70   | .80   | .50   | .60   | .60   | .60   |
| 23    | .20  | 182    | 3.2     | 4.3   | 2.2   | 1.5  | .70   | .80   | .50   | .60   | .60   | .60   |
| 24    | .20  | 106    | 3.8     | 4.5   | 2.2   | 1.7  | .70   | .80   | .50   | .60   | .60   | .60   |
| 25    | .20  | 84     | 2.0     | 4.5   | 2.4   | 3.6  | .70   | .80   | .60   | .60   | .60   | .60   |
| 26    | .20  | 80     | 1.0     | 4.7   | 2.2   | 4.2  | .70   | .80   | .50   | .70   | .60   | .60   |
| 27    | .20  | 49     | 1.0     | 4.9   | 2.1   | 2.9  | .70   | .80   | .50   | .70   | .60   | .60   |
| 28    | .20  | 21     | 1.0     | 3.9   | 2.2   | 1.8  | .70   | .80   | .50   | .70   | .60   | .60   |
| 29    | .20  | 18     | 531     | 3.3   | ----- | 1.8  | .70   | .80   | .50   | .70   | .60   | .60   |
| 30    | .20  | 15     | 291     | 6.5   | ----- | 1.8  | .70   | .80   | .50   | .70   | .60   | .70   |
| 31    | .30  | -----  | 111     | 5.7   | ----- | 1.8  | ----- | .80   | ----- | .70   | .60   | ----- |
| TOTAL | 5.60 | 953.70 | 1,075.6 | 395.8 | 113.2 | 67.4 | 32.60 | 24.20 | 18.70 | 18.60 | 19.20 | 18.70 |
| MEAN  | .18  | 31.8   | 34.7    | 12.8  | 4.04  | 2.17 | 1.09  | .78   | .62   | .60   | .62   | .62   |
| AC-FT | 11   | 1,890  | 2,130   | 785   | 225   | 134  | 65    | 48    | 37    | 37    | 38    | 37    |

CALENDAR YEAR 1965 MAX 531 MIN .10 MEAN 5.86 AC-FT 4,250  
 WATER YEAR 1965-66 MAX 531 MIN .10 MEAN 7.52 AC-FT 5,440

Peak discharge (base, 25 cfs).--Nov. 22 (1815 hrs) 974 cfs (3.78 ft); Dec. 29 (1815 hrs) 1,740 cfs (4.90 ft).

11-0670. Day Creek near Etiwanda, Calif.--Continued.

Combined discharge, in cubic feet per second, of Day Creek and Etiwanda Water Co.'s diversion  
near Etiwanda, Calif., water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.70  | .80    | 12     | 87    | 7.6   | 6.2   | 5.1   | 3.5   | 3.0   | 1.9  | 1.6  | 2.0   |
| 2     | .60   | .90    | 10     | 56    | 7.6   | 6.3   | 5.0   | 3.3   | 3.0   | 1.9  | 1.6  | 1.9   |
| 3     | .70   | .80    | 9.4    | 32    | 7.6   | 6.2   | 4.9   | 3.3   | 3.0   | 1.9  | 1.6  | 1.9   |
| 4     | .70   | .90    | 8.8    | 24    | 7.5   | 6.0   | 4.9   | 3.3   | 3.0   | 1.9  | 1.6  | 1.9   |
| 5     | .70   | .90    | 8.2    | 18    | 7.7   | 5.8   | 4.7   | 3.3   | 2.8   | 1.9  | 1.6  | 1.9   |
| 6     | .70   | .90    | 7.5    | 15    | 11    | 5.8   | 4.9   | 3.2   | 2.9   | 1.9  | 1.6  | 1.9   |
| 7     | .70   | 1.0    | 7.1    | 14    | 11    | 5.7   | 4.8   | 3.4   | 2.9   | 1.9  | 1.5  | 1.8   |
| 8     | .70   | 1.0    | 7.1    | 12    | 11    | 5.7   | 4.8   | 3.6   | 2.9   | 1.8  | 1.5  | 1.8   |
| 9     | .80   | 1.0    | 7.0    | 11    | 9.0   | 5.6   | 4.7   | 3.7   | 2.9   | 1.8  | 1.5  | 1.8   |
| 10    | .80   | 1.1    | 7.0    | 9.8   | 9.5   | 5.6   | 4.9   | 3.9   | 2.7   | 1.8  | 1.5  | 1.8   |
| 11    | .70   | 1.1    | 7.0    | 8.8   | 9.2   | 5.6   | 4.7   | 3.8   | 2.6   | 1.8  | 1.6  | 1.8   |
| 12    | .70   | 1.1    | 6.9    | 8.0   | 8.8   | 5.4   | 4.6   | 3.6   | 2.4   | 1.8  | 1.6  | 2.0   |
| 13    | .70   | 1.1    | 6.7    | 7.8   | 7.4   | 5.3   | 4.5   | 3.4   | 2.3   | 1.8  | 1.6  | 2.0   |
| 14    | .80   | 1.5    | 6.5    | 8.0   | 7.1   | 5.5   | 4.3   | 3.2   | 2.2   | 1.8  | 1.6  | 1.9   |
| 15    | .90   | 3.6    | 6.2    | 8.2   | 7.0   | 5.6   | 4.2   | 3.0   | 2.2   | 1.7  | 1.6  | 1.8   |
| 16    | 1.0   | 16     | 5.9    | 8.2   | 6.8   | 5.6   | 4.0   | 2.8   | 2.3   | 1.5  | 1.5  | 1.9   |
| 17    | .90   | 73     | 5.6    | 8.1   | 6.7   | 5.5   | 4.2   | 2.9   | 2.3   | 1.5  | 1.6  | 1.8   |
| 18    | 1.0   | 32     | 5.2    | 7.6   | 6.6   | 5.5   | 4.3   | 3.2   | 2.3   | 1.5  | 1.6  | 2.0   |
| 19    | .90   | 16     | 4.8    | 6.9   | 6.6   | 5.4   | 4.3   | 3.1   | 2.2   | 1.6  | 1.6  | 2.5   |
| 20    | .80   | 11     | 4.6    | 6.4   | 6.5   | 5.3   | 4.2   | 3.1   | 2.1   | 1.6  | 1.7  | 2.3   |
| 21    | .80   | 9.5    | 4.5    | 6.4   | 6.3   | 5.4   | 4.1   | 3.1   | 2.1   | 1.6  | 1.7  | 2.1   |
| 22    | .80   | 236    | 4.3    | 6.3   | 6.3   | 5.3   | 3.9   | 3.2   | 2.2   | 1.5  | 1.7  | 2.0   |
| 23    | .80   | 182    | 4.1    | 6.1   | 6.1   | 5.4   | 3.8   | 3.2   | 2.2   | 1.5  | 1.7  | 1.9   |
| 24    | .80   | 106    | 3.8    | 6.3   | 6.1   | 5.7   | 3.8   | 3.1   | 2.2   | 1.5  | 1.6  | 1.9   |
| 25    | .80   | 84     | 3.7    | 6.2   | 6.3   | 5.5   | 3.6   | 3.0   | 2.2   | 1.5  | 1.6  | 2.0   |
| 26    | .80   | 80     | 3.6    | 5.9   | 6.0   | 5.3   | 3.7   | 3.0   | 2.1   | 1.6  | 1.7  | 2.0   |
| 27    | .80   | 49     | 3.5    | 5.0   | 5.8   | 5.5   | 3.7   | 3.0   | 2.0   | 1.6  | 1.7  | 2.0   |
| 28    | .80   | 21     | 3.5    | 5.8   | 5.9   | 5.5   | 3.7   | 3.0   | 1.9   | 1.6  | 1.7  | 1.8   |
| 29    | .70   | 18     | 532    | 6.1   | ----- | 5.5   | 3.7   | 3.1   | 1.9   | 1.7  | 1.8  | 1.9   |
| 30    | .70   | 15     | 291    | 7.5   | ----- | 5.4   | 3.6   | 3.1   | 1.9   | 1.7  | 1.9  | 2.1   |
| 31    | .80   | -----  | 111    | 7.4   | ----- | 5.3   | ----- | 3.1   | ----- | 1.6  | 2.1  | ----- |
| Total | 24.10 | 966.20 | 1108.5 | 425.8 | 211.0 | 173.4 | 129.6 | 100.5 | 72.7  | 52.7 | 50.8 | 58.4  |
| Mean  | 0.78  | 32.2   | 35.8   | 13.7  | 7.54  | 5.59  | 4.32  | 3.24  | 2.42  | 1.70 | 1.64 | 1.95  |
| Ac-ft | 48    | 1920   | 2200   | 845   | 419   | 344   | 257   | 199   | 144   | 105  | 101  | 116   |

Calendar year 1965 Max 532 Min 0.60 Mean 7.17 Ac-ft 5,190

Water year 1965-66 Max 532 Min 0.60 Mean 9.24 Ac-ft 6,690

Peak discharge (base, 25 cfs).--Nov. 22 (1815 hrs) 974 cfs; Dec. 29 (1815 hrs) 1,740 cfs.

## SANTA ANA RIVER BASIN

11-0680. Santa Ana River at Auburndale Bridge, near Corona, Calif.

Location (revised).--Lat 33°55'25", long 117°35'50", in La Sierra (Yorba) Grant, on downstream end of first pier south of north end of Auburndale Bridge on River Road, 1.7 miles upstream from Temescal Creek, and 3.8 miles northwest of Corona, Riverside County. Prior to Oct. 6, 1966, on right bank just downstream from Auburndale Bridge.

Drainage area.--1,003 sq mi.

Records available.--May 1930 to November 1966 (irrigation seasons only).

Gage.--Graphic water-stage recorder. Datum of gage is 514.0 ft above mean sea level. Prior to May 1946, at various sites within 1,000 ft of bridge and at different datums. May 1946 to Sept. 12, 1961, at site 100 ft upstream at different datum. Sept. 12, 1961, to Oct. 6, 1966, at site on right bank at different datum.

Remarks.--Records poor. Flow partly regulated by Big Bear Lake (see Sta. No. 0490). The natural flow is affected by ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Water diverted into Durkee ditch, a quarter of a mile above station, bypasses station; discharge measurements of flow in ditch are given below. Due to dredging in river, Durkee ditch was used intermittently from May to December. See schematic diagram of Santa Ana River basin.

Cooperation.--Thirty-two discharge measurements furnished by Orange County Flood Control District.

Discharge measurements, in cubic feet per second, January to December 1966

| Date    | Discharge | Date    | Discharge | Date   | Discharge |
|---------|-----------|---------|-----------|--------|-----------|
| Feb. 24 | 1.53      | Apr. 27 | 0.31      | May 19 | 0         |

Discharge, in cubic feet per second, May to November 1966

| Day   | Jan. | Feb. | Mar. | Apr. | May   | June  | July  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     |      |      |      |      | 42    | 34    | 32    | 22    | 23    | 20    | 27    |       |
| 2     |      |      |      |      | 42    | 35    | 31    | 23    | 24    | 15    | 27    | +38   |
| 3     |      |      |      |      | 42    | 38    | 30    | 21    | 24    | 17    | 27    |       |
| 4     |      |      |      |      | 42    | 38    | 30    | 21    | 22    | 20    | 28    | +203  |
| 5     |      |      |      |      | 42    | 38    | 30    | 21    | 22    | 27    | 29    |       |
| 6     |      |      |      |      | 42    | 37    | 30    | 21    | 22    | 31    | 29    |       |
| 7     |      |      |      |      | 45    | 33    | 28    | 21    | 23    | 38    | 35    | +2600 |
| 8     |      |      |      |      | 45    | 34    | 26    | 21    | 24    | 33    | 100   |       |
| 9     |      |      |      |      | 45    | 37    | 25    | 21    | 25    | 35    | 60    |       |
| 10    |      |      |      |      | 45    | 34    | 24    | 21    | 25    | 37    | 48    |       |
| 11    |      |      |      |      | 46    | 33    | 23    | 21    | 25    | 38    | 46    |       |
| 12    |      |      |      |      | 46    | 33    | 22    | 21    | 25    | 33    | 44    |       |
| 13    |      |      |      |      | 47    | 32    | 22    | 21    | 25    | 28    | 44    |       |
| 14    |      |      |      |      | 40    | 33    | 22    | 21    | 23    | 23    | 44    |       |
| 15    |      |      |      |      | 39    | 30    | 22    | 21    | 22    | 23    | 44    |       |
| 16    |      |      |      |      | 38    | 30    | 22    | 21    | 22    | 23    | 44    |       |
| 17    |      |      |      |      | 39    | 30    | 22    | 21    | 22    | 22    | 43    |       |
| 18    |      |      |      |      | 39    | 30    | 22    | 21    | 22    | 23    | 43    |       |
| 19    |      |      |      |      | 40    | 30    | 22    | 21    | 22    | 24    | 42    |       |
| 20    |      |      |      |      | 38    | 30    | 23    | 21    | 24    | 27    | 42    |       |
| 21    |      |      |      |      | 40    | 30    | 23    | 21    | 25    | 32    | 42    | +51   |
| 22    |      |      |      | +42  | 40    | 30    | 24    | 21    | 26    | 34    | 42    |       |
| 23    |      |      |      |      | 38    | 30    | 23    | 21    | 26    | 36    | 42    |       |
| 24    |      | +47  |      |      | 37    | 30    | 21    | 21    | 26    | 37    | 42    |       |
| 25    |      | +49  | +68  |      | 36    | 30    | 21    | 21    | 26    | 33    | 41    |       |
| 26    |      |      |      |      | 35    | 30    | 21    | 21    | 26    | 31    | 41    |       |
| 27    |      |      |      | +38  | 35    | 30    | 21    | 21    | 26    | 30    | 40    |       |
| 28    |      |      |      |      | 37    | 30    | 21    | 22    | 25    | 27    | 38    |       |
| 29    |      |      |      |      | 35    | 34    | 21    | 23    | 24    | 27    | 36    |       |
| 30    |      |      |      |      | 34    | 33    | 23    | 23    | 22    | 27    | 35    |       |
| 31    |      |      |      |      | 34    | ----- | 22    | 23    | ----- | 27    | ----- |       |
| Total |      |      |      |      | 1,245 | 976   | 749   | 651   | 718   | 878   | 1,245 |       |
| Mean  |      |      |      |      | 40.2  | 32.5  | 24.2  | 21.3  | 23.9  | 28.3  | 41.5  |       |
| Ac-ft |      |      |      |      | 2,470 | 1,940 | 1,490 | 1,310 | 1,420 | 1,740 | 2,470 |       |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Irrigation Season Max 100 Min 15 Mean - Ac-ft 12,840

† Result of discharge measurement.

11-0690. Lake Hemet near Idyllwild, Calif.

Location.--Lat 33°39'55", long 116°42'20", in NE $\frac{1}{4}$  sec. 7, T. 6 S., R. 3 E., on upstream face near right end of dam on South Fork San Jacinto River, 5 miles southeast of Idyllwild and 6.5 miles upstream from mouth.

Drainage area.--65.6 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Staff gage read once daily. Datum of gage is 4,201.5 ft above mean sea level (levels by Lake Hemet Municipal Water District).

Extremes.--Maximum contents observed during the year, 5,941 acre-ft May 27 to June 4 (elevation, 4,314.33 ft); minimum 1,529 acre-ft Nov. 14 (elevation, 4,287.83 ft).  
1961-66: Maximum contents, that of May 27 to June 4, 1966; minimum, 264 acre-ft Nov. 19, 1962, Nov. 19, 1963 (elevation, 4,266.9 ft).

Remarks.--Lake is formed by single-arch dam. Dam was completed to a height of 110 ft in 1893; raised to 122.5 ft in 1895, and to 135 ft in 1923. Capacity table is dated February 1932 (furnished by Lake Hemet Municipal Water District). Lowest sluice gate silted (elevation, 4,222.6 ft). Capacity below spillway level (elevation, 4,333.0 ft), 11,882 acre-ft. Water is released from lake to South Fork San Jacinto River for domestic use and irrigation in the Hemet-San Jacinto Valley. See schematic diagram of Santa Ana River basin.

Cooperation.--Elevations furnished by Lake Hemet Municipal Water District.

Month-end elevation and contents, water year October 1965 to September 1966

| Date                    | Elevation<br>(feet)† | Contents<br>(acre-feet) | Change in contents<br>(acre-feet) |
|-------------------------|----------------------|-------------------------|-----------------------------------|
| Sept. 30.....           | 4,290.17             | 1,774                   | -                                 |
| Oct. 31.....            | 4,288.50             | 1,598                   | -176                              |
| Nov. 30.....            | 4,301.08             | 3,223                   | +1,625                            |
| Dec. 31.....            | 4,305.58             | 4,042                   | +819                              |
| Calendar year 1965..... | -                    | -                       | +3,168                            |
| Jan. 31.....            | 4,308.83             | 4,695                   | +653                              |
| Feb. 28.....            | 4,311.83             | 5,351                   | +656                              |
| Mar. 31.....            | 4,313.50             | 5,741                   | +390                              |
| Apr. 30.....            | 4,314.17             | 5,902                   | +161                              |
| May 31.....             | 4,314.33             | 5,941                   | +39                               |
| June 30.....            | 4,313.83             | 5,820                   | -121                              |
| July 31.....            | 4,312.50             | 5,506                   | -314                              |
| Aug. 31.....            | 4,310.92             | 5,145                   | -361                              |
| Sept. 30.....           | 4,309.50             | 4,836                   | -309                              |
| Water year 1965-66..... | -                    | -                       | +3,062                            |

† Elevation at 0800 hours.

## SANTA ANA RIVER BASIN

11-0693. South Fork San Jacinto River tributary near Valle Vista, Calif.

Location.--Lat 33°43'20", long 116°48'00", in W½ sec.20, T.5 S., R.2 E., 6 ft upstream from private-road culvert, 0.3 mile above mouth and 5.6 miles southeast of Valle Vista.

Drainage area.--2.20 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment, crest-stage gage, and corrugated-pipe culvert control. Altitude of gage is 2,320 ft (from topographic map).

Average discharge.--5 years, 0.058 cfs (42 acre-ft per year).

Extremes.--Maximum discharge during year, 36 cfs Nov. 22 (gage height, 5.56 ft), from rating curve extended above 5.0 cfs on basis of culvert computation of maximum flow; no flow for most of year.  
1961-66: Maximum discharge that of Nov. 22, 1965; no flow for most of each year.

Remarks.--Records good. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan. | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|-------|------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      | 0     | 0     | 1.0  | 0.10  | 0.20 | 0.10  |     |       |      |      |       |
| 2     |      | 0     | 0     | .50  | .10   | .20  | .10   |     |       |      |      |       |
| 3     |      | 0     | 0     | .40  | .10   | .20  | .10   |     |       |      |      |       |
| 4     |      | 0     | 0     | .30  | .10   | .20  | .10   |     |       |      |      |       |
| 5     |      | 0     | 0     | .20  | .10   | .20  | .10   |     |       |      |      |       |
| 6     |      | 0     | 0     | .20  | 1.7   | .20  | .10   |     |       |      |      |       |
| 7     |      | 0     | 0     | .20  | 3.5   | .10  | .10   |     |       |      |      |       |
| 8     |      | 0     | 0     | .20  | 1.9   | .10  | .10   |     |       |      |      |       |
| 9     |      | 0     | .10   | .20  | 1.6   | .10  | .10   |     |       |      |      |       |
| 10    |      | 0     | 1.5   | .10  | 1.4   | .10  | .10   |     |       |      |      |       |
| 11    |      | 0     | .70   | .10  | 1.2   | .10  | .10   |     |       |      |      |       |
| 12    |      | 0     | .50   | .10  | 1.0   | .10  | .10   |     |       |      |      |       |
| 13    |      | 0     | .70   | .10  | .90   | .10  | .10   |     |       |      |      |       |
| 14    |      | 0     | .40   | .10  | .80   | .10  | .10   |     |       |      |      |       |
| 15    |      | 0     | .20   | .10  | .60   | .10  | .10   |     |       |      |      |       |
| 16    |      | .20   | .20   | .10  | .50   | .10  | .10   |     |       |      |      |       |
| 17    |      | 0     | .10   | .10  | .50   | .10  | .10   |     |       |      |      |       |
| 18    |      | 0     | .10   | .10  | .40   | .10  | .10   |     |       |      |      |       |
| 19    |      | 0     | 0     | .10  | .40   | .10  | .10   |     |       |      |      |       |
| 20    |      | 0     | 0     | .10  | .30   | .10  | .10   |     |       |      |      |       |
| 21    |      | 0     | 0     | .10  | .30   | .10  | .10   |     |       |      |      |       |
| 22    |      | 2.2   | .30   | .10  | .20   | .10  | .10   |     |       |      |      |       |
| 23    |      | 8.6   | .20   | .10  | .20   | .10  | .10   |     |       |      |      |       |
| 24    |      | .30   | .10   | .10  | .20   | .10  | 0     |     |       |      |      |       |
| 25    |      | 1.7   | .10   | .10  | .20   | .10  | 0     |     |       |      |      |       |
| 26    |      | .80   | .10   | .10  | .20   | .10  | 0     |     |       |      |      |       |
| 27    |      | .10   | 0     | .10  | .20   | .10  | 0     |     |       |      |      |       |
| 28    |      | 0     | 0     | 0    | .20   | .10  | 0     |     |       |      |      |       |
| 29    |      | 0     | .90   | 0    | ----- | .10  | 0     |     |       |      |      |       |
| 30    |      | 0     | 4.3   | .10  | ----- | .10  | 0     |     |       |      |      |       |
| 31    |      | ----- | 1.5   | .10  | ----- | .10  | ----- |     | ----- |      |      |       |
| Total | 0    | 13.90 | 12.00 | 5.20 | 18.90 | 3.70 | 2.30  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0.46  | 0.39  | 0.17 | 0.68  | 0.12 | 0.08  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 28    | 24    | 10   | 37    | 7.3  | 4.6   | 0   | 0     | 0    | 0    | 0     |
| (†)   | 0    | 7.5   | 4.2   | 0.6  | 1.8   | 0.5  | 0.2   | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 8.6 Min 0 Mean 0.182 Ac-ft 132 † 23.4

Water year 1965-66 Max 8.6 Min 0 Mean 0.153 Ac-ft 111 † 14.9

Peak discharge (base, 10 cfs).--Nov. 22 (2330 hrs) 36 cfs (5.56 ft); Dec. 29 (2330 hrs) 13 cfs (4.25 ft)

† Precipitation, in inches.



11-0695. San Jacinto River near San Jacinto, Calif.

Location.--Lat 33°44'15", long 116°49'35", in subsection 13, T.5 S., R.1 E., on downstream side of right pier of bridge on State Highway 74, 1 mile downstream from North Fork, and 8.2 miles southeast of San Jacinto.

Drainage area.--141 sq mi.

Records available.--October 1920 to February 1927, March 1927 to September 1966; combined records of river and diversions, October 1948 to September 1966. Monthly discharge only for October 1920 and July to September 1926, published in WSP 1315-B.

Gage.--Graphic water-stage recorder on river; graphic water-stage recorder on lower canal; digital water-stage recorder on upper canal; staff gage on pipeline. Datum of gage is 1,982.75 ft above mean sea level (Corps of Engineers bench mark). Prior to Feb. 15, 1927, graphic water-stage recorder at site about 150 ft upstream at different datum. Feb. 15, 1927, to December 1929, staff gage at same site at different datum. December 1929 to Feb. 6, 1937, graphic water-stage recorder at same site at different datum. Feb. 7, 1937, to Jan. 23, 1948, staff gage at same site at various datums. Prior to Oct. 1, 1964 graphic water-stage recorder on upper canal.

Average discharge (river only).--45 years (1920-26, 1927-66), 16.5 cfs (11,950 acre-ft per year); median of yearly mean discharges 5.8 cfs (4,200 acre-ft per year).  
(combined).--18 years (1948-66), 14.8 cfs (10,710 acre-ft per year); median of yearly mean discharges, 8.3 cfs (6,000 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 6,300 cfs Nov. 22 (gage height, 10.40 ft), from rating curve extended above 1,800 cfs on basis of field estimate of maximum flow; no flow for much of year.

1920-66: Maximum discharge, 45,000 cfs Feb. 16, 1927, on basis of slope-area measurement of maximum flow; no flow for several months in each year.

(combined).--Maximum discharge during year, 6,310 cfs Nov. 22; minimum daily, 1.5 cfs June 26.

1948-66: Maximum discharge, that of Nov. 22, 1965; no flow at times in 1951, 1952, and 1957.

Remarks.--Records good. Flow partly regulated by Lake Hemet (see Sta. No. 0690). Lake Hemet Municipal Water District's upper and lower canals divert water above station for irrigation. Fairview Land and Water Co.'s pipeline diverts water above station for domestic use. For records of combined daily discharge of San Jacinto River and diversions, see following page. Diversion above station began prior to 1920. See schematic diagram of Santa Ana River basin.

Cooperation.--Records of Fairview Land and Water Co.'s pipeline furnished by Lake Hemet Municipal Water District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.   | Jan.   | Feb.   | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|---------|--------|--------|--------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0       | 22     | 55     | 0.50   | 2.9   |       | 0    | 0.10  |      |      |       |
| 2     |      | 0       | 14     | 45     | 1.0    | 2.1   |       | 0    | .10   |      |      |       |
| 3     |      | 0       | 7.5    | 37     | .70    | 1.8   |       | 0    | .10   |      |      |       |
| 4     |      | 0       | 4.5    | 32     | .80    | 2.3   |       | 0    | .10   |      |      |       |
| 5     |      | 0       | 3.8    | 27     | .70    | 2.6   |       | 0    | .10   |      |      |       |
| 6     |      | 0       | 3.0    | 19     | 41     | 2.6   |       | 0    | .10   |      |      |       |
| 7     |      | 0       | 1.0    | 15     | 73     | 3.0   |       | 0    | .10   |      |      |       |
| 8     |      | 0       | .30    | 14     | 32     | 3.0   |       | 0    | .10   |      |      |       |
| 9     |      | 0       | 27     | 11     | 17     | 2.9   |       | 0    | .10   |      |      |       |
| 10    |      | 0       | 73     | 7.5    | 11     | 2.9   |       | 0    | 0     |      |      |       |
| 11    |      | 0       | 46     | 5.8    | 7.2    | 2.9   |       | 0    | 0     |      |      |       |
| 12    |      | 0       | 41     | 5.8    | 6.6    | 3.0   |       | 0    | 0     |      |      |       |
| 13    |      | 0       | 24     | 3.8    | 5.2    | 4.0   |       | 0    | 0     |      |      |       |
| 14    |      | 0       | 10     | 3.4    | 4.8    | 3.8   |       | 0    | 0     |      |      |       |
| 15    |      | 0       | 10     | 3.0    | 4.8    | 2.4   |       | 0    | 0     |      |      |       |
| 16    |      | 1.1     | 10     | 4.9    | 4.3    | 1.8   |       | 0    | 0     |      |      |       |
| 17    |      | 14      | 8.8    | 10     | 4.0    | 1.2   |       | 0    | 0     |      |      |       |
| 18    |      | 7.0     | 7.8    | 6.0    | 4.0    | .50   |       | 0    | 0     |      |      |       |
| 19    |      | 3.3     | 7.2    | 2.4    | 3.8    | .40   |       | 0    | 0     |      |      |       |
| 20    |      | 1.4     | 4.5    | 2.0    | 3.6    | .50   |       | 0    | 0     |      |      |       |
| 21    |      | 1.1     | 1.1    | .70    | 3.6    | .40   |       | 0    | 0     |      |      |       |
| 22    |      | 1.270   | 9.6    | .20    | 4.0    | .20   |       | 0    | 0     |      |      |       |
| 23    |      | 2.630   | 6.0    | .30    | 3.8    | 0     |       | 0    | 0     |      |      |       |
| 24    |      | 332     | 2.9    | .40    | 3.6    | .40   |       | 0    | 0     |      |      |       |
| 25    |      | 334     | 2.6    | .40    | 3.6    | .50   |       | 0    | 0     |      |      |       |
| 26    |      | 137     | 2.2    | .40    | 3.6    | 1.9   |       | 0    | 0     |      |      |       |
| 27    |      | 73      | .80    | .40    | 3.4    | 1.2   |       | 0    | 0     |      |      |       |
| 28    |      | 53      | .30    | .40    | 3.2    | .40   |       | 0    | 0     |      |      |       |
| 29    |      | 37      | 95     | .40    | -----  | .10   |       | .10  | 0     |      |      |       |
| 30    |      | 29      | 211    | 1.9    | -----  | 0     |       | .10  | 0     |      |      |       |
| 31    |      | -----   | 81     | 2.8    | -----  | 0     | ----- | .10  | ----- |      |      |       |
| Total | 0    | 4.922.9 | 737.90 | 317.90 | 254.80 | 56.20 | 0     | 0.30 | 0.90  | 0    | 0    | 0     |
| Mean  | 0    | 154     | 23.8   | 10.3   | 9.10   | 1.81  | 0     | 0.01 | 0.03  | 0    | 0    | 0     |
| Ac-ft | 0    | 9.760   | 1.450  | 631    | 505    | 111   | 0     | 0.6  | 1.8   | 0    | 0    | 0     |

Calendar year 1965 Max 2.630 Min 0 Mean 20.6 Ac-ft 14,880  
Water year 1965-66 Max 2.630 Min 0 Mean 17.2 Ac-ft 12,480

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-22 | 2400 | 10.40       | 6,300     | 12-29 | 2330 | 6.05        | 890       |
| 12-10 | 0600 | 4.23        | 110       | 2-6   | 2400 | 4.42        | 148       |

11-0695, San Jacinto River near San Jacinto, Calif.--Continued.

Combined discharge, in cubic feet per second, of San Jacinto River, Lake Hemet Water Co.'s upper and lower canals, and Fairview Land and Water Co.'s pipeline, near San Jacinto, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 3.0  | 2.4     | 34    | 75    | 25    | 31    | 23    | 12    | 6.7   | 7.6   | 4.5   | 4.2   |
| 2     | 3.0  | 2.4     | 28    | 65    | 26    | 31    | 23    | 12    | 6.3   | 4.5   | 4.2   | 4.1   |
| 3     | 3.0  | 2.2     | 26    | 57    | 25    | 28    | 23    | 12    | 6.0   | 4.3   | 4.1   | 4.2   |
| 4     | 3.1  | 2.1     | 25    | 52    | 24    | 28    | 21    | 12    | 5.6   | 4.2   | 3.9   | 4.2   |
| 5     | 3.2  | 2.0     | 23    | 47    | 24    | 28    | 20    | 12    | 5.2   | 4.1   | 3.7   | 4.2   |
| 6     | 2.8  | 2.3     | 21    | 43    | 67    | 28    | 19    | 12    | 5.1   | 4.0   | 3.6   | 4.1   |
| 7     | 2.7  | 2.3     | 20    | 42    | 99    | 29    | 19    | 12    | 5.1   | 3.9   | 3.6   | 4.1   |
| 8     | 2.7  | 2.4     | 19    | 40    | 57    | 29    | 18    | 12    | 5.5   | 3.8   | 3.6   | 3.9   |
| 9     | 2.8  | 2.4     | 38    | 37    | 43    | 29    | 17    | 13    | 6.3   | 4.1   | 3.5   | 3.4   |
| 10    | 3.0  | 2.4     | 74    | 34    | 37    | 29    | 18    | 14    | 5.5   | 3.9   | 3.5   | 3.2   |
| 11    | 2.7  | 2.5     | 46    | 32    | 34    | 29    | 19    | 14    | 4.6   | 3.6   | 3.5   | 3.3   |
| 12    | 2.6  | 2.5     | 41    | 31    | 34    | 30    | 21    | 13    | 4.2   | 3.8   | 3.6   | 3.7   |
| 13    | 2.4  | 2.5     | 43    | 28    | 32    | 31    | 22    | 12    | 3.8   | 3.9   | 3.5   | 3.7   |
| 14    | 2.4  | 3.4     | 38    | 28    | 31    | 31    | 21    | 11    | 3.4   | 3.8   | 3.4   | 3.7   |
| 15    | 2.6  | 4.5     | 35    | 27    | 31    | 30    | 20    | 11    | 3.4   | 3.8   | 3.4   | 3.6   |
| 16    | 2.9  | 6.3     | 32    | 26    | 30    | 31    | 18    | 11    | 3.4   | 3.6   | 3.3   | 3.4   |
| 17    | 2.9  | 27      | 30    | 24    | 30    | 30    | 19    | 10    | 3.2   | 3.5   | 3.1   | 3.0   |
| 18    | 2.9  | 14      | 27    | 26    | 30    | 29    | 20    | 9.3   | 3.0   | 3.3   | 3.1   | 3.1   |
| 19    | 2.9  | 7.9     | 25    | 25    | 30    | 29    | 21    | 9.2   | 2.9   | 3.4   | 3.1   | 3.3   |
| 20    | 2.7  | 5.6     | 26    | 25    | 30    | 29    | 19    | 9.2   | 2.8   | 3.5   | 3.4   | 3.1   |
| 21    | 2.5  | 4.3     | 26    | 24    | 30    | 28    | 18    | 9.4   | 2.5   | 3.5   | 3.4   | 2.7   |
| 22    | 2.5  | 1,280   | 37    | 24    | 30    | 27    | 18    | 9.4   | 2.3   | 3.9   | 3.4   | 3.0   |
| 23    | 2.4  | 2,640   | 31    | 24    | 30    | 27    | 16    | 9.0   | 1.9   | 4.5   | 3.3   | 3.0   |
| 24    | 2.5  | 342     | 27    | 23    | 30    | 29    | 15    | 8.5   | 1.8   | 4.2   | 3.3   | 3.0   |
| 25    | 2.4  | 345     | 27    | 22    | 30    | 26    | 15    | 8.1   | 1.6   | 3.8   | 3.3   | 3.0   |
| 26    | 2.4  | 152     | 25    | 22    | 31    | 31    | 14    | 7.7   | 1.5   | 3.7   | 3.3   | 3.1   |
| 27    | 2.3  | 88      | 25    | 22    | 28    | 27    | 14    | 7.3   | 1.6   | 3.7   | 3.4   | 3.4   |
| 28    | 2.3  | 64      | 24    | 20    | 29    | 27    | 14    | 6.8   | 2.8   | 3.4   | 3.4   | 3.1   |
| 29    | 2.3  | 48      | 121   | 20    | ----- | 26    | 13    | 6.8   | 5.4   | 3.9   | 3.5   | 3.3   |
| 30    | 2.4  | 40      | 233   | 24    | ----- | 25    | 13    | 6.7   | 7.7   | 4.3   | 3.7   | 3.4   |
| 31    | 2.4  | -----   | 101   | 26    | ----- | 23    | ----- | 6.7   | ----- | 4.8   | 4.0   | ----- |
| Total | 82.7 | 5,102.4 | 1,328 | 1,015 | 977   | 895   | 551   | 319.1 | 121.1 | 124.3 | 109.6 | 104.5 |
| Mean  | 2.67 | 170     | 42.8  | 32.7  | 34.9  | 28.9  | 18.4  | 10.3  | 4.04  | 4.01  | 3.54  | 3.48  |
| Ac-ft | 164  | 10,120  | 2,630 | 2,010 | 1,940 | 1,780 | 1,090 | 633   | 240   | 247   | 217   | 207   |

Calendar year 1965 Max 2,640 Min 0.70 Mean 28.4 Ac-ft 20,530  
 Water year 1965-66 Max 2,640 Min 1.5 Mean 29.4 Ac-ft 21,280

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-22 | 2400 |             | 6,310     | 12-29 | 2330 |             | 906       |
| 12-10 | 0600 |             | 110       | 2-6   | 2400 |             | 162       |

## SANTA ANA RIVER BASIN

177

11-0700. Bautista Creek near Hemet, Calif.

Location.--Lat 33°41'40", long 116°51'00", in NE 1/4 SW 1/4 sec. 35, T.5 S., R.1 E., on left bank a quarter of a mile upstream from unnamed tributary, 6 miles upstream from mouth, and 8 miles southeast of Hemet.

Drainage area.--39.4 sq mi.

Records available.--October 1947 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,250 ft (from topographic map).

Average discharge.--19 years, 0.487 cfs (353 acre-ft per year); median of yearly mean discharges, 0.02 cfs (14 acre-ft per year).

Extremes.--Maximum discharge during year, 498 cfs Nov. 23 (gage height, 4.80 ft), on basis of field estimate of maximum flow; no flow for most of year.

1947-66: Maximum discharge, 1,440 cfs Apr. 3, 1958 (gage height, 4.65 ft); no flow for most of each year.

Remarks.--Records poor. No regulation above station. One diversion above station for irrigation of about 15 acres. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                   |                   |                |
|-------------------|-------------------|----------------|
| Nov. 17..... 0.10 | Dec. 15..... 0.30 | Feb. 7.....1.1 |
| 22......65        | 16..... .10       | 8.....1.3      |
| 23......94        | 22..... .10       | 9..... .70     |
| 24..... 1.0       | 29.....1.1        | 10..... .40    |
| 25..... .40       | 30..... 5.8       | 11..... .10    |
| Dec. 14..... .70  | Jan. 30..... .30  | 12..... .10    |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 160.50   | 94      | 0       | 5.35 | 318       |
| December.....           | 18.00    | 11      | 0       | .58  | 36        |
| January 1966.....       | 0.30     | .30     | 0       | .01  | .6        |
| February.....           | 3.70     | 1.3     | 0       | .13  | 7.3       |
| Calendar year 1965..... | -        | 94      | 0       | .508 | 368       |
| Water year 1965-66..... | -        | 94      | 0       | .500 | 362       |

Peak discharge (base, 20 cfs).--Nov. 23 (0200 hrs) 498 cfs (4.80 ft); Dec. 29 (2200 hrs) 80 cfs (3.16 ft).

Note.--Flow occurred only on days listed above.

11-0705. San Jacinto River near Elsinore, Calif.

Location.--Lat 33°39'51", long 117°17'35", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.9, T.6 S., R.4 W., on right bank 2 miles east of Elsinore and 2.1 miles downstream from Railroad Canyon Dam.

Drainage area.--728 sq mi.

Records available.--January 1916 to September 1966. Monthly figures 1927-50, adjusted for diversion, published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Altitude of gage is 1,270 ft (from topographic map). Prior to Feb. 13, 1916, staff gage at site 0.75 mile downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, staff gage at present site at different datum.

Extremes.--Maximum discharge during year, 322 cfs Mar. 10 (gage height, 4.69 ft); no flow for most of year.

1916-66: Maximum discharge, 16,000 cfs Feb. 17, 1927 (gage height 11.8 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in most years.

Remarks.--Records good. Flow partly regulated by Lake Hemet (see Sta. No. 0690) and regulated since 1928 by Railroad Canyon Reservoir (capacity, 12,000 acre-ft) 2.1 miles above station. Diversion for irrigation and domestic use above Railroad Canyon Reservoir. Temescal Water Co. diverted 2,000 acre-ft during year from Railroad Canyon Reservoir for irrigation below station in vicinity of Corona. Discharge Feb. 10 to Mar. 28 was mostly imported Colorado River water for replenishment of Lake Elsinore. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov. | Dec. | Jan. | Feb.     | Mar.     | Apr. | May | June | July | Aug. | Sept. |
|-------|------|------|------|------|----------|----------|------|-----|------|------|------|-------|
| 1     |      |      | 0    | 0.10 | 0.10     | 201      |      |     |      | 0    |      |       |
| 2     |      |      | 0    | .10  | .10      | 201      |      |     |      | 0    |      |       |
| 3     |      |      | 0    | .10  | .10      | 197      |      |     |      | 0    |      |       |
| 4     |      |      | 0    | .10  | .10      | 197      |      |     |      | 0    |      |       |
| 5     |      |      | 0    | .10  | .10      | 197      |      |     |      | 0    |      |       |
| 6     |      |      | 0    | .10  | .10      | 195      |      |     |      | 0    |      |       |
| 7     |      |      | 0    | .10  | .20      | 193      |      |     |      | .60  |      |       |
| 8     |      |      | 0    | .10  | .10      | 191      |      |     |      | 0    |      |       |
| 9     |      |      | 0    | .10  | .10      | 218      |      |     |      | 0    |      |       |
| 10    |      |      | 0.20 | 0    | 88       | 310      |      |     |      | 0    |      |       |
| 11    |      |      | .20  | 0    | 195      | 320      |      |     |      | 0    |      |       |
| 12    |      |      | .10  | 0    | 191      | 318      |      |     |      | 0    |      |       |
| 13    |      |      | .10  | 0    | 190      | 310      |      |     |      | 0    |      |       |
| 14    |      |      | .10  | .10  | 190      | 105      |      |     |      | 0    |      |       |
| 15    |      |      | .10  | .10  | 190      | 1.7      |      |     |      | 0    |      |       |
| 16    |      |      | .20  | .10  | 195      | 53       |      |     |      | 0    |      |       |
| 17    |      |      | .20  | .10  | 195      | 4.6      |      |     |      | 0    |      |       |
| 18    |      |      | .10  | 0    | 195      | 5.9      |      |     |      | 0    |      |       |
| 19    |      |      | .10  | .10  | 195      | 3.8      |      |     |      | 0    |      |       |
| 20    |      |      | .10  | .10  | 195      | .50      |      |     |      | 0    |      |       |
| 21    |      |      | .10  | 0    | 195      | .60      |      |     |      | 0    |      |       |
| 22    |      |      | .10  | 0    | 195      | .70      |      |     |      | 0    |      |       |
| 23    |      |      | .10  | .10  | 195      | .40      |      |     |      | 0    |      |       |
| 24    |      |      | 0    | .10  | 199      | .30      |      |     |      | 0    |      |       |
| 25    |      |      | 0    | .10  | 199      | .40      |      |     |      | 0    |      |       |
| 26    |      |      | .10  | .10  | 201      | .20      |      |     |      | 0    |      |       |
| 27    |      |      | 0    | .10  | 201      | .20      |      |     |      | 0    |      |       |
| 28    |      |      | 0    | .10  | 201      | .10      |      |     |      | 0    |      |       |
| 29    |      |      | .20  | .10  | -----    | 0        |      |     |      | 0    |      |       |
| 30    |      |      | .50  | .20  | -----    | 0        |      |     |      | 0    |      |       |
| 31    |      |      | .20  | .20  | -----    | 0        |      |     |      | 0    |      |       |
| Total | 0    | 0    | 2.80 | 2.60 | 3,606.00 | 3,225.40 | 0    | 0   | 0    | 0.60 | 0    | 0     |
| Mean  | 0    | 0    | 0.09 | 0.08 | 129      | 104      | 0    | 0   | 0    | 0.02 | 0    | 0     |
| Ac-ft | 0    | 0    | 5.6  | 5.2  | 7,150    | 6,400    | 0    | 0   | 0    | 1.2  | 0    | 0     |

Calendar year 1965 Max 183 Min 0 Mean 5.06 Ac-ft 3,660

Water year 1965-66 Max 320 Min 0 Mean 18.7 Ac-ft 13,560

11-0710. Elsinore Lake at Elsinore, Calif.

Location.--Lat 33°40'10", long 117°22'20", in Elsinore State Park, near northwest shore at Elsinore, Riverside County.

Drainage area.--768 sq. mi.

Records available.--December 1915 to September 1966 (discontinued).

Gage.--Staff gage read monthly. Gage heights have been reduced to elevations above mean sea level. Prior to Feb. 13, 1951, staff gage at numerous sites on northeast shore at various datums. Feb. 13, 1951, to Aug. 4, 1964, staff gages at various sites, at datum 10.2 ft higher.

Extremes.--Maximum elevation observed during year, 1,233.3 ft Mar. 14; minimum observed, 1,227.4 ft Oct. 28.

1915-66; Maximum elevation observed, 1,265.6 ft Mar. 20-25, 1916, during period of overflow; maximum observed since cessation of overflow in June 1917, 1,259.8 ft May 6, 11-20, 1922; lake dry during parts of water years 1951, 1954-59, 1964, and all of 1960-63.

Remarks.--Lake replenished with imported Colorado River water during year. Elsinore Lake overflows into Temescal Creek, which is its outlet, only during and after years of unusually heavy rainfall. Elevation at which lake is dry, about 1,223.0 ft. There has been no outflow since June 30, 1917. History of lake prior to 1916 is published in WSP 441. Summary of high stages that have occurred from 1916 to 1942 is contained in WSP 961. Flow partly regulated by Lake Hemet (see Sta. No. 0690) and regulated since 1928 by Railroad Canyon Reservoir (capacity, 12,000 acre-ft). See schematic diagram of Santa Ana River basin.

Elevation, in feet, water year October 1965 to September 1966

| Date    | Elevation | Date   | Elevation | Date    | Elevation |
|---------|-----------|--------|-----------|---------|-----------|
| Oct. 6  | 1,227.7   | Feb. 8 | 1,228.6   | Mar. 29 | 1,233.2   |
| 28      | 1,227.4   | 11     | 1,228.6   | Apr. 28 | 1,232.8   |
| Nov. 19 | 1,227.6   | Mar. 3 | 1,231.4   | June 2  | 1,232.3   |
| Jan. 4  | 1,228.6   | 14     | 1,233.3   | 28      | 1,231.9   |
| Feb. 2  | 1,228.6   | 28     | 1,233.2   | Aug. 3  | 1,231.0   |

## SANTA ANA RIVER BASIN

11-0720. Temescal Creek near Corona, Calif.

Location.--Lat 33°50'29", long 117°30'37", in El Sobrante de San Jacinto Grant, on left bank 0.2 mile downstream from unnamed tributary and 3.8 miles southeast of Corona, Riverside County.

Drainage area.--164 sq mi (not including 768 sq mi above Elsinore Lake).

Records available.--October 1927 to September 1966. Monthly discharge only for the period October 1927 to January 1929, published in WSP 1315-B.

Gage.--Graphic water-stage recorder and incomplete masonry-dam control (ineffective due to sand fill); supplementary graphic water-stage recorder 2½ miles downstream. Altitude of gage is 730 ft (from topographic map). Prior to Feb. 11, 1943, at datum 6.00 ft higher.

Average discharge.--39 years, 2.77 cfs (2,010 acre-ft per year); median of yearly mean discharges, 0.06 cfs (43 acre-ft per year).

Extremes.--Maximum discharge during year, about 1,500 cfs Dec. 29 (gage height, 3.80 ft); no flow for much of year.

1927-66: Maximum discharge, 14,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in most years.

Remarks.--Records poor except those for Nov. 22, 23, and Dec. 29, 30, which are fair. Flow regulated by Elsinore Lake (see Sta. No. 0710) and several storage reservoirs. Many diversions above station for irrigation. Metropolitan Water District of Southern California reported no water released down creek during year. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.   | Dec.   | Jan. | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|--------------------|------|--------|--------|------|-------|------|-------|------|-------|------|------|-------|
| 1                  |      | 0      | 0      | 0.50 | 0.30  | 0.10 | 0.10  | 0.10 |       |      |      |       |
| 2                  |      | 0      | 0      | .40  | .20   | .10  | .10   | .10  |       |      |      |       |
| 3                  |      | 0      | 0      | .30  | .10   | .50  | .10   | .10  |       |      |      |       |
| 4                  |      | 0      | 0      | .30  | 0     | .10  | .10   | .10  |       |      |      |       |
| 5                  |      | 0      | 0      | .20  | 0     | .10  | .10   | .10  |       |      |      |       |
| 6                  |      | 0      | 0      | .20  | 1.0   | .10  | .10   | .10  |       |      |      |       |
| 7                  |      | 0      | 0      | .10  | .70   | .10  | .10   | .10  |       |      |      |       |
| 8                  |      | 0      | 0      | .10  | .50   | .10  | .10   | 0    |       |      |      |       |
| 9                  |      | 0      | 0      | .10  | .40   | .10  | .10   | 0    |       |      |      |       |
| 10                 |      | 0      | 1.0    | .10  | .30   | .10  | .10   | 0    |       |      |      |       |
| 11                 |      | 0      | .80    | 0    | .20   | .10  | .10   | 0    |       |      |      |       |
| 12                 |      | 0      | .70    | 0    | .20   | .10  | .10   | 0    |       |      |      |       |
| 13                 |      | 0      | .60    | 0    | .20   | .10  | .10   | 0    |       |      |      |       |
| 14                 |      | 0      | .60    | 0    | .20   | .10  | .10   | 0    |       |      |      |       |
| 15                 |      | .40    | .50    | 0    | .20   | .10  | .10   | 0    |       |      |      |       |
| 16                 |      | .60    | .50    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 17                 |      | .30    | .40    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 18                 |      | 0      | .10    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 19                 |      | 0      | .10    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 20                 |      | 0      | .10    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 21                 |      | 0      | .10    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 22                 |      | .63    | .10    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 23                 |      | 148    | .10    | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 24                 |      | .50    | .10    | 0    | .10   | .20  | .10   | 0    |       |      |      |       |
| 25                 |      | .10    | 0      | 0    | .10   | .30  | .10   | 0    |       |      |      |       |
| 26                 |      | 0      | 0      | 0    | .10   | .20  | .10   | 0    |       |      |      |       |
| 27                 |      | 0      | 0      | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 28                 |      | 0      | 0      | 0    | .10   | .10  | .10   | 0    |       |      |      |       |
| 29                 |      | 0      | 169    | 0    | ----- | .10  | .10   | 0    |       |      |      |       |
| 30                 |      | 0      | .50    | 1.0  | ----- | .20  | .10   | 0    |       |      |      |       |
| 31                 |      | -----  | 1.0    | .50  | ----- | .10  | ----- | 0    | ----- |      |      | ----- |
| Total              | 0    | 212.90 | 180.80 | 3.80 | 5.80  | 4.00 | 3.00  | 0.70 | 0     | 0    | 0    | 0     |
| Mean               | 0    | 7.10   | 5.83   | 0.12 | 0.21  | 0.13 | 0.10  | 0.02 | 0     | 0    | 0    | 0     |
| Ac-ft              | 0    | 422    | 359    | 7.5  | 12    | 7.9  | 6.0   | 1.4  | 0     | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 169    | Min    | 0    | Mean  | 1.16 | Ac-ft | 840  |       |      |      |       |
| Water year 1965-66 | Max  | 169    | Min    | 0    | Mean  | 1.13 | Ac-ft | 815  |       |      |      |       |

11-0730. San Antonio Creek near Claremont, Calif.

Location.--Lat 34°12'58", long 117°40'04", in SE 1/4 sec. 36, T.2 N., R.8 W., on right bank 0.5 mile upstream from Southern California Edison Co.'s Sierra powerplant and 8.8 miles northeast of Claremont.

Drainage area.--16.5 sq mi.

Records available.--January 1917 to September 1965; combined records of creek and conduit, March 1901 to December 1916 (fragmentary, published as "near Upland"), January 1917 to September 1965.

Gage.--Digital water-stage recorder and broad-crested weir since January 1939 on creek; graphic water-stage recorder and sharp-crested weir on conduit; graphic water-stage recorder and combination rectangular-V-notch weir on river pickup. Altitude of gage is 3,400 ft (from topographic map). Prior to Aug. 24, 1907, staff gage at site 0.5 mile upstream, just above intake to Sierra powerplant, at different datum. Aug. 24, 1907, to Jan. 24, 1917, hook gage and rectangular weir in powerplant tailrace 0.5 mile downstream at different datum; creek flow estimated. Jan. 25, 1917, to Jan. 9, 1939, graphic water-stage recorder at site 50 ft downstream at different datum. Prior to Jan. 31, 1963, graphic water-stage recorder on creek.

Average discharge (creek only).--49 years (1917-66), 8.87 cfs (6,420 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

(combined).--61 years (1901-2, 1903-4, 1905-9, 1910-15, 1916-66), 21.5 cfs (15,570 acre-ft per year); median of yearly mean discharges, 16 cfs (11,600 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 2,590 cfs Dec. 29 (gage height, 6.36 ft), from rating curve extended above 140 cfs on basis of slope-area measurement at gage height 5.66 ft; minimum daily, 0.2 cfs Oct. 5-8.

1917-66: Maximum discharge, 21,400 cfs Mar. 2, 1938, on basis of slope-area measurement and rainfall-runoff studies; no flow Aug. 24-27, 31, Sept. 1, Oct. 17-21, 1951.

(combined).--Maximum discharge during year, 2,620 cfs Dec. 29; minimum daily, 6.0 cfs Oct. 31, Nov. 10-12.

1917-66: Maximum discharge, 21,400 cfs Mar. 2, 1938; minimum daily, 0.30 cfs Dec. 8-19, 1954, Dec. 12-17, 1963.

Remarks.--Records (creek) fair, (combined) good. No regulation above station. For records of combined discharge of San Antonio Creek and Southern California Edison Co.'s Sierra conduit, which diverts above station, see following page. See schematic diagram of Santa Ana River basin.

Cooperation.--Sixteen discharge measurements furnished by Los Angeles County Flood Control District. Water-stage recorder graph for conduit and records of river pickup furnished by Southern California Edison Co.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.50 | 0.20     | 132   | 188   | 40    | 19    | 28    | 21    | 17    | 3.7   | 0.80  | 0.60  |
| 2     | .50  | .30      | 100   | 231   | 37    | 34    | 29    | 20    | 17    | 3.0   | .80   | .60   |
| 3     | .50  | .30      | 99    | 222   | 34    | 36    | 28    | 20    | 18    | 2.5   | .80   | .60   |
| 4     | .40  | .30      | 85    | 192   | 31    | 36    | 28    | 21    | 17    | 1.5   | .80   | .60   |
| 5     | .20  | .30      | 73    | 145   | 29    | 35    | 28    | 21    | 18    | 1.0   | .80   | .60   |
| 6     | .20  | .30      | 70    | 134   | 37    | 34    | 28    | 21    | 15    | .90   | .70   | .50   |
| 7     | .20  | .30      | 65    | 113   | 38    | 34    | 28    | 21    | 13    | .80   | .70   | .50   |
| 8     | .20  | .30      | 60    | 111   | 29    | 34    | 27    | 21    | 15    | .70   | .70   | .50   |
| 9     | .30  | .30      | 59    | 121   | 25    | 34    | 26    | 21    | 2.6   | .70   | .70   | .50   |
| 10    | .30  | .30      | 58    | 118   | 27    | 33    | 27    | 21    | 2.4   | .70   | .70   | .50   |
| 11    | .30  | .30      | 60    | 121   | 28    | 33    | 29    | 20    | 2.3   | .70   | .70   | .50   |
| 12    | .30  | .30      | 58    | 119   | 26    | 32    | 28    | 20    | 2.3   | .70   | .70   | .50   |
| 13    | .30  | .40      | 50    | 124   | 26    | 31    | 28    | 20    | 2.4   | .70   | .70   | .50   |
| 14    | .30  | .50      | 40    | 127   | 24    | 31    | 28    | 20    | 2.3   | .70   | .70   | .50   |
| 15    | .30  | .60      | 35    | 121   | 24    | 31    | 27    | 20    | 2.3   | .70   | .70   | .50   |
| 16    | .30  | .90      | 34    | 112   | 23    | 31    | 26    | 19    | 2.3   | .70   | .70   | .50   |
| 17    | .30  | 31       | 31    | 105   | 22    | 31    | 26    | 19    | 2.5   | .70   | .70   | .50   |
| 18    | .30  | 45       | 29    | 91    | 22    | 31    | 27    | 19    | 2.3   | .70   | .70   | .50   |
| 19    | .30  | 22       | 27    | 81    | 21    | 31    | 26    | 19    | 2.3   | .70   | .70   | .50   |
| 20    | .30  | 12       | 25    | 75    | 21    | 30    | 25    | 19    | 2.3   | .70   | .70   | .50   |
| 21    | .30  | 5.2      | 25    | 71    | 21    | 30    | 25    | 19    | 2.4   | .80   | .70   | .60   |
| 22    | .30  | 648      | 26    | 63    | 20    | 30    | 24    | 18    | 2.3   | .80   | .70   | .60   |
| 23    | .30  | 469      | 24    | 58    | 19    | 31    | 23    | 19    | 2.3   | .80   | .70   | .60   |
| 24    | .30  | 425      | 22    | 54    | 19    | 32    | 22    | 19    | 2.5   | .80   | .70   | .60   |
| 25    | .30  | 435      | 20    | 50    | 19    | 33    | 21    | 18    | 2.6   | .80   | .70   | .60   |
| 26    | .30  | 227      | 18    | 47    | 19    | 31    | 21    | 18    | 2.6   | .80   | .60   | .60   |
| 27    | .30  | 229      | 16    | 45    | 19    | 30    | 21    | 18    | 2.6   | .80   | .60   | .60   |
| 28    | .30  | 216      | 15    | 44    | 17    | 30    | 22    | 18    | 2.7   | .80   | .60   | .60   |
| 29    | .30  | 189      | 943   | 45    | ----- | 30    | 21    | 18    | 3.4   | .80   | .60   | .80   |
| 30    | .30  | 166      | 320   | 44    | ----- | 29    | 21    | 18    | 3.9   | .80   | .60   | .80   |
| 31    | .30  | -----    | 246   | 43    | ----- | 29    | ----- | 17    | ----- | .80   | .60   | ----- |
| TOTAL | 9.60 | 3,125.20 | 2,865 | 3,215 | 717   | 976   | 768   | 603   | 185.6 | 31.30 | 21.60 | 16.90 |
| MEAN  | .31  | 104      | 92.4  | 104   | 25.6  | 31.5  | 25.6  | 19.5  | 6.19  | 1.01  | .70   | .56   |
| AC-FT | 19   | 6,200    | 5,680 | 6,380 | 1,420 | 1,940 | 1,520 | 1,200 | 368   | 62    | 43    | 34    |

|               |         |     |     |     |     |      |      |       |        |
|---------------|---------|-----|-----|-----|-----|------|------|-------|--------|
| CALENDAR YEAR | 1965    | MAX | 943 | MIN | .20 | MEAN | 17.5 | AC-FT | 12,670 |
| WATER YEAR    | 1965-66 | MAX | 943 | MIN | .20 | MEAN | 34.3 | AC-FT | 24,870 |

## Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-18 | 0245 | 2.53        | 94        | 12-29 | 1730 | 6.36        | 2,590     |
| 11-22 | 1830 | 6.08        | 2,300     |       |      |             |           |

## SANTA ANA RIVER BASIN

11-0730. San Antonio Creek near Claremont, Calif.--Continued.

Combined discharge, in cubic feet per second, of San Antonio Creek and Southern California Edison Co.'s  
Sierra conduit near Claremont, Calif., water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 7.3   | 6.3     | 142   | 205   | 59    | 39    | 37    | 28    | 23    | 18   | 13   | 12    |
| 2     | 7.3   | 6.3     | 118   | 248   | 56    | 45    | 38    | 26    | 23    | 17   | 13   | 12    |
| 3     | 7.3   | 6.3     | 117   | 239   | 52    | 45    | 37    | 27    | 24    | 18   | 13   | 12    |
| 4     | 7.0   | 6.3     | 103   | 209   | 49    | 46    | 38    | 28    | 23    | 16   | 13   | 12    |
| 5     | 6.8   | 6.3     | 90    | 162   | 48    | 44    | 38    | 28    | 25    | 16   | 13   | 12    |
| 6     | 6.8   | 6.3     | 88    | 151   | 56    | 44    | 38    | 28    | 24    | 16   | 13   | 10    |
| 7     | 6.5   | 6.3     | 83    | 130   | 60    | 43    | 38    | 28    | 22    | 16   | 13   | 10    |
| 8     | 6.5   | 6.3     | 77    | 128   | 51    | 43    | 37    | 27    | 25    | 15   | 13   | 10    |
| 9     | 6.6   | 6.3     | 76    | 138   | 48    | 43    | 36    | 27    | 17    | 15   | 13   | 10    |
| 10    | 6.6   | 6.0     | 74    | 135   | 48    | 42    | 37    | 27    | 17    | 15   | 13   | 10    |
| 11    | 6.6   | 6.0     | 77    | 137   | 47    | 42    | 39    | 27    | 16    | 15   | 13   | 10    |
| 12    | 6.6   | 6.0     | 75    | 135   | 45    | 41    | 38    | 27    | 16    | 14   | 13   | 10    |
| 13    | 6.6   | 6.1     | 67    | 140   | 45    | 40    | 38    | 27    | 17    | 14   | 13   | 10    |
| 14    | 6.6   | 6.8     | 56    | 143   | 43    | 40    | 36    | 27    | 16    | 14   | 12   | 10    |
| 15    | 6.6   | 7.1     | 51    | 137   | 43    | 40    | 35    | 26    | 16    | 14   | 12   | 10    |
| 16    | 6.6   | 8.0     | 50    | 128   | 42    | 40    | 34    | 25    | 16    | 14   | 12   | 10    |
| 17    | 6.6   | 45      | 48    | 121   | 42    | 41    | 34    | 25    | 16    | 14   | 12   | 10    |
| 18    | 6.6   | 56      | 45    | 107   | 42    | 40    | 35    | 25    | 15    | 15   | 12   | 10    |
| 19    | 6.3   | 36      | 43    | 96    | 41    | 40    | 34    | 25    | 16    | 14   | 12   | 10    |
| 20    | 6.3   | 28      | 41    | 90    | 41    | 39    | 34    | 25    | 16    | 14   | 12   | 10    |
| 21    | 6.3   | 20      | 41    | 86    | 40    | 40    | 33    | 25    | 15    | 14   | 12   | 10    |
| 22    | 6.3   | 658     | 42    | 78    | 40    | 40    | 31    | 24    | 15    | 13   | 12   | 10    |
| 23    | 6.3   | 470     | 41    | 73    | 39    | 41    | 30    | 25    | 15    | 13   | 12   | 10    |
| 24    | 6.3   | 426     | 39    | 69    | 39    | 42    | 30    | 25    | 16    | 13   | 12   | 10    |
| 25    | 6.3   | 436     | 37    | 65    | 39    | 44    | 29    | 24    | 16    | 14   | 12   | 10    |
| 26    | 6.3   | 228     | 34    | 62    | 38    | 40    | 29    | 24    | 17    | 14   | 12   | 10    |
| 27    | 6.3   | 230     | 32    | 61    | 38    | 39    | 29    | 23    | 17    | 14   | 12   | 10    |
| 28    | 6.3   | 216     | 31    | 60    | 37    | 39    | 30    | 24    | 17    | 14   | 12   | 10    |
| 29    | 6.3   | 189     | 957   | 63    | ----- | 39    | 28    | 24    | 15    | 13   | 12   | 10    |
| 30    | 6.3   | 166     | 341   | 64    | ----- | 38    | 27    | 24    | 18    | 13   | 12   | 10    |
| 31    | 6.0   | -----   | 263   | 62    | ----- | 38    | 23    | 23    | ----- | 14   | 12   | ----- |
| Total | 203.1 | 3,306.7 | 3,379 | 3,722 | 1,268 | 1,277 | 1,027 | 798   | 544   | 453  | 385  | 310   |
| Mean  | 6.55  | 110     | 109   | 120   | 45.3  | 41.2  | 34.2  | 25.7  | 18.1  | 14.6 | 12.4 | 10.3  |
| Ac-ft | 403   | 6,560   | 6,700 | 7,380 | 2,520 | 2,530 | 2,040 | 1,580 | 1,080 | 899  | 764  | 615   |

Calendar year 1965 Max 957 Min 5.6 Mean 27.3 Ac-ft 19,790  
 Water year 1965-66 Max 957 Min 6.0 Mean 45.7 Ac-ft 33,070

## Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-18 | 0245 |             | 100       | 12-29 | 1730 |             | 2,620     |
| 11-22 | 1830 |             | 2,300     | 2-6   | 1100 |             | 55        |



11-0732. San Antonio Creek below San Antonio Dam, Calif.

Location.--Lat 34°09'26", long 117°40'50", in NE 1/4 sec. 23, T.1 N., R.8 W., on left wall of outlet channel, at toe of San Antonio Dam and 4.7 miles northeast of Claremont.

Drainage area.--26.9 sq mi.

Records available.--October 1962 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 2,093.94 ft above mean sea level (Corps of Engineers bench mark).

Extremes.--Maximum discharge during year, 920 cfs Dec. 30 (gage height, 3.15 ft), from rating curve extended above 220 cfs; no flow for much of year.

1962-66: Maximum discharge, that of Dec. 30, 1965; no flow for most of each year.

Remarks.--Records poor. Flow regulated by San Antonio flood-control reservoir (capacity, 9,110 acre-ft). Water diverted out of basin for power, domestic use and irrigation. See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.     | Dec.    | Jan.  | Feb.  | Mar.   | Apr.  | May    | June | July | Aug. | Sept. |
|--------------------|------|----------|---------|-------|-------|--------|-------|--------|------|------|------|-------|
| 1                  |      | 0        | 165     | 201   | 26    | 6.9    | 1.4   |        |      |      |      |       |
| 2                  |      | 0        | 89      | 236   | 28    | 6.9    | .20   |        |      |      |      |       |
| 3                  |      | 0        | 45      | 216   | 26    | 6.9    | .20   |        |      |      |      |       |
| 4                  |      | 0        | 45      | 186   | 24    | 6.9    | .20   |        |      |      |      |       |
| 5                  |      | 0        | 45      | 172   | 20    | 6.9    | .20   |        |      |      |      |       |
| 6                  |      | 0        | 45      | 179   | 18    | 6.9    | .20   |        |      |      |      |       |
| 7                  |      | 0        | 45      | 179   | 18    | 16     | 0     |        |      |      |      |       |
| 8                  |      | 0        | 43      | 148   | 18    | 17     | 0     |        |      |      |      |       |
| 9                  |      | 0        | 41      | 144   | 18    | 16     | 0     |        |      |      |      |       |
| 10                 |      | 0        | 38      | 134   | 18    | 13     | 0     |        |      |      |      |       |
| 11                 |      | 0        | 38      | 117   | 18    | 14     | 0     |        |      |      |      |       |
| 12                 |      | 0        | 36      | 108   | 18    | 10     | 0     |        |      |      |      |       |
| 13                 |      | 0        | 30      | 53    | 16    | 6.2    | 0     |        |      |      |      |       |
| 14                 |      | 0        | 26      | 32    | 16    | 5.5    | 0     |        |      |      |      |       |
| 15                 |      | 0        | 26      | 30    | 16    | 8.4    | 0     |        |      |      |      |       |
| 16                 |      | 0        | 28      | 28    | 37    | 5.5    | 0     |        |      |      |      |       |
| 17                 |      | .20      | 28      | 26    | 41    | 2.3    | 0     |        |      |      |      |       |
| 18                 |      | 0        | 23      | 26    | 34    | 1.4    | 0     |        |      |      |      |       |
| 19                 |      | 0        | 17      | 43    | 30    | .90    | 0     |        |      |      |      |       |
| 20                 |      | 0        | 18      | 53    | 22    | .90    | 0     |        |      |      |      |       |
| 21                 |      | 0        | 17      | 51    | 16    | .90    | 0     |        |      |      |      |       |
| 22                 |      | 0        | 14      | 47    | 14    | .90    | 0     |        |      |      |      |       |
| 23                 |      | 118      | 14      | 47    | 10    | .90    | 0     |        |      |      |      |       |
| 24                 |      | 124      | 12      | 45    | 7.6   | .90    | 0     |        |      |      |      |       |
| 25                 |      | 208      | 10      | 43    | 7.6   | .90    | 0     |        |      |      |      |       |
| 26                 |      | 212      | 9.2     | 41    | 6.9   | .90    | 0     |        |      |      |      |       |
| 27                 |      | 224      | 8.4     | 36    | 6.9   | .90    | 0     |        |      |      |      |       |
| 28                 |      | 216      | 5.5     | 36    | 6.9   | .26    | 0     |        |      |      |      |       |
| 29                 |      | 176      | 6.2     | 32    | ----- | 26     | 0     |        |      |      |      |       |
| 30                 |      | 172      | 436     | 28    | ----- | 17     | 0     |        |      |      |      |       |
| 31                 |      | -----    | 229     | 26    | ----- | 9.2    | ----- |        |      |      |      |       |
| Total              | 0    | 1,450.20 | 1,632.3 | 2,743 | 537.9 | 243.00 | 2.40  | 0      | 0    | 0    | 0    | 0     |
| Mean               | 0    | 48.3     | 52.7    | 88.5  | 19.2  | 7.84   | 0.08  | 0      | 0    | 0    | 0    | 0     |
| Ac-ft              | 0    | 2,880    | 3,240   | 5,440 | 1,070 | 482    | 4.8   | 0      | 0    | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 436      | Min     | 0     | Mean  | 8.45   | Ac-ft | 6,120  |      |      |      |       |
| Water year 1965-66 | Max  | 436      | Min     | 0     | Mean  | 18.1   | Ac-ft | 13,110 |      |      |      |       |

## SANTA ANA RIVER BASIN

11-0734.7. Cucamonga Creek near Upland, Calif.

Location.--Lat  $34^{\circ}10'26''$ , long  $117^{\circ}37'51''$ , in SW  $\frac{1}{4}$  sec. 17, T.1 N., R.7 W., on right bank 0.5 mile downstream from unnamed tributary on left and 5.3 miles north of Upland.

Drainage area.--10.1 sq mi.

Records available.--October 1927 to September 1966. Monthly discharge only for October to December 1928, published in WSP 1315-B.

Gage.--Digital water-stage recorder and broad-crested weir since December 1938. Altitude of gage is 2,360 ft (from topographic map). Prior to Jan. 17, 1935, and Apr. 15, 1935, to Nov. 11, 1936, at site 2,500 ft downstream at different datums. Jan. 18 to Apr. 14, 1935, at site 1,200 ft downstream at different datum. Nov. 12, 1936, to Dec. 13, 1938, at site 300 ft downstream at different datum. Prior to Jan. 31, 1963, graphic water-stage recorder.

Average discharge.--39 years, 6.85 cfs (4,960 acre-ft per year); median of yearly mean discharges, 4.5 cfs (3,300 acre-ft per year).

Extremes.--Maximum discharge during year, 2,000 cfs Nov. 22 (gage height, 6.22 ft, from inside gage), from rating curve extended above 350 cfs on basis of field estimate of maximum flow; minimum daily, 0.90 cfs Oct. 28.

1927-66: Maximum discharge, 10,300 cfs Mar. 2, 1938, based on rainfall-runoff study; minimum daily, 0.30 cfs Oct. 5, 6, 1962.

Remarks.--Records fair. No regulation or diversion above station. See schematic diagram of Santa Ana River basin.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 1.3   | 1.1     | 29    | 63    | 14    | 12    | 7.9   | 5.3   | 5.5   | 3.9   | 3.7   | 4.4   |
| 2     | 1.2   | 1.1     | 27    | 50    | 14    | 11    | 7.9   | 5.2   | 5.5   | 3.9   | 3.7   | 4.1   |
| 3     | 1.3   | 1.2     | 25    | 44    | 13    | 11    | 8.0   | 5.2   | 5.5   | 3.9   | 3.6   | 3.7   |
| 4     | 1.3   | 1.2     | 23    | 41    | 13    | 11    | 7.9   | 5.2   | 5.4   | 3.9   | 3.6   | 3.6   |
| 5     | 1.4   | 1.3     | 21    | 39    | 12    | 11    | 7.2   | 5.1   | 5.1   | 3.9   | 3.5   | 3.7   |
| 6     | 1.3   | 1.3     | 20    | 35    | 21    | 11    | 6.6   | 5.0   | 4.8   | 3.9   | 3.5   | 3.8   |
| 7     | 1.3   | 1.4     | 19    | 31    | 26    | 9.9   | 6.5   | 5.0   | 4.8   | 4.1   | 3.6   | 3.8   |
| 8     | 1.3   | 1.4     | 17    | 29    | 22    | 9.9   | 6.5   | 5.6   | 5.1   | 3.9   | 3.6   | 3.7   |
| 9     | 1.4   | 1.5     | 19    | 26    | 19    | 10    | 6.5   | 5.8   | 5.1   | 3.9   | 3.5   | 3.7   |
| 10    | 1.4   | 1.5     | 19    | 25    | 18    | 10    | 6.5   | 5.9   | 4.8   | 3.9   | 3.5   | 3.7   |
| 11    | 1.2   | 1.6     | 16    | 24    | 17    | 10    | 6.4   | 5.9   | 4.6   | 3.8   | 3.7   | 3.8   |
| 12    | 1.1   | 1.7     | 19    | 22    | 16    | 11    | 6.4   | 5.6   | 4.6   | 3.8   | 3.3   | 3.8   |
| 13    | 1.3   | 1.8     | 18    | 19    | 15    | 11    | 6.4   | 5.4   | 4.6   | 3.7   | 3.4   | 3.8   |
| 14    | 1.6   | 1.9     | 17    | 18    | 15    | 11    | 6.4   | 5.4   | 4.4   | 3.7   | 3.5   | 3.5   |
| 15    | 1.7   | 2.1     | 16    | 18    | 14    | 11    | 6.4   | 5.2   | 4.4   | 3.7   | 3.5   | 3.4   |
| 16    | 1.8   | 20      | 16    | 20    | 14    | 11    | 6.2   | 5.2   | 4.4   | 3.7   | 3.6   | 3.4   |
| 17    | 1.7   | 150     | 14    | 19    | 14    | 11    | 6.2   | 5.1   | 4.4   | 3.6   | 3.7   | 3.3   |
| 18    | 1.6   | 80      | 14    | 18    | 13    | 11    | 6.2   | 4.9   | 4.1   | 3.6   | 3.8   | 3.3   |
| 19    | 1.6   | 35      | 13    | 17    | 13    | 9.7   | 6.2   | 4.9   | 4.1   | 3.7   | 3.8   | 3.5   |
| 20    | 1.4   | 23      | 12    | 17    | 12    | 8.1   | 6.2   | 4.9   | 3.8   | 3.7   | 3.9   | 3.5   |
| 21    | 1.1   | 19      | 11    | 16    | 12    | 8.5   | 6.0   | 5.0   | 3.8   | 3.6   | 3.9   | 3.2   |
| 22    | 1.1   | 396     | 12    | 15    | 11    | 8.4   | 6.0   | 5.2   | 4.1   | 3.6   | 3.9   | 3.0   |
| 23    | 1.1   | 312     | 11    | 15    | 11    | 8.3   | 6.0   | 5.2   | 4.1   | 3.5   | 3.6   | 3.0   |
| 24    | 1.1   | 244     | 10    | 14    | 11    | 10    | 6.0   | 5.1   | 4.1   | 3.5   | 3.5   | 2.9   |
| 25    | 1.1   | 113     | 10    | 14    | 11    | 9.9   | 6.0   | 5.0   | 4.1   | 3.5   | 3.6   | 2.6   |
| 26    | 1.0   | 68      | 9.7   | 13    | 12    | 9.1   | 6.0   | 5.5   | 4.1   | 3.5   | 3.6   | 2.7   |
| 27    | 1.0   | 53      | 9.4   | 13    | 13    | 9.7   | 6.0   | 5.5   | 3.8   | 3.5   | 3.7   | 2.7   |
| 28    | 0.90  | 45      | 9.5   | 13    | 12    | 9.5   | 6.0   | 5.4   | 3.8   | 3.6   | 3.6   | 2.6   |
| 29    | 1.0   | 39      | 280   | 13    | ----- | 8.8   | 6.0   | 5.5   | 3.8   | 3.7   | 3.8   | 2.8   |
| 30    | 1.0   | 23      | 161   | 14    | ----- | 8.7   | 5.6   | 5.5   | 3.9   | 3.8   | 4.0   | 3.0   |
| 31    | 1.0   | -----   | 80    | 14    | ----- | 8.0   | ----- | 5.5   | ----- | 3.8   | 4.3   | ----- |
| TOTAL | 39.60 | 1,652.1 | 977.6 | 729   | 408   | 310.5 | 194.1 | 164.2 | 134.6 | 115.8 | 113.5 | 102.0 |
| MEAN  | 1.28  | 55.1    | 31.5  | 23.5  | 14.6  | 10.0  | 6.47  | 5.30  | 4.49  | 3.74  | 3.66  | 3.40  |
| AC-FT | 79    | 3,280   | 1,940 | 1,450 | 809   | 616   | 385   | 326   | 267   | 230   | 225   | 202   |

CALENDAR YEAR 1965 MAX 396 MIN .80 MEAN 9.66 AC-FT 6,990  
 WATER YEAR 1965-66 MAX 396 MIN .90 MEAN 13.5 AC-FT 9,810

## Peak discharge (base, 80 cfs)

| Date  | Time    | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|---------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | Unknown | 4.70        | 770       | 12-29 | 1715 | 5.28        | 1,160     |
| 11-22 | 1800    | 6.22        | 2,000     |       |      |             |           |

11-0740. Santa Ana River below Prado Dam, Calif.

Location.--Lat 33°53'00", long 117°38'40", in La Sierra Grant, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam and 4.5 miles west of Corona, Riverside County.

Drainage area.--1,485 sq mi, not including 768 sq mi above Elsinore Lake.

Records available.--May 1930 to November 1939 (irrigation seasons only), March 1940 to September 1966. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, & Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

Gage.--Graphic water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above mean sea level (Corps of Engineers Survey). Prior to Mar. 18, 1940, at about same site at various datums.

Extremes.--Maximum discharge during year, 1,240 cfs Dec. 30 (gage height, 4.16 ft); minimum daily, 16 cfs Oct. 14.

1940-66: Maximum discharge, 2,260 cfs Dec. 24, 1940 (gage height, 3.20 ft); minimum daily, 12 cfs for some days in 1960.

Flood of Mar. 2, 1938, 100,000 cfs, result of slope-area measurement at site 2.5 miles downstream.

Remarks.--Records good. Flow regulated since 1941 by Prado Reservoir (capacity, 222,800 acre-ft) and Big Bear Lake (see Sta. No. 0490). Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. Santa Ana River Development Co. pumps water from wells in Prado Reservoir into conduit which passes through dam and is released to river immediately downstream from gage. See schematic diagram of Santa Ana River basin.

Cooperation.--Five discharge measurements and records of bypass flow furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 27    | 28     | 992    | 1,160  | 84    | 65    | 53    | 45    | 35    | 35    | 23    | 26    |
| 2     | 25    | 28     | 904    | 1,060  | 97    | 68    | 50    | 45    | 37    | 34    | 25    | 27    |
| 3     | 23    | 30     | 840    | 970    | 82    | 70    | 50    | 45    | 38    | 32    | 22    | 28    |
| 4     | 20    | 28     | 780    | 810    | 78    | 68    | 50    | 46    | 38    | 32    | 22    | 27    |
| 5     | 18    | 30     | 640    | 334    | 78    | 68    | 52    | 45    | 38    | 32    | 22    | 23    |
| 6     | 20    | 30     | 130    | 99     | 326   | 67    | 55    | 45    | 38    | 32    | 22    | 23    |
| 7     | 20    | 31     | 99     | 93     | 511   | 63    | 52    | 49    | 37    | 32    | 22    | 25    |
| 8     | 18    | 34     | 85     | 89     | 308   | 65    | 55    | 49    | 40    | 31    | 22    | 27    |
| 9     | 18    | 34     | 109    | 85     | 101   | 67    | 56    | 48    | 43    | 28    | 23    | 28    |
| 10    | 18    | 35     | 483    | 84     | 87    | 67    | 56    | 49    | 41    | 26    | 23    | 28    |
| 11    | 18    | 37     | 203    | 80     | 84    | 63    | 55    | 52    | 40    | 26    | 22    | 28    |
| 12    | 17    | 37     | 113    | 77     | 80    | 58    | 53    | 49    | 35    | 25    | 22    | 28    |
| 13    | 17    | 40     | 155    | 73     | 79    | 55    | 50    | 49    | 34    | 23    | 22    | 28    |
| 14    | 16    | 40     | 121    | 75     | 78    | 68    | 50    | 44    | 37    | 23    | 22    | 27    |
| 15    | 17    | 53     | 115    | 77     | 77    | 85    | 49    | 43    | 31    | 23    | 22    | 27    |
| 16    | 18    | 93     | 134    | 70     | 76    | 63    | 49    | 40    | 32    | 25    | 23    | 27    |
| 17    | 21    | 241    | 95     | 67     | 75    | 62    | 49    | 44    | 35    | 25    | 23    | 27    |
| 18    | 20    | 197    | 85     | 68     | 74    | 65    | 49    | 45    | 35    | 25    | 23    | 26    |
| 19    | 18    | 148    | 82     | 70     | 73    | 63    | 50    | 44    | 37    | 26    | 23    | 26    |
| 20    | 37    | 109    | 80     | 70     | 72    | 60    | 50    | 43    | 37    | 26    | 23    | 30    |
| 21    | 38    | 109    | 78     | 68     | 71    | 55    | 49    | 44    | 37    | 27    | 23    | 30    |
| 22    | 32    | 218    | 75     | 67     | 70    | 55    | 49    | 44    | 37    | 28    | 23    | 28    |
| 23    | 28    | 881    | 75     | 67     | 69    | 53    | 48    | 40    | 37    | 27    | 23    | 30    |
| 24    | 28    | 926    | 73     | 67     | 68    | 56    | 45    | 40    | 37    | 26    | 23    | 31    |
| 25    | 28    | 926    | 72     | 65     | 67    | 87    | 45    | 38    | 37    | 22    | 23    | 30    |
| 26    | 30    | 926    | 68     | 65     | 67    | 75    | 45    | 40    | 37    | 23    | 23    | 28    |
| 27    | 30    | 970    | 70     | 63     | 65    | 65    | 48    | 40    | 37    | 22    | 23    | 30    |
| 28    | 30    | 1,040  | 72     | 63     | 65    | 58    | 45    | 41    | 38    | 22    | 25    | 28    |
| 29    | 30    | 1,040  | 261    | 67     | ----- | 58    | 48    | 40    | 40    | 25    | 25    | 28    |
| 30    | 27    | 1,010  | 1,160  | 191    | ----- | 60    | 46    | 35    | 38    | 27    | 25    | 25    |
| 31    | 27    | -----  | 1,220  | 252    | ----- | 55    | ----- | 35    | ----- | 26    | 25    | ----- |
| Total | 734   | 9,349  | 9,469  | 6,546  | 3,062 | 1,987 | 1,501 | 1,356 | 1,113 | 836   | 712   | 824   |
| Mean  | 23.7  | 312    | 305    | 211    | 109   | 64.1  | 50.0  | 43.7  | 37.1  | 27.0  | 23.0  | 27.5  |
| Ac-ft | 1,460 | 18,540 | 18,780 | 12,980 | 6,070 | 3,940 | 2,980 | 2,690 | 2,210 | 1,650 | 1,410 | 1,630 |
| (+)   | 1,810 | 18,680 | 18,780 | 12,980 | 6,070 | 3,940 | 2,980 | 2,690 | 2,210 | 1,660 | 1,410 | 1,630 |

Calendar year 1965 Max 1,220 Min 16 Mean 93.7 Ac-ft 67,810 Ac-ft + 69,480  
 Water year 1965-66 Max 1,220 Min 16 Mean 103 Ac-ft 74,360 Ac-ft + 74,840

† Combined discharge, in acre-ft, of river and water pumped from wells in Prado Reservoir.

## SANTA ANA RIVER BASIN

11-0757.2. Carbon Creek below Carbon Canyon Dam, Calif.

Location.--Lat 33°54'50", long 117°50'30", in SW  $\frac{1}{4}$  sec. 17, T.3 S., R.9 W., on right wall of outlet channel, 250 ft downstream from toe of Carbon Canyon Dam and 2.4 miles northwest of Yorba Linda.

Drainage area.--19.5 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 398.29 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Average discharge.--5 years, 0.152 cfs (110 acre-ft per year).

Extremes.--Maximum discharge during year, 220 cfs Dec. 1 (gage height, 1.17 ft): no flow for most of year.  
1961-66: Maximum discharge, that of Dec. 1, 1965; no flow for most of each year.

Remarks.--Records good. Flow regulated by Carbon Canyon flood-control reservoir (capacity, 7,030 acre-ft). No diversion above station.  
See schematic diagram of Santa Ana River basin.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|              |      |              |      |
|--------------|------|--------------|------|
| Nov. 14..... | 0.10 | Nov. 25..... | 0.10 |
| 15.....      | .20  | 26.....      | .10  |
| 16.....      | .20  | 27.....      | .10  |
| 17.....      | .20  | 28.....      | .10  |
| 18.....      | .10  | Dec. 1.....  | .38  |
| 19.....      | 6.1  | 29.....      | .10  |
| 20.....      | .10  | 30.....      | .10  |
| 22.....      | .20  | Jan. 3.....  | .32  |
| 23.....      | .10  | 31.....      | .10  |
| 24.....      | .10  | Mar. 1.....  | .10  |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 7.80     | 6.1     | 0       | 0.26 | 15        |
| December.....           | 38.20    | 38      | 0       | 1.23 | 76        |
| January 1966.....       | 32.10    | 32      | 0       | 1.04 | 64        |
| March.....              | 10       | 10      | 0       | .32  | 20        |
| Calendar year 1965..... | -        | 38      | 0       | .212 | 38        |
| Water year 1965-66..... | -        | 38      | 0       | .241 | 175       |

Note.--Flow occurred only on days listed above.

11-0758. Santiago Creek at Modjeska, Calif.

Location.--Lat 33°42'32", long 117°38'05", in SE 1/4 NW 1/4 sec. 29, T.5 S., R.7 W., on right bank at Santiago Canyon road bridge, 0.3 mile west of Modjeska and 0.4 mile downstream from Harding Creek.

Drainage area.--12.5 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,258.77 ft above mean sea level, datum of 1929. Prior to Mar. 31, 1966, graphic water-stage recorder.

Average discharge.--5 years, 2.63 cfs (1,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,500 cfs Nov. 22 (gage height, 6.60 ft), from rating curve extended above 200 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 17, June 28 to Sept. 30.  
1961-66: Maximum discharge, that of Nov. 22, 1965; no flow for several months in each year.

Remarks.--Records good except those above 100 cfs, which are poor. Slight regulation by Modjeska Reservoir on Harding Creek. No diversion above station. See schematic diagram of Santa Ana River basin.

Cooperation.--Four discharge measurements furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|----------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     |      | 0        | 14    | 35    | 4.5   | 3.7  | 1.9   | 1.7   | 0.50  |      |      |       |
| 2     |      | 0        | 12    | 24    | 4.2   | 4.2  | 1.8   | 1.7   | .50   |      |      |       |
| 3     |      | 0        | 11    | 18    | 3.5   | 3.7  | 1.8   | 1.7   | .50   |      |      |       |
| 4     |      | 0        | 10    | 14    | 3.3   | 3.7  | 1.7   | 1.6   | .50   |      |      |       |
| 5     |      | 0        | 9.2   | 11    | 3.1   | 3.5  | 1.5   | 1.5   | .60   |      |      |       |
| 6     |      | 0        | 8.1   | 10    | 8.6   | 3.5  | 1.4   | 1.4   | .60   |      |      |       |
| 7     |      | 0        | 6.7   | 9.8   | 10    | 3.5  | 1.4   | 1.4   | .50   |      |      |       |
| 8     |      | 0        | 6.1   | 9.6   | 7.4   | 3.3  | 1.3   | 1.4   | .60   |      |      |       |
| 9     |      | 0        | 6.7   | 8.8   | 6.1   | 3.3  | 1.3   | 1.5   | .60   |      |      |       |
| 10    |      | 0        | 14    | 8.4   | 5.8   | 3.3  | 1.4   | 1.7   | .50   |      |      |       |
| 11    |      | 0        | 11    | 7.4   | 5.6   | 3.1  | 1.3   | 1.8   | .50   |      |      |       |
| 12    |      | 0        | 10    | 7.4   | 5.3   | 3.1  | 1.3   | 1.2   | .40   |      |      |       |
| 13    |      | 0        | 10    | 7.4   | 7.1   | 3.1  | 1.2   | 1.8   | .40   |      |      |       |
| 14    |      | 0        | 11    | 7.4   | 6.7   | 3.1  | 1.1   | 1.8   | .40   |      |      |       |
| 15    |      | 0        | 10    | 7.4   | 6.4   | 3.1  | .90   | 1.7   | .40   |      |      |       |
| 16    |      | 0        | 11    | 7.4   | 6.1   | 3.1  | .90   | 1.6   | .40   |      |      |       |
| 17    |      | 0        | 11    | 7.4   | 5.8   | 2.9  | 1.0   | 1.2   | .30   |      |      |       |
| 18    |      | .20      | 11    | 8.5   | 5.6   | 2.9  | 1.2   | 1.0   | .30   |      |      |       |
| 19    |      | .50      | 11    | 7.7   | 5.6   | 2.9  | 1.5   | .90   | .30   |      |      |       |
| 20    |      | .40      | 10    | 7.7   | 5.3   | 2.7  | 1.4   | .80   | .30   |      |      |       |
| 21    |      | .40      | 9.6   | 7.1   | 4.7   | 2.7  | 1.3   | .80   | .20   |      |      |       |
| 22    |      | 417      | 9.0   | 7.1   | 4.5   | 2.7  | 1.2   | .70   | .20   |      |      |       |
| 23    |      | 308      | 8.1   | 6.7   | 4.5   | 2.7  | 1.2   | .50   | .20   |      |      |       |
| 24    |      | 74       | 7.7   | 6.4   | 4.2   | 2.9  | 1.2   | .50   | .20   |      |      |       |
| 25    |      | 70       | 7.4   | 6.1   | 4.2   | 2.9  | 1.3   | .50   | .10   |      |      |       |
| 26    |      | 45       | 6.7   | 5.8   | 4.2   | 2.9  | 1.3   | .50   | .10   |      |      |       |
| 27    |      | 31       | 6.4   | 5.6   | 4.0   | 2.7  | 1.2   | .50   | .10   |      |      |       |
| 28    |      | 22       | 6.1   | 5.0   | 3.7   | 2.5  | 1.4   | .50   | 0     |      |      |       |
| 29    |      | 19       | 292   | 4.5   | ----- | 2.3  | 1.3   | .50   | 0     |      |      |       |
| 30    |      | 16       | 169   | 6.9   | ----- | 2.2  | 1.5   | .50   | 0     |      |      |       |
| 31    |      | -----    | 61    | 5.6   | ----- | 1.9  | ----- | .50   | ----- |      |      |       |
| Total | 0    | 1,003.50 | 786.8 | 291.1 | 150.0 | 94.1 | 40.20 | 36.10 | 10.20 | 0    | 0    | 0     |
| Mean  | 0    | 33.4     | 25.4  | 9.39  | 5.36  | 3.04 | 1.34  | 1.16  | 0.34  | 0    | 0    | 0     |
| Ac-ft | 0    | 1,990    | 1,560 | 577   | 298   | 187  | 80    | 72    | 20    | 0    | 0    | 0     |

Calendar year 1965 Max 417 Min 0 Mean 5.72 Ac-ft 4,140

Water year 1965-66 Max 417 Min 0 Mean 6.61 Ac-ft 4,780

Peak discharge (base, 100 cfs).--Nov. 22 (2100 hrs) 1,500 cfs (6.60 ft); Dec. 29 (1800 hrs) 1,180 cfs (5.80 ft).

## SANTA ANA RIVER BASIN

11-0760. Santiago Creek at Santiago Dam, near Villa Park, Calif.

Location.--Lat 33°47'10", long 117°43'33", near west corner of lot 70 of Lomas de Santiago Grant, on upstream face near left end of Santiago Dam, 0.3 mile upstream from Fremont Canyon, and 5.7 miles southeast of Villa Park, Orange County.

Drainage area.--63.1 sq mi.

Records available.--October 1931 to September 1960, October 1961 to September 1966.

Gage.--Staff gage read on last day of each month. Datum of gage is at mean sea level.

Average discharge.--34 years, 15.7 cfs (11,340 acre-ft per year); median of yearly mean discharges, 9.5 cfs (6,900 acre-ft per year).

Remarks.--Records of total inflow represents all water reaching Santiago Reservoir, including precipitation on the reservoir and supplemental Colorado River water delivered through aqueduct of Metropolitan Water District of Southern California. Total inflow computed on basis of records of storage, release (draft), spill, leakage and evaporation. Monthly evaporation from lake surface computed on basis of evaporation from Class A pan using coefficient of 0.80. Records of net inflow exclude supplemental water from Colorado River. This earth-fill dam was completed in December 1931. Area and capacity tables for the reservoir are dated December 1930. Capacity of reservoir at spillway level (gage height, 790.0 ft), 25,000 acre-ft. Dead storage below lowest outlet included in these records. Minor diversions in basin above this reservoir. See schematic diagram of Santa Ana River basin.

Cooperation.--Reservoir operation records and related data furnished by Serrano and Carpenter Irrigation Districts and Irvine Co.

Monthly net inflow, water year October 1965 to September 1966

| Month                   | Elevation<br>(feet)† | Contents<br>(acre-<br>feet) | Change<br>in<br>Contents<br>(acre-<br>feet) | Draft<br>(acre-<br>feet) | Evapo-<br>ration<br>(acre-<br>feet) | Spill,<br>waste,<br>and<br>leakage<br>(acre-<br>feet) | Total<br>inflow<br>(acre-<br>feet) | Colorado<br>River<br>water<br>imported<br>(acre-<br>feet) | Net<br>inflow<br>(acre-<br>feet) |
|-------------------------|----------------------|-----------------------------|---|--------------------------|-------------------------------------|---|------------------------------------|---|----------------------------------|
|                         | Santiago Reservoir   |                             |   |                          |                                     |   |                                    |   |                                  |
| Sept. 30.....           | 743.2                | 5,473                       | -   | -                        | -                                   | -   | -                                  | -   | -                                |
| Oct. 31.....            | 737.5                | 4,180                       | -1,293                                      | 2,081                    | 157                                 | 0   | 945                                | 659   | 286                              |
| Nov. 30.....            | 749.0                | 6,940                       | +2,760                                      | 734                      | 64                                  | 0   | 3,558                              | 0   | 3,558                            |
| Dec. 31.....            | 759.3                | 10,233                      | +3,293                                      | 6                        | 80                                  | 0   | 3,379                              | 0   | 3,379                            |
| Calendar year 1965..... | -                    | -                           | +5,806                                      | 21,176                   | 1,475                               | 0   | 28,457                             | 18,955  | 9,502                            |
| Jan. 31.....            | 763.5                | 11,802                      | +1,569                                      | 561                      | 123                                 | 0   | 2,253                              | 0   | 2,253                            |
| Feb. 28.....            | 765.2                | 12,484                      | +682  | 397                      | 131                                 | 0   | 1,210                              | 0   | 1,210                            |
| Mar. 31.....            | 763.7                | 11,884                      | -600  | 1,422                    | 158                                 | 0   | 980                                | 0   | 980                              |
| Apr. 30.....            | 763.6                | 11,843                      | -41   | 1,807                    | 198                                 | 0   | 1,964                              | 1,573   | 391                              |
| May 31.....             | 763.8                | 11,924                      | +81   | 2,419                    | 183                                 | 0   | 2,683                              | 2,196   | 487                              |
| June 30.....            | 762.8                | 11,525                      | -399  | 2,372                    | 242                                 | 0   | 2,215                              | 1,788   | 427                              |
| July 31.....            | 757.1                | 9,455                       | -2,070                                      | 2,428                    | 273                                 | 0   | 631                                | 93  | 538                              |
| Aug. 31.....            | 751.2                | 7,556                       | -1,899                                      | 2,162                    | 232                                 | 0   | 495                                | 90  | 405                              |
| Sept. 30.....           | 745.0                | 5,900                       | -1,656                                      | 1,954                    | 160                                 | 0   | 458                                | 103   | 355                              |
| Water year 1965-66..... | -                    | -                           | +427  | 18,343                   | 2,001                               | 0   | 20,771                             | 6,502   | 14,269                           |

† Elevation at 1700 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-0775. Santiago Creek at Santa Ana, Calif.

Location.--Lat 33°46'09", long 117°52'54", in NE 1/4 SW 1/4 sec. 1, T. 5 S., R. 10 W., on left bank at end of Baker Street, Santa Ana, 2,400 ft upstream from mouth.

Drainage area.--95.0 sq mi.

Records available.--October 1928 to September 1966. Monthly discharge only October to December 1928, published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Altitude of gage is 110 ft (from topographic map). Prior to June 22, 1948, at datum 0.96 ft higher.

Average discharge.--38 years, 4.08 cfs (2,950 acre-ft per year); median of yearly mean discharges, 0.7 cfs (510 acre-ft per year).

Extremes.--Maximum discharge during year, 590 cfs Dec. 29 (gage height, 4.50 ft); no flow for most of year.

1928-66: Maximum discharge, 4,400 cfs Mar. 2, 1938 (gage height, 8.36 ft, present datum), from rating curve extended above 1,200 cfs; maximum gage height, 9.85 ft Jan. 16, 1952; no flow for most of each year.

Remarks.--Records fair. Flow regulated by Santiago Reservoir (see Sta. No. 0760). Diversions above station by Irvine Co. and Serrano and Carpenter Irrigation Districts. In each winter season, some water originally diverted from Santa Ana River by Santa Ana Valley Irrigation Co.'s canal is occasionally wasted into Santiago Creek 3 miles above station. See schematic diagram of Santa Ana River basin.

Cooperation.--Four discharge measurements furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                  |                  |                 |
|------------------|------------------|-----------------|
| Nov. 14..... 6.5 | Nov. 23..... 6.3 | Dec. 29..... 71 |
| 15..... 11       | 24..... 13       | 30..... 2.5     |
| 16..... 28       | 25..... 1.4      | Jan. 30..... 11 |
| 17..... 4.1      | Dec. 10..... 21  | Feb. 6..... 19  |
| 22..... 77       | 16..... 1.3      | 7..... .20      |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 147.3    | 77      | 0       | 4.91 | 292       |
| December.....           | 95.8     | 71      | 0       | 3.09 | 190       |
| January 1966.....       | 11       | 11      | 0       | .35  | 22        |
| February.....           | 19.20    | 19      | 0       | .69  | 38        |
| Calendar year 1965..... | -        | 77      | 0       | 1.17 | 849       |
| Water year 1965-66..... | -        | 77      | 0       | .749 | 542       |

Note.--Flow occurred only on days listed above.

11-0780. Santa Ana River at Santa Ana, Calif.

Location.--Lat 33°44'56", long 117°54'30", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.10, T.5 S., R.10 W., on center pier of Fifth Street Bridge in Santa Ana, 1.8 miles downstream from Santiago Creek.

Drainage area.--1,685 sq mi (not including 768 sq mi above Elsinore Lake).

Records available.--January 1923 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 71.20 ft above mean sea level (Orange County bench mark). Jan. 3, 1923, to Jan. 24, 1929, at same site at different datum. Jan. 25, 1929, to June 20, 1948, at site 450 ft upstream at different datum. June 21, 1948, to May 2, 1960, at same site at different datum. Feb. 28, 1961, to Oct. 1, 1961, at same site at datum 2.00 ft higher.

Average discharge.--17 years (1923-40), 23.4 cfs (16,940 acre-ft per year); median of yearly mean discharges, 3.1 cfs (2,200 acre-ft per year); 26 years (1940-66), 13.2 cfs (9,560 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--Maximum discharge during year, caused by failure of series of detention basins, about 4,300 cfs Nov. 24 (gage height, 5.77 ft, from crest-stage gage), from rating curve extended above 150 cfs; no flow for most of year.

1923-66: Maximum discharge, 46,300 cfs Mar. 3, 1938 (gage height, 10.20 ft, former site and datum), on basis of slope-area measurement of maximum flow; no flow for several months each year.

Remarks.--Records poor. Natural flow affected by ground-water withdrawals, diversions, importation from Metropolitan Water District, municipal use, return flow from irrigation, Prado flood-control reservoir (capacity, 222,800 acre-ft) since 1940, three small flood-control reservoirs (combined capacity, 31,900 acre-ft), Big Bear Lake (see Sta. No. 0490), and Santiago Reservoir (see Sta. No. 0760). Discharge up to 100 cfs can be diverted from Carbon Creek to Coyote Creek, 1.5 miles upstream from mouth of Carbon Creek. See schematic diagram of Santa Ana River basin.

Cooperation.--Three discharge measurements furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                 |                 |                   |
|-----------------|-----------------|-------------------|
| Nov. 14..... 30 | Nov. 26.....625 | Dec. 14..... 0.10 |
| 15..... 26      | 27.....650      | 29..... 70        |
| 16..... 13      | 28.....547      | 30.....198        |
| 17..... 7.3     | 29.....586      | 31.....659        |
| 18..... 2.1     | 30.....564      | Jan. 1.....713    |
| 19..... .30     | Dec. 1.....560  | 2.....700         |
| 20..... .10     | 2.....530       | 3.....698         |
| 21..... .10     | 3.....475       | 4.....386         |
| 22.....252      | 4.....425       | 5.....134         |
| 23..... 72      | 5.....350       | 6..... 16         |
| 24.....487      | 6.....101       | 30..... 13        |
| 25.....580      | 10..... 20      | Feb. 6..... 42    |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 4,441.90 | 650     | 0       | 148  | 8,810     |
| December.....           | 3,388.10 | 659     | 0       | 109  | 6,720     |
| January 1966.....       | 2,660    | 713     | 0       | 85.8 | 5,280     |
| February.....           | 42       | 42      | 0       | 1.50 | 83        |
| Calendar year 1965..... | -        | 659     | 0       | 22.8 | 16,480    |
| Water year 1965-66..... | -        | 713     | 0       | 28.9 | 20,890    |

Note.--Flow occurred only on days listed above.



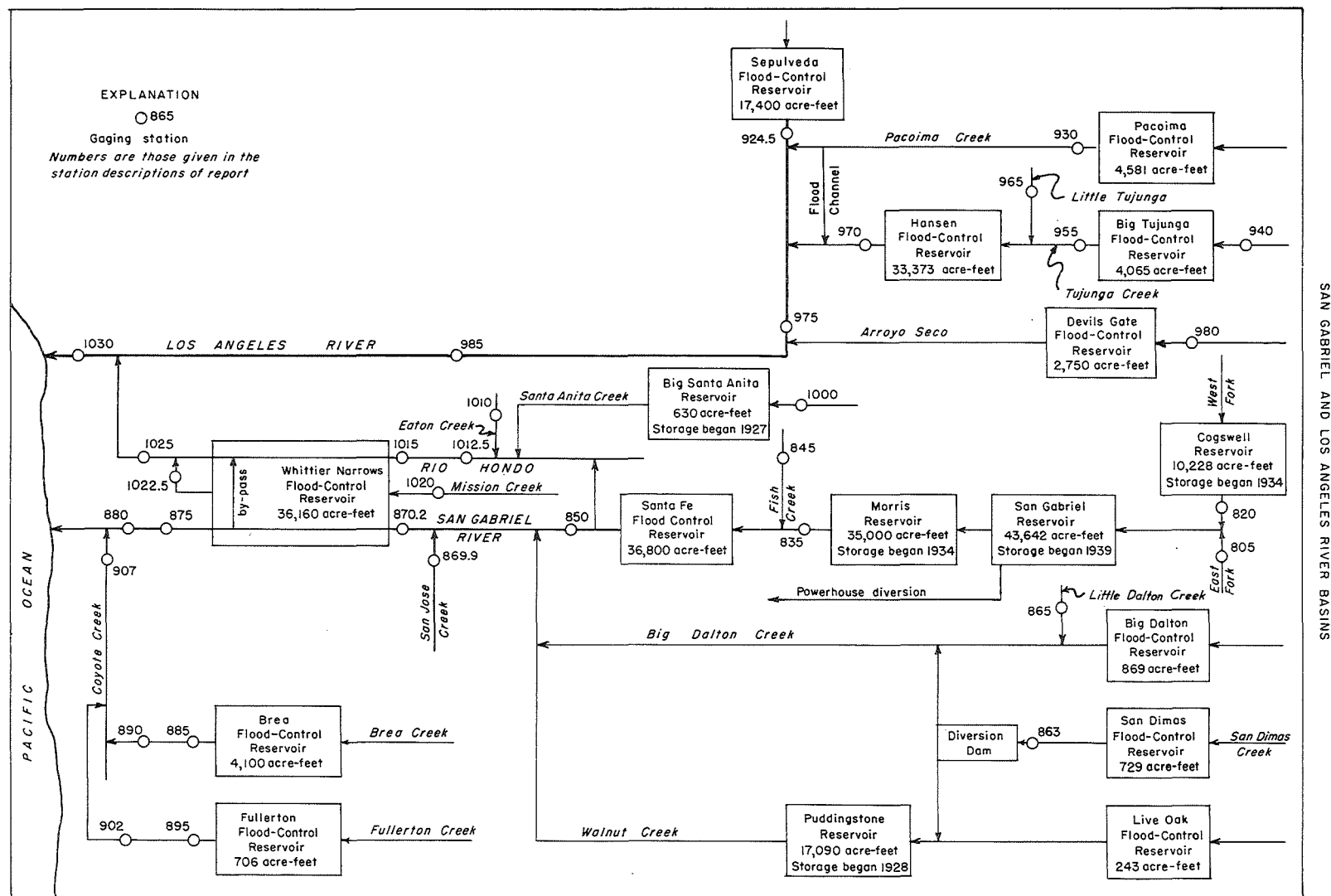


Figure 4.--Schematic diagram showing diversions and storage in San Gabriel and Los Angeles River basins.

## SAN GABRIEL RIVER BASIN

11-0805, East Fork San Gabriel River near Camp Bonita, Calif.

Location.--Lat 34°14'09", long 117°48'18", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 27, T.2 N., R.9 W., on right bank 1,600 ft upstream from mouth of Graveyard Canyon, 2.5 miles upstream from confluence with West Fork, and 2.5 miles west of Camp Bonita.

Drainage area.--84.6 sq mi.

Records available.--December 1932 to September 1966. Prior to 1940, published as San Gabriel River near Camp Bonita.

Gage.--Graphic water-stage recorder. Datum of gage is 1,567.04 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Dec. 10, 1938, at site 0.6 mile downstream at different datum.

Average discharge.--33 years (1933-66), 65.1 cfs (47,130 acre-ft per year); median of yearly mean discharges, 41 cfs (29,700 acre-ft per year).

Extremes.--Maximum discharge during year, 9,760 cfs Dec. 29 (gage height, 13.82 ft); minimum daily, 8.4 cfs Oct. 28.

1932-66: Maximum discharge, 46,000 cfs Mar. 2, 1938, from rating curve extended above 21,300 cfs (computed by Geological Survey); minimum, 1.5 cfs Oct. 1, 1934.

Remarks.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|----------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 10    | 8.9      | 441    | 764    | 140   | 112   | 88    | 64    | 49    | 34    | 25    | 23    |
| 2     | 9.9   | 9.3      | 393    | 653    | 135   | 108   | 88    | 66    | 48    | 34    | 25    | 22    |
| 3     | 9.3   | 9.3      | 344    | 566    | 125   | 102   | 88    | 66    | 48    | 33    | 25    | 21    |
| 4     | 9.3   | 9.3      | 296    | 518    | 125   | 101   | 88    | 65    | 46    | 33    | 24    | 20    |
| 5     | 9.3   | 9.3      | 250    | 470    | 128   | 97    | 87    | 64    | 46    | 33    | 24    | 20    |
| 6     | 9.9   | 9.3      | 212    | 430    | 229   | 95    | 84    | 62    | 45    | 33    | 24    | 19    |
| 7     | 8.9   | 9.9      | 195    | 401    | 207   | 95    | 81    | 59    | 45    | 32    | 24    | 19    |
| 8     | 8.9   | 9.9      | 204    | 370    | 186   | 94    | 80    | 61    | 46    | 32    | 23    | 18    |
| 9     | 9.3   | 9.9      | 242    | 326    | 165   | 97    | 81    | 65    | 45    | 31    | 23    | 17    |
| 10    | 9.9   | 10       | 219    | 283    | 156   | 95    | 83    | 65    | 42    | 29    | 23    | 16    |
| 11    | 9.3   | 10       | 209    | 263    | 152   | 94    | 84    | 64    | 42    | 29    | 23    | 16    |
| 12    | 8.9   | 10       | 221    | 248    | 145   | 94    | 83    | 62    | 42    | 29    | 23    | 17    |
| 13    | 8.9   | 11       | 191    | 238    | 138   | 92    | 81    | 58    | 42    | 29    | 22    | 17    |
| 14    | 9.9   | 14       | 185    | 227    | 136   | 95    | 78    | 57    | 41    | 29    | 21    | 17    |
| 15    | 10    | 27       | 171    | 217    | 134   | 97    | 75    | 55    | 40    | 29    | 20    | 16    |
| 16    | 9.9   | 50       | 173    | 211    | 129   | 97    | 74    | 55    | 40    | 28    | 20    | 16    |
| 17    | 9.9   | 680      | 180    | 205    | 129   | 95    | 75    | 55    | 40    | 27    | 20    | 16    |
| 18    | 9.9   | 604      | 165    | 196    | 129   | 94    | 78    | 55    | 39    | 26    | 20    | 17    |
| 19    | 9.9   | 240      | 157    | 196    | 125   | 94    | 77    | 53    | 40    | 26    | 19    | 20    |
| 20    | 9.9   | 147      | 156    | 193    | 121   | 94    | 74    | 51    | 39    | 28    | 20    | 20    |
| 21    | 8.9   | 114      | 146    | 184    | 116   | 94    | 72    | 53    | 39    | 29    | 20    | 19    |
| 22    | 8.9   | 2,250    | 144    | 175    | 116   | 94    | 71    | 53    | 39    | 28    | 20    | 18    |
| 23    | 8.9   | 2,350    | 136    | 166    | 114   | 95    | 69    | 53    | 39    | 28    | 20    | 17    |
| 24    | 8.9   | 1,940    | 132    | 160    | 114   | 100   | 66    | 51    | 39    | 26    | 19    | 17    |
| 25    | 8.9   | 1,520    | 130    | 158    | 116   | 107   | 65    | 51    | 38    | 25    | 18    | 17    |
| 26    | 8.9   | 994      | 128    | 155    | 116   | 94    | 65    | 51    | 36    | 25    | 18    | 17    |
| 27    | 8.9   | 698      | 127    | 158    | 116   | 90    | 65    | 51    | 35    | 25    | 19    | 17    |
| 28    | 8.4   | 600      | 126    | 155    | 114   | 88    | 65    | 50    | 35    | 25    | 20    | 15    |
| 29    | 8.9   | 506      | 2,530  | 150    | ----- | 90    | 65    | 49    | 34    | 27    | 18    | 17    |
| 30    | 8.9   | 490      | 1,960  | 161    | ----- | 88    | 65    | 48    | 34    | 26    | 19    | 18    |
| 31    | 9.3   | -----    | 1,140  | 145    | ----- | 88    | ----- | 48    | ----- | 25    | 21    | ----- |
| Total | 289.0 | 13,350.1 | 11,303 | 8,742  | 3,856 | 2,970 | 2,295 | 1,760 | 1,233 | 893   | 660   | 539   |
| Mean  | 9.32  | 445      | 365    | 282    | 138   | 95.8  | 76.5  | 56.8  | 41.1  | 28.8  | 21.3  | 18.0  |
| Ac-ft | 573   | 26,480   | 22,420 | 17,340 | 7,650 | 5,890 | 4,550 | 3,490 | 2,450 | 1,770 | 1,310 | 1,070 |

Calendar year 1965 Max 2,530 Min 8.4 Mean 94.9 Ac-ft 63,690  
 Water year 1965-66 Max 2,530 Min 8.4 Mean 131 Ac-ft 94,990

11-0820. West Fork San Gabriel River at Camp Rincon, Calif.

Location.--Lat 34°14'28", long 117°51'45", in SE $\frac{1}{4}$  sec.19, T.2 N., R.9 W., on right bank 0.2 mile upstream from Camp Rincon, 0.5 mile downstream from North Fork, and 6 miles downstream from Cogswell Dam.

Drainage area.--104 sq mi.

Records available.--October 1927 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 1,474.94 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 19, 1930, at site  $1\frac{1}{2}$  miles downstream at different datum. Aug. 27, 1938, to July 3, 1941, at datum 6.41 ft higher.

Average discharge.--39 years, 61.3 cfs (44,380 acre-ft per year); median of yearly mean discharges, 34 cfs (24,600 acre-ft per year).

Extremes.--Maximum discharge during year, 13,000 cfs Dec. 29 (gage height, 15.00 ft); minimum daily, 2.7 cfs Oct. 25.  
1927-66: Maximum discharge, 34,000 cfs (estimated) Mar. 2, 1938; no flow at times in 1928-29.

Remarks.--Flow regulated by Cogswell flood-control reservoir since 1934 (capacity, 10,228 acre-ft). No diversion above station.  
See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|-------|----------|--------|--------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 17    | 3.3      | 568    | 913    | 116   | 84    | 119   | 58    | 37    | 20    | 15   | 14    |
| 2     | 17    | 3.3      | 565    | 787    | 112   | 81    | 145   | 51    | 36    | 20    | 14   | 14    |
| 3     | 16    | 3.5      | 511    | 634    | 110   | 79    | 145   | 52    | 35    | 19    | 14   | 11    |
| 4     | 16    | 3.5      | 420    | 678    | 108   | 76    | 145   | 52    | 34    | 19    | 13   | 8.9   |
| 5     | 16    | 3.5      | 442    | 881    | 106   | 76    | 140   | 53    | 33    | 18    | 13   | 8.9   |
| 6     | 16    | 3.5      | 376    | 844    | 190   | 74    | 137   | 52    | 32    | 18    | 13   | 8.9   |
| 7     | 16    | 3.5      | 284    | 983    | 171   | 74    | 135   | 51    | 33    | 18    | 13   | 9.9   |
| 8     | 16    | 3.5      | 187    | 756    | 141   | 71    | 135   | 50    | 34    | 18    | 13   | 11    |
| 9     | 16    | 3.8      | 189    | 495    | 135   | 71    | 133   | 50    | 35    | 18    | 14   | 9.9   |
| 10    | 16    | 4.1      | 183    | 917    | 129   | 71    | 133   | 50    | 34    | 17    | 14   | 9.9   |
| 11    | 15    | 4.1      | 167    | 902    | 122   | 68    | 133   | 50    | 32    | 17    | 15   | 8.9   |
| 12    | 15    | 4.1      | 188    | 848    | 118   | 68    | 133   | 50    | 30    | 17    | 14   | 8.9   |
| 13    | 15    | 4.1      | 152    | 496    | 114   | 70    | 129   | 49    | 29    | 17    | 14   | 8.9   |
| 14    | 16    | 6.1      | 150    | 262    | 112   | 71    | 126   | 48    | 29    | 18    | 14   | 9.9   |
| 15    | 15    | 19       | 143    | 247    | 108   | 70    | 124   | 47    | 29    | 17    | 14   | 11    |
| 16    | 16    | 74       | 132    | 250    | 104   | 68    | 124   | 46    | 29    | 17    | 13   | 11    |
| 17    | 16    | 1,480    | 107    | 237    | 104   | 65    | 118   | 44    | 28    | 16    | 12   | 11    |
| 18    | 15    | 870      | 99     | 225    | 102   | 65    | 64    | 42    | 27    | 16    | 12   | 13    |
| 19    | 15    | 380      | 97     | 221    | 96    | 65    | 64    | 39    | 26    | 15    | 12   | 14    |
| 20    | 13    | 313      | 95     | 204    | 91    | 65    | 61    | 39    | 26    | 15    | 12   | 13    |
| 21    | 5.3   | 278      | 89     | 193    | 88    | 65    | 59    | 39    | 25    | 15    | 12   | 12    |
| 22    | 3.5   | 3,220    | 90     | 190    | 88    | 64    | 64    | 39    | 25    | 14    | 12   | 9.9   |
| 23    | 3.1   | 3,250    | 85     | 187    | 88    | 61    | 84    | 39    | 25    | 14    | 12   | 8.9   |
| 24    | 2.9   | 2,880    | 83     | 184    | 88    | 65    | 230   | 38    | 25    | 14    | 13   | 8.9   |
| 25    | 2.7   | 1,750    | 83     | 160    | 88    | 76    | 393   | 36    | 24    | 14    | 13   | 8.9   |
| 26    | 2.9   | 945      | 83     | 143    | 86    | 68    | 436   | 36    | 24    | 15    | 12   | 9.9   |
| 27    | 3.1   | 752      | 86     | 116    | 84    | 65    | 410   | 36    | 23    | 15    | 12   | 9.9   |
| 28    | 3.3   | 652      | 105    | 110    | 82    | 71    | 265   | 37    | 22    | 16    | 12   | 9.9   |
| 29    | 3.3   | 619      | 4,000  | 112    | ----- | 104   | 74    | 37    | 21    | 16    | 11   | 11    |
| 30    | 3.3   | 589      | 2,120  | 130    | ----- | 104   | 66    | 37    | 21    | 15    | 12   | 11    |
| 31    | 3.4   | -----    | 1,160  | 120    | ----- | 102   | ----- | 37    | ----- | 15    | 13   | ----- |
| Total | 349.8 | 13,134.9 | 13,039 | 13,425 | 3,081 | 2,277 | 4,524 | 1,384 | 863   | 513   | 402  | 316.3 |
| Mean  | 11.3  | 604      | 421    | 433    | 110   | 73.5  | 151   | 44.6  | 28.8  | 16.5  | 13.0 | 10.5  |
| Ac-ft | 694   | 35,970   | 25,860 | 26,630 | 6,110 | 4,520 | 8,970 | 2,750 | 1,710 | 1,020 | 797  | 627   |

Calendar year 1965 Max 4,000 Min 2.7 Mean 106 Ac-ft 76,720  
 Water year 1965-66 Max 4,000 Min 2.7 Mean 160 Ac-ft 115,600

## SAN GABRIEL RIVER BASIN

11-0835. San Gabriel River near Azusa, Calif.

Location.--Lat 34°10'11", long 117°53'16", in SW 1/4 NW 1/4 sec. 13, T. 1 N., R. 10 W., on right bank 1.1 miles downstream from Morris Dam and 2.7 miles northeast of Azusa.

Drainage area.--214 sq mi.

Records available.--May to November 1894, September 1895 to September 1966 (discontinued).

Gage.--Graphic water-stage recorder. Datum of gage is 867.59 ft above mean sea level (from Los Angeles County Flood Control District bench mark). Prior to August 1917, staff gages and August 1917 to Sept. 30, 1937, graphic water-stage recorders at several sites from 1 1/2 to 2 miles downstream at different datum. Oct. 1, 1937, to Feb. 21, 1938, graphic water-stage recorder at site half a mile downstream at different datum. Feb. 22, 1938, to Feb. 7, 1939, graphic water-stage recorder at site a quarter of a mile upstream at different datum. Datum lowered 4.35 ft May 9, 1950.

Average discharge (combined).--71 years (1895-1966), 146 cfs (105,700 acre-ft per year), adjusted for diversions, importations, and regulation and evaporation in Cogswell, San Gabriel, and Morris Reservoirs; median of yearly mean discharges, 97 cfs (70,200 acre-ft per year).

Extremes.--Maximum discharge during year, 8,640 cfs Nov. 23 (gage height, 11.90 ft); no flow for much of year.

1894, 1895-1966: Maximum discharge, 65,700 cfs Mar. 2, 1938, by computation of maximum flow over Morris Dam; no flow for several months in most years.

Remarks.--Records fair. Flow regulated by Cogswell Reservoir since 1934 and San Gabriel flood-control reservoir since 1939 (combined capacity, 53,870 acre-ft) and by Morris Reservoir since 1934 (capacity, 35,000 acre-ft). Azusa Canal diverts above high-water level of Morris Reservoir or from San Gabriel Reservoir about 5 miles above station. The Metropolitan Water District of Southern California reports a release of 125 acre-ft of Colorado River water into San Gabriel River below Morris Dam and above station during the water year. They also furnished records of combined discharge for San Gabriel River computed on basis of flow in river above Morris Reservoir plus Azusa canal, adjusted for storage and evaporation in Cogswell, San Gabriel, and Morris Reservoirs, as shown in table below. These figures of discharge are equivalent to combined records of San Gabriel River and Southern California Edison Co.'s canal as published from 1894 to 1933. See schematic diagram of San Gabriel and Los Angeles River basins.

| Month                   | Combined discharge<br>(acre-feet) | Month                   | Combined discharge<br>(acre-feet) |
|-------------------------|-----------------------------------|-------------------------|-----------------------------------|
| October.....            | 837                               | April.....              | 8,580                             |
| November.....           | 71,490                            | May.....                | 6,270                             |
| December.....           | 51,880                            | June.....               | 4,360                             |
| Calendar year 1965..... | 163,800                           | July.....               | 3,020                             |
| January.....            | 38,540                            | August.....             | 2,260                             |
| February.....           | 17,020                            | September.....          | 1,960                             |
| March.....              | 12,520                            | Water year 1965-66..... | 224,700                           |

Cooperation.--Forty-seven discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.     | Dec.     | Jan.   | Feb.   | Mar.    | Apr.    | May     | June  | July | Aug. | Sept. |
|--------------------|------|----------|----------|--------|--------|---------|---------|---------|-------|------|------|-------|
| 1                  | 3.4  | 0        | 790      | 1,350  | 146    | 326     | 97      | 8.3     | 0.70  |      | 0    |       |
| 2                  | 2.0  | 0        | 1,260    | 1,340  | 146    | 450     | 97      | 8.4     | .60   |      | 0    |       |
| 3                  | 0    | 0        | 1,250    | 1,330  | 146    | 580     | 115     | 9.0     | .50   |      | 0    |       |
| 4                  | 0    | 0        | 1,280    | 1,340  | 146    | 585     | 143     | 8.4     | .40   |      | 0    |       |
| 5                  | 0    | 0        | 1,250    | 1,330  | 146    | 590     | 158     | 8.0     | .30   |      | 0    |       |
| 6                  | 0    | 0        | 1,320    | 1,320  | 150    | 590     | 160     | 7.6     | .20   |      | 0    |       |
| 7                  | 0    | 0        | 1,340    | 1,190  | 154    | 208     | 103     | 7.6     | .10   |      | 0    |       |
| 8                  | 0    | 0        | 1,320    | 1,080  | 154    | 6.6     | 72      | 7.6     | 0     |      | 0    |       |
| 9                  | 0    | 0        | 1,100    | 1,060  | 154    | 32      | 72      | 7.6     | 0     |      | 0    |       |
| 10                 | 0    | 0        | 814      | 1,050  | 154    | 93      | 72      | 7.6     | 0     |      | 0    |       |
| 11                 | 0    | 0        | 532      | 1,040  | 154    | 97      | 72      | 8.0     | 0     |      | 0    |       |
| 12                 | 0    | 0        | 453      | 1,010  | 154    | 97      | 63      | 8.0     | 0     |      | 0    |       |
| 13                 | 0    | 0        | 399      | 1,000  | 156    | 99      | 92      | 7.6     | 0     |      | 0    |       |
| 14                 | 0    | 0        | 341      | 1,030  | 156    | 105     | 113     | 7.6     | 0     |      | 0    |       |
| 15                 | 0    | 0        | 215      | 1,020  | 156    | 100     | 107     | 8.5     | 0     |      | 0    |       |
| 16                 | 0    | 0        | 218      | 1,010  | 207    | 100     | 107     | 8.0     | 0     |      | 0    |       |
| 17                 | 0    | 5.2      | 96       | 1,080  | 230    | 100     | 109     | 8.0     | 0     |      | 0    |       |
| 18                 | 0    | 3.1      | 10       | 1,140  | 230    | 100     | 70      | 146     | 0     |      | 0    |       |
| 19                 | 0    | 0        | 7.5      | 1,050  | 230    | 100     | 52      | 205     | 0     |      | 8.1  |       |
| 20                 | 0    | 0        | 5.3      | 926    | 230    | 100     | 48      | 205     | 0     |      | 11   |       |
| 21                 | 0    | 0        | 30       | 1,050  | 230    | 102     | 44      | 202     | 0     |      | 0    |       |
| 22                 | 0    | 1,620    | 36       | 735    | 228    | 102     | 41      | 200     | 0     |      | 0    |       |
| 23                 | 0    | 7,260    | 34       | 710    | 228    | 92      | 15      | 200     | 0     |      | 0    |       |
| 24                 | 0    | 4,230    | 34       | 497    | 228    | 102     | 10      | 200     | 0     |      | 0    |       |
| 25                 | 0    | 2,160    | 34       | 492    | 228    | 102     | 9.0     | 198     | 0     |      | 0    |       |
| 26                 | 0    | 1,640    | 34       | 246    | 228    | 102     | 8.0     | 126     | 0     |      | 0    |       |
| 27                 | 0    | 1,250    | 34       | 89     | 228    | 100     | 8.0     | 15      | 0     |      | 0    |       |
| 28                 | 0    | 1,250    | 91       | 144    | 277    | 100     | 8.0     | 5.0     | 0     |      | 0    |       |
| 29                 | 0    | 1,230    | 693      | 144    | -----  | 100     | 8.0     | 3.0     | 0     |      | 8.1  |       |
| 30                 | 0    | 1,160    | 2,120    | 146    | -----  | 101     | 8.0     | 2.0     | 0     |      | 11   |       |
| 31                 | 0    | -----    | 1,260    | 146    | -----  | 99      | -----   | 1.0     | ----- |      | 0    | ----- |
| Total              | 5.4  | 21,808.3 | 18,400.8 | 27,105 | 5,274  | 5,560.6 | 2,081.0 | 1,843.8 | 28.0  | 0    | 38.2 | 0     |
| Mean               | 0.17 | 727      | 594      | 874    | 188    | 179     | 69.4    | 59.5    | 0.09  | 0    | 1.23 | 0     |
| Ac-ft              | 11   | 4,326.0  | 36,500   | 53,760 | 10,460 | 11,030  | 4,130   | 3,660   | 5.6   | 0    | 76   | 0     |
| Calendar year 1965 | Max  | 7,260    | Min      | 0      | Mean   | 120     | Ac-ft   | 86,680  |       |      |      |       |
| Water year 1965-66 | Max  | 7,260    | Min      | 0      | Mean   | 225     | Ac-ft   | 162,900 |       |      |      |       |

11-0845. Fish Creek near Duarte, Calif.

Location.--Lat 34°10'00", long 117°55'25", in SW 1/4 sec. 15, T.1 N., R.10 W., on left bank 0.8 mile upstream from mouth of canyon and 3 miles northeast of Duarte.

Drainage area.--6.36 sq mi.

Records available.--July to September 1916, July 1917 to September 1966.

Gage.--Digital water-stage recorder and broad-crested weir since July 1917, restored in December 1938. Altitude of gage is 1,000 ft (from topographic map). Prior to July 28, 1917, staff gage at same site at different datum. July 28, 1917, to Mar. 2, 1938, water-stage recorder at same site at different datum (destroyed by flood of Mar. 2, 1938). Mar. 3 to Dec. 7, 1938, staff gage at same site at different datum. Dec. 7, 1938, to Oct. 3, 1951, water-stage recorder at same site at datum 1 ft higher. Prior to Mar. 30, 1966, graphic water-stage recorders used.

Average discharge.--49 years (1917-66), 3.78 cfs (2,740 acre-ft per year); median of yearly mean discharges, 2.2 cfs (1,600 acre-ft per year).

Extremes.--Maximum discharge during year, 2,250 cfs Dec. 29 (gage height, 6.80 ft), from rating curve extended above 1,100 cfs on basis of slope-area measurement at gage height 6.78 ft; no flow for some days.  
1916-66: Maximum discharge, that of Dec. 29, 1965; maximum gage height, about 14.5 ft Feb. 11, 16, 1959 (from debris wave); no flow at times in some years.

Remarks.--Records good except those above 10 cfs, which are poor. No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|------|----------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 0.10 | 0.20     | 14    | 17    | 6.7   | 6.3   | 4.2   | 2.2  | 1.7   | 1.3   | 0.80  | 0.60  |
| 2     | 0    | .10      | 12    | 17    | 6.5   | 6.3   | 4.2   | 2.2  | 1.9   | 1.3   | 1.0   | .50   |
| 3     | 0    | .10      | 12    | 16    | 5.9   | 6.1   | 4.3   | 2.2  | 1.9   | 1.4   | 1.0   | .30   |
| 4     | 0    | .10      | 10    | 16    | 5.7   | 5.9   | 4.2   | 2.2  | 1.9   | 1.4   | 1.0   | .10   |
| 5     | 0.10 | .10      | 10    | 16    | 5.5   | 5.9   | 4.2   | 2.2  | 1.8   | 1.4   | .90   | .10   |
| 6     | .10  | .10      | 9.8   | 16    | 28    | 5.8   | 3.9   | 2.2  | 1.7   | 1.3   | .80   | .10   |
| 7     | .10  | .10      | 8.7   | 15    | 26    | 5.5   | 4.1   | 2.2  | 1.8   | 1.3   | .60   | .10   |
| 8     | .10  | .10      | 8.0   | 15    | 16    | 5.5   | 4.0   | 2.5  | 1.9   | 1.2   | .80   | .10   |
| 9     | .20  | .10      | 10    | 15    | 13    | 5.5   | 4.1   | 3.4  | 2.1   | 1.2   | .80   | 0     |
| 10    | .40  | .20      | 10    | 15    | 11    | 5.3   | 4.5   | 2.8  | 2.0   | 1.3   | .70   | 0     |
| 11    | .40  | .20      | 8.2   | 14    | 10    | 5.3   | 4.5   | 2.6  | 2.0   | 1.2   | .70   | 0     |
| 12    | .20  | .20      | 10    | 14    | 10    | 5.3   | 4.8   | 2.5  | 1.9   | 1.2   | .70   | .10   |
| 13    | .20  | .20      | 9.5   | 14    | 9.5   | 5.1   | 4.4   | 2.3  | 1.8   | 1.3   | .70   | .10   |
| 14    | .30  | .50      | 9.0   | 13    | 9.0   | 5.1   | 4.2   | 2.3  | 1.8   | 1.1   | .70   | 0     |
| 15    | .40  | 3.0      | 8.0   | 12    | 9.0   | 5.1   | 4.1   | 2.2  | 1.9   | 1.0   | .60   | 0     |
| 16    | .30  | 14       | 6.9   | 11    | 9.0   | 5.1   | 4.1   | 2.1  | 2.1   | .90   | .60   | 0     |
| 17    | .20  | 198      | 5.9   | 10    | 8.7   | 4.7   | 4.1   | 2.1  | 2.4   | 1.0   | .60   | 0     |
| 18    | .20  | 69       | 5.7   | 9.5   | 8.7   | 4.4   | 4.2   | 2.0  | 2.0   | 1.1   | .60   | .30   |
| 19    | .20  | 18       | 5.3   | 9.2   | 8.7   | 4.4   | 4.2   | 1.9  | 2.0   | 1.3   | .60   | 1.0   |
| 20    | .20  | 14       | 5.1   | 8.7   | 8.5   | 4.2   | 4.1   | 2.0  | 2.1   | 1.3   | .70   | .80   |
| 21    | .10  | 12       | 5.1   | 8.5   | 8.2   | 4.2   | 4.1   | 2.0  | 2.4   | 1.3   | .70   | .60   |
| 22    | .10  | 337      | 5.7   | 8.5   | 7.8   | 4.2   | 4.0   | 2.1  | 1.6   | 1.0   | .70   | .30   |
| 23    | .10  | 162      | 4.9   | 8.2   | 7.6   | 4.2   | 4.2   | 2.0  | 1.6   | .80   | .70   | .20   |
| 24    | .10  | 121      | 4.7   | 8.2   | 7.3   | 6.0   | 4.0   | 2.0  | 1.7   | .60   | .60   | .20   |
| 25    | .10  | 55       | 4.7   | 8.2   | 7.1   | 6.7   | 4.0   | 2.0  | 1.7   | .50   | .50   | .30   |
| 26    | .10  | 30       | 4.4   | 8.2   | 6.9   | 5.2   | 3.8   | 2.1  | 1.7   | .60   | .50   | .40   |
| 27    | 0    | 20       | 4.2   | 8.2   | 6.5   | 4.9   | 3.5   | 2.1  | 1.7   | .60   | .60   | .50   |
| 28    | 0    | 15       | 4.1   | 8.0   | 6.3   | 4.9   | 3.4   | 2.1  | 1.4   | .70   | .60   | .40   |
| 29    | 0    | 15       | 523   | 7.6   | ----- | 4.9   | 3.4   | 2.0  | 1.2   | .90   | .60   | .80   |
| 30    | 0    | 14       | 150   | 9.4   | ----- | 4.6   | 3.1   | 1.9  | 1.3   | 1.0   | .50   | .90   |
| 31    | .10  | -----    | 25    | 7.1   | ----- | 4.2   | ----- | 1.8  | ----- | .90   | .60   | ----- |
| Total | 4.40 | 1,099.30 | 913.9 | 363.5 | 273.1 | 160.8 | 121.9 | 68.2 | 55.0  | 33.40 | 21.50 | 8.80  |
| Mean  | 0.14 | 36.6     | 29.5  | 11.7  | 9.75  | 5.19  | 4.06  | 2.20 | 1.83  | 1.08  | 0.69  | 0.29  |
| Ac-ft | 8.7  | 2,180    | 1,810 | 721   | 542   | 319   | 242   | 135  | 109   | 66    | 43    | 17    |

Calendar year 1965 Max 523 Min 0 Mean 6.68 Ac-ft 4,840  
Water year 1965-66 Max 523 Min 0 Mean 8.56 Ac-ft 6,200

Peak discharge (base, 60 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0400 | 4.05        | 336       | 12-29 | 1700 | 6.80        | 2,250     |
| 11-22 | 2200 | 5.60        | 1,120     | 2-6   | 0900 | 2.42        | 63        |

## SAN GABRIEL RIVER BASIN

11-0850. San Gabriel River below Santa Fe Dam, near Baldwin Park, Calif.

Location.--Lat 34°06'44", long 117°58'07", in SE 1/4 SW 1/4 sec. 6, T.1 S., R.10 W., on left bank at stilling basin of outlet of Santa Fe flood-control dam, 500 ft downstream from axis of dam, and 1.7 miles north of Baldwin Park.

Drainage area.--236 sq mi.

Records available.--October 1942 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 400.00 ft above mean sea level (levels by Corps of Engineers).

Extremes.--Maximum discharge during year, 11,100 cfs Nov. 23 (gage height, 17.14 ft); no flow for much of year.

1942-66: Maximum discharge, that of Nov. 23, 1965; no flow for several months of each year.

Remarks.--Records good. Flow regulated by Cogswell and San Gabriel flood-control reservoirs (combined capacity, 53,870 acre-ft), Morris Reservoir (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir (capacity, 36,800 acre-ft). Diversions above station for irrigation, power development, and ground-water replenishment. At times, water diverted above station to headwaters of Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Twenty-eight discharge measurements and records of diversion to Rio Hondo furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|--------|--------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 490    | 1,100  | 125   | 30    | 43    | 0     | 101   |      |      |       |
| 2     |      | 0      | 530    | 945    | 16    | 0     | 0     | 0     | 75    |      |      |       |
| 3     |      | 0      | 669    | 756    | 0     | 51    | 0     | 0     | 19    |      |      |       |
| 4     |      | 0      | 723    | 840    | 0     | 91    | 0     | 0     | 0     |      |      |       |
| 5     |      | 0      | 705    | 894    | 0     | 105   | 0     | 0     | 0     |      |      |       |
| 6     |      | 0      | 723    | 776    | 0     | 116   | 0     | 0     | 0     |      |      |       |
| 7     |      | 0      | 770    | 577    | 46    | 120   | 0     | 0     | 0     |      |      |       |
| 8     |      | 0      | 760    | 329    | 85    | 108   | 0     | 0     | 0     |      |      |       |
| 9     |      | 0      | 556    | 243    | 85    | 101   | 0     | 0     | 0     |      |      |       |
| 10    |      | 0      | 275    | 315    | 85    | 101   | 0     | 0     | 0     |      |      |       |
| 11    |      | 0      | 254    | 361    | 79    | 98    | 26    | 0     | 0     |      |      |       |
| 12    |      | 0      | 248    | 361    | 75    | 98    | 106   | 0     | 0     |      |      |       |
| 13    |      | 0      | 248    | 412    | 75    | 95    | 98    | 0     | 0     |      |      |       |
| 14    |      | 0      | 269    | 506    | 75    | 98    | 98    | 0     | 0     |      |      |       |
| 15    |      | 0      | 264    | 498    | 75    | 101   | 105   | 0     | 0     |      |      |       |
| 16    |      | 0      | 238    | 490    | 75    | 124   | 112   | 0     | 0     |      |      |       |
| 17    |      | 0      | 12     | 474    | 58    | 146   | 112   | 0     | 0     |      |      |       |
| 18    |      | 0      | 0      | 482    | 58    | 134   | 108   | 0     | 0     |      |      |       |
| 19    |      | 0      | 0      | 482    | 58    | 123   | 101   | 0     | 0     |      |      |       |
| 20    |      | 0      | 0      | 474    | 55    | 120   | 95    | 0     | 0     |      |      |       |
| 21    |      | 0      | 0      | 456    | 60    | 108   | 82    | 0     | 0     |      |      |       |
| 22    |      | 0      | 0      | 426    | 63    | 101   | 61    | 0     | 0     |      |      |       |
| 23    |      | 6,000  | 0      | 410    | 85    | 98    | 48    | 57    | 0     |      |      |       |
| 24    |      | 5,510  | 0      | 449    | 120   | 98    | 18    | 117   | 0     |      |      |       |
| 25    |      | 2,640  | 0      | 514    | 108   | 98    | 0     | 155   | 0     |      |      |       |
| 26    |      | 1,410  | 0      | 330    | 85    | 101   | 0     | 155   | 0     |      |      |       |
| 27    |      | 303    | 0      | 139    | 72    | 101   | 0     | 76    | 0     |      |      |       |
| 28    |      | 482    | 0      | 46     | 63    | 101   | 0     | 0     | 0     |      |      |       |
| 29    |      | 482    | 233    | 85     | ----- | 98    | 0     | 0     | 0     |      |      |       |
| 30    |      | 482    | 689    | 85     | ----- | 95    | 0     | 0     | 0     |      |      |       |
| 31    |      | -----  | 1,310  | 83     | ----- | 91    | ----- | 81    | ----- |      |      |       |
| Total | 0    | 17,309 | 9,976  | 14,338 | 1,781 | 3,050 | 1,213 | 641   | 195   | 0    | 0    | 0     |
| Mean  | 0    | 577    | 322    | 463    | 63.6  | 98.4  | 40.4  | 20.7  | 6.50  | 0    | 0    | 0     |
| Ac-ft | 0    | 34,330 | 19,790 | 28,440 | 3,530 | 6,050 | 2,410 | 1,270 | 387   | 0    | 0    | 0     |
| (†)   | 0    | 34,330 | 20,910 | 33,360 | 5,020 | 6,050 | 2,420 | 1,270 | 387   | 0    | 0    | 0     |

Calendar year 1965 Max 6,000 Min 0 Mean 74.8 Ac-ft 54,120 Ac-ft + 55,240  
 Water year 1965-66 Max 6,000 Min 0 Mean 133 Ac-ft 96,200 Ac-ft + 103,750

† Combined discharge, in acre-feet, of river and diversion.

11-0863. San Dimas Creek below San Dimas Dam, Calif.

Location.--Lat 34°09'10", long 117°46'18", in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.24, T.1 N., R.9 W., on left bank 1,000 ft downstream from San Dimas Dam and 3.7 miles northeast of San Dimas.

Drainage area.--16.3 sq mi.

Records available.--October 1951 to September 1966. Prior to October 1956 monthly discharge only, published in WSP 1735.

Gage.--Graphic water-stage recorder and low-flow concrete control. Datum of gage is 1,325.0 ft above mean sea level (levels by Los Angeles County Flood Control District).

Extremes.--Maximum discharge during year, about 500 cfs Nov. 23, on basis of releases from San Dimas Reservoir; minimum daily, 0.10 cfs Apr. 9 to May 8.

1951-66: Maximum discharge, that of Nov. 23, 1965; no flow for part of most years.

Remarks.--Flow regulated by San Dimas flood-control reservoir (capacity, 729 acre-ft) and at times by old water tunnel 150 ft upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July  | Aug. | Sept. |
|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|-------|------|-------|
| 1     | 0.20  | 0.20   | 14    | 56    | 7.2   | 7.7   | 7.2   | 0.10   | 4.7   | 4.4   | 3.5  | 2.7   |
| 2     | .20   | .20    | 12    | 55    | 6.2   | 7.7   | 7.2   | .10    | 4.7   | 4.4   | 3.3  | 2.7   |
| 3     | .30   | .20    | 11    | 54    | 6.2   | 7.4   | 7.2   | .10    | 4.7   | 4.4   | 2.9  | 2.7   |
| 4     | .30   | .20    | 10    | 53    | 6.2   | 7.4   | 7.2   | .10    | 4.7   | 4.2   | 2.9  | 2.7   |
| 5     | .40   | .20    | 10    | 37    | 6.2   | 7.4   | 7.2   | .10    | 4.7   | 4.2   | 2.9  | 2.7   |
| 6     | .40   | .20    | 10    | 31    | 6.4   | 7.4   | 7.2   | .10    | 4.7   | 4.2   | 2.9  | 2.7   |
| 7     | .50   | .20    | 10    | 33    | 13    | 7.2   | 7.2   | .10    | 4.4   | 3.8   | 2.7  | 2.7   |
| 8     | .50   | .20    | 10    | 33    | 23    | 5.2   | 4.4   | .10    | 4.2   | 3.8   | 2.7  | 2.6   |
| 9     | .50   | .20    | 6.8   | 32    | 35    | 5.8   | 1.0   | 3.3    | 4.2   | 3.8   | 2.7  | 2.6   |
| 10    | .50   | .20    | 7.0   | 32    | 34    | 9.9   | 1.0   | 4.9    | 4.2   | 3.8   | 2.9  | 2.6   |
| 11    | .40   | .20    | 8.0   | 32    | 27    | 7.7   | .10   | 4.9    | 4.2   | 3.8   | 2.9  | 2.6   |
| 12    | .40   | .20    | 8.2   | 30    | 20    | 7.7   | .10   | 4.9    | 4.4   | 3.8   | 2.9  | 2.6   |
| 13    | .40   | .20    | 8.0   | 28    | 19    | 7.7   | .10   | 4.9    | 4.7   | 4.0   | 2.9  | 2.6   |
| 14    | .40   | .20    | 9.0   | 22    | 19    | 7.7   | .10   | 4.9    | 4.7   | 4.0   | 2.7  | 2.6   |
| 15    | .40   | .20    | 8.0   | 19    | 19    | 8.0   | .10   | 5.1    | 4.7   | 3.8   | 2.7  | 2.6   |
| 16    | .40   | .20    | 8.8   | 18    | 16    | 8.0   | .10   | 5.1    | 4.7   | 3.8   | 2.7  | 2.7   |
| 17    | .40   | .20    | 9.6   | 17    | 13    | 8.0   | .10   | 5.1    | 4.7   | 3.8   | 2.7  | 2.7   |
| 18    | .30   | .20    | 9.6   | 17    | 13    | 8.0   | .10   | 5.1    | 4.7   | 3.6   | 2.7  | 2.7   |
| 19    | .30   | 7.6    | 9.6   | 16    | 12    | 8.0   | .10   | 4.9    | 4.4   | 3.6   | 2.7  | 2.7   |
| 20    | .30   | 14     | 8.7   | 15    | 11    | 7.7   | .10   | 4.9    | 4.4   | 3.6   | 2.7  | 2.7   |
| 21    | .30   | 6.2    | 8.5   | 15    | 11    | 7.7   | .10   | 4.9    | 4.4   | 3.6   | 2.7  | 2.7   |
| 22    | .30   | 58     | 8.4   | 15    | 9.6   | 7.4   | .10   | 4.9    | 4.4   | 3.6   | 2.7  | 2.7   |
| 23    | .30   | 242    | 8.3   | 15    | 9.2   | 7.2   | .10   | 4.9    | 4.4   | 3.6   | 2.7  | 2.7   |
| 24    | .30   | 51     | 8.2   | 14    | 8.7   | 7.2   | .10   | 4.9    | 4.4   | 3.6   | 2.7  | 2.7   |
| 25    | .20   | 48     | 8.2   | 13    | 8.7   | 7.2   | .10   | 4.9    | 4.4   | 3.5   | 2.7  | 2.7   |
| 26    | .20   | 58     | 8.2   | 11    | 8.7   | 7.2   | .10   | 4.9    | 4.4   | 3.5   | 2.7  | 2.7   |
| 27    | .20   | 58     | 8.0   | 10    | 8.2   | 7.2   | .10   | 4.9    | 4.4   | 3.5   | 2.7  | 2.6   |
| 28    | .20   | 59     | 8.0   | 8.7   | 8.0   | 7.2   | .10   | 4.9    | 4.7   | 3.6   | 2.7  | 2.6   |
| 29    | .20   | 58     | 7.1   | 8.0   | ----- | 7.2   | .10   | 4.9    | 4.7   | 3.6   | 2.7  | 2.6   |
| 30    | .20   | 31     | 135   | 7.7   | ----- | 7.2   | .10   | 4.7    | 4.7   | 3.6   | 2.7  | 2.6   |
| 31    | .20   | -----  | 56    | 7.4   | ----- | 7.2   | ----- | 4.7    | ----- | 3.6   | 2.7  | ----- |
| Total | 10.10 | 704.40 | 516.1 | 754.8 | 384.5 | 231.5 | 57.00 | 112.50 | 135.7 | 118.1 | 86.7 | 79.8  |
| Mean  | 0.33  | 23.5   | 16.6  | 24.3  | 13.7  | 7.47  | 1.90  | 3.62   | 4.52  | 3.81  | 2.80 | 2.66  |
| Ac-ft | 20    | 1400   | 1020  | 1500  | 753   | 459   | 113   | 223    | 269   | 234   | 172  | 158   |

Calendar year 1965 Max 242 Min 0.10 Mean 4.94 Ac-ft 3,580

Water year 1965-66 Max 242 Min 0.10 Mean 8.74 Ac-ft 6,330

## SAN GABRIEL RIVER BASIN

11-0865. Little Dalton Creek near Glendora, Calif.

Location.--Lat 34°10'03", long 117°50'15", in NE 1/4 Sec. 17, T.1 N., R.9 W., on left bank 0.2 mile upstream from Angeles National Forest boundary and 2.6 miles northeast of Glendora.

Drainage area.--2.72 sq mi.

Records available.--December 1938 to September 1966. January 1929 to November 1938, at site 0.8 mile downstream; records not equivalent because diversion was not included.

Gage.--Graphic water-stage recorder. Datum of gage is 1,334.38 ft above mean sea level (levels by Los Angeles County Flood Control District).

Average discharge.--28 years, 0.644 cfs (466 acre-ft per year); median of yearly mean discharges, 0.2 cfs (145 acre-ft per year).

Extremes.--Maximum discharge during year, 280 cfs Nov. 22 (gage height, 3.98 ft); no flow for much of year.

1938-66: Maximum discharge, 1,700 cfs Nov. 20, 1961 (gage height, 5.24 ft); no flow at times in each year.

Flood of Mar. 2, 1938, 960 cfs (estimated). Flood of February 1914, 1,020 cfs, result of slope-area measurement.

Remarks.--No regulation above station. Prior to December 1938, diversion by Glendora Irrigating Company then in use. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 4.2   | 14    | 2.7   | 2.2  | 1.6   | 0.70  | 0.50  |      |      |       |
| 2     |      | 0      | 3.8   | 9.6   | 2.4   | 2.2  | 1.7   | .60   | .50   |      |      |       |
| 3     |      | 0      | 2.9   | 8.3   | 2.2   | 2.2  | 1.6   | .60   | .50   |      |      |       |
| 4     |      | 0      | 2.8   | 7.5   | 2.0   | 2.0  | 1.6   | .60   | .50   |      |      |       |
| 5     |      | 0      | 2.7   | 6.7   | 2.2   | 1.7  | 1.5   | .70   | .50   |      |      |       |
| 6     |      | 0      | 2.7   | 6.2   | 5.8   | 1.7  | 2.0   | .70   | .30   |      |      |       |
| 7     |      | 0      | 2.6   | 5.8   | 7.3   | 2.0  | 1.5   | .60   | .30   |      |      |       |
| 8     |      | 0      | 2.4   | 5.4   | 3.7   | 2.0  | 1.3   | .90   | .40   |      |      |       |
| 9     |      | 0      | 3.8   | 5.0   | 3.4   | 2.0  | 1.3   | 1.1   | .40   |      |      |       |
| 10    |      | 0      | 2.8   | 4.6   | 3.4   | 2.0  | 1.3   | 1.0   | .40   |      |      |       |
| 11    |      | 0      | 2.7   | 4.2   | 3.0   | 2.0  | 1.3   | .70   | .40   |      |      |       |
| 12    |      | 0      | 3.4   | 3.8   | 3.0   | 1.7  | 1.3   | .60   | .40   |      |      |       |
| 13    |      | 0      | 2.4   | 3.6   | 3.0   | 2.0  | 1.2   | .50   | .30   |      |      |       |
| 14    |      | 0      | 2.3   | 3.5   | 3.0   | 2.0  | 1.1   | .50   | .30   |      |      |       |
| 15    |      | 0      | 2.3   | 3.4   | 3.0   | 1.7  | 1.0   | .50   | .30   |      |      |       |
| 16    |      | 0      | 2.2   | 3.2   | 3.0   | 1.6  | 1.0   | .50   | .50   |      |      |       |
| 17    |      | 7.4    | 2.1   | 3.1   | 3.0   | 1.5  | 1.1   | .50   | .50   |      |      |       |
| 18    |      | 4.4    | 2.0   | 3.0   | 3.0   | 1.5  | 1.2   | .50   | .30   |      |      |       |
| 19    |      | .90    | 1.9   | 3.2   | 3.0   | 1.5  | 1.2   | .50   | .20   |      |      |       |
| 20    |      | .50    | 1.9   | 2.2   | 2.7   | 1.5  | 1.0   | .50   | 0     |      |      |       |
| 21    |      | .40    | 1.9   | 1.7   | 2.4   | 1.5  | .90   | .50   | .10   |      |      |       |
| 22    |      | 4.8    | 1.9   | 1.6   | 2.4   | 1.5  | .90   | .50   | .10   |      |      |       |
| 23    |      | 4.1    | 1.9   | 1.7   | 2.4   | 1.3  | .90   | .50   | .10   |      |      |       |
| 24    |      | 2.2    | 1.8   | 2.0   | 2.4   | 2.9  | .90   | .50   | .10   |      |      |       |
| 25    |      | 2.2    | 1.7   | 1.7   | 2.4   | 4.0  | .90   | .50   | .20   |      |      |       |
| 26    |      | 1.1    | 1.7   | 2.0   | 2.4   | 3.0  | .90   | .50   | .20   |      |      |       |
| 27    |      | 7.4    | 1.7   | 2.0   | 2.4   | 2.4  | .70   | .60   | .20   |      |      |       |
| 28    |      | 7.1    | 1.7   | 2.0   | 2.2   | 2.0  | .70   | .50   | .10   |      |      |       |
| 29    |      | 5.5    | 3.8   | 2.2   | ----- | 1.7  | .70   | .50   | 0     |      |      |       |
| 30    |      | 4.5    | 1.6   | 5.9   | ----- | 1.6  | .70   | .70   | 0     |      |      |       |
| 31    |      | -----  | 1.5   | 3.0   | ----- | 1.5  | ----- | .50   | ----- |      |      |       |
| Total | 0    | 182.10 | 137.2 | 132.1 | 83.8  | 60.4 | 35.00 | 18.60 | 8.60  | 0    | 0    | 0     |
| Mean  | 0    | 6.07   | 4.43  | 4.26  | 2.99  | 1.95 | 1.17  | 0.60  | 0.29  | 0    | 0    | 0     |
| Ac-ft | 0    | 351    | 272   | 252   | 156   | 120  | 69    | 37    | 17    | 0    | 0    | 0     |

Calendar year 1965 Max 48 Min 0 Mean 1.03 Ac-ft 743  
 Water year 1965-66 Max 48 Min 0 Mean 1.80 Ac-ft 1,300



11-0869.9. San Jose Creek near El Monte, Calif.

Location.--Lat 34°01'55", long 118°00'40", in El Monte Grant, on right bank of San Jose flood Channel, 1,650 ft upstream from Workman Mill Road bridge, and 2.7 miles southeast of El Monte, Los Angeles County.

Drainage area.--87.8 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 248.52 ft above mean sea level (levels by Los Angeles County Flood Control District).

Extremes.--Maximum discharge during year, 5,220 cfs Dec. 29 (gage height, 5.27 ft); no flow May 25, 29-30, June 3.  
1964-66: Maximum discharge, that of Dec. 29, 1965; no flow for some days each year.

Remarks.--No regulation above station. One small diversion for ground-water recharge. At times effluent from city of Pomona's sewage reclamation plant is released to creek above Spadra and at Lemon Street. The 200 cfs bypass from San Jose Flood channel to the original San Jose Creek channel has been closed since Oct. 1, 1964. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District, and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar.   | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|---------|---------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 4.2  | 2.8     | 6.5     | 15    | 7.9   | 7.1    | 5.8   | 4.1   | 3.7   | 3.7   | 4.6   | 4.6   |
| 2     | 4.5  | 2.8     | 7.7     | 8.3   | 19    | 6.5    | 4.1   | 4.1   | 3.7   | 3.2   | 4.6   | 4.6   |
| 3     | 3.6  | 3.6     | 7.1     | 7.1   | 4.6   | 5.8    | 4.6   | 3.7   | 0     | 3.2   | 4.1   | 3.2   |
| 4     | 3.6  | 3.1     | 7.1     | 7.7   | 4.6   | 5.8    | 4.6   | 3.2   | 1.4   | 3.2   | 3.2   | 1.4   |
| 5     | 4.2  | 2.8     | 7.7     | 8.3   | 4.6   | 5.2    | 4.6   | 4.6   | 1.4   | 3.2   | 2.8   | 1.4   |
| 6     | 2.6  | 3.1     | 8.3     | 8.3   | 390   | 6.5    | 4.6   | 3.7   | 1.4   | 3.7   | 2.8   | 1.4   |
| 7     | 3.1  | 3.1     | 7.1     | 8.3   | 24    | 5.8    | 4.1   | 3.7   | 3.2   | 3.7   | 2.8   | 50    |
| 8     | 2.8  | 3.4     | 7.1     | 5.8   | 12    | 5.8    | 4.1   | 4.1   | 1.8   | 3.7   | 4.1   | 3.7   |
| 9     | 2.8  | 3.4     | 54      | 7.1   | 8.9   | 5.2    | 4.1   | 5.2   | 5.2   | 2.3   | 3.7   | 5.8   |
| 10    | 2.8  | 3.9     | 101     | 8.3   | 8.3   | 4.6    | 4.1   | 6.5   | 5.2   | 1.4   | 3.7   | 4.6   |
| 11    | 2.8  | 3.9     | 17      | 8.3   | 7.7   | 5.8    | 4.1   | 5.2   | 4.1   | 2.8   | 5.2   | 2.8   |
| 12    | 3.4  | 4.2     | 101     | 8.3   | 8.3   | 5.8    | 4.1   | 4.6   | 3.2   | 4.6   | 4.6   | 1.0   |
| 13    | 3.1  | 4.2     | 17      | 8.9   | 7.7   | 5.2    | 4.1   | 5.2   | 2.8   | 5.2   | 3.2   | 3.2   |
| 14    | 3.4  | 49      | 47      | 8.9   | 7.7   | 5.2    | 4.1   | 4.6   | 4.1   | 4.6   | 3.2   | 5.8   |
| 15    | 3.4  | 127     | 22      | 8.3   | 7.1   | 8.9    | 4.6   | 5.2   | 4.6   | 3.7   | 3.2   | 4.6   |
| 16    | 2.3  | 349     | 14      | 7.7   | 7.1   | 7.7    | 4.1   | 5.8   | 4.6   | 4.6   | 3.2   | 5.8   |
| 17    | 2.6  | 245     | 10      | 8.3   | 7.1   | 6.5    | 4.1   | 3.2   | 7.1   | 5.2   | 2.8   | 5.2   |
| 18    | 2.8  | 52      | 9.6     | 8.3   | 7.1   | 4.1    | 3.7   | 1.8   | 7.7   | 4.1   | 3.2   | 7.1   |
| 19    | 2.3  | 7.8     | 8.3     | 8.3   | 7.7   | 4.6    | 4.1   | .50   | 7.1   | 3.7   | 4.6   | 11    |
| 20    | 2.6  | 5.4     | 8.9     | 7.1   | 7.1   | 3.2    | 3.7   | 1.8   | 4.6   | 4.6   | 4.1   | 3.7   |
| 21    | 2.2  | 5.4     | 8.9     | 7.1   | 6.5   | 4.6    | 4.1   | .50   | 6.5   | 4.6   | 4.1   | 6.5   |
| 22    | 2.1  | 1,410   | 8.9     | 7.7   | 6.5   | 2.3    | 4.1   | .50   | 7.7   | 4.6   | 3.7   | 6.5   |
| 23    | 2.6  | 501     | 7.7     | 7.7   | 7.1   | .90    | 4.1   | 1.4   | 10    | 3.7   | 3.2   | 7.1   |
| 24    | 2.6  | 354     | 7.1     | 8.3   | 5.8   | 12     | 4.6   | 1.8   | 10    | 3.7   | 2.8   | 5.8   |
| 25    | 2.8  | 122     | 6.5     | 8.3   | 7.7   | 4.6    | 5.2   | 0     | 7.7   | 4.1   | 2.8   | 6.5   |
| 26    | 3.1  | 11      | 6.5     | 8.3   | 7.1   | 12     | 4.6   | .90   | 7.1   | 4.1   | 3.2   | 5.8   |
| 27    | 2.8  | 7.1     | 6.5     | 7.1   | 5.8   | 8.9    | 5.2   | 1.4   | 7.1   | 3.2   | 5.8   | 4.6   |
| 28    | 3.1  | 6.5     | 6.5     | 7.1   | 6.5   | 6.5    | 5.2   | .50   | 7.1   | 4.1   | 4.1   | 4.6   |
| 29    | 2.6  | 7.1     | 1,640   | 8.9   | ----- | 5.2    | 1.4   | 0     | 5.8   | 4.1   | 4.1   | 6.5   |
| 30    | 2.6  | 7.7     | 94      | 187   | ----- | 5.2    | 3.7   | 0     | 5.2   | 4.6   | 4.6   | 5.8   |
| 31    | 2.6  | -----   | 24      | 17    | ----- | 4.6    | ----- | 4.1   | ----- | 4.1   | 3.7   | ----- |
| Total | 92.0 | 3,311.3 | 2,285.0 | 441.1 | 611.5 | 223.50 | 127.6 | 91.90 | 151.1 | 119.3 | 115.8 | 141.1 |
| Mean  | 2.97 | 110     | 73.7    | 14.2  | 21.8  | 7.21   | 4.25  | 2.96  | 5.04  | 3.85  | 3.74  | 4.70  |
| Ac-ft | 182  | 6,570   | 4,530   | 875   | 1,210 | 443    | 253   | 182   | 300   | 237   | 230   | 280   |

Calendar year 1965 Max 1,640 Min 0 Mean 27.6 Ac-ft 20,020  
 Water year 1965-66 Max 1,640 Min 0 Mean 21.1 Ac-ft 15,290

11-0870.2. San Gabriel River above Whittier Narrows Dam, Calif.

Location.--Lat 34°02'00", long 118°02'14", in La Puente Grant, on downstream side of bridge near center, on San Gabriel River Parkway, 0.8 mile downstream from San Jose Flood channel,  $1\frac{1}{4}$  miles upstream from axis of Whittier Narrows Dam, and 1.8 miles south of El Monte.

Drainage area.--353 sq mi.

Records available.--October 1955 to September 1957, October 1963 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 220 ft (from topographic map).

Extremes.--Maximum discharge during year, 11,600 cfs Nov. 23 (gage height, 7.68 ft); no flow Oct. 3-13.

1955-57, 1963-66: Maximum discharge, about 12,000 cfs Jan. 26, 1956 (gage height, 8.16 ft, from floodmarks), on basis of maximum discharge for station at Pico; no flow for part of each year.

Remarks.--Records good below 1,000 cfs and poor above. Flow regulated by San Gabriel, Cogswell, and Santa Fe flood control reservoirs (combined capacity, 90,670 acre-ft), several small flood-control reservoirs (combined capacity, 19,100 acre-ft), and Morris Reservoir (capacity, 35,000 acre-ft). Many diversions above station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at a site 4.2 miles upstream from gage and 460 ft downstream from San Bernardino Road for ground-water replenishment. Los Angeles County Flood Control District diverted 7,540 acre-ft of water from San Gabriel River below Santa Fe Dam to Rio Hondo during year. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records of Colorado River water released to river and diversion from San Gabriel River below Santa Fe Dam to Rio Hondo furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.     | Nov.      | Dec.    | Jan.   | Feb.  | Mar.    | Apr.  | May    | June    | July | Aug.  | Sept.  |
|-------|----------|-----------|---------|--------|-------|---------|-------|--------|---------|------|-------|--------|
| 1     | 6.3      | 0.60      | 162     | 1,350  | 17    | 71      | 152   | 146    | 114     | 2.4  | 3.0   | 238    |
| 2     | 1.0      | 1.3       | 146     | 1,070  | 69    | 71      | 152   | 146    | 114     | 1.8  | 3.0   | 184    |
| 3     | 0        | 2.1       | 174     | 832    | 87    | 71      | 152   | 146    | 114     | 1.8  | 3.0   | 174    |
| 4     | 0        | 2.4       | 226     | 912    | 118   | 71      | 152   | 146    | 114     | 1.8  | 2.4   | 162    |
| 5     | 0        | 2.1       | 220     | 960    | 118   | 71      | 152   | 135    | 114     | 1.8  | 2.4   | 162    |
| 6     | 0        | 2.4       | 232     | 809    | 714   | 74      | 152   | 85     | 114     | 2.1  | 1.5   | 162    |
| 7     | 0        | 2.4       | 290     | 510    | 34    | 90      | 152   | 46     | 101     | 2.1  | 2.1   | 162    |
| 8     | 0        | 2.4       | 290     | 250    | 11    | 122     | 152   | 118    | 39      | 2.1  | 2.7   | 168    |
| 9     | 0        | 38        | 449     | 140    | 31    | 131     | 152   | 131    | 127     | 1.8  | 20    | 168    |
| 10    | 0        | 114       | 263     | 157    | 118   | 140     | 152   | 122    | 118     | 1.5  | 42    | 174    |
| 11    | 0        | 146       | 87      | 220    | 127   | 140     | 152   | 114    | 106     | 1.8  | 22    | 174    |
| 12    | 0        | 112       | 246     | 208    | 122   | 140     | 152   | 114    | 106     | 3.0  | 24    | 174    |
| 13    | 0        | 2.7       | 78      | 196    | 122   | 135     | 135   | 114    | 106     | 3.5  | 10    | 168    |
| 14    | 34       | 128       | 150     | 250    | 122   | 52      | 131   | 114    | 106     | 5.0  | 8.0   | 174    |
| 15    | 90       | 344       | 106     | 250    | 118   | 10      | 75    | 110    | 106     | 3.0  | 8.0   | 174    |
| 16    | 122      | 939       | 97      | 268    | 122   | 5.5     | 5.0   | 114    | 106     | 3.5  | 10    | 174    |
| 17    | 131      | 550       | 78      | 268    | 122   | 5.0     | 5.0   | 110    | 106     | 5.0  | 9.0   | 174    |
| 18    | 131      | 108       | 12      | 282    | 114   | 3.0     | 5.0   | 110    | 106     | 4.5  | 12    | 168    |
| 19    | 131      | 23        | 3.5     | 298    | 110   | 3.5     | 5.0   | 110    | 106     | 4.0  | 13    | 179    |
| 20    | 131      | 90        | 14      | 282    | 106   | 3.0     | 5.0   | 110    | 106     | 3.5  | 15    | 179    |
| 21    | 135      | 93        | 71      | 266    | 106   | 3.0     | 5.0   | 114    | 106     | 4.0  | 18    | 179    |
| 22    | 135      | 2,360     | 89      | 214    | 106   | 2.4     | 5.0   | 114    | 106     | 3.5  | 20    | 168    |
| 23    | 114      | 6,480     | 74      | 208    | 90    | 4.9     | 5.0   | 114    | 60      | 3.5  | 22    | 168    |
| 24    | 101      | 6,350     | 71      | 220    | 71    | 198     | 5.0   | 114    | 10      | 3.5  | 22    | 162    |
| 25    | 90       | 3,130     | 71      | 298    | 74    | 109     | 37    | 114    | 5.0     | 4.0  | 22    | 168    |
| 26    | 93       | 1,610     | 71      | 242    | 74    | 52      | 122   | 114    | 3.0     | 4.0  | 24    | 174    |
| 27    | 106      | 186       | 71      | 91     | 74    | 152     | 131   | 122    | 2.5     | 4.0  | 24    | 184    |
| 28    | 118      | 244       | 47      | 18     | 71    | 157     | 131   | 118    | 2.4     | 4.0  | 22    | 184    |
| 29    | 94       | 214       | 2,540   | 14     | ----- | 162     | 135   | 114    | 1.5     | 4.0  | 35    | 157    |
| 30    | .80      | 190       | 721     | 526    | ----- | 162     | 140   | 106    | 2.4     | 4.0  | 142   | 157    |
| 31    | .30      | -----     | 1,620   | 56     | ----- | 162     | ----- | 110    | -----   | 4.0  | 244   | -----  |
| Total | 1,764.40 | 2,345.740 | 3,759.5 | 11,665 | 3,168 | 2,573.3 | 2,906 | 3,595  | 2,427.8 | 98.5 | 808.1 | 5,193  |
| Mean  | 56.9     | 782       | 283     | 376    | 113   | 83.0    | 96.9  | 116    | 80.9    | 3.18 | 26.1  | 173    |
| Ac-ft | 3,500    | 46,550    | 17,390  | 23,140 | 6,280 | 5,100   | 5,760 | 7,130  | 4,820   | 195  | 1,600 | 10,300 |
| (t)   | 13,970   | 3,380     | 2,120   | 0      | 6,070 | 6,300   | 7,120 | 10,800 | 6,930   | 0    | 3,480 | 12,660 |

Calendar year 1965 Max 6,480 Min 0 Mean 180 Ac-ft 130,200 Ac-ft + 83,380  
 Water year 1965-66 Max 6,480 Min 0 Mean 182 Ac-ft 131,800 Ac-ft + 72,830

† Colorado River water released to San Gabriel River at site 4.2 miles upstream.

11-0875. San Gabriel River at Pico, Calif.

Location.--Lat 34°00'23", long 118°04'05", in Paso de Bartolo Grant, in downstream end of mid-span pier of Beverly Boulevard Bridge, 0.7 mile downstream from San Jose Creek, and 0.8 mile northeast of Pico, Los Angeles County.

Drainage area.--448 sq mi.

Records available.--October 1928 to September 1966. Since 1954, Colorado River water released to San Gabriel River above station. Records since 1954 not equivalent.

Gage.--Graphic water-stage recorder. Altitude of gage is 180 ft (from topographic map). Prior to Feb. 4, 1937, at site 0.8 mile downstream at different datum. Feb. 4, 1937, to Nov. 14, 1947, at site 1,200 ft downstream at different datum. Nov. 15, 1947, to Mar. 5, 1952, at site 1,000 ft downstream at different datum.

Extremes.--Maximum discharge during year, 2,670 cfs Feb. 6 (gage height, 7.83 ft); no flow for some days. 1928-66: Maximum discharge, 22,700 cfs Mar. 2, 1938; no flow for periods in each year.

Remarks.--Flow regulated by Cogswell Reservoir since 1934 and San Gabriel flood-control reservoir since 1939 (combined capacity, 53,870 acre-ft), Morris Reservoir since 1934 (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir since October 1942 (capacity, 36,800 acre-ft), Whittier Narrows flood-control reservoir since January 1956 (capacity, 36,160 acre-ft), and several small flood-control reservoirs (combined capacity, 19,100 acre-ft). Diversions for irrigation, power development, and ground-water replenishment. For Colorado River water released to San Gabriel River at site 6.7 miles upstream for ground-water replenishment in the San Gabriel River (see Sta. No. 0870.2). During the year, 7,540 acre-ft was diverted from the San Gabriel River below Santa Fe Dam and 66,430 acre-ft was diverted from above Whittier Narrows Dam to Rio Hondo. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.    | Nov.    | Dec.    | Jan.    | Feb.  | Mar.     | Apr.    | May    | June     | July   | Aug.   | Sept. |
|--------------------|---------|---------|---------|---------|-------|----------|---------|--------|----------|--------|--------|-------|
| 1                  | 0       | 0       | 93      | 172     | 14    | 62       | 157     | 139    | 102      | 0      | 15     | 84    |
| 2                  | 0       | 0       | 87      | 136     | 73    | 62       | 154     | 139    | 99       | 0      | 12     | 78    |
| 3                  | 0       | 0       | 81      | 119     | 87    | 62       | 143     | 136    | 96       | 0      | 12     | 78    |
| 4                  | 0       | 0       | 81      | 122     | 132   | 68       | 136     | 116    | 96       | 10     | 12     | 90    |
| 5                  | 0       | 0       | 84      | 125     | 125   | 68       | 132     | 119    | 99       | 0      | 14     | 96    |
| 6                  | 0       | 0       | 84      | 122     | 916   | 75       | 136     | 88     | 99       | 0      | 14     | 102   |
| 7                  | 0       | 0       | 84      | 119     | 47    | 102      | 119     | 23     | 84       | 7.2    | 13     | 102   |
| 8                  | 0       | 0       | 87      | 112     | 13    | 139      | 119     | 122    | 27       | 17     | 4.7    | 102   |
| 9                  | 0       | 3.8     | 90      | 109     | 23    | 161      | 119     | 116    | 119      | 16     | 0      | 106   |
| 10                 | 0       | 90      | 99      | 96      | 136   | 176      | 125     | 125    | 112      | 16     | 1.1    | 102   |
| 11                 | 0       | 112     | 90      | 96      | 116   | 157      | 125     | 129    | 90       | 13     | 10     | 99    |
| 12                 | 0       | 133     | 93      | 93      | 116   | 146      | 129     | 122    | 90       | 13     | 10     | 99    |
| 13                 | 0       | 1.8     | 87      | 93      | 109   | 143      | 136     | 112    | 109      | 13     | 0      | 109   |
| 14                 | 8.7     | 43      | 84      | 106     | 112   | 62       | 136     | 112    | 125      | 13     | 0      | 102   |
| 15                 | 84      | 226     | 84      | 119     | 116   | 5.4      | 74      | 129    | 112      | 13     | 0      | 112   |
| 16                 | 109     | 176     | 81      | 109     | 125   | 10       | 2.0     | 129    | 106      | 13     | 0      | 106   |
| 17                 | 119     | 168     | 75      | 93      | 129   | 17       | 1.5     | 112    | 116      | 11     | 0      | 99    |
| 18                 | 112     | 112     | 50      | 84      | 125   | 20       | 1.4     | 106    | 106      | 5.1    | 0      | 90    |
| 19                 | 119     | 28      | 21      | 81      | 119   | 20       | 1.7     | 116    | 112      | 0      | 0      | 102   |
| 20                 | 119     | 64      | 5.3     | 78      | 112   | 21       | 1.7     | 125    | 112      | 0      | 0      | 109   |
| 21                 | 119     | 78      | 81      | 72      | 112   | 21       | 1.8     | 129    | 102      | 0      | 0      | 102   |
| 22                 | 119     | 246     | 112     | 68      | 122   | 16       | 4.6     | 129    | 87       | 0      | 0      | 96    |
| 23                 | 99      | 204     | 84      | 72      | 102   | 80       | 15      | 122    | 60       | 0      | 0      | 106   |
| 24                 | 106     | 207     | 78      | 72      | 72    | 195      | 16      | 109    | 84       | 0      | 0      | 99    |
| 25                 | 84      | 139     | 78      | 78      | 78    | 118      | 23      | 112    | 1.2      | 0      | 0      | 93    |
| 26                 | 87      | 132     | 78      | 78      | 75    | 26       | 120     | 112    | .70      | 0      | 0      | 93    |
| 27                 | 96      | 102     | 75      | 64      | 64    | 139      | 120     | 119    | .20      | 0      | 0      | 93    |
| 28                 | 106     | 106     | 67      | 36      | 64    | 146      | 132     | 99     | .10      | 0      | 0      | 93    |
| 29                 | 106     | 93      | 211     | 6.5     | ----- | 136      | 129     | 93     | .10      | 6.5    | 18     | 90    |
| 30                 | 0       | 90      | 108     | 417     | ----- | 139      | 129     | 96     | 0        | 18     | 93     | 87    |
| 31                 | 0       | -----   | 172     | 59      | ----- | 143      | -----   | 99     | -----    | 18     | -----  | ----- |
| Total              | 1,592.7 | 2,554.6 | 2,684.3 | 3,206.5 | 3,434 | 2,656.20 | 2,638.7 | 3,534  | 2,270.70 | 192.90 | 209.00 | 2,919 |
| Mean               | 51.4    | 85.2    | 86.6    | 103     | 123   | 85.7     | 88.0    | 114    | 75.7     | 6.22   | 6.74   | 97.3  |
| Ac-ft              | 3,160   | 5,070   | 5,320   | 6,360   | 6,810 | 5,270    | 5,230   | 7,010  | 4,500    | 383    | 415    | 5,790 |
| Calendar year 1965 | Max     | 1,410   | Min     | 0       | Mean  | 90.7     | Ac-ft   | 65,660 |          |        |        |       |
| Water year 1965-66 | Max     | 916     | Min     | 0       | Mean  | 76.4     | Ac-ft   | 55,320 |          |        |        |       |

## SAN GABRIEL RIVER BASIN

11-0880. San Gabriel River at Spring Street, near Los Alamitos, Calif.

Location.--Lat 33°48'43", long 118°05'24", in SE 1/4 sec. 24, T.4 S., R.12 W., on right levee, 455 ft upstream from Spring Street bridge, 1.3 miles upstream from Coyote Creek, and 1.3 miles northwest of Los Alamitos.

Drainage area.--472 sq mi.

Records available.--October 1927 to September 1951, October 1952 to September 1966. Monthly discharge only for October 1927 to September 1936, published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Datum of gage is 11.87 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to October 1952, at datum 4.82 ft higher, and October 1952 to Nov. 17, 1964, at site 455 ft downstream at datum 0.38 ft higher.

Average discharge.--38 years, 21.8 cfs (15,780 acre-ft per year); median of yearly mean discharges, 2.9 cfs (2,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,950 cfs Feb. 6 (gage height, 4.40 ft); no flow for much of year. 1936-51, 1952-66: Maximum discharge, 27,000 cfs (estimated) Mar. 2, 1938; no flow for several months in each year.

Remarks.--Flow regulated by San Gabriel flood-control reservoir since 1939 and Cogswell flood-control reservoir since 1934 (combined capacity, 53,870 acre-ft), Morris Reservoir since 1934 (capacity, 35,000 acre-ft), Santa Fe flood-control reservoir since October 1942 (capacity, 36,800 acre-ft), Whittier Narrows flood-control reservoir since January 1956 (capacity, 36,160 acre-ft), and several small flood-control reservoirs (combined capacity, 19,100 acre-ft). Many diversions for irrigation, power development, and ground-water replenishment. Average discharge represents flow to ocean during period of record, regardless of upstream development. The Los Angeles County Flood Control District reported 7,540 acre-ft from San Gabriel River below Santa Fe Dam and 66,430 acre-ft from above Whittier Narrows Dam was diverted to Rio Hondo during year. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.   | Feb.   | Mar.   | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|--------|--------|--------|--------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0      | 80     | 1.8    | 0      | 0     | 0    | 0     | 0    | 0.10 | 0.10  |
| 2     |      | 0     | 0      | 61     | 8.7    | .30    | 0     | 0    | 0     | 0    | .20  | 0     |
| 3     |      | 0     | 0      | 26     | 1.9    | .20    | 0     | 0    | 0     | 0    | .20  | .10   |
| 4     |      | 0     | 0      | 20     | .10    | 0      | 0     | 0    | 0     | 0    | 0    | 0     |
| 5     |      | 0     | 0      | 15     | 0      | 0      | 0     | 0    | 0     | 0    | 0    | 0     |
| 6     |      | 0     | 0      | 6.7    | 630    | 0      | 0     | 0    | 0     | .10  | .20  | 0     |
| 7     |      | 0     | 0      | 4.0    | 51     | 0      | 0     | 0    | 0     | .10  | .20  | 0     |
| 8     |      | 0     | 0      | 2.9    | 1.8    | 0      | 0     | 0    | 0     | .10  | .10  | .20   |
| 9     |      | 0     | 10     | 1.6    | .20    | 0      | 0     | 2.1  | 0     | .20  | .20  | .20   |
| 10    |      | 0     | 19     | .50    | 0      | 0      | 0     | 1.2  | 0     | .50  | .60  | .20   |
| 11    |      | 0     | 5.0    | .10    | 0      | 0      | 0     | 0    | 0     | .20  | 1.4  | .20   |
| 12    |      | 0     | 29     | .10    | 0      | 0      | 0     | 0    | 0     | 0    | .20  | .10   |
| 13    |      | 0     | 18     | 0      | 0      | 0      | 0     | 0    | 0     | 0    | .10  | .10   |
| 14    |      | 26    | 15     | 0      | 0      | 0      | 0     | 0    | 0     | .10  | .20  | .10   |
| 15    |      | 49    | 5.9    | 0      | 0      | 0      | 0     | 0    | 0     | .10  | 0    | .10   |
| 16    |      | 235   | 3.1    | 0      | 0      | 0      | 0     | 0    | 0     | .10  | .20  | .10   |
| 17    |      | 258   | .50    | .10    | 0      | 0      | 0     | 0    | 0     | .10  | .20  | .30   |
| 18    |      | 85    | 0      | 0      | 0      | 0      | 0     | 0    | 0     | .20  | .30  | .30   |
| 19    |      | 0     | 0      | 0      | 0      | 0      | 0     | .10  | 0     | .10  | .20  | .30   |
| 20    |      | 0     | 0      | .70    | 0      | 0      | .10   | 0    | 0     | .10  | 0    | .20   |
| 21    |      | 0     | 0      | 0      | 0      | 0      | 0     | 0    | .20   | .20  | 0    | .20   |
| 22    |      | 280   | 0      | 0      | 0      | 0      | 0     | 0    | .10   | .20  | 0    | .20   |
| 23    |      | 188   | 0      | 0      | 0      | 0      | 0     | 0    | .10   | .20  | .20  | 0     |
| 24    |      | 244   | 0      | 0      | 0      | .20    | 0     | 0    | .10   | 0    | .10  | 0     |
| 25    |      | 72    | 0      | 0      | 0      | 106    | 0     | 0    | .10   | 0    | .20  | 0     |
| 26    |      | 40    | 0      | 0      | 0      | .80    | 0     | 0    | .10   | 0    | .50  | 0     |
| 27    |      | 18    | 0      | 0      | 0      | 0      | .30   | .10  | .10   | 0    | .20  | .10   |
| 28    |      | 10    | 0      | 0      | 0      | 0      | .30   | 0    | .10   | .10  | .30  | .10   |
| 29    |      | 0     | 485    | 0      | -----  | 0      | 0     | 0    | .10   | .50  | .20  | .10   |
| 30    |      | 0     | 34     | 247    | -----  | 0      | 0     | 0    | .10   | .20  | 0    | .10   |
| 31    |      | ----- | 87     | 95     | -----  | 0      | ----- | 0    | ----- | .10  | .10  | ----- |
| Total | 0    | 1,605 | 711.50 | 560.70 | 695.50 | 127.30 | 0.70  | 3.50 | 1.10  | 4.20 | 6.40 | 3.40  |
| Mean  | 0    | 53.5  | 23.0   | 18.1   | 24.8   | 4.11   | 0.02  | 0.11 | 0.04  | 0.14 | 0.21 | 0.11  |
| Ac-ft | 0    | 3,180 | 1,410  | 1,110  | 1,380  | 252    | 1.4   | 6.9  | 2.2   | 8.3  | 13   | 6.7   |

Calendar year 1965 Max 1,070 Min 0 Mean 17.4 Ac-ft 12,620  
 Water year 1965-66 Max 630 Min 0 Mean 10.2 Ac-ft 7,380

11-0885. Brea Creek below Dam, near Fullerton, Calif.

Location.--Lat 33°53'16", long 117°55'32", in NE 1/4 NE 1/4 sec. 28, T.3 S., R.10 W., on right bank 0.2 mile downstream from Brea Dam and 1 mile north of Fullerton.

Drainage area.--21.6 sq mi.

Records available.--January 1942 to September 1966.

Gage.--Graphic water-stage recorder and V-notch sharp-crested weir since October 1946. Datum of gage is 196.67 ft above mean sea level (levels by Corps of Engineers). Prior to Dec. 4, 1964, at datum 1.03 ft higher.

Average discharge.--24 years, 0.665 cfs (481 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 327 cfs Nov. 22 (gage height, 5.05 ft); no flow for most of year.  
1942-66: Maximum discharge, 655 cfs Feb. 29, 1944 (gage height, 6.13 ft, present datum); no flow for parts of most years.

Remarks.--Records fair. Flow regulated by Brea flood-control reservoir (capacity, 4,100 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|                   |                  |                   |
|-------------------|------------------|-------------------|
| Nov. 14..... 0.10 | Dec. 12..... 2.1 | Jan. 31..... 0.40 |
| 15..... 3.1       | 13..... 1.9      | Feb. 1..... .40   |
| 16..... 28        | 14..... 3.7      | 2..... 1.2        |
| 17..... 15        | 15..... 1.5      | 6..... 55         |
| 18..... 1.6       | 16..... .80      | 7..... 1.0        |
| 22..... 120       | 17..... .10      | 8..... .20        |
| 23..... 19        | 29..... 84       | 25..... .10       |
| 24..... 22        | 30..... 10       | Mar. 20..... .10  |
| 25..... 1.4       | 31..... 1.2      | 22..... .10       |
| Dec. 9..... 1.8   | Jan. 1..... .10  | 24..... .50       |
| 10..... 15        | 30..... 22       | 25..... 3.0       |
| 11..... .20       |                  |                   |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 210.20   | 120     | 0       | 7.01 | 417       |
| December.....           | 122.30   | 84      | 0       | 3.95 | 243       |
| January 1966.....       | 22.50    | 22      | 0       | .73  | 45        |
| February.....           | 57.90    | 55      | 0       | 2.07 | 115       |
| March.....              | 3.70     | 3.0     | 0       | .12  | 7.3       |
| Calendar year 1965..... | -        | 120     | 0       | 1.56 | 1,130     |
| Water year 1965-66..... | -        | 120     | 0       | 1.14 | 826       |

Note.--Flow occurred only on days listed above.

## SAN GABRIEL RIVER BASIN

11-0890. Brea Creek at Fullerton, Calif.

Location.--Lat 33°52'25", long 117°55'30", in SE 1/4 sec. 28, T.3 S., R.10 W., between Malden Avenue and Spadra Road at Fullerton.

Drainage area.--23.6 sq mi.

Records available.--October 1930 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 160 ft (from topographic map). From Oct. 1, 1930, to Sept. 30, 1935, at site a quarter of a mile upstream at different datum. Oct. 1, 1935, to Jan. 19, 1940, at site a quarter of a mile downstream at different datum.

Average discharge.--36 years, 1.09 cfs (789 acre-ft per year); median of yearly mean discharges, 0.5 cfs (360 acre-ft per year).

Extremes.--Maximum discharge during year, 365 cfs Nov. 22 (gage height, 1.32 ft); no flow for most of year.  
1930-66: Maximum discharge, 3,700 cfs Mar. 14, 1941 (gage height, 5.45 ft); no flow for most of each year.

Remarks.--Flow regulated by Brea flood-control reservoir since January 1942 (capacity, 4,100 acre-ft). No diversion above station.  
See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|------|-------|-----|-------|------|------|-------|
| 1     | 0    | 0      | 0      | 0.40  | 2.2   | 0    |       |     | 0     |      | 0    | 0     |
| 2     | 0    | 0      | 0      | 0     | 3.2   | 0    |       |     | 0     |      | 0    | 0     |
| 3     | 0    | 0      | 0      | 0     | .20   | .10  |       |     | 0     |      | 0    | 0     |
| 4     | 0    | 0      | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | 0     |
| 5     | 0    | 0      | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | 0     |
| 6     | 0    | 0      | 0      | 0     | 4.3   | 0    |       |     | 0     |      | 0    | .20   |
| 7     | 0    | 0      | 0      | 0     | 3.0   | 0    |       |     | .10   |      | 0    | .10   |
| 8     | 0    | 0      | 0      | 0     | .80   | 0    |       |     | 0     |      | 0    | 0     |
| 9     | 0    | 0      | 5.2    | 0     | .10   | 0    |       |     | 0     |      | 0    | 0     |
| 10    | 0    | 0      | 23     | 0     | 0     | 0    |       |     | 0     |      | 0    | 0     |
| 11    | 0    | 0      | .60    | 0     | 0     | 0    |       |     | 0     |      | 0    | .10   |
| 12    | 0    | 0      | 4.0    | 0     | 0     | 0    |       |     | 0     |      | .20  | 0     |
| 13    | 0    | 0      | 4.8    | 0     | 0     | 0    |       |     | 0     |      | .20  | .10   |
| 14    | 0    | 4.7    | 6.2    | 0     | 0     | 0    |       |     | 0     |      | .50  | 0     |
| 15    | 0    | 12     | 3.0    | 0     | 0     | 0    |       |     | 0     |      | 0    | .30   |
| 16    | 0    | 36     | 2.2    | 0     | 0     | 0    |       |     | 0     |      | 0    | .60   |
| 17    | 0    | 37     | .20    | 0     | 0     | 0    |       |     | 0     |      | 0    | .40   |
| 18    | 0    | 5.9    | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | .30   |
| 19    | .30  | 0      | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | .60   |
| 20    | .20  | 0      | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | .60   |
| 21    | 0    | 0      | 0      | 0     | 0     | 0    |       |     | .10   |      | 0    | 0     |
| 22    | 0    | 127    | 0      | 0     | 0     | .10  |       |     | .60   |      | 0    | .30   |
| 23    | 0    | 41     | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | .70   |
| 24    | 0    | 28     | 0      | 0     | 0     | .80  |       |     | .60   |      | .10  | .60   |
| 25    | 0    | 10     | 0      | 0     | 0     | 3.6  |       |     | 0     |      | 0    | .30   |
| 26    | 0    | .50    | 0      | 0     | 0     | .10  |       |     | 0     |      | 0    | .50   |
| 27    | 0    | 0      | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | .30   |
| 28    | 0    | 0      | 0      | 0     | 0     | 0    |       |     | 0     |      | 0    | .30   |
| 29    | 0    | 0      | 8.5    | 0     | ----- | 0    |       |     | 0     |      | 0    | .60   |
| 30    | 0    | 0      | 11     | 27    | ----- | 0    |       |     | 0     |      | 0    | .60   |
| 31    | 0    | -----  | 3.6    | 1.6   | ----- | 0    | ----- |     | ----- |      | .20  | ----- |
| Total | 0.50 | 302.10 | 148.80 | 29.00 | 52.50 | 4.70 | 0     | 0   | 1.40  | 0    | 1.20 | 7.50  |
| Mean  | 0.02 | 10.1   | 4.80   | 0.94  | 1.88  | 0.15 | 0     | 0   | 0.05  | 0    | 0.04 | 0.25  |
| Ac-ft | 1.0  | 599    | 295    | 58    | 104   | 9.3  | 0     | 0   | 2.8   | 0    | 2.4  | 15    |

Calendar year 1965 Max 127 Min 0 Mean 2.00 Ac-ft 1,450  
Water year 1965-66 Max 127 Min 0 Mean 1.50 Ac-ft 1,090

11-0895. Fullerton Creek below Fullerton Dam, near Brea, Calif.

Location.--Lat 33°53'45", long 117°53'07", in NE 1/4 SW 1/4 sec. 24, T.3 S., R.10 W., on left bank of outlet channel of Fullerton Dam, 1.6 miles southeast of Brea.

Drainage area.--4.94 sq mi.

Records available.--October 1941 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 250 ft (from topographic map). V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956.

Average discharge.--13 years (1941-54), 0.19 cfs (135 acre-ft per year); median of yearly discharges, 0.02 cfs (14 acre-ft per year); 12 years (1954-66), 0.404 cfs (292 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 22 cfs Dec. 29 (gage height, 0.83 ft); no flow for most of year. 1941-66; Maximum discharge, 298 cfs Mar. 16, 1943 (gage height, 3.80 ft); no flow at times each year.

Remarks.--Records good except those for Jan. 31 and Feb. 6, which are poor. Flow regulated by Fullerton flood-control reservoir (capacity 706 acre-ft). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River basins.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|              |     |              |      |
|--------------|-----|--------------|------|
| Nov. 16..... | 3.7 | Dec. 13..... | 0.10 |
| 17.....      | 3.6 | 14.....      | .90  |
| 18.....      | .10 | 15.....      | .10  |
| 22.....      | 12  | 29.....      | 10   |
| 23.....      | 19  | 30.....      | 14   |
| 24.....      | 16  | 31.....      | .10  |
| 25.....      | 5.1 | Jan. 31..... | 10   |
| Dec. 9.....  | .20 | Feb. 6.....  | 1.0  |
| 10.....      | 2.4 |              |      |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 59.50    | 19      | 0       | 1.98 | 118       |
| December.....           | 27.80    | 14      | 0       | .90  | 55        |
| January 1966.....       | 10       | 10      | 0       | .32  | 120       |
| February.....           | 1.0      | 1.0     | 0       | .04  | 2.0       |
| Calendar year 1965..... | -        | 19      | 0       | .328 | 237       |
| Water year 1965-66..... | -        | 19      | 0       | .269 | 195       |

Note.--Flow occurred only on days listed above.

## SAN GABRIEL RIVER BASIN

11-0902. Fullerton Creek at Richman Avenue, at Fullerton, Calif.

Location.--Lat 33°51'45", long 117°55'55", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.33, T.3 S., R.10 W., on right bank 125 ft east of Richman Avenue, in Fullerton.

Drainage area.--12.1 sq mi.

Records available.--October 1959 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 126.4 ft above mean sea level (levels by Orange County Flood Control District).

Average discharge.--7 years, 0.863 cfs (625 acre-ft per year).

Extremes.--Maximum discharge during year, 460 cfs Jan. 30 (gage height, 3.74 ft); no flow for many days.

1959-66: Maximum discharge, 540 cfs Feb. 19, 1962 (gage height, 4.09 ft); no flow for many days in each year.

Remarks.--Flow regulated by Fullerton flood-control reservoir (capacity, 706 acre-ft). No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Orange County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0    | 0.10   | 0      | 0.10  | 2.5   | 0     | 0.10  | 0.10 | 0.10  | 0.10 | 0.10 | 0.10  |
| 2     | .10  | 0      | 0      | .10   | .70   | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 3     | .10  | 0      | 0      | 0     | .10   | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 4     | 0    | 0      | 0      | .10   | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 5     | 0    | .10    | 0      | 0     | .10   | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 6     | 0    | .10    | 0      | 0     | 53    | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 7     | 0    | 0      | 0      | 0     | 3.7   | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 8     | 0    | .10    | .10    | 0     | .10   | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 9     | 0    | 0      | 12     | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 10    | 0    | 0      | 21     | 0     | 0     | 0     | .10   | .20  | .10   | .10  | .10  | .10   |
| 11    | 0    | 0      | .10    | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 12    | 0    | 0      | 2.0    | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .20   |
| 13    | 0    | 0      | 1.1    | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .20   |
| 14    | .10  | 14     | 2.5    | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 15    | 0    | 18     | .40    | .10   | 0     | 0     | .10   | .10  | .30   | .10  | .10  | .10   |
| 16    | 0    | 47     | 1.4    | .10   | 0     | 0     | .10   | .10  | .70   | .10  | .10  | .10   |
| 17    | .10  | 24     | .10    | 0     | 0     | 0     | .10   | .10  | 1.2   | .10  | .10  | .10   |
| 18    | 0    | .30    | 0      | .10   | 0     | 0     | .10   | .10  | .20   | .40  | .10  | .10   |
| 19    | .10  | 0      | 0      | .10   | 0     | 0     | .10   | .10  | .70   | .20  | .10  | .50   |
| 20    | .10  | 0      | 0      | .10   | .10   | 0     | .10   | .10  | .40   | .10  | .20  | .10   |
| 21    | .10  | 0      | 0      | 0     | 0     | 0     | .10   | .10  | .40   | .10  | .10  | .10   |
| 22    | .10  | 45     | 0      | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 23    | .10  | 21     | .10    | .10   | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 24    | .10  | 38     | .10    | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 25    | .10  | 7.3    | 0      | 0     | 0     | .10   | .10   | .10  | .10   | .10  | .10  | .10   |
| 26    | .10  | .30    | 0      | 0     | 0     | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 27    | .10  | 0      | .10    | .10   | .10   | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 28    | .10  | 0      | 0      | 0     | 0     | 0     | .10   | .10  | .20   | .10  | .10  | .10   |
| 29    | .10  | 0      | .64    | 0     | ----- | 0     | .10   | .10  | .10   | .10  | .10  | .10   |
| 30    | .10  | 0      | 12     | .41   | ----- | 0     | .10   | .10  | .20   | .10  | .10  | .10   |
| 31    | .10  | -----  | 2.5    | .20   | ----- | .10   | ----- | .10  | ----- | .10  | .10  | ----- |
| Total | 1.70 | 215.30 | 119.50 | 42.20 | 60.40 | 0.20  | 3.00  | 3.20 | 6.40  | 3.50 | 3.20 | 3.60  |
| Mean  | 0.05 | 7.18   | 3.85   | 1.36  | 2.16  | 0.006 | 0.10  | 0.10 | 0.21  | 0.11 | 0.10 | 0.12  |
| Ac-ft | 3.4  | 427    | 237    | 84    | 120   | 0.4   | 6.0   | 6.3  | 13    | 6.9  | 6.3  | 7.1   |

Calendar year 1965 Max 64 Min 0 Mean 1.56 Ac-ft 1.130

Water year 1965-66 Max 64 Min 0 Mean 1.27 Ac-ft 917



11-0907. Coyote Creek at Los Alamitos, Calif.

Location.--Lat 33°48'38", long 118°04'28", in NW 1/4 sec. 19, T.4 S., R.11 W., on right bank about 250 ft downstream from center line of Spring Street, 0.5 mile northwest of Los Alamitos, Orange County.

Drainage area.--136 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 7.37 ft above mean sea level (levels by Los Angeles County Flood Control District).

Extremes.--Maximum discharge during year, 5,020 cfs Dec. 29 (gage height, 4.48 ft); minimum daily, 1.2 cfs Nov. 8. 1963-66: Maximum discharge, that of Dec. 29, 1965; no flow Jan. 25, Feb. 15-17, 1964.

Remarks.--Flows up to 100 cfs can be diverted from present Carbon Creek channel to Coyote Creek through the original Carbon Creek channel. No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.   | Feb.    | Mar.   | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|---------|---------|--------|---------|--------|-------|-------|-------|------|------|-------|
| 1     | 2.6  | 1.7     | 3.4     | 4.8    | 2.8     | 3.4    | 3.0   | 3.6   | 3.4   | 3.2  | 3.0  | 2.6   |
| 2     | 1.9  | 1.9     | 3.4     | 2.6    | 6.5     | 1.3    | 2.8   | 4.4   | 2.8   | 3.4  | 3.4  | 2.6   |
| 3     | 2.6  | 1.7     | 3.4     | 1.9    | 3.6     | 4.4    | 3.0   | 5.1   | 2.6   | 4.4  | 3.4  | 2.6   |
| 4     | 2.6  | 1.7     | 3.2     | 1.1    | 3.6     | 5.1    | 2.8   | 4.4   | 2.3   | 3.6  | 3.4  | 2.3   |
| 5     | 1.7  | 1.5     | 3.2     | 8.2    | 3.2     | 5.1    | 3.4   | 5.1   | 3.0   | 3.4  | 3.4  | 2.3   |
| 6     | 1.9  | 1.5     | 3.2     | 6.7    | 8.46    | 5.1    | 3.4   | 3.6   | 3.4   | 3.2  | 3.4  | 2.3   |
| 7     | 2.3  | 1.4     | 3.2     | 4.4    | 6.5     | 5.1    | 3.0   | 3.6   | 2.8   | 3.2  | 3.4  | 2.8   |
| 8     | 2.3  | 1.2     | 3.4     | 5.1    | 1.1     | 5.1    | 3.6   | 4.4   | 2.3   | 2.8  | 3.4  | 2.3   |
| 9     | 2.1  | 1.5     | 13.4    | 4.4    | 8.2     | 5.1    | 6.7   | 1.5   | 3.2   | 2.8  | 3.4  | 1.9   |
| 10    | 2.1  | 1.5     | 4.44    | 3.6    | 8.2     | 5.1    | 5.9   | 3.4   | 3.6   | 2.8  | 6.7  | 2.1   |
| 11    | 2.1  | 1.5     | 1.1     | 3.6    | 6.7     | 5.1    | 5.1   | 3.0   | 2.6   | 2.6  | 3.2  | 2.1   |
| 12    | 2.1  | 1.5     | 13.6    | 5.1    | 6.7     | 5.1    | 4.4   | 2.1   | 2.6   | 2.6  | 3.0  | 2.1   |
| 13    | 2.1  | 1.3     | 6.1     | 5.1    | 5.1     | 4.4    | 3.6   | 2.6   | 2.8   | 2.6  | 3.0  | 1.9   |
| 14    | 1.9  | 15.7    | 5.6     | 5.1    | 3.6     | 3.4    | 2.8   | 2.6   | 2.8   | 2.3  | 3.0  | 2.1   |
| 15    | 1.7  | 35.7    | 4.7     | 5.9    | 3.4     | 3.4    | 3.0   | 2.6   | 3.0   | 2.6  | 2.8  | 2.1   |
| 16    | 1.5  | 8.50    | 6.3     | 3.4    | 3.4     | 3.2    | 3.2   | 2.3   | 3.2   | 3.0  | 3.0  | 3.0   |
| 17    | 1.9  | 7.72    | 1.4     | 3.2    | 4.4     | 3.2    | 3.2   | 2.8   | 3.4   | 3.2  | 3.0  | 3.0   |
| 18    | 1.9  | 2.47    | 6.7     | 3.6    | 5.1     | 3.2    | 3.0   | 3.0   | 3.6   | 3.4  | 3.2  | 3.0   |
| 19    | 1.9  | 9.0     | 5.1     | 1.0    | 5.1     | 3.2    | 3.0   | 3.2   | 4.4   | 5.1  | 3.4  | 7.4   |
| 20    | 1.9  | 5.1     | 3.6     | 9.0    | 6.7     | 3.2    | 3.0   | 3.4   | 3.0   | 5.1  | 3.0  | 9.8   |
| 21    | 2.1  | 4.4     | 3.6     | 5.9    | 6.7     | 3.4    | 2.8   | 3.2   | 3.6   | 4.4  | 3.0  | 5.1   |
| 22    | 1.5  | 1.830   | 5.1     | 4.4    | 5.1     | 3.6    | 2.8   | 3.4   | 3.2   | 3.6  | 2.6  | 4.4   |
| 23    | 1.5  | 6.25    | 3.4     | 5.9    | 5.1     | 3.6    | 2.3   | 3.2   | 3.0   | 3.2  | 2.6  | 4.4   |
| 24    | 1.5  | 6.62    | 3.2     | 5.1    | 4.4     | 4.1    | 2.3   | 3.4   | 3.0   | 3.0  | 2.6  | 3.6   |
| 25    | 1.5  | 2.30    | 3.0     | 4.4    | 5.1     | 1.30   | 2.6   | 3.4   | 3.2   | 3.0  | 2.3  | 3.4   |
| 26    | 1.5  | 3.8     | 3.0     | 3.4    | 5.1     | 5.9    | 2.8   | 3.4   | 4.4   | 2.8  | 1.7  | 3.4   |
| 27    | 1.4  | 7.4     | 3.2     | 3.6    | 5.1     | 3.2    | 2.8   | 4.4   | 3.0   | 2.8  | 1.9  | 3.2   |
| 28    | 1.4  | 6.7     | 3.6     | 3.4    | 7.4     | 3.2    | 3.0   | 5.9   | 3.0   | 2.8  | 1.9  | 3.0   |
| 29    | 1.5  | 5.1     | 1.650   | 1.1    | -----   | 3.0    | 3.2   | 5.9   | 3.6   | 2.6  | 1.9  | 4.4   |
| 30    | 1.7  | 7.4     | 2.08    | 6.69   | -----   | 3.6    | 3.6   | 3.6   | 3.2   | 2.6  | 2.1  | 9.8   |
| 31    | 2.1  | -----   | 8.7     | 3.2    | -----   | 3.2    | ----- | 3.6   | ----- | 2.8  | 2.1  | ----- |
| Total | 58.8 | 5.833.0 | 2.980.9 | 9.38.5 | 1.136.0 | 2.97.6 | 100.1 | 123.6 | 94.0  | 98.9 | 92.2 | 105.0 |
| Mean  | 1.90 | 1.94    | 9.62    | 30.3   | 40.6    | 9.60   | 3.34  | 3.99  | 3.13  | 3.19 | 2.97 | 3.50  |
| Ac-ft | 117  | 11.570  | 5.910   | 1.860  | 2.250   | 5.90   | 1.99  | 2.45  | 1.86  | 1.96 | 1.83 | 2.08  |

Calendar year 1965 Max 1.830 Min 0.70 Mean 38.5 Ac-ft 27.880  
 Water year 1965-66 Max 1.830 Min 1.2 Mean 32.5 Ac-ft 23.520

## 11-0924.5. Los Angeles River at Sepulveda Dam, Calif.

Location.--Lat 34°09'42", long 118°27'57", in Ex Mission de San Fernando Grant, on right bank of outlet channel of Sepulveda Dam, 200 ft upstream from Sepulveda Boulevard in city of Los Angeles, and 1.85 miles southwest of Van Nuys, Los Angeles County.

Drainage area.--158 sq mi.

Records available.--January 1929 to February 1938, May 1938 to September 1966. Monthly discharge only for January 1929 to September 1940 and May 1943 to September 1950, published in WSP 1315-B. Records for May 1943 to September 1950, published in WSP 981, 1011, 1041, 1061, 1091, 1121, 1151, 1181, have been found to be unreliable and should not be used. Equivalent daily discharge, published as "below Sepulveda Dam", 1943-45, and as "below Sepulveda Boulevard" (in reports of Los Angeles County Flood Control District), 1946-50, supersede the discredited records.

Gage.--Graphic water-stage recorder. Altitude of gage is 670 ft (from topographic map). Prior to Aug. 23, 1941, at site 1 mile downstream at different datum; Aug. 23, 1941, to Sept. 30, 1950, at site 900 ft downstream at different datum; Oct. 1, 1950, to Aug. 29, 1953, at site 800 ft upstream at datum 5.99 ft higher.

Average discharge.--36 years (1929-37, 1938-66), 24.3 cfs (17,590 acre-ft per year); median of yearly mean discharges, 18 cfs (13,000 acre-ft per year).

Extremes.--Maximum discharge during year, 13,000 cfs Dec. 29 (gage height, 10.98 ft); minimum daily 3.8 cfs Dec. 18, 1929-37, 1938-66; Maximum discharge, that of Dec. 29, 1965; no flow Sept. 19, 20, 1930. Flood of Mar. 2, 1938, amounted to 12,000 cfs (estimated).

Remarks.--Records good. Flow regulated since December 1941 by Sepulveda flood-control reservoir (capacity, 17,400 acre-ft). Some diversion above station. City of Los Angeles at times discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Nine discharge measurements furnished by Los Angeles County Flood Control District. Records of released water from reservoirs furnished by City of Los Angeles.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.    | Jan.    | Feb.    | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|----------|---------|---------|---------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 36    | 26       | 12      | 54      | 78      | 18    | 32    | 26    | 12    | 6.4   | 10    | 8.5   |
| 2     | 34    | 30       | 11      | 30      | 34      | 18    | 30    | 27    | 12    | 6.4   | 9.7   | 9.1   |
| 3     | 33    | 32       | 9.7     | 24      | 12      | 17    | 30    | 26    | 14    | 6.4   | 8.5   | 9.1   |
| 4     | 30    | 33       | 7.4     | 22      | 9.7     | 16    | 32    | 22    | 14    | 6.4   | 9.7   | 9.1   |
| 5     | 27    | 25       | 6.9     | 20      | 10      | 12    | 28    | 9.1   | 14    | 6.4   | 9.7   | 9.1   |
| 6     | 30    | 9.7      | 9.7     | 16      | 86.1    | 12    | 30    | 9.1   | 15    | 9.1   | 9.1   | 9.7   |
| 7     | 28    | 9.1      | 7.4     | 14      | 6.9     | 12    | 30    | 9.1   | 13    | 10    | 8.5   | 9.7   |
| 8     | 30    | 9.7      | 7.9     | 12      | 24      | 12    | 30    | 9.1   | 12    | 11    | 9.7   | 9.7   |
| 9     | 30    | 12       | 40      | 11      | 13      | 13    | 30    | 5.2   | 7.4   | 11    | 10    | 9.7   |
| 10    | 30    | 11       | 198     | 11      | 14      | 12    | 30    | 11    | 9.1   | 9.7   | 10    | 9.1   |
| 11    | 27    | 13       | 9.1     | 10      | 11      | 16    | 28    | 7.9   | 9.1   | 10    | 9.7   | 9.1   |
| 12    | 28    | 14       | 6.9     | 8.5     | 10      | 30    | 33    | 9.1   | 9.1   | 10    | 9.7   | 9.1   |
| 13    | 30    | 12       | 8.5     | 7.9     | 9.7     | 30    | 33    | 9.7   | 11    | 11    | 9.7   | 9.1   |
| 14    | 28    | 495      | 132     | 14      | 11      | 30    | 33    | 9.1   | 12    | 12    | 10    | 19    |
| 15    | 26    | 982      | 9.1     | 8.5     | 11      | 32    | 34    | 9.7   | 9.1   | 11    | 10    | 18    |
| 16    | 27    | 1,960    | 4.2     | 5.9     | 10      | 32    | 36    | 11    | 8.5   | 11    | 10    | 19    |
| 17    | 28    | 3,670    | 4.6     | 6.9     | 10      | 32    | 34    | 12    | 8.5   | 10    | 10    | 19    |
| 18    | 26    | 569      | 3.8     | 7.4     | 13      | 32    | 34    | 12    | 7.9   | 11    | 9.7   | 4.5   |
| 19    | 25    | 247      | 4.2     | 9.1     | 13      | 28    | 33    | 14    | 7.4   | 11    | 9.1   | 14    |
| 20    | 26    | 68       | 6.4     | 9.1     | 9.1     | 28    | 33    | 14    | 6.9   | 11    | 9.1   | 9.1   |
| 21    | 28    | 13       | 9.1     | 9.1     | 9.7     | 30    | 32    | 14    | 6.4   | 10    | 7.4   | 18    |
| 22    | 30    | 3,820    | 19      | 10      | 8.5     | 30    | 28    | 13    | 6.4   | 10    | 7.9   | 17    |
| 23    | 26    | 811      | 9.7     | 11      | 13      | 22    | 26    | 13    | 6.4   | 10    | 9.1   | 16    |
| 24    | 26    | 1,410    | 8.5     | 11      | 16      | 45    | 26    | 15    | 5.9   | 10    | 9.7   | 17    |
| 25    | 25    | 335      | 7.4     | 11      | 15      | 45    | 28    | 16    | 5.9   | 10    | 10    | 18    |
| 26    | 26    | 42       | 6.9     | 10      | 14      | 28    | 28    | 14    | 6.4   | 10    | 10    | 18    |
| 27    | 27    | 19       | 7.4     | 8.5     | 13      | 28    | 27    | 14    | 6.4   | 10    | 10    | 18    |
| 28    | 27    | 12       | 18      | 8.5     | 15      | 28    | 26    | 13    | 6.9   | 10    | 10    | 21    |
| 29    | 26    | 11       | 6,570   | 8.5     | -----   | 30    | 27    | 13    | 6.9   | 10    | 11    | 38    |
| 30    | 26    | 21       | 322     | 985     | -----   | 32    | 26    | 12    | 6.9   | 10    | 11    | 32    |
| 31    | 26    | -----    | 106     | 20      | -----   | 32    | ----- | 12    | ----- | 10    | 10    | ----- |
| Total | 872   | 14,721.5 | 7,644.9 | 1,393.9 | 1,336.7 | 782   | 907   | 457.9 | 276.5 | 300.8 | 298.0 | 476.2 |
| Mean  | 28.1  | 491      | 247     | 45.0    | 47.7    | 25.2  | 30.2  | 14.8  | 9.22  | 9.70  | 9.61  | 15.9  |
| Ac-ft | 1,730 | 29,200   | 15,160  | 2,760   | 2,650   | 1,550 | 1,800 | 908   | 548   | 597   | 591   | 945   |
| (†)   | 1,410 | 172      | 0       | 0       | 0       | 787   | 1,190 | 129   | 0     | 0     | 0     | 505   |

Calendar year 1965 Max 6,570 Min 3.8 Mean 94.5 Ac-ft 68,410 Ac-ft † 6,880  
 Water year 1965-66 Max 6,570 Min 3.8 Mean 80.7 Ac-ft 58,450 Ac-ft † 4,190

† Release, in acre-feet, from city of Los Angeles distributing reservoirs. This is included in flow that passes station.

11-0930. Pacoima Creek near San Fernando, Calif.

Location.--Lat 34°20'07", long 118°23'50", in SE 1/4 sec. 24, T.3 N., R.15 W., on right bank 500 ft downstream from Pacoima Dam, a third of a mile upstream from mouth of canyon, and 4 miles northeast of San Fernando.

Drainage area.--28.5 sq mi.

Records available.--March to July 1916 (fragmentary), December 1916 to September 1966.

Gage.--Graphic water-stage recorder and flume or weir control since June 1937. Altitude of gage is 1,650 ft (from topographic map). Prior to September 1929, at site 0.5 mile downstream at different datum. September 1929, to Mar. 23, 1933, records based on outflow from Pacoima Dam. Mar. 24, 1933, to Feb. 1, 1935, at site 450 ft downstream at different datum.

Average discharge.--49 years (1917-66), 8.46 cfs (6,120 acre-ft per year); median of yearly mean discharges, 4.1 cfs (3,000 acre-ft per year).

Extremes.--Maximum discharge during year, 664 cfs Nov. 23 (gage height, 4.48 ft); no flow for much of year. 1916-66: Maximum discharge, 2,440 cfs Mar. 3, 1938; no flow for several months in most years.

Remarks.--Flow regulated since February 1929 by Pacoima flood-control reservoir (capacity, 4,581 acre-ft). Flow passing over Pacoima Dam spillway enters creek below station. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.     | Feb.  | Mar.  | Apr.     | May | June | July | Aug.  | Sept. |
|-------|------|-------|-------|----------|-------|-------|----------|-----|------|------|-------|-------|
| 1     |      | 0     | 96    | 112      | 0.10  | 0.10  | 16       |     |      | 0    | 18    | 0     |
| 2     |      | 0     | 102   | 112      | .10   | .10   | 13       |     |      | 0    | 17    | 0     |
| 3     |      | 0     | 130   | 92       | .10   | .10   | .10      |     |      | 0    | 5.8   | 0     |
| 4     |      | 0     | 117   | 77       | .10   | .10   | .10      |     |      | 0    | .10   | 0     |
| 5     |      | 0     | 119   | 76       | .10   | .10   | .10      |     |      | 0    | .10   | 0     |
| 6     |      | 0     | 117   | 74       | .10   | .10   | .10      |     |      | 0    | 0     | 0     |
| 7     |      | 0     | 116   | 72       | .10   | .10   | .10      |     |      | 0    | 0     | 0     |
| 8     |      | 0     | 117   | 72       | .10   | .10   | .10      |     |      | 0    | 0     | 0     |
| 9     |      | 0     | 61    | 72       | .10   | .10   | .10      |     |      | 0    | 0     | 0     |
| 10    |      | 0     | 44    | 72       | .10   | .10   | .10      |     |      | 0    | 0     | 0     |
| 11    |      | 0     | 80    | 66       | .10   | .10   | 114      |     |      | 0    | 0     | 0     |
| 12    |      | 0     | 38    | 64       | .10   | .10   | 106      |     |      | 0    | 0     | 0     |
| 13    |      | 0     | 120   | 61       | .10   | .10   | 134      |     |      | 0    | 0     | 0     |
| 14    |      | 0     | 55    | 60       | .10   | .10   | 160      |     |      | 0    | 0     | 0     |
| 15    |      | 0     | 40    | 60       | .10   | .10   | 152      |     |      | 0    | 0     | 0     |
| 16    |      | 0     | 70    | 60       | .10   | .10   | 141      |     |      | 0    | 0     | 0     |
| 17    |      | 0     | 48    | 58       | .10   | .10   | 137      |     |      | 0    | 0     | 0     |
| 18    |      | 0     | 0     | 56       | .10   | .10   | 141      |     |      | 0    | 0     | 0     |
| 19    |      | 0     | 0     | 90       | .10   | .10   | 119      |     |      | 0    | 0     | 0     |
| 20    |      | 0     | 0     | 109      | .10   | .20   | 18       |     |      | 0    | 0     | 0     |
| 21    |      | 0     | 0     | 108      | .10   | .20   | 0        |     |      | 0    | 0     | 0     |
| 22    |      | 55    | 0     | 106      | .10   | .20   | 0        |     |      | 0    | 0     | 0     |
| 23    |      | 480   | 0     | 105      | .10   | .20   | 0        |     |      | 0    | 0     | 0     |
| 24    |      | 389   | 0     | 103      | .10   | .20   | 0        |     |      | 0    | 0     | 0     |
| 25    |      | 330   | 0     | 125      | .10   | .20   | 0        |     |      | 28   | 0     | 0     |
| 26    |      | 155   | 0     | 85       | .10   | .20   | 0        |     |      | 43   | 0     | 0     |
| 27    |      | 120   | 0     | 86       | .10   | .20   | 0        |     |      | 35   | 0     | 0     |
| 28    |      | 123   | 86    | 69       | .10   | .20   | 0        |     |      | 18   | 0     | 0     |
| 29    |      | 139   | 78    | .10      | ----- | .20   | 0        |     |      | 19   | 0     | 5.9   |
| 30    |      | 136   | 116   | .10      | ----- | 9.1   | 0        |     |      | 19   | 0     | 8.3   |
| 31    |      | ----- | 118   | .10      | ----- | 14    | -----    |     |      | 19   | 0     | ----- |
| Total | 0    | 1,927 | 1,868 | 2,302.30 | 2.80  | 27.00 | 1,251.80 | 0   | 0    | 181  | 41.00 | 14.2  |
| Mean  | 0    | 64.2  | 60.3  | 74.3     | 0.10  | 0.87  | 41.7     | 0   | 0    | 5.84 | 1.32  | 0.47  |
| Ac-ft | 0    | 3,820 | 3,710 | 4,570    | 5.6   | 54    | 2,480    | 0   | 0    | 359  | 81    | 28    |

Calendar year 1965 Max 480 Min 0 Mean 11.8 Ac-ft 8,520  
 Water year 1965-66 Max 480 Min 0 Mean 20.9 Ac-ft 15,100

## LOS ANGELES RIVER BASIN

11-0940. Tujunga Creek below Mill Creek, near Colby Ranch, Calif.

Location.--Lat 34°18'33", long 118°08'40", on left bank 500 ft downstream from Mill Creek and 2 miles west of Colby Ranch, Los Angeles County.

Drainage area.--64.9 sq mi.

Records available.--January 1948 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 2,650 ft (from topographic map).

Average discharge.--18 years, 7.01 cfs (5,080 acre-ft per year); median of yearly mean discharges, 2.4 cfs (1,700 acre-ft per year).

Extremes.--Maximum discharge during year, 6,550 cfs Dec. 29 (gage height, 13.75 ft); no flow Oct. 1 to Nov. 4,

1948-66: Maximum discharge, that of Dec. 29, 1965; no flow at times in most years.

Maximum discharge recorded since November 1930, 14,800 cfs Jan. 23, 1943, but was exceeded by flood of Mar. 2, 1938.

Remarks.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|----------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     |      | 0        | 39    | 118   | 26    | 20   | 10    | 7.3   | 4.9   | 1.7   | 0.70  | 0.60  |
| 2     |      | 0        | 30    | 107   | 26    | 20   | 10    | 7.0   | 4.7   | 1.7   | .60   | .60   |
| 3     |      | 0        | 27    | 96    | 25    | 19   | 10    | 6.6   | 4.7   | 1.6   | .60   | .60   |
| 4     |      | 0        | 25    | 88    | 25    | 17   | 10    | 6.6   | 4.9   | 1.4   | .60   | .60   |
| 5     |      | .10      | 25    | 86    | 25    | 17   | 10    | 6.8   | 4.7   | 1.4   | .60   | .60   |
| 6     |      | .10      | 23    | 75    | 62    | 18   | 10    | 6.8   | 4.7   | 1.3   | .60   | .60   |
| 7     |      | .10      | 22    | 63    | 65    | 18   | 11    | 6.8   | 4.9   | 1.3   | .60   | .40   |
| 8     |      | .20      | 21    | 57    | 52    | 18   | 11    | 7.0   | 5.1   | 1.3   | .60   | .40   |
| 9     |      | .20      | 21    | 51    | 41    | 18   | 11    | 7.6   | 5.1   | 1.2   | .60   | .40   |
| 10    |      | .20      | 26    | 46    | 36    | 18   | 10    | 8.0   | 4.7   | 1.2   | .60   | .40   |
| 11    |      | .20      | 20    | 45    | 33    | 17   | 10    | 8.0   | 4.3   | 1.2   | .60   | .40   |
| 12    |      | .20      | 19    | 44    | 30    | 17   | 9.7   | 8.0   | 4.0   | 1.1   | .60   | .40   |
| 13    |      | .20      | 18    | 41    | 30    | 16   | 9.7   | 7.3   | 3.7   | 1.1   | .60   | .40   |
| 14    |      | .40      | 18    | 36    | 28    | 15   | 9.7   | 7.3   | 3.6   | 1.1   | .40   | .40   |
| 15    |      | .90      | 18    | 32    | 27    | 15   | 9.7   | 7.3   | 3.2   | 1.1   | .40   | .40   |
| 16    |      | 2.3      | 18    | 30    | 25    | 14   | 9.7   | 7.3   | 3.1   | 1.0   | .40   | .40   |
| 17    |      | 216      | 18    | 29    | 25    | 14   | 9.7   | 6.8   | 3.0   | .90   | .40   | .40   |
| 18    |      | 162      | 17    | 29    | 25    | 13   | 10    | 6.6   | 2.8   | .80   | .40   | .80   |
| 19    |      | 29       | 16    | 29    | 24    | 13   | 10    | 6.3   | 2.7   | .70   | .40   | .90   |
| 20    |      | 15       | 16    | 29    | 24    | 13   | 10    | 6.1   | 2.6   | .60   | .40   | .70   |
| 21    |      | 13       | 14    | 29    | 23    | 13   | 10    | 6.1   | 2.5   | .60   | .40   | .60   |
| 22    |      | 942      | 14    | 28    | 22    | 13   | 10    | 6.1   | 2.4   | .60   | .40   | .60   |
| 23    |      | 643      | 13    | 27    | 22    | 13   | 10    | 5.9   | 2.4   | .60   | .40   | .60   |
| 24    |      | 727      | 13    | 26    | 21    | 16   | 9.4   | 5.9   | 2.4   | .60   | .40   | .60   |
| 25    |      | 329      | 13    | 25    | 21    | 22   | 9.1   | 5.5   | 2.2   | .60   | .40   | .60   |
| 26    |      | 153      | 12    | 25    | 21    | 18   | 8.8   | 5.5   | 2.2   | .60   | .40   | .60   |
| 27    |      | 107      | 12    | 25    | 20    | 15   | 8.6   | 5.5   | 2.0   | .60   | .40   | .60   |
| 28    |      | 78       | 11    | 24    | 20    | 14   | 8.3   | 5.3   | 2.0   | .60   | .40   | .60   |
| 29    |      | 59       | 1640  | 24    | ----- | 13   | 8.3   | 5.3   | 1.9   | .80   | .40   | .60   |
| 30    |      | 48       | 535   | 28    | ----- | 12   | 7.6   | 5.1   | 1.9   | .80   | .60   | .80   |
| 31    |      | -----    | 133   | 25    | ----- | 11   | ----- | 5.1   | ----- | .80   | .60   | ----- |
| Total | 0    | 3,526.10 | 2,847 | 1,417 | 824   | 490  | 291.3 | 202.8 | 103.3 | 30.90 | 15.50 | 16.60 |
| Mean  | 0    | 118      | 91.8  | 45.7  | 29.4  | 15.8 | 9.71  | 6.54  | 3.44  | 1.00  | 0.50  | 0.55  |
| Ac-ft | 0    | 6,990    | 5,650 | 2,810 | 1,630 | 972  | 578   | 402   | 205   | 61    | 31    | 33    |

Calendar year 1965 Max 1,640 Min 0 Mean 19.7 Ac-ft 14,250

Water year 1965-66 Max 1,640 Min 0 Mean 26.8 Ac-ft 19,370

11-0955. Tujunga Creek near Sunland, Calif.

Location.--Lat 34°18'02", long 118°16'04", near center of SW $\frac{1}{4}$  sec.32, T.3 N., R.13 W., on left bank 1,000 ft upstream from Gold Canyon, 2 miles upstream from mouth of canyon, and 4 miles northeast of Sunland.

Drainage area.--106 sq mi.

Records available.--October 1916 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 1,571.80 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 1, 1932, at site 1,000 ft upstream at different datum.

Average discharge.--49 years, 25.8 cfs (18,680 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

Extremes.--Maximum discharge during year, 5,220 cfs Dec. 30 (gage height, 14.55 ft); minimum daily, 1.0 cfs Nov. 7-14.  
1916-66: Maximum discharge, 50,000 cfs (estimated) Mar. 2, 1938; minimum, 0.10 cfs at times in some years.

Remarks.--Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 4,240 acre-ft). Several small diversions above station for irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 5.5   | 4.7     | 240    | 468    | 54    | 15    | 8.6   | 5.1   | 11    | 9.8   | 8.0   | 13    |
| 2     | 5.5   | 2.3     | 230    | 317    | 54    | 15    | 9.2   | 4.8   | 12    | 9.8   | 9.2   | 13    |
| 3     | 6.0   | 1.8     | 195    | 295    | 52    | 13    | 9.2   | 4.8   | 12    | 9.8   | 12    | 12    |
| 4     | 6.0   | 1.5     | 77     | 305    | 51    | 13    | 9.2   | 5.1   | 12    | 9.2   | 12    | 12    |
| 5     | 6.0   | 1.3     | 70     | 301    | 50    | 13    | 8.6   | 5.5   | 12    | 9.2   | 12    | 12    |
| 6     | 6.0   | 1.2     | 59     | 279    | 67    | 13    | 8.6   | 5.5   | 12    | 9.2   | 12    | 12    |
| 7     | 6.0   | 1.0     | 55     | 267    | 21    | 13    | 8.6   | 5.8   | 13    | 9.2   | 12    | 12    |
| 8     | 6.0   | 1.0     | 54     | 272    | 92    | 12    | 8.6   | 6.6   | 15    | 9.8   | 12    | 12    |
| 9     | 6.5   | 1.0     | 55     | 225    | 90    | 12    | 8.6   | 7.3   | 15    | 9.8   | 12    | 12    |
| 10    | 6.5   | 1.0     | 57     | 169    | 90    | 12    | 8.6   | 7.3   | 15    | 9.8   | 12    | 12    |
| 11    | 6.5   | 1.0     | 52     | 134    | 90    | 11    | 8.6   | 7.3   | 13    | 10    | 13    | 12    |
| 12    | 6.5   | 1.0     | 58     | 147    | 86    | 11    | 8.6   | 6.9   | 12    | 10    | 13    | 12    |
| 13    | 6.5   | 1.0     | 51     | 140    | 84    | 11    | 8.6   | 6.6   | 11    | 11    | 12    | 12    |
| 14    | 6.5   | 1.0     | 51     | 96     | 82    | 11    | 7.3   | 6.2   | 11    | 11    | 12    | 12    |
| 15    | 6.5   | 2.3     | 49     | 92     | 78    | 11    | 6.9   | 5.8   | 11    | 11    | 12    | 12    |
| 16    | 6.5   | 1.1     | 47     | 86     | 69    | 11    | 6.9   | 5.5   | 11    | 11    | 12    | 12    |
| 17    | 6.5   | 183     | 45     | 86     | 69    | 11    | 7.3   | 5.1   | 11    | 11    | 12    | 12    |
| 18    | 6.5   | 118     | 44     | 84     | 67    | 10    | 7.6   | 5.1   | 10    | 11    | 12    | 13    |
| 19    | 6.0   | 73      | 42     | 82     | 64    | 10    | 7.6   | 5.1   | 10    | 11    | 12    | 13    |
| 20    | 6.0   | 52      | 41     | 127    | 63    | 10    | 7.3   | 5.1   | 11    | 10    | 13    | 13    |
| 21    | 6.0   | 46      | 41     | 172    | 59    | 9.8   | 6.9   | 5.1   | 11    | 10    | 12    | 12    |
| 22    | 6.0   | 1,090   | 40     | 170    | 51    | 9.2   | 6.9   | 5.1   | 11    | 9.8   | 12    | 12    |
| 23    | 6.0   | 2,850   | 39     | 167    | 49    | 8.6   | 6.6   | 4.8   | 11    | 9.2   | 12    | 12    |
| 24    | 5.5   | 1,860   | 37     | 164    | 37    | 10    | 6.2   | 4.4   | 11    | 9.2   | 12    | 12    |
| 25    | 5.5   | 627     | 37     | 175    | 17    | 12    | 6.2   | 4.4   | 11    | 9.2   | 12    | 12    |
| 26    | 6.0   | 257     | 37     | 201    | 16    | 10    | 6.2   | 4.2   | 10    | 9.2   | 12    | 12    |
| 27    | 6.0   | 144     | 31     | 175    | 15    | 10    | 6.2   | 4.2   | 10    | 9.2   | 12    | 12    |
| 28    | 6.0   | 253     | 23     | 112    | 15    | 10    | 6.2   | 4.0   | 10    | 9.2   | 12    | 12    |
| 29    | 6.0   | 244     | 1,980  | 55     | ----- | 9.8   | 5.8   | 4.0   | 10    | 9.2   | 12    | 13    |
| 30    | 6.0   | 240     | 1,510  | 62     | ----- | 9.2   | 5.5   | 4.0   | 9.8   | 9.2   | 13    | 13    |
| 31    | 6.0   | -----   | 472    | 54     | ----- | 8.6   | ----- | 4.0   | ----- | 8.6   | 13    | ----- |
| Total | 189.0 | 8,071.1 | 5,819  | 5,479  | 1,632 | 345.2 | 227.2 | 164.7 | 344.8 | 304.6 | 370.2 | 367   |
| Mean  | 6.10  | 269     | 188    | 177    | 58.3  | 11.1  | 7.57  | 5.31  | 11.5  | 9.83  | 11.9  | 12.2  |
| Ac-ft | 375   | 16,010  | 11,540 | 10,870 | 3,240 | 685   | 451   | 327   | 684   | 604   | 734   | 728   |

Calendar year 1965 Max 2,850 Min 1.0 Mean 42.2 Ac-ft 30,570  
Water year 1965-66 Max 2,850 Min 1.0 Mean 63.9 Ac-ft 46,240

11-0965. Little Tujunga Creek near San Fernando, Calif.

Location.--Lat 34°16'28", long 118°22'18", in Tujunga Grant, on downstream side of Foothill Boulevard Bridge, 4 miles east of San Fernando, Los Angeles County.

Drainage area.--21.1 sq mi.

Records available.--October 1928 to September 1966. Monthly discharge for April 1931, published in WSP 1315-B.

Gage.--Graphic water-stage recorder and concrete control since May 1940. Datum of gage is 1,068.39 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 30, 1964, at datum 0.5 ft lower.

Average discharge.--38 years, 2.26 cfs (1,640 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

Extremes.--Maximum discharge during year, 1,300 cfs Nov. 22 (gage height, 3.98 ft); no flow for most of year.

1928-66: Maximum discharge, 8,500 cfs (estimated) Mar. 2, 1938; no flow for several months each year.

Remarks.--No regulation or diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.    | Dec.   | Jan.   | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|--------------------|------|---------|--------|--------|-------|------|-------|-------|-------|------|------|-------|
| 1                  |      | 0       | 10     | 43     | 0     | 0    |       |       |       |      |      |       |
| 2                  |      | 0       | 9.0    | 36     | 0     | 0    |       |       |       |      |      |       |
| 3                  |      | 0       | 7.0    | 30     | 0     | 0    |       |       |       |      |      |       |
| 4                  |      | 0       | 4.0    | 23     | 0     | 0    |       |       |       |      |      |       |
| 5                  |      | 0       | 2.0    | 16     | 0     | 0    |       |       |       |      |      |       |
| 6                  |      | 0       | 1.0    | 13     | 12    | 0    |       |       |       |      |      |       |
| 7                  |      | 0       | .40    | 9.9    | 5.0   | 0    |       |       |       |      |      |       |
| 8                  |      | 0       | .20    | 8.3    | 3.0   | 0    |       |       |       |      |      |       |
| 9                  |      | 0       | 2.4    | 6.7    | 2.4   | 0    |       |       |       |      |      |       |
| 10                 |      | 0       | 1.7    | 5.0    | 2.4   | 0    |       |       |       |      |      |       |
| 11                 |      | 0       | .10    | 3.5    | 2.2   | 0    |       |       |       |      |      |       |
| 12                 |      | 0       | 1.7    | 2.1    | 2.0   | 0    |       |       |       |      |      |       |
| 13                 |      | 0       | .60    | 2.1    | 1.8   | 0    |       |       |       |      |      |       |
| 14                 |      | 0       | .80    | 1.5    | 1.7   | 0    |       |       |       |      |      |       |
| 15                 |      | 0       | 0      | 1.5    | 1.6   | 0    |       |       |       |      |      |       |
| 16                 |      | 1.4     | 0      | 1.5    | 1.5   | 0    |       |       |       |      |      |       |
| 17                 |      | 67      | 0      | 1.4    | 1.2   | 0    |       |       |       |      |      |       |
| 18                 |      | 38      | 0      | 1.2    | .90   | .10  |       |       |       |      |      |       |
| 19                 |      | 1.3     | 0      | 1.0    | .40   | .10  |       |       |       |      |      |       |
| 20                 |      | .90     | 0      | .80    | 0     | .10  |       |       |       |      |      |       |
| 21                 |      | .90     | 0      | .60    | 0     | .10  |       |       |       |      |      |       |
| 22                 |      | 340     | 0      | .40    | 0     | .20  |       |       |       |      |      |       |
| 23                 |      | 150     | 0      | .20    | 0     | .20  |       |       |       |      |      |       |
| 24                 |      | 355     | 0      | .20    | 0     | .10  |       |       |       |      |      |       |
| 25                 |      | 106     | 0      | .20    | 0     | .10  |       |       |       |      |      |       |
| 26                 |      | 48      | 0      | .20    | 0     | .10  |       |       |       |      |      |       |
| 27                 |      | 32      | 0      | .10    | 0     | .10  |       |       |       |      |      |       |
| 28                 |      | 25      | 0      | 0      | 0     | 0    |       |       |       |      |      |       |
| 29                 |      | 13      | 298    | 0      | ----- | 0    |       |       |       |      |      |       |
| 30                 |      | 10      | 64     | 5.0    | ----- | 0    |       |       |       |      |      |       |
| 31                 |      | -----   | 50     | 0      | ----- | 0    | ----- |       | ----- |      |      | ----- |
| Total              | 0    | 1188.50 | 452.90 | 214.40 | 38.10 | 1.20 | 0     | 0     | 0     | 0    | 0    | 0     |
| Mean               | 0    | 39.6    | 14.6   | 6.92   | 1.36  | 0.04 | 0     | 0     | 0     | 0    | 0    | 0     |
| Ac-ft              | 0    | 2,360   | 898    | 425    | 76    | 2.4  | 0     | 0     | 0     | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 355     | Min    | 0      | Mean  | 4.77 | Ac-ft | 3,460 |       |      |      |       |
| Water year 1965-66 | Max  | 355     | Min    | 0      | Mean  | 5.19 | Ac-ft | 3,760 |       |      |      |       |

11-0970. Tujunga Creek below Hansen Dam, Calif.

Location.--Lat 34°15'10", long 118°23'20", in Ex Mission San Fernando Grant, in city of Los Angeles, on left bank of outlet channel of Hansen Dam, 0.1 mile upstream from Glen Oaks Boulevard, and 3 miles southeast of San Fernando, Los Angeles County.

Drainage area.--150 sq mi.

Records available.--May 1932 to February 1938, August 1940 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Datum of gage is 943.32 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 25, 1944, at site 0.1 mile downstream at different datum. Aug. 25, 1944, to Sept. 30, 1951, at site 0.3 mile upstream at different datum. Oct. 1, 1951, to Sept. 30, 1953, at present site at datum 1.00 ft higher.

Extremes.--Maximum discharge during year, 3,240 cfs Nov. 23 (gage height, 3.93 ft); no flow for most of year.  
1940-66: Maximum discharge, that of Nov. 23, 1965; no flow for parts of each year.  
Maximum discharge known since May 1932, 54,000 cfs (estimated) Mar. 2, 1938.

Remarks.--Records good. Flow regulated since July 1931 by Big Tujunga flood-control reservoir (capacity, 4,240 acre-ft) and since September 1940 by Hansen flood-control reservoir (capacity, 33,373 acre-ft). Several small diversions for domestic use and irrigation. Water reported herein is that which passed Hansen Dam. Los Angeles County Flood Control District diverted water from outlet channel upstream from gage to spreading grounds during year. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records of diversion furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.   | Feb.  | Mar. | Apr. | May  | June | July | Aug. | Sept. |
|-------|------|--------|-------|--------|-------|------|------|------|------|------|------|-------|
| 1     |      | 0      | 0     | 416    |       | 0    |      | 0    |      |      |      |       |
| 2     |      | 0      | 0     | 337    |       | 0    |      | 0    |      |      |      |       |
| 3     |      | 0      | 0     | 242    |       | 0    |      | 0    |      |      |      |       |
| 4     |      | 0      | 0     | 145    |       | 18   |      | 4.7  |      |      |      |       |
| 5     |      | 0      | 0     | 109    |       | 0    |      | 0    |      |      |      |       |
| 6     |      | 0      | 0     | 109    |       | 0    |      | 0    |      |      |      |       |
| 7     |      | 0      | 0     | 66     |       | 0    |      | 0    |      |      |      |       |
| 8     |      | 0      | 0     | 53     |       | 0    |      | 0    |      |      |      |       |
| 9     |      | 0      | 0     | 66     |       | 0    |      | 0    |      |      |      |       |
| 10    |      | 0      | 0     | 81     |       | 0    |      | 0    |      |      |      |       |
| 11    |      | 0      | 0     | 121    |       | 0    |      | 0    |      |      |      |       |
| 12    |      | 0      | 0     | 150    |       | 0    |      | 0    |      |      |      |       |
| 13    |      | 0      | 0     | 213    |       | 0    |      | 0    |      |      |      |       |
| 14    |      | 0      | 0     | 281    |       | 0    |      | 0    |      |      |      |       |
| 15    |      | 0      | 0     | 281    |       | 0    |      | 0    |      |      |      |       |
| 16    |      | 0      | 0     | 257    |       | 0    |      | 0    |      |      |      |       |
| 17    |      | 0      | 0     | 207    |       | 0    |      | 0    |      |      |      |       |
| 18    |      | 0      | 0     | 172    |       | 0    |      | 0    |      |      |      |       |
| 19    |      | 0      | 0     | 172    |       | 0    |      | 0    |      |      |      |       |
| 20    |      | 0      | 0     | 165    |       | 0    |      | 0    |      |      |      |       |
| 21    |      | 0      | 0     | 151    |       | 0    |      | 0    |      |      |      |       |
| 22    |      | 145    | 0     | 158    |       | 0    |      | 0    |      |      |      |       |
| 23    |      | 2,320  | 0     | 165    |       | 0    |      | 0    |      |      |      |       |
| 24    |      | 1,810  | 0     | 109    |       | 0    |      | 0    |      |      |      |       |
| 25    |      | 241    | 0     | 94     |       | 0    |      | 0    |      |      |      |       |
| 26    |      | 0      | 0     | 64     |       | 0    |      | 0    |      |      |      |       |
| 27    |      | 0      | 0     | 0      |       | 0    |      | 0    |      |      |      |       |
| 28    |      | 0      | 0     | 0      |       | 0    |      | 0    |      |      |      |       |
| 29    |      | 0      | 0     | 0      |       | 0    |      | 0    |      |      |      |       |
| 30    |      | 0      | 29    | 0      |       | 0    |      | 0    |      |      |      |       |
| 31    |      |        | 577   | 0      |       | 0    |      | 0    |      |      |      |       |
| Total | 0    | 4,516  | 606   | 4,384  | 0     | 18   | 0    | 4.7  | 0    | 0    | 0    | 0     |
| Mean  | 0    | 151    | 19.5  | 141    | 0     | 0.58 | 0    | 0.15 | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 8,960  | 1,200 | 8,700  | 0     | 36   | 0    | 9.3  | 0    | 0    | 0    | 0     |
| (†)   | 0    | 12,340 | 6,410 | 16,310 | 2,280 | 835  | 0    | 532  | 0    | 0    | 0    | 0     |

|                    |     |       |     |   |      |      |       |        |         |        |
|--------------------|-----|-------|-----|---|------|------|-------|--------|---------|--------|
| Calendar year 1965 | Max | 2,320 | Min | 0 | Mean | 14.0 | Ac-ft | 10,160 | Ac-ft † | 18,750 |
| Water year 1965-66 | Max | 2,320 | Min | 0 | Mean | 26.1 | Ac-ft | 18,900 | Ac-ft † | 38,710 |

† Combined discharge, in acre-feet, of creek and diversion.

11-0975. Los Angeles River at Los Angeles, Calif.

Location.--Lat 34°04'52", long 118°13'36", on right bank near Figueroa Street, Los Angeles, 800 ft upstream from Arroyo Seco.Drainage area.--514 sq mi.Records available.--October 1929 to September 1966.Gage.--Graphic water-stage recorder. Datum of gage is 292.58 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to May 26, 1938, at site 150 ft downstream at different datum. May 26, 1938, to Dec. 8, 1939, at site 350 ft downstream at different datum.Average discharge.--37 years, 58.5 cfs (42,350 acre-ft per year); median of yearly mean discharges, 33 cfs (23,900 acre-ft per year).Extremes.--Maximum discharge during year, 32,000 cfs Dec. 29 (gage height, 10.08 ft); minimum daily, 0.10 cfs Oct. 3, July 19, 22-24, 1929-66; Maximum discharge, 67,000 cfs Mar. 2, 1938; no flow at times in some years.Remarks.--Flow regulated since September 1940 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft) and several small flood-control reservoirs. City of Los Angeles at times discharges imported Owens River water into Los Angeles River from upstream distributing reservoirs. Excess treated sewage effluent from Los Angeles Bureau of Sanitation is released to channel about 8 miles upstream. Many diversions above station for domestic use and irrigation. See schematic diagram of San Gabriel and Los Angeles River basins.Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.      | Dec.     | Jan.    | Feb.    | Mar.   | Apr.  | May     | June  | July | Aug. | Sept.  |
|--------------------|------|-----------|----------|---------|---------|--------|-------|---------|-------|------|------|--------|
| 1                  | 0.20 | 0.20      | 24       | 448     | 18      | 5.4    | 0.40  | 0.40    | 0.40  | 0.30 | 0.20 | 0.20   |
| 2                  | .20  | .20       | 18       | 293     | 16      | 2.8    | .50   | .40     | .40   | .30  | .20  | .30    |
| 3                  | .10  | .20       | 34       | 188     | 16      | 2.8    | .40   | .40     | .40   | .30  | .20  | .30    |
| 4                  | .20  | .20       | 27       | 163     | 15      | 4.7    | .40   | .40     | .40   | .30  | .20  | .30    |
| 5                  | .20  | .20       | 6.7      | 138     | 12      | 17     | .40   | .40     | .40   | .30  | .20  | .30    |
| 6                  | .20  | .20       | 7.2      | 134     | 1.480   | 1.2    | .40   | .40     | .40   | .30  | .20  | .30    |
| 7                  | .20  | .20       | 10       | 115     | 88      | .80    | .50   | .40     | .40   | .30  | .30  | .40    |
| 8                  | .20  | .20       | 7.7      | 86      | 50      | 1.2    | .50   | .40     | .40   | .30  | .40  | .40    |
| 9                  | .20  | .20       | 515      | 56      | 21      | .60    | .50   | 1.11    | .60   | .20  | .20  | .40    |
| 10                 | .20  | .20       | 444      | 15      | 16      | .80    | .50   | 37      | .80   | .30  | .20  | .40    |
| 11                 | .20  | .20       | 19       | 30      | 16      | 1.20   | .50   | 8.2     | .80   | .30  | .20  | .40    |
| 12                 | .20  | .20       | 256      | 19      | 13      | 1.90   | .80   | .80     | .40   | .40  | .20  | .40    |
| 13                 | .20  | .20       | 30       | 16      | 9.8     | 1.20   | .60   | .40     | .30   | .40  | .20  | .40    |
| 14                 | .20  | 54.3      | 277      | 15      | 9.8     | .80    | .50   | .40     | .30   | .30  | .20  | .40    |
| 15                 | .20  | 1.420     | 46       | 13      | 13      | 1.9    | .50   | .40     | .30   | .30  | .30  | .40    |
| 16                 | .20  | 3.360     | 16       | 5.8     | 14      | 2.5    | .40   | .40     | .40   | .30  | .30  | .40    |
| 17                 | .20  | 6.420     | 12       | 2.5     | 21      | 1.2    | .40   | .40     | .40   | .20  | .20  | .40    |
| 18                 | .20  | 891       | 8.7      | 3.8     | 14      | .80    | .40   | .40     | .40   | .20  | .20  | .81    |
| 19                 | .20  | 39        | 3.8      | 3.4     | 13      | .80    | .40   | .40     | .50   | .10  | .20  | .81    |
| 20                 | .20  | 10        | 8.2      | 6.7     | 8.2     | .80    | .40   | .40     | .50   | .20  | .20  | 14     |
| 21                 | .20  | 3.8       | 3.8      | 6.7     | 8.7     | .80    | .40   | .40     | .60   | .20  | .20  | .80    |
| 22                 | .20  | 8.450     | 6.2      | 6.2     | 9.8     | .80    | .40   | .40     | .60   | .10  | .30  | .30    |
| 23                 | .20  | 3.930     | 10       | 5.8     | 12      | .80    | .40   | .40     | .40   | .10  | .30  | .30    |
| 24                 | .20  | 4.990     | 10       | 5.4     | 15      | 162    | .40   | .40     | .30   | .10  | .30  | .40    |
| 25                 | .20  | 1.370     | 3.4      | 5.0     | 12      | 159    | .40   | .40     | .30   | .20  | .30  | .40    |
| 26                 | .20  | 138       | 2.2      | 4.6     | 10      | 5.8    | .40   | .40     | .30   | .20  | .30  | .40    |
| 27                 | .20  | 50        | 1.4      | 4.2     | 11      | 2.5    | .40   | .40     | .30   | .20  | .30  | .40    |
| 28                 | .20  | 30        | 2.8      | 3.8     | 10      | .60    | .40   | .40     | .30   | .20  | .30  | .40    |
| 29                 | .20  | 26        | 12.600   | 5.0     | -----   | .50    | .40   | .40     | .30   | .20  | .20  | 28     |
| 30                 | .20  | 25        | 1.110    | 1.700   | -----   | .50    | .40   | .40     | .30   | .30  | .20  | 33     |
| 31                 | .20  | -----     | 625      | 65      | -----   | .50    | ----- | .40     | ----- | .20  | .20  | -----  |
| Total              | 6.10 | 31.698.40 | 16.145.1 | 3.562.9 | 1.952.3 | 384.20 | 13.40 | 16.780  | 12.60 | 7.60 | 7.40 | 246.50 |
| Mean               | 0.20 | 1.057     | 521      | 115     | 69.7    | 12.4   | 0.45  | 5.41    | 0.42  | 0.25 | 0.24 | 8.22   |
| Ac-ft              | 12   | 62.870    | 32.020   | 7.070   | 3.870   | 762    | 27    | 333     | 25    | 15   | 15   | 489    |
| Calendar year 1965 | Max  | 12.600    | Min      | 0.10    | Mean    | 169    | Ac-ft | 122.200 |       |      |      |        |
| Water year 1965-66 | Max  | 12.600    | Min      | 0.10    | Mean    | 149    | Ac-ft | 107.500 |       |      |      |        |



11-0980. Arroyo Seco near Pasadena, Calif.

Location.--Lat 34°13'20", long 118°10'36", near north line of sec.31, T.2 N., R.12 W., on right bank 1.5 miles upstream from Millard Canyon and 5.5 miles northwest of Pasadena.

Drainage area.--16.0 sq mi.

Records available.--December 1910 to September 1966.

Gage.--Graphic water-stage recorder and broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1916, staff gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

Average discharge.--52 years (1913-15, 1916-66), 8.55 cfs (6,190 acre-ft per year); median of yearly mean discharges, 4.5 cfs (3,300 acre-ft per year).

Extremes.--Maximum discharge during year, 3,160 cfs Nov. 22 (gage height, 6.33 ft); minimum daily, 0.50 cfs Oct. 25-29.

1910-66: Maximum discharge, 8,620 cfs Mar. 2, 1938 (gage height, 9.42 ft, present datum), on basis of slope-area measurement of maximum flow; no flow at times in some years.

Remarks.--Records good. Minor regulation by debris dam 1.5 miles upstream. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Five discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.80  | 0.60     | 64    | 98    | 20    | 13    | 8.7   | 5.4   | 4.2   | 3.2  | 1.9  | 2.1   |
| 2     | .70   | .60      | 55    | 92    | 19    | 13    | 7.9   | 5.4   | 4.0   | 3.4  | 1.7  | 2.1   |
| 3     | .70   | .60      | 51    | 74    | 18    | 13    | 7.9   | 5.4   | 3.7   | 3.4  | 1.7  | 2.1   |
| 4     | .70   | .60      | 44    | 72    | 17    | 13    | 7.9   | 5.4   | 3.7   | 3.4  | 1.7  | 1.9   |
| 5     | .70   | .60      | 36    | 64    | 16    | 12    | 7.4   | 5.4   | 3.7   | 3.4  | 1.7  | 1.7   |
| 6     | .70   | .60      | 30    | 55    | 50    | 12    | 7.4   | 5.4   | 3.7   | 3.4  | 1.7  | 2.1   |
| 7     | .70   | .60      | 27    | 50    | 32    | 12    | 7.4   | 5.4   | 3.7   | 3.7  | 1.7  | 2.3   |
| 8     | .70   | .60      | 25    | 46    | 26    | 12    | 7.1   | 6.0   | 3.7   | 3.7  | 1.7  | 1.9   |
| 9     | .70   | .60      | 28    | 40    | 24    | 12    | 7.1   | 6.8   | 3.7   | 3.7  | 1.7  | 1.7   |
| 10    | .70   | .60      | 30    | 36    | 22    | 12    | 7.1   | 6.8   | 3.4   | 3.7  | 1.7  | 1.7   |
| 11    | .70   | .60      | 24    | 35    | 20    | 11    | 6.8   | 6.3   | 3.2   | 3.7  | 1.7  | 1.7   |
| 12    | .70   | .60      | 28    | 32    | 20    | 11    | 7.1   | 6.0   | 2.7   | 3.0  | 1.7  | 1.7   |
| 13    | .70   | .60      | 25    | 30    | 19    | 11    | 6.8   | 5.7   | 2.5   | 2.7  | 1.7  | 1.9   |
| 14    | .70   | 1.2      | 26    | 30    | 18    | 11    | 6.6   | 5.4   | 2.5   | 2.5  | 1.7  | 1.7   |
| 15    | .70   | 5.0      | 21    | 28    | 18    | 11    | 6.3   | 5.4   | 2.7   | 2.3  | 1.7  | 1.7   |
| 16    | .70   | 29       | 22    | 27    | 17    | 11    | 6.6   | 5.4   | 3.2   | 2.1  | 1.7  | 1.3   |
| 17    | .70   | 359      | 20    | 26    | 16    | 11    | 6.0   | 5.2   | 3.4   | 1.9  | 1.5  | 1.3   |
| 18    | .80   | 175      | 19    | 25    | 16    | 10    | 5.4   | 5.2   | 3.2   | 1.9  | 1.5  | 1.9   |
| 19    | .80   | 42       | 18    | 25    | 15    | 10    | 5.2   | 5.0   | 3.0   | 1.9  | 1.5  | 3.4   |
| 20    | .80   | 26       | 18    | 24    | 15    | 9.9   | 5.4   | 5.0   | 3.2   | 1.9  | 1.5  | 3.7   |
| 21    | .70   | 18       | 17    | 23    | 15    | 9.9   | 5.2   | 5.2   | 3.2   | 1.9  | 1.7  | 3.0   |
| 22    | .70   | 742      | 18    | 22    | 14    | 9.9   | 5.3   | 5.4   | 3.2   | 1.9  | 1.9  | 2.3   |
| 23    | .70   | 280      | 17    | 22    | 14    | 9.6   | 5.0   | 5.4   | 3.4   | 1.7  | 1.9  | 2.1   |
| 24    | .70   | 373      | 17    | 21    | 14    | 12    | 5.1   | 5.4   | 3.4   | 1.7  | 1.9  | 1.9   |
| 25    | .50   | 288      | 16    | 20    | 14    | 15    | 5.7   | 5.0   | 3.4   | 1.7  | 1.9  | 1.7   |
| 26    | .50   | 192      | 16    | 20    | 14    | 12    | 6.0   | 5.0   | 3.4   | 1.9  | 1.9  | 1.7   |
| 27    | .50   | 134      | 15    | 19    | 14    | 11    | 6.3   | 5.0   | 3.4   | 1.9  | 1.9  | 1.9   |
| 28    | .50   | 99       | 14    | 18    | 13    | 11    | 6.4   | 5.0   | 3.4   | 2.1  | 1.9  | 1.9   |
| 29    | .50   | 80       | 701   | 18    | ----- | 10    | 6.0   | 5.0   | 3.2   | 2.3  | 1.9  | 2.1   |
| 30    | .60   | 70       | 165   | 23    | ----- | 9.9   | 6.0   | 4.7   | 3.2   | 2.3  | 2.1  | 2.1   |
| 31    | .60   | -----    | 118   | 20    | ----- | 9.0   | ----- | 4.6   | ----- | 2.1  | 2.1  | ----- |
| Total | 209.0 | 2,921.00 | 1,725 | 1,135 | 530   | 350.2 | 195.1 | 167.7 | 100.3 | 80.4 | 54.5 | 60.6  |
| Mean  | 0.67  | 97.4     | 55.6  | 36.6  | 18.9  | 11.3  | 6.50  | 5.41  | 3.34  | 2.59 | 1.76 | 2.02  |
| Ac-ft | 41    | 5,790    | 3,420 | 2,250 | 1,050 | 695   | 387   | 333   | 199   | 159  | 108  | 120   |

Calendar year 1965 Max 742 Min 0.50 Mean 15.6 Ac-ft 11,270  
 Water year 1965-66 Max 742 Min 0.50 Mean 20.1 Ac-ft 14,560

Peak discharge (base, 150 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 1930 | 4.60        | 1,020     | 12-29 | 1600 | 6.06        | 3,050     |
| 11-22 | 2000 | 6.33        | 3,160     |       |      |             |           |

## LOS ANGELES RIVER BASIN

11-0985. Los Angeles River near Downey, Calif.

Location.--Lat 33°56'58", long 118°10'23", in San Antonio Grant, on right bank 400 ft downstream from Firestone Boulevard Bridge, 1 mile upstream from Rio Hondo, and 2.5 miles west of Downey, Los Angeles County.

Drainage area.--599 sq mi.

Records available.--March 1928 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 96.12 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Apr. 11, 1938, at site 1,600 ft downstream at different datum. Apr. 11, 1938, to Nov. 3, 1949, at site 400 ft upstream at datum 0.96 ft lower, and Nov. 4, 1949, to Dec. 11, 1956, at site 400 ft upstream at datum 2.25 ft higher.

Average discharge.--38 years, 95.3 cfs (68,990 acre-ft per year); median of yearly mean discharges, 57 cfs (41,300 acre-ft per year).

Extremes.--Maximum discharge during year, 37,100 cfs Dec. 29 (gage height, 7.17 ft); minimum daily, 4.3 cfs Nov. 11.  
1928-66: Maximum discharge, 79,700 cfs Mar. 2, 1938, on basis of slope-area measurements; no flow for parts of some years.

Remarks.--Flow regulated since July 1941 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft), and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth Reservoirs and at times discharges imported water into Los Angeles River. Many diversions for domestic use and irrigation above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.  | Nov.     | Dec.     | Jan.   | Feb.  | Mar.  | Apr.  | May     | June  | July  | Aug.  | Sept. |
|--------------------|-------|----------|----------|--------|-------|-------|-------|---------|-------|-------|-------|-------|
| 1                  | 6.5   | 8.4      | 101      | 700    | 113   | 20    | 7.0   | 7.9     | 7.9   | 12    | 9.4   | 10    |
| 2                  | 5.5   | 7.9      | 81       | 370    | 267   | 18    | 6.5   | 8.4     | 7.9   | 8.9   | 9.4   | 11    |
| 3                  | 5.5   | 7.4      | 24       | 320    | 57    | 12    | 7.0   | 8.4     | 8.4   | 11    | 8.9   | 7.9   |
| 4                  | 7.0   | 7.4      | 122      | 400    | 27    | 13    | 7.4   | 8.9     | 6.5   | 6.0   | 10    | 7.4   |
| 5                  | 7.9   | 7.4      | 17       | 290    | 23    | 20    | 7.4   | 8.9     | 7.0   | 10    | 11    | 7.4   |
| 6                  | 6.0   | 6.0      | 12       | 250    | 2040  | 8.4   | 8.9   | 8.9     | 8.4   | 8.4   | 10    | 9.4   |
| 7                  | 7.9   | 6.0      | 9.4      | 196    | 123   | 8.9   | 8.4   | 8.4     | 8.9   | 7.9   | 12    | 10    |
| 8                  | 7.9   | 8.4      | 7.9      | 122    | 111   | 10    | 8.4   | 8.9     | 8.9   | 8.4   | 11    | 10    |
| 9                  | 7.9   | 10       | 763      | 114    | 40    | 9.4   | 7.9   | 80      | 10    | 8.9   | 13    | 8.4   |
| 10                 | 8.4   | 6.5      | 728      | 37     | 37    | 10    | 7.9   | 82      | 12    | 6.5   | 12    | 7.9   |
| 11                 | 12    | 4.3      | 51       | 56     | 34    | 12    | 8.4   | 30      | 9.4   | 8.9   | 14    | 7.4   |
| 12                 | 7.9   | 5.0      | 325      | 39     | 34    | 12    | 8.9   | 14      | 8.9   | 8.9   | 12    | 10    |
| 13                 | 9.4   | 6.0      | 100      | 32     | 29    | 12    | 10    | 6.5     | 10    | 9.4   | 12    | 7.9   |
| 14                 | 7.9   | 532      | 274      | 32     | 25    | 15    | 8.9   | 6.5     | 12    | 11    | 11    | 7.9   |
| 15                 | 7.9   | 1,340    | 66       | 31     | 35    | 15    | 8.9   | 6.5     | 11    | 12    | 13    | 8.9   |
| 16                 | 7.4   | 4,160    | 31       | 26     | 35    | 12    | 7.9   | 7.0     | 10    | 8.9   | 14    | 10    |
| 17                 | 7.0   | 8,270    | 27       | 24     | 40    | 11    | 7.9   | 7.4     | 8.9   | 10    | 11    | 8.9   |
| 18                 | 8.9   | 1,300    | 25       | 23     | 35    | 9.4   | 8.9   | 7.9     | 7.9   | 13    | 12    | 72    |
| 19                 | 8.4   | 260      | 18       | 47     | 32    | 9.4   | 8.4   | 9.4     | 7.0   | 14    | 12    | 147   |
| 20                 | 7.4   | 220      | 18       | 18     | 29    | 9.4   | 8.4   | 8.9     | 8.4   | 15    | 12    | 34    |
| 21                 | 8.4   | 148      | 19       | 16     | 16    | 10    | 8.4   | 7.9     | 9.4   | 12    | 10    | 8.9   |
| 22                 | 7.4   | 11,300   | 35       | 14     | 20    | 9.4   | 8.9   | 7.4     | 10    | 13    | 13    | 7.0   |
| 23                 | 7.0   | 5,770    | 26       | 14     | 19    | 8.9   | 8.4   | 7.4     | 10    | 12    | 12    | 8.4   |
| 24                 | 7.4   | 6,300    | 24       | 14     | 30    | 140   | 7.4   | 8.4     | 11    | 14    | 13    | 6.5   |
| 25                 | 8.9   | 2,100    | 15       | 13     | 20    | 308   | 7.9   | 9.4     | 8.4   | 15    | 12    | 7.0   |
| 26                 | 8.9   | 679      | 13       | 13     | 20    | 20    | 7.9   | 10      | 7.4   | 14    | 13    | 7.0   |
| 27                 | 8.9   | 208      | 13       | 13     | 20    | 14    | 8.4   | 8.9     | 12    | 12    | 12    | 8.4   |
| 28                 | 8.9   | 77       | 13       | 12     | 22    | 15    | 9.4   | 7.9     | 12    | 11    | 11    | 8.4   |
| 29                 | 8.4   | 88       | 15,700   | 11     | ----- | 17    | 9.4   | 6.5     | 11    | 12    | 14    | 31    |
| 30                 | 8.9   | 107      | 1,600    | 2,330  | ----- | 16    | 8.4   | 6.0     | 11    | 8.9   | 13    | 58    |
| 31                 | 7.0   | -----    | 685      | 199    | ----- | 15    | ----- | 7.4     | ----- | 7.9   | 13    | ----- |
| Total              | 244.8 | 42,949.7 | 20,943.3 | 5,776  | 3,333 | 820.2 | 247.9 | 422.0   | 281.6 | 330.9 | 365.7 | 554.0 |
| Mean               | 7.90  | 1,432    | 676      | 186    | 119   | 26.5  | 8.26  | 13.6    | 9.39  | 10.7  | 11.8  | 18.5  |
| Ac-ft              | 486   | 85,190   | 41,540   | 11,450 | 6,610 | 1,630 | 492   | 837     | 559   | 656   | 725   | 1,100 |
| Calendar year 1965 | Max   | 15,700   | Min      | 4.3    | Mean  | 227   | Ac-ft | 164,000 |       |       |       |       |
| Water year 1965-66 | Max   | 15,700   | Min      | 4.3    | Mean  | 209   | Ac-ft | 151,300 |       |       |       |       |

11-1000. Santa Anita Creek near Sierra Madre, Calif.

Location.--Lat 34°11'30", long 118°00'59", in SW 1/4 sec. 10, T.1 N., R.11 W., on right bank at head of Hermits Falls, 0.9 mile upstream from Big Santa Anita Dam, and 3 miles northeast of Sierra Madre.

Drainage area.--9.71 sq mi.

Records available.--July 1916 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,475.3 ft above mean sea level (levels by U.S. Forest Service). Prior to Mar. 2, 1938, at same site at datum 0.4 ft lower (destroyed by flood). Mar. 18 to Sept. 27, 1938, at same site at datum 0.7 ft higher. Prior to Jan. 31, 1963, graphic water-stage recorder.

Average discharge.--50 years, 5.73 cfs (4,150 acre-ft per year); median of yearly mean discharges, 3.4 cfs (2,500 acre-ft per year).

Extremes.--Maximum discharge during year, 1,770 cfs Dec. 29 (gage height, 9.15 ft), from rating curve extended above 440 cfs on basis of slope-area measurement at gage height 12.33 ft; minimum daily, 0.50 cfs Oct. 29.

1916-66: Maximum discharge, about 5,200 cfs Mar. 2, 1938, based on inflow to Big Santa Anita flood-control reservoir; practically no flow Aug. 18 to Sept. 14, 1929.

Remarks.--Records good. Debris dams above station built in December 1959 cause little or no regulation. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 0.70  | 0.60     | 66    | 104   | 20    | 6.9   | 8.8   | 6.2   | 5.1   | 4.7   | 2.7  | 2.2   |
| 2     | .60   | .70      | 65    | 85    | 19    | 6.9   | 8.8   | 5.9   | 5.1   | 4.6   | 2.7  | 2.2   |
| 3     | .60   | .70      | 53    | 75    | 18    | 6.7   | 9.0   | 5.9   | 5.0   | 4.5   | 2.7  | 2.1   |
| 4     | .60   | .60      | 30    | 66    | 17    | 6.7   | 8.8   | 6.0   | 4.9   | 4.0   | 2.5  | 2.0   |
| 5     | .70   | .60      | 27    | 59    | 17    | 6.7   | 8.4   | 5.9   | 5.1   | 3.9   | 2.5  | 1.9   |
| 6     | .70   | .70      | 25    | 54    | 46    | 6.8   | 8.4   | 5.8   | 5.0   | 3.9   | 2.5  | 1.9   |
| 7     | .70   | .70      | 23    | 49    | 30    | 6.7   | 8.3   | 5.8   | 4.9   | 3.9   | 2.4  | 1.9   |
| 8     | .70   | .70      | 22    | 46    | 23    | 6.9   | 8.3   | 6.5   | 5.2   | 3.9   | 2.5  | 1.8   |
| 9     | .70   | .80      | 23    | 43    | 20    | 7.0   | 8.5   | 8.2   | 5.4   | 3.8   | 2.3  | 1.7   |
| 10    | .70   | .80      | 24    | 40    | 19    | 7.2   | 8.5   | 7.4   | 5.4   | 3.8   | 2.3  | 1.7   |
| 11    | .70   | .80      | 20    | 38    | 17    | 7.1   | 8.3   | 6.9   | 5.1   | 3.4   | 2.3  | 1.8   |
| 12    | .70   | .80      | 24    | 36    | 16    | 7.2   | 8.3   | 6.6   | 5.0   | 3.3   | 2.3  | 1.9   |
| 13    | .70   | .80      | 21    | 35    | 15    | 7.3   | 8.0   | 6.3   | 4.7   | 3.4   | 2.3  | 1.9   |
| 14    | .70   | 1.6      | 20    | 33    | 14    | 7.4   | 7.5   | 6.3   | 4.8   | 3.5   | 2.2  | 1.9   |
| 15    | .70   | 5.4      | 19    | 31    | 14    | 7.4   | 7.1   | 6.0   | 4.8   | 3.3   | 2.1  | 1.9   |
| 16    | .70   | 21       | 17    | 30    | 13    | 7.6   | 7.1   | 5.9   | 5.0   | 3.3   | 2.1  | 1.9   |
| 17    | .70   | 333      | 16    | 29    | 12    | 7.6   | 7.4   | 5.8   | 4.9   | 3.2   | 2.1  | 1.9   |
| 18    | .60   | 148      | 15    | 28    | 12    | 7.6   | 7.6   | 5.7   | 4.6   | 2.9   | 2.1  | 1.9   |
| 19    | .60   | 55       | 15    | 27    | 11    | 7.8   | 7.6   | 5.5   | 4.8   | 3.0   | 2.2  | 1.9   |
| 20    | .60   | 33       | 14    | 25    | 10    | 7.8   | 7.2   | 5.5   | 4.8   | 3.2   | 2.2  | 1.9   |
| 21    | .60   | 23       | 13    | 24    | 9.4   | 8.0   | 7.1   | 5.5   | 4.7   | 3.1   | 2.2  | 2.0   |
| 22    | .60   | 474      | 13    | 23    | 8.8   | 8.2   | 7.1   | 5.5   | 4.8   | 3.0   | 2.1  | 2.0   |
| 23    | .60   | 462      | 13    | 22    | 8.5   | 8.2   | 6.7   | 5.5   | 4.8   | 3.0   | 2.1  | 2.0   |
| 24    | .60   | 379      | 13    | 22    | 7.9   | 9.4   | 6.5   | 5.5   | 5.1   | 3.0   | 2.0  | 2.0   |
| 25    | .60   | 236      | 13    | 21    | 7.6   | 10    | 6.6   | 5.6   | 5.0   | 2.8   | 1.9  | 2.0   |
| 26    | .60   | 137      | 12    | 21    | 7.4   | 9.2   | 6.6   | 5.8   | 4.9   | 2.8   | 1.9  | 2.0   |
| 27    | .60   | 94       | 12    | 21    | 7.1   | 9.3   | 6.7   | 5.9   | 4.7   | 2.9   | 1.9  | 2.0   |
| 28    | .60   | 80       | 12    | 21    | 6.6   | 9.0   | 6.6   | 5.5   | 4.7   | 2.9   | 1.9  | 2.0   |
| 29    | .50   | 76       | 608   | 21    | ----- | 9.1   | 6.6   | 5.5   | 4.7   | 3.0   | 2.0  | 2.0   |
| 30    | .60   | 69       | 269   | 25    | ----- | 9.1   | 6.5   | 5.3   | 4.7   | 3.1   | 2.0  | 2.0   |
| 31    | .60   | -----    | 150   | 21    | ----- | 8.9   | ----- | 5.2   | ----- | 3.0   | 2.1  | ----- |
| TOTAL | 19.90 | 2,636.30 | 1,667 | 1,175 | 426.3 | 241.7 | 228.9 | 184.9 | 147.7 | 106.1 | 69.1 | 58.3  |
| MEAN  | .64   | 87.9     | 53.8  | 37.9  | 15.2  | 7.80  | 7.63  | 5.97  | 4.92  | 3.42  | 2.23 | 1.94  |
| AC-FT | 39    | 5,230    | 3,310 | 2,330 | 846   | 479   | 454   | 367   | 293   | 210   | 137  | 116   |

CALENDAR YEAR 1965 MAX 608 MIN .50 MEAN 14.3 AC-FT 10,330  
 WATER YEAR 1965-66 MAX 608 MIN .50 MEAN 19.1 AC-FT 13,810

## Peak discharge (base, 40 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 2115 | 5.25        | 688       | 12-29 | 1430 | 9.15        | 1,770     |
| 11-22 | 1700 | 7.53        | 1,320     | 2-6   | 0915 | 2.01        | 77        |

## LOS ANGELES RIVER BASIN

11-1010. Eaton Creek near Pasadena, Calif.

Location.--Lat 34°11'37", long 118°06'13", in SW 1/4 SE 1/4 sec. 2, T.1 N., R.12 W., on right bank at mouth of canyon just upstream from bridge on old Mount Wilson toll road, and 4.5 miles northeast of Pasadena.

Drainage area.--6.47 sq mi.

Records available.--March 1918 to September 1966 (discontinued). Combined monthly records of creek and diversions, July 1923 to September 1966 (discontinued).

Gage.--Graphic water-stage recorder and broad-crested weir since October 1938; flow meter on each diversion. Altitude of gage is 1,230 ft (from topographic map). Prior to Oct. 28, 1938, at site 75 ft downstream at different datum. Oct. 28, 1938, to Nov. 4, 1959, at same site at datum 1.00 ft higher.

Average discharge (creek only).--48 years, 2.10 cfs (1,520 acre-ft per year); median of yearly mean discharges, 0.9 cfs (650 acre-ft per year).  
(combined).--43 years, 3.28 cfs (2,370 acre-ft per year); median of yearly mean discharges, 1.9 cfs (1,400 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 1,040 cfs Dec. 29 (gage height, 4.90 ft), from rating curve extended above 480 cfs on basis of velocity-area study at gage height, 4.50 ft; no flow for most of year.

1918-66: Maximum discharge, 2,400 cfs Mar. 2, 1938, from record of inflow to Eaton flood-control reservoir; no flow at times during each year.

Flood of January 1916, 1,500 cfs, from slope-area measurement, by local engineering student.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. No regulation above station. Water diverted during period of record, at sites 300 ft and 1.2 miles upstream for municipal supply. In addition, 158 acre-ft was diverted from two infiltration galleries, one 800 ft upstream and the other 500 ft downstream from station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records of diversions furnished by city of Pasadena.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 17     | 48    | 5.4   | 0    |       | 0.10  |       |      |      |       |
| 2     |      | 0      | 13     | 38    | 4.0   | 0    |       | 0     |       |      |      |       |
| 3     |      | 0      | 10     | 29    | 3.0   | 0    |       | 0     |       |      |      |       |
| 4     |      | 0      | 7.7    | 27    | 2.0   | 0    |       | 0     |       |      |      |       |
| 5     |      | 0      | 6.7    | 30    | 1.0   | 0    |       | 0     |       |      |      |       |
| 6     |      | 0      | 5.9    | 27    | 2.2   | 0    |       | 0     |       |      |      |       |
| 7     |      | 0      | 5.1    | 24    | 1.1   | 0    |       | 0     |       |      |      |       |
| 8     |      | 0      | 4.4    | 22    | 3.2   | 0    |       | 0     |       |      |      |       |
| 9     |      | 0      | 7.2    | 20    | 3.1   | 0    |       | 0     |       |      |      |       |
| 10    |      | 0      | 10     | 18    | 2.2   | 0    |       | 0     |       |      |      |       |
| 11    |      | 0      | 5.4    | 13    | 1.8   | 0    |       | 0     |       |      |      |       |
| 12    |      | 0      | 7.7    | 8.3   | 1.0   | 0    |       | 0     |       |      |      |       |
| 13    |      | 0      | 5.2    | 7.1   | .90   | 0    |       | 0     |       |      |      |       |
| 14    |      | 0      | 3.7    | 6.9   | .60   | 0    |       | 0     |       |      |      |       |
| 15    |      | 0      | 2.8    | 7.2   | .30   | 0    |       | 0     |       |      |      |       |
| 16    |      | 13     | 2.8    | 23    | .10   | .10  |       | 0     |       |      |      |       |
| 17    |      | 170    | 2.4    | 16    | 0     | .30  |       | 0     |       |      |      |       |
| 18    |      | 81     | 2.0    | 5.0   | 0     | .20  |       | 0     |       |      |      |       |
| 19    |      | 26     | 1.3    | 4.0   | 0     | 0    |       | 0     |       |      |      |       |
| 20    |      | 11     | .30    | 3.0   | 0     | 0    |       | 0     |       |      |      |       |
| 21    |      | 4.6    | 0      | 3.0   | 0     | 0    |       | 0     |       |      |      |       |
| 22    |      | 215    | .10    | 3.0   | 0     | 0    |       | 0     |       |      |      |       |
| 23    |      | 238    | 0      | 2.5   | 0     | 0    |       | 0     |       |      |      |       |
| 24    |      | 175    | 0      | 2.5   | 0     | 2.1  |       | 0     |       |      |      |       |
| 25    |      | 102    | 0      | 2.5   | 0     | 3.1  |       | 0     |       |      |      |       |
| 26    |      | 64     | 0      | 2.2   | 0     | 0    |       | 0     |       |      |      |       |
| 27    |      | 47     | 0      | 2.1   | 0     | 0    |       | 0     |       |      |      |       |
| 28    |      | 35     | 0      | 2.0   | .10   | 0    |       | 0     |       |      |      |       |
| 29    |      | 28     | 251    | 2.0   | ----- | 0    |       | 0     |       |      |      |       |
| 30    |      | 21     | 120    | 13    | ----- | 0    |       | 0     |       |      |      |       |
| 31    |      | -----  | 61     | 7.9   | ----- | 0    | ----- | 0     | ----- |      |      | ----- |
| Total | 0    | 1230.6 | 552.70 | 419.2 | 61.70 | 5.80 | 0     | 0.10  | 0     | 0    | 0    | 0     |
| Mean  | 0    | 41.0   | 17.8   | 13.5  | 2.20  | 0.19 | 0     | 0.003 | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 2,440  | 1,100  | 831   | 122   | 12   | 0     | 0.2   | 0     | 0    | 0    | 0     |
| (+)   | 13   | 2,550  | 1,560  | 1,280 | 550   | 356  | 241   | 193   | 130   | 82   | 65   | 56    |

Calendar year 1965 Max 251 Min 0 Mean 5.50 Ac-ft 3,980 Ac-ft + 5,150  
Water year 1965-66 Max 251 Min 0 Mean 6.22 Ac-ft 4,500 Ac-ft + 7,080

Peak discharge (base, 55 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 1930 | 3.38        | 329       | 12-29 | 1500 | 4.90        | 1,040     |
| 11-22 | 1900 | 4.40        | 769       |       |      |             |           |

Note.--No gage-height record Jan. 18-29, Feb. 2-5.

+ Combined discharge, in acre-ft, for creek and diversion.

11-1012.5. Rio Hondo above Whittier Narrows Dam, Calif.

Location.--Lat 34°03'30", long 118°04'15", in Portrero Grande Grant, on right bank 0.3 mile downstream from Garvey Avenue, 0.4 mile downstream from Rubio Wash, and 2.2 miles west of El Monte, Los Angeles County.

Drainage area.--91.2 sq mi.

Records available.--February 1956 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 220 ft (from topographic map).

Average discharge.--10 years, 22.1 cfs (16,000 acre-ft per year); median of yearly mean discharges, 10 cfs (7,200 acre-ft per year).

Extremes.--Maximum discharge during year, 6,640 cfs Dec. 29 (gage height, 4.38 ft); minimum daily, 0.40 cfs for many days.  
1956-66: Maximum discharge, 8,150 cfs Jan. 6, 1959 (gage height, 4.90 ft, from floodmark); no flow on many days in most years.

Remarks.--Records good. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs (combined capacity, 1,700 acre-ft), and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. Los Angeles County Flood Control District diverted 7,540 acre-ft of water from San Gabriel River below Santa Fe Dam to Rio Hondo for ground-water recharge during year. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Fifteen discharge measurements and records of diversion furnished by the Los Angeles County Flood Control District; two discharge measurements furnished by Corps of Engineers.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.     | Jan.    | Feb.     | Mar.   | Apr.  | May   | June  | July  | Aug.  | Sept.  |
|-------|-------|---------|----------|---------|----------|--------|-------|-------|-------|-------|-------|--------|
| 1     | 2.5   | 2.3     | 9.1      | 55      | 190      | 0.70   | 2.1   | 0.7   | 1.9   | 1.7   | 1.9   | 2.1    |
| 2     | 2.7   | 2.3     | 7.0      | 23      | 202      | .40    | 1.6   | 1.7   | 2.3   | .60   | 2.1   | 1.7    |
| 3     | 2.5   | 2.3     | 4.1      | 7.3     | 154      | .40    | 1.1   | 1.7   | 2.3   | .40   | 2.3   | .70    |
| 4     | 2.7   | 2.5     | 4.6      | 6.5     | 56       | 1.0    | 1.9   | 1.7   | 1.9   | .40   | 2.3   | .80    |
| 5     | 2.5   | 2.7     | 4.4      | 4.4     | 2.3      | 1.1    | 2.5   | 1.6   | 1.0   | 1.7   | 2.1   | .60    |
| 6     | 2.1   | 2.7     | 4.4      | 2.9     | 56.5     | .80    | 1.7   | 2.1   | 1.7   | 2.1   | 2.1   | 1.7    |
| 7     | 2.3   | 1.1     | 3.8      | 249     | 6.4      | 1.0    | 1.2   | 1.7   | 1.9   | 1.9   | .40   | 2.1    |
| 8     | 2.1   | 2.3     | 3.4      | 325     | 1.7      | 1.0    | 1.4   | 2.4   | 2.3   | 2.1   | 1.7   | 1.9    |
| 9     | 1.9   | 3.1     | 229      | 226     | 1.6      | 1.0    | 1.1   | 1.2   | 2.5   | 1.9   | 1.9   | 1.9    |
| 10    | .60   | 2.7     | 40       | 112     | 2.1      | 1.0    | .70   | 2.9   | 2.1   | 1.1   | 1.9   | 2.3    |
| 11    | 1.6   | 2.7     | 5.1      | 59      | 1.1      | 1.0    | 1.0   | 1.1   | 2.1   | 2.1   | 2.1   | 1.0    |
| 12    | 2.9   | 2.1     | 93       | 59      | 1.4      | .80    | 2.1   | 1.7   | 1.1   | 2.1   | 2.3   | 1.9    |
| 13    | 2.7   | 1.7     | 4.4      | 51      | .80      | .80    | 1.2   | 1.7   | 2.1   | 2.1   | 2.5   | 2.1    |
| 14    | 2.5   | 437     | 41       | 23      | 1.0      | 7.7    | 1.2   | 1.4   | 2.7   | 2.3   | .50   | 1.9    |
| 15    | 2.5   | 713     | 2.1      | 20      | 1.6      | 1.2    | 1.9   | .50   | 2.5   | 2.1   | 1.9   | 2.7    |
| 16    | 1.9   | 879     | 1.2      | 25      | 1.0      | 1.2    | 2.3   | 1.0   | 3.1   | 1.4   | 2.5   | 3.6    |
| 17    | .80   | 1,430   | 1.0      | 24      | 1.1      | 1.4    | 2.3   | 1.7   | 3.1   | 1.4   | 2.5   | 5.1    |
| 18    | 2.2   | 140     | 1.6      | 23      | 1.2      | 1.0    | 2.3   | 2.1   | 3.1   | 1.9   | 2.3   | .75    |
| 19    | 2.7   | 4.8     | .80      | 17      | 1.2      | 1.0    | 2.3   | 1.6   | 2.7   | 1.9   | 2.3   | 13     |
| 20    | 2.7   | 4.1     | .60      | 17      | 1.1      | .60    | 2.3   | 2.7   | 2.7   | 2.3   | 2.3   | 4.5    |
| 21    | 2.7   | 3.8     | .70      | 20      | 1.6      | 1.2    | 3.8   | 2.1   | 3.6   | 2.3   | .50   | 1.6    |
| 22    | 2.9   | 1,820   | 4.8      | 17      | 1.7      | 1.2    | 4.7   | 1.4   | 2.9   | 2.3   | 2.5   | 1.1    |
| 23    | 2.7   | 801     | .70      | 16      | 1.7      | 1.1    | 3.1   | 1.7   | 2.1   | 2.1   | 3.6   | .40    |
| 24    | 2.7   | 1,380   | .40      | 17      | 1.6      | 1.68   | 2.5   | 1.7   | 2.1   | .80   | 4.6   | .40    |
| 25    | 2.5   | 823     | .40      | 14      | .70      | 117    | 3.7   | 2.3   | 2.1   | 1.7   | 5.1   | .40    |
| 26    | 2.7   | 43      | .40      | 1.6     | .40      | 1.2    | 2.8   | 2.3   | 1.9   | 2.3   | 5.6   | .40    |
| 27    | 2.3   | 6.8     | .60      | 1.1     | .40      | .60    | 4.1   | 2.7   | 2.3   | 2.3   | 2.7   | .40    |
| 28    | 2.5   | 1.6     | 1.0      | 1.2     | .60      | .80    | 3.6   | 1.2   | 1.6   | 2.3   | 1.0   | .40    |
| 29    | 1.7   | 1.4     | 2,020    | 1.7     | -----    | 1.0    | 3.6   | .60   | 1.7   | 2.3   | 1.7   | 11     |
| 30    | 1.2   | 4.5     | 78       | 395     | -----    | 1.1    | 2.3   | .40   | 1.4   | 2.5   | 1.7   | 2.9    |
| 31    | 1.1   | -----   | 82       | 88      | -----    | 1.7    | ----- | 2.1   | ----- | 1.1   | 1.9   | -----  |
| Total | 69.40 | 8,523.5 | 2,649.60 | 1,901.7 | 1,201.30 | 320.00 | 68.40 | 62.50 | 66.8  | 55.50 | 70.80 | 145.60 |
| Mean  | 2.24  | 284     | 85.5     | 61.3    | 42.9     | 10.3   | 2.28  | 2.02  | 2.23  | 1.79  | 2.28  | 4.85   |
| Ac-ft | 138   | 16,910  | 5,260    | 3,770   | 2,380    | 635    | 136   | 124   | 132   | 110   | 140   | 289    |

Calendar year 1965 Max 2,020 Min 0.20 Mean 39.3 Ac-ft 28,420  
 Water year 1965-66 Max 2,020 Min 0.40 Mean 41.5 Ac-ft 30,020

## LOS ANGELES RIVER BASIN

11-1015, Rio Hondo near Montebello, Calif.

Location (revised).--Lat 34°02'00", long 118°04'22", in Potrero Grande Grant, on right bank 900 ft upstream from Mission Bridge and 2 miles northeast of Montebello, Los Angeles County.

Drainage area.--116 sq mi (excluding area above Santa Fe Dam).

Records available.--October 1928 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 190.77 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 23, 1956, at datum 3.86 ft higher. Oct. 23, 1956, to Sept. 17, 1962, at site 67 ft upstream at datum 2.06 ft higher.

Average discharge.--29 years (1928-57), 51.5 cfs (37,280 acre-ft per year); median of yearly mean discharges, 36 cfs (26,100 acre-ft per year).

Extremes.--Maximum discharge during year, 7,100 cfs Dec. 29 (gage height, 11.37 ft); minimum daily, 0.40 cfs Nov. 7. 1928-66: Maximum discharge, 28,000 cfs Mar. 2, 1938 (gage height, 16.69 ft, present datum), from rating curve extended above 9,000 cfs on basis of slope-area measurement and runoff from contributing stream; no flow for some days in 1964, 1965.

Remarks.--Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs (combined capacity, 1,700 acre-ft) and Sierra Madre, Las Flores, and Rubio debris basins. Many diversions above station for domestic use and irrigation. At times flow is diverted from San Gabriel River below Santa Fe Dam to Rio Hondo above station. Since 1957, at times imported Colorado River water has been released to Rio Hondo 1.6 miles above station for ground-water recharge. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.     | Nov.     | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May   | June    | July  | Aug.    | Sept.   |
|-------|----------|----------|---------|---------|---------|---------|---------|-------|---------|-------|---------|---------|
| 1     | 164      | 248      | 11      | 71      | 242     | 126     | 193     | 103   | 101     | 4.6   | 2.6     | 35      |
| 2     | 164      | 252      | 8.0     | 41      | 263     | 126     | 196     | 103   | 101     | 4.4   | 3.4     | 121     |
| 3     | 168      | 250      | 5.6     | 15      | 212     | 126     | 198     | 103   | 101     | 4.1   | 3.4     | 154     |
| 4     | 166      | 165      | 4.9     | 12      | 155     | 126     | 200     | 109   | 103     | 4.4   | 3.1     | 152     |
| 5     | 164      | 3.6      | 4.9     | 8.0     | 158     | 126     | 203     | 112   | 101     | 3.8   | 3.4     | 152     |
| 6     | 168      | 1.8      | 4.4     | 7.0     | 540     | 126     | 208     | 58    | 99      | 4.1   | 3.1     | 150     |
| 7     | 166      | 4.0      | 4.1     | 180     | 60      | 162     | 208     | 43    | 96      | 4.4   | 2.4     | 144     |
| 8     | 166      | 26       | 3.6     | 245     | 133     | 218     | 208     | 112   | 46      | 4.1   | 85      | 166     |
| 9     | 166      | 64       | 289     | 218     | 140     | 205     | 208     | 138   | 101     | 4.1   | 177     | 171     |
| 10    | 166      | 64       | 84      | 138     | 156     | 193     | 208     | 111   | 114     | 4.0   | 177     | 173     |
| 11    | 164      | 64       | 6.6     | 74      | 158     | 193     | 205     | 107   | 130     | 3.9   | 208     | 179     |
| 12    | 164      | 135      | 171     | 68      | 158     | 193     | 205     | 107   | 131     | 3.8   | 218     | 191     |
| 13    | 134      | 240      | 83      | 62      | 158     | 175     | 113     | 106   | 142     | 3.7   | 232     | 162     |
| 14    | 87       | 352      | 200     | 30      | 158     | 14      | 63      | 104   | 154     | 3.6   | 220     | 48      |
| 15    | 76       | 501      | 6.0     | 25      | 122     | 4.9     | 110     | 103   | 160     | 3.6   | 222     | 4.6     |
| 16    | 74       | 926      | 3.6     | 31      | 4.6     | 4.1     | 230     | 103   | 164     | 3.6   | 123     | 66      |
| 17    | 74       | 1,450    | 3.6     | 30      | 4.6     | 4.1     | 238     | 101   | 164     | 3.4   | 5.6     | 119     |
| 18    | 71       | 145      | 3.4     | 28      | 4.1     | 4.1     | 232     | 99    | 164     | 3.6   | 106     | 202     |
| 19    | 69       | 47       | 2.8     | 21      | 3.4     | 3.8     | 230     | 101   | 164     | 4.4   | 215     | 179     |
| 20    | 68       | 137      | 5.6     | 21      | 3.1     | 3.6     | 230     | 101   | 105     | 4.6   | 225     | 162     |
| 21    | 66       | 133      | 164     | 23      | 3.1     | 3.6     | 230     | 101   | 6.3     | 4.9   | 232     | 175     |
| 22    | 42       | 2,320    | 175     | 19      | 3.1     | 3.8     | 230     | 104   | 14      | 4.6   | 232     | 205     |
| 23    | 20       | 380      | 164     | 16      | 62      | 3.8     | 230     | 103   | 45      | 4.4   | 232     | 179     |
| 24    | .90      | 1,000    | 164     | 17      | 121     | 214     | 230     | 101   | 5.3     | 2.8   | 232     | 166     |
| 25    | .80      | 434      | 164     | 17      | 123     | 291     | 159     | 101   | 5.6     | 3.4   | 232     | 186     |
| 26    | 1.3      | 44       | 164     | 4.9     | 124     | 212     | 104     | 103   | 5.2     | 3.8   | 232     | 193     |
| 27    | 1.0      | 10       | 164     | 3.6     | 123     | 193     | 104     | 103   | 5.0     | 3.8   | 232     | 193     |
| 28    | .80      | 6.5      | 124     | 3.6     | 124     | 191     | 43      | 103   | 4.8     | 3.8   | 232     | 141     |
| 29    | 84       | 4.1      | 2,340   | 3.6     | -----   | 188     | 42      | 103   | 4.7     | 3.4   | 210     | 22      |
| 30    | 232      | 5.6      | 105     | 379     | -----   | 191     | 103     | 104   | 4.6     | 3.6   | 95      | 103     |
| 31    | 240      | -----    | 110     | 87      | -----   | 188     | -----   | 104   | -----   | 2.8   | 4.9     | -----   |
| Total | 3,327.80 | 9,409.00 | 4,793.5 | 1,898.7 | 3,516.0 | 3,812.8 | 5,304.3 | 3,154 | 2,541.5 | 121.5 | 4,400.9 | 4,293.6 |
| Mean  | 107      | 314      | 155     | 61.2    | 126     | 123     | 177     | 102   | 84.7    | 3.92  | 142     | 143     |
| Ac-ft | 6,600    | 18,660   | 9,510   | 3,770   | 6,970   | 7,560   | 10,520  | 6,260 | 5,040   | 241   | 8,730   | 8,520   |
| (t)   | 6,410    | 3,840    | 2,940   | 0       | 4,400   | 6,970   | 10,160  | 5,960 | 4,910   | 0     | 8,420   | 8,090   |

Calendar year 1965 Max 2,340 Min 0 Mean 130 Ac-ft 104,800 Ac-ft † 59,790

Water year 1965-66 Max 2,340 Min 0.40 Mean 128 Ac-ft 92,380 Ac-ft † 62,100

† Colorado River water, in acre-ft, released to Rio Hondo via Alhambra Wash, 1.6 miles upstream, for ground-water recharge in Rio Hondo basin.

11-1020, Mission Creek near Montebello, Calif.

Location (revised).--Lat 34°01'45", long 118°04'07", in La Merced Grant, on upstream side of right abutment of San Gabriel Boulevard Bridge, 2 miles northeast of Montebello, Los Angeles County.

Drainage area.--4.16 sq mi.

Records available.--October 1929 to September 1966. Yearly estimate for 1938, published in WSP 1315-B. Prior to October 1944, published as Rio Hondo Slough near Montebello.

Gage.--Graphic water-stage recorder. Altitude of gage is 195 ft (from topographic map). Prior to Nov. 3, 1938, at datum 6.30 ft higher.

Average discharge.--37 years, 12.3 cfs (8,900 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

Extremes.--Maximum discharge during year, about 10 cfs Dec. 29; no flow for much of year.

1929-66: Maximum discharge not determined, occurred Mar. 2, 1938; no flow at times in some years.

Remarks.--Flow is almost entirely from ground-water seepage. Flow partially regulated above station by Legg Lake. No diversion above station. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|------|------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0    | 0    | 0.60  | 0.70  | 0.80  | 0.30 | 0.10  |      |      |       |
| 2     |      | 0     | 0    | 0    | .50   | .50   | .70   | .20  | .10   |      |      |       |
| 3     |      | 0     | 0    | 0    | .40   | .50   | .70   | .20  | .10   |      |      |       |
| 4     |      | 0     | 0    | 0    | .40   | .50   | .60   | .20  | .10   |      |      |       |
| 5     |      | 0     | 0    | 0    | .40   | .50   | .60   | .20  | .10   |      |      |       |
| 6     |      | 0     | 0    | 0    | .80   | .50   | .60   | .10  | .10   |      |      |       |
| 7     |      | 0     | 0    | 0    | .50   | .50   | .60   | .10  | .10   |      |      |       |
| 8     |      | 0     | 0    | 0    | .50   | .50   | .50   | .10  | 0     |      |      |       |
| 9     |      | 0     | .40  | 0    | .50   | .60   | .50   | .20  | 0     |      |      |       |
| 10    |      | 0     | .10  | 0    | .50   | .60   | .50   | .20  | 0     |      |      |       |
| 11    |      | 0     | 0    | 0    | .40   | .50   | .40   | .30  | 0     |      |      |       |
| 12    |      | 0     | .20  | 0    | .50   | .50   | .40   | .30  | 0     |      |      |       |
| 13    |      | 0     | 0    | 0    | .50   | .60   | .30   | .30  | 0     |      |      |       |
| 14    |      | 0     | .10  | 0    | .70   | .30   | .20   | .20  | 0     |      |      |       |
| 15    |      | 0     | 0    | 0    | .80   | .30   | .30   | .10  | 0     |      |      |       |
| 16    |      | .50   | 0    | .10  | .30   | .30   | .40   | .10  | 0     |      |      |       |
| 17    |      | 1.5   | 0    | .10  | .10   | .20   | .40   | .10  | 0     |      |      |       |
| 18    |      | .30   | 0    | .10  | .10   | .20   | .50   | .10  | 0     |      |      |       |
| 19    |      | 0     | 0    | .10  | .10   | .20   | .50   | .10  | 0     |      |      |       |
| 20    |      | 0     | 0    | .10  | .10   | .20   | .50   | .10  | 0     |      |      |       |
| 21    |      | 0     | 0    | .10  | .10   | .20   | .40   | .10  | 0     |      |      |       |
| 22    |      | .20   | 0    | .10  | .10   | .20   | .40   | .10  | 0     |      |      |       |
| 23    |      | .20   | 0    | .10  | .10   | .20   | .30   | .10  | 0     |      |      |       |
| 24    |      | .80   | 0    | .10  | .40   | .20   | .30   | .10  | 0     |      |      |       |
| 25    |      | .30   | 0    | .10  | .80   | .60   | .20   | .10  | 0     |      |      |       |
| 26    |      | 0     | 0    | .10  | .90   | .80   | .10   | .10  | 0     |      |      |       |
| 27    |      | 0     | 0    | .10  | .80   | .90   | .20   | .20  | 0     |      |      |       |
| 28    |      | 0     | 0    | .10  | .70   | 1.0   | .20   | .20  | 0     |      |      |       |
| 29    |      | 0     | .40  | .10  | ----- | 1.1   | .10   | .20  | 0     |      |      |       |
| 30    |      | 0     | 0    | .50  | ----- | 1.0   | .20   | .20  | 0     |      |      |       |
| 31    |      | ----- | 0    | .50  | ----- | .90   | ----- | .10  | ----- |      |      |       |
| Total | 0    | 6.60  | 4.80 | 2.40 | 12.60 | 15.80 | 12.40 | 5.00 | 0.70  | 0    | 0    | 0     |
| Mean  | 0    | 0.22  | 0.15 | 0.08 | 0.45  | 0.51  | 0.41  | 0.16 | 0.02  | 0    | 0    | 0     |
| Ac-ft | 0    | 13    | 9.5  | 4.8  | 25    | 31    | 25    | 9.9  | 1.4   | 0    | 0    | 0     |

Calendar year 1965 Max 4.0 Min 0 Mean 0.032 Ac-ft 23  
 Water year 1965-66 Max 4.0 Min 0 Mean 0.165 Ac-ft 120

Note.--Station inundated during November and December.

## LOS ANGELES RIVER BASIN

11-1022.5, Mission Creek below Whittier Narrows Dam, Calif.

Location.--Lat 34°01'15", long 118°04'15", near north boundary of Paso de Bartolo Grant, on left bank about 500 ft downstream from axis of Whittier Narrows Dam, and 1.4 miles north of Pico, Los Angeles County.

Records available.--December 1955 to September 1966.

Gage.--Graphic water-stage recorder and Parshall flume. Datum of gage is 187.1 ft above mean sea level (Corps of Engineers Survey).

Extremes.--Maximum daily discharge during year, 6.3 cfs Mar. 27; no flow for most of year.  
1955-66: Maximum daily discharge, 18 cfs Jan. 6, 1959; no flow for many days in most years.

Remarks.--Records good. Flow is almost entirely from ground-water seepage. Flow regulated or diverted above station at Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Four discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May | June | July | Aug. | Sept. |
|--------------------|------|------|------|------|-------|-------|-------|-----|------|------|------|-------|
| 1                  |      |      |      |      |       | 0     | 0.20  |     |      |      |      | 0.30  |
| 2                  |      |      |      |      |       | 0     | .30   |     |      |      |      | .60   |
| 3                  |      |      |      |      |       | 0     | .30   |     |      |      |      | .20   |
| 4                  |      |      |      |      |       | 0     | .20   |     |      |      |      | .20   |
| 5                  |      |      |      |      |       | 0     | .20   |     |      |      |      | .30   |
| 6                  |      |      |      |      |       | 0     | .20   |     |      |      |      | .40   |
| 7                  |      |      |      |      |       | 0     | .40   |     |      |      |      | .50   |
| 8                  |      |      |      |      |       | 0     | .30   |     |      |      |      | .50   |
| 9                  |      |      |      |      |       | .30   | .20   |     |      |      |      | .50   |
| 10                 |      |      |      |      |       | .30   | .20   |     |      |      |      | .50   |
| 11                 |      |      |      |      |       | .20   | .40   |     |      |      |      | .40   |
| 12                 |      |      |      |      |       | .20   | .20   |     |      |      |      | .40   |
| 13                 |      |      |      |      |       | .80   | .20   |     |      |      |      | .30   |
| 14                 |      |      |      |      |       | .20   | 0     |     |      |      |      | .30   |
| 15                 |      |      |      |      |       | .10   | 0     |     |      |      |      | .30   |
| 16                 |      |      |      |      |       | 0     | .10   |     |      |      |      | 1.5   |
| 17                 |      |      |      |      |       | 0     | .10   |     |      |      |      | 2.7   |
| 18                 |      |      |      |      |       | 0     | .10   |     |      |      |      | .50   |
| 19                 |      |      |      |      |       | 0     | .10   |     |      |      |      | .50   |
| 20                 |      |      |      |      |       | 0     | .10   |     |      |      |      | .40   |
| 21                 |      |      |      |      |       | 0     | .10   |     |      |      |      | .40   |
| 22                 |      |      |      |      |       | 0     | .10   |     |      |      |      | .40   |
| 23                 |      |      |      |      |       | 0     | .10   |     |      |      |      | .40   |
| 24                 |      |      |      |      |       | 0     | 0     |     |      |      |      | .40   |
| 25                 |      |      |      |      |       | .20   | 0     |     |      |      |      | .40   |
| 26                 |      |      |      |      |       | 2.2   | 0     |     |      |      |      | .40   |
| 27                 |      |      |      |      |       | 6.3   | 0     |     |      |      |      | .40   |
| 28                 |      |      |      |      |       | .70   | 0     |     |      |      |      | .40   |
| 29                 |      |      |      |      | ----- | .50   | 0     |     |      |      |      | .40   |
| 30                 |      |      |      |      | ----- | .50   | 0     |     |      |      |      | .40   |
| 31                 |      |      |      |      | ----- | .30   | ----- |     |      |      |      | ----- |
| Total              | 0    | 0    | 0    | 0    | 0     | 12.80 | 4.10  | 0   | 0    | 0    | 0    | 15.30 |
| Mean               | 0    | 0    | 0    | 0    | 0     | 0.41  | 0.14  | 0   | 0    | 0    | 0    | 0.51  |
| Ac-ft              | 0    | 0    | 0    | 0    | 0     | 25    | 8.1   | 0   | 0    | 0    | 0    | 30    |
| Calendar year 1965 | Max  | 7.2  | Min  | 0    | Mean  | 0.027 | Ac-ft | 20  |      |      |      |       |
| Water year 1965-66 | Max  | 6.3  | Min  | 0    | Mean  | 0.088 | Ac-ft | 64  |      |      |      |       |



11-1025, Rio Hondo near Downey, Calif.

Location.--Lat 33°56'48", long 118°09'43", in San Antonio Grant, on left bank 700 ft upstream from Stewart and Gray Road Bridge, 1.0 mile upstream from mouth, and 1.5 miles west of Downey, Los Angeles County.

Drainage area.--143 sq mi (excluding area above Santa Fe Dam).

Records available.--March 1928 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 91.4 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 31, 1951, at site 700 ft downstream at datum 1.5 ft lower.

Extremes.--Maximum discharge during year, 19,000 cfs Dec. 29 (gage height, 9.18 ft); no flow for many days.

1928-66: Maximum discharge, 24,400 cfs Mar. 3, 1938 (gage height, 12.0 ft, present datum), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow; no flow for part of each year.

Remarks.--Flow regulated since January 1956 by Whittier Narrows flood-control reservoir (capacity, 36,160 acre-ft). There are several small flood-control reservoirs (combined capacity, 1,700 acre-ft) and several debris basins above Whittier Narrows Dam. Many diversions above station for domestic use and irrigation. At times, flow is diverted from San Gabriel River below Santa Fe Dam and above Whittier Narrows Dam to Rio Hondo above station. During the year, 66,430 acre-ft of San Gabriel River water was diverted to Rio Hondo from above Whittier Narrows Dam. Since 1937 much of the flow in Rio Hondo has been diverted to percolation basin from a site 5.5 miles upstream. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.      | Dec.     | Jan.     | Feb.   | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|-----------|----------|----------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0    | 0         | 0.10     | 805      | 12     | 1.4   | 0.30  | 0     | 0.30  | 1.4   | 0.30  | 0     |
| 2     | 0    | 0         | .10      | 492      | 10     | .50   | .30   | .20   | .30   | .50   | .50   | .10   |
| 3     | 0    | 0         | .10      | 333      | .50    | .20   | .30   | .30   | .30   | .30   | .50   | .20   |
| 4     | 0    | 0         | .10      | 331      | .30    | .30   | .30   | .30   | .30   | .30   | .30   | .20   |
| 5     | 0    | 0         | .10      | 433      | .30    | .20   | .50   | .30   | .30   | .50   | .20   | .30   |
| 6     | .10  | 0         | .10      | 534      | 178    | .20   | 1.0   | .30   | .30   | 1.0   | .20   | 1.0   |
| 7     | .20  | 0         | .10      | 364      | 2.0    | .30   | .30   | .30   | .30   | 1.4   | .20   | .50   |
| 8     | .20  | 0         | .10      | 152      | 1.4    | .50   | .30   | .20   | .50   | 1.6   | .30   | .20   |
| 9     | .20  | 0         | 138      | 67       | 1.4    | 1.0   | .30   | 11    | 1.0   | 1.8   | .30   | .10   |
| 10    | .20  | .10       | 44       | 32       | 1.8    | 1.0   | .20   | 1.0   | .50   | 1.4   | .30   | .10   |
| 11    | .20  | .30       | .10      | .10      | 1.4    | 1.4   | .20   | .50   | .50   | .30   | .20   | .10   |
| 12    | .30  | .20       | 70       | .30      | 1.4    | .30   | .30   | .30   | .30   | 1.0   | .10   | .20   |
| 13    | .30  | .30       | 7.4      | .30      | 1.4    | .30   | .30   | .50   | .30   | .50   | .10   | 0     |
| 14    | .20  | 93        | 40       | 1.4      | 1.4    | .50   | .30   | .50   | 1.0   | 1.0   | .20   | .10   |
| 15    | .20  | 81        | 4.1      | 1.6      | 1.0    | 1.4   | .30   | .30   | 1.0   | 1.0   | .30   | 0     |
| 16    | 0    | 373       | 2.0      | 1.0      | 1.0    | 1.4   | .30   | .30   | 1.4   | .50   | .30   | .20   |
| 17    | 0    | 1830      | 1.8      | .50      | .30    | 2.0   | .30   | .30   | 1.0   | .30   | .50   | .30   |
| 18    | 0    | 60        | 1.4      | .30      | .50    | 1.0   | .30   | 1.0   | 1.4   | .30   | .50   | .23   |
| 19    | .30  | 4.4       | .20      | 12       | .30    | 1.4   | 1.0   | .50   | .50   | 1.0   | .50   | 5.8   |
| 20    | .30  | 1.4       | .20      | .30      | .30    | 1.4   | .30   | .50   | .50   | 1.0   | 1.4   | .50   |
| 21    | .20  | 1.4       | .30      | .30      | .30    | 1.0   | .30   | .50   | 1.0   | 1.0   | 1.4   | .20   |
| 22    | .20  | 3.750     | 3.2      | 0        | .50    | 1.0   | .50   | .20   | .30   | 1.0   | 1.4   | .20   |
| 23    | .20  | 5.570     | .30      | .30      | .50    | .50   | .30   | .20   | .30   | 1.0   | .50   | .30   |
| 24    | .20  | 3.310     | 0        | .30      | 1.0    | 3.4   | .30   | .30   | .50   | .50   | .20   | .50   |
| 25    | .20  | 2.790     | 0        | .30      | 1.0    | 30    | 1.6   | .20   | .30   | .50   | 0     | .20   |
| 26    | .20  | 1.070     | 0        | .50      | 1.4    | .30   | 1.0   | .20   | .20   | .50   | 0     | .20   |
| 27    | .20  | 32        | .30      | .30      | 1.0    | .30   | 1.4   | .30   | .30   | .50   | .10   | .20   |
| 28    | .20  | 0         | 1.0      | .30      | 1.4    | .50   | 1.6   | .30   | 1.4   | .50   | 0     | .20   |
| 29    | 0    | 0         | 4.810    | .30      | -----  | 1.0   | 1.4   | .10   | 1.4   | 1.0   | .10   | 1.4   |
| 30    | 0    | .10       | 570      | 223      | -----  | .30   | .30   | 0     | 1.0   | 1.0   | .50   | .50   |
| 31    | 0    | -----     | 1.090    | 1.6      | -----  | .30   | ----- | .20   | ----- | .30   | .30   | ----- |
| Total | 4.30 | 23,967.20 | 6,785.10 | 3,788.00 | 223.80 | 85.90 | 16.10 | 21.10 | 18.70 | 24.90 | 11.70 | 36.80 |
| Mean  | 0.14 | 799       | 219      | 122      | 7.99   | 2.77  | 0.54  | 0.68  | 0.62  | 0.80  | 0.38  | 1.23  |
| Ac-ft | 8.5  | 47,540    | 13,460   | 7,510    | 444    | 170   | 32    | 42    | 37    | 49    | 23    | 73    |

Calendar year 1965 Max 8,310 Min 0 Mean 90.7 Ac-ft 65,660  
 Water year 1965-66 Max 8,310 Min 0 Mean 95.8 Ac-ft 69,390

## LOS ANGELES RIVER BASIN

11-1030. Los Angeles River at Long Beach, Calif.

Location.--Lat 33°49'02", long 118°12'20", in Los Cerritos Grant, on right bank 5,000 ft upstream from Willow Street, 3.4 miles north of Long Beach, Los Angeles County, and 3.7 miles upstream from mouth.

Drainage area.--832 sq mi.

Records available.--December 1928 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 11.91 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Oct. 31, 1931, at site 3 miles downstream at different datum. Oct. 31, 1931, to Jan. 19, 1956, at site 2 miles downstream at different datum.

Average discharge.--37 years (1929-66), 140 cfs (101,400 acre-ft per year); median of yearly mean discharges, 89 cfs (64,400 acre-ft per year).

Extremes.--Maximum discharge during year, 61,500 cfs Dec. 29 (gage height, 11.71 ft); minimum daily, 3.0 cfs June 8.  
1928-66: Maximum discharge, 99,000 cfs Mar. 2, 1938, on basis of records for stations upstream; no flow at times in 1929-30, 1934.

Remarks.--Flow regulated since September 1940 by Hansen flood-control reservoir and since December 1941 by Sepulveda flood-control reservoir (combined capacity, 49,400 acre-ft), and several small flood-control reservoirs. City of Los Angeles stores imported Owens River water in San Fernando and Chatsworth reservoirs and at times discharges imported water into Los Angeles River above station. During the year, 66,430 acre-ft of San Gabriel River water was diverted to Rio Hondo. Many diversions above station for domestic use and irrigation. Average discharge represents flow to the ocean, regardless of upstream development. See schematic diagram of San Gabriel and Los Angeles River basins.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.   | Jan.   | Feb.  | Mar.    | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|----------|--------|--------|-------|---------|-------|-------|-------|-------|-------|-------|
| 1     | 13    | 8.2      | 110    | 1,690  | 93    | 29      | 28    | 12    | 18    | 22    | 16    | 19    |
| 2     | 11    | 13       | 99     | 923    | 418   | 25      | 20    | 14    | 17    | 18    | 20    | 18    |
| 3     | 8.8   | 12       | 66     | 790    | 53    | 16      | 16    | 17    | 15    | 18    | 20    | 16    |
| 4     | 10    | 12       | 101    | 961    | 44    | 19      | 18    | 18    | 13    | 12    | 21    | 17    |
| 5     | 15    | 12       | 50     | 961    | 45    | 40      | 19    | 18    | 12    | 15    | 18    | 15    |
| 6     | 11    | 11       | 40     | 1,000  | 2,940 | 20      | 24    | 17    | 6.0   | 19    | 8.2   | 14    |
| 7     | 13    | 8.8      | 31     | 581    | 259   | 14      | 21    | 17    | 3.4   | 18    | 8.2   | 7.7   |
| 8     | 14    | 9.9      | 28     | 385    | 112   | 20      | 21    | 12    | 3.0   | 18    | 9.4   | 7.7   |
| 9     | 12    | 18       | 1,470  | 230    | 52    | 19      | 16    | 139   | 5.2   | 20    | 14    | 4.8   |
| 10    | 8.8   | 13       | 1,370  | 142    | 47    | 20      | 13    | 215   | 7.2   | 14    | 20    | 10    |
| 11    | 10    | 9.9      | 93     | 58     | 45    | 14      | 12    | 36    | 14    | 14    | 20    | 16    |
| 12    | 14    | 9.4      | 681    | 44     | 42    | 7.2     | 16    | 20    | 18    | 18    | 18    | 16    |
| 13    | 15    | 11       | 207    | 42     | 34    | 4.4     | 18    | 12    | 18    | 18    | 16    | 16    |
| 14    | 14    | 8.12     | 481    | 44     | 30    | 12      | 16    | 14    | 22    | 12    | 14    | 15    |
| 15    | 12    | 2,210    | 198    | 49     | 40    | 35      | 17    | 12    | 23    | 8.2   | 14    | 16    |
| 16    | 9.9   | 5,470    | 72     | 33     | 39    | 20      | 18    | 11    | 28    | 6.0   | 18    | 16    |
| 17    | 8.8   | 10,600   | 36     | 36     | 43    | 26      | 14    | 14    | 20    | 4.4   | 22    | 15    |
| 18    | 9.9   | 2,050    | 27     | 34     | 40    | 16      | 15    | 18    | 17    | 8.2   | 20    | 91    |
| 19    | 12    | 333      | 19     | 72     | 34    | 13      | 12    | 19    | 14    | 19    | 20    | 270   |
| 20    | 10    | 266      | 20     | 50     | 25    | 12      | 4.8   | 20    | 17    | 20    | 19    | 82    |
| 21    | 12    | 205      | 22     | 34     | 21    | 14      | 9.4   | 17    | 18    | 20    | 16    | 22    |
| 22    | 13    | 13,800   | 45     | 24     | 25    | 19      | 22    | 14    | 19    | 20    | 16    | 17    |
| 23    | 12    | 11,600   | 36     | 24     | 24    | 20      | 19    | 13    | 21    | 20    | 16    | 21    |
| 24    | 8.8   | 14,500   | 27     | 22     | 38    | 175     | 14    | 15    | 23    | 20    | 14    | 20    |
| 25    | 8.8   | 5,380    | 18     | 28     | 30    | 742     | 18    | 16    | 21    | 20    | 13    | 17    |
| 26    | 10    | 1,980    | 14     | 27     | 30    | 42      | 20    | 17    | 16    | 22    | 18    | 16    |
| 27    | 11    | 343      | 16     | 28     | 25    | 18      | 20    | 18    | 18    | 22    | 16    | 18    |
| 28    | 12    | 82       | 18     | 33     | 25    | 19      | 20    | 20    | 24    | 21    | 14    | 18    |
| 29    | 11    | 94       | 22,500 | 23     | ----- | 25      | 20    | 14    | 21    | 20    | 15    | 29    |
| 30    | 12    | 112      | 3,140  | 2,850  | ----- | 24      | 14    | 12    | 22    | 20    | 18    | 105   |
| 31    | 9.9   | -----    | 2,150  | 312    | ----- | 23      | ----- | 14    | ----- | 16    | 19    | ----- |
| Total | 352.7 | 69,985.2 | 33,185 | 11,530 | 4,653 | 1,502.6 | 515.2 | 825   | 493.8 | 522.8 | 510.8 | 965.2 |
| Mean  | 11.4  | 2,330    | 1,070  | 372    | 166   | 48.5    | 17.2  | 26.6  | 16.5  | 16.9  | 16.5  | 32.2  |
| Ac-ft | 700   | 138,800  | 65,820 | 22,870 | 9,230 | 2,980   | 1,020 | 1,640 | 979   | 1,040 | 1,010 | 1,910 |

Calendar year 1965 Max 22,500 Min 7.2 Mean 365 Ac-ft 264,100  
Water year 1965-66 Max 22,500 Min 3.0 Mean 343 Ac-ft 248,000

11-1035, Ballona Creek near Culver City, Calif.

Location.--Lat 33°59'48", long 118°24'07", in La Ballona Grant, on downstream side of Sawtelle Boulevard Bridge, 1.7 miles south of Culver City, Los Angeles County, and 4 miles upstream from mouth.

Drainage area.--89.5 sq mi, excludes that of Sepulveda Creek. Prior to January 1951, 111 sq mi, change due to tributary channel realignment.

Records available.--February 1928 to September 1966 (after December 1950, flow of Sepulveda Creek excluded).

Gage.--Graphic water-stage recorder. Datum of gage is 11.06 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to May 14, 1936, at site 1 mile downstream at different datum. May 14, 1936, to Oct. 23, 1961, at datum 0.2 ft higher.

Average discharge.--22 years (1928-50), 35.2 cfs (25,480 acre-ft per year); 16 years (1950-66), 38.7 cfs (28,020 acre-ft per year); median of yearly mean discharges, 30 cfs (21,700 acre-ft per year).

Extremes.--Maximum discharge during year, 18,000 cfs Nov. 22 (gage height, 11.49 ft); minimum daily, 5.3 cfs Oct. 10.

1928-66: Maximum discharge, 19,000 cfs Mar. 2, 1938 (gage height, 15.4 ft, present datum); no flow in parts of some years.

Remarks.--No regulation above station. City of Los Angeles at times discharges imported Owens River water from several distribution reservoirs into the creek above station. Some small pumping diversions above station for irrigation.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.    | Jan.    | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|----------|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 13    | 10       | 17      | 21      | 70    | 15    | 13    | 10    | 14    | 12    | 18    | 13    |
| 2     | 12    | 13       | 15      | 19      | 26    | 14    | 12    | 16    | 12    | 10    | 14    | 13    |
| 3     | 10    | 10       | 14      | 18      | 10    | 15    | 10    | 14    | 14    | 8.8   | 14    | 12    |
| 4     | 14    | 13       | 12      | 17      | 10    | 16    | 20    | 16    | 10    | 13    | 19    | 9.5   |
| 5     | 14    | 13       | 12      | 17      | 12    | 15    | 19    | 15    | 12    | 13    | 17    | 10    |
| 6     | 14    | 9.5      | 18      | 18      | 1.150 | 13    | 17    | 18    | 14    | 13    | 15    | 13    |
| 7     | 13    | 8.1      | 15      | 19      | 14    | 16    | 13    | 14    | 13    | 13    | 17    | 13    |
| 8     | 10    | 13       | 16      | 17      | 22    | 14    | 13    | 12    | 14    | 9.5   | 17    | 15    |
| 9     | 7.4   | 14       | 948     | 14      | 61    | 13    | 9.5   | 98    | 12    | 7.4   | 18    | 13    |
| 10    | 5.3   | 13       | 328     | 16      | 63    | 15    | 7.4   | 16    | 15    | 8.1   | 17    | 14    |
| 11    | 8.1   | 12       | 21      | 17      | 63    | 14    | 16    | 9.5   | 12    | 6.7   | 16    | 8.8   |
| 12    | 8.8   | 14       | 243     | 15      | 65    | 14    | 13    | 10    | 10    | 9.5   | 17    | 13    |
| 13    | 10    | 17       | 35      | 15      | 63    | 13    | 13    | 10    | 18    | 12    | 15    | 15    |
| 14    | 12    | 548      | 71      | 15      | 65    | 17    | 17    | 9.5   | 15    | 12    | 13    | 12    |
| 15    | 14    | 647      | 15      | 15      | 35    | 13    | 16    | 12    | 15    | 13    | 18    | 14    |
| 16    | 9.5   | 1,670    | 15      | 12      | 14    | 17    | 15    | 12    | 16    | 12    | 17    | 14    |
| 17    | 6.7   | 2,350    | 14      | 15      | 14    | 24    | 13    | 13    | 15    | 13    | 18    | 14    |
| 18    | 8.8   | 197      | 10      | 17      | 14    | 24    | 13    | 12    | 15    | 16    | 17    | 100   |
| 19    | 8.8   | 22       | 9.5     | 22      | 14    | 14    | 15    | 14    | 13    | 17    | 18    | 46    |
| 20    | 12    | 18       | 10      | 17      | 10    | 12    | 15    | 14    | 16    | 17    | 15    | 13    |
| 21    | 12    | 15       | 13      | 10      | 15    | 12    | 13    | 16    | 12    | 15    | 10    | 13    |
| 22    | 14    | 3,620    | 21      | 9.5     | 14    | 15    | 14    | 9.5   | 14    | 14    | 17    | 13    |
| 23    | 13    | 380      | 12      | 12      | 14    | 14    | 9.5   | 13    | 15    | 15    | 19    | 15    |
| 24    | 10    | 503      | 12      | 10      | 15    | 87    | 9.5   | 12    | 12    | 9.5   | 15    | 14    |
| 25    | 15    | 280      | 8.1     | 10      | 14    | 78    | 16    | 12    | 9.5   | 17    | 18    | 9.5   |
| 26    | 15    | 27       | 9.5     | 12      | 13    | 10    | 14    | 12    | 8.1   | 18    | 19    | 17    |
| 27    | 14    | 19       | 12      | 12      | 10    | 9.5   | 14    | 16    | 12    | 15    | 12    | 15    |
| 28    | 15    | 15       | 13      | 13      | 14    | 12    | 12    | 13    | 9.5   | 15    | 9.5   | 15    |
| 29    | 12    | 16       | 3,170   | 15      | ----- | 14    | 12    | 15    | 10    | 15    | 16    | 30    |
| 30    | 9.5   | 16       | 61      | 8.18    | ----- | 18    | 12    | 12    | 12    | 13    | 9.5   | 17    |
| 31    | 7.4   | -----    | 59      | 18      | ----- | 14    | ----- | 16    | ----- | 12    | 10    | ----- |
| Total | 348.3 | 10,502.6 | 5,229.1 | 1,275.5 | 1,904 | 591.5 | 405.9 | 491.5 | 389.1 | 394.5 | 485.0 | 533.8 |
| Mean  | 11.2  | 350      | 169     | 41.1    | 68.0  | 19.1  | 13.5  | 15.9  | 13.0  | 12.7  | 15.6  | 17.8  |
| Ac-ft | 691   | 20,830   | 10,370  | 2,530   | 3,780 | 1,170 | 805   | 975   | 772   | 782   | 962   | 1,060 |

Calendar year 1965 Max 3,620 Min 4.6 Mean 72.3 Ac-ft 52,360  
 Water year 1965-66 Max 3,620 Min 5.3 Mean 61.8 Ac-ft 44,730

## TOPANGA CREEK BASIN

11-1040. Topanga Creek near Topanga Beach, Calif.

Location.--Lat 34°03'52", long 118°35'10", in Boca de Santa Monica Grant, on downstream side of right abutment of highway bridge, 1.7 miles north of Topanga Beach, Los Angeles County.

Drainage area.--18.0 sq mi.

Records available.--January 1930 to September 1938, October 1939 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 265.60 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to June 5, 1940, at different datum. June 5, 1940, to Dec. 9, 1941, at site 400 ft upstream at different datum.

Average discharge.--35 years, 4.91 cfs (3,550 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--Maximum discharge during year, 3,500 cfs Dec. 29 (gage height, 9.49 ft); minimum daily, 0.01 cfs Oct. 1-6, Oct. 29 to Nov. 2. 1930-38, 1939-66: Maximum discharge, 7,960 cfs Mar. 2, 1938; no flow at times in some years.

Remarks.--No regulation or diversion above station.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.    | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|----------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 0.01  | 0.01     | 8.2     | 4.3   | 7.8   | 2.8  | 1.4   | 0.70  | 0.30  | 0.10  | 0.10  | 0.10  |
| 2     | .01   | .01      | 6.1     | 3.4   | 8.5   | 2.6  | 1.4   | .70   | .30   | .10   | .10   | .10   |
| 3     | .01   | .02      | 5.2     | 2.7   | 5.8   | 2.5  | 1.4   | .70   | .30   | .10   | .10   | .10   |
| 4     | .01   | .02      | 5.0     | 2.2   | 5.0   | 2.3  | 1.3   | .60   | .30   | .10   | .10   | .10   |
| 5     | .01   | .02      | 4.4     | 1.9   | 4.7   | 2.3  | 1.3   | .60   | .30   | .10   | .10   | .10   |
| 6     | .01   | .02      | 3.9     | 1.6   | 3.8   | 2.3  | 1.3   | .50   | .30   | .10   | .10   | .10   |
| 7     | .04   | .02      | 3.9     | 1.4   | 1.5   | 2.3  | 1.3   | .70   | .20   | .10   | .10   | .10   |
| 8     | .04   | .04      | 3.6     | 1.3   | 1.1   | 2.1  | 1.3   | .50   | .20   | .10   | .10   | .10   |
| 9     | .04   | .04      | 3.9     | 1.2   | 8.2   | 2.1  | 1.3   | .70   | .20   | .10   | .10   | .10   |
| 10    | .04   | .04      | 1.7     | 1.1   | 7.5   | 2.1  | 1.3   | .60   | .20   | .10   | .10   | .10   |
| 11    | .04   | .04      | 6.4     | 1.0   | 6.1   | 2.1  | 1.1   | .60   | .20   | .10   | .10   | .10   |
| 12    | .04   | .04      | 6.8     | 8.9   | 6.1   | 2.3  | 1.0   | .50   | .20   | .10   | .10   | .10   |
| 13    | .04   | .04      | 5.0     | 7.8   | 5.5   | 2.3  | 1.0   | .50   | .20   | .10   | .10   | .10   |
| 14    | .04   | .50      | 8.8     | 7.5   | 5.5   | 2.1  | .90   | .50   | .20   | .10   | .10   | .10   |
| 15    | .04   | 2.4      | 5.8     | 6.4   | 5.2   | 2.1  | .90   | .50   | .20   | .10   | .10   | .10   |
| 16    | .04   | 6.8      | 4.4     | 5.5   | 5.0   | 2.1  | .80   | .40   | .20   | .10   | .10   | .10   |
| 17    | .04   | 24.5     | 3.6     | 5.2   | 5.0   | 2.0  | .90   | .40   | .20   | .20   | .10   | .10   |
| 18    | .04   | 6.5      | 3.1     | 5.0   | 5.0   | 1.8  | .90   | .40   | .20   | .10   | .10   | .10   |
| 19    | .04   | 1.5      | 2.9     | 4.7   | 4.7   | 1.8  | .90   | .40   | .20   | .10   | .10   | .10   |
| 20    | .04   | 6.1      | 2.9     | 4.7   | 4.4   | 1.8  | .90   | .40   | .20   | .10   | .10   | .10   |
| 21    | .04   | 2.9      | 2.9     | 4.2   | 4.2   | 1.8  | .80   | .50   | .20   | .10   | .10   | .10   |
| 22    | .02   | 4.91     | 2.9     | 4.7   | 3.9   | 1.7  | .80   | .50   | .10   | .10   | .10   | .10   |
| 23    | .02   | 20.3     | 2.5     | 4.4   | 3.6   | 1.7  | .80   | .50   | .10   | .10   | .10   | .10   |
| 24    | .02   | 17.9     | 2.3     | 4.4   | 3.6   | 1.7  | .70   | .40   | .10   | .10   | .10   | .10   |
| 25    | .02   | 8.7      | 2.3     | 4.2   | 3.4   | 1.8  | .70   | .40   | .10   | .10   | .10   | .10   |
| 26    | .02   | 4.1      | 2.1     | 4.4   | 3.1   | 1.8  | .70   | .50   | .20   | .10   | .10   | .10   |
| 27    | .02   | 2.3      | 2.1     | 4.2   | 2.9   | 1.8  | .70   | .50   | .20   | .10   | .10   | .10   |
| 28    | .02   | 1.7      | 2.3     | 3.9   | 2.8   | 1.7  | .80   | .50   | .10   | .10   | .10   | .10   |
| 29    | .01   | 1.3      | 1.120   | 3.9   | ----- | 1.5  | .70   | .40   | .10   | .10   | .10   | .10   |
| 30    | .01   | 1.0      | 1.98    | 4.3   | ----- | 1.7  | .70   | .30   | .10   | .10   | .10   | .10   |
| 31    | .01   | -----    | 6.2     | 1.0   | ----- | 1.5  | ----- | .30   | ----- | .10   | .10   | ----- |
| Total | 0.83  | 1.469.26 | 1.510.3 | 368.0 | 191.5 | 62.5 | 30.00 | 15.70 | 5.90  | 3.20  | 3.10  | 3.00  |
| Mean  | 0.027 | 49.0     | 48.7    | 11.9  | 6.84  | 2.02 | 1.00  | 0.506 | 0.190 | 0.103 | 0.100 | 0.100 |
| Ac-ft | 1.6   | 2.910    | 3.000   | 7.30  | 3.80  | 1.24 | 6.0   | 3.1   | 1.2   | 6.3   | 6.1   | 6.0   |

Calendar year 1965 Max 1.120 Min 0.01 Mean 9.34 Ac-ft 6.760  
 Water year 1965-66 Max 1.120 Min 0.01 Mean 10.0 Ac-ft 7.270

11-1055. Malibu Creek at Crater Camp, near Calabasas, Calif.

Location.--Lat  $34^{\circ}04'40''$ , long  $118^{\circ}42'03''$ , in SW $\frac{1}{4}$  sec.18, T.1 S., R.17 W., on right bank 700 ft downstream from Cold Creek, 0.2 mile downstream from Crater Camp, and 6 miles southwest of Calabasas.

Drainage area.--105 sq mi.

Records available.--January 1931 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 432.82 ft above mean sea level (levels by Los Angeles County Flood Control District). Prior to Nov. 16, 1954, at datum 2.31 ft lower.

Average discharge.--35 years, 17.8 cfs (12,890 acre-ft per year); median of yearly mean discharges, 5.9 cfs (4,300 acre-ft per year).

Extremes.--Maximum discharge during year, 20,600 cfs Dec. 29 (gage height, 17.27 ft), from rating curve extended above 6,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.06 cfs Oct. 1-6.  
1931-66: Maximum discharge, that of Dec. 29, 1965; no flow at times in some years.

Remarks.--Flow regulated by many small recreational reservoirs. Small diversions above station for domestic use.

Cooperation.--Records furnished by Los Angeles County Flood Control District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|-------|----------|--------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 0.06  | 0.20     | 40     | 243   | 48    | 22    | 10    | 4.6   | 3.4   | 1.7  | 1.2   | 1.0   |
| 2     | .06   | .20      | 36     | 168   | 46    | 21    | 10    | 4.6   | 2.9   | 1.7  | 1.0   | 1.0   |
| 3     | .06   | .20      | 32     | 135   | 39    | 20    | 10    | 4.2   | 2.7   | 1.7  | 1.0   | 1.0   |
| 4     | .06   | .20      | 28     | 115   | 35    | 18    | 9.2   | 4.2   | 2.7   | 1.7  | 1.0   | 1.0   |
| 5     | .06   | .20      | 25     | 100   | 33    | 18    | 8.8   | 3.9   | 2.4   | 1.4  | 1.0   | 1.0   |
| 6     | .06   | .20      | 24     | 95    | 94    | 18    | 8.5   | 3.9   | 2.7   | 1.4  | 1.0   | 1.0   |
| 7     | .20   | .20      | 21     | 84    | 76    | 18    | 8.5   | 4.6   | 3.2   | 1.4  | 1.0   | 1.0   |
| 8     | .20   | .20      | 19     | 76    | 59    | 16    | 8.1   | 3.9   | 2.9   | 1.3  | 1.0   | 1.0   |
| 9     | .20   | .20      | 19     | 70    | 50    | 16    | 8.1   | 4.6   | 2.7   | 1.2  | 1.0   | 1.0   |
| 10    | .20   | .20      | 29     | 63    | 46    | 16    | 8.1   | 4.9   | 2.7   | 1.2  | 1.0   | 1.1   |
| 11    | .20   | .20      | 21     | 58    | 39    | 16    | 8.1   | 5.3   | 2.4   | 1.3  | 1.0   | 1.1   |
| 12    | .20   | .20      | 23     | 53    | 36    | 16    | 6.3   | 4.6   | 2.4   | 1.3  | 1.0   | 1.0   |
| 13    | .20   | .20      | 23     | 47    | 35    | 15    | 4.9   | 3.9   | 2.2   | 1.4  | 1.0   | .90   |
| 14    | .20   | .40      | 39     | 44    | 34    | 15    | 4.6   | 3.7   | 2.4   | 1.4  | 1.0   | .80   |
| 15    | .20   | .60      | 30     | 41    | 33    | 15    | 6.3   | 3.9   | 3.2   | 1.4  | 1.0   | .80   |
| 16    | .20   | 12       | 23     | 38    | 31    | 14    | 6.3   | 3.9   | 2.4   | 1.3  | 1.0   | .90   |
| 17    | .20   | 1,490    | 20     | 35    | 31    | 14    | 6.7   | 4.2   | 2.2   | 1.3  | 1.0   | .90   |
| 18    | .20   | 233      | 18     | 34    | 31    | 11    | 6.0   | 2.9   | 1.9   | 1.3  | 1.0   | .90   |
| 19    | .20   | 49       | 17     | 33    | 29    | 10    | 5.6   | 2.7   | 1.9   | 1.2  | 1.1   | 1.1   |
| 20    | .20   | 25       | 16     | 32    | 29    | 11    | 5.6   | 2.9   | 2.2   | 1.1  | 1.2   | 1.1   |
| 21    | .20   | 19       | 16     | 30    | 29    | 10    | 4.9   | 3.4   | 1.9   | 1.0  | 1.2   | 1.0   |
| 22    | .20   | 1,280    | 15     | 29    | 26    | 10    | 4.9   | 3.4   | 1.9   | 1.0  | 1.2   | .90   |
| 23    | .20   | 825      | 14     | 29    | 25    | 9.2   | 4.9   | 3.9   | 1.9   | 1.0  | 1.2   | .80   |
| 24    | .20   | 995      | 13     | 26    | 25    | 10    | 5.6   | 3.9   | 1.9   | 1.1  | 1.1   | .80   |
| 25    | .20   | 444      | 12     | 21    | 25    | 10    | 6.0   | 3.7   | 1.7   | 1.2  | 1.0   | .90   |
| 26    | .20   | 181      | 12     | 24    | 24    | 10    | 5.3   | 3.4   | 1.9   | 1.2  | 1.0   | .90   |
| 27    | .20   | 107      | 12     | 23    | 22    | 10    | 6.0   | 3.4   | 1.9   | 1.2  | 1.0   | 1.0   |
| 28    | .20   | 76       | 15     | 23    | 22    | 10    | 5.3   | 3.2   | 1.9   | 1.3  | 1.0   | 1.0   |
| 29    | .20   | 58       | 7,060  | 22    | ----- | 10    | 4.9   | 3.2   | 1.7   | 1.3  | 1.0   | 1.0   |
| 30    | .20   | 47       | 963    | 182   | ----- | 11    | 4.9   | 3.4   | 1.7   | 1.3  | 1.0   | 1.0   |
| 31    | .20   | -----    | 416    | 67    | ----- | 11    | ----- | 3.7   | ----- | 1.3  | .90   | ----- |
| Total | 5.36  | 5,844.60 | 9,051  | 2,040 | 1,052 | 431.2 | 2,024 | 120.0 | 69.9  | 40.6 | 32.10 | 28.90 |
| Mean  | 0.173 | 195      | 292    | 65.8  | 37.6  | 13.9  | 6.75  | 3.87  | 2.33  | 1.31 | 1.04  | 0.963 |
| Ac-ft | 11    | 11,590   | 17,950 | 4,050 | 2,090 | 855   | 401   | 238   | 139   | 81   | 64    | 57    |

Calendar year 1965 Max 7.060 Min 0.02 Mean 42.9 Ac-ft 31,090  
 Water year 1965-66 Max 7.060 Min 0.06 Mean 51.8 Ac-ft 37,520

## SANTA CLARA RIVER BASIN

11-1085. Santa Clara River at Los Angeles-Ventura County Line, Calif.

Location.--Lat 34°23'59", long 118°42'14", in San Francisco Grant, on downstream end of old diversion weir on right bank, 0.8 mile west of Los Angeles-Ventura County Line.

Drainage area.--644 sq mi.

Records available.--October 1952 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 794.93 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 11.5 cfs (8,330 acre-ft per year); median of yearly mean discharges, 6.0 cfs (4,300 acre-ft per year).

Extremes.--Maximum discharge during year, 32,000 cfs Dec. 29 (gage height, 11.50 ft), on basis of slope-area measurement of maximum flow; no flow Oct. 1 to Nov. 3, Nov. 6, 7, Sept. 4.  
1952-66: Maximum discharge, that of Dec. 29, 1965; no flow at times in some years.

Remarks.--Records fair except those above 1,000 cfs, which are poor. No regulation above station. Flow affected by pumping from wells along stream for irrigation.

Cooperation.--Water-stage recorder graph and 44 discharge measurements furnished by Ventura County Flood Control District; 15 discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|------|----------|---------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     |      | 0        | 7.6     | 142   | 27    | 16    | 7.6   | 4.6  | 2.4   | 1.0   | 0.80  | 0.10  |
| 2     |      | 0        | 7.2     | 130   | 24    | 16    | 7.2   | 4.3  | 2.4   | .90   | .80   | .30   |
| 3     |      | 0        | 7.2     | 98    | 20    | 16    | 7.2   | 4.0  | 2.4   | .70   | .80   | .20   |
| 4     |      | .10      | 6.8     | 72    | 25    | 16    | 7.6   | 3.4  | 2.0   | .70   | .70   | 0     |
| 5     |      | .10      | 6.4     | 54    | 25    | 17    | 7.6   | 3.1  | 1.4   | .70   | .70   | .30   |
| 6     |      | 0        | 5.6     | 44    | 74    | 18    | 6.8   | 3.1  | 2.0   | .70   | .70   | .60   |
| 7     |      | 0        | 5.0     | 37    | 49    | 19    | 6.8   | 3.1  | 2.0   | .80   | .70   | .40   |
| 8     |      | .10      | 4.6     | 37    | 48    | 20    | 6.0   | 3.1  | 1.8   | .70   | .60   | .30   |
| 9     |      | .10      | 5.0     | 39    | 46    | 21    | 5.6   | 3.1  | 1.6   | .70   | .80   | .20   |
| 10    |      | .20      | 5.0     | 36    | 45    | 20    | 5.0   | 3.1  | 1.6   | .80   | .80   | .20   |
| 11    |      | .30      | 4.3     | 35    | 42    | 19    | 4.3   | 2.9  | 1.6   | .90   | .80   | .30   |
| 12    |      | .40      | 4.3     | 30    | 40    | 17    | 4.6   | 2.6  | 1.4   | 1.0   | .80   | .30   |
| 13    |      | .80      | 4.0     | 28    | 35    | 16    | 4.6   | 2.4  | 1.3   | 1.0   | .80   | .30   |
| 14    |      | 1.0      | 4.3     | 28    | 33    | 16    | 5.0   | 2.4  | 1.4   | .70   | .80   | .30   |
| 15    |      | 1.6      | 4.6     | 28    | 33    | 16    | 5.0   | 2.2  | 1.4   | .60   | .80   | .30   |
| 16    |      | 5.8      | 4.6     | 22    | 35    | 16    | 4.6   | 1.8  | 1.3   | .70   | .80   | .20   |
| 17    |      | 1,500    | 4.6     | 23    | 30    | 14    | 4.6   | 1.8  | 1.3   | .70   | .90   | .20   |
| 18    |      | 213      | 4.3     | 21    | 29    | 13    | 4.6   | 2.0  | 1.4   | .60   | 1.0   | .20   |
| 19    |      | 5.3      | 4.0     | 26    | 28    | 12    | 4.6   | 2.2  | 1.4   | .60   | .90   | .30   |
| 20    |      | 3.4      | 3.4     | 25    | 23    | 12    | 4.6   | 2.0  | 1.3   | .70   | .90   | .30   |
| 21    |      | 2.2      | 3.1     | 24    | 25    | 12    | 4.3   | 2.0  | 1.3   | .80   | .70   | .30   |
| 22    |      | 2,250    | 3.1     | 23    | 28    | 9.6   | 4.6   | 2.0  | 1.3   | .80   | .70   | .30   |
| 23    |      | 1,140    | 3.1     | 23    | 24    | 10    | 5.3   | 2.0  | 1.3   | .90   | .60   | .30   |
| 24    |      | 2,730    | 3.1     | 21    | 23    | 9.6   | 5.3   | 2.0  | 1.6   | .90   | .60   | .30   |
| 25    |      | 88       | 3.4     | 22    | 19    | 10    | 5.3   | 1.8  | 1.3   | .90   | .20   | .30   |
| 26    |      | 16       | 3.7     | 21    | 18    | 9.6   | 5.3   | 2.0  | 1.1   | 1.0   | .20   | .30   |
| 27    |      | 11       | 3.7     | 23    | 18    | 9.6   | 5.4   | 2.0  | 1.0   | 1.0   | .20   | .20   |
| 28    |      | 9.6      | 3.7     | 23    | 17    | 9.6   | 5.5   | 2.0  | 1.1   | 1.0   | .20   | .10   |
| 29    |      | 9.1      | 7.960   | 22    | ----- | 9.1   | 5.3   | 2.0  | 1.0   | 1.0   | .10   | .30   |
| 30    |      | 7.6      | 741     | 52    | ----- | 9.1   | 5.0   | 1.8  | 1.1   | 1.1   | .10   | .30   |
| 31    |      | -----    | 198     | 37    | ----- | 8.6   | ----- | 2.0  | ----- | 1.0   | .10   | ----- |
| Total | 0    | 7,995.70 | 9,028.7 | 1,246 | 883   | 4,368 | 16,52 | 788  | 455   | 25.60 | 19.60 | 8.00  |
| Mean  | 0    | 267      | 291     | 40.2  | 31.5  | 14.1  | 5.51  | 2.54 | 1.52  | 0.83  | 0.63  | 0.27  |
| Ac-ft | 0    | 15,860   | 17,910  | 2,470 | 1,750 | 866   | 328   | 156  | 90    | 51    | 39    | 16    |

Calendar year 1965 Max 7,960 Min 0 Mean 49.2 Ac-ft 35,610  
 Water year 1965-66 Max 7,960 Min 0 Mean 54.6 Ac-ft 39,540

Peak discharge (base, 750 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0430 | 10.80       | 8,300     | 12-29 | 1900 | 11.50       | 32,000    |
| 11-24 | 0900 | 10.73       | 11,500    |       |      |             |           |

11-1096. Piru Creek above Lake Piru, Calif.

Location.--Lat 34°31'40", long 118°45'21", in SE 1/4 sec. 10, T.5 N., R.18 W., on right bank at Blue Point, 1.0 mile downstream from Agua Blanca Creek, 4.6 miles upstream from Santa Felicia Dam, and 8.0 miles northeast of Piru.

Drainage area.--372 sq mi.

Records available.--October 1955 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,063.62 ft above mean sea level (levels by Ventura County Water Resources Division). Prior to May 11, 1966, graphic water-stage recorder.

Average discharge.--11 years, 39.4 cfs (28,520 acre-ft per year); median of yearly mean discharges, 14 cfs (10,100 acre-ft per year).

Extremes.--Maximum discharge during year, 9,000 cfs Dec. 29 (gage height, 10.1 ft, from floodmark), from rating curve extended as explained below; no flow Oct. 2, Oct. 20 to Nov. 13.  
1955-66: Maximum discharge, 12,200 cfs Feb. 10, 1962 (gage height, 12.20 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records good. No regulation or diversion above station.

Cooperation.--Nineteen discharge measurements furnished by the Ventura County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.      | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug.  | Sept. |
|-------|------|-----------|--------|--------|-------|-------|-------|------|-------|------|-------|-------|
| 1     | 0.10 | 0         | 165    | 726    | 89    | 64    | 36    | 16   | 11    | 2.0  | 1.0   | 0.40  |
| 2     | 0    | 0         | 151    | 503    | 83    | 63    | 36    | 16   | 11    | 2.0  | 1.0   | .40   |
| 3     | .10  | 0         | 141    | 388    | 76    | 58    | 35    | 16   | 10    | 1.8  | 1.2   | .30   |
| 4     | .10  | 0         | 121    | 329    | 72    | 54    | 33    | 15   | 9.7   | 1.6  | .90   | .70   |
| 5     | .10  | 0         | 105    | 273    | 70    | 52    | 31    | 15   | 9.2   | 1.8  | .70   | .30   |
| 6     | .10  | 0         | 92     | 231    | 177   | 53    | 31    | 15   | 8.8   | 1.6  | .60   | .20   |
| 7     | .10  | 0         | 84     | 210    | 195   | 52    | 30    | 15   | 8.5   | 1.6  | .60   | .30   |
| 8     | .10  | 0         | 80     | 192    | 131   | 51    | 29    | 15   | 9.0   | 1.4  | .60   | .20   |
| 9     | .10  | 0         | 78     | 175    | 115   | 50    | 29    | 17   | 9.0   | 1.2  | .60   | .20   |
| 10    | .10  | 0         | 77     | 165    | 107   | 49    | 29    | 20   | 8.2   | 1.2  | .60   | .20   |
| 11    | .10  | 0         | 72     | 155    | 103   | 48    | 28    | 19   | 6.7   | 1.1  | .60   | .20   |
| 12    | .10  | 0         | 77     | 141    | 99    | 48    | 27    | 18   | 5.7   | 1.1  | .70   | .30   |
| 13    | .10  | 0         | 76     | 129    | 94    | 48    | 26    | 16   | 5.2   | 1.1  | .60   | .40   |
| 14    | .10  | .10       | 74     | 123    | 92    | 46    | 26    | 15   | 4.6   | 1.2  | .60   | .50   |
| 15    | .10  | 64        | 71     | 115    | 90    | 45    | 25    | 15   | 4.0   | 1.2  | .50   | .40   |
| 16    | .10  | 862       | 65     | 105    | 86    | 44    | 24    | 14   | 3.7   | 1.2  | .50   | .40   |
| 17    | .10  | 2,170     | 65     | 92     | 84    | 44    | 24    | 14   | 3.7   | 1.1  | .40   | .40   |
| 18    | .10  | 856       | 59     | 90     | 83    | 43    | 24    | 13   | 3.5   | 1.1  | .40   | .50   |
| 19    | .10  | 406       | 55     | 89     | 82    | 42    | 24    | 12   | 3.1   | 1.0  | .30   | 1.3   |
| 20    | 0    | 188       | 53     | 88     | 80    | 41    | 23    | 12   | 3.2   | 1.0  | .40   | 1.9   |
| 21    | 0    | 109       | 53     | 86     | 74    | 40    | 23    | 12   | 3.0   | 1.1  | .40   | 1.5   |
| 22    | 0    | 1,090     | 53     | 84     | 72    | 39    | 22    | 12   | 2.7   | 1.1  | .40   | .90   |
| 23    | 0    | 2,480     | 51     | 83     | 71    | 39    | 21    | 12   | 2.4   | 1.1  | .40   | .50   |
| 24    | 0    | 3,870     | 49     | 82     | 70    | 39    | 21    | 12   | 2.4   | 1.0  | .40   | .40   |
| 25    | 0    | 1,150     | 48     | 80     | 70    | 39    | 20    | 12   | 2.3   | 1.0  | .20   | .50   |
| 26    | 0    | 690       | 48     | 78     | 70    | 39    | 20    | 12   | 2.4   | 1.0  | .20   | .90   |
| 27    | 0    | 462       | 48     | 77     | 70    | 40    | 20    | 12   | 2.5   | 1.1  | .10   | 1.1   |
| 28    | 0    | 288       | 45     | 77     | 69    | 41    | 19    | 12   | 2.1   | 1.1  | .10   | .80   |
| 29    | 0    | 220       | 3,950  | 76     | ----- | 42    | 18    | 12   | 2.0   | 1.3  | .30   | 1.6   |
| 30    | 0    | 173       | 1,990  | 137    | ----- | 39    | 17    | 12   | 2.0   | 1.5  | .30   | 2.4   |
| 31    | 0    | -----     | 912    | 97     | ----- | 37    | ----- | 12   | ----- | 1.3  | .40   | ----- |
| Total | 1.80 | 15,078.10 | 9,008  | 5,276  | 2,574 | 1,429 | 771   | 440  | 161.6 | 39.9 | 16.00 | 20.10 |
| Mean  | 0.06 | 503       | 291    | 170    | 91.9  | 46.1  | 25.7  | 14.2 | 5.38  | 1.29 | 0.52  | 0.67  |
| Ac-ft | 3.6  | 29,910    | 17,870 | 10,460 | 5,110 | 2,830 | 1,530 | 873  | 321   | 79   | 32    | 40    |

Calendar year 1965 Max 3,950 Min 0 Mean 77.6 Ac-ft 56,170  
Water year 1965-66 Max 3,950 Min 0 Mean 95.4 Ac-ft 69,060

Peak discharge (base, 800 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2330 | 7.15        | 3,550     | 12-29 | 1700 | 10.1        | 9,000     |
| 11-24 | 0930 | 9.80        | 8,400     |       |      |             |           |

## SANTA CLARA RIVER BASIN

11-1097, Lake Piru near Piru, Calif.

Location.--Lat 34°27'52", long 118°44'57", in Temescal Grant, at Santa Felicia Dam on Piru Creek, on left bank 1,000 ft upstream from left end of dam, 0.5 mile downstream from Santa Felicia Canyon, and 4.2 miles northeast of Piru, Ventura County.

Drainage area.--425 sq mi.

Records available.--May 1955 to September 1966.

Gage.--Staff gage read once daily. Datum of gage is mean sea level (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum.

Extremes.--Maximum contents observed during year, 57,576 acre-ft Mar. 15-22 (elevation, 1,014.45 ft); minimum contents, 5,866 acre-ft Nov. 14 (elevation, 926.75 ft).

1955-66: Maximum contents observed, 78,483 acre-ft May 19, 1958 (elevation, 1,035.30 ft); lake dry Oct. 25 to Nov. 20, 1961.

Remarks.--Lake is formed by earth-fill dam. Storage began May 20, 1955. Capacity table is based on surveys made in 1949 and 1956. Dead storage below two 24-inch sluice gates (elevation, 880.0 ft), 74 acre-ft, included in contents. Capacity below spillway level (elevation, 1,055.0 ft), 101,225 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use and irrigation on the Oxnard plain.

Cooperation.--Elevations furnished by United Water Conservation District.

Month-end elevation and contents, water year October 1965 to September 1966

| Date                    | Elevation<br>(feet)† | Contents<br>(acre-feet) | Change in contents<br>(acre-feet) |
|-------------------------|----------------------|-------------------------|-----------------------------------|
| Sept. 30.....           | 928.50               | 6,252                   | -                                 |
| Oct. 31.....            | 927.30               | 5,986                   | -266                              |
| Nov. 30.....            | 988.10               | 35,535                  | +29,549                           |
| Dec. 31.....            | 1,002.20             | 46,732                  | +11,197                           |
| Calendar year 1965..... | -                    | -                       | +40,735                           |
| Jan. 31.....            | 1,010.85             | 54,275                  | +7,543                            |
| Feb. 28.....            | 1,013.95             | 57,112                  | +2,837                            |
| Mar. 31.....            | 1,014.30             | 57,437                  | +325                              |
| Apr. 30.....            | 1,009.65             | 53,195                  | -4,242                            |
| May 31.....             | 997.45               | 42,829                  | -10,366                           |
| June 30.....            | 982.00               | 31,044                  | -11,785                           |
| July 31.....            | 961.45               | 17,956                  | -13,088                           |
| Aug. 31.....            | 953.25               | 13,940                  | -4,016                            |
| Sept. 30.....           | 952.45               | 13,587                  | -353                              |
| Water year 1965-66..... | -                    | -                       | + 7,335                           |

† Elevation at 0700 hours.



11-1098, Piru Creek below Santa Felicia Dam, Calif.

Location.--Lat 34°27'37", long 118°45'04", in Temescal Grant, on right bank 750 ft downstream from Santa Felicia Dam, 1 mile upstream from Lime Canyon, and 4 miles northeast of Piru, Ventura County.

Drainage area.--425 sq mi.

Records available.--October 1955 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 858.8 ft above mean sea level (levels by United Water Conservation District). Supplemental water-stage recorder at site 1½ miles downstream. Prior to May 10, 1966, graphic water-stage recorder.

Extremes.--Maximum daily discharge during year, 348 cfs Dec. 25-27; no flow Nov. 24-26, Jan. 2.

1955-66: Maximum discharge, 544 cfs Aug. 18, 1958 (gage height, 3.66 ft); no flow at times in most years.

Remarks.--Records good. Flow regulated by Lake Piru (see Sta.No. 1097). No diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.     | Jan.     | Feb.  | Mar.  | Apr.  | May    | June   | July   | Aug.    | Sept. |
|-------|-------|--------|----------|----------|-------|-------|-------|--------|--------|--------|---------|-------|
| 1     | 7.1   | 8.0    | 2.5      | 0.10     | 24    | 38    | 99    | 101    | 195    | 198    | 218     | 8.0   |
| 2     | 7.1   | 8.3    | 2.5      | 0        | 25    | 38    | 101   | 161    | 195    | 198    | 218     | 8.0   |
| 3     | 7.1   | 8.7    | 2.5      | 17       | 39    | 38    | 101   | 204    | 195    | 198    | 218     | 7.8   |
| 4     | 7.1   | 8.7    | 2.5      | 39       | 40    | 38    | 101   | 204    | 195    | 198    | 218     | 8.1   |
| 5     | 7.1   | 8.7    | 2.5      | 39       | 40    | 38    | 101   | 201    | 195    | 201    | 218     | 8.0   |
| 6     | 7.1   | 8.7    | 2.2      | 39       | 8.8   | 39    | 101   | 201    | 195    | 203    | 217     | 8.0   |
| 7     | 7.1   | 8.7    | 10       | 39       | 25    | 39    | 101   | 201    | 195    | 201    | 217     | 8.0   |
| 8     | 7.1   | 8.7    | 1.8      | 40       | 39    | 39    | 101   | 198    | 195    | 200    | 217     | 7.0   |
| 9     | 7.1   | 8.7    | 3.3      | 41       | 40    | 28    | 101   | 198    | 196    | 204    | 216     | 6.8   |
| 10    | 7.1   | 8.7    | 3.3      | 40       | 27    | 15    | 101   | 198    | 198    | 210    | 80      | 6.8   |
| 11    | 7.1   | 8.7    | 3.1      | 40       | 25    | 39    | 99    | 198    | 196    | 216    | 5.4     | 6.9   |
| 12    | 7.1   | 8.7    | 3.1      | 40       | 39    | 39    | 99    | 198    | 195    | 221    | 5.4     | 6.8   |
| 13    | 7.1   | 8.7    | 123      | 40       | 40    | 39    | 99    | 198    | 195    | 223    | 5.4     | 6.8   |
| 14    | 7.1   | 8.7    | 176      | 40       | 40    | 39    | 99    | 198    | 195    | 225    | 5.5     | 6.8   |
| 15    | 7.1   | 8.7    | 2.4      | 40       | 40    | 39    | 99    | 198    | 195    | 225    | 5.9     | 6.8   |
| 16    | 7.1   | 4.4    | 3.9      | 40       | 40    | 39    | 99    | 198    | 196    | 224    | 7.1     | 6.5   |
| 17    | 7.1   | .50    | 3.9      | 40       | 40    | 39    | 99    | 198    | 196    | 225    | 7.7     | 6.5   |
| 18    | 7.1   | .10    | 3.7      | 40       | 40    | 39    | 99    | 198    | 195    | 227    | 8.3     | 6.5   |
| 19    | 7.1   | .60    | 3.7      | 39       | 39    | 39    | 99    | 198    | 194    | 225    | 8.3     | 6.5   |
| 20    | 7.1   | .40    | 39       | 38       | 39    | 39    | 99    | 198    | 195    | 226    | 8.3     | 6.6   |
| 21    | 7.1   | .80    | 340      | 38       | 39    | 39    | 99    | 198    | 196    | 227    | 8.3     | 6.5   |
| 22    | 7.1   | .60    | 340      | 38       | 39    | 62    | 99    | 195    | 195    | 226    | 8.3     | 6.5   |
| 23    | 7.1   | .10    | 340      | 38       | 39    | 40    | 99    | 195    | 195    | 226    | 7.8     | 6.2   |
| 24    | 7.1   | 0      | 344      | 38       | 39    | 40    | 99    | 198    | 194    | 226    | 6.2     | 6.3   |
| 25    | 7.4   | 0      | 248      | 38       | 39    | 40    | 101   | 198    | 195    | 213    | 5.9     | 6.4   |
| 26    | 7.4   | 0      | 348      | 38       | 38    | 38    | 101   | 195    | 195    | 215    | 7.1     | 6.5   |
| 27    | 7.4   | .10    | 348      | 39       | 38    | 38    | 101   | 198    | 195    | 215    | 7.7     | 6.2   |
| 28    | 7.1   | 1.6    | 264      | 39       | 38    | 36    | 101   | 198    | 195    | 216    | 7.7     | 5.8   |
| 29    | 7.4   | 2.5    | 12       | 38       | ----- | 36    | 101   | 195    | 196    | 217    | 7.7     | 4.8   |
| 30    | 7.7   | 2.5    | .10      | 14       | ----- | 78    | 101   | 195    | 198    | 217    | 7.6     | 4.8   |
| 31    | 7.7   | -----  | .10      | 22       | ----- | 99    | ----- | 195    | -----  | 217    | 7.6     | ----- |
| Total | 222.5 | 143.60 | 3,069.20 | 1,071.10 | 998.8 | 1,286 | 3,000 | 6,007  | 5,860  | 6,663  | 2,186.2 | 203.2 |
| Mean  | 7.18  | 4.79   | 99.0     | 34.6     | 35.7  | 41.5  | 100   | 194    | 195    | 215    | 70.5    | 6.77  |
| Ac-ft | 441   | 285    | 6,090    | 2,120    | 1,980 | 2,550 | 5,950 | 11,910 | 11,620 | 13,220 | 4,340   | 403   |

Calendar year 1965 Max 348 Min 0 Mean 21.4 Ac-ft 15,480

Water year 1965-66 Max 348 Min 0 Mean 84.1 Ac-ft 60,910

## SANTA CLARA RIVER BASIN

11-1105. Hopper Creek near Piru, Calif.

Location.--Lat 34°24'03", long 118°49'32", in NE¼NE¼SW¼ sec.25, T.4 N., R.19 W., on downstream end of center pier of bridge on State Highway 126, 1 mile upstream from mouth and 2.1 miles southwest of Piru.

Drainage area.--23.6 sq mi.

Records available.--October 1930 to September 1932, October 1933 to September 1936, October 1937 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 590 ft (from topographic map).

Average discharge.--3½ years, 4.69 cfs (3,400 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 3,090 cfs Dec. 29 (gage height, 6.43 ft), from rating curve extended above 700 cfs on basis of slope-area measurement at gage height 6.28 ft; no flow for much of year.

1930-32, 1933-36, 1937-66: Maximum discharge, 8,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow for several months in most years.

Remarks.--Records good. No regulation above station. Some pumping along stream for irrigation.

Cooperation.--Water-stage recorder graph and 37 discharge measurements furnished by Ventura County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar. | Apr.  | May  | June | July | Aug. | Sept. |
|-------|------|---------|---------|-------|-------|------|-------|------|------|------|------|-------|
| 1     |      | 0       | 5.7     | 18    | 6.2   | 3.5  | 2.0   | 0.40 | 0.10 |      |      |       |
| 2     |      | 0       | 5.7     | 16    | 5.7   | 3.5  | 2.0   | .40  | .10  |      |      |       |
| 3     |      | 0       | 5.7     | 14    | 5.3   | 3.2  | 1.8   | .30  | .10  |      |      |       |
| 4     |      | 0       | 5.3     | 13    | 4.5   | 3.2  | 1.6   | .30  | 0    |      |      |       |
| 5     |      | 0       | 4.9     | 12    | 4.1   | 3.2  | 1.5   | .30  | 0    |      |      |       |
| 6     |      | 0       | 4.1     | 11    | 7.0   | 3.2  | 1.5   | .20  | 0    |      |      |       |
| 7     |      | 0       | 3.5     | 10    | 18    | 3.2  | 1.4   | .20  | 0    |      |      |       |
| 8     |      | 0       | 3.2     | 9.6   | 9.0   | 3.2  | 1.4   | .20  | 0    |      |      |       |
| 9     |      | 0       | 4.1     | 9.0   | 6.2   | 3.2  | 1.4   | .30  | 0    |      |      |       |
| 10    |      | 0       | 3.8     | 8.4   | 4.9   | 3.2  | 1.4   | .40  | 0    |      |      |       |
| 11    |      | 0       | 3.2     | 7.8   | 4.1   | 3.5  | 1.4   | .30  | 0    |      |      |       |
| 12    |      | 0       | 4.5     | 7.8   | 3.8   | 3.5  | 1.4   | .20  | 0    |      |      |       |
| 13    |      | 0       | 4.5     | 7.8   | 3.8   | 3.5  | 1.4   | .20  | 0    |      |      |       |
| 14    |      | 0       | 6.2     | 7.2   | 3.8   | 3.5  | 1.2   | .20  | 0    |      |      |       |
| 15    |      | 4.5     | 4.5     | 7.2   | 3.8   | 3.5  | 1.2   | .20  | 0    |      |      |       |
| 16    |      | 226     | 4.5     | 7.2   | 3.8   | 3.2  | 1.0   | .20  | 0    |      |      |       |
| 17    |      | 381     | 4.5     | 7.2   | 3.8   | 3.0  | 1.0   | .20  | 0    |      |      |       |
| 18    |      | 60      | 4.1     | 6.7   | 3.8   | 3.0  | 1.4   | .20  | 0    |      |      |       |
| 19    |      | 17      | 4.1     | 6.7   | 3.8   | 3.0  | 1.4   | .10  | 0    |      |      |       |
| 20    |      | 3.8     | 3.8     | 6.7   | 3.8   | 3.0  | 1.2   | .10  | 0    |      |      |       |
| 21    |      | 1.6     | 3.8     | 6.2   | 3.5   | 3.0  | 1.2   | .10  | 0    |      |      |       |
| 22    |      | 429     | 3.8     | 6.2   | 3.5   | 2.7  | 1.0   | .10  | 0    |      |      |       |
| 23    |      | 238     | 3.8     | 6.2   | 3.5   | 2.4  | .90   | .10  | 0    |      |      |       |
| 24    |      | 443     | 3.5     | 6.2   | 3.5   | 2.7  | .80   | 0    | 0    |      |      |       |
| 25    |      | 17      | 3.5     | 5.7   | 3.5   | 3.0  | .80   | 0    | 0    |      |      |       |
| 26    |      | 15      | 3.5     | 5.3   | 3.5   | 3.0  | .70   | .10  | 0    |      |      |       |
| 27    |      | 12      | 3.2     | 5.3   | 3.5   | 2.7  | .70   | .10  | 0    |      |      |       |
| 28    |      | 8.4     | 3.2     | 4.9   | 3.5   | 2.7  | .60   | .10  | 0    |      |      |       |
| 29    |      | 6.2     | 1.110   | 4.9   | 2.7   | 2.7  | .60   | .10  | 0    |      |      |       |
| 30    |      | 5.7     | 70      | 4.4   | 2.4   | 2.4  | .60   | .10  | 0    |      |      |       |
| 31    |      |         | 20      | 11    | 2.2   | 2.2  |       | .10  |      |      |      |       |
| Total | 0    | 1,908.7 | 1,318.2 | 2,992 | 2,002 | 948  | 36.50 | 5.80 | 0.30 | 0    | 0    | 0     |
| Mean  | 0    | 63.6    | 42.5    | 96.5  | 71.5  | 30.6 | 1.22  | 0.19 | 0.01 | 0    | 0    | 0     |
| Ac-ft | 0    | 3,790   | 2,610   | 593   | 397   | 188  | 72    | 12   | 0.6  | 0    | 0    | 0     |

Calendar year 1965 Max 1.110 Min 0 Mean 10.0 Ac-ft 7.280

Water year 1965-66 Max 1.110 Min 0 Mean 10.6 Ac-ft 7.660

Peak discharge (base, 90 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2130 | 4.50        | 852       | 12-29 | 1530 | 6.43        | 3,000     |
| 11-24 | 0500 | 6.28        | 2,690     | 2-6   | 1130 | 3.48        | 170       |

11-1115, Sespe Creek near Wheeler Springs, Calif.

Location.--Lat 34°34'40", long 119°15'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 30, T.6 N., R.22 W., on right bank at Sespe Gorge, 1.6 miles upstream from Tule Creek, 5 miles upstream from Cold Springs damsite, and 5 miles northeast of Wheeler Springs.

Drainage area.--49.5 sq mi.

Records available.--January 1948 to September 1966. Monthly discharge only for January to July 1948 and yearly estimate for water year 1948 (incomplete), published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Datum of gage is 3,500.65 ft above mean sea level (levels by Ventura County Water Resources Division).

Average discharge.--19 years (1947-66), 8.02 cfs (5,810 acre-ft per year); median of yearly mean discharges, 2.5 cfs (1,800 acre-ft per year).

Extremes.--Maximum discharge during year, 3,320 cfs Dec. 29 (gage height, 9.42 ft); minimum daily, 0.10 cfs Oct. 1 to Nov. 8. 1948-66: Maximum discharge, about 3,800 cfs Feb. 10, 1962 (gage height, 10.6 ft, from floodmarks), on basis of field estimate of maximum flow; no flow for many days in most years.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of water temperatures for the water 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|------|----------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 0.10 | 0.10     | 30    | 90    | 20    | 10    | 5.6   | 3.0  | 2.3   | 0.80  | 1.8   | 0.30  |
| 2     | .10  | .10      | 27    | 80    | 19    | 10    | 5.3   | 3.0  | 2.2   | .80   | 1.3   | .30   |
| 3     | .10  | .10      | 24    | 70    | 19    | 9.6   | 5.3   | 3.0  | 2.0   | .80   | 1.0   | .30   |
| 4     | .10  | .10      | 22    | 65    | 19    | 9.2   | 5.3   | 3.0  | 2.0   | .80   | .90   | .30   |
| 5     | .10  | .10      | 21    | 60    | 20    | 9.2   | 5.3   | 3.2  | 2.0   | .80   | .70   | .30   |
| 6     | .10  | .10      | 20    | 54    | 88    | 8.8   | 5.3   | 3.2  | 2.0   | .80   | .60   | .30   |
| 7     | .10  | .10      | 19    | 47    | 52    | 8.8   | 5.3   | 3.2  | 2.2   | .80   | .60   | .30   |
| 8     | .10  | .10      | 17    | 43    | 36    | 8.5   | 5.3   | 3.4  | 2.2   | .80   | .60   | .30   |
| 9     | .10  | .20      | 17    | 39    | 30    | 8.5   | 5.0   | 3.6  | 2.2   | .80   | .50   | .30   |
| 10    | .10  | .20      | 16    | 35    | 28    | 8.2   | 5.0   | 3.6  | 2.0   | .80   | .50   | .30   |
| 11    | .10  | .20      | 16    | 32    | 24    | 8.2   | 5.0   | 3.4  | 1.9   | .80   | .50   | .30   |
| 12    | .10  | .20      | 18    | 29    | 23    | 8.2   | 5.0   | 3.0  | 1.6   | .80   | .50   | .30   |
| 13    | .10  | .20      | 16    | 27    | 21    | 8.2   | 4.7   | 3.0  | 1.5   | .80   | .50   | .30   |
| 14    | .10  | 3.6      | 15    | 25    | 20    | 8.2   | 4.7   | 3.0  | 1.4   | .70   | .50   | .30   |
| 15    | .10  | 23       | 14    | 24    | 19    | 7.8   | 4.4   | 3.0  | 1.4   | .70   | .40   | .30   |
| 16    | .10  | 400      | 14    | 22    | 17    | 7.4   | 4.4   | 2.8  | 1.3   | .70   | .40   | .30   |
| 17    | .10  | 495      | 12    | 21    | 17    | 7.4   | 4.4   | 2.8  | 1.3   | .70   | .40   | .30   |
| 18    | .10  | 175      | 12    | 20    | 16    | 7.1   | 4.4   | 2.7  | 1.3   | .60   | .40   | .30   |
| 19    | .10  | 100      | 11    | 20    | 15    | 7.1   | 4.4   | 2.5  | 1.2   | .60   | .40   | .30   |
| 20    | .10  | 50       | 11    | 19    | 15    | 7.1   | 4.2   | 2.5  | 1.1   | .60   | .40   | .30   |
| 21    | .10  | 25       | 11    | 19    | 14    | 7.1   | 3.9   | 2.5  | 1.0   | .60   | .40   | .30   |
| 22    | .10  | 589      | 12    | 18    | 14    | 7.1   | 3.9   | 2.5  | 1.0   | .50   | .40   | .30   |
| 23    | .10  | 534      | 11    | 17    | 13    | 7.1   | 3.6   | 2.5  | 1.0   | .50   | .40   | .30   |
| 24    | .10  | 1,050    | 11    | 17    | 12    | 7.1   | 3.4   | 2.3  | 1.0   | .50   | .40   | .30   |
| 25    | .10  | 176      | 11    | 16    | 11    | 7.1   | 3.4   | 2.3  | .90   | .50   | .40   | .30   |
| 26    | .10  | 97       | 11    | 16    | 11    | 7.1   | 3.4   | 2.2  | .80   | .40   | .40   | .30   |
| 27    | .10  | 65       | 10    | 16    | 10    | 7.1   | 3.4   | 2.2  | .80   | .40   | .40   | .30   |
| 28    | .10  | 52       | 11    | 16    | 10    | 7.1   | 3.4   | 2.2  | .80   | .40   | .40   | .30   |
| 29    | .10  | 43       | 1,650 | 16    | ----- | 6.8   | 3.2   | 2.3  | .80   | .40   | .40   | .30   |
| 30    | .10  | 37       | 460   | 21    | ----- | 6.4   | 3.2   | 2.3  | .80   | .40   | .30   | .30   |
| 31    | .10  | -----    | 100   | 20    | ----- | 6.0   | ----- | 2.3  | ----- | .40   | .30   | ----- |
| Total | 3.10 | 3,916.40 | 2,650 | 1,014 | 613   | 2,435 | 1,331 | 865  | 44.00 | 20.00 | 17.10 | 9.00  |
| Mean  | 0.10 | 131      | 85.5  | 32.7  | 21.9  | 78.5  | 44.4  | 27.9 | 1.47  | 0.65  | 0.55  | 0.30  |
| Ac-ft | 6.1  | 7,770    | 5,260 | 2,010 | 1,220 | 483   | 264   | 172  | 87    | 40    | 34    | 18    |

Calendar year 1965 Max 1.650 Min 0.10 Mean 20.0 Ac-ft 14,480  
 Water year 1965-66 Max 1.650 Min 0.10 Mean 24.0 Ac-ft 17,350

Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2400 | 8.48        | 1,840     | 12-29 | 1500 | 9.42        | 3,320     |
| 11-24 | 0230 | 9.10        | 2,940     | 2-6   | 1000 | 4.89        | 156       |

Note.--No gage-height record Nov. 19-21, Dec. 31 to Jan. 5, Feb. 23-27.

## SANTA CLARA RIVER BASIN

11-1130. Sespe Creek near Fillmore, Calif.

Location.--Lat 34°27'03", long 118°55'30", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.12, T.4 N., R.20 W., on right bank 0.1 mile downstream from Little Sespe Creek and 3.5 miles north of Fillmore.

Drainage area.--251 sq mi.

Records available.--September 1911 to September 1913, October 1927 to September 1966; combined records of creek and canal, October 1927 to September 1966. Published as "at Sespe," prior to 1935.

Gage.--Graphic water-stage recorder on creek; graphic water-stage recorder and Parshall flume on canal. Altitude of gage is 580 ft (from topographic map). Prior to Sept. 30, 1913, staff gage, and Oct. 1, 1927, to Nov. 4, 1934, graphic water-stage recorder, at site 3 miles downstream at different datum. Nov. 5, 1934, to Mar. 2, 1938, graphic water-stage recorder at same site at different datum (destroyed by flood; reestablished at present datum Feb. 2, 1939). Prior to Jan. 17, 1946, staff gage read once daily on Fillmore Irrigation Co.'s canal.

Average discharge (creek only).--41 years, 91.9 cfs (66,530 acre-ft per year); median of yearly mean discharges, 47 cfs (34,000 acre-ft per year).  
(combined).--39 years, 97.2 cfs (70,370 acre-ft per year); median of yearly mean discharges, 50 cfs (36,200 acre-ft per year).

Extremes (creek only).--Maximum discharge during year, 21,600 cfs Dec. 29 (gage height, 13.95 ft); minimum daily, 0.10 cfs Oct. 1-3, 20-30.  
1927-66; Maximum discharge, 56,000 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; no flow at times in some years.

(combined).--Maximum discharge during year, 21,600 cfs Dec. 29; minimum daily, 2.9 cfs Oct. 3, 24-27.  
1927-66; Maximum discharge, 56,000 cfs Mar. 2, 1938; minimum daily, 1.1 cfs July 31, Aug. 2, 1951.

Remarks.--Records good. No regulation above station. Fillmore Irrigation Co. has diverted water 1 mile upstream since September 1911. For records of combined discharge of Sespe Creek and Fillmore Irrigation Co.'s canal, see following page.

Cooperation.--One discharge measurement furnished by Ventura County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.      | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June   | July  | Aug. | Sept. |
|-------|------|-----------|--------|--------|-------|-------|-------|-------|--------|-------|------|-------|
| 1     | 0.10 | 0.20      | 298    | 950    | 174   | 93    | 45    | 22    | 10     | 0.80  | 0.30 | 0.20  |
| 2     | .10  | .20       | 264    | 752    | 168   | 91    | 44    | 22    | 9.6    | .80   | .30  | .20   |
| 3     | .10  | .20       | 242    | 655    | 156   | 89    | 44    | 22    | 9.2    | .80   | .30  | .20   |
| 4     | .20  | .20       | 222    | 544    | 153   | 87    | 42    | 22    | 8.8    | .60   | .30  | .20   |
| 5     | .20  | .20       | 207    | 484    | 150   | 85    | 41    | 22    | 8.4    | .60   | .30  | .20   |
| 6     | .20  | .20       | 195    | 448    | 424   | 83    | 40    | 20    | 8.0    | .60   | .30  | .20   |
| 7     | .20  | .20       | 186    | 405    | 375   | 81    | 39    | 20    | 7.2    | .60   | .30  | .20   |
| 8     | .20  | .20       | 177    | 375    | 266   | 80    | 39    | 20    | 6.9    | .60   | .30  | .20   |
| 9     | .20  | .20       | 174    | 335    | 242   | 78    | 40    | 20    | 7.2    | .50   | .30  | .20   |
| 10    | .20  | .20       | 171    | 306    | 201   | 76    | 40    | 20    | 6.9    | .50   | .30  | .20   |
| 11    | .20  | .20       | 162    | 278    | 186   | 74    | 38    | 22    | 6.6    | .50   | .30  | .20   |
| 12    | .20  | .20       | 168    | 250    | 174   | 71    | 41    | 22    | 6.0    | .50   | .30  | .20   |
| 13    | .20  | .20       | 162    | 226    | 165   | 71    | 36    | 22    | 5.8    | .50   | .30  | .20   |
| 14    | .20  | .16       | 156    | 214    | 156   | 69    | 33    | 22    | 5.0    | .40   | .30  | .20   |
| 15    | .20  | 390       | 148    | 204    | 148   | 69    | 31    | 22    | 4.5    | .40   | .30  | .20   |
| 16    | .20  | 3.800     | 142    | 195    | 142   | 68    | 31    | 21    | 4.2    | .40   | .30  | .20   |
| 17    | .20  | 6.130     | 138    | 183    | 138   | 65    | 31    | 20    | 4.0    | .40   | .30  | .20   |
| 18    | .20  | 2.500     | 132    | 180    | 132   | 60    | 30    | 19    | 3.8    | .40   | .30  | .20   |
| 19    | .20  | 1.050     | 128    | 171    | 130   | 59    | 29    | 19    | 3.4    | .30   | .30  | .20   |
| 20    | .10  | 295       | 125    | 168    | 125   | 58    | 29    | 17    | 3.2    | .30   | .30  | .20   |
| 21    | .10  | 122       | 123    | 162    | 121   | 58    | 29    | 14    | 4.2    | .30   | .30  | .20   |
| 22    | .10  | 4.900     | 121    | 156    | 114   | 56    | 28    | 14    | 1.7    | .30   | .30  | .20   |
| 23    | .10  | 4.740     | 116    | 153    | 112   | 55    | 28    | 14    | 1.6    | .30   | .30  | .20   |
| 24    | .10  | 9.540     | 112    | 148    | 107   | 53    | 27    | 14    | 1.5    | .30   | .30  | .20   |
| 25    | .10  | 2.100     | 112    | 142    | 105   | 53    | 26    | 14    | 1.4    | .30   | .30  | .20   |
| 26    | .10  | 1.040     | 110    | 140    | 101   | 52    | 24    | 14    | 1.3    | .30   | .20  | .20   |
| 27    | .10  | 664       | 107    | 138    | 99    | 51    | 22    | 14    | 1.2    | .30   | .20  | .20   |
| 28    | .10  | 502       | 107    | 135    | 95    | 51    | 22    | 14    | 1.0    | .30   | .20  | .20   |
| 29    | .10  | 405       | 11.900 | 130    | ----- | 48    | 22    | 13    | .90    | .30   | .20  | .80   |
| 30    | .10  | 340       | 3.790  | 269    | ----- | 46    | 22    | 12    | .80    | .30   | .20  | .80   |
| 31    | .20  | -----     | 1.430  | 218    | ----- | 45    | ----- | 10    | -----  | .30   | .20  | ----- |
| Total | 4.80 | 38.536.60 | 21.625 | 9.114  | 4.659 | 2.075 | 993   | 563   | 144.30 | 13.80 | 8.70 | 7.20  |
| Mean  | 0.15 | 1.285     | 698    | 294    | 166   | 66.9  | 33.1  | 18.2  | 4.81   | 0.45  | 0.28 | 0.24  |
| Ac-ft | 9.5  | 76.440    | 42.890 | 18.080 | 9.240 | 4.120 | 1.970 | 1.120 | 286    | 27    | 17   | 14    |

Calendar year 1965 Max 11.900 Min 0.10 Mean 190 Ac-ft 137.700  
Water year 1965-66 Max 11.900 Min 0.10 Mean 213 Ac-ft 154.200

Peak discharge (base, 1,300 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2300 | 10.89       | 11,600    | 12-29 | 1500 | 13.95       | 21,600    |
| 11-24 | 0600 | 13.40       | 19,600    |       |      |             |           |

11-1130. Sespe Creek near Fillmore, Calif.--Continued.

Combined discharge, in cubic feet per second, of Sespe Creek and Fillmore Irrigation Co.'s canal near Fillmore, Calif., water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|------|---------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| 1     | 3.1  | 3.2     | 298   | 950   | 174   | 96   | 54    | 30   | 20    | 9.9   | 6.6   | 5.8   |
| 2     | 3.0  | 3.3     | 264   | 752   | 158   | 94   | 53    | 31   | 20    | 9.8   | 6.5   | 5.9   |
| 3     | 2.9  | 3.3     | 242   | 655   | 156   | 92   | 53    | 31   | 19    | 9.7   | 6.4   | 5.9   |
| 4     | 3.0  | 3.3     | 222   | 544   | 153   | 90   | 51    | 32   | 19    | 9.4   | 6.3   | 5.5   |
| 5     | 3.1  | 3.3     | 207   | 484   | 150   | 88   | 50    | 32   | 18    | 9.2   | 6.2   | 5.4   |
| 6     | 3.2  | 3.3     | 195   | 448   | 424   | 86   | 49    | 30   | 18    | 9.0   | 6.1   | 5.5   |
| 7     | 3.3  | 3.3     | 186   | 405   | 375   | 84   | 48    | 27   | 17    | 8.8   | 6.1   | 5.5   |
| 8     | 3.4  | 3.6     | 177   | 375   | 266   | 83   | 47    | 28   | 17    | 8.6   | 6.1   | 5.4   |
| 9     | 3.5  | 3.6     | 174   | 335   | 242   | 82   | 47    | 28   | 17    | 8.3   | 6.1   | 5.1   |
| 10    | 3.5  | 3.6     | 171   | 306   | 201   | 80   | 47    | 28   | 17    | 8.0   | 6.1   | 5.1   |
| 11    | 3.5  | 3.6     | 162   | 278   | 186   | 79   | 45    | 30   | 17    | 7.9   | 6.1   | 5.2   |
| 12    | 3.4  | 3.6     | 168   | 251   | 174   | 77   | 46    | 30   | 16    | 7.8   | 6.1   | 5.3   |
| 13    | 3.5  | 3.7     | 162   | 227   | 166   | 77   | 44    | 30   | 15    | 7.8   | 6.0   | 5.3   |
| 14    | 3.6  | 19      | 156   | 215   | 156   | 75   | 42    | 29   | 14    | 7.7   | 6.0   | 5.3   |
| 15    | 3.6  | 392     | 148   | 205   | 148   | 76   | 41    | 29   | 14    | 7.6   | 5.9   | 5.1   |
| 16    | 3.5  | 3800    | 142   | 196   | 142   | 75   | 41    | 28   | 14    | 7.3   | 5.7   | 5.0   |
| 17    | 3.5  | 6130    | 138   | 184   | 138   | 72   | 40    | 28   | 13    | 7.2   | 5.6   | 5.0   |
| 18    | 3.5  | 2500    | 132   | 181   | 132   | 69   | 40    | 26   | 13    | 7.1   | 5.6   | 5.1   |
| 19    | 3.5  | 1050    | 128   | 172   | 130   | 70   | 38    | 27   | 12    | 7.0   | 5.6   | 5.8   |
| 20    | 3.3  | 296     | 125   | 169   | 125   | 68   | 38    | 26   | 12    | 7.0   | 5.6   | 6.1   |
| 21    | 3.2  | 123     | 123   | 163   | 121   | 69   | 38    | 23   | 12    | 6.9   | 5.7   | 6.0   |
| 22    | 3.1  | 4900    | 121   | 157   | 114   | 66   | 36    | 22   | 12    | 6.9   | 5.9   | 5.5   |
| 23    | 3.0  | 4740    | 116   | 154   | 113   | 66   | 36    | 22   | 11    | 6.5   | 5.7   | 5.3   |
| 24    | 2.9  | 9540    | 112   | 149   | 110   | 65   | 36    | 22   | 11    | 6.4   | 5.5   | 5.2   |
| 25    | 2.9  | 2100    | 112   | 143   | 108   | 64   | 35    | 22   | 11    | 6.4   | 5.4   | 5.1   |
| 26    | 2.9  | 1040    | 110   | 141   | 104   | 62   | 35    | 22   | 11    | 6.4   | 5.2   | 5.2   |
| 27    | 2.9  | 664     | 107   | 139   | 102   | 61   | 33    | 22   | 11    | 6.4   | 5.3   | 5.3   |
| 28    | 3.0  | 502     | 107   | 136   | 98    | 61   | 33    | 22   | 10    | 6.5   | 5.4   | 5.0   |
| 29    | 3.0  | 405     | 11900 | 130   | ----- | 57   | 34    | 20   | 10    | 6.6   | 5.5   | 5.9   |
| 30    | 3.0  | 340     | 3790  | 269   | ----- | 55   | 32    | 21   | 9.9   | 6.9   | 5.5   | 6.5   |
| 31    | 3.1  | -----   | 1430  | 218   | ----- | 54   | ----- | 20   | ----- | 6.7   | 5.6   | ----- |
| Total | 99.9 | 38585.7 | 21625 | 9131  | 4676  | 2293 | 1262  | 818  | 430.9 | 237.7 | 181.4 | 163.3 |
| Mean  | 3.22 | 1286    | 698   | 295   | 167   | 74.0 | 42.1  | 26.4 | 14.4  | 7.67  | 5.85  | 5.44  |
| Ac-ft | 198  | 76530   | 42890 | 18110 | 9270  | 4550 | 2500  | 1620 | 855   | 471   | 360   | 324   |

Calendar year 1965 Max 11900 Min 2.8 Mean 194 Ac-ft 140600  
 Water year 1965-66 Max 11900 Min 2.9 Mean 218 Ac-ft 157700

Peak discharge (base, 1,300 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2300 |             | 11,600    | 12-29 | 1500 |             | 21,600    |
| 11-24 | 0600 |             | 19,600    |       |      |             |           |

## SANTA CLARA RIVER BASIN

11-1135, Santa Paula Creek near Santa Paula, Calif.

Location.---Lat 34°23'44", long 119°04'32", in NW 1/4 SW 1/4 sec. 27, T.4 N., R.21 W., on right bank 15 ft upstream from Santa Paula Water Works diversion dam, 200 ft upstream from Mud Creek, and 3 miles north of Santa Paula.

Drainage area.---40.0 sq mi.

Records available.---October 1927 to September 1966. March 1912 to September 1913, at site 2.5 miles upstream; records not equivalent.

Gage.---Digital water-stage recorder and concrete diversion dam control. Altitude of gage is 650 ft (from topographic map). Oct. 1, 1927, to Feb. 19, 1931, at site 500 ft downstream at different datum. Feb. 20, 1931, to Dec. 5, 1963, at same site and datum. Dec. 6, 1963, to July 29, 1965, at site 50 ft upstream at same datum. Prior to Aug. 8, 1962, graphic water-stage recorder.

Average discharge.---39 years, 18.0 cfs (13,030 acre-ft per year); median of yearly mean discharges, 8.6 cfs (6,200 acre-ft per year).

Extremes.---Maximum discharge during year, 6,480 cfs Nov. 24 (gage height, 7.49 ft), from rating curve extended as explained below;

minimum daily, 0.10 cfs Oct. 1, 2.

1927-66: Maximum discharge, 13,500 cfs Mar. 2, 1938 (gage height, 10.56 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurement of maximum flow; no flow at times in 1949, 1951-52, 1965.

Remarks.---Records good except those for period of no gage-height record, which are poor. No regulation above station. Diversion above station for irrigation of about 60 acres by Santa Paula Water Works began prior to October 1927; 373 acre-ft was diverted during year.

Cooperation.---Record of diversion furnished by Santa Paula Water Works.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 0.10  | 0.50     | 69    | 196   | 41    | 28    | 13    | 10    | 7.3   | 3.5   | 2.6  | 2.8   |
| 2     | .10   | .40      | 60    | 171   | 39    | 30    | 13    | 9.1   | 6.8   | 3.5   | 2.3  | 2.7   |
| 3     | .60   | .40      | 56    | 157   | 37    | 29    | 14    | 9.1   | 6.2   | 3.5   | 2.4  | 2.5   |
| 4     | .80   | .40      | 51    | 141   | 36    | 28    | 13    | 10    | 5.9   | 3.5   | 2.4  | 2.5   |
| 5     | .80   | .40      | 41    | 138   | 36    | 27    | 13    | 10    | 5.5   | 3.5   | 2.3  | 2.6   |
| 6     | .40   | .40      | 37    | 126   | 89    | 26    | 13    | 10    | 5.2   | 3.5   | 2.1  | 3.2   |
| 7     | .30   | .60      | 36    | 105   | 64    | 25    | 12    | 10    | 5.0   | 3.5   | 2.2  | 2.6   |
| 8     | .50   | .50      | 35    | 97    | 53    | 25    | 13    | 11    | 5.5   | 3.5   | 2.1  | 2.0   |
| 9     | .50   | .60      | 34    | 87    | 47    | 25    | 13    | 13    | 5.3   | 3.5   | 2.1  | 1.9   |
| 10    | 1.1   | .60      | 32    | 79    | 43    | 23    | 13    | 12    | 5.2   | 3.5   | 2.1  | 2.0   |
| 11    | 1.2   | .60      | 31    | 71    | 40    | 22    | 13    | 10    | 5.0   | 3.2   | 2.0  | 2.1   |
| 12    | 1.2   | 1.0      | 31    | 66    | 38    | 22    | 12    | 9.1   | 4.7   | 3.2   | 2.1  | 2.4   |
| 13    | 1.2   | 1.1      | 32    | 59    | 37    | 22    | 13    | 8.4   | 4.7   | 3.2   | 2.2  | 2.3   |
| 14    | 1.3   | 1.8      | 34    | 62    | 36    | 22    | 13    | 8.7   | 4.1   | 3.2   | 2.1  | 2.2   |
| 15    | 1.2   | 3.7      | 32    | 60    | 32    | 22    | 13    | 8.7   | 5.0   | 3.2   | 2.0  | 2.1   |
| 16    | 1.2   | 206      | 29    | 55    | 30    | 21    | 12    | 8.7   | 5.0   | 3.2   | 1.9  | 2.0   |
| 17    | 1.2   | 571      | 23    | 58    | 29    | 20    | 13    | 8.4   | 5.6   | 3.2   | 1.9  | 1.8   |
| 18    | 1.2   | 224      | 22    | 57    | 28    | 19    | 14    | 8.0   | 5.2   | 3.2   | 1.9  | 2.0   |
| 19    | 1.1   | 107      | 21    | 58    | 27    | 19    | 14    | 7.6   | 5.4   | 3.2   | 2.0  | 1.7   |
| 20    | .80   | 55       | 21    | 59    | 27    | 19    | 14    | 7.6   | 5.3   | 3.2   | 2.1  | 1.6   |
| 21    | .50   | 38       | 20    | 57    | 28    | 18    | 13    | 8.0   | 4.0   | 3.0   | 2.4  | 1.6   |
| 22    | .50   | 601      | 20    | 57    | 30    | 18    | 14    | 8.7   | 3.7   | 3.0   | 2.4  | 1.5   |
| 23    | .60   | 669      | 23    | 56    | 30    | 18    | 14    | 8.4   | 3.7   | 3.0   | 2.3  | 1.5   |
| 24    | .60   | 2,020    | 27    | 55    | 30    | 17    | 14    | 8.0   | 4.0   | 3.0   | 2.2  | 1.6   |
| 25    | .60   | 367      | 27    | 55    | 29    | 18    | 14    | 7.6   | 3.9   | 3.0   | 2.1  | 1.7   |
| 26    | .60   | 209      | 28    | 54    | 29    | 17    | 15    | 8.4   | 4.2   | 3.0   | 2.1  | 1.8   |
| 27    | .60   | 148      | 24    | 51    | 28    | 17    | 15    | 8.4   | 3.4   | 3.0   | 2.1  | 1.8   |
| 28    | .70   | 110      | 23    | 47    | 27    | 17    | 16    | 8.0   | 3.4   | 3.0   | 2.3  | 1.6   |
| 29    | .70   | 86       | 1,740 | 46    | ----- | 15    | 13    | 8.4   | 3.0   | 3.1   | 2.2  | 1.8   |
| 30    | .70   | 79       | 633   | 75    | ----- | 14    | 11    | 8.7   | 3.1   | 3.3   | 2.3  | 2.2   |
| 31    | .80   | -----    | 284   | 42    | ----- | 13    | ----- | 7.6   | ----- | 3.3   | 2.5  | ----- |
| TOTAL | 23.70 | 5,503.00 | 3,576 | 2,497 | 1,040 | 656   | 400   | 279.6 | 144.3 | 100.7 | 67.7 | 62.1  |
| MEAN  | .77   | 183      | 115   | 80.5  | 37.1  | 21.2  | 13.3  | 9.02  | 4.81  | 3.25  | 2.18 | 2.07  |
| AC-FT | 47    | 10,920   | 7,090 | 4,950 | 2,060 | 1,300 | 793   | 555   | 286   | 200   | 134  | 123   |

CALENDAR YEAR 1965 MAX 2,020 MIN .10 MEAN 30.3 AC-FT 21,910  
 WATER YEAR 1965-66 MAX\* 2,020 MIN .10 MEAN 39.3 AC-FT 28,460

## Peak discharge (base, 200 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2400 | 3.75        | 810       | 12-29 | 1530 | 7.28        | 6,060     |
| 11-24 | 0445 | 7.49        | 6,480     |       |      |             |           |

Note,---No gage-height record July 1-28.

11-1145. Matilija Creek above reservoir, near Matilija Hot Springs, Calif.

Location.--Lat 34°29'41", long 119°19'48", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.19, T.5 N., R.23 W., on left bank 1.6 miles upstream from Matilija Dam and 1.7 miles northwest of Matilija Hot Springs.

Drainage area.--50.7 sq mi.

Records available.--May 1948 to September 1966. Published as "near Matilija" prior to October 1953.

Gage.--Digital water-stage recorder. Datum of gage is 1,160.20 ft above mean sea level (levels by Ventura County Water Resources Division). Prior to Feb. 16, 1965, graphic water-stage recorder.

Average discharge.--18 years, 20.4 cfs (14,770 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

Extremes.--Maximum discharge during year, 5,540 cfs Dec. 29 (gage height, 9.89 ft); minimum daily, 1.2 cfs Oct. 23.  
1948-66; Maximum discharge, 8,800 cfs Jan. 15, 1952 (gage height, 12.1 ft), from rating curve extended above 5,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.30 cfs Oct. 17-20, 25, 27, 1951.

Remarks.--Records good. No regulation or diversion above station.

Cooperation.--Forty-six discharge measurements furnished by Ventura County Flood Control District; two discharge measurements furnished by Ventura River Municipal Water District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 1.3  | 1.5     | 100    | 710   | 51    | 36    | 22    | 12    | 9.7   | 5.6   | 3.5   | 3.1   |
| 2     | 1.3  | 1.5     | 90     | 597   | 50    | 35    | 21    | 12    | 9.6   | 5.5   | 3.5   | 3.2   |
| 3     | 1.3  | 1.5     | 80     | 250   | 47    | 34    | 21    | 13    | 9.1   | 5.3   | 3.4   | 3.0   |
| 4     | 1.3  | 1.4     | 79     | 207   | 44    | 33    | 21    | 13    | 8.4   | 5.2   | 3.7   | 3.0   |
| 5     | 1.3  | 1.4     | 74     | 190   | 44    | 32    | 19    | 13    | 8.0   | 5.1   | 3.6   | 3.0   |
| 6     | 1.3  | 1.5     | 71     | 176   | 78    | 32    | 19    | 13    | 7.7   | 5.1   | 3.9   | 3.1   |
| 7     | 1.4  | 1.6     | 70     | 157   | 67    | 31    | 20    | 12    | 7.5   | 5.0   | 4.0   | 3.1   |
| 8     | 1.5  | 1.6     | 70     | 150   | 56    | 31    | 20    | 12    | 7.7   | 5.0   | 4.3   | 3.0   |
| 9     | 1.6  | 1.6     | 71     | 138   | 53    | 31    | 21    | 13    | 7.9   | 4.9   | 4.0   | 2.9   |
| 10    | 1.7  | 1.7     | 68     | 131   | 50    | 30    | 20    | 14    | 7.6   | 4.6   | 3.6   | 2.9   |
| 11    | 1.6  | 1.7     | 65     | 124   | 49    | 30    | 20    | 14    | 7.6   | 4.6   | 3.3   | 3.0   |
| 12    | 1.5  | 1.6     | 68     | 111   | 48    | 29    | 20    | 13    | 7.2   | 4.6   | 3.3   | 3.1   |
| 13    | 1.5  | 1.6     | 62     | 105   | 47    | 29    | 19    | 12    | 7.3   | 4.6   | 3.2   | 3.0   |
| 14    | 1.6  | 3.1     | 55     | 101   | 46    | 28    | 18    | 13    | 7.1   | 4.5   | 3.2   | 3.0   |
| 15    | 1.7  | 6.1     | 58     | 97    | 45    | 28    | 17    | 13    | 7.0   | 4.5   | 3.2   | 3.0   |
| 16    | 1.7  | 800     | 55     | 82    | 44    | 28    | 16    | 13    | 7.0   | 4.6   | 3.3   | 3.0   |
| 17    | 1.5  | 970     | 53     | 82    | 42    | 28    | 17    | 13    | 6.9   | 4.5   | 3.4   | 2.9   |
| 18    | 1.5  | 370     | 50     | 78    | 42    | 27    | 16    | 12    | 6.9   | 4.1   | 3.4   | 3.0   |
| 19    | 1.4  | 185     | 48     | 74    | 41    | 27    | 16    | 12    | 6.5   | 4.2   | 3.4   | 3.2   |
| 20    | 1.3  | 126     | 46     | 69    | 39    | 26    | 16    | 12    | 6.4   | 4.2   | 3.5   | 3.2   |
| 21    | 1.3  | 85      | 43     | 67    | 37    | 26    | 15    | 12    | 6.4   | 4.0   | 3.2   | 3.1   |
| 22    | 1.3  | 723     | 35     | 59    | 37    | 26    | 15    | 10    | 6.3   | 3.9   | 3.2   | 3.0   |
| 23    | 1.2  | 944     | 36     | 57    | 37    | 26    | 14    | 10    | 6.1   | 3.8   | 3.0   | 2.9   |
| 24    | 1.4  | 1,820   | 42     | 56    | 36    | 25    | 14    | 10    | 6.1   | 3.7   | 2.9   | 2.7   |
| 25    | 1.4  | 533     | 40     | 54    | 36    | 26    | 13    | 10    | 6.1   | 3.5   | 2.9   | 2.7   |
| 26    | 1.4  | 312     | 41     | 50    | 36    | 25    | 13    | 10    | 6.1   | 3.5   | 2.7   | 2.9   |
| 27    | 1.4  | 216     | 39     | 49    | 35    | 25    | 13    | 10    | 6.0   | 3.7   | 2.8   | 2.9   |
| 28    | 1.5  | 178     | 40     | 47    | 34    | 25    | 14    | 10    | 5.7   | 3.7   | 2.9   | 2.8   |
| 29    | 1.7  | 144     | 2,890  | 46    | ----- | 24    | 14    | 10    | 5.7   | 3.8   | 2.8   | 3.0   |
| 30    | 1.7  | 122     | 1,290  | 95    | ----- | 23    | 13    | 9.9   | 5.7   | 3.9   | 2.8   | 3.1   |
| 31    | 1.8  | -----   | 844    | 58    | ----- | 23    | ----- | 9.3   | ----- | 3.6   | 3.1   | ----- |
| TOTAL | 45.4 | 7,557.4 | 6,673  | 4,267 | 1,271 | 879   | 517   | 365.2 | 213.3 | 136.8 | 103.0 | 89.8  |
| MEAN  | 1.47 | 252     | 215    | 138   | 45.4  | 28.4  | 17.2  | 11.8  | 7.11  | 4.41  | 3.32  | 2.99  |
| AC-FT | 90   | 14,990  | 13,240 | 8,460 | 2,520 | 1,740 | 1,030 | 724   | 423   | 271   | 204   | 178   |

CALENDAR YEAR 1965 MAX 2,890 MIN 1.2 MEAN 46.9 AC-FT 33,960  
WATER YEAR 1965-66 MAX 2,890 MIN 1.2 MEAN 60.6 AC-FT 43,870

Peak discharge (base, 200 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2345 | 8.10        | 3,990     | 12-29 | 0745 | 9.89        | 5,540     |
| 11-24 | 0330 | 9.09        | 4,390     |       |      |             |           |

11-1155. Matilija Creek at Matilija Hot Springs, Calif.

Location.--Lat 34°28'58", long 119°18'03", in SW 1/4 sec. 28, T.5 N., R.23 W., on right bank 0.2 mile east of Matilija Hot Springs, 0.2 mile upstream from North Fork, and 0.45 mile downstream from Matilija Dam.

Drainage area.--54.6 sq mi.

Records available.--October 1927 to September 1966. Combined monthly records for creek and diversion, May 1951 to September 1966. Prior to October 1953, published as "at Matilija."

Gage.--Graphic water-stage recorder. Altitude of gage is 900 ft (from topographic map). Prior to Feb. 11, 1939, at site 0.6 mile upstream at different datum.

Extremes.--Maximum discharge during year, 5,530 cfs Dec. 29 (gage height, 8.60 ft); minimum daily, 0.30 cfs Feb. 18-20, Feb. 26 to Mar. 1.

1927-66; Maximum discharge, 15,900 cfs Mar. 2, 1938, on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs for several days in some years of regulated flow.

Remarks.--Records good. Flow regulated March 1948 to March 1964 and partly regulated since March 1964; water diverted at dam by Matilija conduit to Ventura River basin and Ojai Valley for irrigation since May 1951. No diversion during year.

Cooperation.--Ten discharge measurements furnished by Ventura County Flood Control District; two discharge measurements furnished by Ventura River Municipal Water District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.    | Jan.  | Feb.     | Mar.   | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|-------|---------|---------|-------|----------|--------|-------|------|-------|-------|-------|-------|
| 1     | 1.0   | 1.2     | 19      | 710   | 163      | 0.30   | 5.8   | 14   | 11    | 5.4   | 4.3   | 2.9   |
| 2     | 1.0   | 1.6     | 21      | 600   | 164      | .60    | 5.8   | 14   | 11    | 5.4   | 4.0   | 3.0   |
| 3     | 1.0   | 1.6     | 49      | 250   | 58       | 31     | 5.8   | 14   | 11    | 5.4   | 3.7   | 3.0   |
| 4     | 1.1   | 1.7     | 190     | 250   | 63       | 40     | 5.8   | 14   | 11    | 5.4   | 3.7   | 3.0   |
| 5     | 1.1   | 1.7     | 154     | 250   | 63       | 39     | 7.2   | 13   | 11    | 5.4   | 3.7   | 3.0   |
| 6     | 1.1   | 1.7     | 46      | 250   | 150      | 35     | 8.7   | 13   | 11    | 5.4   | 3.5   | 3.0   |
| 7     | 1.1   | 1.6     | 9.9     | 150   | 161      | 17     | 15    | 13   | 9.3   | 5.4   | 3.4   | 3.0   |
| 8     | 1.2   | 1.4     | 8.2     | 10    | 64       | 5.2    | 16    | 13   | 9.0   | 5.4   | 3.3   | 3.0   |
| 9     | 1.2   | 1.4     | 88      | 25    | 64       | 3.5    | 16    | 13   | 8.5   | 5.4   | 3.3   | 3.3   |
| 10    | 1.2   | 1.4     | 218     | 95    | 62       | 3.5    | 20    | 14   | 8.0   | 5.4   | 3.3   | 2.9   |
| 11    | 1.2   | 1.4     | 224     | 95    | 162      | 3.5    | 16    | 14   | 7.7   | 5.4   | 3.7   | 3.0   |
| 12    | 1.2   | 1.2     | 115     | 95    | 133      | 3.5    | 17    | 14   | 7.7   | 5.4   | 3.7   | 3.6   |
| 13    | 1.3   | 1.3     | 19      | 95    | 60       | 3.5    | 16    | 13   | 7.7   | 5.4   | 3.7   | 3.4   |
| 14    | 1.4   | 1.5     | 8.2     | 93    | 56       | 3.5    | 15    | 13   | 8.0   | 5.4   | 3.7   | 3.1   |
| 15    | 1.4   | 22      | 8.2     | 93    | 52       | 3.5    | 15    | 13   | 8.0   | 5.4   | 3.5   | 3.1   |
| 16    | 1.4   | 54      | 8.2     | 91    | 36       | 13     | 15    | 12   | 7.7   | 5.4   | 3.5   | 3.1   |
| 17    | 1.4   | 372     | 95      | 141   | 28       | 24     | 14    | 11   | 7.2   | 5.4   | 3.4   | 3.3   |
| 18    | 1.4   | 447     | 193     | 247   | .30      | 31     | 14    | 11   | 7.2   | 6.4   | 3.3   | 3.3   |
| 19    | 1.4   | 504     | 8.2     | 120   | .30      | 28     | 13    | 11   | 7.0   | 6.0   | 3.3   | 3.4   |
| 20    | 1.4   | 432     | 8.2     | 75    | .30      | 27     | 13    | 11   | 6.6   | 4.3   | 3.1   | 3.4   |
| 21    | 1.4   | 344     | 8.2     | 74    | 4.4      | 14     | 14    | 11   | 6.6   | 4.3   | 3.1   | 3.5   |
| 22    | 1.4   | 254     | 8.2     | 176   | 43       | 4.7    | 14    | 11   | 6.5   | 4.3   | 3.1   | 3.4   |
| 23    | 1.4   | 424     | 9.0     | 251   | 45       | 6.8    | 14    | 11   | 6.4   | 4.3   | 3.1   | 3.5   |
| 24    | 1.3   | 1.180   | 9.0     | 66    | 43       | 7.0    | 14    | 11   | 6.4   | 4.3   | 3.1   | 3.5   |
| 25    | 1.2   | 628     | 9.0     | 62    | 37       | 7.0    | 14    | 11   | 6.4   | 4.3   | 3.1   | 3.4   |
| 26    | 1.2   | 396     | 9.0     | 66    | .30      | 7.2    | 14    | 11   | 6.4   | 4.3   | 3.1   | 3.4   |
| 27    | 1.1   | 416     | 9.0     | 192   | .30      | 7.5    | 14    | 11   | 6.4   | 4.3   | 3.1   | 3.3   |
| 28    | .50   | 283     | 16      | 194   | .30      | 7.5    | 14    | 11   | 6.4   | 4.3   | 3.0   | 3.5   |
| 29    | .70   | 72      | 2.900   | 66    | -----    | 7.7    | 14    | 11   | 5.8   | 4.3   | 3.0   | 3.5   |
| 30    | 1.1   | 1.0     | 1.300   | 87    | -----    | 6.6    | 14    | 11   | 5.4   | 4.3   | 2.9   | 3.5   |
| 31    | 1.1   | -----   | 850     | 62    | -----    | 5.8    | ----- | 11   | ----- | 4.3   | 2.8   | ----- |
| Total | 36.90 | 5.849.7 | 6.617.5 | 5.031 | 1.688.00 | 397.40 | 394.1 | 379  | 238.3 | 155.8 | 104.5 | 97.3  |
| Mean  | 1.19  | 195     | 213     | 162   | 60.3     | 12.8   | 13.1  | 12.2 | 7.94  | 5.03  | 3.37  | 3.24  |
| Ac-ft | 73    | 11.600  | 13.130  | 9.980 | 3.350    | 788    | 782   | 752  | 473   | 309   | 207   | 193   |

Calendar year 1965 Max 2.900 Min 0.20 Mean 45.2 Ac-ft 32.720  
 Water year 1965-66 Max 2.900 Min 0.30 Mean 45.1 Ac-ft 32.650

Note.--No gage-height record Dec. 29 to Jan. 13.



11-1160. North Fork Matilija Creek at Matilija Hot Springs, Calif.

Location.--Lat 34°29'33", long 119°18'20", in NE 1/4 sec. 29, T.5 N., R.23 W., on right bank at bridge on U.S. Highway 399, 0.7 mile north of Matilija Hot Springs and 0.8 mile upstream from mouth.

Drainage area.--15.6 sq mi.

Records available.--October 1928 to September 1932, October 1933 to September 1966. Prior to October 1953, published as "at Matilija".

Gage.--Graphic water-stage recorder and concrete control since September 1966. Datum of gage is 1,142.02 ft above mean sea level (levels by Ventura County Flood Control District). Prior to Nov. 12, 1948, at site 0.3 mile downstream at different datum.

Average discharge.--37 years, 8.70 cfs (6,300 acre-ft per year); median of yearly mean discharges, 3.9 cfs (2,800 acre-ft per year).

Extremes.--Maximum discharge during year, 2,900 cfs Nov. 24 (gage height, 7.37 ft), from rating curve extended above 560 cfs on basis of slope-area measurement at gage height 9.00 ft; minimum daily, 0.20 cfs Oct. 3-6, 21-26.  
1928-32, 1933-66: Maximum discharge, 5,580 cfs Mar. 2, 1938; minimum daily, 0.10 cfs for several days in some years.

Remarks.--Records good. No regulation or diversion above station.

Cooperation.--Water-stage recorder graph and 54 discharge measurements furnished by Ventura County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 0.30 | 0.30    | 37    | 120   | 19    | 11    | 6.4   | 4.8   | 3.6   | 2.2  | 1.2   | 1.2   |
| 2     | .30  | .50     | 31    | 90    | 18    | 11    | 6.4   | 4.3   | 3.3   | 2.2  | 1.1   | 1.2   |
| 3     | .20  | .40     | 28    | 67    | 17    | 11    | 6.4   | 4.3   | 3.3   | 2.1  | 1.1   | 1.2   |
| 4     | .20  | .30     | 26    | 55    | 17    | 10    | 6.4   | 4.6   | 3.3   | 2.0  | 1.1   | 1.2   |
| 5     | .20  | .40     | 24    | 50    | 17    | 10    | 6.4   | 4.6   | 3.0   | 1.8  | 1.0   | 1.2   |
| 6     | .20  | .40     | 22    | 46    | 22    | 10    | 6.0   | 4.3   | 3.0   | 1.8  | 1.0   | 1.2   |
| 7     | .30  | .40     | 21    | 43    | 19    | 9.8   | 5.7   | 4.3   | 3.0   | 1.8  | 1.0   | 1.2   |
| 8     | .40  | .50     | 21    | 41    | 18    | 9.8   | 5.7   | 4.3   | 3.3   | 1.8  | 1.0   | 1.0   |
| 9     | .40  | .40     | 20    | 38    | 17    | 9.8   | 5.7   | 4.8   | 3.3   | 1.6  | .90   | .80   |
| 10    | .40  | .40     | 19    | 36    | 16    | 9.8   | 5.7   | 4.8   | 3.0   | 1.6  | .90   | .80   |
| 11    | .40  | .40     | 19    | 33    | 15    | 9.3   | 5.7   | 4.6   | 2.8   | 1.6  | 1.0   | 1.0   |
| 12    | .40  | .40     | 19    | 32    | 15    | 9.3   | 5.7   | 4.6   | 2.8   | 1.6  | 1.0   | 1.2   |
| 13    | .40  | .40     | 17    | 28    | 15    | 9.3   | 5.4   | 4.6   | 3.0   | 1.6  | 1.0   | 1.3   |
| 14    | .40  | 2.0     | 16    | 27    | 15    | 9.3   | 5.1   | 4.6   | 2.4   | 1.6  | .90   | 1.2   |
| 15    | .40  | 5.9     | 15    | 26    | 14    | 8.9   | 4.8   | 4.6   | 2.4   | 1.6  | .80   | 1.0   |
| 16    | .40  | 252     | 15    | 25    | 14    | 8.9   | 4.6   | 4.6   | 2.4   | 1.5  | .80   | 1.0   |
| 17    | .40  | 326     | 14    | 24    | 14    | 8.1   | 5.1   | 4.6   | 2.4   | 1.4  | .80   | 1.0   |
| 18    | .40  | 208     | 13    | 24    | 14    | 8.1   | 5.1   | 4.3   | 2.1   | 1.2  | .80   | 1.2   |
| 19    | .40  | 65      | 13    | 23    | 13    | 8.1   | 5.1   | 4.0   | 2.1   | 1.2  | .90   | 1.3   |
| 20    | .30  | 33      | 13    | 22    | 13    | 7.8   | 5.1   | 3.8   | 1.8   | 1.2  | 1.0   | 1.5   |
| 21    | .20  | 21      | 12    | 22    | 12    | 7.8   | 5.1   | 3.8   | 1.8   | 1.2  | 1.1   | 1.3   |
| 22    | .20  | 320     | 13    | 21    | 12    | 7.8   | 5.1   | 4.0   | 1.8   | 1.2  | 1.1   | 1.2   |
| 23    | .20  | 416     | 13    | 21    | 12    | 7.4   | 5.1   | 4.0   | 1.8   | 1.2  | 1.1   | 1.0   |
| 24    | .20  | 782     | 13    | 20    | 12    | 7.4   | 5.1   | 3.8   | 1.8   | 1.2  | 1.1   | .80   |
| 25    | .20  | 208     | 13    | 19    | 12    | 7.4   | 4.8   | 3.8   | 2.0   | 1.2  | 1.1   | 1.0   |
| 26    | .20  | 120     | 13    | 19    | 11    | 7.4   | 4.8   | 3.8   | 2.0   | 1.2  | 1.1   | 1.2   |
| 27    | .30  | 84      | 13    | 18    | 11    | 7.8   | 4.8   | 4.0   | 2.1   | 1.2  | 1.1   | 1.2   |
| 28    | .30  | 65      | 13    | 17    | 11    | 7.4   | 4.8   | 3.8   | 2.2   | 1.2  | 1.1   | 1.2   |
| 29    | .30  | 51      | 770   | 17    | ----- | 7.0   | 4.8   | 3.8   | 2.2   | 1.4  | 1.1   | 1.3   |
| 30    | .30  | 45      | 289   | 32    | ----- | 7.0   | 4.8   | 3.8   | 2.2   | 1.4  | 1.1   | 1.3   |
| 31    | .30  | -----   | 165   | 21    | ----- | 6.4   | ----- | 3.6   | ----- | 1.4  | 1.1   | ----- |
| Total | 9.50 | 3009.10 | 1730  | 1077  | 415   | 270.1 | 161.7 | 131.6 | 76.2  | 47.2 | 31.40 | 34.20 |
| Mean  | 0.31 | 100     | 55.8  | 34.7  | 14.8  | 8.71  | 5.39  | 4.25  | 2.54  | 1.52 | 1.01  | 1.14  |
| Ac-ft | 19   | 5.970   | 3.430 | 2.140 | 823   | 536   | 321   | 261   | 151   | 94   | 62    | 68    |

Calendar year 1965 Max 782 Min 0.20 Mean 14.9 Ac-ft 10,820

Water year 1965-66 Max 782 Min 0.20 Mean 19.2 Ac-ft 13,870

Peak discharge (base, 40 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2400 | 4.20        | 850       | 12-29 | 0630 | 5.57        | 1,570     |
| 11-24 | 0330 | 7.37        | 2,900     |       |      |             |           |

## VENTURA RIVER BASIN

11-1165.5. Ventura River near Meiners Oaks, Calif.

Location.--Lat 34°27'45", long 119°17'20", in Santa Ana Grant, on right bank 500 ft downstream from Robles diversion dam, 1,500 ft downstream from Los Padres National Forest boundary, and 1.1 miles northwest of Meiners Oaks, Ventura County.

Drainage area.--76.4 sq mi.

Records available.--May 1959 to September 1966.

Gage.--Graphic water-stage recorder and concrete control. Datum of gage is 744.60 ft above mean sea level (Bureau of Reclamation bench mark).

Extremes.--Maximum discharge during year, 7,900 cfs Dec. 29 (gage height, 7.20 ft), from rating curve extended above 65 cfs on basis of slope-area measurement at gage-height 7.1 ft; no flow for several months.  
1959-66: Maximum discharge, that of Dec. 29, 1965; no flow for several months in each year.

Remarks.--Records good. Flow regulated by Matilija Reservoir (see Sta. No. 1150). Flows up to 500 cfs diverted since May 1959 at Robles diversion dam to Casitas Reservoir on Coyote Creek. Flow reported herein is that released through gates in Robles diversion dam.

Cooperation.--Eight discharge measurements furnished by Ventura River Municipal Water District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|---------|---------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0       | 50      | 4.0   | 11    | 8.9   | 4.7   | 11    | 7.5   | 1.4  |      |       |
| 2     |      | 0       | 23      | 0     | 10    | 8.9   | 5.7   | 11    | 7.5   | 1.2  |      |       |
| 3     |      | 0       | 21      | 7.0   | 14    | 9.6   | 6.3   | 11    | 7.5   | 1.0  |      |       |
| 4     |      | 0       | 24      | 12    | 13    | 10    | 6.3   | 11    | 7.5   | .90  |      |       |
| 5     |      | 0       | 6.3     | 12    | 13    | 9.6   | 5.7   | 11    | 6.9   | .60  |      |       |
| 6     |      | 0       | 8.2     | 12    | 13    | 9.6   | 5.2   | 11    | 6.9   | .30  |      |       |
| 7     |      | 0       | 16      | 12    | 13    | 9.6   | 12    | 11    | 6.9   | .20  |      |       |
| 8     |      | 0       | 18      | 10    | 12    | 9.6   | 17    | 11    | 6.9   | .20  |      |       |
| 9     |      | 0       | 21      | 12    | 12    | 9.6   | 17    | 12    | 6.9   | .20  |      |       |
| 10    |      | 0       | 16      | 13    | 12    | 8.9   | 19    | 14    | 5.7   | .10  |      |       |
| 11    |      | 0       | 18      | 5.4   | 12    | 7.5   | 17    | 13    | 5.2   | .30  |      |       |
| 12    |      | 0       | 18      | 0     | 12    | 7.5   | 17    | 12    | 6.3   | .20  |      |       |
| 13    |      | 0       | 33      | 2.6   | 12    | 7.5   | 14    | 11    | 5.7   | .40  |      |       |
| 14    |      | 0       | 39      | 6.3   | 11    | 6.9   | 11    | 10    | 5.7   | .60  |      |       |
| 15    |      | 1.6     | 39      | 6.3   | 11    | 6.9   | 11    | 10    | 5.2   | .40  |      |       |
| 16    |      | 83      | 40      | 6.3   | 10    | 6.9   | 11    | 9.6   | 5.2   | 0    |      |       |
| 17    |      | 199     | 20      | 4.2   | 10    | 8.2   | 11    | 8.9   | 4.7   | .10  |      |       |
| 18    |      | 160     | 0       | 3.7   | 10    | 8.2   | 12    | 7.5   | 4.7   | .10  |      |       |
| 19    |      | 74      | 0       | 7.7   | 9.6   | 8.2   | 10    | 6.9   | 4.7   | 0    |      |       |
| 20    |      | 17      | 2.6     | 2.3   | 8.9   | 8.2   | 6.9   | 7.5   | 4.2   | 0    |      |       |
| 21    |      | 18      | 5.7     | 2.3   | 8.9   | 8.2   | 8.2   | 10    | 4.2   | 0    |      |       |
| 22    |      | 239     | 6.3     | 2.2   | 8.9   | 7.5   | 12    | 10    | 3.7   | 0    |      |       |
| 23    |      | 273     | 6.9     | 0     | 8.9   | 6.9   | 12    | 10    | 3.3   | 0    |      |       |
| 24    |      | 1,880   | 8.2     | 0     | 8.9   | 7.5   | 12    | 10    | 2.3   | 0    |      |       |
| 25    |      | 279     | 8.2     | 0     | 8.9   | 8.2   | 12    | 10    | 2.3   | 0    |      |       |
| 26    |      | 101     | 8.9     | 0     | 8.9   | 8.2   | 12    | 10    | 3.3   | 0    |      |       |
| 27    |      | 79      | 10      | 5.8   | 8.9   | 8.2   | 12    | 9.6   | 3.3   | 0    |      |       |
| 28    |      | 30      | 17      | 14    | 8.9   | 8.2   | 12    | 8.9   | 3.0   | 0    |      |       |
| 29    |      | 21      | 3.610   | 14    | ----- | 6.9   | 12    | 7.5   | 3.0   | 0    |      |       |
| 30    |      | 25      | 768     | 14    | ----- | 5.7   | 12    | 7.5   | 1.2   | 0    |      |       |
| 31    |      | -----   | 108     | 13    | ----- | 4.7   | ----- | 7.5   | ----- | 0    |      |       |
| Total | 0    | 3,479.6 | 4,970.3 | 204.1 | 300.7 | 250.5 | 336.0 | 311.4 | 151.4 | 8.20 | 0    | 0     |
| Mean  | 0    | 116     | 160     | 6.58  | 10.7  | 8.08  | 11.2  | 10.0  | 5.05  | 0.26 | 0    | 0     |
| Ac-ft | 0    | 6,900   | 9,860   | 405   | 596   | 497   | 666   | 618   | 300   | 16   | 0    | 0     |

Calendar year 1965 Max 3,610 Min 0 Mean 27.0 Ac-ft 19,560  
Water year 1965-66 Max 3,610 Min 0 Mean 27.4 Ac-ft 19,860

11-1175. San Antonio Creek at Casitas Springs, Calif.

Location.--Lat 34°22'49", long 119°18'13", in Santa Ana Grant, on downstream side of bridge on U.S. Highway 399, 0.2 mile upstream from mouth, and 0.9 mile north of Casitas Springs, Ventura County.

Drainage area.--51.2 sq mi.

Records available.--October 1949 to September 1966.

Gage.--Graphic water-stage recorder. Datum of gage is 307.25 ft above mean sea level (levels by Ventura County Flood Control District). Prior to Jan. 30, 1962, at datum 0.30 ft higher.

Average discharge.--17 years, 5.92 cfs (4,290 acre-ft per year); median of yearly mean discharges, 1.4 cfs (1,000 acre-ft per year).

Extremes.--Maximum discharge during year, 6,800 cfs Nov. 24 (gage height, 10.80 ft), from rating curve extended above 2,000 cfs; no flow Oct. 1 to Nov. 15, June 21 to Sept. 30.  
1949-66: Maximum discharge, that of Nov. 24, 1965; no flow for several months in each year.

Remarks.--Records poor. No regulation above station; pumping from wells along creek for irrigation.

Cooperation.--Water-stage recorder graph, and 35 discharge measurements furnished by Ventura County Flood Control District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|---------|---------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     |      | 0       | 9.0     | 100   | 6.5   | 4.2  | 1.5   | 0.60  | 0.20  |      |      |       |
| 2     |      | 0       | 7.0     | 70    | 6.2   | 4.0  | 1.4   | .60   | .20   |      |      |       |
| 3     |      | 0       | 5.4     | 50    | 5.8   | 3.8  | 1.4   | .60   | .20   |      |      |       |
| 4     |      | 0       | 5.1     | 40    | 5.4   | 3.6  | 1.3   | .60   | .20   |      |      |       |
| 5     |      | 0       | 4.8     | 30    | 5.0   | 3.4  | 1.3   | .60   | .20   |      |      |       |
| 6     |      | 0       | 4.5     | 17    | 25    | 3.3  | 1.3   | .60   | .10   |      |      |       |
| 7     |      | 0       | 4.2     | 15    | 12    | 3.2  | 1.3   | .60   | .10   |      |      |       |
| 8     |      | 0       | 4.1     | 13    | 10    | 3.1  | 1.2   | .60   | .10   |      |      |       |
| 9     |      | 0       | 4.0     | 11    | 8.5   | 3.0  | 1.2   | .60   | .10   |      |      |       |
| 10    |      | 0       | 3.9     | 8.7   | 8.0   | 3.0  | 1.2   | .60   | .10   |      |      |       |
| 11    |      | 0       | 3.8     | 8.0   | 7.5   | 3.0  | 1.1   | .60   | .10   |      |      |       |
| 12    |      | 0       | 5.0     | 7.7   | 7.0   | 3.0  | 1.1   | .60   | .10   |      |      |       |
| 13    |      | 0       | 3.7     | 7.4   | 6.5   | 3.0  | 1.1   | .60   | .10   |      |      |       |
| 14    |      | 0       | 3.5     | 7.2   | 6.0   | 3.0  | 1.0   | .60   | .10   |      |      |       |
| 15    |      | 0       | 3.3     | 7.0   | 5.5   | 3.0  | 1.0   | .60   | .10   |      |      |       |
| 16    |      | 54      | 3.1     | 6.8   | 5.1   | 2.9  | .90   | .60   | .10   |      |      |       |
| 17    |      | 273     | 2.9     | 6.6   | 5.0   | 2.8  | .90   | .60   | .10   |      |      |       |
| 18    |      | 220     | 2.8     | 6.4   | 4.9   | 2.7  | .80   | .60   | .10   |      |      |       |
| 19    |      | 24      | 2.7     | 6.2   | 4.9   | 2.6  | .80   | .60   | .10   |      |      |       |
| 20    |      | 4.6     | 2.6     | 5.9   | 4.8   | 2.5  | .80   | .60   | .10   |      |      |       |
| 21    |      | 1.5     | 2.5     | 5.7   | 4.7   | 2.5  | .80   | .50   | 0     |      |      |       |
| 22    |      | 488     | 2.5     | 5.5   | 4.6   | 2.4  | .80   | .50   | 0     |      |      |       |
| 23    |      | 411     | 2.4     | 5.2   | 4.6   | 2.4  | .80   | .50   | 0     |      |      |       |
| 24    |      | 1,510   | 2.4     | 4.9   | 4.5   | 2.2  | .80   | .50   | 0     |      |      |       |
| 25    |      | 236     | 2.4     | 4.7   | 4.5   | 2.1  | .80   | .50   | 0     |      |      |       |
| 26    |      | 62      | 2.3     | 4.5   | 4.4   | 2.0  | .80   | .50   | 0     |      |      |       |
| 27    |      | 35      | 2.3     | 4.3   | 4.3   | 1.9  | .80   | .40   | 0     |      |      |       |
| 28    |      | 24      | 2.5     | 4.1   | 4.3   | 1.8  | .70   | .40   | 0     |      |      |       |
| 29    |      | 18      | 1.520   | 4.0   | ----- | 1.7  | .70   | .30   | 0     |      |      |       |
| 30    |      | 12      | 400     | 20    | ----- | 1.6  | .70   | .30   | 0     |      |      |       |
| 31    |      | -----   | 200     | 13    | ----- | 1.5  | ----- | .30   | ----- |      |      |       |
| Total | 0    | 3,373.1 | 2,224.7 | 499.8 | 185.5 | 85.2 | 30.30 | 16.70 | 2.50  | 0    | 0    | 0     |
| Mean  | 0    | 112     | 71.8    | 16.1  | 6.62  | 2.75 | 1.01  | 0.54  | 0.08  | 0    | 0    | 0     |
| Ac-ft | 0    | 6,690   | 4,410   | 991   | 368   | 169  | 60    | 33    | 5.0   | 0    | 0    | 0     |

Calendar year 1965 Max 1.520 Min 0 Mean 16.3 Ac-ft 11,820  
Water year 1965-66 Max 1.520 Min 0 Mean 17.6 Ac-ft 12,730

Peak discharge (base, 200 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0230 | 6.93        | 964       | 12-29 | 0730 | 9.20        | 3,620     |
| 11-24 | 0330 | 10.80       | 6,800     |       |      |             |           |

Note.--No gage-height record all year except that for Nov. 16-25, Dec. 29.

## VENTURA RIVER BASIN

11-1176, Coyote Creek near Oak View, Calif.

Location.--Lat 34°25'00", long 119°22'00", in Santa Ana Grant, on right bank 1,000 ft downstream from Los Padres National Forest boundary, 0.6 mile upstream from Poplin Creek, and 4.2 miles west of Oak View, Ventura County.

Drainage area.--13.2 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 560 ft (from topographic map). Prior to Feb. 8, 1965, graphic water-stage recorder.

Average discharge.--8 years, 3.24 cfs (2,350 acre-ft per year).

Extremes.--Maximum discharge during year, 4,470 cfs Nov. 24 (gage height, 9.10 ft), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; no flow Oct. 1-13, 16-30.

1958-66: Maximum discharge, that of Nov. 24, 1965; no flow at times in most years.

Remarks.--Records good. No regulation or diversion above station.

Cooperation.--Two discharge measurements furnished by Ventura River Municipal Water District.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.  | JAN.  | FEB.  | MAR. | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|------|----------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|
| 1     | 0    | 0.10     | 7.5   | 45    | 6.2   | 2.8  | 2.0   | 1.1   | 0.90  | 0.50  | 0.30 | 0.20  |
| 2     | 0    | .10      | 6.7   | 27    | 5.5   | 2.8  | 2.0   | 1.1   | .90   | .50   | .30  | .20   |
| 3     | 0    | .10      | 5.8   | 20    | 5.0   | 2.7  | 2.0   | 1.1   | .90   | .50   | .30  | .20   |
| 4     | 0    | .10      | 5.4   | 17    | 4.7   | 2.6  | 2.1   | 1.1   | .80   | .50   | .30  | .20   |
| 5     | 0    | .10      | 4.8   | 14    | 4.8   | 2.7  | 2.0   | 1.0   | .80   | .50   | .20  | .20   |
| 6     | 0    | .10      | 4.4   | 13    | 14    | 2.6  | 1.8   | 1.0   | .80   | .50   | .30  | .20   |
| 7     | 0    | .10      | 4.0   | 11    | 7.8   | 2.5  | 1.8   | 1.0   | .80   | .50   | .30  | .20   |
| 8     | 0    | .10      | 3.9   | 10    | 6.0   | 2.5  | 1.9   | 1.0   | .80   | .40   | .20  | .20   |
| 9     | 0    | .10      | 3.9   | 9.3   | 5.4   | 2.5  | 1.9   | 1.0   | .80   | .40   | .20  | .10   |
| 10    | 0    | .10      | 3.7   | 8.2   | 5.1   | 2.5  | 1.9   | 1.1   | .80   | .40   | .20  | .10   |
| 11    | 0    | .10      | 3.5   | 7.4   | 4.7   | 2.4  | 1.7   | 1.1   | .80   | .40   | .20  | .20   |
| 12    | 0    | .10      | 4.8   | 7.2   | 4.6   | 2.5  | 1.6   | 1.1   | .80   | .40   | .20  | .20   |
| 13    | 0    | .10      | 3.9   | 7.0   | 4.4   | 2.5  | 1.6   | 1.0   | .70   | .40   | .20  | .20   |
| 14    | .10  | .10      | 3.5   | 6.5   | 4.3   | 2.4  | 1.5   | 1.1   | .70   | .40   | .20  | .10   |
| 15    | .10  | .20      | 3.4   | 6.2   | 4.1   | 2.4  | 1.4   | 1.1   | .70   | .40   | .20  | .10   |
| 16    | 0    | 93       | 3.1   | 5.8   | 4.0   | 2.4  | 1.5   | 1.1   | .70   | .40   | .20  | .10   |
| 17    | 0    | 120      | 3.0   | 5.6   | 3.9   | 2.3  | 1.4   | 1.0   | .70   | .40   | .20  | .10   |
| 18    | 0    | 60       | 2.8   | 5.4   | 3.8   | 2.3  | 1.5   | 1.0   | .60   | .40   | .20  | .10   |
| 19    | 0    | 16       | 2.7   | 5.2   | 3.7   | 2.3  | 1.5   | 1.0   | .60   | .40   | .20  | .10   |
| 20    | 0    | 6.1      | 2.6   | 5.2   | 3.6   | 2.3  | 1.5   | .90   | .60   | .40   | .20  | .10   |
| 21    | 0    | 3.4      | 2.5   | 5.0   | 3.5   | 2.3  | 1.4   | .90   | .60   | .40   | .20  | .10   |
| 22    | 0    | 124      | 2.3   | 4.8   | 3.2   | 2.2  | 1.4   | .90   | .60   | .40   | .20  | .10   |
| 23    | 0    | 129      | 2.2   | 4.6   | 3.2   | 2.2  | 1.3   | .90   | .60   | .30   | .20  | .10   |
| 24    | 0    | 495      | 2.3   | 4.4   | 3.1   | 2.2  | 1.3   | .90   | .60   | .30   | .20  | .10   |
| 25    | 0    | 63       | 2.3   | 4.2   | 3.1   | 2.3  | 1.3   | .90   | .60   | .30   | .20  | .10   |
| 26    | 0    | 29       | 2.3   | 4.0   | 3.0   | 2.4  | 1.2   | .90   | .60   | .30   | .20  | .10   |
| 27    | 0    | 18       | 2.2   | 4.0   | 2.9   | 2.4  | 1.2   | .90   | .60   | .30   | .20  | .10   |
| 28    | 0    | 13       | 2.3   | 3.7   | 2.8   | 2.4  | 1.3   | .90   | .60   | .30   | .20  | .10   |
| 29    | 0    | 11       | 663   | 3.7   | ----- | 2.3  | 1.2   | .90   | .60   | .30   | .20  | .10   |
| 30    | 0    | 8.3      | 147   | 25    | ----- | 2.3  | 1.3   | .90   | .50   | .30   | .20  | .20   |
| 31    | .10  | -----    | 83    | 8.5   | ----- | 2.1  | ----- | .70   | ----- | .30   | .20  | ----- |
| TOTAL | .30  | 1,190.40 | 994.8 | 307.9 | 130.4 | 75.1 | 47.5  | 30.60 | 21.10 | 12.20 | 6.80 | 4.20  |
| MEAN  | .01  | 39.7     | 32.1  | 9.93  | 4.66  | 2.42 | 1.58  | .99   | .70   | .39   | .22  | .14   |
| AC-FT | .6   | 2,360    | 1,970 | 611   | 259   | 149  | 94    | 61    | 42    | 24    | 13   | 8.3   |

CALENDAR YEAR 1965 MAX 663 MIN 0 MEAN 8.05 AC-FT 5,820  
 WATER YEAR 1965-66 MAX 663 MIN 0 MEAN 7.73 AC-FT 5,590

## Peak discharge (base, 150 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2230 | 5.89        | 824       | 12-29 | 0700 | 7.03        | 1,670     |
| 11-24 | 0245 | 9.10        | 4,470     |       |      |             |           |

11-1178. Santa Ana Creek near Oak View, Calif.

Location.--Lat 34°25'25", long 119°20'25", in Santa Ana Grant, on downstream end of right abutment of bridge, 400 ft upstream from unnamed tributary, and 3.0 miles northwest of Oak View, Ventura County.

Drainage area.--9.11 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 610 ft (from topographic map).

Average discharge.--8 years, 3.07 cfs (2,220 acre-ft per year).

Extremes.--Maximum discharge during year, 2,670 cfs Nov. 24 (gage height, 8.12 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow for much of year.

1958-66: Maximum discharge, that of Nov. 24, 1965; no flow for part of each year.

Flood of Mar. 2, 1938, 3,780 cfs, result of slope-area measurement at site 2.0 miles downstream.

Remarks.--Records good. No regulation or diversion above station.

Cooperation.--Six discharge measurements furnished by Ventura River Municipal Water District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|------|-------|------|-------|-------|------|-------|
| 1     |      | 0     | 9.6    | 4.8   | 5.8   | 3.1  | 1.6   | 0.60 | 0.10  | 0.10  |      |       |
| 2     |      | 0     | 8.7    | 3.6   | 5.5   | 3.1  | 1.6   | .40  | .10   | .10   |      |       |
| 3     |      | 0     | 7.1    | 2.7   | 5.2   | 3.1  | 1.6   | .40  | .10   | 0     |      |       |
| 4     |      | 0     | 6.4    | 2.1   | 4.6   | 2.9  | 1.6   | .50  | .10   | 0     |      |       |
| 5     |      | 0     | 6.1    | 1.8   | 4.9   | 2.9  | 1.6   | .50  | .10   | 0     |      |       |
| 6     |      | 0     | 5.5    | 1.5   | 9.6   | 2.9  | 1.6   | .40  | .20   | 0     |      |       |
| 7     |      | 0     | 5.2    | 1.4   | 6.7   | 2.7  | 1.6   | .20  | .20   | 0     |      |       |
| 8     |      | 0     | 4.9    | 1.2   | 5.8   | 2.7  | 1.6   | .30  | .20   | 0     |      |       |
| 9     |      | 0     | 4.9    | 1.0   | 5.2   | 2.7  | 1.8   | .20  | .30   | 0     |      |       |
| 10    |      | 0     | 4.9    | 9.6   | 4.9   | 2.7  | 1.8   | .20  | .20   | 0     |      |       |
| 11    |      | 0     | 4.9    | 8.7   | 4.6   | 2.7  | 1.6   | .60  | .20   | 0     |      |       |
| 12    |      | 0     | 5.5    | 7.9   | 4.3   | 2.5  | 1.6   | .60  | .20   | 0     |      |       |
| 13    |      | 0     | 4.6    | 7.1   | 4.3   | 2.5  | 1.6   | .40  | .20   | 0     |      |       |
| 14    |      | 0     | 4.3    | 6.7   | 4.3   | 2.5  | 1.5   | .40  | .20   | 0     |      |       |
| 15    |      | 0     | 4.0    | 6.7   | 4.3   | 2.5  | 1.4   | .50  | .20   | 0     |      |       |
| 16    |      | 161   | 4.0    | 6.4   | 4.0   | 2.5  | 1.2   | .40  | .20   | 0     |      |       |
| 17    |      | 176   | 3.8    | 6.1   | 4.0   | 2.3  | 1.5   | .20  | .20   | 0     |      |       |
| 18    |      | 118   | 3.8    | 6.1   | 3.8   | 2.3  | 1.6   | .10  | .20   | 0     |      |       |
| 19    |      | 35    | 3.8    | 5.8   | 3.5   | 2.1  | 1.6   | .10  | .10   | 0     |      |       |
| 20    |      | 15    | 3.5    | 5.5   | 3.5   | 2.1  | 1.6   | .10  | .10   | 0     |      |       |
| 21    |      | 12    | 3.3    | 5.2   | 3.5   | 2.1  | 1.4   | .10  | .10   | 0     |      |       |
| 22    |      | 223   | 3.3    | 4.9   | 3.3   | 2.1  | .60   | .10  | .10   | 0     |      |       |
| 23    |      | 180   | 3.1    | 4.9   | 3.3   | 2.1  | .60   | .10  | .10   | 0     |      |       |
| 24    |      | 534   | 3.1    | 4.6   | 3.3   | 2.1  | .40   | .10  | .10   | 0     |      |       |
| 25    |      | 100   | 3.1    | 4.6   | 3.3   | 2.1  | .40   | .10  | .10   | 0     |      |       |
| 26    |      | 57    | 3.1    | 4.6   | 3.3   | 2.1  | .50   | .30  | .10   | 0     |      |       |
| 27    |      | 33    | 3.1    | 4.3   | 3.1   | 2.1  | .60   | .60  | .10   | 0     |      |       |
| 28    |      | 22    | 3.1    | 4.3   | 3.1   | 2.1  | .60   | .50  | .10   | 0     |      |       |
| 29    |      | 16    | 729    | 4.0   | ----- | 2.1  | .60   | .50  | .10   | 0     |      |       |
| 30    |      | 13    | 171    | 20    | ----- | 2.0  | .70   | .20  | .10   | 0     |      |       |
| 31    |      | ----- | 73     | 7.1   | ----- | 1.8  | ----- | .10  | ----- | 0     |      |       |
| Total | 0    | 1695  | 1103.7 | 346.1 | 125.0 | 75.5 | 38.00 | 9.80 | 4.40  | 0.20  | 0    | 0     |
| Mean  | 0    | 56.5  | 35.6   | 11.2  | 4.46  | 2.44 | 1.27  | 0.32 | 0.15  | 0.006 | 0    | 0     |
| Ac-ft | 0    | 3360  | 2190   | 686   | 248   | 150  | 75    | 19   | 8.7   | 0.4   | 0    | 0     |

Calendar year 1965 Max 729 Min 0 Mean 8.87 Ac-ft 6,420

Water year 1965-66 Max 729 Min 0 Mean 9.31 Ac-ft 6,740

Peak discharge (base, 150 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 2330 | 5.70        | 1,050     | 12-29 | 0700 | 6.35        | 1,480     |
| 11-24 | 0300 | 8.12        | 2,670     |       |      |             |           |

## VENTURA RIVER BASIN

11-1185, Ventura River near Ventura, Calif.

Location.--Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, on right bank 500 ft downstream from county highway bridge at Foster Memorial Park, 0.2 mile downstream from Coyote Creek, and 5 miles north of Ventura, Ventura County.

Drainage area.--188 sq mi.

Records available.--September 1911 to January 1914, October 1929 to September 1966; combined records of river and diversion, October 1932 to September 1966.

Gage.--Graphic water-stage recorder on river; digital water-stage recorder and Parshall flume on diversion. Altitude of gage is 200 ft (from topographic map). Prior to Jan. 18, 1914, chain gage at site 370 ft upstream at different datum (destroyed by flood). October 1929 to Nov. 2, 1949, at site 370 ft upstream at present datum. Prior to Feb. 8, 1965, graphic water-stage recorder on diversion.

Average discharge (river only).--39 years (1911-13, 1929-66), 54.1 cfs (39,170 acre-ft per year); median of yearly mean discharges, 22 cfs (15,900 acre-ft per year).  
(combined).--34 years, 63.4 cfs (45,900 acre-ft per year); median of yearly mean discharges, 26 cfs (18,800 acre-ft per year).

Extremes (river only).--Maximum discharge during year, 11,200 cfs Nov. 24 (gage height, 16.75 ft), from rating curve extended above 4,100 cfs; no flow Oct. 1 to Nov. 15.

1911-14, 1929-66: Maximum discharge, 39,200 cfs Mar. 2, 1938 (gage height, 19.2 ft), from rating curve extended above 7,700 cfs on basis of slope-area and contracted-opening measurement of maximum flow; no flow at times in many years.  
(combined).--Maximum discharge during year, 11,200 cfs Nov. 24; minimum daily, 2.0 cfs Nov. 11.  
1932-66: Maximum discharge, 39,200 cfs Mar. 2, 1938; minimum daily, 0.10 cfs Sept. 3, 4, 13, 1961.

Remarks.--Records good except those above 1,000 cfs, which are poor. Flow partly regulated since March 1948 by Matilija Reservoir (See Sta. No. 1150) and since October 1959 by Casitas Reservoir (capacity, 267,000 acre-ft). Water diverted since May 1951 through pipeline at dam (Matilija Reservoir) to Ojai Valley for irrigation. Water diverted to Casitas Reservoir 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, see following page. Average discharge (river only) represents flow to ocean, regardless of upstream development.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     |      | 0      | 36     | 102   | 30    | 18    | 11    | 12    | 4.3   | 2.6   | 3.1   | 0.60  |
| 2     |      | 0      | 22     | 68    | 27    | 15    | 13    | 12    | 2.2   | 3.5   | 2.2   | .50   |
| 3     |      | 0      | 17     | 52    | 24    | 16    | 14    | 8.6   | 2.1   | 4.5   | 1.1   | .40   |
| 4     |      | 0      | 15     | 43    | 24    | 14    | 14    | 6.2   | 3.3   | 4.1   | 1.0   | .80   |
| 5     |      | 0      | 15     | 38    | 24    | 14    | 15    | 5.4   | 3.7   | 2.2   | 1.0   | 1.6   |
| 6     |      | 0      | 15     | 36    | 92    | 16    | 14    | 8.2   | 3.5   | 2.1   | 1.2   | 1.4   |
| 7     |      | 0      | 18     | 33    | 42    | 16    | 13    | 7.4   | 2.5   | 2.1   | 3.3   | .80   |
| 8     |      | 0      | 16     | 29    | 33    | 16    | 11    | 4.7   | 2.8   | 2.1   | 3.1   | .50   |
| 9     |      | 0      | 15     | 28    | 30    | 16    | 14    | 5.6   | 3.9   | 2.9   | 1.6   | 1.3   |
| 10    |      | 0      | 15     | 27    | 24    | 16    | 15    | 5.1   | 4.1   | 3.1   | .90   | 3.3   |
| 11    |      | 0      | 15     | 53    | 19    | 16    | 16    | 5.7   | 4.7   | 2.6   | .70   | 1.2   |
| 12    |      | 0      | 18     | 34    | 19    | 16    | 14    | 5.7   | 5.1   | 1.9   | .60   | 1.1   |
| 13    |      | 0      | 22     | 32    | 19    | 16    | 10    | 6.9   | 5.1   | 1.1   | 1.4   | .50   |
| 14    |      | 0      | 27     | 29    | 18    | 15    | 7.1   | 3.7   | 7.6   | 1.4   | 2.2   | .30   |
| 15    |      | 0      | 26     | 26    | 18    | 15    | 6.8   | 3.7   | 5.6   | 1.7   | 2.5   | .30   |
| 16    |      | 70     | 24     | 24    | 18    | 14    | 11    | 3.7   | 2.2   | 2.6   | 1.1   | .20   |
| 17    |      | 580    | 22     | 20    | 18    | 16    | 12    | 4.1   | 3.7   | 2.9   | .70   | .40   |
| 18    |      | 424    | 15     | 18    | 22    | 12    | 12    | 4.1   | 4.1   | 2.8   | .60   | .80   |
| 19    |      | 118    | 16     | 23    | 20    | 8.6   | 11    | 5.4   | 6.4   | 2.1   | .40   | .70   |
| 20    |      | 30     | 16     | 20    | 17    | 8.6   | 5.9   | 5.1   | 5.3   | 1.7   | .80   | .30   |
| 21    |      | 22     | 15     | 17    | 24    | 7.3   | 7.6   | 7.3   | 2.9   | 1.4   | 1.4   | .30   |
| 22    |      | 931    | 14     | 17    | 27    | 10    | 7.9   | 9.0   | 3.1   | 1.7   | 1.8   | .20   |
| 23    |      | 1,170  | 13     | 17    | 24    | 9.6   | 10    | 5.9   | 2.9   | 2.6   | 1.8   | .20   |
| 24    |      | 4,060  | 14     | 16    | 24    | 10    | 10    | 5.9   | 2.8   | 2.9   | .90   | .20   |
| 25    |      | 549    | 16     | 16    | 24    | 9.6   | 7.6   | 6.2   | 2.8   | 2.5   | .70   | .10   |
| 26    |      | 174    | 15     | 16    | 20    | 9.3   | 8.3   | 3.1   | 3.1   | 1.8   | .70   | .10   |
| 27    |      | 105    | 14     | 15    | 18    | 10    | 6.8   | 2.6   | 3.3   | .90   | .60   | .10   |
| 28    |      | 52     | 14     | 15    | 20    | 10    | 4.1   | 3.9   | 2.8   | .90   | .60   | .10   |
| 29    |      | 28     | 5,160  | 15    | ----- | 11    | 4.1   | 4.9   | 2.8   | .80   | 1.4   | .10   |
| 30    |      | 21     | 1,260  | 126   | ----- | 12    | 7.3   | 6.8   | 3.1   | 1.4   | .60   | .10   |
| 31    |      | -----  | 344    | 39    | ----- | 11    | ----- | 8.8   | ----- | 2.3   | .60   | ----- |
| Total | 0    | 8,334  | 7,264  | 1,044 | 719   | 404.0 | 313.5 | 187.7 | 111.8 | 69.20 | 40.60 | 18.50 |
| Mean  | 0    | 278    | 234    | 33.7  | 25.7  | 13.0  | 10.4  | 6.05  | 3.73  | 2.23  | 1.31  | 0.62  |
| Ac-ft | 0    | 16,530 | 14,410 | 2,070 | 1,430 | 801   | 622   | 372   | 222   | 137   | 81    | 37    |

Calendar year 1965 Max 5,160 Min 0 Mean 45.1 Ac-ft 32,620  
Water year 1965-66 Max 5,160 Min 0 Mean 50.7 Ac-ft 36,710

Peak discharge (base, 500 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0300 | 11.13       | 1,500     | 12-29 | 0800 | 16.55       | 10,700    |
| 11-24 | 0330 | 16.75       | 11,200    |       |      |             |           |

11-1185. Ventura River near Ventura, Calif.--Continued.

Combined discharge, in cubic feet per second, of Ventura River and Ventura City diversion near Ventura, Calif., water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|-------|---------|--------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 5.6   | 4.1     | 44     | 105   | 37    | 24    | 20    | 17   | 17    | 14    | 11    | 12    |
| 2     | 4.2   | 4.0     | 28     | 72    | 34    | 22    | 22    | 18   | 16    | 14    | 15    | 10    |
| 3     | 4.2   | 4.0     | 23     | 58    | 30    | 22    | 23    | 17   | 14    | 14    | 12    | 8.9   |
| 4     | 4.2   | 3.9     | 20     | 51    | 29    | 22    | 23    | 15   | 14    | 15    | 11    | 6.3   |
| 5     | 4.2   | 3.9     | 19     | 46    | 28    | 22    | 23    | 15   | 15    | 14    | 11    | 6.0   |
| 6     | 4.2   | 3.9     | 19     | 40    | 25    | 22    | 22    | 16   | 16    | 14    | 9.0   | 10    |
| 7     | 4.2   | 3.8     | 24     | 39    | 46    | 22    | 22    | 16   | 14    | 14    | 9.5   | 12    |
| 8     | 5.6   | 3.8     | 24     | 36    | 38    | 24    | 21    | 16   | 14    | 12    | 13    | 7.8   |
| 9     | 6.0   | 3.7     | 22     | 33    | 36    | 24    | 22    | 15   | 14    | 12    | 15    | 5.6   |
| 10    | 5.8   | 3.7     | 20     | 32    | 32    | 23    | 21    | 15   | 14    | 12    | 14    | 8.8   |
| 11    | 5.6   | 2.0     | 20     | 58    | 29    | 23    | 22    | 16   | 14    | 13    | 13    | 7.2   |
| 12    | 3.3   | 2.6     | 22     | 38    | 29    | 21    | 22    | 15   | 14    | 16    | 8.8   | 10    |
| 13    | 4.2   | 3.9     | 26     | 37    | 29    | 20    | 21    | 16   | 14    | 13    | 7.6   | 12    |
| 14    | 5.8   | 3.0     | 32     | 35    | 29    | 21    | 19    | 16   | 13    | 11    | 9.1   | 10    |
| 15    | 5.5   | 3.2     | 31     | 34    | 29    | 21    | 18    | 15   | 18    | 11    | 14    | 10    |
| 16    | 3.9   | 7.4     | 31     | 31    | 29    | 21    | 20    | 15   | 13    | 11    | 14    | 6.2   |
| 17    | 3.2   | 585     | 30     | 27    | 29    | 20    | 20    | 15   | 13    | 12    | 13    | 5.6   |
| 18    | 5.1   | 430     | 19     | 28    | 30    | 23    | 21    | 15   | 13    | 14    | 13    | 7.0   |
| 19    | 5.3   | 121     | 18     | 30    | 27    | 25    | 22    | 15   | 14    | 13    | 8.2   | 9.8   |
| 20    | 5.1   | 34      | 20     | 28    | 26    | 23    | 19    | 15   | 15    | 14    | 8.1   | 11    |
| 21    | 5.0   | 26      | 20     | 28    | 31    | 19    | 20    | 15   | 14    | 14    | 9.2   | 10.0  |
| 22    | 4.8   | 938     | 22     | 28    | 29    | 17    | 19    | 15   | 14    | 9.9   | 9.8   | 10    |
| 23    | 4.7   | 1,180   | 20     | 28    | 30    | 18    | 18    | 14   | 14    | 11    | 13    | 10    |
| 24    | 4.6   | 4,060   | 17     | 27    | 32    | 19    | 18    | 14   | 15    | 12    | 13    | 10    |
| 25    | 4.5   | 553     | 18     | 27    | 30    | 19    | 18    | 17   | 14    | 14    | 12    | 9.5   |
| 26    | 4.4   | 180     | 18     | 27    | 30    | 19    | 18    | 16   | 14    | 14    | 12    | 9.5   |
| 27    | 4.4   | 110     | 18     | 26    | 25    | 19    | 19    | 15   | 15    | 14    | 11    | 9.8   |
| 28    | 4.3   | 56      | 22     | 26    | 26    | 19    | 17    | 14   | 15    | 14    | 8.3   | 9.7   |
| 29    | 4.2   | 34      | 5,170  | 25    | ----- | 20    | 15    | 15   | 14    | 9.6   | 11    | 9.5   |
| 30    | 4.2   | 28      | 1,270  | 128   | ----- | 21    | 17    | 15   | 14    | 9.4   | 13    | 8.1   |
| 31    | 4.1   | -----   | 347    | 43    | ----- | 21    | ----- | 17   | ----- | 9.5   | 12    | ----- |
| Total | 144.4 | 3,462.5 | 7,434  | 1,271 | 924   | 656   | 602   | 480  | 432   | 394.4 | 353.6 | 272.3 |
| Mean  | 4.66  | 282     | 240    | 41.0  | 33.0  | 21.2  | 20.1  | 15.5 | 14.4  | 12.7  | 11.4  | 9.08  |
| Ac-ft | 286   | 16,790  | 14,750 | 2,520 | 1,830 | 1,300 | 1,190 | 952  | 857   | 782   | 701   | 540   |

Calendar year 1965 Max 5,170 Min 1.3 Mean 51.6 Ac-ft 37,340  
 Water year 1965-66 Max 5,170 Min 2.0 Mean 58.7 Ac-ft 42,500

Peak discharge (base, 500 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0300 |             | 1,500     | 12-29 | 0800 |             | 10,700    |
| 11-24 | 0330 |             | 11,200    |       |      |             |           |

## CARPINTERIA CREEK BASIN

11-1195. Carpinteria Creek near Carpinteria, Calif.

Location.--Lat 34°24'04", long 119°29'08", in El Rincon Grant, on left bank at upstream side of bridge on State Highway 150, 200 ft downstream from Gobernador Creek, and 1.8 miles northeast of Carpinteria, Santa Barbara County.

Drainage area.--13.1 sq mi.

Records available.--January 1941 to September 1966.

Gage.--Graphic water-stage recorder and box-culvert control. Altitude of gage is 130 ft (from topographic map). Prior to July 1, 1958, at datum 2.00 ft higher.

Average discharge.--25 years, 1.76 cfs (1,270 acre-ft per year); median of yearly mean discharges, 0.3 cfs (220 acre-ft per year).

Extremes.--Maximum discharge during year, 2,300 cfs Nov. 24 (gage height, 7.90 ft), from rating curve extended above 810 cfs; no flow for most of year.

1941-66: Maximum discharge, 2,440 cfs Jan. 15, 1952 (gage height, 9.75 ft, present datum), from rating curve extended above 500 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records good. No regulation above station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 miles above station. Small lake three-quarters of a mile southeast of station and outside the drainage area stores storm runoff and surplus water diverted by Gobernador Land and Water Co. from Gobernador Creek. At times this lake is drained by pumping water into Gobernador Creek 1,000 ft above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      | 0      | 2.1    | 16    | 1.8   | 0.20 | 0     |     |       |      |      |       |
| 2     |      | 0      | 1.6    | 11    | 1.4   | .20  | 0     |     |       |      |      |       |
| 3     |      | 0      | 1.1    | 8.4   | 1.2   | .20  | 0     |     |       |      |      |       |
| 4     |      | 0      | .80    | 6.9   | 1.0   | .20  | 0     |     |       |      |      |       |
| 5     |      | 0      | .70    | 5.7   | 1.0   | .10  | 0     |     |       |      |      |       |
| 6     |      | 0      | .50    | 4.2   | 4.6   | .10  | 0     |     |       |      |      |       |
| 7     |      | 0      | .40    | 3.2   | 2.3   | .10  | 0     |     |       |      |      |       |
| 8     |      | 0      | .30    | 2.3   | 1.4   | .10  | 0     |     |       |      |      |       |
| 9     |      | 0      | .30    | 1.9   | 1.1   | .10  | 0     |     |       |      |      |       |
| 10    |      | 0      | .20    | 1.6   | 1.0   | .10  | .10   |     |       |      |      |       |
| 11    |      | 0      | .10    | 1.3   | .90   | .10  | .10   |     |       |      |      |       |
| 12    |      | 0      | .80    | 1.2   | .80   | .10  | 0     |     |       |      |      |       |
| 13    |      | 0      | .40    | 1.1   | .80   | 0    | 0     |     |       |      |      |       |
| 14    |      | 0      | .30    | 1.0   | .70   | 0    | 0     |     |       |      |      |       |
| 15    |      | 0      | .20    | .90   | .60   | 0    | 0     |     |       |      |      |       |
| 16    |      | 5.1    | .20    | .80   | .60   | 0    | 0     |     |       |      |      |       |
| 17    |      | 23     | .10    | 1.0   | .60   | 0    | 0     |     |       |      |      |       |
| 18    |      | 18     | .10    | 1.0   | .50   | 0    | 0     |     |       |      |      |       |
| 19    |      | 3.1    | 0      | .90   | .40   | 0    | 0     |     |       |      |      |       |
| 20    |      | 1.0    | 0      | .80   | .40   | 0    | 0     |     |       |      |      |       |
| 21    |      | .40    | 0      | .80   | .40   | .10  | 0     |     |       |      |      |       |
| 22    |      | 22     | 0      | .70   | .20   | .10  | .10   |     |       |      |      |       |
| 23    |      | 56     | 0      | .60   | .20   | 0    | .20   |     |       |      |      |       |
| 24    |      | 324    | 0      | .60   | .20   | 0    | 0     |     |       |      |      |       |
| 25    |      | 18     | 0      | .60   | .20   | 0    | 0     |     |       |      |      |       |
| 26    |      | 12     | 0      | .50   | .20   | 0    | 0     |     |       |      |      |       |
| 27    |      | 7.5    | 0      | .40   | .20   | 0    | 0     |     |       |      |      |       |
| 28    |      | 5.0    | 0      | .40   | .20   | 0    | 0     |     |       |      |      |       |
| 29    |      | 4.0    | 278    | .40   | ----- | 0    | 0     |     |       |      |      |       |
| 30    |      | 3.1    | 59     | 9.2   | ----- | 0    | 0     |     |       |      |      |       |
| 31    |      | -----  | 29     | 2.9   | ----- | 0    | ----- |     | ----- |      |      | ----- |
| Total | 0    | 502.20 | 376.20 | 88.30 | 24.90 | 1.80 | 0.50  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 16.7   | 12.1   | 2.85  | 0.89  | 0.06 | 0.02  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 996    | 746    | 175   | 49    | 3.6  | 1.0   | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 324 Min 0 Mean 2.87 Ac-ft 2,080  
 Water year 1965-66 Max 324 Min 0 Mean 2.72 Ac-ft 1,970

Peak discharge (base, 25 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0030 | 4.43        | 111       | 12-29 | 0730 | 6.35        | 975       |
| 11-24 | 0230 | 7.90        | 2,300     |       |      |             |           |



11-1200. Atascadero Creek near Goleta, Calif.

Location.--Lat 34°25'29", long 119°48'39", in La Goleta Grant, on downstream side of left-bank abutment of private road bridge 400 ft downstream from Maria Ygnacio Creek, 1.3 miles upstream from mouth, and 1.3 miles southeast of Goleta, Santa Barbara County.

Drainage area.--18.8 sq mi.

Records available.--October 1941 to September 1966. Prior to October 1947, published as Alascadero Creek near Goleta.

Gage.--Graphic water-stage recorder. Altitude of gage is 20 ft (from topographic map).

Average discharge.--25 years, 2.86 cfs (2,070 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 4,020 cfs Nov. 16 (gage height, 13.12 ft, from inside high-water mark), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; no flow for many days.  
1941-66: Maximum discharge, about 4,500 cfs Jan. 15, 1952 (gage height, 10.85 ft), estimated on basis of records for nearby streams; no flow for many days in each year.

Remarks.--Records fair. No regulation above station. Small diversions for irrigation above station. At times low flow results from return irrigation waste water. At other times Lake Cachuma water is wasted to channel. Forest fire in September 1964 denuded a large portion of the drainage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|---------|--------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     |      | 0       | 3.3    | 13    | 5.8   | 0.20 | 0.10  | 0    | 0     | 0    | 0.10 | 0     |
| 2     |      | 0       | 3.3    | 9.4   | 5.0   | .40  | .10   | 0    | 0     | 0    | .10  | 0     |
| 3     |      | 0       | 2.0    | 8.4   | 2.8   | .20  | .10   | 0    | 0     | 0    | .10  | 0     |
| 4     |      | 0       | 1.5    | 7.9   | 2.2   | .20  | .10   | 0    | .10   | .10  | 0    | 0     |
| 5     |      | 0       | 1.5    | 6.6   | 3.3   | .10  | .10   | 0    | .10   | .20  | 0    | 0     |
| 6     |      | 0       | 1.0    | 6.2   | 2.4   | .10  | .10   | 0    | .10   | .20  | 0    | 0     |
| 7     |      | 0       | 1.0    | 5.8   | 4.2   | .10  | .10   | 0    | .10   | .10  | .10  | 0     |
| 8     |      | 0       | 1.0    | 4.2   | 2.5   | .10  | .10   | 0    | .10   | .10  | .10  | 0     |
| 9     |      | 0       | 1.0    | 3.6   | 1.8   | .10  | .10   | 0    | 0     | .10  | .10  | .60   |
| 10    |      | 0       | 1.0    | 2.8   | 1.6   | .10  | .10   | .10  | 0     | 0    | 0    | 1.1   |
| 11    |      | 0       | 1.0    | 2.0   | 1.6   | .10  | 0     | 4.1  | 0     | 0    | 0    | .80   |
| 12    |      | 0       | 2.0    | 1.8   | 1.6   | .10  | 0     | 3.6  | 0     | 0    | 0    | .40   |
| 13    |      | 0       | 1.0    | 1.8   | 1.2   | .10  | 0     | 0    | 0     | 0    | 0    | .10   |
| 14    |      | 14      | .70    | 1.6   | 1.1   | .20  | 0     | 0    | .10   | 0    | 0    | .10   |
| 15    |      | 14      | .40    | 1.4   | .90   | .20  | 0     | 0    | .10   | 0    | 0    | 0     |
| 16    |      | 515     | .30    | 1.4   | .70   | .10  | 0     | 0    | .10   | 0    | 0    | 0     |
| 17    |      | 232     | .20    | 1.8   | .70   | .10  | 0     | 0    | 0     | 0    | 0    | 0     |
| 18    |      | 113     | .20    | 1.8   | .70   | .20  | 0     | 0    | 0     | 0    | 0    | 0     |
| 19    |      | 15      | .20    | 2.2   | .70   | .20  | .50   | .10  | 0     | 0    | 0    | 0     |
| 20    |      | 6.2     | .20    | 2.2   | .70   | .20  | .20   | .10  | 0     | 0    | 0    | .10   |
| 21    |      | 3.0     | .20    | 2.0   | .60   | .20  | 0     | .10  | 0     | 0    | 0    | .60   |
| 22    |      | 67      | .20    | 2.0   | .60   | .10  | 0     | .10  | 0     | 0    | .10  | .50   |
| 23    |      | 92      | .20    | 1.8   | .60   | .10  | 0     | .10  | 0     | 0    | .10  | .90   |
| 24    |      | 329     | .20    | 1.8   | .40   | .10  | 0     | 0    | 0     | 0    | 0    | .50   |
| 25    |      | 58      | .10    | 1.8   | .40   | .10  | 0     | 0    | 0     | 0    | 0    | .20   |
| 26    |      | 15      | .10    | 1.8   | .30   | .10  | 0     | .10  | 0     | 0    | 0    | .10   |
| 27    |      | 8.9     | .10    | 1.8   | .20   | .10  | 0     | .10  | 0     | 0    | 0    | .10   |
| 28    |      | 6.2     | .20    | 1.8   | .20   | .10  | 0     | .10  | 0     | 0    | 0    | 0     |
| 29    |      | 3.9     | 623    | 2.9   | ----- | .10  | 0     | .10  | 0     | 0    | 0    | 0     |
| 30    |      | 3.3     | 127    | 88    | ----- | .10  | 0     | 0    | 0     | 0    | 0    | 0     |
| 31    |      | -----   | 59     | 12    | ----- | .10  | ----- | 0    | ----- | 0    | 0    | ----- |
| Total | 0    | 1,495.5 | 833.10 | 203.6 | 66.40 | 4.30 | 1.70  | 8.70 | 0.80  | 0.80 | 0.80 | 6.10  |
| Mean  | 0    | 49.8    | 26.9   | 6.57  | 2.37  | 0.14 | 0.06  | 0.28 | 0.03  | 0.03 | 0.03 | 0.20  |
| Ac-ft | 0    | 2,970   | 1,650  | 404   | 132   | 8.5  | 3.4   | 17   | 1.6   | 1.6  | 1.6  | 12    |

Calendar year 1965 Max 623 Min 0 Mean 9.06 Ac-ft 6,560

Water year 1965-66 Max 623 Min 0 Mean 7.18 Ac-ft 5,200

Peak discharge (base, 60 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 1800 | 13.12       | 4,020     | 12-29 | 0500 | 11.45       | 1,470     |
| 11-24 | 0100 | 12.00       | 1,760     | 1-30  | 0230 | 7.63        | 274       |

Note.--No gage-height record Dec. 4-13, 18-28.

11-1205. San Jose Creek near Goleta, Calif.

Location.--Lat 34°27'33", long 119°48'29", in La Goleta Grant, on left pier of Patterson Avenue Bridge, 1.1 miles downstream from unnamed tributary, and 1.7 miles northeast of Goleta, Santa Barbara County.

Drainage area.--5.51 sq mi.

Records available.--January 1941 to September 1966.

Gage.--Digital water-stage recorder and concrete low-water control since October 1962. Altitude of gage is 100 ft (from topographic map). 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 Apr. 18, 1966, graphic water-stage recorder.

Average discharge.--25 years, 1.61 cfs (1,170 acre-ft per year); median of yearly mean discharges, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 1,700 cfs Nov. 16 (gage height, 9.32 ft), from rating curve extended above 280 cfs on basis of slope-area measurement of maximum flow; no flow for some days.

1941-66: Maximum discharge, 1,960 cfs Apr. 4, 1941, from rating curve extended above 850 cfs; maximum gage height, 12.74 ft, present datum, Jan. 21, 1943; no flow at times in each year.

Remarks.--Records good. No regulation above station. Many small diversions for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.10 | 0      | 1.8    | 12    | 2.7   | 0.70  |       |      |       |      |      |       |
| 2     | .10  | 0      | 1.5    | 8.6   | 2.0   | .80   | 0.40  | .40  | 0.20  | 0.10 | 0.10 | 0.10  |
| 3     | .10  | 0      | 1.3    | 6.1   | 1.6   | .70   | .40   | .40  | .20   | .10  | .10  | .10   |
| 4     | .10  | 0      | 1.2    | 5.2   | 1.5   | .70   | .40   | .40  | .20   | .10  | .10  | 0     |
| 5     | .10  | .10    | 1.1    | 4.0   | 1.5   | .70   | .30   | .30  | .20   | .10  | .10  | 0     |
| 6     | .10  | .10    | 1.1    | 3.5   | 5.1   | .70   | .30   | .30  | .20   | .10  | .10  | 0     |
| 7     | .10  | .10    | 1.1    | 3.2   | 2.7   | .60   | .30   | .30  | .20   | .10  | .10  | 0     |
| 8     | .10  | .10    | 1.0    | 2.7   | 2.0   | .60   | .30   | .40  | .20   | .10  | .10  | 0     |
| 9     | .10  | .10    | 1.2    | 2.4   | 1.6   | .60   | .40   | .30  | .20   | .10  | .10  | 0     |
| 10    | .10  | .10    | 1.2    | 2.0   | 1.5   | .60   | .40   | .30  | .20   | .10  | .10  | 0     |
| 11    | .10  | .10    | 1.1    | 1.8   | 1.4   | .60   | .30   | .20  | .20   | .10  | .10  | 0     |
| 12    | .10  | .10    | 2.4    | 1.6   | 1.3   | .60   | .30   | .20  | .10   | .10  | .10  | 0     |
| 13    | .10  | .10    | 1.6    | 1.5   | 1.3   | .60   | .30   | .20  | .10   | .10  | .10  | 0     |
| 14    | .10  | .50    | 1.2    | 1.4   | 1.2   | .60   | .40   | .20  | .10   | .10  | .10  | 0     |
| 15    | .10  | 1.6    | 1.1    | 1.3   | 1.1   | .50   | .30   | .20  | .20   | .10  | .10  | .10   |
| 16    | .10  | 203    | .90    | 1.2   | 1.1   | .50   | .40   | .20  | .20   | .10  | .10  | .10   |
| 17    | .10  | 75     | .90    | 1.1   | 1.0   | .50   | .40   | .20  | .10   | .10  | .10  | 0     |
| 18    | .10  | 32     | .80    | 1.1   | 1.0   | .50   | .40   | .20  | .10   | .10  | .10  | .10   |
| 19    | .10  | 6.4    | .70    | 1.1   | .90   | .50   | .40   | .20  | .10   | .10  | .10  | .10   |
| 20    | .10  | 3.2    | .70    | 1.1   | .90   | .50   | .40   | .30  | .10   | .10  | .10  | .10   |
| 21    | .10  | 1.8    | .70    | 1.0   | .90   | .50   | .40   | .30  | .10   | .10  | .10  | .10   |
| 22    | 0    | 30     | .70    | 1.0   | .90   | .50   | .40   | .30  | .10   | .10  | .10  | .10   |
| 23    | 0    | 48     | .70    | 1.0   | .90   | .50   | .40   | .20  | .10   | .10  | .10  | .10   |
| 24    | 0    | 190    | .60    | 1.0   | .80   | .50   | .40   | .20  | .10   | .10  | .10  | .10   |
| 25    | 0    | 22     | .60    | .90   | .80   | .50   | .40   | .30  | .10   | .10  | .10  | .10   |
| 26    | 0    | 7.8    | .60    | .90   | .80   | .50   | .50   | .30  | .10   | .10  | .10  | .10   |
| 27    | 0    | 4.9    | .60    | .80   | .80   | .50   | .50   | .30  | .10   | .10  | .10  | .10   |
| 28    | 0    | 3.5    | .70    | .80   | .80   | .50   | .50   | .30  | .10   | .10  | .10  | .10   |
| 29    | 0    | 2.7    | 324    | .90   | ----- | .50   | .50   | .30  | .10   | .10  | .10  | .10   |
| 30    | 0    | 2.2    | 46     | 23    | ----- | .50   | .50   | .20  | .10   | .10  | .10  | .10   |
| 31    | 0    | -----  | 24     | 4.0   | ----- | .50   | ----- | .20  | ----- | .10  | 0    | ----- |
| Total | 2.10 | 635.50 | 423.10 | 98.20 | 40.10 | 17.60 | 11.80 | 8.40 | 4.30  | 3.10 | 3.00 | 1.70  |
| Mean  | 0.07 | 21.2   | 13.6   | 3.17  | 1.43  | 0.57  | 0.39  | 0.27 | 0.14  | 0.10 | 0.10 | 0.06  |
| Ac-ft | 4.2  | 1,260  | 839    | 195   | 80    | 35    | 23    | 17   | 8.5   | 6.1  | 6.0  | 3.4   |

Calendar year 1965 Max 324 Min 0 Mean 4.00 Ac-ft 2,890

Water year 1965-66 Max 324 Min 0 Mean 3.42 Ac-ft 2,480

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 1700 | 9.32        | 1,700     | 12-29 | 0530 | 8.20        | 1,360     |
| 11-24 | 0100 | 8.50        | 1,450     | 1-30  | 0400 | 2.97        | 100       |

11-1206. Jalama Creek near Lompoc, Calif.

Location.--Lat 34°30'50", long 120°29'02", in San Julian Grant, on downstream side of right bridge pier on Jalama Road, 0.6 mile downstream from Gasper Creek, 1.4 miles upstream from mouth, and 8.9 miles southwest of Lompoc, Santa Barbara County.

Drainage area.--20.5 sq mi.

Records available.--September 1965 to September 1966.

Gage.--Graphic water-stage recorder and concrete control. Altitude of gage is 80 ft (from topographic map).

Extremes.--1965: No flow during September.

1965-66: Maximum discharge during year, 1,430 cfs Nov. 16 (gage height, 7.70 ft); no flow Oct. 1 to Nov. 13.

Remarks.--Records good. No regulation or diversion above station. Some pumping from wells for irrigation of about 400 acres.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 5.0   | 26    | 38    | 4.1   | 1.8   | 1.1   | 0.80  | 0.40 | 0.20 | 0.10  |
| 2     |      | 0     | 4.4   | 18    | 20    | 4.7   | 1.8   | 1.1   | .80   | .40  | .20  | .10   |
| 3     |      | 0     | 3.5   | 15    | 12    | 4.4   | 2.0   | 1.1   | .80   | .40  | .10  | .10   |
| 4     |      | 0     | 3.5   | 12    | 11    | 4.4   | 2.2   | 1.2   | .70   | .40  | .10  | .10   |
| 5     |      | 0     | 3.2   | 11    | 12    | 4.1   | 2.2   | 1.2   | .70   | .40  | .10  | .10   |
| 6     |      | 0     | 3.0   | 9.6   | 27    | 4.1   | 2.0   | 1.2   | .70   | .30  | .10  | .10   |
| 7     |      | 0     | 2.8   | 8.6   | 16    | 4.1   | 1.8   | 1.2   | .70   | .30  | .10  | .10   |
| 8     |      | 0     | 2.6   | 7.8   | 12    | 4.1   | 1.8   | 1.2   | .70   | .30  | .10  | .10   |
| 9     |      | 0     | 2.6   | 7.4   | 12    | 4.1   | 1.8   | 1.5   | .70   | .30  | .10  | .10   |
| 10    |      | 0     | 2.4   | 7.0   | 12    | 4.1   | 1.8   | 1.5   | .60   | .30  | .10  | .10   |
| 11    |      | 0     | 2.8   | 6.3   | 9.6   | 4.1   | 1.7   | 1.5   | .60   | .30  | .10  | .10   |
| 12    |      | 0     | 4.1   | 5.6   | 9.2   | 3.8   | 1.5   | 1.5   | .60   | .30  | .10  | .10   |
| 13    |      | 0     | 2.8   | 5.6   | 8.2   | 3.8   | 1.5   | 1.5   | .70   | .30  | .10  | .10   |
| 14    |      | 72    | 2.8   | 5.3   | 7.8   | 3.8   | 1.4   | 1.5   | .80   | .30  | .10  | .10   |
| 15    |      | 30    | 2.4   | 6.3   | 7.4   | 3.5   | 1.2   | 1.4   | .70   | .30  | .10  | .10   |
| 16    |      | 306   | 2.2   | 5.0   | 7.0   | 3.2   | 1.2   | 1.4   | .80   | .30  | .10  | .10   |
| 17    |      | 143   | 2.0   | 4.4   | 7.0   | 3.0   | 1.2   | 1.4   | .80   | .30  | .10  | .10   |
| 18    |      | 120   | 1.8   | 4.4   | 6.7   | 3.0   | 1.4   | 1.2   | .70   | .30  | .10  | .10   |
| 19    |      | 23    | 1.8   | 4.4   | 6.3   | 3.0   | 1.4   | 1.2   | .70   | .20  | .10  | .20   |
| 20    |      | 10    | 1.8   | 4.4   | 6.3   | 3.0   | 1.2   | 1.2   | .60   | .20  | .10  | .20   |
| 21    |      | 6.7   | 1.8   | 4.1   | 5.9   | 2.8   | 1.1   | 1.1   | .50   | .20  | .10  | .30   |
| 22    |      | 21    | 1.8   | 4.1   | 5.6   | 2.8   | 1.1   | 1.1   | .40   | .20  | .10  | .10   |
| 23    |      | 41    | 1.7   | 3.8   | 5.3   | 2.8   | 1.1   | 1.1   | .40   | .20  | .10  | .10   |
| 24    |      | 46    | 1.5   | 3.5   | 5.0   | 2.8   | 1.0   | .90   | .30   | .20  | .10  | .10   |
| 25    |      | 27    | 2.2   | 3.5   | 4.7   | 2.6   | .90   | .90   | .30   | .20  | .10  | .20   |
| 26    |      | 14    | 2.0   | 3.8   | 4.4   | 2.6   | .80   | .90   | .40   | .20  | .10  | .20   |
| 27    |      | 9.6   | 1.8   | 7.0   | 4.1   | 2.4   | 1.1   | 1.0   | .40   | .20  | .10  | .20   |
| 28    |      | 7.8   | 1.3   | 3.8   | 4.1   | 2.4   | 1.2   | 1.0   | .40   | .20  | .10  | .20   |
| 29    |      | 6.7   | 1.94  | 4.1   | ----- | 2.4   | 1.2   | .90   | .40   | .20  | .10  | .10   |
| 30    |      | 5.9   | 51    | 99    | ----- | 2.2   | 1.2   | .80   | .40   | .20  | .10  | .20   |
| 31    |      | ----- | 44    | 17    | ----- | 2.2   | ----- | .80   | ----- | .20  | .10  | ----- |
| Total | 0    | 889.7 | 372.3 | 327.8 | 286.6 | 104.4 | 43.60 | 36.60 | 18.10 | 8.50 | 3.30 | 3.90  |
| Mean  | 0    | 29.7  | 12.0  | 10.6  | 10.2  | 3.37  | 1.45  | 1.18  | 0.60  | 0.27 | 0.11 | 0.13  |
| Ac-ft | 0    | 1,760 | 738   | 650   | 568   | 207   | 86    | 73    | 36    | 17   | 6.5  | 7.7   |

Calendar year 1965 Max Min Mean Ac-ft  
 Water year 1965-66 Max 306 Min 0 Mean 5.74 Ac-ft 4,150

Peak discharge (base, 150 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-14 | 1930 | 6.05        | 560       | 12-29 | 0100 | 6.60        | 800       |
| 11-16 | 1430 | 7.70        | 1,430     | 1-30  | 0100 | 5.76        | 469       |

## SANTA YNEZ RIVER BASIN

11-1210. Santa Ynez River at Jameson Lake, near Montecito, Calif.

Location.--Lat 34°29'32", long 119°30'25", on upstream side of Juncal Dam, 6.5 miles north of Carpinteria, and 8 miles northeast of Montecito, Santa Barbara County.

Drainage area.--13.8 sq mi (not including Alder Creek).

Records available.--December 1930 to September 1966. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

Gage.--Water-stage recorder on lake; digital water-stage recorder and sharp-crested weir on outlet conduit. Datum of gage is 2,021.6 ft above mean sea level (Bureau of Reclamation bench mark), or 2,000 ft above arbitrary datum (called sea level) generally used for works in this vicinity. Prior to Apr. 15, 1966, graphic water-stage recorder on outlet conduit.

Average discharge.--35 years (1931-66), 5.40 cfs (3,910 acre-ft per year); median of yearly mean discharges, 2.1 cfs (1,500 acre-ft per year).

Remarks.--Records of total inflow represent all water reaching Jameson Lake, including precipitation on the lake. Net discharge computed on basis of records of storage, diversion (draft) to the city of Montecito, spill and release to river, and evaporation. Records of net discharge exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from Colorado land pan using coefficient of 0.80. Area and capacity tables are based on surveys made in 1961. Lake capacity at spillway level (gage height, 223.82 ft) 6,596 acre-ft. Dead storage, 220 acre-ft, below lowest outlet at gage height 139.0 ft, included in these records. There is no regulation or diversion above station. At times flow of Alder Creek, which enters Santa Ynez River 2 miles downstream from Juncal Dam, is diverted at elevation 2,250 ft through a tunnel to Jameson Lake, and is included in these records.

Cooperation.--Reservoir-operation records and related data furnished by Montecito County Water District.

Monthly net discharge, water year October 1965 to September 1966

| Month                   | Gage height (feet)† | Contents (acre-feet) | Change in contents (acre-feet) | Draft (acre-feet) | Spill and release (acre-feet) | Evaporation (acre-feet) | Total inflow (acre-feet) | Rain on reservoir (acre-feet) | Net discharge (acre-feet) |
|-------------------------|---------------------|----------------------|--------------------------------|-------------------|-------------------------------|-------------------------|--------------------------|-------------------------------|---------------------------|
|                         | Jameson Lake        |                      |                                |                   |                               |                         |                          |                               |                           |
| Sept. 30.....           | 181.62              | 2,066                | -                              | -                 | -                             | -                       | -                        | -                             | -                         |
| Oct. 31.....            | 178.43              | 1,845                | -221                           | 213               | 0                             | 19                      | 11                       | 0                             | 11                        |
| Nov. 30.....            | 203.15              | 4,014                | +2,169                         | 111               | 0                             | 4                       | 2,284                    | 127                           | 2,157                     |
| Dec. 31.....            | 224.15              | 6,643                | +2,629                         | 31                | 201                           | 3                       | 2,864                    | 110                           | 2,754                     |
| Calendar year 1965..... | -                   | -                    | +4,080                         | 1,667             | 201                           | 235                     | 6,183                    | 316                           | 5,867                     |
| Jan. 31.....            | 223.98              | 6,619                | -24                            | 34                | 2,220                         | 10                      | 2,240                    | 0                             | 2,240                     |
| Feb. 28.....            | 223.88              | 6,604                | -15                            | 129               | 519                           | 15                      | 648                      | 13                            | 635                       |
| Mar. 31.....            | 223.32              | 6,524                | -80                            | 229               | 6                             | 30                      | 185                      | 1                             | 184                       |
| Apr. 30.....            | 222.13              | 6,355                | -169                           | 208               | 0                             | 43                      | 82                       | 0                             | 82                        |
| May 31.....             | 220.63              | 6,147                | -208                           | 200               | 0                             | 46                      | 38                       | 1                             | 37                        |
| June 30.....            | 218.95              | 5,919                | -228                           | 182               | 0                             | 60                      | 14                       | 0                             | 14                        |
| July 31.....            | 216.28              | 5,567                | -352                           | 281               | 0                             | 64                      | -7                       | 0                             | -7                        |
| Aug. 31.....            | 213.97              | 5,276                | -291                           | 232               | 0                             | 59                      | 0                        | 0                             | 0                         |
| Sept. 30.....           | 212.31              | 5,071                | -205                           | 154               | 0                             | 35                      | -16                      | 0                             | -16                       |
| Water year 1965-66..... | -                   | -                    | +3,005                         | 2,004             | 2,946                         | 388                     | 8,343                    | 252                           | 8,091                     |

† Gage height at 2400 hours.

Note.--For months when inflow to the lake was small and other quantities were large, discordant figures of net discharge may appear. This arises primarily from the difficulty of computing net discharge as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

11-1220. Santa Ynez River above Gibraltar Dam, near Santa Barbara, Calif.

Location.--Lat 34°31'37", long 119°41'10", on upstream side of Gibraltar Dam, 7 miles north of Santa Barbara, Santa Barbara County.

Drainage area.--216 sq mi.

Records available.--April 1920 to September 1966. 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 "near Santa Barbara."

Gage.--Water-stage recorder on reservoir; digital water-stage recorder and sharp-crested weir on diversion. Spill and release measured at river gaging station below dam (see Sta. No. 1230). Datum of reservoir gage is mean sea level (datum of 1929). Prior to August 1916, staff gage 900 ft downstream at different datum. August 1916, to June 1918, water-stage recorder at Gibraltar damsite at different datum. June to November 1918, staff gage at several sites and datums near dam. Apr. 1, 1920, to Oct. 1, 1955, at datum 21.82 ft higher. Since Oct. 1, 1955, supplemental gage 15 ft to right of spillway, used for elevation above 1,386 ft. Prior to Apr. 15, 1966, graphic water-stage recorder on diversion.

Remarks.--Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage, diversion (draft) to city of Santa Barbara, spill and release to river, and evaporation. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed on basis of evaporation from Colorado Land pan using coefficient of 0.80. Area and capacity tables are based on surveys made in 1956. Reservoir capacity at spillway level (elevation, 1,399.82 ft), 14,777 acre-ft (increased to 15,210 acre-ft with flash boards in place). Dead storage, 716 acre-ft, below lowest outlet at elevation 1,333.86 ft, included in these records. Flow regulated by Jameson Lake since December 1930 (see Sta. No. 1210).

Cooperation.--Reservoir-operation records and related data furnished by city of Santa Barbara.

Monthly net inflow, water year October 1965 to September 1966

| Month                   | Elevation<br>(feet)† | 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>(acre-<br>feet) | Total<br>inflow<br>(acre-<br>feet) | Rain on<br>reser-<br>voir<br>(acre-<br>feet) | Net<br>Inflow<br>(acre-<br>feet) |
|-------------------------|----------------------|-----------------------------|---|--------------------------|--|-------------------------------------|------------------------------------|--|----------------------------------|
|                         | Gibraltar Reservoir  |                             |   |                          |  |                                     |                                    |  |                                  |
| Sept. 30.....           | 1,391.25             | 11,412                      | -   | -                        | -  | -                                   | -                                  | -  | -                                |
| Oct. 31.....            | 1,388.98             | 10,628                      | -784  | 689                      | 23   | 109                                 | 37                                 | 0  | 37                               |
| Nov. 30.....            | 1,398.82             | 14,353                      | +3,725                                      | 164                      | 19,980                                     | 34                                  | 23,903                             | 532  | 23,371                           |
| Dec. 31.....            | 1,400.16             | 14,923                      | +570  | 115                      | 24,650                                     | 22                                  | 25,357                             | 338  | 25,019                           |
| Calendar year 1965..... | -                    | -                           | +7,409                                      | 5,569                    | 46,107                                     | 1,272                               | 60,357                             | 1,151  | 59,206                           |
| Jan. 31.....            | 1,400.00             | 14,854                      | -69   | 97                       | 11,570                                     | 39                                  | 11,637                             | 80   | 11,557                           |
| Feb. 28.....            | 1,399.67             | 14,713                      | -141  | 217                      | 6,660                                      | 64                                  | 6,800                              | 31   | 6,769                            |
| Mar. 31.....            | 1,400.75             | 14,876                      | +163  | 492                      | 1,830                                      | 111                                 | 2,596                              | 9  | 2,587                            |
| Apr. 30.....            | 1,400.00             | 14,854                      | -22   | 696                      | 358  | 178                                 | 1,210                              | 0  | 1,210                            |
| May 31.....             | 1,399.35             | 14,577                      | -277  | 689                      | 17   | 192                                 | 621                                | 0  | 621                              |
| June 30.....            | 1,397.59             | 13,842                      | -735  | 772                      | 57   | 236                                 | 330                                | 0  | 330                              |
| July 31.....            | 1,395.07             | 12,830                      | -1,012                                      | 855                      | 99   | 240                                 | 182                                | 0  | 182                              |
| Aug. 31.....            | 1,392.31             | 11,794                      | -1,036                                      | 869                      | 48   | 248                                 | 129                                | 0  | 129                              |
| Sept. 30.....           | 1,389.72             | 10,879                      | -915  | 833                      | 24   | 164                                 | 106                                | 0  | 106                              |
| Water year 1965-66..... | -                    | -                           | -533  | 6,488                    | 65,316                                     | 1,637                               | 72,908                             | 990  | 71,918                           |

† Elevation at 1800 hours.

Note.--For months when inflow to the reservoir was small and other quantities were large, discordant figures of net inflow may appear. This arises primarily from the difficulty of computing net inflow as the residual of several larger quantities, which are not susceptible to measurement with a precision necessary to produce a final answer within desirable limits of accuracy.

## SANTA YNEZ RIVER BASIN

11-1230. Santa Ynez River below Gibraltar Dam, near Santa Barbara, Calif.

Location.--Lat 34°31'28", long 119°41'11", in southwest portion of Los Padres National Forest, on left bank 700 ft downstream from Gibraltar Dam, and 7 miles north of Santa Barbara, Santa Barbara County.

Drainage area.--216 sq mi.

Records available.--April 1920 to September 1966 (monthly discharge only prior to October 1941).

Gage.--Graphic water-stage recorder; graphic water-stage recorder and combination sharp-crested weir on "release to river" gage. Datum of gage is 1,227 ft above mean sea level. Graphic water-stage recorder on Gibraltar Reservoir used as supplementary gage. Prior to Apr. 17, 1952, graphic water-stage recorder on Gibraltar Reservoir used as principal gage. Apr. 17 to Oct. 15, 1952, staff gage, and Oct. 16, 1952, to May 20, 1958, graphic water-stage recorder, at same site at datum 5.00 ft higher.

Extremes.--Maximum discharge during year, 13,900 cfs Dec. 29 (gage height, 16.30 ft); no flow June 4-18.

1920-66: Maximum discharge, 35,500 cfs Mar. 2, 1938, computed from spillway rating; no flow at times in most years.

Remarks.--Records good. Flow regulated by Jameson Lake and Gibraltar Reservoir (see Sta. Nos. 1210, 1220). City of Santa Barbara diverted 6,488 acre-ft during the water year from Gibraltar Reservoir; Montecito County Water District diverted 2,004 acre-ft during the water year from Jameson Lake.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.     | Jan.   | Feb.  | Mar.   | Apr.  | May  | June  | July | Aug.  | Sept. |
|-------|-------|----------|----------|--------|-------|--------|-------|------|-------|------|-------|-------|
| 1     | 0.60  | 0.40     | 0.10     | 56.4   | 159   | 64     | 3.7   | 1.3  | 0.10  | 2.6  | 1.1   | 0.40  |
| 2     | .60   | .40      | .23      | 457    | 134   | 67     | 4.8   | .90  | .10   | 2.5  | .80   | .40   |
| 3     | .50   | .30      | .57      | 374    | 121   | 62     | 5.6   | .70  | .10   | 2.5  | .80   | .50   |
| 4     | .50   | .30      | .66      | 340    | 103   | 56     | 7.6   | .60  | 0     | 2.5  | .80   | .50   |
| 5     | .40   | .30      | .65      | 288    | 102   | 51     | 9.3   | .40  | 0     | 2.5  | .80   | .50   |
| 6     | .30   | .30      | .61      | 280    | 270   | 48     | 9.6   | .30  | 0     | 2.0  | .80   | .50   |
| 7     | .30   | .30      | .58      | 252    | 235   | 46     | 9.8   | .30  | 0     | 1.6  | .80   | .50   |
| 8     | .31   | .30      | .54      | 235    | 201   | 44     | 10    | .30  | 0     | 1.7  | .80   | .50   |
| 9     | .31   | .30      | .53      | 217    | 165   | 40     | 10    | .30  | 0     | 1.7  | .80   | .40   |
| 10    | .31   | .30      | .53      | 201    | 149   | 37     | 10    | .30  | 0     | 1.7  | .80   | .40   |
| 11    | .31   | .30      | .48      | 187    | 134   | 36     | 10    | .30  | 0     | 1.7  | .70   | .40   |
| 12    | .31   | .30      | .54      | 169    | 122   | 34     | 10    | .30  | 0     | 1.7  | .70   | .40   |
| 13    | .31   | .30      | .56      | 165    | 121   | 32     | 9.1   | .30  | 0     | 1.7  | .70   | .40   |
| 14    | .31   | .40      | .48      | 149    | 120   | 31     | 6.8   | .30  | 0     | 1.7  | .70   | .40   |
| 15    | .31   | .40      | .43      | 140    | 112   | 30     | 7.2   | .30  | 0     | 1.7  | .80   | .40   |
| 16    | .31   | .36      | .40      | 133    | 106   | 31     | 7.9   | .20  | 0     | 1.7  | .80   | .40   |
| 17    | .31   | 138      | .38      | 126    | 102   | 28     | 5.8   | .20  | 0     | 1.7  | .80   | .40   |
| 18    | .40   | 172      | .35      | 115    | 99    | 26     | 4.3   | .20  | 0     | 1.5  | .80   | .40   |
| 19    | .31   | 95       | .32      | 114    | 95    | 26     | 5.4   | 10   | .10   | 1.2  | .80   | .39   |
| 20    | .30   | 81       | .32      | 109    | 94    | 26     | 5.2   | .10  | 1.5   | 1.2  | .90   | .39   |
| 21    | .31   | 77       | .32      | 104    | 87    | 24     | 4.6   | .10  | 3.0   | 1.2  | .90   | .39   |
| 22    | .40   | 132      | .31      | 96     | 86    | 23     | 4.8   | .10  | 2.9   | 1.2  | .90   | .41   |
| 23    | .40   | 1990     | .28      | 92     | 80    | 23     | 4.0   | .10  | 2.6   | 1.2  | .90   | .41   |
| 24    | .40   | 4,900    | .28      | 94     | 79    | 24     | 3.5   | .10  | 2.6   | 1.2  | .80   | .39   |
| 25    | .40   | 1,040    | .28      | 87     | 75    | 11     | 2.5   | .10  | 2.6   | 1.1  | .80   | .35   |
| 26    | .40   | 457      | .28      | 87     | 72    | .20    | 1.7   | .10  | 2.6   | 1.1  | .80   | .35   |
| 27    | .40   | 282      | .28      | 86     | 70    | .20    | 1.9   | .10  | 2.6   | 1.1  | .80   | .35   |
| 28    | .40   | 235      | .28      | 81     | 66    | .20    | 2.5   | .10  | 2.6   | 1.1  | .70   | .30   |
| 29    | .40   | 191      | 7.580    | 80     | ----- | .20    | 1.6   | .10  | 2.6   | 1.1  | .70   | .30   |
| 30    | .31   | 242      | 2.720    | 199    | ----- | .20    | 1.3   | .10  | 2.6   | 1.1  | .70   | .30   |
| 31    | .31   | -----    | 982      | 211    | ----- | 1.1    | ----- | .10  | ----- | 1.2  | .50   | ----- |
| Total | 11.44 | 10.07290 | 12.42910 | 5.832  | 3.359 | 9.2210 | 180.5 | 8.80 | 28.60 | 49.7 | 24.50 | 12.13 |
| Mean  | 0.369 | .336     | .401     | .188   | .120  | .297   | 6.02  | 0.28 | 0.95  | 1.60 | 0.79  | 0.404 |
| Ac-ft | 23    | 19.980   | 24.650   | 11.570 | 6.660 | 1.830  | 358   | 17   | 57    | 99   | 49    | 24    |

Calendar year 1965 Max 7.580 Min 0 Mean 63.7 Ac-ft 46,110

Water year 1965-66 Max 7.580 Min 0 Mean 90.2 Ac-ft 65,320

11-1235. Santa Ynez River below Los Laureles Canyon, near Santa Ynez, Calif.

Location.--Lat 34°32'37", long 119°51'50", in San Marcos Grant, on left bank 0.3 mile downstream from Los Laureles Canyon Creek and 13.3 miles east of Santa Ynez, Santa Barbara County.

Drainage area.--277 sq mi.

Records available.--April 1947 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Datum of gage is 787.8 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 15,000 cfs Dec. 29 (gage height, 10.80 ft); no flow Oct. 1 to Nov. 14, Apr. 30 to Sept. 30. 1947-66; Maximum discharge, 33,000 cfs Jan. 15, 1952 (gage height, 15.6 ft), from rating curve extended above 6,400 cfs on basis of slope-area measurement of maximum flow for station below Gibraltar Dam; no flow for several months in each year.

Remarks.--Records good except those for Apr. 2-28, which are poor. Flow regulated by Jameson Lake and Gibraltar Reservoir (see Sta. Nos. 1210, 1220). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Flow affected by intermittent pumping for irrigation and from infiltration gallery in river bed at station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.    | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May    | June | July | Aug. | Sept. |
|--------------------|------|---------|--------|--------|-------|-------|-------|--------|------|------|------|-------|
| 1                  |      | 0       | 70     | 1,040  | 152   | 66    | 10    |        |      |      |      |       |
| 2                  |      | 0       | 46     | 791    | 134   | 70    | 9.8   |        |      |      |      |       |
| 3                  |      | 0       | 64     | 564    | 119   | 66    | 9.5   |        |      |      |      |       |
| 4                  |      | 0       | 75     | 503    | 113   | 62    | 9.3   |        |      |      |      |       |
| 5                  |      | 0       | 75     | 350    | 110   | 60    | 9.2   |        |      |      |      |       |
| 6                  |      | 0       | 70     | 344    | 142   | 57    | 9.0   |        |      |      |      |       |
| 7                  |      | 0       | 66     | 285    | 188   | 53    | 8.8   |        |      |      |      |       |
| 8                  |      | 0       | 62     | 255    | 175   | 51    | 8.6   |        |      |      |      |       |
| 9                  |      | 0       | 60     | 226    | 146   | 49    | 8.4   |        |      |      |      |       |
| 10                 |      | 0       | 62     | 204    | 131   | 46    | 8.2   |        |      |      |      |       |
| 11                 |      | 0       | 59     | 191    | 122   | 45    | 8.0   |        |      |      |      |       |
| 12                 |      | 0       | 66     | 175    | 116   | 43    | 7.8   |        |      |      |      |       |
| 13                 |      | 0       | 64     | 163    | 113   | 41    | 7.6   |        |      |      |      |       |
| 14                 |      | 0       | 59     | 152    | 113   | 40    | 7.5   |        |      |      |      |       |
| 15                 |      | 2.1     | 53     | 146    | 107   | 38    | 7.3   |        |      |      |      |       |
| 16                 |      | 381     | 51     | 140    | 107   | 38    | 7.1   |        |      |      |      |       |
| 17                 |      | 625     | 49     | 134    | 101   | 38    | 7.0   |        |      |      |      |       |
| 18                 |      | 254     | 48     | 128    | 98    | 35    | 6.8   |        |      |      |      |       |
| 19                 |      | 98      | 45     | 125    | 92    | 34    | 6.6   |        |      |      |      |       |
| 20                 |      | 49      | 43     | 119    | 88    | 34    | 6.5   |        |      |      |      |       |
| 21                 |      | 33      | 43     | 113    | 88    | 33    | 6.4   |        |      |      |      |       |
| 22                 |      | 127     | 41     | 110    | 82    | 31    | 6.2   |        |      |      |      |       |
| 23                 |      | 879     | 40     | 104    | 80    | 30    | 6.1   |        |      |      |      |       |
| 24                 |      | 4,270   | 38     | 101    | 78    | 30    | 6.0   |        |      |      |      |       |
| 25                 |      | 1,190   | 37     | 98     | 72    | 29    | 5.8   |        |      |      |      |       |
| 26                 |      | 602     | 37     | 90     | 72    | 22    | 5.7   |        |      |      |      |       |
| 27                 |      | 326     | 35     | 92     | 67    | 14    | 5.6   |        |      |      |      |       |
| 28                 |      | 250     | 37     | 88     | 66    | 12    | 5.4   |        |      |      |      |       |
| 29                 |      | 204     | 8.080  | 85     | ----- | 12    | 3.1   |        |      |      |      |       |
| 30                 |      | 163     | 3,230  | 220    | ----- | 12    | 0     |        |      |      |      |       |
| 31                 |      | -----   | 1,410  | 200    | ----- | 11    | ----- |        |      |      |      |       |
| Total              | 0    | 9,453.1 | 14,215 | 7,336  | 3,072 | 1,202 | 213.3 | 0      | 0    | 0    | 0    | 0     |
| Mean               | 0    | 315     | 458    | 237    | 110   | 38.8  | 7.11  | 0      | 0    | 0    | 0    | 0     |
| Ac-ft              | 0    | 18,750  | 28,200 | 14,550 | 6,090 | 2,380 | 423   | 0      | 0    | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 8,080   | Min    | 0      | Mean  | 71.2  | Ac-ft | 51,550 |      |      |      |       |
| Water year 1965-66 | Max  | 8,080   | Min    | 0      | Mean  | 97.2  | Ac-ft | 70,400 |      |      |      |       |

Note.--Stage-discharge relationship indefinite Apr. 2-28.

## SANTA YNEZ RIVER BASIN

11-1245. Santa Cruz Creek near Santa Ynez, Calif.

Location,--Lat 34°35'48", long 119°54'28", in San Marcos Grant, on right bank 0.6 mile downstream from Pine Canyon and 9.9 miles east of Santa Ynez, Santa Barbara County.

Drainage area,--73.9 sq mi.

Records available,--October 1941 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage,--Graphic water-stage recorder. Datum of gage is 786.63 ft above mean sea level (levels by Bureau of Reclamation). Prior to Jan. 22, 1943, at site 1.9 miles downstream at different datum (destroyed by flood). Jan. 22, 1943, to Sept. 26, 1952, at site 1.7 miles downstream at different datum.

Average discharge,--25 years, 12.4 cfs (8,980 acre-ft per year); median of yearly mean discharges, 5.8 cfs (4,200 acre-ft per year).

Extremes,--Maximum discharge during year, 2,030 cfs Dec. 29 (gage height, 7.80 ft); no flow Oct. 1 to Nov. 15, July 7 to Sept. 30. 1941-66: Maximum discharge, 4,520 cfs Feb. 9, 1962 (gage height, 9.75 ft), from rating curve extended above 2,100 cfs; flood of Jan. 22, 1943 may have exceeded that of Feb. 9, 1962, gage height and discharge not determined; no flow at times in 1953-66.

Remarks,--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|---------|---------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0       | 20      | 138   | 24    | 18    | 8.5   | 4.2  | 2.0   | 0.10 |      |       |
| 2     |      | 0       | 18      | 115   | 22    | 18    | 8.5   | 3.7  | 1.9   | .10  |      |       |
| 3     |      | 0       | 16      | 93    | 20    | 18    | 8.5   | 3.5  | 1.6   | .10  |      |       |
| 4     |      | 0       | 14      | 75    | 20    | 17    | 8.5   | 3.5  | 1.5   | .10  |      |       |
| 5     |      | 0       | 12      | 59    | 21    | 17    | 8.5   | 3.5  | 1.2   | .10  |      |       |
| 6     |      | 0       | 11      | 53    | 88    | 16    | 8.2   | 3.1  | 1.0   | .10  |      |       |
| 7     |      | 0       | 9.2     | 48    | 55    | 16    | 8.2   | 2.9  | 1.0   | 0    |      |       |
| 8     |      | 0       | 9.2     | 43    | 41    | 16    | 8.2   | 2.9  | 1.2   | 0    |      |       |
| 9     |      | 0       | 9.6     | 41    | 36    | 16    | 8.2   | 4.2  | 1.5   | 0    |      |       |
| 10    |      | 0       | 11      | 37    | 34    | 15    | 7.8   | 4.4  | 1.4   | 0    |      |       |
| 11    |      | 0       | 9.6     | 35    | 32    | 14    | 7.4   | 4.2  | 1.0   | 0    |      |       |
| 12    |      | 0       | 14      | 32    | 30    | 14    | 7.4   | 4.0  | .70   | 0    |      |       |
| 13    |      | 0       | 14      | 30    | 29    | 14    | 7.4   | 3.1  | .40   | 0    |      |       |
| 14    |      | 0       | 12      | 28    | 28    | 14    | 6.8   | 2.9  | .30   | 0    |      |       |
| 15    |      | 0       | 11      | 26    | 26    | 13    | 6.2   | 2.9  | .20   | 0    |      |       |
| 16    |      | 18      | 11      | 25    | 26    | 12    | 5.8   | 2.5  | .20   | 0    |      |       |
| 17    |      | 178     | 10      | 23    | 25    | 12    | 5.6   | 2.3  | .20   | 0    |      |       |
| 18    |      | 64      | 10      | 23    | 23    | 12    | 5.8   | 2.2  | .20   | 0    |      |       |
| 19    |      | 32      | 9.6     | 23    | 23    | 12    | 6.2   | 1.6  | .20   | 0    |      |       |
| 20    |      | 11      | 9.6     | 22    | 23    | 11    | 6.2   | 1.6  | .20   | 0    |      |       |
| 21    |      | 4.6     | 9.6     | 21    | 22    | 10    | 5.8   | 1.5  | .20   | 0    |      |       |
| 22    |      | 73      | 9.2     | 21    | 21    | 10    | 5.6   | 1.9  | .20   | 0    |      |       |
| 23    |      | 265     | 8.8     | 20    | 21    | 10    | 5.2   | 2.0  | .20   | 0    |      |       |
| 24    |      | 613     | 8.8     | 20    | 21    | 10    | 5.0   | 1.9  | .20   | 0    |      |       |
| 25    |      | 96      | 9.2     | 19    | 20    | 10    | 4.7   | 1.9  | .20   | 0    |      |       |
| 26    |      | 46      | 9.2     | 19    | 20    | 9.6   | 4.7   | 1.6  | .20   | 0    |      |       |
| 27    |      | 33      | 8.8     | 18    | 20    | 9.2   | 4.7   | 1.6  | .20   | 0    |      |       |
| 28    |      | 30      | 9.2     | 18    | 18    | 9.2   | 4.7   | 1.6  | .20   | 0    |      |       |
| 29    |      | 26      | 8.94    | 18    | ----- | 9.2   | 5.0   | 1.9  | .20   | 0    |      |       |
| 30    |      | 22      | 306     | 60    | ----- | 8.8   | 4.7   | 2.0  | .10   | 0    |      |       |
| 31    |      | -----   | 165     | 31    | ----- | 8.5   | ----- | 2.0  | ----- | 0    |      | ----- |
| Total | 0    | 1,511.6 | 1,678.6 | 1,234 | 789   | 399.5 | 198.0 | 83.1 | 198.0 | 0.60 | 0    | 0     |
| Mean  | 0    | 50.4    | 54.1    | 39.8  | 28.2  | 12.9  | 6.60  | 2.68 | 0.66  | 0.02 | 0    | 0     |
| Ac-ft | 0    | 3,000   | 3,330   | 2,450 | 1,560 | 792   | 393   | 155  | 39    | 1.2  | 0    | 0     |

Calendar year 1965 Max 894 Min 0 Mean 15.2 Ac-ft 10,990

Water year 1965-66 Max 894 Min 0 Mean 16.2 Ac-ft 11,730

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-16 | 2400 | 5.55        | 460       | 1-30 | 0500 | 4.25        | 110       |
| 11-24 | 0400 | 7.35        | 1,590     | 2-6  | 1230 | 4.35        | 127       |
| 12-29 | 0700 | 7.80        | 2,030     |      |      |             |           |



11-1255. Lake Cachuma near Santa Ynez, Calif.

Location.--Lat 34°34'57", long 119°58'47", at Cachuma Dam on Santa Ynez River, in Lomas de la Purification Grant, on upstream face near left end of dam, 6.1 miles east of Santa Ynez, Santa Barbara County.

Drainage area.--417 sq mi.

Records available.--November 1952 to September 1966. Prior to October 1960, published as Cachuma Reservoir near Santa Ynez.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level, datum of 1929 (Bureau of Reclamation bench mark).

Extremes.--Maximum contents during year, 192,564 acre-ft Mar. 26-28 (elevation, 745.93 ft); minimum, 117,872 acre-ft Nov. 13 (elevation, 716.63 ft).  
1952-66: Maximum contents, 206,863 acre-ft Apr. 17, 1958 (elevation, 750.64 ft); minimum, since initial filling in April 1958, that of Nov. 13, 1965.

Remarks.--Reservoir is formed by earth-fill dam. Storage began November 1952. Capacity table is based on surveys made in January 1953. Dead storage below outlet gate to river (elevation, 600 ft), 3,114 acre-ft, included in contents. Capacity below sill of inlet to Tecolote Tunnel (elevation, 660 ft), 32,514 acre-ft; below spillway level (elevation, 720 ft), 125,292 acre-ft; below top of 4 radial gates (elevation, 750 ft), 204,874 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 and nearby communities to Santa Ynez River Water Conservation District, and to Cachuma Recreation Area.

Cooperation.--Reservoir elevations and diversion figures furnished by Bureau of Reclamation.

Month-end elevation and contents, water year October 1965 to September 1966

| Date                    | Elevation<br>(feet)† | Contents<br>(acre-feet) | Change in contents<br>(acre-feet) | Total Diversions<br>(acre-feet) |
|-------------------------|----------------------|-------------------------|-----------------------------------|---------------------------------|
| Sept. 30.....           | 718.66               | 122,308                 | -                                 | -                               |
| Oct. 31.....            | 717.24               | 119,193                 | -3,115                            | 2,280                           |
| Nov. 30.....            | 726.13               | 139,570                 | +20,377                           | 1,091                           |
| Dec. 31.....            | 736.52               | 166,063                 | +26,493                           | 496                             |
| Calendar year 1965..... | -                    | -                       | +28,077                           | 17,858                          |
| Jan. 31.....            | 742.60               | 182,895                 | +16,832                           | 558                             |
| Feb. 28.....            | 745.22               | 190,475                 | +7,580                            | 320                             |
| Mar. 31.....            | 745.91               | 192,505                 | +2,030                            | 905                             |
| Apr. 30.....            | 744.79               | 189,216                 | -3,289                            | 1,984                           |
| May 31.....             | 743.78               | 186,282                 | -2,934                            | 1,640                           |
| June 30.....            | 742.31               | 182,068                 | -4,214                            | 2,439                           |
| July 31.....            | 740.59               | 177,217                 | -4,851                            | 3,078                           |
| Aug. 31.....            | 738.93               | 172,612                 | -4,605                            | 2,707                           |
| Sept. 30.....           | 737.58               | 168,926                 | -3,686                            | 2,487                           |
| Water year 1965-66..... | -                    | -                       | +46,618                           | 19,985                          |

† Elevation at 0845 hours.

## SANTA YNEZ RIVER BASIN

11-1260. Santa Ynez River near Santa Ynez, Calif.

Location.---Lat 34°35'30", long 119°59'45", on boundary between Canada de los Pinos and Lomas de la Purification Grants, on right bank 1.1 miles downstream from Cachuma Dam, and 5 miles southeast of Santa Ynez, Santa Barbara County.

Drainage area.---422 sq mi.

Records available.---December 1928 to September 1931, October 1932 to September 1966.

Gage.---Graphic water-stage recorder. Datum of gage is 552.9 ft, datum of 1929. Prior to Oct. 1, 1955, at site 2.1 miles downstream at different datum.

Extremes.---Maximum discharge during year, 170 cfs Nov. 16 (gage height, 2.80 ft); no flow for many days.

1928-31, 1932-66: Maximum discharge, 43,700 cfs Mar. 2, 1938 (gage height, 17.90 ft, site and datum then in use), from rating curve extended above float measurement of 34,100 cfs; no flow at times in some years.

Remarks.---Records good. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (see Sta. Nos. 1210, 1220, 1255). 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.   | Dec.  | Jan. | Feb.  | Mar. | Apr.   | May    | June   | July  | Aug.  | Sept. |
|--------------------|------|--------|-------|------|-------|------|--------|--------|--------|-------|-------|-------|
| 1                  | 0    | 0      | 0.60  | 5.5  | 1.5   | 0.30 | 0      | 0      | 0.60   | 2.4   | 3.2   |       |
| 2                  | 0    | 2.5    | .50   | 4.7  | 1.1   | .30  | 0      | 0      | .10    | 1.6   | 1.6   |       |
| 3                  | 0    | 4.4    | .40   | 4.0  | .80   | .20  | 0      | 0      | 0      | 1.8   | 1.6   |       |
| 4                  | 0    | 5.6    | .40   | 3.2  | .50   | .20  | 0      | 0      | 0      | 2.6   | 1.6   |       |
| 5                  | 0    | 5.9    | .30   | 3.0  | .40   | .20  | 4.5    | 0      | 0      | 4.2   | 1.6   |       |
| 6                  | 0    | 6.5    | .30   | 2.8  | 1.6   | .20  | 9.2    | 0      | 0      | 4.4   | 1.9   |       |
| 7                  | 0    | 6.5    | .30   | 2.6  | 1.1   | .20  | 10     | 0      | .10    | 4.7   | 2.2   |       |
| 8                  | 0    | 4.7    | .30   | 2.4  | .60   | .20  | 35     | 0      | 2.4    | 4.4   | 3.5   |       |
| 9                  | 0    | 1.9    | .20   | 2.4  | .40   | .20  | 8.3    | 0      | 3.2    | 4.7   | 7.2   |       |
| 10                 | 0    | 1.2    | .20   | 2.4  | .40   | .20  | 48     | 0      | 3.5    | 4.4   | 7.6   |       |
| 11                 | 0    | 1.1    | .20   | 2.2  | .40   | .20  | 37     | .20    | 4.2    | 4.4   | 6.8   |       |
| 12                 | 0    | .80    | .20   | 2.0  | .40   | .20  | 37     | 4.4    | 4.2    | 4.2   | 7.6   |       |
| 13                 | 0    | .70    | .20   | 1.8  | .40   | .20  | 37     | 5.0    | 5.6    | 4.2   | 7.6   |       |
| 14                 | 0    | 1.0    | .20   | 1.8  | .40   | .20  | 33     | 5.6    | 4.7    | 4.0   | 7.6   |       |
| 15                 | 0    | 1.2    | .20   | 1.6  | .40   | .20  | 20     | 6.2    | 5.0    | 4.0   | 5.3   |       |
| 16                 | 0    | 3.6    | .20   | 1.6  | .40   | .20  | 20     | 6.1    | 8.8    | 3.5   | 2.1   |       |
| 17                 | 1.9  | 28     | .20   | 1.5  | .40   | .20  | 21     | 8.8    | 8.4    | 3.2   | 1.3   |       |
| 18                 | 1.2  | 17     | .20   | 1.3  | 2.3   | .20  | 21     | 8.8    | 8.4    | 2.8   | .20   |       |
| 19                 | 1.0  | 6.8    | .20   | 1.3  | 1.1   | .20  | 21     | 8.8    | 8.4    | 3.0   | 0     |       |
| 20                 | 0    | 2.6    | .20   | 1.3  | .40   | .20  | 21     | 9.2    | 8.8    | 2.6   | 0     |       |
| 21                 | 0    | 2.9    | .20   | 1.3  | .20   | .20  | 22     | 9.2    | 10     | 2.2   | 0     |       |
| 22                 | 0    | 22     | .20   | 1.3  | .20   | 0    | 13     | 9.6    | 10     | 2.0   | 0     |       |
| 23                 | 0    | 24     | .20   | 1.3  | .20   | 0    | .60    | 10     | 11     | 2.0   | 0     |       |
| 24                 | 0    | 23     | .20   | 1.3  | .20   | 0    | .20    | 12     | 11     | 1.8   | 0     |       |
| 25                 | 0    | 8.0    | .20   | 1.1  | .30   | 0    | .20    | 13     | 11     | 2.4   | 0     |       |
| 26                 | 0    | 4.7    | .20   | 1.1  | .30   | 0    | .20    | 12     | 11     | 3.5   | 0     |       |
| 27                 | 0    | 2.6    | .20   | 1.1  | .30   | 0    | .20    | 12     | 7.2    | 3.5   | 0     |       |
| 28                 | 0    | 1.8    | .20   | 1.0  | .30   | 0    | .20    | 12     | 2.4    | 3.7   | 0     |       |
| 29                 | 0    | 1.2    | 54    | 1.0  | ----- | 0    | 0      | 12     | 2.2    | 3.7   | 0     |       |
| 30                 | 0    | 1.0    | 20    | 5.3  | ----- | 0    | 0      | 8.8    | 2.4    | 4.0   | 0     |       |
| 31                 | 0    | -----  | 10    | 2.6  | ----- | 0    | -----  | 2.2    | -----  | 3.7   | 0     | ----- |
| Total              | 3.20 | 225.60 | 91.10 | 68.8 | 17.00 | 4.40 | 494.30 | 175.90 | 154.60 | 103.6 | 70.50 | 0     |
| Mean               | 0.10 | 7.52   | 2.94  | 2.22 | 0.61  | 0.14 | 16.5   | 5.67   | 5.15   | 3.34  | 2.27  | 0     |
| Ac-ft              | 6.3  | 447    | 181   | 136  | 34    | 8.7  | 980    | 349    | 307    | 205   | 140   | 0     |
| Calendar year 1965 | Max  | 113    | Min   | 0    | Mean  | 10.5 | Ac-ft  | 7,580  |        |       |       |       |
| Water year 1965-66 | Max  | 83     | Min   | 0    | Mean  | 3.86 | Ac-ft  | 2,790  |        |       |       |       |

11-1265, Santa Agueda Creek near Santa Ynez, Calif.

Location,--Lat 34°35'40", long 120°01'30", in Canada de los Pinos Grant, on left downstream wingwall of highway bridge, 0.8 mile upstream from mouth, and 3.5 miles southeast of Santa Ynez, Santa Barbara County.

Drainage area,--55.8 sq mi.

Records available,--October 1940 to September 1966. Monthly discharge only for January 1941 and yearly estimate for water year 1941 (incomplete) published in WSP 1315-B.

Gage,--Graphic water-stage recorder. Altitude of gage is 520 ft (from topographic map). Prior to Oct. 1, 1955, at datum 1.00 ft higher.

Average discharge,--26 years, 3.17 cfs (2,290 acre-ft per year); median of yearly mean discharges, 0.6 cfs (430 acre-ft per year).

Extremes,--Maximum discharge during year, 938 cfs Nov. 24 (gage height, 3.57 ft); no flow for most of year.  
1940-66: Maximum discharge, 5,760 cfs Feb. 19, 1958 (gage height, 6.14 ft), from rating curve extended above 2,000 cfs; no flow at times in most years.

Remarks,--Records fair. No regulation above station. Small diversions for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|------|------|-----|------|------|------|-------|
| 1     |      | 0      | 0.10   | 8.3   | 0.20  | 0.10 |      |     |      |      |      |       |
| 2     |      | 0      | .10    | .50   | .20   | .10  |      |     |      |      |      |       |
| 3     |      | 0      | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 4     |      | 0      | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 5     |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 6     |      | 0      | 0      | .20   | 1.7   | .10  |      |     |      |      |      |       |
| 7     |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 8     |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 9     |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 10    |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 11    |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 12    |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 13    |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 14    |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 15    |      | 0      | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 16    |      | .10    | 0      | .20   | .20   | .10  |      |     |      |      |      |       |
| 17    |      | 2.8    | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 18    |      | 3.0    | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 19    |      | .30    | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 20    |      | .10    | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 21    |      | 0      | 0      | .30   | .20   | .10  |      |     |      |      |      |       |
| 22    |      | 0      | 0      | .30   | .20   | 0    |      |     |      |      |      |       |
| 23    |      | 1.6    | 0      | .30   | .10   | 0    |      |     |      |      |      |       |
| 24    |      | 111    | 0      | .30   | .10   | 0    |      |     |      |      |      |       |
| 25    |      | 8.5    | 0      | .30   | .10   | 0    |      |     |      |      |      |       |
| 26    |      | .30    | 0      | .30   | .10   | 0    |      |     |      |      |      |       |
| 27    |      | .10    | 0      | .30   | .10   | 0    |      |     |      |      |      |       |
| 28    |      | .10    | 0      | .30   | .10   | 0    |      |     |      |      |      |       |
| 29    |      | .10    | 188    | .30   | ----- | 0    |      |     |      |      |      |       |
| 30    |      | .10    | 57     | 3.4   | ----- | 0    |      |     |      |      |      |       |
| 31    |      | -----  | 20     | .30   | ----- | 0    |      |     |      |      |      |       |
| Total | 0    | 142.50 | 265.20 | 19.40 | 6.50  | 2.10 | 0    | 0   | 0    | 0    | 0    | 0     |
| Mean  | 0    | 4.75   | 8.55   | 0.63  | 0.23  | 0.07 | 0    | 0   | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 283    | 526    | 38    | 13    | 4.2  | 0    | 0   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 188 Min 0 Mean 1.38 Ac-ft 1,000

Water year 1965-66 Max 188 Min 0 Mean 1.19 Ac-ft 864

Peak discharge (base, 50 cfs),--Nov. 24 (0200 hrs) 938 cfs (3.57 ft); Dec. 29 (about 1100 hrs) 618 cfs (3.19 ft). ~

11-1284. Alisal Creek near Solvang, Calif.

Location.--Lat 34°35'01", long 120°08'37", in Nojoqui Grant, on right bank at footbridge, 0.1 mile upstream from mouth, and 0.9 mile southwest of Solvang, Santa Barbara County.

Drainage area.--12.2 sq mi.

Records available.--October 1954 to September 1955, October 1955 to September 1956 (monthly discharge only), October 1956 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 380 ft (from topographic map). Prior to Dec. 25, 1955, at site 50 ft upstream at different datum (destroyed by flood). Oct. 1, 1956, to Jan. 23, 1961, at datum 1.0 ft higher.

Average discharge.--12 years, 5.53 cfs (4,000 acre-ft per year); median of yearly mean discharges, 2.0 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 2,140 cfs Nov. 16 (gage height, 7.15 ft), from rating curve extended above 940 cfs; no flow Oct. 1 to Nov. 14, June 1 to Sept. 30.

1954-66: Maximum discharge, 2,960 cfs Feb. 9, 1962 (gage height, 8.15 ft), from rating curve extended above 940 cfs; no flow for several months in each year.

Remarks.--Records good. No regulation or diversion above station. At times waste irrigation water pumped from Santa Ynez River causes minor flow.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May   | June | July | Aug. | Sept. |
|-------|------|---------|---------|-------|-------|-------|-------|-------|------|------|------|-------|
| 1     |      | 0       | 15      | 53    | 30    | 5.8   | 2.1   | 0.90  |      |      |      |       |
| 2     |      | 0       | 12      | 42    | 25    | 7.1   | 2.5   | .80   |      |      |      |       |
| 3     |      | 0       | 12      | 36    | 22    | 5.8   | 2.5   | .70   |      |      |      |       |
| 4     |      | 0       | 11      | 32    | 19    | 5.8   | 2.7   | .60   |      |      |      |       |
| 5     |      | 0       | 10      | 27    | 19    | 5.5   | 2.5   | .50   |      |      |      |       |
| 6     |      | 0       | 9.9     | 25    | 31    | 5.2   | 2.5   | .50   |      |      |      |       |
| 7     |      | 0       | 8.7     | 22    | 24    | 5.0   | 2.3   | .50   |      |      |      |       |
| 8     |      | 0       | 8.4     | 21    | 21    | 4.7   | 2.3   | .50   |      |      |      |       |
| 9     |      | 0       | 9.4     | 19    | 18    | 4.7   | 2.1   | .70   |      |      |      |       |
| 10    |      | 0       | 9.9     | 17    | 17    | 4.4   | 2.3   | .60   |      |      |      |       |
| 11    |      | 0       | 9.9     | 16    | 16    | 4.1   | 2.5   | .50   |      |      |      |       |
| 12    |      | 0       | 12      | 15    | 15    | 3.8   | 2.5   | .50   |      |      |      |       |
| 13    |      | 0       | 10      | 13    | 14    | 3.8   | 2.3   | .50   |      |      |      |       |
| 14    |      | 0       | 9.9     | 12    | 13    | 3.8   | 2.1   | .40   |      |      |      |       |
| 15    |      | 1.8     | 9.4     | 12    | 12    | 3.8   | 1.9   | .40   |      |      |      |       |
| 16    |      | 415     | 9.0     | 11    | 12    | 3.8   | 1.9   | .40   |      |      |      |       |
| 17    |      | 301     | 8.7     | 10    | 11    | 3.8   | 1.6   | .40   |      |      |      |       |
| 18    |      | 153     | 8.4     | 9.4   | 10    | 3.8   | 1.8   | .30   |      |      |      |       |
| 19    |      | 48      | 8.4     | 9.9   | 9.9   | 3.6   | 1.6   | .30   |      |      |      |       |
| 20    |      | 24      | 8.4     | 9.0   | 9.0   | 3.6   | 1.4   | .30   |      |      |      |       |
| 21    |      | 12      | 8.4     | 8.0   | 8.7   | 3.3   | 1.4   | .30   |      |      |      |       |
| 22    |      | 74      | 8.4     | 8.0   | 8.4   | 3.3   | 1.3   | .20   |      |      |      |       |
| 23    |      | 216     | 8.4     | 7.7   | 8.0   | 3.3   | 1.2   | .20   |      |      |      |       |
| 24    |      | 261     | 8.4     | 7.1   | 7.7   | 3.1   | 1.1   | .30   |      |      |      |       |
| 25    |      | 85      | 8.7     | 6.4   | 7.4   | 2.9   | 1.0   | .20   |      |      |      |       |
| 26    |      | 43      | 8.7     | 6.8   | 7.4   | 2.7   | 1.0   | .20   |      |      |      |       |
| 27    |      | 32      | 8.4     | 8.4   | 7.1   | 2.5   | 1.0   | .20   |      |      |      |       |
| 28    |      | 26      | 37      | 6.1   | 6.4   | 2.5   | .90   | .20   |      |      |      |       |
| 29    |      | 22      | 659     | 31    | ----- | 2.5   | .90   | .20   |      |      |      |       |
| 30    |      | 17      | 116     | 199   | ----- | 2.5   | .80   | .10   |      |      |      |       |
| 31    |      | -----   | 71      | 39    | ----- | 2.3   | ----- | .10   |      |      |      |       |
| Total | 0    | 1,730.8 | 1,142.8 | 738.8 | 409.0 | 122.8 | 54.00 | 12.50 | 0    | 0    | 0    | 0     |
| Mean  | 0    | 57.7    | 36.9    | 23.8  | 14.6  | 3.96  | 1.80  | 0.40  | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 3,430   | 2,270   | 1,470 | 811   | 244   | 107   | 25    | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 659 Min 0 Mean 9.62 Ac-ft 6,960

Water year 1965-66 Max 659 Min 0 Mean 11.5 Ac-ft 8,350

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 1430 | 7.15        | 2,140     | 12-29 | 0330 | 6.65        | 1,700     |
| 11-23 | 2300 | 6.25        | 1,390     | 1-30  | 0030 | 6.20        | 1,200     |

11-1285, Santa Ynez River at Solvang, Calif.

Location.--Lat 34°35'05", long 120°08'35", in San Carlos de Jonata Grant, on downstream side of right abutment of Mission Bridge, 25 ft downstream from Alisal Creek, and 0.9 mile south of Solvang, Santa Barbara County.

Drainage area.--579 sq mi.

Records available.--October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 350 ft (from topographic map). 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 Jan. 26, 1955, graphic water-stage recorder on center bridge pier at same datum. Prior to May 12, 1966, graphic water-stage recorder.

Extremes.--Maximum discharge during year, 2,100 cfs Nov. 16 (gage height, 6.98 ft), from rating curve extended above 790 cfs on basis of maximum discharge for Alisal Creek; no flow Oct. 1 to Nov. 14, June 9 to Sept. 30.  
1928-36, 1946-66: Maximum discharge, 37,000 cfs Jan. 15, 1952 (gage height, 14.80 ft, datum then in use), from rating curve extended above 10,000 cfs; no flow for several months in many years.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see Sta. Nos. 1210, 1220, 1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Some water for irrigation pumped from wells along banks of river in valley upstream.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July | Aug. | Sept. |
|--------------------|------|---------|-------|-------|-------|-------|-------|--------|-------|------|------|-------|
| 1                  |      | 0       | 27    | 126   | 58    | 17    | 4.2   | 2.6    | 4.7   |      |      |       |
| 2                  |      | 0       | 24    | 92    | 48    | 18    | 4.2   | 2.4    | 4.3   |      |      |       |
| 3                  |      | 0       | 22    | 74    | 40    | 16    | 4.2   | 2.4    | 3.1   |      |      |       |
| 4                  |      | 0       | 19    | 66    | 35    | 14    | 4.2   | 2.2    | 2.6   |      |      |       |
| 5                  |      | 0       | 18    | 56    | 34    | 13    | 3.0   | 2.2    | 1.7   |      |      |       |
| 6                  |      | 0       | 17    | 47    | 58    | 12    | 2.4   | 2.0    | 1.3   |      |      |       |
| 7                  |      | 0       | 15    | 44    | 49    | 12    | 2.0   | 2.0    | 1.5   |      |      |       |
| 8                  |      | 0       | 14    | 41    | 40    | 12    | 2.0   | 1.8    | 1.0   |      |      |       |
| 9                  |      | 0       | 16    | 37    | 35    | 10    | 3.5   | 3.0    | 0     |      |      |       |
| 10                 |      | 0       | 15    | 35    | 32    | 10    | 5.6   | 2.6    | 0     |      |      |       |
| 11                 |      | 0       | 15    | 32    | 30    | 10    | 4.2   | 3.2    | 0     |      |      |       |
| 12                 |      | 0       | 21    | 30    | 29    | 10    | 3.9   | 2.8    | 0     |      |      |       |
| 13                 |      | 0       | 20    | 27    | 27    | 10    | 3.8   | 2.6    | 0     |      |      |       |
| 14                 |      | 0       | 20    | 24    | 26    | 10    | 3.7   | 2.4    | 0     |      |      |       |
| 15                 |      | 1.0     | 19    | 24    | 24    | 10    | 3.4   | 2.2    | 0     |      |      |       |
| 16                 |      | 479     | 18    | 24    | 24    | 10    | 3.4   | 2.2    | 0     |      |      |       |
| 17                 |      | 622     | 17    | 24    | 23    | 9.6   | 3.4   | 2.2    | 0     |      |      |       |
| 18                 |      | 333     | 15    | 24    | 22    | 9.3   | 3.4   | 1.9    | 0     |      |      |       |
| 19                 |      | 87      | 14    | 24    | 22    | 8.9   | 3.4   | 1.3    | 0     |      |      |       |
| 20                 |      | 32      | 15    | 23    | 22    | 8.6   | 3.3   | 1.0    | 0     |      |      |       |
| 21                 |      | 19      | 14    | 24    | 20    | 8.2   | 3.2   | 1.5    | 0     |      |      |       |
| 22                 |      | 80      | 12    | 24    | 20    | 7.5   | 3.2   | 1.9    | 0     |      |      |       |
| 23                 |      | 254     | 10    | 25    | 19    | 7.1   | 2.2   | 2.8    | 0     |      |      |       |
| 24                 |      | 576     | 12    | 25    | 19    | 6.8   | 1.3   | 2.4    | 0     |      |      |       |
| 25                 |      | 157     | 16    | 24    | 18    | 6.4   | 9.6   | 1.9    | 0     |      |      |       |
| 26                 |      | 73      | 17    | 24    | 17    | 6.1   | 7.5   | 2.2    | 0     |      |      |       |
| 27                 |      | 60      | 18    | 27    | 16    | 5.6   | 5.3   | 2.4    | 0     |      |      |       |
| 28                 |      | 47      | 58    | 24    | 16    | 4.7   | 3.4   | 3.9    | 0     |      |      |       |
| 29                 |      | 36      | 1,240 | 24    | ----- | 5.0   | 3.2   | 5.3    | 0     |      |      |       |
| 30                 |      | 32      | 429   | 259   | ----- | 5.3   | 2.6   | 6.6    | 0     |      |      |       |
| 31                 |      | -----   | 192   | 85    | ----- | 5.3   | ----- | 6.4    | ----- |      |      | ----- |
| Total              | 0    | 2887.10 | 2379  | 1439  | 823   | 298.4 | 606.8 | 82.3   | 19.30 | 0    | 0    | 0     |
| Mean               | 0    | 96.2    | 76.7  | 46.4  | 29.4  | 9.63  | 20.2  | 2.65   | 0.64  | 0    | 0    | 0     |
| Ac-ft              | 0    | 5.730   | 4.720 | 2.850 | 1.630 | 592   | 1,200 | 163    | 38    | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 1,240   | Min   | 0     | Mean  | 22.5  | Ac-ft | 16,320 |       |      |      |       |
| Water year 1965-66 | Max  | 1,240   | Min   | 0     | Mean  | 23.4  | Ac-ft | 16,930 |       |      |      |       |

## SANTA YNEZ RIVER BASIN

11-1298. Zaca Creek near Buellton, Calif.

Location.---Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, on upstream end of left pier of bridge on frontage road, 0.9 mile upstream from Dry Creek, 2.4 miles north of Buellton, and 4.0 miles upstream from mouth, Santa Barbara County.

Drainage area.---32.8 sq mi.

Records available.---September 1963 to September 1966.

Gage.---Graphic water-stage recorder. Datum of gage is 471.54 ft above mean sea level.

Extremes.---Maximum discharge during year, 6.1 cfs Feb. 6 (gage height, 2.37 ft), from rating curve extended as explained below; no flow for most of year.

1963-66: Maximum discharge, 8.0 cfs Nov. 12, 1964 (gage height, 2.48 ft), from rating curve extended above 2.6 cfs; no flow for most of each year.

Remarks.---Records fair. Some regulation by Zaca Lake. Some pumping from wells along stream for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

|              |      |              |      |
|--------------|------|--------------|------|
| Nov. 17..... | 0.50 | Dec. 30..... | 0.30 |
| 18.....      | .30  | 31.....      | .10  |
| 24.....      | .20  | Jan. 30..... | .60  |
| Dec. 29..... | .70  | Feb. 6.....  | 2.8  |

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| November 1965.....      | 1.00     | 0.50    | 0       | 0.03 | 2.0       |
| December.....           | 1.10     | .70     | 0       | .04  | 2.2       |
| January 1966.....       | .60      | .60     | 0       | .02  | 1.2       |
| February.....           | 2.8      | 2.8     | 0       | .10  | 5.6       |
| Calendar year 1965..... | -        | .70     | 0       | .006 | 4.4       |
| Water year 1965-66..... | -        | 2.8     | 0       | .015 | 11        |

Peak discharge (base, 10 cfs).---No peak above base.

Note.---Flow occurred only on days listed above.

11-1305. Santa Ynez River near Buellton, Calif.

Location.--Lat 34°36'50", long 120°14'30", in Santa Rosa Grant, on left bank 0.5 mile downstream from Canada de los Palos Blancos and 3 miles west of Buellton, Santa Barbara County.

Drainage area.--668 sq mi.

Records available.--June 1948 to September 1952 (irrigation seasons only); October 1952 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 250 ft (from topographic map). Prior to Apr. 25, 1950, at same site at different datum. Apr. 25, 1950, to Sept. 22, 1957, at site 200 ft upstream at datum 3 ft higher. Sept. 23, 1957, to Mar. 28, 1962, at site 200 ft upstream at datum 1 ft higher. Prior to May 12, 1966, graphic water-stage recorder.

Extremes.--Maximum discharge during year, not determined; no flow Oct. 1 to Nov. 15, July 24 to Sept. 30.

1952-66: Maximum discharge, 10,600 cfs Mar. 22, 1958 (gage height, 11.10 ft, present datum), from rating curve extended above 400 cfs on basis of maximum flows for station at Buellton; no flow for many days in each year.

Remarks.--Records good. This is a project station. Discharge above wading stages not reported herein. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952 by Lake Cachuma (see Sta. Nos. 1210, 1220, 1255). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Some water pumped from wells along banks of river for irrigation in valley upstream. Records of sediment data for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|------|------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 38   | 205  | 98    | 30    | 15    | 4.9  | 1.5   | 0.90 |      |       |
| 2     |      | 0     | 36   | 145  | 85    | 32    | 14    | 4.3  | 1.4   | .50  |      |       |
| 3     |      | 0     | 32   | 120  | 74    | 30    | 13    | 3.7  | 1.3   | .50  |      |       |
| 4     |      | 0     | 28   | 103  | 68    | 28    | 13    | 3.2  | 1.2   | .40  |      |       |
| 5     |      | 0     | 28   | 88   | 64    | 26    | 13    | 2.5  | 1.1   | .40  |      |       |
| 6     |      | 0     | 26   | 79   | 90    | 25    | 13    | 2.4  | 1.2   | .40  |      |       |
| 7     |      | 0     | 24   | 71   | 78    | 24    | 13    | 2.1  | 1.2   | .30  |      |       |
| 8     |      | 0     | 24   | 64   | 64    | 23    | 12    | 1.8  | 1.2   | .30  |      |       |
| 9     |      | 0     | 23   | 60   | 57    | 22    | 14    | 1.8  | 1.2   | .30  |      |       |
| 10    |      | 0     | 22   | 56   | 55    | 22    | 36    | 1.7  | 1.2   | .20  |      |       |
| 11    |      | 0     | 22   | 53   | 51    | 21    | 29    | 1.9  | 1.2   | .30  |      |       |
| 12    |      | 0     | 24   | 50   | 49    | 20    | 23    | 1.6  | 1.2   | .40  |      |       |
| 13    |      | 0     | 24   | 48   | 46    | 20    | 22    | 1.5  | 1.2   | .30  |      |       |
| 14    |      | 0     | 23   | 44   | 44    | 20    | 21    | 1.3  | 1.2   | .30  |      |       |
| 15    |      | 0     | 22   | 42   | 43    | 20    | 21    | 1.2  | 1.3   | .30  |      |       |
| 16    |      | -     | 21   | 40   | 41    | 20    | 16    | 1.2  | 1.5   | .30  |      |       |
| 17    |      | -     | 21   | 39   | 40    | 20    | 13    | 1.3  | 1.5   | .20  |      |       |
| 18    |      | -     | 20   | 38   | 40    | 20    | 15    | 1.3  | 1.5   | .20  |      |       |
| 19    |      | 137   | 20   | 39   | 38    | 20    | 15    | 1.3  | 1.5   | .20  |      |       |
| 20    |      | 51    | 20   | 36   | 37    | 20    | 15    | 1.2  | 1.5   | .20  |      |       |
| 21    |      | 29    | 20   | 35   | 36    | 20    | 15    | 1.1  | 1.4   | .20  |      |       |
| 22    |      | 44    | 20   | 34   | 35    | 20    | 14    | 1.2  | 1.4   | .20  |      |       |
| 23    |      | 215   | 18   | 33   | 33    | 20    | 12    | 1.1  | 1.5   | .10  |      |       |
| 24    |      | -     | 18   | 32   | 32    | 19    | 9.2   | 1.2  | 1.5   | 0    |      |       |
| 25    |      | 230   | 18   | 31   | 32    | 19    | 7.5   | 1.3  | 1.5   | 0    |      |       |
| 26    |      | 123   | 18   | 31   | 30    | 17    | 7.0   | 1.4  | 1.6   | 0    |      |       |
| 27    |      | 86    | 18   | 34   | 29    | 16    | 6.5   | 1.5  | 1.5   | 0    |      |       |
| 28    |      | 64    | 19   | 29   | 30    | 16    | 6.0   | 1.5  | 1.4   | 0    |      |       |
| 29    |      | 53    | -    | 29   | ----- | 16    | 5.5   | 1.4  | 1.4   | 0    |      |       |
| 30    |      | 44    | -    | -    | ----- | 13    | 5.3   | 1.3  | 1.1   | 0    |      |       |
| 31    |      | ----- | 290  | 127  | ----- | 13    | ----- | 1.3  | ----- | 0    |      | ----- |
| Total | 0    | -     | -    | -    | 1419  | 652   | 434.0 | 56.5 | 40.4  | 7.40 | 0    | 0     |
| Mean  | 0    | -     | -    | -    | 50.7  | 21.0  | 14.5  | 1.82 | 1.35  | 0.24 | 0    | 0     |
| Ac-ft | 0    | -     | -    | -    | 2810  | 1,290 | 861   | 112  | 80    | 15   | 0    | 0     |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Water year 1965-66 Max - Min - Mean - Ac-ft -

## SANTA YNEZ RIVER BASIN

11-1315. Santa Ynez River at Cooper's Reef, near Lompoc, Calif.

Location.--Lat 34°36'48", long 120°21'20", near boundary of Canada de Salsipuedes Grant, on right bank 0.6 mile upstream from Canada de la Vina, and 6 miles east of Lompoc, Santa Barbara County.

Drainage area.--708 sq mi.

Records available.--October 1954 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 200 ft (from topographic map). Prior to Dec. 7, 1962, graphic water-stage recorder.

Extremes.--Maximum discharge during year, 2,230 cfs Dec. 29 (gage height, 6.18 ft); no flow Oct. 14-16, Oct. 19 to Nov. 13. 1954-66: Maximum discharge, 6,260 cfs Mar. 22, 1958 (gage height, 8.44 ft); maximum stage, 8.75 ft Feb. 11, 1962; no flow for several months in some years.

Remarks.--Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see Sta Nos. 1210, 1220, 1255). 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 pumped from wells along banks of river for irrigation in valley upstream.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|----------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0        | 51    | 215   | 128   | 40    | 9.5   | 4.2   | 0.90  | 0.30 | 0.10 | 0.10  |
| 2     | .10  | 0        | 50    | 155   | 105   | 43    | 9.9   | 4.0   | .90   | .20  | .10  | .10   |
| 3     | .10  | 0        | 48    | 132   | 90    | 38    | 9.7   | 3.4   | 1.0   | .20  | .10  | .10   |
| 4     | .10  | 0        | 46    | 113   | 79    | 32    | 9.7   | 3.0   | .80   | .10  | .10  | .10   |
| 5     | .10  | 0        | 43    | 99    | 73    | 32    | 8.7   | 2.6   | .90   | .10  | .10  | .10   |
| 6     | .10  | 0        | 40    | 93    | 99    | 31    | 8.8   | 2.3   | 1.0   | .10  | .10  | .10   |
| 7     | .10  | 0        | 38    | 85    | 99    | 30    | 8.4   | 2.5   | .90   | .10  | .10  | .10   |
| 8     | .10  | 0        | 37    | 76    | 86    | 29    | 8.0   | 3.0   | .70   | .10  | .10  | .10   |
| 9     | .10  | 0        | 36    | 70    | 71    | 27    | 7.8   | 2.2   | .70   | .10  | .10  | .10   |
| 10    | .10  | 0        | 35    | 63    | 66    | 27    | 15    | 1.0   | .60   | .10  | .10  | .10   |
| 11    | .10  | 0        | 32    | 58    | 60    | 27    | 20    | .80   | .80   | .10  | .10  | .10   |
| 12    | .10  | 0        | 35    | 56    | 56    | 26    | 12    | .90   | .80   | .10  | .10  | .10   |
| 13    | .10  | 0        | 35    | 52    | 55    | 26    | 10    | 1.0   | .80   | .10  | .10  | .10   |
| 14    | 0    | .10      | 33    | 50    | 56    | 26    | 10    | 1.2   | .80   | .10  | .10  | .10   |
| 15    | 0    | .10      | 34    | 51    | 55    | 24    | 10    | 1.4   | .80   | .10  | .10  | .10   |
| 16    | 0    | 22       | 33    | 48    | 52    | 23    | 10    | 1.8   | .90   | .10  | .10  | .10   |
| 17    | .10  | 607      | 31    | 43    | 51    | 23    | 9.8   | 1.8   | .70   | .10  | .10  | .10   |
| 18    | .10  | 451      | 28    | 46    | 50    | 21    | 10    | 1.9   | .70   | .10  | .10  | .10   |
| 19    | 0    | 186      | 28    | 43    | 48    | 19    | 9.5   | 1.3   | .90   | .10  | .10  | .10   |
| 20    | 0    | 67       | 29    | 39    | 48    | 18    | 9.1   | 1.3   | 1.0   | .20  | .10  | .10   |
| 21    | 0    | 37       | 29    | 37    | 46    | 17    | 9.1   | 1.4   | .80   | .10  | .10  | .10   |
| 22    | 0    | 26       | 27    | 37    | 53    | 16    | 8.9   | 1.4   | .80   | .10  | .10  | .10   |
| 23    | 0    | 169      | 24    | 35    | 53    | 16    | 9.2   | 1.4   | .60   | .10  | .10  | .10   |
| 24    | 0    | 624      | 24    | 36    | 49    | 16    | 8.6   | 1.4   | .40   | .10  | .10  | .10   |
| 25    | 0    | 309      | 24    | 31    | 40    | 15    | 7.6   | 1.3   | .50   | .10  | .10  | .10   |
| 26    | 0    | 193      | 25    | 29    | 40    | 15    | 6.5   | 1.3   | .50   | .10  | .10  | .10   |
| 27    | 0    | 116      | 26    | 28    | 38    | 13    | 5.6   | 1.3   | .40   | .10  | .10  | .10   |
| 28    | 0    | 83       | 28    | 25    | 38    | 12    | 5.2   | 1.4   | .40   | .10  | .10  | .10   |
| 29    | 0    | 64       | 1,190 | 37    | ----- | 11    | 4.9   | 1.4   | .40   | .10  | .10  | .10   |
| 30    | 0    | 52       | 748   | 487   | ----- | 10    | 4.5   | 1.3   | .40   | .10  | .10  | .10   |
| 31    | 0    | -----    | 353   | 173   | ----- | 10    | ----- | .70   | ----- | .10  | .10  | ----- |
| TOTAL | 1.50 | 3,006.20 | 3,240 | 2,542 | 1,784 | 713   | 276.0 | 55.90 | 21.80 | 3.60 | 3.10 | 3.00  |
| MEAN  | .05  | 100      | 105   | 82.0  | 63.7  | 23.0  | 9.20  | 1.80  | .73   | .12  | .10  | .10   |
| AC-FT | 3.0  | 5,960    | 6,430 | 5,040 | 3,540 | 1,410 | 547   | 111   | 43    | 7.1  | 6.1  | 6.0   |

|                    |     |       |     |   |      |      |       |        |
|--------------------|-----|-------|-----|---|------|------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 1,190 | MIN | 0 | MEAN | 23.7 | AC-FT | 17,150 |
| WATER YEAR 1965-66 | MAX | 1,190 | MIN | 0 | MEAN | 31.9 | AC-FT | 23,100 |



11-1325. Salsipuedes Creek near Lompoc, Calif.

Location.--Lat 34°35'20", long 120°24'27", in W $\frac{1}{2}$  sec. 24, T. 6 N., R. 34 W., on right bank at highway bridge on Jalama Road, 0.4 mile downstream from El Jaro Creek and 4.4 miles southeast of Lompoc.

Drainage area.--47.1 sq mi.

Records available.--January 1941 to September 1966.

Gage.--Digital water-stage recorder and concrete low-water control. Altitude of gage is 240 ft (from topographic map). Prior to Sept. 29, 1962, graphic water-stage recorder.

Average discharge.--25 years, 8.28 cfs (5,990 acre-ft per year); median of yearly mean discharges, 3.3 cfs (2,400 acre-ft per year).

Extremes.--Maximum discharge during year, 2,540 cfs Dec. 29 (gage height, 7.56 ft); no flow Oct. 1-26.

1941-66: Maximum discharge, 11,400 cfs Mar. 15, 1952 (gage height, 20.8 ft); no flow at times in some years.

Remarks.--Records good except those for period of indefinite stage-discharge relation, which are poor. No regulation above station. Small diversions for irrigation above station. Records of sediment data for the water year 1966 are published in part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY  | OCT. | NOV.     | DEC.    | JAN.    | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|--|------|----------|---------|---------|-------|-------|-------|------|-------|-------|-------|-------|
| 1  | 0    | 0.10     | 11      | 58      | 74    | 11    | 4.7   | 3.2  | 1.9   | 1.0   | 0.50  | 0.40  |
| 2  | 0    | .10      | 10      | 41      | 42    | 13    | 4.7   | 3.0  | 1.6   | 1.0   | .50   | .40   |
| 3  | 0    | .10      | 6.5     | 35      | 32    | 10    | 5.2   | 3.1  | 1.6   | .80   | .50   | .40   |
| 4  | 0    | .10      | 6.2     | 33      | 28    | 9.8   | 5.6   | 3.6  | 1.5   | .70   | .50   | .40   |
| 5  | 0    | .10      | 5.8     | 31      | 30    | 9.9   | 4.1   | 3.6  | 1.4   | .60   | .50   | .40   |
| 6  | 0    | .10      | 5.8     | 24      | 70    | 10    | 4.1   | 3.6  | 1.8   | .70   | .50   | .40   |
| 7  | 0    | .10      | 4.9     | 22      | 33    | 9.4   | 3.8   | 3.5  | 2.0   | .80   | .50   | .40   |
| 8  | 0    | .10      | 4.9     | 20      | 27    | 9.4   | 3.4   | 3.4  | 2.0   | .60   | .50   | .40   |
| 9  | 0    | .10      | 5.3     | 19      | 23    | 9.4   | 4.1   | 3.3  | 2.2   | .50   | .50   | .40   |
| 10   | 0    | .10      | 5.3     | 17      | 23    | 9.4   | 4.5   | 3.2  | 2.0   | .70   | .50   | .40   |
| 11   | 0    | .10      | 4.9     | 16      | 21    | 9.4   | 4.4   | 3.1  | 1.8   | .60   | .50   | .40   |
| 12   | 0    | .10      | 8.8     | 15      | 20    | 9.1   | 4.0   | 3.1  | 1.3   | .60   | .50   | .40   |
| 13   | 0    | .10      | 6.2     | 14      | 19    | 9.1   | 4.5   | 3.0  | 1.2   | .70   | .50   | .40   |
| 14   | 0    | 40       | 5.3     | 13      | 18    | 9.2   | 3.7   | 2.9  | 1.1   | .60   | .50   | .40   |
| 15   | 0    | 19       | 4.9     | 12      | 16    | 9.3   | 2.8   | 2.8  | .90   | .80   | .50   | .40   |
| 16   | 0    | 454      | 4.5     | 12      | 16    | 8.8   | 2.7   | 2.6  | 1.0   | .50   | .50   | .40   |
| 17   | 0    | 253      | 4.5     | 11      | 16    | 8.4   | 2.8   | 2.5  | 1.2   | .50   | .50   | .40   |
| 18   | 0    | 153      | 4.1     | 11      | 14    | 7.9   | 3.1   | 2.6  | 1.0   | .50   | .50   | .40   |
| 19   | 0    | 42       | 4.1     | 11      | 13    | 7.7   | 3.0   | 2.5  | .80   | .60   | .50   | .40   |
| 20   | 0    | 13       | 4.1     | 11      | 12    | 7.3   | 2.8   | 3.6  | .70   | .60   | .50   | .40   |
| 21   | 0    | 9.8      | 4.5     | 10      | 12    | 6.6   | 3.2   | 1.6  | .60   | .70   | .50   | .40   |
| 22   | 0    | 47       | 4.5     | 11      | 12    | 6.5   | 3.4   | 4.2  | .70   | .60   | .50   | .40   |
| 23   | 0    | 138      | 3.7     | 10      | 12    | 6.2   | 2.8   | 3.3  | .80   | .40   | .50   | .40   |
| 24   | 0    | 121      | 3.7     | 9.7     | 11    | 6.1   | 2.8   | 3.2  | .90   | .30   | .50   | .40   |
| 25   | 0    | 74       | 4.9     | 9.4     | 11    | 6.0   | 3.0   | 2.9  | 2.3   | .30   | .50   | .40   |
| 26   | 0    | 39       | 4.5     | 9.9     | 11    | 5.7   | 3.6   | 2.7  | 1.9   | .50   | .50   | .40   |
| 27   | .10  | 16       | 4.1     | 22      | 9.6   | 5.8   | 3.8   | 3.0  | 1.7   | .50   | .50   | .40   |
| 28   | .10  | 13       | 59      | 11      | 10    | 5.7   | 3.6   | 2.5  | 1.6   | .50   | .50   | .40   |
| 29   | .10  | 12       | 681     | 28      | ----- | 5.5   | 3.7   | 2.4  | 1.3   | .50   | .50   | .40   |
| 30   | .10  | 12       | 133     | 420     | ----- | 5.6   | 3.5   | 2.1  | 1.1   | .50   | .50   | .40   |
| 31   | .10  | -----    | 106     | 47      | ----- | 5.4   | ----- | 1.9  | ----- | .50   | .50   | ----- |
| TOTAL  | .50  | 1,457.10 | 1,126.0 | 1,014.0 | 635.6 | 252.6 | 111.4 | 92.0 | 41.90 | 18.70 | 15.50 | 12.00 |
| MEAN   | .02  | 48.6     | 36.3    | 32.7    | 22.7  | 8.15  | 3.71  | 2.97 | 1.40  | 0.60  | .50   | .40   |
| AC-FT  | 1.0  | 2,890    | 2,230   | 2,010   | 1,260 | 501   | 221   | 182  | 83    | 37    | 31    | 24    |
| CALENDAR YEAR 1965 MAX 681 MIN 0 MEAN 10.6 AC-FT 7,650 |      |          |         |         |       |       |       |      |       |       |       |       |
| WATER YEAR 1965-66 MAX 681 MIN 0 MEAN 13.1 AC-FT 9,480 |      |          |         |         |       |       |       |      |       |       |       |       |

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-16 | 1445 | 6.87        | 2,200     | 1-30 | 0045 | 6.72        | 2,120     |
| 11-23 | 2315 | 3.58        | 418       | 2-6  | 0815 | 2.39        | 136       |
| 12-29 | 0130 | 7.56        | 2,540     |      |      |             |           |

Note.--Stage discharge relation indefinite July 27 to Sept. 30.

## SANTA YNEZ RIVER BASIN

11-1330. Santa Ynez River at narrows, near Lompoc, Calif.

Location.--Lat 34°38'21", long 120°25'39", in Canada de Salsipuedes Grant, on left bank 0.4 mile upstream from State Highway 150, 1.9 miles east of Lompoc, Santa Barbara County, and 2.1 miles downstream from Salsipuedes Creek.

Drainage area.--789 sq mi.

Records available.--April 1947 to September 1952 (irrigation seasons only); October 1952 to September 1963, October 1964 to September 1966.

Gage.--Graphic water-stage recorder (supplemental gage used Nov. 15 to Feb. 3). Altitude of gage is 90 ft (from topographic map). Prior to Mar. 23, 1953, at site 700 ft upstream at different datum. Mar. 23, 1953, to Feb. 10, 1962, at site 500 ft upstream at datum 2.00 ft higher, and Feb. 11, 1962, to Sept. 30, 1965, at same datum. Since October 1960, supplemental gage at site 0.5 mile downstream at different datum.

Extremes.--Maximum discharge during year, 2,100 cfs Dec. 29 (gage height, 7.94 ft from supplemental gage); no flow Oct. 1 to Nov. 14; Aug. 5 to Sept. 30.

1952-63, 1964-66: Maximum discharge, 8,560 cfs Feb. 11, 1962 (gage height, 10.80 ft); no flow at times in each year.

Remarks.--Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir and since November 1952 by Lake Cachuma (see Sta. Nos. 1210, 1220, 1255). 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 54    | 330   | 185   | 45    | 15    | 10    | 1.7   | 0.40 | 0.10 |       |
| 2     |      | 0     | 44    | 253   | 148   | 48    | 14    | 10    | 1.3   | .40  | .10  |       |
| 3     |      | 0     | 39    | 184   | 125   | 46    | 14    | 9.5   | 1.3   | .40  | .10  |       |
| 4     |      | 0     | 35    | 158   | 109   | 40    | 13    | 9.0   | 1.3   | .40  | .10  |       |
| 5     |      | 0     | 33    | 138   | 105   | 40    | 12    | 8.2   | 1.3   | .40  | 0    |       |
| 6     |      | 0     | 32    | 125   | 142   | 39    | 11    | 7.8   | 1.3   | .40  | 0    |       |
| 7     |      | 0     | 30    | 115   | 128   | 38    | 10    | 7.8   | 1.3   | .40  | 0    |       |
| 8     |      | 0     | 28    | 105   | 107   | 37    | 10    | 8.2   | 1.2   | .40  | 0    |       |
| 9     |      | 0     | 28    | 96    | 97    | 34    | 10    | 8.2   | 1.2   | .30  | 0    |       |
| 10    |      | 0     | 27    | 88    | 92    | 33    | 10    | 8.2   | 1.2   | .30  | 0    |       |
| 11    |      | 0     | 26    | 82    | 85    | 32    | 13    | 8.2   | 1.0   | .30  | 0    |       |
| 12    |      | 0     | 31    | 77    | 76    | 31    | 20    | 7.9   | 1.0   | .30  | 0    |       |
| 13    |      | 0     | 31    | 73    | 74    | 31    | 18    | 7.8   | 1.0   | .20  | 0    |       |
| 14    |      | 0     | 30    | 70    | 70    | 31    | 18    | 7.4   | 1.0   | .20  | 0    |       |
| 15    |      | 13    | 27    | 65    | 67    | 30    | 18    | 7.0   | .90   | .20  | 0    |       |
| 16    |      | 299   | 26    | 63    | 63    | 28    | 18    | 6.6   | .90   | .20  | 0    |       |
| 17    |      | 420   | 25    | 58    | 59    | 27    | 18    | 6.2   | .90   | .20  | 0    |       |
| 18    |      | 595   | 24    | 57    | 56    | 27    | 17    | 5.8   | .90   | .20  | 0    |       |
| 19    |      | 233   | 23    | 56    | 54    | 27    | 17    | 5.4   | .80   | .20  | 0    |       |
| 20    |      | 92    | 24    | 56    | 53    | 26    | 15    | 5.1   | .80   | .20  | 0    |       |
| 21    |      | 50    | 25    | 52    | 52    | 24    | 15    | 4.8   | .60   | .20  | 0    |       |
| 22    |      | 34    | 25    | 50    | 50    | 24    | 15    | 4.8   | .60   | .20  | 0    |       |
| 23    |      | 166   | 24    | 48    | 49    | 24    | 14    | 4.5   | .50   | .20  | 0    |       |
| 24    |      | 568   | 22    | 47    | 48    | 23    | 14    | 4.2   | .50   | .20  | 0    |       |
| 25    |      | 387   | 23    | 45    | 47    | 22    | 14    | 3.3   | .50   | .20  | 0    |       |
| 26    |      | 168   | 25    | 45    | 46    | 21    | 14    | 3.0   | .50   | .10  | 0    |       |
| 27    |      | 112   | 25    | 62    | 44    | 20    | 12    | 2.1   | .50   | .10  | 0    |       |
| 28    |      | 86    | 28    | 47    | 44    | 19    | 10    | 2.1   | .50   | .10  | 0    |       |
| 29    |      | 70    | 1.430 | 45    | ----- | 18    | 10    | 2.1   | .40   | .10  | 0    |       |
| 30    |      | 60    | 1.120 | 7.21  | ----- | 17    | 10    | 1.9   | .40   | .10  | 0    |       |
| 31    |      | ----- | 534   | 265   | ----- | 15    | ----- | 1.7   | ----- | .10  | 0    | ----- |
| Total | 0    | 3,353 | 3,898 | 3,656 | 2,275 | 917   | 419   | 188.8 | 27.30 | 7.60 | 0.40 | 0     |
| Mean  | 0    | 112   | 126   | 118   | 81.2  | 29.6  | 14.0  | 6.09  | 0.91  | 0.25 | 0.01 | 0     |
| Ac-ft | 0    | 6,650 | 7,730 | 7,250 | 4,510 | 1,820 | 831   | 374   | 54    | 15   | 0.8  | 0     |

Calendar year 1965 Max 1.430 Min 0 Mean 26.7 Ac-ft 19,350  
 Water year 1965-66 Max 1.430 Min 0 Mean 40.4 Ac-ft 29,240

11-1345. Santa Ynez River at 13th Street, near Lompoc, Calif.

Location.--Lat 34°40'06", long 120°28'29", in Lompoc Grant, on right bank at 13th Street crossing, 2.3 miles northwest of Lompoc, Santa Barbara County.

Drainage area.--820 sq mi.

Records available.--October 1954 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 60 ft (from topographic map). Prior to Nov. 27, 1956, at various sites within 300 ft at same datum. Prior to Oct. 1, 1962, at datum 1.00 ft higher.

Extremes.--Maximum discharge during year, not determined; no flow for much of year.

1954-66: Maximum discharge, 6,670 cfs Feb. 11, 1962 (gage height, 8.92 ft, present datum), from rating curve extended above 500 cfs on basis of measurements at station at H Street one mile upstream; no flow for several months in each year.

Remarks.--Records good. This is a project station. Discharge above wading stages not reported herein. Flow regulated by Jameson Lake, Gibraltar Reservoir, and Lake Cachuma (see Sta. Nos. 1210, 1220, 1255). 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 pumped from wells along bank of river for irrigation in valley upstream.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May | June  | July | Aug. | Sept. |
|--------------------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1                  |      | 0     | 41   | 294  | 185   | 36    | 1.4   |     |       |      |      |       |
| 2                  |      | 0     | 30   | 225  | 155   | 39    | .60   |     |       |      |      |       |
| 3                  |      | 0     | 26   | 178  | 127   | 38    | 0     |     |       |      |      |       |
| 4                  |      | 0     | 21   | 147  | 111   | 34    | 0     |     |       |      |      |       |
| 5                  |      | 0     | 19   | 131  | 105   | 33    | 0     |     |       |      |      |       |
| 6                  |      | 0     | 16   | 116  | 139   | 33    | 0     |     |       |      |      |       |
| 7                  |      | 0     | 15   | 105  | 132   | 32    | 0     |     |       |      |      |       |
| 8                  |      | 0     | 13   | 98   | 113   | 30    | 0     |     |       |      |      |       |
| 9                  |      | 0     | 12   | 86   | 98    | 30    | 0     |     |       |      |      |       |
| 10                 |      | 0     | 12   | 78   | 91    | 29    | 0     |     |       |      |      |       |
| 11                 |      | 0     | 9.8  | 72   | 82    | 28    | 0     |     |       |      |      |       |
| 12                 |      | 0     | 13   | 67   | 76    | 27    | 1.7   |     |       |      |      |       |
| 13                 |      | 0     | 15   | 62   | 74    | 26    | 4.1   |     |       |      |      |       |
| 14                 |      | 0     | 14   | 59   | 69    | 25    | 3.9   |     |       |      |      |       |
| 15                 |      | 0     | 12   | 53   | 64    | 24    | 2.0   |     |       |      |      |       |
| 16                 |      | 100   | 11   | 50   | 62    | 22    | 2.0   |     |       |      |      |       |
| 17                 |      | -     | 9.3  | 46   | 59    | 21    | 1.6   |     |       |      |      |       |
| 18                 |      | -     | 7.6  | 46   | 58    | 20    | .80   |     |       |      |      |       |
| 19                 |      | 224   | 6.2  | 44   | 53    | 19    | .40   |     |       |      |      |       |
| 20                 |      | 84    | 6.5  | 45   | 50    | 19    | 0     |     |       |      |      |       |
| 21                 |      | 38    | 8.9  | 42   | 48    | 18    | 0     |     |       |      |      |       |
| 22                 |      | 16    | 8.4  | 39   | 47    | 17    | 0     |     |       |      |      |       |
| 23                 |      | 94    | 6.5  | 38   | 44    | 16    | 0     |     |       |      |      |       |
| 24                 |      | -     | 5.2  | 36   | 43    | 15    | 0     |     |       |      |      |       |
| 25                 |      | 357   | 5.2  | 34   | 40    | 14    | .0    |     |       |      |      |       |
| 26                 |      | 164   | 6.8  | 34   | 39    | 12    | 0     |     |       |      |      |       |
| 27                 |      | 102   | 6.5  | 49   | 36    | 11    | 0     |     |       |      |      |       |
| 28                 |      | 72    | 6.8  | 38   | 35    | 9.3   | 0     |     |       |      |      |       |
| 29                 |      | 55    | -    | 33   | ----- | 5.9   | 0     |     |       |      |      |       |
| 30                 |      | 47    | -    | -    | ----- | 3.4   | 0     |     |       |      |      |       |
| 31                 |      | ----- | 418  | 247  | ----- | 2.0   | ----- |     | ----- |      |      | ----- |
| Total              | 0    | -     | -    | -    | 2,235 | 688.6 | 18.50 | 0   | 0     | 0    | 0    | 0     |
| Mean               | 0    | -     | -    | -    | 79.8  | 22.2  | 0.62  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft              | 0    | -     | -    | -    | 4,430 | 1,370 | 37    | 0   | 0     | 0    | 0    | 0     |
| Calendar year 1965 | Max  | -     | Min  | -    | Mean  | -     | Ac-ft | -   |       |      |      |       |
| Water year 1965-66 | Max  | -     | Min  | -    | Mean  | -     | Ac-ft | -   |       |      |      |       |



11-1361. San Antonio Creek near Casmalia, Calif.

Location.--Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, on Camp Cook Military Reservation on downstream side of left center pile bent of San Antonio Road bridge, 0.7 mile east of junction of San Antonio Road with Lompoc-Casmalia Road, and 3.8 miles south of Casmalia, Santa Barbara County.

Drainage area.--135 sq mi.

Records available.--October 1955 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to June 27, 1958, at datum 2.00 ft higher. Prior to Sept. 28, 1962, graphic water-stage recorder.

Average discharge.--11 years, 5.73 cfs (4,150 acre-ft per year); median of yearly mean discharges, 3.0 cfs (2,200 acre-ft per year).

Extremes.--Maximum discharge during year, 257 cfs Jan. 30 (gage height, 5.38 ft); minimum daily, 0.20 cfs Aug. 17-20, Sept. 3. 1955-66: Maximum discharge, 1,300 cfs Feb. 19, 1962 (gage height, 9.35 ft); minimum daily, 0.10 cfs June 19, 20, 1957.

Remarks.--Records good. No regulation above station. Flow affected by pumping from wells along stream for irrigation above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.70  | 0.50   | 2.3   | 18    | 14    | 4.4   | 3.1   | 1.2   | 0.80  | 0.50  | 0.40  | 0.40  |
| 2     | .60   | .50    | 2.2   | 8.8   | 15    | 5.0   | 3.1   | 1.2   | .90   | .50   | .40   | .40   |
| 3     | .70   | .50    | 2.1   | 7.2   | 9.3   | 4.9   | 3.1   | 1.2   | 1.0   | .50   | .30   | .20   |
| 4     | .70   | .50    | 2.1   | 5.6   | 8.0   | 4.3   | 3.1   | 1.2   | .90   | .50   | .40   | .50   |
| 5     | .50   | .50    | 2.1   | 5.0   | 10    | 4.0   | 3.0   | 1.2   | .90   | .50   | .50   | .40   |
| 6     | .40   | .50    | 2.1   | 4.8   | 19    | 4.0   | 3.0   | 1.2   | .90   | .50   | .40   | .50   |
| 7     | .60   | .60    | 2.1   | 4.5   | 13    | 3.8   | 3.0   | 1.2   | .90   | .50   | .40   | .40   |
| 8     | .60   | .60    | 2.1   | 4.4   | 8.7   | 3.8   | 2.9   | 1.2   | .80   | .50   | .50   | .40   |
| 9     | .70   | .60    | 2.2   | 4.2   | 7.4   | 3.6   | 2.8   | 1.2   | .80   | .50   | .40   | .40   |
| 10    | .70   | .60    | 2.3   | 4.2   | 6.6   | 3.5   | 2.8   | 1.2   | .80   | .40   | .40   | .40   |
| 11    | .60   | .60    | 2.2   | 3.9   | 6.3   | 3.8   | 3.0   | 1.1   | .80   | .40   | .30   | .50   |
| 12    | .70   | .60    | 3.9   | 3.7   | 5.9   | 3.9   | 3.0   | 1.1   | .70   | .40   | .30   | .50   |
| 13    | .70   | .70    | 3.5   | 3.6   | 5.8   | 3.8   | 3.1   | 1.1   | .70   | .50   | .30   | .40   |
| 14    | .70   | 1.2    | 2.9   | 3.6   | 5.6   | 3.7   | 2.6   | 1.1   | .70   | .40   | .40   | .40   |
| 15    | .60   | 3.0    | 2.8   | 3.6   | 5.5   | 3.3   | 2.1   | 1.1   | .80   | .40   | .40   | .30   |
| 16    | .60   | 5.1    | 2.6   | 3.4   | 5.4   | 3.1   | .90   | 1.1   | .80   | .40   | .30   | .30   |
| 17    | .60   | 6.9    | 2.4   | 3.3   | 5.2   | 3.0   | .90   | 1.1   | .80   | .40   | .20   | .30   |
| 18    | .60   | 6.6    | 2.3   | 3.3   | 5.2   | 2.9   | 1.6   | 1.1   | .70   | .40   | .20   | .30   |
| 19    | .60   | 3.4    | 2.3   | 3.2   | 5.1   | 2.9   | 2.3   | 1.1   | .70   | .40   | .20   | .50   |
| 20    | .50   | 1.9    | 2.4   | 3.5   | 5.1   | 3.0   | 2.2   | 1.1   | .60   | .40   | .20   | .50   |
| 21    | .50   | 1.5    | 2.5   | 2.9   | 5.1   | 2.9   | 1.4   | 1.0   | .60   | .40   | .40   | .40   |
| 22    | .50   | 1.3    | 2.6   | 3.2   | 4.9   | 2.9   | 1.6   | 1.0   | .60   | .40   | .40   | .30   |
| 23    | .40   | 6.0    | 2.5   | 3.3   | 4.9   | 2.9   | 1.6   | 1.0   | .50   | .40   | .40   | .30   |
| 24    | .40   | 23     | 2.3   | 3.3   | 4.9   | 3.0   | 1.5   | 1.0   | .50   | .40   | .30   | .30   |
| 25    | .40   | 18     | 2.7   | 3.2   | 4.6   | 3.2   | 1.4   | 1.0   | .60   | .40   | .30   | .50   |
| 26    | .30   | 8.4    | 3.4   | 3.2   | 4.7   | 3.1   | 1.3   | 1.0   | .50   | .40   | .40   | .50   |
| 27    | .40   | 4.7    | 3.0   | 3.8   | 4.6   | 3.2   | 1.3   | 1.0   | .40   | .60   | .40   | .40   |
| 28    | .40   | 3.3    | 2.9   | 3.7   | 4.5   | 3.2   | 1.3   | 1.0   | .50   | .50   | .40   | .40   |
| 29    | .40   | 2.7    | 46    | 3.5   | ----- | 3.2   | 1.3   | 1.0   | .50   | .30   | .50   | .40   |
| 30    | .40   | 2.4    | 35    | 44    | ----- | 3.3   | 1.2   | .90   | .60   | .40   | .40   | .80   |
| 31    | .40   | -----  | 30    | 24    | ----- | 3.1   | ----- | .90   | ----- | .30   | .30   | ----- |
| TOTAL | 16.90 | 106.70 | 181.8 | 199.9 | 204.3 | 108.7 | 65.50 | 33.80 | 21.30 | 13.50 | 11.10 | 12.30 |
| MEAN  | .55   | 3.56   | 5.87  | 6.45  | 7.30  | 3.51  | 2.18  | 1.09  | .71   | .44   | .36   | .41   |
| AC-FT | 34    | 212    | 361   | 396   | 405   | 216   | 130   | 67    | 42    | 27    | 22    | 24    |

|                    |        |         |           |             |
|--------------------|--------|---------|-----------|-------------|
| CALENDAR YEAR 1965 | MAX 50 | MIN .20 | MEAN 2.90 | AC-FT 2,110 |
| WATER YEAR 1965-66 | MAX 46 | MIN .20 | MEAN 2.67 | AC-FT 1,940 |

Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-24 | 0100 | 3.70        | 52        | 1-30 | 1500 | 5.38        | 257       |
| 12-29 | 1300 | 3.76        | 63        |      |      |             |           |

## SAN ANTONIO CREEK BASIN

11-1361.5. San Antonio Creek tributary near Casmalia, Calif.

Location.--Lat 34°48'45", long 120°31'30", in Todos Santos Y San Antonio Grant, on right bank at culvert under Lompoc-Casmalia Road, 1.8 miles south of Casmalia, Santa Barbara County.

Drainage area.--0.28 sq mi.

Records available.--Water years 1960-64 (annual maximum), August 1964 to September 1966.

Gage.--Flood-hydrograph recorder with rain-gage attachment and crest-stage gage. Altitude of gage is 480 ft (from topographic map). Sept. 18, 1959, to Aug. 20, 1964, crest-stage gage only at same site and datum.

Extremes.--1964-65: Maximum discharge during year, 7.3 cfs Nov. 9 (gage height 5.48 ft, from crest-stage gage); no flow for most of year.

1965-66: Maximum discharge during year, 5.0 cfs Jan. 30 (gage height, 5.33 ft, from crest-stage gage); no flow for most of year.

1959-66: Maximum discharge, 8.4 cfs Feb. 10, 1962 (gage height, 5.51 ft, from crest-stage gage), by computation of maximum flow through culvert; no flow for most of each year.

Remarks.--Records poor. No regulation or diversion above station. Monthly precipitation, in inches, for the water year October 1964 to September 1965, is as follows: October, 1.65; November, 1.90; December, 2.00; January, 0.40; February, 0.30; March, 0.96; April, 3.63; the year, 10.84. Precipitation for water year October 1965 to September 1966, incomplete.

Discharge, in cubic feet per second, water years October 1964 to September 1966

|                    |      |                    |      |
|--------------------|------|--------------------|------|
| Oct. 28, 1964..... | 0.20 | Nov. 22.....       | 0.10 |
| Nov. 9.....        | .30  | Dec. 29.....       | .10  |
| Apr. 8, 1965.....  | .10  | Jan. 30, 1966..... | .20  |
| Nov. 15.....       | .10  |                    |      |

| Month                   | Cfs-days | Maximum | Minimum | Mean  | Acre-feet |
|-------------------------|----------|---------|---------|-------|-----------|
| October 1964.....       | 0.20     | 0.20    | 0       | 0.006 | 0.4       |
| November.....           | .30      | .30     | 0       | .01   | .6        |
| April 1965.....         | .10      | .10     | 0       | .003  | .2        |
| November.....           | .20      | .10     | 0       | .007  | .4        |
| December.....           | .10      | .10     | 0       | .003  | .2        |
| January 1966.....       | .20      | .20     | 0       | .006  | .4        |
| Calendar year 1964..... | -        | -       | -       | -     | -         |
| Water year 1964-65..... | -        | .30     | 0       | .002  | 1.2       |
| Calendar year 1965..... | -        | .10     | 0       | .001  | .8        |
| Water year 1965-66..... | -        | .20     | 0       | .001  | 1.0       |

Note.--Flow occurred only on days listed above.

## SANTA MARIA RIVER BASIN

11-1366.5. Aliso Canyon Creek near New Cuyama, Calif.

Location.--Lat 34°59'00", long 119°46'30", in Cuyama Grant, at culvert on State Highway 166, 5.8 miles northwest of New Cuyama, Santa Barbara County.

Drainage area.--16.1 sq mi.

Records available.--Water years 1960-63 (annual maximum), October 1963 to September 1966.

Gage.--Graphic water-stage recorder with rain-gage attachment and arch-culvert control. Altitude of gage is 1,880 ft (from topographic map). Sept. 30, 1959, to July 24, 1963, crest-stage gage at same site at different datum. July 25 to Nov. 5, 1963, crest-stage gage at same site and datum.

Extremes.--No flow during year.

1959-66: Maximum discharge, 78 cfs Feb. 10, 1962 (gage height, 3.00 ft, datum then in use), based on computation of maximum flow through culvert; no flow for most of each year.

Remarks.--No flow since June 12, 1963. No regulation or diversion above station. Monthly precipitation, in inches, is as follows: November, 2.4; December, 1.7; January, 0.7; February, 0.8; March, 0.1; September, 0.2; the water year, 5.9.

11-1368. Cuyama River below Buckhorn Canyon, near Santa Maria, Calif.

Location.--Lat 35°01'20", long 120°13'10", in SW $\frac{1}{4}$  sec. 14, T.11 N., R.32 W., on downstream side of second pier from right abutment of bridge on State Highway 166, 0.7 mile downstream from Buckhorn Canyon and 13 miles northeast of Santa Maria.

Drainage area.--884 sq mi.

Records available.--October 1903 to December 1905 (published as Santa Maria River near Santa Maria), October 1959 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 760 ft (from topographic map). Prior to October 1959, at different site and datum.

Average discharge.--9 years, 16.9 cfs (12,240 acre-ft per year).

Extremes.--Maximum discharge during year, 2,170 cfs Dec. 30 (gage height, 6.90 ft); no flow Oct. 1 to Nov. 17, Aug. 3 to Sept. 30. 1903-05, 1959-66: Maximum discharge observed, about 10,000 cfs Mar. 13, 1905 (gage height, 10.0 ft, site and datum then in use); no flow at times in most years.

Remarks.--Records good. No regulation above station. Pumping from wells along stream for irrigation in upper Cuyama Valley.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.    | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|---------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 1.2     | 5.6   | 5.0   | 2.9  | 1.6   | 1.6   | 0.80  | 0.20 | 0.10 |       |
| 2     |      | 0     | .80     | 2.5   | 3.6   | 3.4  | 1.6   | 1.4   | .80   | .20  | .10  |       |
| 3     |      | 0     | .70     | 1.7   | 2.5   | 2.9  | 1.6   | 1.3   | .70   | .10  | 0    |       |
| 4     |      | 0     | .70     | 1.2   | 1.8   | 2.7  | 1.6   | 1.3   | .70   | .10  | 0    |       |
| 5     |      | 0     | .60     | 8.9   | 2.1   | 2.5  | 1.6   | 1.3   | .60   | .10  | 0    |       |
| 6     |      | 0     | .50     | 7.1   | 3.9   | 2.5  | 1.6   | 1.2   | .60   | .10  | 0    |       |
| 7     |      | 0     | .50     | 6.0   | 7.5   | 2.5  | 1.6   | 1.1   | .60   | .20  | 0    |       |
| 8     |      | 0     | .50     | 4.8   | 2.2   | 2.3  | 1.8   | 1.2   | .60   | .20  | 0    |       |
| 9     |      | 0     | .40     | 3.6   | 1.4   | 2.3  | 1.6   | 1.2   | .60   | .20  | 0    |       |
| 10    |      | 0     | .40     | 3.2   | 9.4   | 2.3  | 1.8   | 1.2   | .60   | .20  | 0    |       |
| 11    |      | 0     | .60     | 2.5   | 8.0   | 2.3  | 1.8   | 1.2   | .50   | .20  | 0    |       |
| 12    |      | 0     | .60     | 2.1   | 6.7   | 2.3  | 1.8   | 1.1   | .40   | .20  | 0    |       |
| 13    |      | 0     | .40     | 1.8   | 6.0   | 2.3  | 1.6   | 1.1   | .30   | .20  | 0    |       |
| 14    |      | 0     | .40     | 1.6   | 5.4   | 2.3  | 1.4   | 1.1   | .40   | .20  | 0    |       |
| 15    |      | 0     | .40     | 1.4   | 5.0   | 2.3  | 1.2   | 1.1   | .40   | .20  | 0    |       |
| 16    |      | 0     | .40     | 1.4   | 4.4   | 2.1  | 1.1   | 1.1   | .40   | .20  | 0    |       |
| 17    |      | 0     | .40     | 1.4   | 4.2   | 2.1  | 1.2   | 1.1   | .40   | .10  | 0    |       |
| 18    |      | 14.7  | .30     | 1.4   | 4.2   | 1.9  | 1.3   | 1.1   | .40   | .10  | 0    |       |
| 19    |      | 30    | .30     | 1.4   | 3.9   | 1.6  | 1.3   | 1.1   | .40   | .10  | 0    |       |
| 20    |      | 17    | .30     | 1.4   | 3.6   | 1.8  | 1.3   | 1.1   | .20   | .10  | 0    |       |
| 21    |      | 10    | .30     | 1.4   | 3.6   | 1.8  | 1.3   | 1.1   | .20   | .10  | 0    |       |
| 22    |      | 5.5   | .30     | 1.3   | 3.6   | 1.9  | 1.3   | 1.1   | .20   | .10  | 0    |       |
| 23    |      | 12    | .30     | 1.2   | 3.4   | 1.8  | 1.2   | 1.1   | .20   | .10  | 0    |       |
| 24    |      | 202   | .30     | 1.2   | 3.2   | 1.9  | 1.1   | 1.0   | .20   | .10  | 0    |       |
| 25    |      | 226   | .30     | 1.2   | 2.9   | 1.8  | 1.1   | 1.0   | .20   | .10  | 0    |       |
| 26    |      | 40    | .30     | 1.2   | 2.9   | 1.6  | 1.2   | 1.0   | .20   | .10  | 0    |       |
| 27    |      | 9.7   | .20     | 1.1   | 2.7   | 1.6  | 1.3   | 1.0   | .20   | .10  | 0    |       |
| 28    |      | 3.8   | .20     | 1.0   | 2.9   | 1.6  | 1.4   | 1.0   | .10   | .10  | 0    |       |
| 29    |      | 2.4   | 91      | 1.0   | ----- | 1.6  | 1.6   | 1.0   | .10   | .10  | 0    |       |
| 30    |      | 1.6   | 746     | 5.0   | ----- | 1.6  | 1.6   | 1.0   | .20   | .10  | 0    |       |
| 31    |      | ----- | 184     | 3.2   | ----- | 1.6  | ----- | .80   | ----- | .10  | 0    | ----- |
| Total | 0    | 707.0 | 1033.60 | 178.8 | 148.4 | 66.1 | 43.5  | 35.00 | 12.20 | 4.30 | 0.20 | 0     |
| Mean  | 0    | 23.6  | 33.3    | 5.77  | 5.30  | 2.13 | 1.45  | 1.13  | 0.41  | 0.14 | 0.01 | 0     |
| Ac-ft | 0    | 1,400 | 2,050   | 355   | 294   | 131  | 86    | 69    | 24    | 8.5  | 0.4  | 0     |

Calendar year 1965 Max 746 Min 0 Mean 5.52 Ac-ft 4,000  
 Water year 1965-66 Max 746 Min 0 Mean 6.11 Ac-ft 4,420

Peak discharge (base, 200 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-18 | 0530 | 5.50        | 646       | 12-30 | 1000 | 6.90        | 2,170     |
| 11-25 | 0730 | 5.75        | 856       |       |      |             |           |

## SANTA MARIA RIVER BASIN

11-1374. Alamo Creek near Nipomo, Calif.

Location.--Lat 35°02'55", long 120°18'05", in Huasna Grant, on right bank 3.2 miles upstream from mouth and 10 miles east of Nipomo, San Luis Obispo County.

Drainage area.--83.3 sq mi.

Records available.--March 1959 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 650 ft (from topographic map).

Average discharge.--7 years, 2.23 cfs (1,610 acre-ft per year).

Extremes.--No flow during year.

1959-66: Maximum discharge, 1,630 cfs Feb. 9, 1962 (gage height, 4.80 ft); no flow for all or part of each year.

Remarks.--No flow since Apr. 10, 1965. No regulation or diversion above station. Discharge for the calendar year 1965 is as follows: maximum daily, 12 cfs; minimum, zero; mean, 0.033 cfs, total, 24 acre-ft.

11-1379. Huasna River near Arroyo Grande, Calif.

Location.--Lat 35°04'40", long 120°22'15", in Huasna Grant, on right bank 300 ft downstream from mouth of Huasna Creek and 12 miles southeast of Arroyo Grande, San Luis Obispo County.

Drainage area.--104 sq mi.

Records available.--June 1959 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 640 ft (from topographic map).

Average discharge.--7 years, 6.12 cfs (4,430 acre-ft per year).

Extremes.--Maximum discharge during year, 520 cfs Nov. 24 (gage height, 5.40 ft); no flow Oct. 1-8, Oct. 10 to Nov. 9.

1959-66: Maximum discharge, 2,100 cfs Feb. 10, 1962 (gage height, 6.90 ft, from crest-stage gage); no flow for many days in each year.

Remarks.--Records good. No regulation above station. Some diversions by pumping for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|-------|--------|--------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     | 0     | 0      | 0.70   | 1.00  | 8.7   | 5.2  | 1.9   | 0.90  | 1.0   | 0.10 | 0.20 | 0.10  |
| 2     | 0     | 0      | .70    | .48   | 8.4   | 5.0  | 1.9   | .90   | 1.0   | .10  | .30  | .10   |
| 3     | 0     | 0      | 1.0    | .30   | 7.5   | 4.6  | 1.9   | .90   | 1.0   | .10  | .30  | .10   |
| 4     | 0     | 0      | .70    | .23   | 7.5   | 4.6  | 1.9   | .90   | 1.0   | .10  | .30  | .10   |
| 5     | 0     | 0      | .70    | .18   | 7.8   | 4.2  | 1.9   | .90   | 1.0   | .10  | .20  | .10   |
| 6     | 0     | 0      | .60    | .15   | 10    | 4.2  | 1.9   | .90   | 1.0   | .10  | .20  | .10   |
| 7     | 0     | 0      | .60    | .14   | 13    | 4.0  | 1.9   | .90   | .60   | .10  | .20  | .10   |
| 8     | 0     | 0      | .60    | .13   | 13    | 3.8  | 1.9   | .90   | .40   | .10  | .20  | .10   |
| 9     | .10   | 0      | .60    | .12   | 11    | 3.6  | 1.8   | .90   | .30   | .10  | .20  | .10   |
| 10    | 0     | .10    | .60    | .12   | 10    | 3.2  | 1.8   | .90   | .20   | .20  | .20  | .10   |
| 11    | 0     | .10    | .70    | .11   | 9.9   | 3.2  | 1.8   | .90   | .10   | .20  | .20  | .10   |
| 12    | 0     | .10    | .90    | .10   | 9.3   | 3.1  | 1.8   | .90   | .10   | .20  | .10  | .10   |
| 13    | 0     | .10    | 1.0    | .10   | 9.3   | 3.0  | 1.8   | 1.0   | .10   | .20  | .10  | .10   |
| 14    | 0     | .20    | .90    | .10   | 8.4   | 3.0  | 1.5   | .90   | .40   | .20  | .10  | .10   |
| 15    | 0     | .20    | .80    | .10   | 8.1   | 3.0  | 1.5   | .80   | .20   | .20  | .10  | .10   |
| 16    | 0     | .60    | .80    | .10   | 7.5   | 2.6  | 1.5   | .60   | .20   | .30  | .10  | .10   |
| 17    | 0     | .30    | .80    | .10   | 7.5   | 2.4  | 1.5   | .60   | .20   | .30  | .10  | .10   |
| 18    | 0     | .40    | .80    | .10   | 7.5   | 2.4  | 1.5   | .60   | .20   | .30  | .10  | .10   |
| 19    | 0     | .30    | .80    | 9.9   | 6.8   | 2.4  | 1.3   | .60   | .10   | .30  | .20  | .10   |
| 20    | 0     | .30    | .80    | 9.9   | 6.5   | 2.2  | .90   | .50   | .10   | .30  | .20  | .10   |
| 21    | 0     | .30    | .80    | 9.3   | 6.2   | 2.1  | .80   | .60   | .10   | .30  | .20  | .10   |
| 22    | 0     | .40    | .80    | 9.0   | 6.0   | 2.1  | .80   | .50   | .10   | .20  | .20  | .10   |
| 23    | 0     | 1.4    | .80    | 9.0   | 6.0   | 2.0  | .80   | .40   | .10   | .20  | .10  | .10   |
| 24    | 0     | .73    | .80    | 8.7   | 6.0   | 2.1  | .80   | .40   | .10   | .10  | .10  | .10   |
| 25    | 0     | .18    | .90    | 8.4   | 6.0   | 2.1  | .80   | .40   | .10   | .10  | .10  | .10   |
| 26    | 0     | .96    | .90    | 7.8   | 6.5   | 2.1  | .80   | .40   | .20   | .10  | .10  | .10   |
| 27    | 0     | 1.1    | .90    | 7.5   | 5.8   | 2.1  | .80   | .50   | .20   | .60  | .10  | .10   |
| 28    | 0     | .70    | 1.0    | 6.0   | 5.2   | 2.1  | .90   | .60   | .10   | .20  | .10  | .10   |
| 29    | 0     | .70    | .72    | 5.4   | ----- | 2.1  | .90   | 1.0   | .10   | .20  | .10  | .20   |
| 30    | 0     | .90    | 153    | 10    | ----- | 2.0  | .90   | 1.0   | .20   | .20  | .10  | .20   |
| 31    | 0     | -----  | 167    | 9.9   | ----- | 1.9  | ----- | 1.0   | ----- | .20  | .10  | ----- |
| Total | 0.10  | 108.80 | 414.00 | 476.8 | 225.4 | 92.4 | 42.20 | 23.20 | 10.50 | 6.00 | 4.90 | 3.20  |
| Mean  | 0.003 | 3.63   | 13.4   | 15.4  | 8.05  | 2.98 | 1.41  | 0.75  | 0.35  | 0.19 | 0.16 | 0.11  |
| Ac-ft | 0.2   | 216    | 821    | 946   | 447   | 183  | 84    | 46    | 21    | 12   | 9.7  | 6.3   |

Calendar year 1965 Max 285 Min 0 Mean 5.96 Ac-ft 4,310

Water year 1965-66 Max 167 Min 0 Mean 3.86 Ac-ft 2,790

Peak discharge (base, 40 cfs).--Nov. 24 (0500 hrs) 520 cfs (5.40 ft); Dec. 29 (1930 hrs) 499 cfs (5.16 ft).



11-1381. Cuyama River below Twitchell Dam, Calif.

Location.--Lat 34°56'40", long 120°17'30", in Suey Grant, on left bank 3.5 miles upstream from mouth, 4 miles northeast of Garey, Santa Barbara County, and 4.4 miles downstream from Twitchell Dam.

Drainage area.--1,132 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Extremes.--Maximum discharge during year, 231 cfs Mar. 26 (gage height, 4.53 ft); no flow Oct. 1 to Nov. 19, Nov. 28, June 5 to Sept. 30. 1958-66: Maximum discharge, 548 cfs Feb. 10, 1962 (gage height, 5.76 ft); no flow for part of each year.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated since February 1959 by Twitchell Reservoir (capacity, 240,000 acre-ft). Some pumping from wells along stream for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar.    | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|---------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 133    | 3.4   | 2.5   | 0.30    | 8.0   | 0.50  | 0.10  |      |      |       |
| 2     |      | 0      | 40     | 2.2   | 1.5   | .30     | 5.4   | .50   | .10   |      |      |       |
| 3     |      | 0      | 7.6    | 1.8   | 1.0   | .30     | 5.1   | .50   | .10   |      |      |       |
| 4     |      | 0      | 4.2    | 1.6   | .70   | .20     | 5.1   | .50   | .10   |      |      |       |
| 5     |      | 0      | 2.3    | 1.4   | 1.0   | .20     | 5.4   | .40   | 0     |      |      |       |
| 6     |      | 0      | 1.3    | 1.4   | 2.0   | .20     | 4.8   | .40   | 0     |      |      |       |
| 7     |      | 0      | 1.0    | 1.3   | 1.8   | .20     | 4.8   | .30   | 0     |      |      |       |
| 8     |      | 0      | .70    | 1.1   | 1.3   | .20     | 4.6   | .40   | 0     |      |      |       |
| 9     |      | 0      | .80    | 1.2   | 1.0   | .20     | 4.0   | .40   | 0     |      |      |       |
| 10    |      | 0      | 1.0    | 1.1   | .80   | .20     | 4.8   | .40   | 0     |      |      |       |
| 11    |      | 0      | .90    | 1.0   | .80   | .10     | 4.4   | .40   | 0     |      |      |       |
| 12    |      | 0      | 3.0    | .90   | .70   | .20     | 3.6   | .30   | 0     |      |      |       |
| 13    |      | 0      | 4.6    | 1.0   | .70   | .20     | 3.0   | .30   | 0     |      |      |       |
| 14    |      | 0      | 2.6    | .90   | .80   | .30     | 2.3   | .30   | 0     |      |      |       |
| 15    |      | 0      | 1.8    | .70   | .80   | .30     | 4.1   | 1.1   | 0     |      |      |       |
| 16    |      | 0      | 1.3    | .90   | .90   | .30     | 2.2   | .40   | 0     |      |      |       |
| 17    |      | 0      | .90    | .90   | 1.0   | 30      | 1.3   | .30   | 0     |      |      |       |
| 18    |      | 0      | .70    | .90   | .90   | 199     | 1.5   | .30   | 0     |      |      |       |
| 19    |      | 0      | .50    | .90   | .70   | 203     | 1.9   | .30   | 0     |      |      |       |
| 20    |      | 13     | .50    | .90   | .60   | 203     | 1.5   | .20   | 0     |      |      |       |
| 21    |      | 6.3    | .60    | .80   | .60   | 143     | 1.4   | .20   | 0     |      |      |       |
| 22    |      | 1.1    | .60    | .80   | .50   | 13      | 1.4   | .20   | 0     |      |      |       |
| 23    |      | .10    | .90    | .80   | .40   | 2.3     | 1.3   | .20   | 0     |      |      |       |
| 24    |      | 18     | .30    | .80   | .40   | 40      | 1.1   | .20   | 0     |      |      |       |
| 25    |      | 16     | .60    | .80   | .30   | 227     | .70   | .20   | 0     |      |      |       |
| 26    |      | 1.2    | .70    | .70   | .30   | 227     | .70   | .20   | 0     |      |      |       |
| 27    |      | .20    | 1.2    | .70   | .30   | 221     | .60   | .20   | 0     |      |      |       |
| 28    |      | 0      | 1.3    | .70   | .30   | 213     | .50   | .10   | 0     |      |      |       |
| 29    |      | 4.1    | 19     | .70   | ----- | 201     | .70   | .10   | 0     |      |      |       |
| 30    |      | 129    | 8.9    | 4.2   | ----- | 151     | .50   | .10   | 0     |      |      |       |
| 31    |      | -----  | 4.8    | 4.0   | ----- | 23      | ----- | .10   | ----- |      |      |       |
| Total | 0    | 189.00 | 247.60 | 40.50 | 24.60 | 2100.00 | 86.70 | 10.00 | 0.40  | 0    | 0    | 0     |
| Mean  | 0    | 6.30   | 7.99   | 1.31  | 0.88  | 67.7    | 2.89  | 0.32  | 0.01  | 0    | 0    | 0     |
| Ac-ft | 0    | 375    | 491    | 80    | 49    | 4,170   | 172   | 20    | 0.8   | 0    | 0    | 0     |

Calendar year 1965 Max 255 Min 0 Mean 5.35 Ac-ft 3,870

Water year 1965-66 Max 227 Min 0 Mean 7.39 Ac-ft 3,350

Note.--No gage-height record Jan. 17 to Feb. 3.

11-1385. Sisquoc River near Sisquoc, Calif.

Location.--Lat 34°50'25", long 120°10'00", in sec.20, T.9 N., R.31 W., on left bank 2.2 miles upstream from La Brea Creek and 7 miles east of Sisquoc.

Drainage area.--281 sq mi.

Records available.--October 1943 to September 1966. October 1929 to September 1933, at site 0.2 mile downstream; low-flow records not equivalent owing to diversion immediately upstream. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 624.30 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Aug. 24, 1951, at site 0.2 mile downstream at datum 3.70 ft lower; during this period, a supplementary gage at site 200 ft downstream from present site at different datums was generally used for periods of low flow. Prior to Dec. 7, 1962, graphic water-stage recorder.

Average discharge.--23 years (1943-66), 26.7 cfs (19,330 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

Extremes.--Maximum discharge during year, 3,020 cfs Dec. 29 (gage height, 7.32 ft); minimum daily, 1.1 cfs Oct. 23-30.

1929-33, 1943-66: Maximum discharge, 7,640 cfs Apr. 3, 1958 (gage height, 10.62 ft), from rating curve extended above 1,400 cfs on basis of slope-area measurement at gage height 10.08 ft; minimum daily since 1943, 0.40 cfs for several days in 1947, 1951, 1957, and 1961.

Maximum discharge known, 11,000 cfs Mar. 2, 1938 (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 cfs.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 1.3  | 1.4     | 33    | 330   | 61    | 39    | 20    | 11    | 3.8   | 2.5  | 2.0  | 1.7   |
| 2     | 1.3  | 1.4     | 26    | 221   | 54    | 41    | 19    | 9.5   | 3.7   | 2.5  | 2.0  | 1.7   |
| 3     | 1.4  | 1.4     | 24    | 170   | 43    | 40    | 19    | 9.3   | 3.5   | 2.4  | 2.0  | 1.7   |
| 4     | 1.5  | 1.4     | 21    | 136   | 40    | 37    | 19    | 8.8   | 3.4   | 2.4  | 2.0  | 1.6   |
| 5     | 1.6  | 1.4     | 20    | 111   | 41    | 35    | 20    | 8.5   | 3.2   | 2.4  | 1.9  | 1.6   |
| 6     | 1.6  | 1.4     | 18    | 99    | 142   | 34    | 20    | 8.2   | 3.1   | 2.4  | 1.9  | 1.7   |
| 7     | 1.5  | 1.5     | 15    | 91    | 192   | 32    | 20    | 7.7   | 3.0   | 2.4  | 1.9  | 1.7   |
| 8     | 1.6  | 1.6     | 16    | 86    | 129   | 31    | 19    | 7.2   | 3.0   | 2.4  | 1.9  | 1.6   |
| 9     | 1.7  | 1.5     | 17    | 83    | 103   | 31    | 19    | 8.0   | 2.9   | 2.4  | 1.8  | 1.6   |
| 10    | 1.7  | 1.6     | 17    | 77    | 85    | 30    | 19    | 8.2   | 2.9   | 2.4  | 1.9  | 1.6   |
| 11    | 1.7  | 1.6     | 17    | 72    | 81    | 30    | 18    | 8.1   | 2.7   | 2.4  | 1.9  | 1.6   |
| 12    | 1.7  | 1.6     | 23    | 64    | 73    | 29    | 18    | 7.5   | 2.5   | 2.4  | 1.8  | 1.6   |
| 13    | 1.7  | 1.8     | 26    | 61    | 63    | 29    | 18    | 7.2   | 2.7   | 2.1  | 1.6  | 1.6   |
| 14    | 1.8  | 2.0     | 26    | 59    | 62    | 29    | 17    | 7.2   | 2.7   | 2.1  | 1.6  | 1.6   |
| 15    | 1.8  | 2.1     | 23    | 56    | 59    | 29    | 16    | 7.1   | 3.1   | 2.0  | 1.6  | 1.5   |
| 16    | 1.5  | 4.2     | 21    | 48    | 56    | 28    | 15    | 6.9   | 3.1   | 2.1  | 1.5  | 1.4   |
| 17    | 1.5  | 90      | 20    | 47    | 53    | 27    | 15    | 6.7   | 3.1   | 2.0  | 1.5  | 1.3   |
| 18    | 1.4  | 93      | 19    | 45    | 51    | 27    | 15    | 6.4   | 3.0   | 2.0  | 1.5  | 1.4   |
| 19    | 1.4  | 39      | 18    | 42    | 48    | 27    | 16    | 6.4   | 2.8   | 2.0  | 1.5  | 1.6   |
| 20    | 1.3  | 14      | 18    | 40    | 45    | 25    | 16    | 5.9   | 2.9   | 2.0  | 1.6  | 1.6   |
| 21    | 1.2  | 6.6     | 18    | 38    | 43    | 25    | 15    | 5.4   | 2.8   | 2.0  | 1.6  | 1.5   |
| 22    | 1.2  | 3.2     | 17    | 37    | 42    | 25    | 15    | 5.3   | 2.7   | 2.0  | 1.6  | 1.5   |
| 23    | 1.1  | 487     | 15    | 34    | 41    | 24    | 14    | 4.7   | 2.7   | 2.0  | 1.6  | 1.5   |
| 24    | 1.1  | 968     | 17    | 29    | 41    | 24    | 13    | 4.4   | 2.7   | 2.0  | 1.5  | 1.6   |
| 25    | 1.1  | 332     | 16    | 31    | 41    | 25    | 12    | 4.5   | 2.5   | 2.0  | 1.5  | 1.6   |
| 26    | 1.1  | 122     | 16    | 30    | 40    | 24    | 12    | 4.3   | 2.5   | 2.0  | 1.6  | 1.6   |
| 27    | 1.1  | 76      | 17    | 27    | 39    | 23    | 12    | 4.1   | 2.5   | 2.1  | 1.5  | 1.6   |
| 28    | 1.1  | 67      | 17    | 26    | 38    | 23    | 12    | 3.9   | 1.6   | 2.0  | 1.5  | 1.4   |
| 29    | 1.1  | 50      | 1,440 | 26    | ----- | 23    | 12    | 4.0   | 2.6   | 2.1  | 1.6  | 1.6   |
| 30    | 1.1  | 39      | 1,270 | 68    | ----- | 22    | 11    | 4.3   | 2.6   | 2.3  | 1.6  | 2.0   |
| 31    | 1.2  | -----   | 493   | 91    | ----- | 20    | ----- | 4.0   | ----- | 2.1  | 1.6  | ----- |
| TOTAL | 43.4 | 2,414.7 | 3,754 | 2,375 | 1,806 | 888   | 486   | 204.7 | 86.3  | 67.9 | 52.6 | 47.6  |
| MEAN  | 1.40 | 80.5    | 121   | 76.6  | 64.5  | 28.6  | 16.2  | 6.60  | 2.88  | 2.19 | 1.70 | 1.59  |
| AC-FT | 86   | 4,790   | 7,450 | 4,710 | 3,580 | 1,760 | 964   | 406   | 171   | 135  | 104  | 94    |

|               |         |     |       |     |     |      |      |       |        |
|---------------|---------|-----|-------|-----|-----|------|------|-------|--------|
| CALENDAR YEAR | 1965    | MAX | 1,440 | MIN | 1.1 | MEAN | 34.2 | AC-FT | 24,780 |
| WATER YEAR    | 1965-66 | MAX | 1,440 | MIN | 1.1 | MEAN | 33.5 | AC-FT | 24,250 |

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 1100 | 3.35        | 240       | 12-29 | 1445 | 7.32        | 3,020     |
| 11-24 | 0945 | 6.05        | 1,820     | 2-6   | 0030 | 3.21        | 307       |

11-1390. La Brea Creek near Sisquoc, Calif.

Location.--Lat 34°51'10", long 120°11'55", in SE $\frac{1}{4}$  sec.13, T.9 N., R.32 W., on right bank 2,100 ft upstream from mouth and 5.5 miles east of Sisquoc.

Drainage area.--93.8 sq mi.

Records available.--October 1943 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 550 ft (from topographic map).

Average discharge.--23 years, 3.94 cfs (2,850 acre-ft per year); median of yearly mean discharges, 0.2 cfs (140 acre-ft per year).

Extremes.--Maximum discharge during year, 227 cfs Dec. 29 (gage height, 3.33 ft); no flow Oct. 1 to Dec. 28, Mar. 31 to Sept. 30. 1943-66: Maximum discharge, 3,320 cfs Jan. 15, 1952 (gage height, 5.94 ft); no flow for most of each year.

Remarks.--Records good. Perennial low flow from basin above sinks beneath streambed before reaching station. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan.  | Feb.  | Mar.  | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|------|-------|-------|-------|-------|-----|-------|------|------|-------|
| 1     |      |       | 0    | 46    | 4.5   | 2.3   |       |     |       |      |      |       |
| 2     |      |       | 0    | 25    | 4.2   | 2.3   |       |     |       |      |      |       |
| 3     |      |       | 0    | 17    | 3.7   | 2.1   |       |     |       |      |      |       |
| 4     |      |       | 0    | 12    | 3.2   | 1.8   |       |     |       |      |      |       |
| 5     |      |       | 0    | 8.3   | 3.7   | 1.6   |       |     |       |      |      |       |
| 6     |      |       | 0    | 6.0   | 7.9   | 1.5   |       |     |       |      |      |       |
| 7     |      |       | 0    | 4.8   | 17    | 1.3   |       |     |       |      |      |       |
| 8     |      |       | 0    | 3.9   | 14    | 1.0   |       |     |       |      |      |       |
| 9     |      |       | 0    | 3.4   | 12    | 1.0   |       |     |       |      |      |       |
| 10    |      |       | 0    | 2.9   | 10    | 1.0   |       |     |       |      |      |       |
| 11    |      |       | 0    | 2.5   | 8.8   | 1.0   |       |     |       |      |      |       |
| 12    |      |       | 0    | 2.3   | 7.9   | 1.0   |       |     |       |      |      |       |
| 13    |      |       | 0    | 2.1   | 7.1   | 1.0   |       |     |       |      |      |       |
| 14    |      |       | 0    | 2.1   | 6.4   | 1.0   |       |     |       |      |      |       |
| 15    |      |       | 0    | 1.9   | 6.0   | 1.0   |       |     |       |      |      |       |
| 16    |      |       | 0    | 1.8   | 5.4   | .90   |       |     |       |      |      |       |
| 17    |      |       | 0    | 1.8   | 5.1   | .90   |       |     |       |      |      |       |
| 18    |      |       | 0    | 1.6   | 4.8   | .90   |       |     |       |      |      |       |
| 19    |      |       | 0    | 1.6   | 3.9   | .80   |       |     |       |      |      |       |
| 20    |      |       | 0    | 1.6   | 3.7   | .80   |       |     |       |      |      |       |
| 21    |      |       | 0    | 1.5   | 3.7   | .70   |       |     |       |      |      |       |
| 22    |      |       | 0    | 1.5   | 3.4   | .70   |       |     |       |      |      |       |
| 23    |      |       | 0    | 1.5   | 2.9   | .70   |       |     |       |      |      |       |
| 24    |      |       | 0    | 1.5   | 2.9   | .70   |       |     |       |      |      |       |
| 25    |      |       | 0    | 1.5   | 2.9   | .60   |       |     |       |      |      |       |
| 26    |      |       | 0    | 1.5   | 2.7   | .60   |       |     |       |      |      |       |
| 27    |      |       | 0    | 1.5   | 2.5   | .60   |       |     |       |      |      |       |
| 28    |      |       | 0    | 1.3   | 2.3   | .40   |       |     |       |      |      |       |
| 29    |      |       | 30   | 1.2   | ----- | .30   |       |     |       |      |      |       |
| 30    |      |       | 95   | 5.7   | ----- | .20   |       |     |       |      |      |       |
| 31    |      | ----- | 55   | 5.7   | ----- | 0     | ----- |     | ----- |      |      | ----- |
| Total | 0    | 0     | 180  | 173.0 | 162.6 | 30.70 | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0     | 5.81 | 5.58  | 5.81  | 0.99  | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 0     | 357  | 343   | 323   | 61    | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 102 Min 0 Mean 1.39 Ac-ft 1,010  
 Water year 1965-66 Max 95 Min 0 Mean 1.50 Ac-ft 1,080

Peak discharge (base, 30 cfs).--Dec. 29 (2130 hrs) 227 cfs (3.33 ft).

## SANTA MARIA RIVER BASIN

11-1393.5. Foxen Creek near Sisquoc, Calif.

Location.--Lat 34°48'50", long 120°13'26", in La Laguna Grant, on left upstream wingwall to culvert on Foxen Canyon road, 3.0 miles upstream from mouth and 3.7 miles southeast of Sisquoc, Santa Barbara County.

Drainage area.--17.0 sq mi.

Records available.--September 1965 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 920 ft (from topographic map.)

Extremes.--1965: No flow during September.

1965-66: Maximum discharge during year, 2.0 cfs Dec. 29 (gage height, 1.26 ft), from rating curve extended above 0.14 cfs; No flow Oct. 1 to Nov. 22, June 27 to Sept. 30.

Remarks.--Records fair. Small diversion dam for irrigation of about 160 acres above gage. Some pumping from wells along stream above gage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.10 | 0.20 | 0.10  | 0.10 | 0.10  | 0.10 | 0.10  |      |      |       |
| 2     |      | 0     | .10  | .20  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 3     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 4     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 5     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 6     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 7     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 8     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 9     |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 10    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 11    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 12    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 13    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 14    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 15    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 16    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 17    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 18    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 19    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 20    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 21    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 22    |      | 0     | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 23    |      | .20   | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 24    |      | .20   | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 25    |      | .10   | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 26    |      | .10   | .10  | .10  | .10   | .10  | .10   | .10  | .10   |      |      |       |
| 27    |      | .10   | .10  | .10  | .10   | .10  | .10   | .10  | 0     |      |      |       |
| 28    |      | .10   | .10  | .10  | .10   | .10  | .10   | .10  | 0     |      |      |       |
| 29    |      | .10   | .20  | .10  | ----- | .10  | .10   | .10  | 0     |      |      |       |
| 30    |      | .10   | .20  | .20  | ----- | .10  | .10   | .10  | 0     |      |      |       |
| 31    |      | ----- | .20  | .10  | ----- | .10  | ----- | .10  | ----- |      |      | ----- |
| Total | 0    | 1.00  | 3.80 | 3.40 | 2.80  | 3.10 | 3.00  | 3.10 | 2.60  | 0    | 0    | 0     |
| Mean  | 0    | 0.03  | 0.12 | 0.11 | 0.10  | 0.10 | 0.10  | 0.10 | 0.09  | 0    | 0    | 0     |
| Ac-ft | 0    | 2.0   | 7.5  | 6.7  | 5.6   | 6.1  | 6.0   | 6.1  | 5.2   | 0    | 0    | 0     |

Calendar year 1965 Max -- Min -- Mean -- Ac-ft --  
 Water year 1965-66 Max 0.60 Min 0 Mean 0.062 Ac-ft 45

11-1395. Tepusquet Creek near Sisquoc, Calif.

Location.--Lat 34°52'20", long 120°14'35", in NE¼ sec.9, T.9 N., R.32 W., on downstream wingwall of right bridge abutment, 1.1 miles upstream from mouth and 3 miles east of Sisquoc.

Drainage area.--28.6 sq mi.

Records available.--October 1943 to September 1966.

Gage.--Digital water-stage recorder. Concrete control since July 1957. Altitude of gage is 500 ft (from topographic map). Prior to Dec. 9, 1948, at datum 0.9 ft higher. Prior to Sept. 24, 1962, graphic water-stage recorder.

Average discharge.--23 years, 1.09 cfs (789 acre-ft per year); median of yearly mean discharges, 0.4 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 1.9 cfs Nov. 23 (gage height, 2.51 ft); no flow for many days. 1943-66; Maximum discharge, 500 cfs Feb. 9, 1962 (gage height, 4.25 ft), from rating curve extended above 220 cfs; no flow at times in some years.

Remarks.--Records good. No regulation above station. Some diversion by pumping from wells along stream to irrigate about 100 acres above gage.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC. | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0     | 0.30 | 0.50  | 0.90  | 0.90  | 0.90  | 0.60  | 0.40  | 0.20 | 0.10 | 0     |
| 2     | .10  | .10   | .30  | .50   | .90   | .90   | .90   | .60   | .40   | .20  | .10  | .10   |
| 3     | .10  | .10   | .30  | .50   | .90   | .90   | .90   | .60   | .40   | .20  | .10  | .10   |
| 4     | .10  | 0     | .30  | .50   | .90   | .90   | 1.0   | .70   | .40   | .20  | .10  | .10   |
| 5     | .10  | .10   | .20  | .50   | .90   | .90   | .90   | .60   | .40   | .20  | .10  | .10   |
| 6     | .10  | .10   | .20  | .50   | 1.0   | .90   | .90   | .60   | .30   | .20  | .10  | .10   |
| 7     | .10  | .10   | .20  | .40   | .90   | .90   | .90   | .60   | .30   | .20  | .10  | .10   |
| 8     | .10  | .10   | .20  | .40   | .90   | .90   | .90   | .70   | .40   | .20  | .10  | .10   |
| 9     | .10  | .10   | .20  | .50   | .80   | 1.0   | .90   | .70   | .30   | .20  | .10  | .10   |
| 10    | .10  | .10   | .20  | .50   | .80   | 1.0   | .80   | .70   | .30   | .20  | .10  | .10   |
| 11    | .10  | .10   | .20  | .50   | .80   | 1.0   | .80   | .60   | .30   | .20  | 0    | .10   |
| 12    | .10  | .10   | .30  | .50   | .80   | 1.0   | .80   | .50   | .20   | .20  | .10  | .10   |
| 13    | .20  | .20   | .30  | .50   | .80   | 1.1   | .80   | .60   | .20   | .20  | .10  | .10   |
| 14    | .10  | .20   | .30  | .50   | .80   | 1.1   | .70   | .60   | .20   | .20  | .10  | .10   |
| 15    | .10  | .20   | .30  | .40   | .90   | 1.0   | .70   | .60   | .20   | .20  | .10  | 0     |
| 16    | .20  | .50   | .30  | .40   | .90   | .90   | .70   | .60   | .20   | .20  | .10  | .10   |
| 17    | .20  | .50   | .30  | .40   | .90   | .90   | .70   | .50   | .30   | .20  | .10  | .10   |
| 18    | .20  | .60   | .30  | .40   | .90   | .90   | .70   | .60   | .20   | .10  | 0    | .10   |
| 19    | .20  | .50   | .30  | .40   | .90   | .90   | .80   | .60   | .20   | .10  | .10  | .20   |
| 20    | .10  | .50   | .30  | .40   | .80   | .80   | .70   | .50   | .20   | .20  | .10  | .10   |
| 21    | 0    | .50   | .30  | .40   | .80   | .90   | .70   | .60   | .20   | .20  | .10  | .10   |
| 22    | 0    | .50   | .30  | .40   | .80   | .90   | .70   | .60   | .20   | .10  | .10  | .10   |
| 23    | 0    | 1.1   | .30  | .40   | .80   | .90   | .70   | .50   | .10   | .10  | .10  | .10   |
| 24    | 0    | .40   | .30  | .40   | .90   | .90   | .60   | .50   | .20   | .20  | .10  | .10   |
| 25    | 0    | .40   | .30  | .40   | .90   | .90   | .70   | .50   | .20   | .20  | .10  | .10   |
| 26    | 0    | .30   | .30  | .40   | .90   | .90   | .70   | .50   | 0     | .20  | .10  | .10   |
| 27    | 0    | .30   | .30  | .40   | .80   | .90   | .70   | .50   | .10   | .20  | .10  | .10   |
| 28    | 0    | .30   | .30  | .40   | .80   | .90   | .70   | .50   | .10   | .20  | .10  | .10   |
| 29    | 0    | .30   | .70  | .50   | ----- | .90   | .70   | .50   | .20   | .20  | .10  | .20   |
| 30    | 0    | .30   | .60  | .80   | ----- | .90   | .60   | .50   | .20   | .20  | .10  | .20   |
| 31    | 0    | ----- | .50  | .80   | ----- | .90   | ----- | .40   | ----- | .10  | .10  | ----- |
| TOTAL | 2.50 | 8.60  | 9.50 | 14.50 | 24.10 | 28.70 | 23.20 | 17.70 | 7.30  | 5.70 | 2.90 | 3.10  |
| MEAN  | .08  | .29   | .31  | .47   | .86   | .93   | .77   | .57   | .24   | .18  | .09  | .10   |
| AC-FT | 5.0  | 17    | 19   | 29    | 48    | 57    | 46    | 35    | 14    | 11   | 5.8  | 6.1   |

CALENDAR YEAR 1965 MAX 6.7 MIN 0 MEAN .382 AC-FT 277  
 WATER YEAR 1965-66 MAX 1.1 MIN 0 MEAN .405 AC-FT 293

Peak discharge (base, 10 cfs).--No peak above base.

11-1400, Sisquoc River near Garey, Calif.

Location.--Lat 34°53'38", long 120°18'20", in SW $\frac{1}{4}$  sec. 36, T.10 N., R.33 W., near right bank on downstream side of county road bridge, 0.6 mile northeast of Garey and 3.7 miles downstream from Tepusquet Creek.

Drainage area.--472 sq mi.

Records available.--October 1940 to September 1966. Records for water year 1941 incomplete, yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

Gage.--Graphic water-stage recorder. Datum of gage is 354.8 ft above mean sea level (Santa Barbara County bench mark). Prior to Aug. 27, 1954, at site 3 miles upstream at different datum. Aug. 27, 1954, to Nov. 1, 1956, at site 0.7 mile upstream at different datum. Nov. 1, 1956, to Sept. 30, 1959, at same site at different datums. October 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplemental gage near left bank at same datum.

Average discharge.--26 years, 29.5 cfs (21,360 acre-ft per year); median of yearly mean discharges, 5.6 cfs (4,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,370 cfs Dec. 29 (gage height, 6.10 ft, datum then in use); no flow for most of year. 1940-66: Maximum discharge, 13,000 cfs Jan. 23, 1943 (gage height, 8.46 ft, site and datum then in use), from rating curve extended above 2,000 cfs on basis of records for upstream stations; no flow for several months in each year.

Remarks.--Records poor. No regulation above station. Pumping from wells along stream for irrigation of about 7,000 acres above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.  | Jan.   | Feb.  | Mar.  | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|----------|-------|--------|-------|-------|-------|-----|-------|------|------|-------|
| 1     |      | 0        | 0     | 260    | 31    | 3.0   |       |     |       |      |      |       |
| 2     |      | 0        | 0     | 135    | 25    | 3.5   |       |     |       |      |      |       |
| 3     |      |          | 0     | 92     | 20    | 4.2   |       |     |       |      |      |       |
| 4     |      | 0        | 0     | 70     | 15    | 2.5   |       |     |       |      |      |       |
| 5     |      | 0        | 0     | 50     | 160   | 0     |       |     |       |      |      |       |
| 6     |      | 0        | 0     | 40     | 170   | 0     |       |     |       |      |      |       |
| 7     |      |          | 0     | 30     | 130   | 0     |       |     |       |      |      |       |
| 8     |      | 0        | 0     | 24     | 92    | 0     |       |     |       |      |      |       |
| 9     |      | 0        | 0     | 18     | 65    | 0     |       |     |       |      |      |       |
| 10    |      | 0        | 0     | 12     | 51    | .20   |       |     |       |      |      |       |
| 11    |      | 0        | 0     | 7.0    | 37    | .40   |       |     |       |      |      |       |
| 12    |      | 0        | 0     | 2.7    | 30    | 0     |       |     |       |      |      |       |
| 13    |      | 0        | 0     | 2.0    | 26    | 0     |       |     |       |      |      |       |
| 14    |      | 0        | 0     | 1.3    | 17    | .20   |       |     |       |      |      |       |
| 15    |      | 0        | 0     | .60    | 10    | .50   |       |     |       |      |      |       |
| 16    |      | 0        | 0     | 0      | 9.1   | .20   |       |     |       |      |      |       |
| 17    |      | 0        | 0     | 0      | 7.1   | 0     |       |     |       |      |      |       |
| 18    |      | 14       | 0     | 0      | 6.0   | 0     |       |     |       |      |      |       |
| 19    |      | 0        | 0     | 0      | 4.7   | 0     |       |     |       |      |      |       |
| 20    |      | 0        | 0     | 0      | 4.4   | 0     |       |     |       |      |      |       |
| 21    |      | 0        | 0     | 0      | 4.0   | 0     |       |     |       |      |      |       |
| 22    |      | 0        | 0     | 0      | 3.7   | 0     |       |     |       |      |      |       |
| 23    |      | 382      | 0     | 0      | 3.6   | 0     |       |     |       |      |      |       |
| 24    |      | 643      | 0     | 0      | 3.5   | .10   |       |     |       |      |      |       |
| 25    |      | 116      | 0     | 0      | 3.3   | .40   |       |     |       |      |      |       |
| 26    |      | 15       | 0     | 0      | 3.2   | 0     |       |     |       |      |      |       |
| 27    |      | .20      | 0     | 0      | 3.1   | 0     |       |     |       |      |      |       |
| 28    |      | 0        | 0     | 0      | 3.0   | 0     |       |     |       |      |      |       |
| 29    |      | 0        | 625   | 0      | ----- | 0     |       |     |       |      |      |       |
| 30    |      | 0        | 1,040 | 5.0    | ----- | 0     |       |     |       |      |      |       |
| 31    |      | -----    | 430   | 17     | ----- | 0     | ----- |     | ----- |      |      | ----- |
| Total | 0    | 1,170.20 | 2,095 | 756.60 | 927.7 | 15.20 | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 39.0     | 67.6  | 24.7   | 33.1  | 0.49  | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 2,320    | 4,160 | 1,520  | 1,840 | 30    | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 1,040 Min 0 Mean 13.4 Ac-ft 9,670

Water year 1965-66 Max 1,040 Min 0 Mean 13.6 Ac-ft 9,870

Peak discharge (base, 100 cfs)

Note.--No gage-height record Dec. 30 to Jan. 15, Jan. 30 to Feb. 7, Feb. 20 to Mar. 1.

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-24 | 1000 | 5.70†       | 1,200     | 2-6  | 0600 | Unknown     | a180      |
| 12-29 | 1800 | 6.10†       | 1,370     |      |      |             |           |

† Datum then in use.

a About.

## 11-1410. Santa Maria River at Guadalupe, Calif.

Location.--Lat 34°58'35", long 120°34'15", in Guadalupe Grant, on downstream side of fifth bridge pier from left bank on State Highway 1, 0.5 mile north of Guadalupe, Santa Barbara County, and 4.5 miles upstream from mouth.

Drainage area.--1,742 sq mi.

Records available.--October 1940 to September 1966. Monthly discharge only, October 1940 to January 1941, published in WSP 1315-B.

Gage.--Graphic water-stage recorder and supplemental gage near right bank. Datum of gage is 64.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1934 (Corps of Engineers bench mark). Prior to Aug. 11, 1955, at site 100 ft upstream at same datum.

Average discharge.--26 years, 29.8 cfs (21,570 acre-ft per year); median of yearly mean discharges, 1.5 cfs (1,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,360 cfs Dec. 30 (gage height, 5.38 ft); no flow for most of year. 1940-66; Maximum discharge, 32,800 cfs Jan. 16, 1952 (gage height, 8.18 ft); no flow for several months of each year.

Remarks.--Records fair. Flow of Cuyama River regulated since February 1959 by Twitchell Reservoir (capacity, 240,000 acre-ft). Several small surface diversions and extensive pumping from wells for irrigation along stream above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Dec. 30.....458  
31..... 11

| Month                   | Cfs-days | Maximum | Minimum | Mean | Acre-feet |
|-------------------------|----------|---------|---------|------|-----------|
| December 1965.....      | 458      | 447     | 0       | 14.8 | 447       |
| Calendar year 1965..... | -        | 0       | 0       | 0    | 0         |
| Water year 1965-66..... | -        | 447     | 0       | 1.25 | 908       |

Note.--Flow occurred only on days listed above.

## ARROYO GRANDE BASIN

11-1413. Arroyo Grande near Arroyo Grande, Calif.

Location.--Lat 35°11'10", long 120°29'55", in NW $\frac{1}{4}$  sec.32, T.31 S., R.14 E., on downstream side of county road bridge, 0.9 mile downstream from Lopez Canyon Creek, and  $\frac{6}{16}$  miles northeast of Arroyo Grande.

Drainage area.--68.3 sq mi.

Records available.--July 1958 to September 1966.

Gage.--Graphic water-stage recorder. Altitude of gage is 360 ft (from topographic map). Prior to Feb. 18, 1964, at datum 4.00 ft higher.

Average discharge.--8 years, 2.28 cfs (1,650 acre-ft per year).

Extremes.--Maximum discharge during year, 26 cfs Dec. 31 (gage height, 5.07 ft); no flow Oct. 1 to Dec. 28, Apr. 2 to Sept. 30. 1958-66: Maximum discharge, 1,280 cfs Feb. 9, 1962 (gage height, 8.50 ft, present datum); maximum gage height, 15.07 ft Jan. 6, 1965, caused by temporary road fill; no flow for most of each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan.  | Feb.  | Mar.  | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|------|-------|-------|-------|-------|-----|-------|------|------|-------|
| 1     |      |       | 0    | 22    | 6.7   | 5.4   | 0.10  |     |       |      |      |       |
| 2     |      |       | 0    | 20    | 6.7   | 5.4   | 0     |     |       |      |      |       |
| 3     |      |       | 0    | 18    | 6.7   | 5.1   | 0     |     |       |      |      |       |
| 4     |      |       | 0    | 18    | 7.0   | 5.1   | 0     |     |       |      |      |       |
| 5     |      |       | 0    | 15    | 7.4   | 4.8   | 0     |     |       |      |      |       |
| 6     |      |       | 0    | 13    | 8.2   | 4.3   | 0     |     |       |      |      |       |
| 7     |      |       | 0    | 12    | 7.8   | 4.0   | 0     |     |       |      |      |       |
| 8     |      |       | 0    | 9.8   | 7.0   | 4.0   | 0     |     |       |      |      |       |
| 9     |      |       | 0    | 8.6   | 7.0   | 3.8   | 0     |     |       |      |      |       |
| 10    |      |       | 0    | 8.2   | 7.0   | 3.8   | 0     |     |       |      |      |       |
| 11    |      |       | 0    | 8.2   | 7.4   | 3.8   | 0     |     |       |      |      |       |
| 12    |      |       | 0    | 8.2   | 7.4   | 3.6   | 0     |     |       |      |      |       |
| 13    |      |       | 0    | 7.8   | 7.4   | 3.4   | 0     |     |       |      |      |       |
| 14    |      |       | 0    | 7.4   | 7.4   | 3.2   | 0     |     |       |      |      |       |
| 15    |      |       | 0    | 7.4   | 7.0   | 3.2   | 0     |     |       |      |      |       |
| 16    |      |       | 0    | 7.0   | 7.0   | 3.2   | 0     |     |       |      |      |       |
| 17    |      |       | 0    | 7.0   | 6.7   | 3.2   | 0     |     |       |      |      |       |
| 18    |      |       | 0    | 7.0   | 6.7   | 3.0   | 0     |     |       |      |      |       |
| 19    |      |       | 0    | 6.7   | 6.7   | 3.0   | 0     |     |       |      |      |       |
| 20    |      |       | 0    | 6.7   | 7.0   | 2.8   | 0     |     |       |      |      |       |
| 21    |      |       | 0    | 6.4   | 6.7   | 2.6   | 0     |     |       |      |      |       |
| 22    |      |       | 0    | 6.4   | 6.7   | 2.5   | 0     |     |       |      |      |       |
| 23    |      |       | 0    | 5.7   | 6.4   | 2.2   | 0     |     |       |      |      |       |
| 24    |      |       | 0    | 5.4   | 6.0   | 2.0   | 0     |     |       |      |      |       |
| 25    |      |       | 0    | 5.4   | 6.0   | 1.4   | 0     |     |       |      |      |       |
| 26    |      |       | 0    | 5.4   | 6.0   | 1.0   | 0     |     |       |      |      |       |
| 27    |      |       | 0    | 5.4   | 5.7   | .80   | 0     |     |       |      |      |       |
| 28    |      |       | 0    | 4.8   | 5.4   | .60   | 0     |     |       |      |      |       |
| 29    |      |       | 1.3  | 5.4   | ----- | .60   | 0     |     |       |      |      |       |
| 30    |      |       | 9.0  | 11    | ----- | .60   | 0     |     |       |      |      |       |
| 31    |      | ----- | 21   | 7.0   | ----- | 3.0   | ----- |     | ----- |      |      | ----- |
| Total | 0    | 0     | 31.3 | 286.3 | 191.1 | 92.70 | 0.10  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0     | 1.01 | 9.24  | 6.82  | 2.99  | 0.003 | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 0     | 62   | 568   | 379   | 184   | 0.2   | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 140 Min 0 Mean 2.39 Ac-ft 1,730

Water year 1965-66 Max 22 Min 0 Mean 1.65 Ac-ft 1,190

Peak discharge (base, 40 cfs).--No peak above base.



11-1415, Arroyo Grande at Arroyo Grande, Calif.

Location.--Lat 35°07'30", long 120°34'05", in Pismo Grant, on left bank at Arroyo Grande, San Luis Obispo County, 0.7 mile upstream from U. S. Highway 101.

Drainage area.--102 sq mi.

Records available.--October 1939 to September 1966. Records for water year 1940 incomplete, yearly estimate published in WSP 1315-B.

Gage.--Digital water-stage recorder and broad-crested weir. Datum of gage is 97.77 ft above mean sea level, datum of 1929, supplementary adjustment of 1934. Prior to July 10, 1947, at datum 0.50 ft higher. Prior to Sept. 5, 1962, graphic water-stage recorder.

Average discharge.--27 years, 18.8 cfs (13,610 acre-ft per year); median of yearly mean discharges, 8.0 cfs (5,800 acre-ft per year).

Extremes.--Maximum discharge during year, 220 cfs Nov. 23 (gage height, 3.20 ft); no flow Oct. 9-18.

1939-66: Maximum discharge, 5,370 cfs Jan. 15, 1952 (gage height, 11.97 ft); no flow for several days in some years.

Remarks.--Records good. Many small and intermittent diversions by pumping from stream for irrigation of about 4,000 acres above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.20 | 1.1    | 5.8   | 39    | 21    | 15    | 9.6   | 5.3   | 2.5   | 0.90  | 0.70  | 0.40  |
| 2     | .10  | .70    | 5.4   | 33    | 20    | 16    | 9.9   | 2.6   | 2.8   | 1.0   | 1.1   | .30   |
| 3     | .10  | .70    | 5.6   | 31    | 19    | 15    | 10    | 3.2   | 3.0   | 1.5   | .40   | .10   |
| 4     | .20  | .70    | 5.6   | 30    | 20    | 15    | 9.2   | 3.4   | 2.4   | 1.9   | .70   | .80   |
| 5     | .80  | 1.1    | 5.7   | 26    | 19    | 15    | 8.0   | 3.5   | 4.0   | 2.5   | 1.2   | .90   |
| 6     | .60  | .90    | 5.8   | 24    | 22    | 14    | 6.7   | 4.3   | 4.8   | 2.0   | .50   | .30   |
| 7     | .10  | 1.1    | 5.7   | 22    | 20    | 12    | 5.4   | 4.5   | 4.0   | 1.1   | .30   | .20   |
| 8     | .10  | 1.3    | 5.9   | 22    | 19    | 13    | 7.0   | 4.1   | 3.3   | .70   | .30   | .20   |
| 9     | 0    | 1.4    | 6.2   | 21    | 18    | 13    | 6.7   | 4.0   | 3.2   | .40   | .60   | .90   |
| 10    | 0    | 1.3    | 6.1   | 20    | 18    | 13    | 7.7   | 4.1   | 2.2   | .30   | .40   | 1.6   |
| 11    | 0    | 2.2    | 6.5   | 20    | 18    | 13    | 7.1   | 3.3   | 1.9   | 1.5   | .20   | .60   |
| 12    | 0    | 3.7    | 7.6   | 20    | 18    | 13    | 6.7   | 2.6   | 1.3   | 1.3   | .20   | .50   |
| 13    | 0    | 3.9    | 6.7   | 20    | 18    | 14    | 6.9   | 3.8   | 1.9   | .60   | .20   | .90   |
| 14    | 0    | 1.8    | 7.4   | 19    | 18    | 13    | 5.4   | 4.1   | 2.0   | .60   | .20   | 1.0   |
| 15    | 0    | 3.8    | 7.3   | 19    | 18    | 13    | 4.1   | 3.6   | 1.6   | .60   | .20   | .80   |
| 16    | 0    | 11     | 6.7   | 19    | 18    | 13    | 3.1   | 3.4   | 2.7   | 1.2   | .20   | .80   |
| 17    | 0    | 8.7    | 7.1   | 18    | 17    | 13    | 3.4   | 4.3   | 3.5   | 1.6   | .20   | .70   |
| 18    | 0    | 11     | 7.7   | 18    | 17    | 11    | 4.3   | 3.4   | 3.1   | 1.2   | .20   | .50   |
| 19    | .30  | 5.3    | 7.9   | 17    | 17    | 11    | 5.0   | 3.2   | 2.3   | .70   | .20   | .50   |
| 20    | .20  | 4.9    | 8.2   | 17    | 17    | 12    | 5.7   | 3.3   | 3.0   | 1.5   | .20   | .40   |
| 21    | .10  | 4.4    | 8.7   | 16    | 17    | 12    | 4.7   | 3.8   | 2.0   | 1.8   | .10   | .50   |
| 22    | .10  | 3.8    | 9.0   | 19    | 16    | 11    | 5.0   | 4.6   | 2.2   | 1.1   | .60   | .50   |
| 23    | .10  | 24     | 8.9   | 20    | 16    | 12    | 4.9   | 3.8   | 1.6   | 1.3   | .30   | .50   |
| 24    | .10  | 18     | 9.5   | 19    | 16    | 11    | 5.0   | 4.5   | 1.1   | 2.0   | .10   | .80   |
| 25    | .10  | 23     | 9.5   | 18    | 16    | 10    | 5.9   | 4.2   | 1.2   | 2.2   | .10   | .60   |
| 26    | .10  | 10     | 9.4   | 20    | 15    | 9.9   | 4.9   | 3.4   | 1.7   | 1.3   | .10   | .50   |
| 27    | .10  | 8.0    | 9.6   | 22    | 15    | 9.8   | 4.2   | 3.7   | 1.3   | .80   | .10   | 1.2   |
| 28    | .10  | 7.2    | 10    | 23    | 15    | 11    | 4.6   | 3.6   | 1.2   | .80   | .10   | 1.0   |
| 29    | .10  | 6.3    | 61    | 25    | ----- | 12    | 5.3   | 4.0   | 1.9   | 1.1   | .40   | 1.3   |
| 30    | .10  | 6.0    | 29    | 36    | ----- | 11    | 6.1   | 3.7   | 1.4   | 1.1   | .40   | 3.3   |
| 31    | .50  | -----  | 43    | 22    | ----- | 9.2   | ----- | 2.9   | ----- | 1.4   | .40   | ----- |
| TOTAL | 4.20 | 177.30 | 338.5 | 695   | 498   | 385.9 | 182.5 | 116.7 | 71.1  | 38.00 | 10.90 | 22.60 |
| MEAN  | .14  | 5.91   | 10.9  | 22.4  | 17.8  | 12.4  | 6.08  | 3.77  | 2.37  | 1.23  | .35   | .75   |
| AC-FT | 8.3  | 352    | 671   | 1,380 | 988   | 765   | 362   | 231   | 141   | 75    | 22    | 45    |

CALENDAR YEAR 1965 MAX 175 MIN 0 MEAN 8.76 AC-FT 6,350  
 WATER YEAR 1965-66 MAX 61 MIN 0 MEAN 6.96 AC-FT 5,040

Peak discharge (base, 40 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-23 | 1845 | 3.20        | 220       | 1-30 | 1445 | 2.18        | 58        |
| 12-29 | 0330 | 2.97        | 175       |      |      |             |           |

## SANTA ROSA CREEK BASIN

11-1422. Santa Rosa Creek near Cambria, Calif.

Location.--Lat 35°34'35", long 120°59'50", in NE¼ sec.21, T.27 S., R.9 E., on left bank 4.8 miles east of Cambria.Drainage area.--12.5 sq mi.Records available.--August 1957 to September 1966.Gage.--Digital water-stage recorder. Datum of gage is 264.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 12, 1963, graphic water-stage recorder at same site and datum.Average discharge.--9 years, 8.85 cfs (6,410 acre-ft per year).Extremes.--Maximum discharge during year, 628 cfs Nov. 18 (gage height, 5.77 ft); no flow Oct. 1 to Nov. 13, July 11 to Sept. 30. 1957-66: Maximum discharge, 2,520 cfs Feb. 1, 1960 (gage height, 10.36 ft), from rating curve extended above 390 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year. Flood of December 1955 reached a stage of 15.2 ft, from floodmarks.Remarks.--Records poor. No regulation; small diversions above station for irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 9.0   | 33    | 41    | 6.6   | 2.2   | 2.0   | 0.50  | 0.20 |      |       |
| 2     |      | 0     | 8.0   | 27    | 28    | 7.7   | 2.1   | 1.8   | .50   | .20  |      |       |
| 3     |      | 0     | 7.3   | 23    | 23    | 6.5   | 2.1   | 1.7   | .40   | .10  |      |       |
| 4     |      | 0     | 6.8   | 20    | 23    | 6.0   | 2.0   | 1.8   | .40   | .10  |      |       |
| 5     |      | 0     | 6.0   | 18    | 24    | 5.8   | 2.0   | 1.7   | .30   | .20  |      |       |
| 6     |      | 0     | 5.6   | 16    | 25    | 5.5   | 2.0   | 1.6   | .30   | .10  |      |       |
| 7     |      | 0     | 5.3   | 15    | 20    | 5.3   | 1.9   | 1.4   | .50   | .10  |      |       |
| 8     |      | 0     | 5.1   | 14    | 19    | 5.2   | 2.0   | 1.3   | .50   | .10  |      |       |
| 9     |      | 0     | 4.9   | 13    | 15    | 4.9   | 1.8   | 1.4   | .40   | .10  |      |       |
| 10    |      | 0     | 4.8   | 12    | 14    | 4.9   | 2.4   | 1.4   | .30   | .10  |      |       |
| 11    |      | 0     | 7.0   | 11    | 12    | 4.8   | 1.9   | 1.3   | .30   | 0    |      |       |
| 12    |      | 0     | 14    | 10    | 12    | 4.6   | 1.9   | 1.3   | .30   | 0    |      |       |
| 13    |      | 0     | 7.0   | 9.7   | 12    | 4.5   | 1.9   | 1.2   | .30   | 0    |      |       |
| 14    |      | 4.6   | 6.4   | 9.2   | 11    | 4.2   | 1.7   | 1.2   | .30   | 0    |      |       |
| 15    |      | 12    | 6.0   | 8.7   | 11    | 4.2   | 1.7   | 1.1   | .30   | 0    |      |       |
| 16    |      | 139   | 5.7   | 8.2   | 10    | 4.0   | 1.8   | 1.1   | .30   | 0    |      |       |
| 17    |      | 84    | 5.5   | 7.8   | 9.5   | 3.9   | 2.0   | 1.0   | .30   | 0    |      |       |
| 18    |      | 160   | 5.3   | 7.4   | 9.5   | 3.8   | 2.4   | 1.0   | .30   | 0    |      |       |
| 19    |      | 28    | 4.8   | 7.4   | 9.6   | 3.5   | 2.1   | .90   | .30   | 0    |      |       |
| 20    |      | 16    | 4.2   | 7.3   | 9.1   | 3.5   | 2.0   | .90   | .30   | 0    |      |       |
| 21    |      | 9.9   | 4.2   | 6.6   | 8.5   | 3.5   | 1.9   | .90   | .30   | 0    |      |       |
| 22    |      | 66    | 4.2   | 6.4   | 8.1   | 3.4   | 1.9   | .90   | .30   | 0    |      |       |
| 23    |      | 64    | 4.0   | 6.1   | 7.8   | 3.3   | 1.8   | .90   | .30   | 0    |      |       |
| 24    |      | 50    | 4.0   | 5.9   | 7.7   | 3.1   | 1.8   | .90   | .30   | 0    |      |       |
| 25    |      | 35    | 6.9   | 5.3   | 7.4   | 3.1   | 1.9   | .80   | .30   | 0    |      |       |
| 26    |      | 20    | 5.1   | 4.9   | 7.2   | 3.1   | 2.0   | .80   | .30   | 0    |      |       |
| 27    |      | 16    | 4.5   | 5.0   | 6.8   | 3.1   | 2.0   | .80   | .30   | 0    |      |       |
| 28    |      | 13    | 22    | 4.2   | 6.7   | 3.1   | 2.0   | .80   | .20   | 0    |      |       |
| 29    |      | 11    | 64    | 48    | ----- | 2.7   | 2.0   | .80   | .20   | 0    |      |       |
| 30    |      | 10    | 89    | 107   | ----- | 2.6   | 2.0   | .80   | .20   | 0    |      |       |
| 31    |      | --    | 84    | 28    | ----- | 2.3   | ----- | .60   | ----- | 0    |      | ----- |
| TOTAL | 0    | 738.5 | 420.6 | 505.1 | 397.9 | 132.7 | 59.2  | 36.10 | 9.80  | 1.30 | 0    | 0     |
| MEAN  | 0    | 24.6  | 13.6  | 16.3  | 14.2  | 4.28  | 1.97  | 1.17  | .33   | .04  | 0    | 0     |
| AC-FT | 0    | 1,460 | 834   | 1,000 | 789   | 263   | 117   | 72    | 19    | 2.6  | 0    | 0     |

|                    |     |     |     |   |      |      |       |       |
|--------------------|-----|-----|-----|---|------|------|-------|-------|
| CALENDAR YEAR 1965 | MAX | 440 | MIN | 0 | MEAN | 10.0 | AC-FT | 7,250 |
| WATER YEAR 1965-66 | MAX | 160 | MIN | 0 | MEAN | 6.30 | AC-FT | 4,560 |

Peak discharge (base, 450 cfs, revised).--Nov. 18 (0230) 628 cfs (5.77 ft); Jan. 29 (2230) 548 cfs (5.64 ft).

11-1425. Arroyo de la Cruz near San Simeon, Calif.

Location.--Lat 35°43'25", long 121°17'00", in Piedra Blanca Grant, on right bank 1.7 miles upstream from mouth and 7 miles northwest of town of San Simeon, San Luis Obispo County.

Drainage area.--41.2 sq mi.

Records available.--October 1950 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 22 ft (from topographic map). Prior to Dec. 14, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--16 years, 51.4 cfs (37,210 acre-ft per year); median of yearly mean discharges, 42 cfs (30,400 acre-ft per year).

Extremes.--Maximum discharge during year, 5,440 cfs Jan. 29 (gage height, 8.42 ft); no flow Oct. 1 to Nov. 13, June 5 to Sept. 30. 1950-66: Maximum discharge, 17,700 cfs Dec. 23, 1955 (gage height, 12.40 ft), from rating curve extended above 7,600 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 43    | 305   | 263   | 29    | 7.3   | 2.9   | 0.20  |      |      |       |
| 2     |      | 0      | 37    | 200   | 162   | 30    | 6.9   | 2.7   | .20   |      |      |       |
| 3     |      | 0      | 32    | 155   | 112   | 27    | 6.5   | 2.4   | .10   |      |      |       |
| 4     |      | 0      | 29    | 122   | 203   | 25    | 6.2   | 2.2   | .10   |      |      |       |
| 5     |      | 0      | 25    | 110   | 350   | 24    | 6.2   | 2.2   | 0     |      |      |       |
| 6     |      | 0      | 23    | 95    | 281   | 23    | 6.0   | 1.9   | 0     |      |      |       |
| 7     |      | 0      | 21    | 77    | 168   | 22    | 5.6   | 1.8   | 0     |      |      |       |
| 8     |      | 0      | 18    | 70    | 137   | 21    | 5.3   | 1.8   | 0     |      |      |       |
| 9     |      | 0      | 18    | 63    | 106   | 20    | 5.3   | 1.6   | 0     |      |      |       |
| 10    |      | 0      | 17    | 59    | 94    | 20    | 7.1   | 1.6   | 0     |      |      |       |
| 11    |      | 0      | 17    | 50    | 76    | 19    | 6.2   | 1.8   | 0     |      |      |       |
| 12    |      | 0      | 77    | 45    | 66    | 18    | 5.1   | 1.6   | 0     |      |      |       |
| 13    |      | 0      | 42    | 42    | 60    | 18    | 4.7   | 1.5   | 0     |      |      |       |
| 14    |      | 489    | 27    | 35    | 56    | 17    | 4.4   | 1.3   | 0     |      |      |       |
| 15    |      | 160    | 21    | 33    | 51    | 16    | 4.2   | 1.2   | 0     |      |      |       |
| 16    |      | 675    | 18    | 30    | 47    | 15    | 4.0   | 1.2   | 0     |      |      |       |
| 17    |      | 1,630  | 16    | 28    | 44    | 14    | 3.8   | 1.1   | 0     |      |      |       |
| 18    |      | 1,230  | 15    | 26    | 42    | 14    | 4.0   | 1.0   | 0     |      |      |       |
| 19    |      | 215    | 13    | 25    | 57    | 13    | 4.2   | 1.1   | 0     |      |      |       |
| 20    |      | 118    | 13    | 24    | 57    | 12    | 4.1   | .90   | 0     |      |      |       |
| 21    |      | 85     | 12    | 22    | 44    | 12    | 4.0   | .90   | 0     |      |      |       |
| 22    |      | 466    | 12    | 20    | 40    | 11    | 3.8   | .90   | 0     |      |      |       |
| 23    |      | 835    | 11    | 19    | 41    | 11    | 3.6   | .80   | 0     |      |      |       |
| 24    |      | 450    | 11    | 18    | 37    | 10    | 3.4   | .80   | 0     |      |      |       |
| 25    |      | 263    | 23    | 17    | 35    | 10    | 3.3   | .70   | 0     |      |      |       |
| 26    |      | 152    | 23    | 16    | 34    | 10    | 3.1   | .70   | 0     |      |      |       |
| 27    |      | 106    | 15    | 17    | 31    | 9.3   | 3.2   | .60   | 0     |      |      |       |
| 28    |      | 80     | 444   | 15    | 30    | 9.0   | 2.9   | .70   | 0     |      |      |       |
| 29    |      | 63     | 935   | 290   | ----- | 8.6   | 3.0   | .50   | 0     |      |      |       |
| 30    |      | 52     | 609   | 966   | ----- | 8.2   | 3.1   | .40   | 0     |      |      |       |
| 31    |      | -- --  | 562   | 188   | ----- | 7.8   | ----- | .30   | ----- |      |      |       |
| TOTAL | 0    | 7,069  | 3,179 | 3,182 | 2,724 | 504.0 | 140.5 | 41.10 | .60   | 0    | 0    | 0     |
| MEAN  | 0    | 236    | 103   | 103   | 97.3  | 16.3  | 4.68  | 1.33  | .02   | 0    | 0    | 0     |
| AC-FT | 0    | 14,020 | 6,310 | 6,310 | 5,400 | 1,000 | 279   | 82    | 1.2   | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 2,980 MIN 0 MEAN 71.7 AC-FT 51,910  
 WATER YEAR 1965-66 MAX 1,630 MIN 0 MEAN 46.1 AC-FT 33,400

## Peak discharge (base, 2,500 cfs, revised)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 0100 | 8.30        | 5,200     | 12-28 | 2215 | 8.08        | 4,800     |
| 11-22 | 2200 | 6.60        | 2,560     | 1-29  | 2330 | 8.42        | 5,440     |

## BIG SUR RIVER BASIN

11-1430. Big Sur River near Big Sur, Calif.

Location.--Lat 36°14'45", long 121°46'20", in SW¼SW¼ sec.29, T.19 S., R.2 E., on right bank at downstream side of bridge, 0.4 mile upstream from Post Creek and 2.6 miles southeast of Big Sur.

Drainage area.--46.5 sq mi.

Records available.--March 1950 to September 1966. Prior to October 1959, published as Sur River at Big Sur.

Gage.--Digital water-stage recorder. Altitude of gage is 400 ft (from topographic map). Prior to Oct. 1, 1951, wire-weight gage at site 0.9 mile downstream at different datum. Oct. 1, 1951 to Apr. 18, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--16 years, 87.3 cfs (63,200 acre-ft per year); median of yearly mean discharges 67 cfs (48,500 acre-ft per year).

Extremes.--Maximum discharge during year, 918 cfs Nov. 17 (gage height, 5.73 ft); minimum daily, 9.3 cfs Sept. 28, 29.  
1950-66: Maximum discharge, 5,680 cfs Apr. 2, 1958 (gage height, 11.56 ft), from rating curve extended above 1,400 cfs on basis of slope-area measurement at gage height 11.05 ft; minimum, 3.7 cfs Oct. 7, 1961.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 19   | 12    | 68    | 450   | 169   | 89    | 51    | 34    | 25    | 15   | 14   | 12    |
| 2     | 20   | 13    | 62    | 329   | 155   | 89    | 49    | 34    | 24    | 16   | 13   | 11    |
| 3     | 20   | 13    | 58    | 256   | 141   | 85    | 49    | 34    | 23    | 15   | 13   | 11    |
| 4     | 20   | 13    | 54    | 212   | 209   | 82    | 49    | 35    | 23    | 15   | 13   | 11    |
| 5     | 20   | 13    | 51    | 188   | 319   | 79    | 49    | 34    | 22    | 15   | 12   | 11    |
| 6     | 20   | 13    | 47    | 167   | 345   | 77    | 48    | 35    | 22    | 14   | 12   | 11    |
| 7     | 20   | 13    | 45    | 151   | 292   | 76    | 47    | 34    | 22    | 14   | 13   | 11    |
| 8     | 19   | 13    | 43    | 137   | 250   | 74    | 47    | 34    | 23    | 14   | 12   | 11    |
| 9     | 19   | 13    | 43    | 125   | 215   | 73    | 50    | 35    | 22    | 15   | 12   | 12    |
| 10    | 19   | 12    | 41    | 115   | 195   | 72    | 57    | 35    | 21    | 15   | 12   | 11    |
| 11    | 19   | 12    | 46    | 108   | 177   | 71    | 49    | 34    | 21    | 15   | 12   | 11    |
| 12    | 17   | 13    | 72    | 100   | 165   | 70    | 47    | 33    | 19    | 15   | 12   | 11    |
| 13    | 15   | 24    | 56    | 94    | 155   | 68    | 45    | 33    | 19    | 14   | 12   | 11    |
| 14    | 16   | 160   | 51    | 89    | 145   | 67    | 44    | 32    | 18    | 14   | 12   | 11    |
| 15    | 17   | 33    | 46    | 84    | 137   | 65    | 43    | 32    | 18    | 14   | 11   | 11    |
| 16    | 15   | 119   | 45    | 81    | 129   | 64    | 41    | 31    | 18    | 13   | 11   | 11    |
| 17    | 14   | 272   | 43    | 78    | 122   | 66    | 42    | 30    | 19    | 13   | 11   | 11    |
| 18    | 14   | 455   | 41    | 76    | 116   | 64    | 43    | 29    | 19    | 13   | 11   | 11    |
| 19    | 14   | 173   | 40    | 74    | 131   | 64    | 42    | 29    | 18    | 13   | 11   | 11    |
| 20    | 14   | 105   | 38    | 72    | 116   | 63    | 41    | 28    | 17    | 13   | 11   | 11    |
| 21    | 13   | 76    | 38    | 70    | 110   | 62    | 40    | 28    | 17    | 13   | 11   | 11    |
| 22    | 13   | 70    | 37    | 68    | 105   | 60    | 39    | 28    | 17    | 12   | 11   | 10    |
| 23    | 12   | 156   | 36    | 66    | 106   | 58    | 39    | 28    | 17    | 13   | 11   | 10    |
| 24    | 12   | 322   | 36    | 64    | 103   | 58    | 38    | 27    | 17    | 12   | 11   | 9.7   |
| 25    | 12   | 220   | 156   | 62    | 100   | 57    | 38    | 27    | 17    | 12   | 11   | 9.6   |
| 26    | 12   | 155   | 92    | 61    | 98    | 57    | 37    | 26    | 16    | 12   | 10   | 9.6   |
| 27    | 12   | 122   | 78    | 60    | 92    | 56    | 36    | 25    | 16    | 12   | 11   | 9.4   |
| 28    | 13   | 100   | 247   | 58    | 91    | 55    | 36    | 25    | 16    | 12   | 11   | 9.3   |
| 29    | 13   | 85    | 620   | 130   | ----- | 54    | 36    | 26    | 15    | 12   | 11   | 9.3   |
| 30    | 12   | 76    | 680   | 304   | ----- | 53    | 35    | 26    | 15    | 14   | 11   | 9.7   |
| 31    | 12   | ----- | 625   | 181   | ----- | 52    | ----- | 26    | ----- | 15   | 11   | ----- |
| TOTAL | 487  | 2,876 | 3,635 | 4,110 | 4,488 | 2,080 | 1,307 | 947   | 576   | 424  | 360  | 319.6 |
| MEAN  | 15.7 | 95.9  | 117   | 133   | 160   | 67.1  | 43.6  | 30.5  | 19.2  | 13.7 | 11.6 | 10.7  |
| AC-FT | 966  | 5,700 | 7,210 | 8,150 | 8,900 | 4,130 | 2,590 | 1,880 | 1,140 | 841  | 714  | 634   |

CALENDAR YEAR 1965 MAX 1,820 MIN 12 MEAN 89.7 AC-FT 64,910  
WATER YEAR 1965-66 MAX 680 MIN 9.3 MEAN 59.2 AC-FT 42,860

Peak discharge (base, 700 cfs).--Nov. 17 (2330) 918 cfs (5.73 ft); Dec. 28 (2130) 888 cfs (5.68 ft).

11-1432. Carmel River at Robles del Rio, Calif.

Location.--Lat 36°28'28", long 121°43'40", in Los Laureles Grant, on downstream side of county road bridge at Robles del Rio, Monterey County, 0.2 mile downstream from Hitchcock Canyon and 11 miles southeast of town of Carmel.

Drainage area.--193 sq mi.

Records available.--August 1957 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 270 ft (from topographic map). Prior to Apr. 21, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 60.2 cfs (43,580 acre-ft per year).

Extremes.--Maximum discharge during year, 594 cfs Dec. 30 (gage height, 5.51 ft); no flow Oct. 1 to Nov. 16, May 14 to Sept. 30.

1957-66: Maximum discharge, 7,100 cfs Apr. 2, 1958 (gage height, 10.50 ft); no flow at times in each year.

Flood of Dec. 23, 1955, reached a stage of 11.7 ft, from floodmarks (discharge, 6,930 cfs on basis of slope-area measurement of maximum flow).

Remarks.--Records good. Flow regulated by Los Padres Reservoir (capacity, 3,000 acre-ft) and San Clemente Reservoir (capacity, 1,600 acre-ft). Small diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR.    | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|-------|-------|-------|---------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 51    | 386   | 127   | 57      | 3.7   | 6.2   |       |      |      |       |
| 2     |      | 0     | 41    | 284   | 124   | 68      | 3.7   | 4.8   |       |      |      |       |
| 3     |      | 0     | 37    | 215   | 112   | 60      | 4.0   | 5.0   |       |      |      |       |
| 4     |      | 0     | 33    | 176   | 112   | 57      | 4.0   | 5.9   |       |      |      |       |
| 5     |      | 0     | 29    | 153   | 141   | 56      | 3.4   | 5.4   |       |      |      |       |
| 6     |      | 0     | 24    | 134   | 172   | 54      | 2.8   | 3.5   |       |      |      |       |
| 7     |      | 0     | 23    | 122   | 166   | 52      | 2.3   | 1.2   |       |      |      |       |
| 8     |      | 0     | 23    | 109   | 153   | 51      | 1.5   | .80   |       |      |      |       |
| 9     |      | 0     | 22    | 100   | 140   | 51      | 2.1   | .60   |       |      |      |       |
| 10    |      | 0     | 20    | 91    | 134   | 50      | 8.4   | .60   |       |      |      |       |
| 11    |      | 0     | 19    | 83    | 124   | 49      | 25    | .40   |       |      |      |       |
| 12    |      | 0     | 48    | 76    | 116   | 48      | 28    | .20   |       |      |      |       |
| 13    |      | 0     | 49    | 70    | 112   | 45      | 19    | .10   |       |      |      |       |
| 14    |      | 0     | 37    | 65    | 104   | 42      | 15    | 0     |       |      |      |       |
| 15    |      | 0     | 31    | 61    | 98    | 39      | 12    | 0     |       |      |      |       |
| 16    |      | 0     | 30    | 57    | 92    | 39      | 11    | 0     |       |      |      |       |
| 17    |      | 17    | 26    | 55    | 88    | 36      | 9.5   | 0     |       |      |      |       |
| 18    |      | 42    | 25    | 52    | 82    | 35      | 9.1   | 0     |       |      |      |       |
| 19    |      | 16    | 23    | 50    | 87    | 34      | 8.6   | 0     |       |      |      |       |
| 20    |      | 8.2   | 23    | 49    | 82    | 33      | 9.5   | 0     |       |      |      |       |
| 21    |      | 6.8   | 24    | 46    | 76    | 32      | 12    | 0     |       |      |      |       |
| 22    |      | 5.4   | 24    | 44    | 70    | 51      | 7.6   | 0     |       |      |      |       |
| 23    |      | 11    | 20    | 44    | 70    | 9.1     | 3.8   | 0     |       |      |      |       |
| 24    |      | 27    | 20    | 43    | 70    | 5.9     | 2.5   | 0     |       |      |      |       |
| 25    |      | 31    | 49    | 42    | 65    | 5.0     | 1.9   | 0     |       |      |      |       |
| 26    |      | 19    | 66    | 41    | 70    | 4.3     | 1.7   | 0     |       |      |      |       |
| 27    |      | 13    | 52    | 41    | 62    | 4.3     | 5.7   | 0     |       |      |      |       |
| 28    |      | 75    | 59    | 38    | 59    | 4.3     | 6.0   | 0     |       |      |      |       |
| 29    |      | 73    | 356   | 44    | ----- | 3.7     | 5.8   | 0     |       |      |      |       |
| 30    |      | 61    | 494   | 177   | ----- | 3.4     | 6.2   | 0     |       |      |      |       |
| 31    |      | ----- | 536   | 141   | ----- | 3.7     | ----- | 0     | ----- |      |      |       |
| TOTAL | 0    | 405.4 | 2,314 | 3,089 | 2,908 | 1,082.7 | 235.8 | 34.70 | 0     | 0    | 0    | 0     |
| MEAN  | 0    | 13.5  | 74.6  | 99.6  | 104   | 34.9    | 7.86  | 1.12  | 0     | 0    | 0    | 0     |
| AC-FT | 0    | 804   | 4,590 | 6,130 | 5,770 | 2,150   | 468   | 69    | 0     | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 1,040 MIN 0 MEAN 57.0 AC-FT 41,290  
WATER YEAR 1965-66 MAX 536 MIN 0 MEAN 27.6 AC-FT 19,980

Peak discharge (base, 1,000 cfs).--No peak above base.

## CARMEL RIVER BASIN

11-1432.5. Carmel River near Carmel, Calif.

Location--Lat 36°32'20", long 121°52'25", in Canada de la Segunda Grant, on right bank 0.3 mile downstream from Potrero Canyon and 3 miles east of Carmel, Monterey County.

Drainage area--246 sq mi.

Records available--August 1962 to September 1966.

Gage--Digital water-stage recorder. Altitude of gage is 45 ft (from topographic map). Prior to Nov. 15, 1965, graphic water-stage recorder at same site and datum.

Extremes--Maximum discharge during year, 774 cfs Dec. 31 (gage 6.11 ft); no flow Oct. 1 to Nov. 23, June 3 to Sept. 30.  
1962-66: Maximum discharge, 7,360 cfs Jan. 31, 1963 (gage height, 14.72 ft); no flow at times in each year.

Remarks--Records good. Flow regulated by Los Padres Reservoir (capacity, 3,000 acre-ft) and San Clemente Reservoir (capacity, 1,600 acre-ft). Small diversion above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.    | JAN.  | FEB.  | MAR.    | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|---------|-------|-------|---------|-------|-------|-------|------|------|-------|
| 1     |      | 0     | 6.8     | 542   | 180   | 74      | 6.0   | 1.4   | 0.10  |      |      |       |
| 2     |      | 0     | 13      | 364   | 171   | 82      | 6.5   | 1.3   | .10   |      |      |       |
| 3     |      | 0     | 15      | 278   | 153   | 77      | 7.0   | .90   | 0     |      |      |       |
| 4     |      | 0     | 16      | 228   | 145   | 71      | 7.5   | 1.2   | 0     |      |      |       |
| 5     |      | 0     | 16      | 195   | 177   | 69      | 7.0   | .90   | 0     |      |      |       |
| 6     |      | 0     | 16      | 174   | 216   | 66      | 6.0   | .80   | 0     |      |      |       |
| 7     |      | 0     | 15      | 158   | 217   | 63      | 5.0   | .70   | 0     |      |      |       |
| 8     |      | 0     | 16      | 142   | 200   | 62      | 4.5   | .70   | 0     |      |      |       |
| 9     |      | 0     | 16      | 132   | 182   | 59      | 4.0   | .60   | 0     |      |      |       |
| 10    |      | 0     | 16      | 122   | 173   | 56      | 5.0   | .50   | 0     |      |      |       |
| 11    |      | 0     | 16      | 113   | 163   | 55      | 20    | .60   | 0     |      |      |       |
| 12    |      | 0     | 25      | 105   | 150   | 54      | 30    | .60   | 0     |      |      |       |
| 13    |      | 0     | 46      | 96    | 144   | 51      | 25    | .50   | 0     |      |      |       |
| 14    |      | 0     | 40      | 92    | 134   | 49      | 20    | .50   | 0     |      |      |       |
| 15    |      | 0     | 34      | 87    | 126   | 46      | 17    | .40   | 0     |      |      |       |
| 16    |      | 0     | 32      | 82    | 119   | 44      | 15    | .40   | 0     |      |      |       |
| 17    |      | 0     | 29      | 77    | 113   | 45      | 13    | .30   | 0     |      |      |       |
| 18    |      | 0     | 27      | 71    | 108   | 42      | 11    | .20   | 0     |      |      |       |
| 19    |      | 0     | 25      | 68    | 107   | 42      | 8.6   | .30   | 0     |      |      |       |
| 20    |      | 0     | 24      | 66    | 105   | 41      | 7.7   | .30   | 0     |      |      |       |
| 21    |      | 0     | 24      | 64    | 105   | 42      | 9.2   | .30   | 0     |      |      |       |
| 22    |      | 0     | 25      | 57    | 96    | 46      | 11    | .30   | 0     |      |      |       |
| 23    |      | 0     | 22      | 54    | 88    | 20      | 7.0   | .30   | 0     |      |      |       |
| 24    |      | 2.4   | 20      | 51    | 89    | 8.0     | 5.1   | .30   | 0     |      |      |       |
| 25    |      | 1.1   | 35      | 49    | 86    | 7.0     | 3.9   | .30   | 0     |      |      |       |
| 26    |      | .40   | 65      | 46    | 90    | 6.0     | 3.7   | .30   | 0     |      |      |       |
| 27    |      | .30   | 59      | 45    | 81    | 6.0     | 3.6   | .30   | 0     |      |      |       |
| 28    |      | .30   | 67      | 44    | 74    | 6.0     | 3.1   | .30   | 0     |      |      |       |
| 29    |      | .40   | 387     | 50    | ----- | 6.0     | 2.6   | .30   | 0     |      |      |       |
| 30    |      | .40   | 670     | 165   | ----- | 6.0     | 1.6   | .30   | 0     |      |      |       |
| 31    |      | ----- | 725     | 195   | ----- | 6.0     | ----- | .20   | ----- |      |      |       |
| TOTAL | 0    | 5.30  | 2,542.8 | 4,012 | 3,792 | 1,307.0 | 276.6 | 16.30 | .20   | 0    | 0    | 0     |
| MEAN  | 0    | .18   | 82.0    | 129   | 135   | 42.2    | 9.22  | .53   | .007  | 0    | 0    | 0     |
| AC-FT | 0    | 11    | 5,040   | 7,960 | 7,520 | 2,590   | 549   | 32    | .4    | 0    | 0    | 0     |

|                    |     |       |     |   |      |      |       |        |
|--------------------|-----|-------|-----|---|------|------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 1,400 | MIN | 0 | MEAN | 67.5 | AC-FT | 48,880 |
| WATER YEAR 1965-66 | MAX | 725   | MIN | 0 | MEAN | 32.7 | AC-FT | 23,700 |

Peak discharge (base, 1,200 cfs)--No peak above base.

11-1435. Salinas River near Pozo, Calif.

Location.--Lat 35°18'20", long 120°24'20", in SW¼SE¼ sec.18, T.30 S., R.15 E., on right bank 0.4 mile downstream from highway bridge, 1.5 miles downstream from Pozo Creek, 1.7 miles west of Pozo, and 7 miles upstream from Salinas Dam.

Drainage area.--74.1 sq mi.

Records available.--July 1942 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,347.78 ft above mean sea level datum of 1929, supplementary adjustment of 1960. Prior to Jan. 6, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--24 years, 13.1 cfs (9,480 acre-ft per year); median of yearly mean discharge, 7.0 cfs (5,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,320 cfs Nov. 24 (gage height, 7.68 ft); no flow Oct. 1-8, Aug. 4 to Sept. 30. 1942-66: Maximum discharge, 7,210 cfs Jan. 21, 1943 (gage height, 13.55 ft); no flow at times.

Remarks.--Records good. No regulation or diversion above station. Water is stored in Salinas Reservoir below station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|---------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0    | 0.10   | 4.2     | 166   | 13    | 4.2   | 3.0   | 1.9  | 1.2   | 0.20 | 0.10 |       |
| 2     | 0    | .10    | 4.2     | 88    | 12    | 5.0   | 3.1   | 1.8  | 1.4   | .20  | .10  |       |
| 3     | 0    | .20    | 3.2     | 96    | 10    | 4.4   | 3.4   | 2.0  | 1.3   | .20  | .10  |       |
| 4     | 0    | .20    | 2.7     | 42    | 9.2   | 4.2   | 3.4   | 2.1  | 1.2   | .10  | 0    |       |
| 5     | 0    | .20    | 2.7     | 32    | 11    | 4.2   | 3.3   | 1.9  | 1.1   | .10  | 0    |       |
| 6     | 0    | .20    | 2.3     | 26    | 27    | 4.0   | 2.8   | 1.8  | 1.1   | .20  | 0    |       |
| 7     | 0    | .20    | 2.0     | 21    | 32    | 3.7   | 2.8   | 1.7  | 1.2   | .20  | 0    |       |
| 8     | 0    | .20    | 2.0     | 19    | 25    | 3.7   | 2.8   | 1.8  | 1.1   | .10  | 0    |       |
| 9     | .10  | .20    | 2.0     | 16    | 19    | 3.5   | 2.8   | 2.2  | 1.0   | .10  | 0    |       |
| 10    | .10  | .20    | 2.0     | 13    | 17    | 3.2   | 2.9   | 2.1  | .80   | .10  | 0    |       |
| 11    | .10  | .40    | 2.3     | 12    | 16    | 3.7   | 3.4   | 1.8  | 1.0   | .10  | 0    |       |
| 12    | .10  | .20    | 2.7     | 10    | 14    | 3.7   | 2.8   | 1.8  | .90   | .10  | 0    |       |
| 13    | .10  | .50    | 2.7     | 8.8   | 13    | 3.7   | 2.6   | 1.5  | .80   | .10  | 0    |       |
| 14    | .10  | 1.4    | 2.3     | 7.7   | 12    | 3.7   | 2.4   | 1.5  | .70   | .10  | 0    |       |
| 15    | .10  | 2.3    | 2.3     | 8.0   | 10    | 3.7   | 2.3   | 1.4  | .70   | .10  | 0    |       |
| 16    | .10  | 3.7    | 2.3     | 6.9   | 9.2   | 3.5   | 2.2   | 1.6  | .90   | .10  | 0    |       |
| 17    | .10  | 3.7    | 2.3     | 5.9   | 8.5   | 3.4   | 2.3   | 1.4  | .90   | .10  | 0    |       |
| 18    | .10  | 3.2    | 2.3     | 6.0   | 7.9   | 3.6   | 1.9   | 1.3  | .70   | .10  | 0    |       |
| 19    | .10  | 1.7    | 2.3     | 5.7   | 6.8   | 3.1   | 2.0   | 1.1  | .60   | .10  | 0    |       |
| 20    | .10  | 1.4    | 2.3     | 5.2   | 5.9   | 3.1   | 2.0   | 1.0  | .50   | .10  | 0    |       |
| 21    | .10  | 1.1    | 2.0     | 4.7   | 6.4   | 3.2   | 2.0   | 1.1  | .50   | .10  | 0    |       |
| 22    | .10  | 6.6    | 2.0     | 4.3   | 6.2   | 3.3   | 2.0   | 1.1  | .40   | .10  | 0    |       |
| 23    | .10  | 189    | 2.0     | 4.2   | 5.8   | 3.3   | 1.9   | 1.0  | .50   | .10  | 0    |       |
| 24    | .10  | 349    | 2.0     | 3.9   | 5.5   | 3.4   | 2.1   | 1.2  | .40   | .10  | 0    |       |
| 25    | .10  | 146    | 2.0     | 3.7   | 5.2   | 3.0   | 2.0   | 1.2  | .40   | .10  | 0    |       |
| 26    | .10  | 61     | 2.0     | 3.7   | 5.0   | 2.9   | 2.0   | 1.1  | .30   | .10  | 0    |       |
| 27    | .10  | 23     | 2.0     | 3.4   | 4.5   | 3.0   | 2.0   | 1.2  | .30   | .10  | 0    |       |
| 28    | .10  | 12     | 2.7     | 2.9   | 4.2   | 3.2   | 2.0   | 1.2  | .20   | .10  | 0    |       |
| 29    | .10  | 9.2    | 388     | 2.8   | ----- | 3.4   | 1.9   | 1.4  | .20   | .10  | 0    |       |
| 30    | .10  | 6.4    | 322     | 17    | ----- | 3.4   | 1.8   | 1.3  | .20   | .10  | 0    |       |
| 31    | .10  | -----  | 298     | 15    | ----- | 2.9   | ----- | 1.2  | ----- | .10  | 0    | ----- |
| TOTAL | 2.30 | 823.60 | 1,075.8 | 620.8 | 321.3 | 110.3 | 73.9  | 46.7 | 22.50 | 3.60 | .30  | 0     |
| MEAN  | .07  | 27.5   | 34.7    | 20.0  | 11.5  | 3.56  | 2.46  | 1.51 | .75   | .12  | .01  | 0     |
| AC-FT | 4.6  | 1,630  | 2,130   | 1,230 | 637   | 219   | 147   | 93   | 45    | 7.1  | .6   | 0     |

CALENDAR YEAR 1965 MAX 513 MIN 0 MEAN 16.1 AC-FT 11,670  
 WATER YEAR 1965-66 MAX 388 MIN 0 MEAN 8.50 AC-FT 6,140

Peak discharge (base, 300 cfs, revised).--Nov. 24 (0030) 1,320 cfs (7.68 ft); Dec. 29 (1800) 856 cfs (6.69 ft).

11-1440. Toro Creek near Pozo, Calif.

Location--Lat 35°19'20", long 120°25'20", in SE¼ sec.12, T.30 S., R.14 E., on left bank 300 ft upstream from mouth and 3 miles northwest of Pozo.

Drainage area--9.61 sq mi.

Records available--June 1942 to September 1966. Prior to October 1961 low-water records only. Monthly discharge only for some periods, published in WSP 1315-B.

Gage--Water-stage recorder and concrete control. Datum of gage is 1,312.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Dec. 8, 1961, at site 250 ft downstream at datum 11.83 ft lower.

Average discharge--5 years (1961-66), 0.21 cfs (152 acre-ft per year).

Extremes--Maximum discharge during year, 6.8 cfs Nov. 16 (gage height, 3.67 ft); no flow for several months.

1961-66: Maximum discharge, 31 cfs Feb. 9, 1962 (gage height, 4.24 ft).

1942-66: No flow at times in most years.

Remarks--Records good. Small diversions above station for irrigation and stock reservoir.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1     | 0    | 0.10  | 0.20 | 0.20 | 0.20  | 0.30 | 0.20  | 0.10 |       | 0    |      |       |
| 2     | 0    | .10   | .20  | .20  | .20   | .30  | .20   | .10  |       | 0    |      |       |
| 3     | 0    | .10   | .20  | .20  | .20   | .30  | .20   | 0    |       | 0    |      |       |
| 4     | 0    | .10   | .20  | .20  | .30   | .30  | .20   | .10  |       | 0    |      |       |
| 5     | 0    | .10   | .20  | .20  | .30   | .30  | .10   | .10  |       | .10  |      |       |
| 6     | 0    | .10   | .20  | .20  | .30   | .30  | .20   | .10  |       | 0    |      |       |
| 7     | 0    | .10   | .20  | .20  | .30   | .30  | .30   | .10  |       | 0    |      |       |
| 8     | 0    | .10   | .20  | .20  | .20   | .30  | .30   | .10  |       | 0    |      |       |
| 9     | 0    | .10   | .20  | .20  | .20   | .30  | .20   | .10  |       | 0    |      |       |
| 10    | 0    | .10   | .20  | .20  | .20   | .30  | .20   | .10  |       | 0    |      |       |
| 11    | 0    | .10   | .20  | .20  | .20   | .30  | .10   | .10  |       | 0    |      |       |
| 12    | 0    | .10   | .20  | .20  | .20   | .30  | .10   | 0    |       | 0    |      |       |
| 13    | 0    | .10   | .20  | .20  | .20   | .20  | .20   | 0    |       | 0    |      |       |
| 14    | 0    | .20   | .20  | .20  | .20   | .30  | .10   | 0    |       | 0    |      |       |
| 15    | 0    | .20   | .20  | .20  | .20   | .20  | .10   | 0    |       | 0    |      |       |
| 16    | 0    | 1.8   | .20  | .20  | .20   | .10  | .10   | 0    |       | 0    |      |       |
| 17    | 0    | .50   | .20  | .20  | .20   | .10  | .10   | .10  |       | 0    |      |       |
| 18    | 0    | .40   | .20  | .20  | .20   | .20  | .10   | .10  |       | 0    |      |       |
| 19    | 0    | .20   | .20  | .20  | .30   | .20  | .20   | 0    |       | 0    |      |       |
| 20    | 0    | .20   | .20  | .20  | .30   | .20  | .10   | 0    |       | 0    |      |       |
| 21    | 0    | .20   | .20  | .20  | .20   | .20  | .10   | 0    |       | 0    |      |       |
| 22    | 0    | .40   | .20  | .20  | .20   | .20  | .10   | 0    |       | 0    |      |       |
| 23    | 0    | .90   | .20  | .20  | .20   | .10  | .20   | .10  |       | 0    |      |       |
| 24    | 0    | .30   | .20  | .20  | .30   | .20  | .10   | .10  |       | 0    |      |       |
| 25    | 0    | .40   | .20  | .20  | .20   | .20  | .10   | .10  |       | 0    |      |       |
| 26    | 0    | .20   | .20  | .20  | .20   | .20  | .10   | .10  |       | 0    |      |       |
| 27    | 0    | .20   | .20  | .20  | .20   | .20  | .10   | .10  |       | 0    |      |       |
| 28    | 0    | .20   | .20  | .20  | .20   | .20  | .10   | .10  |       | 0    |      |       |
| 29    | 0    | .20   | 1.1  | .20  | ----- | .20  | .10   | .10  |       | 0    |      |       |
| 30    | 0    | .20   | .30  | .30  | ----- | .20  | .10   | .10  |       | 0    |      |       |
| 31    | .10  | ----- | .30  | .30  | ----- | .30  | ----- | .10  | ----- | 0    |      | ----- |
| Total | .10  | 8.00  | 7.30 | 6.90 | 6.30  | 7.30 | 4.40  | 2.10 | 0     | .10  | 0    | 0     |
| Mean  | .003 | .27   | .24  | .22  | .22   | .24  | .15   | .07  | 0     | .003 | 0    | 0     |
| Ac-ft | .2   | 16    | 14   | 14   | 12    | 14   | 8.7   | 4.2  | 0     | .2   | 0    | 0     |

Calendar year 1965 Max 1.8 Min 0 Mean 0.13 Ac-ft 91

Water year 1965-66 Max 1.8 Min 0 Mean 0.12 Ac-ft 84

Peak discharge (base, 15 cfs, revised)--No peak above base.



11-1445. Salinas Reservoir near Pozo, Calif.

Location.--Lat 35°20'15", long 120°30'05", in NW¼NW¼ sec.8, T.30 S., R.14 E., at left end of dam on Salinas River, 2 miles upstream from Pilitas Creek and 7.5 miles northwest of Pozo.

Drainage area.--112 sq mi.

Records available.--December 1941 to September 1966.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Mar. 9, 1942, staff gage at same site and datum.

Extremes.--Maximum contents during year, 26,200 acre-ft Jan. 30, 31, Feb. 6-8; maximum elevation, 1,301.30 ft Feb. 8; minimum contents, 20,300 acre-ft Sept. 28-30.

1941-66: Maximum contents, 30,900 acre-ft Apr. 3, 1958 (elevation, 1,306.92 ft); minimum, 1,730 acre-ft Nov. 6-10, 1943.

Remarks.--Reservoir is formed by concrete-arch dam, outlet closed Dec. 6, 1941. Usable capacity, 26,000 acre-ft between elevations 1,220.3 (bottom of outlet pipe) and 1,301.0 ft (spillway crest) above mean sea level. Water diverted at dam into pipeline to small reservoir 10 miles below, from which it is pumped to Camp San Luis Obispo and city of San Luis Obispo for water supply; water is also released down natural channel of river. Figures given herein represent usable contents.

Contents, in acre-feet, at 2400 hours, water year October 1965 to September 1966

| Day | Oct.     | Nov.     | Dec.     | Jan.     | Feb.     | Mar.     | Apr.     | May      | June     | July     | Aug.     | Sept.    |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1   | 21,100   | 20,400   | 22,700   | 25,500   | 26,100   | 26,100   | 25,800   | 25,200   | 24,600   | 23,800   | 22,800   | 21,700   |
| 2   | 21,100   | 20,300   | 22,700   | 25,800   | 26,100   | 26,000   | 25,800   | 25,200   | 24,600   | 23,700   | 22,700   | 21,700   |
| 3   | 21,100   | 20,300   | 22,700   | 25,900   | 26,100   | 26,000   | 25,800   | 25,200   | 24,600   | 23,700   | 22,700   | 21,700   |
| 4   | 21,100   | 20,300   | 22,700   | 26,000   | 26,100   | 26,000   | 25,800   | 25,100   | 24,500   | 23,600   | 22,700   | 21,700   |
| 5   | 21,000   | 20,300   | 22,700   | 26,100   | 26,100   | 26,000   | 25,700   | 25,100   | 24,500   | 23,600   | 22,600   | 21,700   |
| 6   | 21,000   | 20,300   | 22,700   | 26,100   | 26,200   | 26,000   | 25,700   | 25,100   | 24,500   | 23,600   | 22,600   | 21,600   |
| 7   | 21,000   | 20,200   | 22,700   | 26,100   | 26,200   | 26,000   | 25,700   | 25,100   | 24,400   | 23,500   | 22,600   | 21,600   |
| 8   | 21,000   | 20,200   | 22,700   | 26,100   | 26,200   | 26,000   | 25,700   | 25,000   | 24,400   | 23,500   | 22,500   | 21,500   |
| 9   | 20,900   | 20,200   | 22,700   | 26,100   | 26,100   | 26,000   | 25,700   | 25,000   | 24,400   | 23,500   | 22,500   | 21,500   |
| 10  | 20,900   | 20,200   | 22,700   | 26,100   | 26,000   | 26,000   | 25,700   | 25,000   | 24,400   | 23,400   | 22,400   | 21,500   |
| 11  | 20,900   | 20,200   | 22,700   | 26,100   | 26,000   | 26,000   | 25,600   | 25,000   | 24,300   | 23,400   | 22,400   | 21,500   |
| 12  | 20,800   | 20,100   | 22,700   | 26,100   | 26,100   | 26,000   | 25,600   | 25,000   | 24,300   | 23,400   | 22,400   | 21,400   |
| 13  | 20,800   | 20,100   | 22,700   | 26,100   | 26,100   | 26,000   | 25,600   | 24,900   | 24,300   | 23,300   | 22,300   | 21,400   |
| 14  | 20,800   | 20,200   | 22,700   | 26,100   | 26,100   | 26,000   | 25,600   | 24,900   | 24,300   | 23,300   | 22,300   | 21,400   |
| 15  | 20,800   | 20,200   | 22,700   | 26,100   | 26,100   | 26,000   | 25,600   | 24,900   | 24,200   | 23,300   | 22,300   | 21,400   |
| 16  | 20,700   | 20,400   | 22,700   | 26,100   | 26,100   | 26,000   | 25,500   | 24,900   | 24,200   | 23,300   | 22,300   | 21,300   |
| 17  | 20,700   | 20,500   | 22,700   | 26,100   | 26,100   | 26,000   | 25,500   | 24,900   | 24,200   | 23,200   | 22,200   | 21,300   |
| 18  | 20,700   | 20,600   | 22,700   | 26,100   | 26,100   | 25,900   | 25,500   | 24,800   | 24,200   | 23,200   | 22,200   | 21,300   |
| 19  | 20,700   | 20,600   | 22,700   | 26,100   | 26,100   | 25,900   | 25,500   | 24,800   | 24,100   | 23,200   | 22,100   | 21,300   |
| 20  | 20,600   | 20,600   | 22,700   | 26,100   | 26,100   | 25,900   | 25,500   | 24,800   | 24,100   | 23,100   | 22,100   | 20,700   |
| 21  | 20,600   | 20,600   | 22,700   | 26,100   | 26,100   | 25,900   | 25,400   | 24,800   | 24,000   | 23,100   | 22,100   | 20,500   |
| 22  | 20,600   | 20,700   | 22,600   | 26,100   | 26,100   | 25,900   | 25,400   | 24,700   | 24,000   | 23,100   | 22,100   | 20,500   |
| 23  | 20,600   | 21,400   | 22,600   | 26,100   | 26,100   | 25,900   | 25,400   | 24,700   | 24,000   | 23,000   | 22,000   | 20,400   |
| 24  | 20,600   | 22,200   | 22,600   | 26,100   | 26,100   | 25,900   | 25,400   | 24,700   | 24,000   | 23,000   | 22,000   | 20,400   |
| 25  | 20,500   | 22,500   | 22,600   | 26,100   | 26,100   | 25,900   | 25,300   | 24,700   | 23,900   | 23,000   | 22,000   | 20,400   |
| 26  | 20,500   | 22,600   | 22,600   | 26,100   | 26,100   | 25,900   | 25,300   | 24,700   | 23,900   | 22,900   | 21,900   | 20,400   |
| 27  | 20,500   | 22,600   | 22,600   | 26,100   | 26,100   | 25,900   | 25,300   | 24,700   | 23,900   | 22,900   | 21,900   | 20,400   |
| 28  | 20,500   | 22,700   | 23,600   | 26,000   | 26,100   | 25,900   | 25,300   | 24,700   | 23,800   | 22,900   | 21,900   | 20,300   |
| 29  | 20,400   | 22,700   | 24,600   | 26,100   | -----    | 25,800   | 25,300   | 24,700   | 23,800   | 22,800   | 21,800   | 20,300   |
| 30  | 20,400   | 22,700   | 25,200   | 26,200   | -----    | 25,800   | 25,200   | 24,600   | 23,800   | 22,800   | 21,800   | 20,300   |
| 31  | 20,400   | -----    | 25,400   | 26,200   | -----    | 25,800   | -----    | 24,600   | -----    | 22,800   | 21,800   | -----    |
| (+) | 1,293.12 | 1,296.42 | 1,300.20 | 1,301.23 | 1,301.12 | 1,300.78 | 1,300.03 | 1,299.18 | 1,297.94 | 1,296.53 | 1,295.11 | 1,293.07 |
| (+) | -800     | +2,300   | +2,700   | +800     | -100     | -300     | -600     | -600     | -800     | -1,000   | -1,000   | -1,500   |
| (+) | 490      | 299      | 249      | 232      | 203      | 297      | 442      | 349      | 510      | 511      | 507      | 440      |

Calendar year 1965..... ++ 7,900                      ++ 4,400  
 Water year 1965-66..... +- 900                      ++ 4,530

† Elevation, in feet, at end of month.

+ Change in contents, in acre-feet.

++ Diversion, in acre-feet, for municipal supply; furnished by county of San Luis Obispo.

## SALINAS RIVER BASIN

11-1450. Salinas River above Pilitas Creek, near Santa Margarita, Calif.

Location.--Lat 35°20'55", long 120°30'40", in NE¼ sec.6, T.30 S., R.14 E., on downstream side of right bank bridge pier, 200 ft upstream from Pilitas Creek, 2 miles downstream from Salinas Dam, and 6 miles southeast of Santa Margarita.

Drainage area.--114 sq mi.

Records available.--July 1942 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 1,148.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge.--24 years, 11.4 cfs (8,250 acre-ft per year).

Extremes.--Maximum discharge during year, 374 cfs Sept. 20 (gage height, 2.85 ft); no flow for several months.

1942-66: Maximum discharge, 4,720 cfs Apr. 3, 1958 (gage height, 8.68 ft); no flow at times during 1944, 1947-66.

Remarks.--Records good. Flow regulated by Salinas Reservoir beginning in 1941 and water diverted to Camp San Luis Obispo and city of San Luis Obispo (see sta. 11-1445).

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.   | Feb.   | Mar.  | Apr.  | May | June  | July | Aug. | Sept.  |
|-------|------|-------|-------|--------|--------|-------|-------|-----|-------|------|------|--------|
| 1     |      | 0     | 0.20  | 3.3    | 63     | 4.4   | 0.10  |     |       |      |      | 0      |
| 2     |      | 0     | .20   | 1.9    | 59     | 36    | .10   |     |       |      |      | 0      |
| 3     |      | 0     | .10   | 1.3    | 1.5    | .90   | .10   |     |       |      |      | 0      |
| 4     |      | 0     | .10   | 1.0    | 1.5    | .40   | .10   |     |       |      |      | 0      |
| 5     |      | 0     | .10   | .80    | 3.3    | .30   | 0     |     |       |      |      | 0      |
| 6     |      | 0     | .10   | 2.9    | 7.4    | .20   | 0     |     |       |      |      | 0      |
| 7     |      | 0     | .10   | 14     | 22     | .20   | 0     |     |       |      |      | 0      |
| 8     |      | 0     | .10   | 16     | 30     | .20   | 0     |     |       |      |      | 0      |
| 9     |      | 0     | .10   | 18     | 102    | .20   | 0     |     |       |      |      | 0      |
| 10    |      | 0     | .10   | 20     | 73     | .20   | 0     |     |       |      |      | 0      |
| 11    |      | 0     | .10   | 23     | 1.0    | .20   | 0     |     |       |      |      | 0      |
| 12    |      | 0     | .20   | 21     | .60    | .20   | 0     |     |       |      |      | 0      |
| 13    |      | 0     | .20   | 20     | .50    | .20   | 0     |     |       |      |      | 0      |
| 14    |      | 0     | .20   | 17     | .60    | .20   | 0     |     |       |      |      | 0      |
| 15    |      | 0     | .10   | 17     | .90    | .20   | 0     |     |       |      |      | 0      |
| 16    |      | .60   | .10   | 20     | 1.9    | .20   | 0     |     |       |      |      | 0      |
| 17    |      | 2.9   | .10   | 16     | 2.3    | .10   | 0     |     |       |      |      | 0      |
| 18    |      | 1.5   | .10   | 38     | 2.1    | .10   | 0     |     |       |      |      | 0      |
| 19    |      | .40   | .10   | 23     | 1.3    | .10   | 0     |     |       |      |      | 0      |
| 20    |      | .20   | .10   | .60    | .90    | .10   | 0     |     |       |      |      | 218    |
| 21    |      | .10   | .10   | 23     | 3.1    | .10   | 0     |     |       |      |      | 93     |
| 22    |      | .50   | .10   | 25     | 3.1    | .10   | 0     |     |       |      |      | .40    |
| 23    |      | .96   | .10   | 23     | 2.3    | .10   | 0     |     |       |      |      | .10    |
| 24    |      | 9.0   | .10   | 2.7    | 1.4    | .10   | 0     |     |       |      |      | 0      |
| 25    |      | 3.8   | .10   | 3.3    | 5.2    | .10   | 0     |     |       |      |      | 0      |
| 26    |      | 1.4   | .10   | 2.9    | 9.0    | .10   | 0     |     |       |      |      | 0      |
| 27    |      | .60   | .10   | 1.9    | 7.9    | .10   | 0     |     |       |      |      | 0      |
| 28    |      | .40   | .20   | 1.2    | 6.2    | .10   | 0     |     |       |      |      | 0      |
| 29    |      | .30   | .18   | 1.0    | -----  | .10   | 0     |     |       |      |      | 0      |
| 30    |      | .20   | .15   | 23     | -----  | .10   | 0     |     |       |      |      | 0      |
| 31    |      | ----- | 6.5   | 29     | -----  | .10   | ----- |     | ----- |      |      | -----  |
| Total | 0    | 31.50 | 42.90 | 326.20 | 413.00 | 45.70 | .40   | 0   | 0     | 0    | 0    | 311.50 |
| Mean  | 0    | 1.05  | 1.38  | 10.5   | 14.8   | 1.47  | .01   | 0   | 0     | 0    | 0    | 10.4   |
| Ac-ft | 0    | 62    | 85    | 647    | 819    | 91    | .8    | 0   | 0     | 0    | 0    | 618    |

Calendar year 1965 Max 18 Min 0 Mean .43 Ac-ft 311

Water year 1965-66 Max 218 Min 0 Mean 3.21 Ac-ft 2,320

11-1470. Jack Creek near Templeton, Calif.

Location.--Lat 35°34'00", long 120°48'10", in Paso de Robles Grant, on left bank 1.4 miles upstream from mouth, 1.8 miles northwest of Oakdale School, and 5.6 miles west of Templeton, San Luis Obispo County.

Drainage area.--25.3 sq mi.

Records available.--October 1949 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 980 ft (from topographic map).

Average discharge.--17 years, 12.3 cfs (8,900 acre-ft per year); median of yearly mean discharges, 8.6 cfs (6,200 acre-ft per year).

Extremes.--Maximum discharge during year, 580 cfs Dec. 29 (gage height, 4.93 ft); no flow for several months.  
1949-66: Maximum discharge, 5,040 cfs Jan. 25, 1956 (gage height, 9.56 ft), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|---------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0       | 8.2   | 102   | 56    | 7.3   | 3.0   | 1.1   | 0.40  |      |      |       |
| 2     |      | 0       | 6.8   | 61    | 46    | 8.2   | 3.4   | 1.1   | .40   |      |      |       |
| 3     |      | 0       | 5.8   | 42    | 34    | 7.0   | 2.9   | 1.0   | .40   |      |      |       |
| 4     |      | 0       | 5.2   | 33    | 31    | 6.5   | 2.9   | 1.0   | .30   |      |      |       |
| 5     |      | 0       | 4.7   | 27    | 33    | 6.5   | 2.9   | 1.0   | .30   |      |      |       |
| 6     |      | 0       | 4.1   | 22    | 41    | 6.2   | 2.8   | 1.1   | .20   |      |      |       |
| 7     |      | 0       | 3.8   | 20    | 33    | 5.8   | 2.8   | .90   | .30   |      |      |       |
| 8     |      | 0       | 3.4   | 17    | 28    | 5.6   | 2.8   | .90   | .30   |      |      |       |
| 9     |      | 0       | 3.2   | 15    | 23    | 5.4   | 2.9   | .90   | .20   |      |      |       |
| 10    |      | 0       | 2.9   | 13    | 21    | 5.4   | 3.0   | .90   | .20   |      |      |       |
| 11    |      | 0       | 3.5   | 12    | 18    | 5.2   | 2.8   | .90   | .20   |      |      |       |
| 12    |      | 0       | 2.8   | 11    | 18    | 5.2   | 2.8   | .90   | .10   |      |      |       |
| 13    |      | 0       | 1.6   | 9.8   | 16    | 4.9   | 2.6   | .80   | .10   |      |      |       |
| 14    |      | 0       | 1.2   | 9.0   | 15    | 4.9   | 2.4   | .80   | .10   |      |      |       |
| 15    |      | 0       | 9.0   | 8.4   | 14    | 4.7   | 2.2   | .70   | .10   |      |      |       |
| 16    |      | 138     | 7.6   | 7.9   | 13    | 4.5   | 2.0   | .70   | .10   |      |      |       |
| 17    |      | 132     | 6.5   | 7.6   | 12    | 4.5   | 1.9   | .70   | .10   |      |      |       |
| 18    |      | 147     | 5.8   | 7.0   | 11    | 4.3   | 1.9   | .70   | .10   |      |      |       |
| 19    |      | 28      | 5.4   | 6.8   | 11    | 4.3   | 1.9   | .60   | .10   |      |      |       |
| 20    |      | 9.0     | 5.2   | 6.8   | 11    | 4.1   | 1.8   | .60   | .10   |      |      |       |
| 21    |      | 5.2     | 4.9   | 6.5   | 10    | 4.1   | 1.6   | .60   | .10   |      |      |       |
| 22    |      | 75      | 4.5   | 6.0   | 9.4   | 4.1   | 1.6   | .70   | 0     |      |      |       |
| 23    |      | 192     | 4.0   | 5.8   | 9.0   | 4.0   | 1.5   | .60   | 0     |      |      |       |
| 24    |      | 121     | 3.8   | 5.6   | 8.7   | 4.0   | 1.5   | .60   | 0     |      |      |       |
| 25    |      | 83      | 1.1   | 5.4   | 8.4   | 3.8   | 1.4   | .50   | 0     |      |      |       |
| 26    |      | 41      | 9.4   | 5.2   | 7.9   | 3.8   | 1.3   | .50   | 0     |      |      |       |
| 27    |      | 26      | 7.6   | 4.9   | 7.3   | 3.6   | 1.3   | .50   | 0     |      |      |       |
| 28    |      | 18      | 1.7   | 4.5   | 7.3   | 3.6   | 1.2   | .50   | 0     |      |      |       |
| 29    |      | 14      | 3.12  | 8.6   | ----- | 3.5   | 1.3   | .50   | 0     |      |      |       |
| 30    |      | 11      | 2.32  | 208   | ----- | 3.4   | 1.2   | .50   | 0     |      |      |       |
| 31    |      | -----   | 208   | 56    | ----- | 3.2   | ----- | .50   | ----- |      |      |       |
| Total | 0    | 1,040.2 | 961.3 | 754.8 | 553.0 | 151.6 | 65.6  | 233.0 | 4.20  | 0    | 0    | 0     |
| Mean  | 0    | 34.7    | 31.0  | 24.3  | 19.8  | 4.89  | 2.19  | 0.75  | 0.14  | 0    | 0    | 0     |
| Ac-ft | 0    | 2,060   | 1,910 | 1,500 | 1,100 | 301   | 130   | 46    | 8.3   | 0    | 0    | 0     |

Calendar year 1965 Max 603 Min 0 Mean 15.4 Ac-ft 11,120  
Water year 1965-66 Max 312 Min 0 Mean 9.74 Ac-ft 7,050

Peak discharge (base, 600 cfs, revised).--No peak above base.

## SALINAS RIVER BASIN

11-1470.7. Santa Rita Creek near Templeton, Calif.

Location.--Lat 35°31'26", long 120°45'54", in Asuncion Grant, on left bank 1.6 miles upstream from Paso Robles Creek and 4 miles west of Templeton, San Luis Obispo County.

Drainage area.--18.2 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Digital water-stage recorder with rain gage attachment. Altitude of gage is 860 ft (from topographic map). Prior to Apr. 7, 1966, graphic water-stage recorder at same site and datum. Auxiliary tipping bucket rain gage 5.3 miles west of gage. Altitude of gage is 1,270 ft (from topographic map).

Average discharge.--5 years, 12.4 cfs (8,980 acre-ft).

Extremes.--Maximum discharge during year, 678 cfs Dec. 28 (gage height, 6.62 ft); no flow for several months.  
1961-66: Maximum discharge, 2,320 cfs Feb. 9, 1962 (gage height, 9.15 ft); no flow for several months in each year.

Remarks.--Records good. Some regulation and pumping above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY    | JUNE  | JULY | AUG. | SEPT. |
|--------------------|------|-------|-------|-------|-------|-------|-------|--------|-------|------|------|-------|
| 1                  |      | 0     | 16    | 112   | 62    | 5.2   | 2.4   | 0.70   | 0.10  |      |      | 0     |
| 2                  |      | 0     | 13    | 65    | 40    | 6.7   | 1.9   | .60    | .10   |      |      | 0     |
| 3                  |      | 0     | 13    | 45    | 34    | 5.7   | 1.9   | .60    | .10   |      |      | 0     |
| 4                  |      | 0     | 11    | 33    | 25    | 5.7   | 1.9   | .70    | .10   |      |      | 0     |
| 5                  |      | 0     | 5.7   | 27    | 25    | 5.2   | 1.9   | .50    | 0     |      |      | 0     |
| 6                  |      | 0     | 4.3   | 22    | 33    | 5.2   | 1.9   | .40    | 0     |      |      | 0     |
| 7                  |      | 0     | 3.9   | 18    | 25    | 5.2   | 1.9   | .40    | .10   |      |      | 0     |
| 8                  |      | 0     | 3.5   | 15    | 22    | 5.2   | 1.9   | .50    | .10   |      |      | 0     |
| 9                  |      | 0     | 3.5   | 13    | 18    | 4.3   | 1.9   | .60    | .10   |      |      | 0     |
| 10                 |      | 0     | 3.5   | 12    | 15    | 4.3   | 2.6   | .60    | 0     |      |      | 0     |
| 11                 |      | 0     | 2.4   | 11    | 13    | 3.9   | 2.1   | .50    | 0     |      |      | 0     |
| 12                 |      | 0     | 27    | 9.6   | 13    | 3.9   | 1.7   | .50    | 0     |      |      | 0     |
| 13                 |      | 0     | 10    | 9.1   | 12    | 3.9   | 1.6   | .40    | 0     |      |      | 0     |
| 14                 |      | 0     | 6.7   | 7.6   | 11    | 3.9   | 1.5   | .40    | 0     |      |      | 0     |
| 15                 |      | 0     | 5.2   | 7.2   | 9.6   | 3.5   | 1.5   | .40    | 0     |      |      | 0     |
| 16                 |      | 82    | 4.3   | 6.2   | 9.1   | 3.5   | 1.4   | .30    | 0     |      |      | 0     |
| 17                 |      | 95    | 3.5   | 5.7   | 9.1   | 3.1   | 1.5   | .30    | 0     |      |      | 0     |
| 18                 |      | 126   | 3.1   | 5.2   | 8.6   | 3.1   | 1.7   | .20    | 0     |      |      | 0     |
| 19                 |      | 29    | 3.1   | 5.2   | 8.1   | 3.1   | 1.5   | .10    | 0     |      |      | 0     |
| 20                 |      | 16    | 2.7   | 4.7   | 7.6   | 3.1   | 1.4   | .10    | 0     |      |      | 0     |
| 21                 |      | 12    | 2.7   | 3.9   | 7.6   | 2.7   | 1.1   | .10    | 0     |      |      | 0     |
| 22                 |      | 41    | 2.4   | 3.9   | 7.2   | 2.4   | 1.1   | .20    | 0     |      |      | 0     |
| 23                 |      | 86    | 2.1   | 3.9   | 6.7   | 2.4   | 1.1   | .10    | 0     |      |      | 0     |
| 24                 |      | 87    | 1.9   | 3.5   | 6.7   | 2.4   | 1.1   | .10    | 0     |      |      | .80   |
| 25                 |      | 78    | 7.8   | 3.5   | 6.2   | 2.4   | 1.0   | .10    | 0     |      |      | 1.6   |
| 26                 |      | 38    | 5.2   | 3.5   | 6.2   | 2.4   | 1.0   | .10    | 0     |      |      | 1.7   |
| 27                 |      | 28    | 3.5   | 3.1   | 5.2   | 2.4   | 1.0   | .10    | 0     |      |      | .20   |
| 28                 |      | 22    | 25    | 2.7   | 5.2   | 2.4   | .90   | .10    | 0     |      |      | 0     |
| 29                 |      | 19    | 256   | 3.9   | ----- | 2.4   | .90   | .20    | 0     |      |      | 0     |
| 30                 |      | 15    | 240   | 185   | ----- | 2.4   | .70   | .20    | 0     |      |      | 0     |
| 31                 |      | --    | 250   | 42    | ----- | 2.4   | ----- | .20    | ----- |      |      | 0     |
| TOTAL              | 0    | 774   | 942.0 | 692.4 | 451.1 | 114.4 | 46.00 | 10.30  | .70   | 0    | 0    | 4.30  |
| MEAN               | 0    | 25.8  | 30.4  | 22.3  | 16.1  | 3.69  | 1.53  | .33    | .02   | 0    | 0    | .14   |
| AC-FT              | 0    | 1,540 | 1,870 | 1,370 | 895   | 227   | 91    | 20     | 1.4   | 0    | 0    | 8.5   |
| (†)                | 0    | 10.9  | 6.3   | 2.2   | .8    | .3    | .2    | 0      | .1    | .1   | 0    | 0     |
| (‡)                | 0    | 13.8  | 7.4   | 3.0   | 1.6   | .5    | .4    | 0      | .2    | .1   | 0    | 0     |
| CALENDAR YEAR 1965 | MAX  | 576   | MIN   | 0     | MEAN  | 14.6  | AC-FT | 10,570 |       |      |      |       |
| WATER YEAR 1965-66 | MAX  | 256   | MIN   | 0     | MEAN  | 8.32  | AC-FT | 6,020  |       |      |      |       |

Peak discharge (base, 600 cfs, revised).--Dec. 28 (2400) 678 cfs (6.62 ft).

† Precipitation, in inches.

‡ Precipitation, in inches, at auxiliary gage.

11-1476. Huerhuero Creek near Creston, Calif.

Location.--Lat 35°35'00", long 120°33'15", in NE¼ sec.15, T.27 S., R.13 E., on left bank 1 mile northwest of Geneseo School and 4.6 miles northwest of Creston.

Drainage area.--101 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 930 ft (from topographic map).

Average discharge.--8 years, 0.40 cfs (290 acre-ft per year).

Extremes.--Maximum discharge during year, 0.4 cfs Feb. 4 (gage height, 2.03 ft); no flow for several months.

1958-66: Maximum discharge, 808 cfs Feb. 9, 1962 (gage height, 5.57 ft), from rating curve extended above 140 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation; small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      |      |      |      | 0     | 0.10 | 0.10  |     |       |      |      |       |
| 2     |      |      |      |      | 0     | .10  | .10   |     |       |      |      |       |
| 3     |      |      |      |      | 0     | .10  | .10   |     |       |      |      |       |
| 4     |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 5     |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 6     |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 7     |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 8     |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 9     |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 10    |      |      |      |      | .10   | .10  | .10   |     |       |      |      |       |
| 11    |      |      |      |      | 0     | .10  | .10   |     |       |      |      |       |
| 12    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 13    |      |      |      |      | .10   | .20  | 0     |     |       |      |      |       |
| 14    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 15    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 16    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 17    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 18    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 19    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 20    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 21    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 22    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 23    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 24    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 25    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 26    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 27    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 28    |      |      |      |      | .10   | .10  | 0     |     |       |      |      |       |
| 29    |      |      |      |      | ----- | .10  | 0     |     |       |      |      |       |
| 30    |      |      |      |      | ----- | .10  | 0     |     |       |      |      |       |
| 31    |      |      |      |      | ----- | .10  | ----- |     | ----- |      |      | ----- |
| Total | 0    | 0    | 0    | 0    | 2.40  | 3.20 | 1.10  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0    | 0    | 0    | 0.09  | 0.10 | 0.04  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 0    | 0    | 0    | 4.8   | 6.3  | 2.2   | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 0.70 Min 0 Mean 0.03 Ac-ft 20  
 Water year 1965-66 Max 0.20 Min 0 Mean 0.02 Ac-ft 13

Peak discharge (base, 40 cfs).--No peak above base.

## SALINAS RIVER BASIN

11-1478. Cholame Creek near Shandon, Calif.

Location.--Lat 35°41'20", long 120°20'03", in SE¼ sec.3, T.26 S., R.15 E., on left bank 500 ft upstream from highway bridge, 2.6 miles downstream from White Canyon, and 3.5 miles northeast of Shandon.

Drainage area.--227 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1,069.0 ft above mean sea level (planetable survey).

Average discharge.--8 years, 1.22 cfs (883 acre-ft per year).

Extremes.--Maximum discharge during year, 129 cfs Dec. 30 (gage height, 4.36 ft); no flow for most of year.

1958-66: Maximum discharge, 1,100 cfs Feb. 9, 1962 (gage height, 6.90 ft), but may have been higher Feb. 16, 1959; no flow for many months in each year.

Remarks.--Records fair. No regulation; small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|------|-------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      | 0     | 0    | 15    |       |      |       |     |       |      |      |       |
| 2     |      | 0     | 0    | 3.2   |       |      |       |     |       |      |      |       |
| 3     |      | 0     | 0    | .60   |       |      |       |     |       |      |      |       |
| 4     |      | 0     | 0    | .10   |       |      |       |     |       |      |      |       |
| 5     |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 6     |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 7     |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 8     |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 9     |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 10    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 11    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 12    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 13    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 14    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 15    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 16    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 17    |      | 11    | 0    | 0     |       |      |       |     |       |      |      |       |
| 18    |      | 10    | 0    | 0     |       |      |       |     |       |      |      |       |
| 19    |      | 1.7   | 0    | 0     |       |      |       |     |       |      |      |       |
| 20    |      | .10   | 0    | 0     |       |      |       |     |       |      |      |       |
| 21    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 22    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 23    |      | 15    | 0    | 0     |       |      |       |     |       |      |      |       |
| 24    |      | 35    | 0    | 0     |       |      |       |     |       |      |      |       |
| 25    |      | 7.0   | 0    | 0     |       |      |       |     |       |      |      |       |
| 26    |      | 1.2   | 0    | 0     |       |      |       |     |       |      |      |       |
| 27    |      | .20   | 0    | 0     |       |      |       |     |       |      |      |       |
| 28    |      | 0     | 0    | 0     |       |      |       |     |       |      |      |       |
| 29    |      | 0     | 12   | 0     | ----- |      |       |     |       |      |      |       |
| 30    |      | 0     | 52   | 0     | ----- |      |       |     |       |      |      |       |
| 31    |      | ----- | 53   | 0     | ----- |      | ----- |     | ----- |      |      | ----- |
| Total | 0    | 81.20 | 117  | 18.90 | 0     | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 2.71  | 38   | .61   | 0     | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 161   | 232  | 37    | 0     | 0    | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 53 Min 0 Mean .79 Ac-ft 575

Water year 1965-66 Max 53 Min 0 Mean .59 Ac-ft 431

Peak discharge (base, 100 cfs).--Dec. 30 (0500) 129 cfs (4.36 ft).

11-1485. Estrella River near Estrella, Calif.

Location.--Lat 35°42'35", long 120°38'20", in NW¼NW¼ sec.36, T.25 S., R.12 E., on right bank 0.2 mile downstream from mouth of Ranchito Canyon and 1.9 miles northwest of Estrella.

Drainage area.--924 sq mi, not including Carrizo Plains.

Records available.--October 1954 to September 1966. Prior to October 1962, published as Estrella Creek near Estrella.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 710 ft (from topographic map).

Average discharge.--12 years, 11.3 cfs (8,180 acre-ft per year); median of yearly discharges, 2.8 cfs (2,000 acre-ft per year).

Extremes.--Maximum discharge during year, 308 cfs Dec. 31 (gage height, 2.88 ft); no flow for several months.

1954-66: Maximum discharge, 8,850 cfs Apr. 6, 1958 (gage height, 7.20 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; no flow for several months in each year.

Remarks.--Records fair. No regulation; pumpage from wells along river for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May | June | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|------|-------|-----|------|------|------|-------|
| 1     |      | 0      | 4.7   | 9.4   | 1.1   | 3.4  | 1.4   |     |      |      |      |       |
| 2     |      | 0      | 3.4   | 7.8   | 7.5   | 3.4  | 1.1   |     |      |      |      |       |
| 3     |      | 0      | 2.2   | 5.2   | 6.1   | 3.4  | .80   |     |      |      |      |       |
| 4     |      | 0      | 1.7   | 2.6   | 5.4   | 2.8  | .80   |     |      |      |      |       |
| 5     |      | 0      | 1.7   | 1.3   | 6.1   | 4.0  | .80   |     |      |      |      |       |
| 6     |      | 0      | 1.4   | 9.8   | 6.8   | 2.8  | 1.1   |     |      |      |      |       |
| 7     |      | 0      | 1.4   | 9.0   | 6.8   | 2.2  | .80   |     |      |      |      |       |
| 8     |      | 0      | 1.4   | 8.2   | 6.8   | 2.2  | .60   |     |      |      |      |       |
| 9     |      | 0      | 1.4   | 7.5   | 6.8   | 2.2  | .80   |     |      |      |      |       |
| 10    |      | 0      | 1.4   | 6.8   | 6.1   | 2.2  | .80   |     |      |      |      |       |
| 11    |      | 0      | 1.7   | 6.8   | 4.7   | 2.8  | 1.1   |     |      |      |      |       |
| 12    |      | 0      | 4.7   | 5.4   | 4.7   | 2.2  | .80   |     |      |      |      |       |
| 13    |      | 0      | 4.7   | 5.4   | 4.7   | 2.2  | .80   |     |      |      |      |       |
| 14    |      | 0      | 4.7   | 5.4   | 4.7   | 2.8  | .50   |     |      |      |      |       |
| 15    |      | .10    | 4.0   | 5.4   | 4.0   | 2.8  | .50   |     |      |      |      |       |
| 16    |      | 4.3    | 3.4   | 5.4   | 4.0   | 2.2  | .40   |     |      |      |      |       |
| 17    |      | 3.5    | 3.4   | 5.4   | 4.7   | 2.8  | .40   |     |      |      |      |       |
| 18    |      | 2.4    | 2.2   | 5.4   | 4.7   | 2.8  | .40   |     |      |      |      |       |
| 19    |      | 9.8    | 2.2   | 5.4   | 4.7   | 2.2  | .10   |     |      |      |      |       |
| 20    |      | 3.4    | 2.2   | 5.4   | 4.0   | 2.2  | .40   |     |      |      |      |       |
| 21    |      | 4.0    | 2.2   | 5.4   | 4.0   | 2.2  | .40   |     |      |      |      |       |
| 22    |      | 9.0    | 2.2   | 5.4   | 4.7   | 2.2  | .40   |     |      |      |      |       |
| 23    |      | 9.8    | 1.7   | 5.4   | 4.7   | 2.2  | .10   |     |      |      |      |       |
| 24    |      | 7.5    | 1.7   | 5.4   | 4.7   | 2.2  | 0     |     |      |      |      |       |
| 25    |      | 5.6    | 2.2   | 5.4   | 4.0   | 2.2  | 0     |     |      |      |      |       |
| 26    |      | 7.5    | 2.2   | 5.4   | 3.4   | 2.2  | 0     |     |      |      |      |       |
| 27    |      | 3.7    | 2.2   | 4.0   | 4.0   | 2.2  | 0     |     |      |      |      |       |
| 28    |      | 1.5    | 3.4   | 4.0   | 3.4   | 2.2  | 0     |     |      |      |      |       |
| 29    |      | 1.1    | 4.1   | 4.0   | ----- | 2.2  | 0     |     |      |      |      |       |
| 30    |      | 8.2    | 3.7   | 9.0   | ----- | 1.4  | 0     |     |      |      |      |       |
| 31    |      | -----  | 1.48  | 9.8   | ----- | 1.4  | ----- |     |      |      |      |       |
| Total | 0    | 309.10 | 297.7 | 422.9 | 147.2 | 76.2 | 15.30 | 0   | 0    | 0    | 0    | 0     |
| Mean  | 0    | 10.3   | 9.60  | 13.6  | 5.26  | 2.46 | .51   | 0   | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 613    | 590   | 839   | 292   | 151  | 30    | 0   | 0    | 0    | 0    | 0     |

Calendar year 1965 Max 148 Min 0 Mean 2.38 Ac-ft 1,730

Water year 1965-66 Max 148 Min 0 Mean 3.48 Ac-ft 2,520

Peak discharge (base, 200 cfs).--Dec. 31 (0230) 308 cfs (2.88 ft).

## SALINAS RIVER BASIN

11-1488. Nacimiento River near Bryson, Calif.

Location.--Lat 35°48'06", long 121°06'50", in NW¼ sec.33, T.24 S., R.8 E., on right bank 0.6 mile upstream from Turtle Creek, 1.6 miles west of Bryson, and 10 miles southwest of Lockwood.

Drainage area.--140 sq mi.

Records available.--October 1955 to September 1966. Records for February to April 1901, published in WSP 66 and 75, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder. Altitude of gage is 860 ft (from topographic map).

Average discharge.--11 years, 146 cfs (105,700 acre-ft per year); median of yearly mean discharges, 115 cfs (83,300 acre-ft per year).

Extremes.--Maximum discharge during year, 6,200 cfs Dec. 28 (gage height, 10.94 ft); no flow Oct. 1 to Nov. 13, July 1 to Sept. 30. 1955-66: Maximum discharge, 30,300 cfs Dec. 23, 1955 (gage height, 24.63 ft), from rating curve extended above 13,000 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records fair. No storage or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1962 Report: 1961.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.   | Feb.   | Mar.  | Apr.  | May   | June   | July | Aug. | Sept. |
|-------|------|--------|--------|--------|--------|-------|-------|-------|--------|------|------|-------|
| 1     |      | 0      | 138    | 1,030  | 504    | 96    | 33    | 13    | 9.0    |      |      |       |
| 2     |      | 0      | 117    | 635    | 406    | 100   | 32    | 12    | 8.4    |      |      |       |
| 3     |      | 0      | 110    | 488    | 332    | 94    | 32    | 11    | 7.2    |      |      |       |
| 4     |      | 0      | 100    | 380    | 462    | 89    | 30    | 11    | 7.2    |      |      |       |
| 5     |      | 0      | 92     | 323    | 819    | 85    | 29    | 11    | 6.6    |      |      |       |
| 6     |      | 0      | 85     | 277    | 735    | 81    | 29    | 11    | 6.0    |      |      |       |
| 7     |      | 0      | 79     | 249    | 534    | 77    | 28    | 11    | 6.6    |      |      |       |
| 8     |      | 0      | 77     | 211    | 444    | 72    | 27    | 12    | 6.6    |      |      |       |
| 9     |      | 0      | 74     | 187    | 370    | 68    | 27    | 13    | 6.0    |      |      |       |
| 10    |      | 0      | 72     | 169    | 314    | 66    | 30    | 14    | 6.0    |      |      |       |
| 11    |      | 0      | 70     | 149    | 273    | 64    | 35    | 14    | 5.6    |      |      |       |
| 12    |      | 0      | 130    | 138    | 237    | 62    | 32    | 15    | 5.2    |      |      |       |
| 13    |      | 0      | 112    | 130    | 211    | 59    | 29    | 14    | 4.5    |      |      |       |
| 14    |      | 60     | 94     | 117    | 187    | 57    | 28    | 14    | 3.6    |      |      |       |
| 15    |      | 35     | 83     | 110    | 172    | 55    | 27    | 13    | 2.6    |      |      |       |
| 16    |      | 1,100  | 77     | 103    | 154    | 52    | 24    | 12    | 2.2    |      |      |       |
| 17    |      | 1,660  | 72     | 94     | 146    | 52    | 22    | 11    | 2.0    |      |      |       |
| 18    |      | 2,200  | 68     | 89     | 140    | 50    | 22    | 10    | 1.9    |      |      |       |
| 19    |      | 460    | 64     | 85     | 192    | 48    | 22    | 9.6   | 1.9    |      |      |       |
| 20    |      | 245    | 62     | 83     | 181    | 47    | 22    | 9.6   | 1.9    |      |      |       |
| 21    |      | 169    | 62     | 79     | 146    | 45    | 21    | 9.0   | 1.6    |      |      |       |
| 22    |      | 1,230  | 61     | 74     | 140    | 44    | 21    | 8.4   | 1.4    |      |      |       |
| 23    |      | 2,120  | 57     | 72     | 132    | 44    | 20    | 7.8   | 1.2    |      |      |       |
| 24    |      | 1,350  | 53     | 70     | 122    | 42    | 19    | 7.8   | 1.2    |      |      |       |
| 25    |      | 918    | 94     | 68     | 114    | 41    | 18    | 7.2   | .90    |      |      |       |
| 26    |      |        |        |        |        |       |       |       | .80    |      |      |       |
| 27    |      | 492    | 100    | 64     | 114    | 40    | 17    | 7.2   | .80    |      |      |       |
| 28    |      | 323    | 85     | 64     | 105    | 38    | 15    | 7.2   | .60    |      |      |       |
| 29    |      | 237    | 1,350  | 61     | 100    | 38    | 15    | 7.2   | .60    |      |      |       |
| 30    |      | 190    | 2,650  | 431    | -----  | 38    | 14    | 7.8   | .40    |      |      |       |
| 31    |      | 160    | 2,440  | 1,530  | -----  | 37    | 14    | 8.4   | .20    |      |      |       |
|       |      | -----  | 2,050  | 516    | -----  | 35    | ----- | 8.4   | -----  |      |      |       |
| Total | 0    | 12,949 | 10,778 | 8,076  | 7,786  | 1,816 | 734   | 327.6 | 109.90 | 0    | 0    | 0     |
| Mean  | 0    | 432    | 348    | 261    | 278    | 58.6  | 24.5  | 10.6  | 3.66   | 0    | 0    | 0     |
| Ac-ft | 0    | 25,680 | 21,380 | 16,020 | 15,440 | 3,600 | 1,460 | 650   | 218    | 0    | 0    | 0     |

Calendar year 1965 Max 6,910 Min 0 Mean 179 Ac-ft 129,800  
 Water year 1965-66 Max 2,650 Min 0 Mean 117 Ac-ft 84,450

Peak discharge (base, 4,000 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-18 | 0100 | 10.13       | 5,160     | 12-28 | 2030 | 10.94       | 6,200     |
| 11-22 | 2200 | 10.88       | 6,120     |       |      |             |           |



11-1494. Nacimiento River below Nacimiento Dam, near Bradley, Calif.

Location--Lat 35°45'41", long 120°51'16", in NE¼NE¼ sec.14, T.25 S., R.10 E., on left bank 2.2 miles below Nacimiento Dam and 7.6 miles southwest of Bradley.

Drainage area--322 sq mi.

Records available--October 1957 to September 1966.

Gage--Water-stage recorder. Datum of gage is 597 ft above mean sea level (Corps of Engineers bench mark).

Average discharge--9 years, 226 cfs (163,600 acre-ft per year), unadjusted.

Extremes--Maximum discharge during year, 566 cfs July 30 to Aug. 3 (gage height, 5.84 ft); minimum daily 0.1 cfs for many days. 1957-66: Maximum discharge, 5,220 cfs Apr. 7, 1958 (gage height, 10.28 ft); no flow many days each year except 1964, 1966.

Remarks--Records good. Flow regulated by Nacimiento Dam (usable capacity, 340,000 acre-ft). No diversion above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Cooperation--One discharge measurement furnished by Monterey County Flood Control and Water Conservation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.     | Dec. | Jan. | Feb.   | Mar.  | Apr.    | May    | June   | July   | Aug.   | Sept.  |
|-------|--------|----------|------|------|--------|-------|---------|--------|--------|--------|--------|--------|
| 1     | 351    | 240      | 0.20 | 0.40 | 0.20   | 4.7   | 4.5     | 478    | 273    | 485    | 566    | 494    |
| 2     | 351    | 240      | .10  | .20  | .20    | 5.0   | 4.5     | 478    | 273    | 534    | 566    | 494    |
| 3     | 351    | 240      | .10  | .20  | .20    | 5.0   | 4.5     | 478    | 273    | 534    | 566    | 486    |
| 4     | 351    | 238      | .10  | .20  | .20    | 5.0   | 4.7     | 478    | 273    | 534    | 562    | 482    |
| 5     | 351    | 238      | .10  | .10  | 4.5    | 5.0   | 4.7     | 478    | 273    | 534    | 558    | 482    |
| 6     | 351    | 238      | .10  | .10  | 5.5    | 5.0   | 4.7     | 478    | 270    | 538    | 558    | 478    |
| 7     | 351    | 238      | .10  | .10  | 5.5    | 5.0   | 4.7     | 474    | 320    | 538    | 558    | 478    |
| 8     | 351    | 235      | .10  | .10  | 5.5    | 5.0   | 4.7     | 474    | 384    | 534    | 558    | 474    |
| 9     | 302    | 235      | .10  | .20  | 5.5    | 5.0   | 5.0     | 424    | 381    | 534    | 554    | 474    |
| 10    | 260    | 235      | .10  | .30  | 5.5    | 5.0   | 5.0     | 372    | 381    | 530    | 550    | 474    |
| 11    | 260    | 235      | .20  | .30  | 5.2    | 5.0   | 5.0     | 369    | 378    | 530    | 550    | 474    |
| 12    | 260    | 207      | .20  | .40  | 5.2    | 5.0   | 5.0     | 369    | 378    | 530    | 550    | 434    |
| 13    | 258    | 125      | .20  | .40  | 5.2    | 5.0   | 4.5     | 369    | 378    | 530    | 550    | 390    |
| 14    | 258    | 128      | .20  | .40  | 5.5    | 5.0   | 4.5     | 366    | 334    | 526    | 550    | 390    |
| 15    | 255    | 128      | .20  | .30  | 5.2    | 5.0   | 4.7     | 366    | 297    | 526    | 542    | 390    |
| 16    | 255    | 88       | .20  | .30  | 5.2    | 5.0   | 102     | 366    | 297    | 526    | 538    | 390    |
| 17    | 255    | 5.9      | .20  | .20  | 5.0    | 5.0   | 330     | 363    | 297    | 526    | 538    | 390    |
| 18    | 255    | 2.7      | .10  | .20  | 5.0    | 4.7   | 438     | 360    | 297    | 498    | 538    | 390    |
| 19    | 252    | 1.9      | .10  | .20  | 5.0    | 4.7   | 478     | 360    | 297    | 466    | 538    | 390    |
| 20    | 252    | 1.1      | .10  | .20  | 5.0    | 4.7   | 478     | 360    | 325    | 462    | 534    | 374    |
| 21    | 250    | .90      | .10  | .20  | 9.1    | 4.7   | 478     | 360    | 378    | 466    | 534    | 345    |
| 22    | 250    | 2.3      | .10  | .20  | 6.3    | 4.7   | 478     | 357    | 378    | 466    | 530    | 345    |
| 23    | 248    | 2.4      | .10  | .10  | 5.0    | 4.7   | 478     | 320    | 378    | 466    | 526    | 345    |
| 24    | 250    | 1.5      | .10  | .10  | 4.7    | 4.7   | 478     | 276    | 378    | 470    | 522    | 345    |
| 25    | 248    | 1.0      | .10  | .10  | 4.5    | 4.2   | 478     | 276    | 418    | 515    | 518    | 345    |
| 26    | 248    | .70      | .10  | .10  | 4.5    | 4.5   | 478     | 276    | 454    | 562    | 514    | 323    |
| 27    | 245    | .60      | .10  | .10  | 4.5    | 4.5   | 478     | 276    | 454    | 562    | 510    | 276    |
| 28    | 245    | .40      | .10  | .10  | 4.7    | 4.5   | 478     | 276    | 454    | 562    | 506    | 276    |
| 29    | 242    | .30      | .20  | .30  | -----  | 3.9   | 478     | 276    | 458    | 562    | 506    | 276    |
| 30    | 242    | .20      | .20  | .40  | -----  | 3.9   | 478     | 273    | 458    | 562    | 498    | 276    |
| 31    | 240    | -----    | .40  | .30  | -----  | 4.5   | -----   | 273    | -----  | 566    | 494    | -----  |
| Total | 8,638  | 3,309.90 | 4.40 | 6.80 | 127.60 | 147.6 | 6,676.7 | 11,499 | 10,587 | 16,174 | 16,682 | 11,980 |
| Mean  | 279    | 110      | .14  | .22  | 4.56   | 4.76  | 223     | 371    | 353    | 522    | 538    | 399    |
| Ac-ft | 17,130 | 6,570    | 8.7  | 13   | 253    | 293   | 13,240  | 22,810 | 21,000 | 32,080 | 33,090 | 23,760 |

Calendar year 1965 Max 566 Min 0 Mean 196 Ac-ft 142,000  
 Water year 1965-66 Max 566 Min .10 Mean 235 Ac-ft 170,200

11-1499. San Antonio River near Lockwood, Calif.

Location.--Lat 35°53'48", long 121°05'14", in Los Ojitos Grant, on downstream side of highway bridge, 0.4 mile upstream of Tule Canyon, and 3.3 miles south of Lockwood, Monterey County.

Drainage area.--223 sq mi.

Records available.--October 1965 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 800.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Extremes.--Maximum discharge during year, 721 cfs Dec. 31 (gage height, 2.68 ft); no flow for several months.

Remarks.--Records poor. No regulation; some pumping above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|--------|-------|------|------|-------|
| 1     |      | 0     | 27    | 472   | 127   | 60    | 21    | 7.2    | 0.20  |      |      |       |
| 2     |      | 0     | 21    | 278   | 127   | 57    | 21    | 5.8    | .10   |      |      |       |
| 3     |      | 0     | 20    | 240   | 123   | 54    | 23    | 5.8    | 0     |      |      |       |
| 4     |      | 0     | 20    | 225   | 118   | 51    | 21    | 6.4    | 0     |      |      |       |
| 5     |      | 0     | 18    | 199   | 209   | 54    | 20    | 7.2    | 0     |      |      |       |
| 6     |      | 0     | 18    | 176   | 235   | 51    | 20    | 6.4    | 0     |      |      |       |
| 7     |      | 0     | 16    | 172   | 195   | 51    | 15    | 5.8    | 0     |      |      |       |
| 8     |      | 0     | 15    | 158   | 167   | 48    | 15    | 5.8    | 0     |      |      |       |
| 9     |      | 0     | 15    | 127   | 145   | 46    | 20    | 5.2    | 0     |      |      |       |
| 10    |      | 0     | 15    | 110   | 136   | 46    | 16    | 5.2    | 0     |      |      |       |
| 11    |      | 0     | 23    | 96    | 132   | 46    | 23    | 5.8    | 0     |      |      |       |
| 12    |      | 0     | 36    | 75    | 127   | 46    | 21    | 8.0    | 0     |      |      |       |
| 13    |      | 0     | 48    | 69    | 103   | 43    | 21    | 6.4    | 0     |      |      |       |
| 14    |      | 0     | 43    | 69    | 96    | 46    | 20    | 6.4    | 0     |      |      |       |
| 15    |      | 0     | 36    | 66    | 85    | 48    | 15    | 5.8    | 0     |      |      |       |
| 16    |      | 0     | 32    | 60    | 78    | 48    | 11    | 6.4    | 0     |      |      |       |
| 17    |      | 0     | 27    | 60    | 78    | 46    | 11    | 4.8    | 0     |      |      |       |
| 18    |      | 96    | 27    | 57    | 78    | 41    | 12    | 4.3    | 0     |      |      |       |
| 19    |      | 85    | 27    | 60    | 82    | 41    | 12    | 3.5    | 0     |      |      |       |
| 20    |      | 51    | 27    | 54    | 96    | 41    | 14    | 3.5    | 0     |      |      |       |
| 21    |      | 39    | 27    | 51    | 75    | 41    | 14    | 3.5    | 0     |      |      |       |
| 22    |      | 46    | 27    | 51    | 69    | 41    | 14    | 3.5    | 0     |      |      |       |
| 23    |      | 209   | 27    | 48    | 69    | 41    | 14    | 3.5    | 0     |      |      |       |
| 24    |      | 167   | 27    | 43    | 69    | 41    | 14    | 2.9    | 0     |      |      |       |
| 25    |      | 149   | 30    | 42    | 66    | 41    | 12    | 1.0    | 0     |      |      |       |
| 26    |      | 100   | 54    | 42    | 66    | 39    | 11    | 1.0    | 0     |      |      |       |
| 27    |      | 57    | 40    | 41    | 60    | 39    | 10    | .70    | 0     |      |      |       |
| 28    |      | 41    | 50    | 41    | 60    | 36    | 10    | .70    | 0     |      |      |       |
| 29    |      | 34    | 100   | 85    | ----- | 34    | 10    | .60    | 0     |      |      |       |
| 30    |      | 30    | 300   | 181   | ----- | 32    | 9.0   | .60    | 0     |      |      |       |
| 31    |      | ----- | 609   | 149   | ----- | 27    | ----- | 5.0    | ----- |      |      | ----- |
| Total | 0    | 1,104 | 1,802 | 3,597 | 3,071 | 1,376 | 470.0 | 134.20 | 0.30  | 0    | 0    | 0     |
| Mean  | 0    | 36.8  | 58.1  | 116   | 110   | 44.4  | 15.7  | 4.33   | 0.01  | 0    | 0    | 0     |
| Ac-ft | 0    | 2,190 | 3,570 | 7,130 | 6,090 | 2,730 | 932   | 266    | 0.6   | 0    | 0    | 0     |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Water year 1965-66 Max 609 Min 0 Mean 31.7 Ac-ft 22,920

Peak discharge (base, 350 cfs).--Dec. 31 (1730) 721 cfs (2.68 ft).

## SALINAS RIVER BASIN

297

11-1505. Salinas River near Bradley, Calif.

Location.--Lat 35°55'40", long 120°52'00", in NE¼ sec.15, T.23 S., R.10 E., on left bank 6 miles northwest of Bradley and 7 miles downstream from San Antonio River.

Drainage area.--2,536 sq mi.

Records available.--October 1948 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Altitude of gage is 450 ft (from topographic map).

Average discharge.--18 years, 361 cfs (261,400 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 1,010 cfs Jan. 1 (gage height, 5.63 ft); minimum daily, 12 cfs Apr. 15, 16.

1948-66: Maximum discharge, 28,400 cfs Apr. 3, 1958 (gage height, 12.53 ft); no flow at times in 1951, 1954-55, 1957.

Remarks.--Records fair. Flow partly regulated by Salinas Reservoir (see sta 11-1445), Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft), and San Antonio Reservoir beginning in October 1965 (usable capacity, 350,000 acre-ft). Several small diversions above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.   | Nov.  | Dec.  | Jan.   | Feb.  | Mar.  | Apr.   | May     | June   | July   | Aug.   | Sept.  |
|--------------------|--------|-------|-------|--------|-------|-------|--------|---------|--------|--------|--------|--------|
| 1                  | 352    | 244   | 29    | 958    | 328   | 88    | 34     | 504     | 340    | 484    | 539    | 490    |
| 2                  | 352    | 244   | 24    | 686    | 294   | 85    | 31     | 532     | 328    | 567    | 539    | 497    |
| 3                  | 364    | 244   | 21    | 504    | 282   | 82    | 29     | 546     | 322    | 602    | 546    | 504    |
| 4                  | 364    | 255   | 21    | 388    | 238   | 85    | 26     | 546     | 316    | 602    | 553    | 504    |
| 5                  | 358    | 250   | 20    | 334    | 196   | 85    | 24     | 525     | 322    | 595    | 574    | 511    |
| 6                  | 358    | 244   | 18    | 288    | 182   | 78    | 22     | 504     | 328    | 588    | 581    | 511    |
| 7                  | 358    | 244   | 16    | 255    | 206   | 75    | 20     | 490     | 340    | 581    | 588    | 490    |
| 8                  | 340    | 244   | 16    | 228    | 216   | 72    | 18     | 497     | 400    | 574    | 588    | 478    |
| 9                  | 334    | 244   | 16    | 200    | 206   | 66    | 16     | 532     | 406    | 574    | 588    | 484    |
| 10                 | 272    | 250   | 16    | 182    | 196   | 66    | 14     | 466     | 394    | 567    | 574    | 497    |
| 11                 | 255    | 255   | 16    | 164    | 206   | 61    | 13     | 442     | 370    | 581    | 546    | 504    |
| 12                 | 260    | 255   | 24    | 155    | 216   | 61    | 16     | 430     | 364    | 588    | 546    | 504    |
| 13                 | 272    | 196   | 22    | 147    | 191   | 61    | 14     | 424     | 358    | 588    | 546    | 472    |
| 14                 | 272    | 160   | 21    | 142    | 168   | 58    | 14     | 418     | 352    | 560    | 546    | 442    |
| 15                 | 277    | 147   | 21    | 134    | 151   | 58    | 12     | 400     | 288    | 574    | 532    | 424    |
| 16                 | 277    | 186   | 16    | 121    | 134   | 58    | 12     | 406     | 288    | 581    | 539    | 442    |
| 17                 | 277    | 164   | 16    | 110    | 126   | 55    | 76     | 412     | 294    | 553    | 546    | 448    |
| 18                 | 272    | 110   | 15    | 102    | 121   | 52    | 282    | 412     | 288    | 553    | 539    | 466    |
| 19                 | 277    | 99    | 15    | 99     | 121   | 52    | 394    | 406     | 288    | 511    | 532    | 478    |
| 20                 | 277    | 99    | 14    | 99     | 110   | 49    | 424    | 400     | 277    | 472    | 546    | 454    |
| 21                 | 277    | 102   | 14    | 92     | 106   | 49    | 442    | 394     | 352    | 448    | 560    | 382    |
| 22                 | 266    | 99    | 14    | 82     | 110   | 47    | 442    | 388     | 376    | 442    | 553    | 358    |
| 23                 | 272    | 102   | 14    | 75     | 99    | 47    | 448    | 388     | 382    | 442    | 518    | 358    |
| 24                 | 266    | 121   | 14    | 69     | 92    | 45    | 472    | 328     | 394    | 454    | 504    | 370    |
| 25                 | 266    | 88    | 16    | 58     | 92    | 45    | 490    | 316     | 394    | 460    | 504    | 376    |
| 26                 | 272    | 72    | 16    | 52     | 88    | 42    | 518    | 328     | 460    | 504    | 497    | 388    |
| 27                 | 266    | 61    | 16    | 49     | 88    | 42    | 518    | 340     | 472    | 518    | 484    | 346    |
| 28                 | 260    | 49    | 22    | 47     | 88    | 40    | 518    | 334     | 466    | 532    | 484    | 310    |
| 29                 | 250    | 36    | 64    | 47     | ----- | 38    | 497    | 334     | 466    | 525    | 484    | 288    |
| 30                 | 250    | 29    | 349   | 94     | ----- | 36    | 484    | 340     | 454    | 539    | 478    | 277    |
| 31                 | 244    | ----- | 836   | 328    | ----- | 36    | -----  | 340     | -----  | 553    | 490    | -----  |
| Total              | 9,057  | 4,893 | 1,752 | 6,289  | 4,651 | 1,814 | 6,320  | 13,122  | 10,879 | 16,712 | 16,644 | 13,053 |
| Mean               | 292    | 163   | 56.5  | 203    | 166   | 58.5  | 211    | 423     | 363    | 539    | 537    | 435    |
| Ac-ft              | 17,960 | 9,710 | 3,480 | 12,470 | 9,230 | 3,600 | 12,540 | 26,030  | 21,580 | 33,150 | 33,010 | 25,890 |
| Calendar year 1965 | Max    | 4,050 | Min   | 14     | Mean  | 312   | Ac-ft  | 226,200 |        |        |        |        |
| Water year 1965-66 | Max    | 958   | Min   | 12     | Mean  | 288   | Ac-ft  | 208,600 |        |        |        |        |

## SALINAS RIVER BASIN

11-1513. San Lorenzo Creek below Bitterwater Creek, near King City, Calif.

Location.--Lat 36°16'05", long 121°03'50", in NW¼ sec.24, T.19 S., R.8 E., on left bank 1.2 miles downstream from Bitterwater Creek, 5 miles northeast of King City, and 10 miles upstream from mouth.

Drainage area.--233 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 436.64 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Apr. 6, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 4.88 cfs (3,530 acre-ft per year).

Extremes.--Maximum discharge during year, 1,270 cfs Nov. 23 (gage height, 7.36 ft), from rating curve extended above 120 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.10 cfs for several months.

1958-66: Maximum discharge, 2,130 cfs Feb. 10, 1963 (gage height, 8.13 ft), from rating curve extended above 800 cfs; no flow for many days in 1961.

Remarks.--Records good prior to June 11; fair thereafter. No regulation; small diversions above station.

Revisions (water years).--1962 Report: 1961. 1965 Report: 1964.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.   | JAN.   | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|----------|--------|--------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.10 | 0.10     | 0.20   | 44     | 10    | 1.9   | 0.30  | 0.20 | 0.20  | 0.10 | 0.20 | 0.10  |
| 2     | .10  | .10      | .20    | 19     | 16    | 2.8   | .20   | .20  | .20   | .10  | .20  | .10   |
| 3     | .10  | .10      | .10    | 14     | 8.3   | 3.4   | .20   | .20  | .20   | .10  | .20  | .10   |
| 4     | .10  | .10      | .10    | 11     | 7.4   | 2.8   | .20   | .20  | .20   | .10  | .10  | .10   |
| 5     | .10  | .10      | .10    | 9.1    | 4.5   | 2.6   | .20   | .20  | .20   | .10  | .10  | .10   |
| 6     | .10  | .10      | .10    | 7.4    | 32    | 2.1   | .30   | .20  | .20   | .10  | .10  | .10   |
| 7     | .10  | .10      | .10    | 6.6    | 23    | 1.6   | .20   | .20  | .20   | .10  | .10  | .10   |
| 8     | .10  | .10      | .10    | 5.4    | 13    | 1.2   | .20   | .20  | .20   | .10  | .10  | .10   |
| 9     | .10  | .10      | .10    | 4.5    | 10    | .80   | .30   | .20  | .20   | .10  | .10  | .10   |
| 10    | .10  | .10      | .10    | 4.0    | 8.3   | .80   | .30   | .20  | .20   | .10  | .10  | .10   |
| 11    | .10  | .10      | .60    | 3.4    | 7.4   | .70   | .30   | .20  | .20   | .10  | .10  | .10   |
| 12    | .10  | .10      | 3.7    | 2.8    | 6.1   | .60   | .20   | .20  | .20   | .10  | .10  | .10   |
| 13    | .10  | .10      | 27     | 2.3    | 5.7   | .60   | .20   | .20  | .20   | .10  | .10  | .10   |
| 14    | .10  | .30      | 7.0    | 1.9    | 5.4   | .40   | .20   | .20  | .20   | .10  | .10  | .10   |
| 15    | .10  | .10      | 4.2    | 1.6    | 5.1   | .30   | .20   | .20  | .20   | .10  | .10  | .10   |
| 16    | .10  | 1.3      | 2.6    | 1.0    | 4.5   | .30   | .20   | .20  | .20   | .10  | .10  | .10   |
| 17    | .10  | 64       | 1.3    | .80    | 4.2   | .40   | .20   | .20  | .20   | .10  | .10  | .10   |
| 18    | .10  | 135      | .90    | .90    | 4.2   | .30   | .20   | .20  | .20   | .10  | .10  | .10   |
| 19    | .10  | 68       | .80    | 1.0    | 4.0   | .30   | .20   | .10  | .10   | .10  | .10  | .10   |
| 20    | .10  | 13       | .80    | 1.0    | 3.7   | .30   | .20   | .20  | .10   | .10  | .10  | .10   |
| 21    | .10  | 4.0      | .80    | 1.0    | 3.1   | .30   | .20   | .20  | .10   | .10  | .10  | .10   |
| 22    | .10  | 3.6      | .60    | 1.0    | 2.8   | .30   | .20   | .20  | .10   | .10  | .10  | .10   |
| 23    | .10  | 350      | .60    | .90    | 2.8   | .30   | .20   | .10  | .10   | .10  | .10  | .10   |
| 24    | .10  | 298      | .60    | .80    | 2.3   | .30   | .20   | .10  | .10   | .10  | .10  | .10   |
| 25    | .10  | 63       | 1.1    | .90    | 2.3   | .30   | .20   | .20  | .10   | .10  | .10  | .10   |
| 26    | .10  | 21       | .90    | .90    | 2.8   | .20   | .20   | .10  | .10   | .10  | .10  | .10   |
| 27    | .10  | 9.6      | .90    | .80    | 2.8   | .20   | .20   | .20  | .10   | .10  | .10  | .10   |
| 28    | .10  | 4.8      | 1.6    | .60    | 2.3   | .30   | .20   | .20  | .10   | .10  | .10  | .10   |
| 29    | .10  | 2.6      | 236    | 1.8    | ----- | .30   | .20   | .20  | .10   | .10  | .10  | .10   |
| 30    | .10  | .80      | 132    | 41     | ----- | .30   | .20   | .10  | .10   | .10  | .10  | .10   |
| 31    | .10  | -----    | 125    | 25     | ----- | .30   | ----- | .20  | ----- | .20  | .10  | ----- |
| TOTAL | 3.10 | 1,040.40 | 550.20 | 216.40 | 244.5 | 27.30 | 6.50  | 5.70 | 4.80  | 3.20 | 3.40 | 3.00  |
| MEAN  | .10  | 34.7     | 17.7   | 6.98   | 8.73  | .88   | .22   | .18  | .16   | .10  | .11  | .10   |
| AC-FT | 6.1  | 2,060    | 1,090  | 429    | 485   | 54    | 13    | 11   | 9.5   | 6.3  | 6.7  | 6.0   |

CALENDAR YEAR 1965 MAX 350 MIN .10 MEAN 7.57 AC-FT 5,480  
 WATER YEAR 1965-66 MAX 350 MIN .10 MEAN 5.78 AC-FT 4,180

Peak Discharge (base, 250 cfs, revised).--Nov. 23 (0200) 1,270 cfs (7.36 ft); Dec. 29 (0530) 740 cfs (6.42 ft).

Note.--No gage-height record July 5 to Sept. 30.

11-1518.7. Arroyo Seco near Greenfield, Calif.

Location.--Lat 36°14'15", long 121°28'50", in NE¼SE¼ sec.36, T.19 S., R.4 E., on right bank 0.6 mile downstream from Rocky Creek and 14.5 miles southwest of Greenfield.

Drainage area.--113 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 780 ft (from topographic map).

Average discharge.--5 years, 110 cfs (79,640 acre-ft per year).

Extremes.--Maximum discharge during year, 2,330 cfs Dec. 28 (gage height, 6.58 ft); no flow Aug. 25-27.

1961-66: Maximum discharge, 10,400 cfs Jan. 31, 1963 (gage height, 11.35 ft); no flow Oct. 1-5, 1961, Aug. 25-27, 1966.

Remarks.--Records good. No regulation; small diversion for fishponds above station by pumping. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.  | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 5.1   | 4.0     | 85    | 598    | 252   | 94    | 44    | 24    | 11    | 2.7   | 2.2   | 0.20  |
| 2     | 4.3   | 4.3     | 74    | 440    | 220   | 101   | 44    | 23    | 11    | 2.8   | 2.5   | .30   |
| 3     | 3.9   | 4.5     | 67    | 351    | 193   | 94    | 42    | 22    | 10    | 2.8   | 2.2   | .50   |
| 4     | 3.5   | 5.1     | 61    | 290    | 240   | 90    | 42    | 22    | 10    | 2.9   | 1.9   | .30   |
| 5     | 3.7   | 5.3     | 57    | 260    | 327   | 89    | 42    | 22    | 8.6   | 2.9   | 1.6   | .20   |
| 6     | 3.9   | 5.3     | 53    | 223    | 360   | 87    | 41    | 23    | 7.9   | 2.9   | 1.3   | .20   |
| 7     | 3.9   | 5.4     | 50    | 203    | 302   | 83    | 40    | 22    | 8.2   | 2.8   | 1.2   | .10   |
| 8     | 4.0   | 5.6     | 47    | 187    | 265   | 81    | 40    | 22    | 8.4   | 2.6   | 1.2   | .20   |
| 9     | 3.9   | 6.1     | 45    | 173    | 230   | 78    | 39    | 22    | 8.2   | 2.6   | .80   | .40   |
| 10    | 4.0   | 6.8     | 44    | 159    | 207   | 76    | 53    | 22    | 7.6   | 2.7   | .60   | .40   |
| 11    | 4.2   | 7.4     | 45    | 147    | 189   | 75    | 43    | 22    | 7.2   | 3.2   | .40   | .50   |
| 12    | 4.5   | 8.0     | 107   | 137    | 185   | 73    | 39    | 22    | 6.6   | 3.9   | .40   | .60   |
| 13    | 4.9   | 11.0    | 80    | 130    | 166   | 71    | 38    | 20    | 6.2   | 3.9   | .40   | .60   |
| 14    | 4.5   | 12.5    | 63    | 120    | 154   | 70    | 37    | 20    | 6.0   | 3.9   | .40   | .60   |
| 15    | 4.5   | 27.0    | 58    | 112    | 145   | 68    | 35    | 18    | 6.2   | 3.7   | .40   | .60   |
| 16    | 4.9   | 33.0    | 54    | 105    | 138   | 66    | 32    | 18    | 5.6   | 3.5   | .30   | .70   |
| 17    | 5.4   | 1.000   | 51    | 98     | 131   | 65    | 32    | 18    | 5.6   | 3.1   | .20   | .80   |
| 18    | 5.8   | 35.0    | 48    | 93     | 126   | 63    | 32    | 17    | 5.6   | 2.6   | .20   | .80   |
| 19    | 5.8   | 200     | 46    | 89     | 142   | 61    | 32    | 16    | 5.6   | 2.4   | .20   | .80   |
| 20    | 5.8   | 100     | 44    | 85     | 130   | 60    | 32    | 15    | 4.7   | 2.1   | .20   | 1.0   |
| 21    | 5.8   | 80      | 44    | 81     | 122   | 58    | 32    | 14    | 4.2   | 2.0   | .20   | 1.2   |
| 22    | 5.6   | 120     | 42    | 78     | 114   | 57    | 32    | 13    | 4.0   | 1.6   | .20   | 1.2   |
| 23    | 5.3   | 327     | 42    | 75     | 113   | 56    | 31    | 13    | 4.3   | 1.3   | .20   | 1.1   |
| 24    | 4.7   | 489     | 40    | 72     | 109   | 54    | 31    | 13    | 5.3   | 1.2   | .10   | 1.0   |
| 25    | 3.9   | 387     | 175   | 70     | 105   | 53    | 28    | 12    | 4.3   | 1.0   | 0     | 1.0   |
| 26    | 3.9   | 252     | 116   | 68     | 106   | 52    | 27    | 12    | 4.5   | .80   | 0     | 1.0   |
| 27    | 3.9   | 185     | 87    | 68     | 101   | 51    | 26    | 12    | 4.2   | .60   | 0     | 1.0   |
| 28    | 4.0   | 143     | 488   | 65     | 98    | 50    | 28    | 11    | 3.7   | .50   | .10   | 1.0   |
| 29    | 4.0   | 118     | 1,040 | 135    | ----- | 49    | 28    | 12    | 3.2   | .40   | .10   | 1.0   |
| 30    | 4.2   | 100     | 910   | 605    | ----- | 47    | 26    | 13    | 2.9   | .70   | .10   | 1.0   |
| 31    | 4.0   | -----   | 850   | 282    | ----- | 45    | ----- | 11    | ----- | 1.9   | .20   | ----- |
| Total | 139.8 | 4,753.8 | 5,013 | 5,599  | 4,970 | 2,117 | 1,068 | 546   | 190.8 | 72.00 | 19.80 | 20.30 |
| Mean  | 4.51  | 158     | 162   | 181    | 178   | 68.3  | 35.6  | 17.6  | 6.36  | 2.32  | 0.64  | 0.68  |
| Ac-ft | 277   | 1,000   | 9,940 | 11,110 | 9,860 | 4,200 | 2,120 | 1,080 | 378   | 143   | 39    | 40    |

Calendar year 1965 Max 3,090 Min 2.6 Mean 119 Ac-ft 86,490  
 Water year 1965-66 Max 1,040 Min 0 Mean 67.1 Ac-ft 48,610

Peak discharge (base, 1,500 cfs, revised).--Nov. 18 (about 0800) 2100 cfs (6.35 ft); Dec. 28 (2100) 2,330 cfs (6.58 ft).

11-1520. Arroyo Seco near Soledad, Calif.

Location.--Lat 36°16'50", long 121°19'20", in SW¼NE¼ sec.16, T.19 S., R.6 E., on left bank just downstream from bridge, 1.5 miles downstream from Vaquero Creek, and 10 miles south of Soledad.

Drainage area.--244 sq mi.

Records available.--November 1901 to September 1966. Records for water year 1902 incomplete, yearly estimate published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 342.20 ft above mean sea level (Corps of Engineers benchmark). Prior to June 16, 1929, staff gage, and June 16, 1929, to Dec. 2, 1941, water-stage recorder, at site 1 mile upstream at different datum. Dec. 3, 1941, to Sept. 30, 1959, at datum 2.00 ft higher.

Average discharge.--65 years, 159 cfs (115,100 acre-ft per year); median of yearly mean discharges, 122 cfs (88,300 acre-ft per year).

Extremes.--Maximum discharge during year, 4,530 cfs Dec. 28 (gage height, 10.19 ft); no flow July 6 to Sept. 30. 1901-66: Maximum discharge, 28,300 cfs Apr. 3, 1958 (gage height, 16.40 ft, present datum), from rating curve extended above 12,000 cfs on basis of slope-area measurement at gage height 16.30 ft; no flow at times during several years.

Remarks.--Records good. No regulation or large diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.    | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June   | July | Aug. | Sept. |
|-------|------|---------|--------|--------|-------|-------|-------|-------|--------|------|------|-------|
| 1     | 2.2  | 2.7     | 100    | 811    | 250   | 91    | 46    | 26    | 14     | 0.40 |      |       |
| 2     | 1.9  | 2.7     | 91     | 540    | 228   | 96    | 45    | 22    | 13     | .40  |      |       |
| 3     | 1.9  | 2.7     | 82     | 395    | 192   | 93    | 44    | 22    | 12     | .40  |      |       |
| 4     | 1.7  | 2.7     | 75     | 314    | 200   | 86    | 43    | 22    | 11     | .30  |      |       |
| 5     | 1.6  | 2.9     | 70     | 272    | 314   | 84    | 42    | 21    | 10     | .10  |      |       |
| 6     | 1.3  | 3.4     | 64     | 237    | 374   | 83    | 41    | 21    | 10     | 0    |      |       |
| 7     | 1.0  | 3.8     | 60     | 210    | 303   | 80    | 40    | 22    | 9.0    | 0    |      |       |
| 8     | 1.1  | 4.0     | 57     | 195    | 261   | 77    | 40    | 22    | 9.0    | 0    |      |       |
| 9     | 1.1  | 4.2     | 53     | 178    | 225   | 76    | 40    | 21    | 9.0    | 0    |      |       |
| 10    | 1.4  | 4.6     | 52     | 162    | 205   | 75    | 49    | 21    | 8.6    | 0    |      |       |
| 11    | 1.7  | 5.0     | 51     | 148    | 188   | 73    | 50    | 22    | 7.8    | 0    |      |       |
| 12    | 1.7  | 5.3     | 110    | 139    | 172   | 70    | 45    | 22    | 6.6    | 0    |      |       |
| 13    | 1.6  | 6.2     | 112    | 131    | 160   | 69    | 42    | 20    | 5.0    | 0    |      |       |
| 14    | 1.7  | 113     | 84     | 125    | 121   | 68    | 41    | 19    | 4.3    | 0    |      |       |
| 15    | 1.8  | 100     | 75     | 117    | 142   | 67    | 39    | 18    | 3.6    | 0    |      |       |
| 16    | 1.8  | 306     | 69     | 110    | 133   | 64    | 35    | 18    | 3.4    | 0    |      |       |
| 17    | 1.7  | 349     | 64     | 106    | 125   | 63    | 35    | 18    | 2.6    | 0    |      |       |
| 18    | 1.9  | 1,160   | 60     | 101    | 123   | 61    | 35    | 17    | 2.5    | 0    |      |       |
| 19    | 2.2  | 270     | 58     | 97     | 131   | 59    | 35    | 16    | 1.8    | 0    |      |       |
| 20    | 4.4  | 146     | 57     | 94     | 129   | 57    | 35    | 15    | 1.6    | 0    |      |       |
| 21    | 3.0  | 104     | 56     | 91     | 117   | 56    | 34    | 14    | 1.1    | 0    |      |       |
| 22    | 2.8  | 87      | 52     | 88     | 108   | 55    | 33    | 13    | 1.1    | 0    |      |       |
| 23    | 2.7  | 281     | 51     | 85     | 106   | 54    | 31    | 13    | .80    | 0    |      |       |
| 24    | 2.6  | 586     | 50     | 83     | 103   | 53    | 31    | 13    | .80    | 0    |      |       |
| 25    | 2.4  | 460     | 141    | 82     | 99    | 52    | 32    | 12    | .70    | 0    |      |       |
| 26    | 2.3  | 290     | 142    | 77     | 99    | 51    | 31    | 12    | .70    | 0    |      |       |
| 27    | 2.3  | 210     | 108    | 76     | 96    | 51    | 30    | 12    | .70    | 0    |      |       |
| 28    | 2.2  | 160     | 353    | 75     | 93    | 52    | 28    | 11    | .70    | 0    |      |       |
| 29    | 2.3  | 134     | 1,850  | 76     | ----- | 50    | 28    | 11    | .50    | 0    |      |       |
| 30    | 2.3  | 116     | 1,350  | 785    | ----- | 48    | 27    | 12    | .40    | 0    |      |       |
| 31    | 2.4  | -----   | 1,260  | 322    | ----- | 47    | ----- | 14    | -----  | 0    |      |       |
| Total | 63.0 | 4,922.2 | 6,857  | 6,322  | 4,797 | 2,061 | 1,127 | 542   | 152.30 | 1.60 | 0    | 0     |
| Mean  | 2.03 | 164     | 221    | 204    | 171   | 66.5  | 37.6  | 17.5  | 5.08   | 0.05 | 0    | 0     |
| Ac-ft | 125  | 9,760   | 13,600 | 12,540 | 9,510 | 4,090 | 2,240 | 1,080 | 302    | 3.2  | 0    | 0     |

Calendar year 1965 Max 4,690 Min 0.60 Mean 135 Ac-ft 97,870  
 Water year 1965-66 Max 1,850 Min 0 Mean 73.5 Ac-ft 53,250

Peak discharge (base, 2,500 cfs, revised).--Nov. 18 (0300) 3,650 cfs (9.75 ft); Dec. 28 (2400) 4,530 cfs (10.9 ft).

11-1525. Salinas River near Spreckels, Calif.

Location.--Lat 36°37'50", long 121°40'40", in El Toro Grant, on first pier near left end of bridge on Salinas-Monterey highway, 0.5 mile upstream from El Toro Creek, 2 miles west of Spreckels, Monterey County, and 4 miles south of Salinas.

Drainage area.--4,157 sq mi.

Records available.--January 1900 to August 1901, October 1929 to September 1966. Records for water year 1930 incomplete, yearly estimate published in WSP 1315-B. Published as "near Salinas" 1900-1901.

Gage.--Water-stage recorder. Datum of gage is 19.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1955. 1900-1901, May 10 to July 29, 1940, staff gages at same site at different datum. Mar. 17, 1941, to June 30, 1961, supplementary wire-weight or staff gages and since July 1, 1961, auxiliary water-stage recorder at site 80 ft upstream at same datum.

Average discharge.--37 years (1929-66), 385 cfs (278,700 acre-ft per year); median of yearly mean discharges 135 cfs (97,700 acre-ft per year).

Extremes.--Maximum discharge during year, 604 cfs Jan. 2 (gage height, 11.87 ft); minimum daily 0.6 cfs June 24, 27, 28.

1900-1901, 1929-66. Maximum discharge, 75,000 cfs Feb. 12, 1938 (gage height, 25.0 ft), from rating curve extended above 26,000 cfs on basis of velocity-area studies; maximum gage height, 26.85 ft Jan. 16, 1952, from floodmarks; no flow at times in 1929-40.

Remarks.--Records fair. Large withdrawals from ground water and small surface-water diversions for municipal use and irrigation of about 95,000 acres above station. Low flow represents waste water from Spreckels sugar refinery and Alisal sewage disposal plant. Flow partly regulated by Nacimiento Reservoir beginning in November 1956 (usable capacity, 340,000 acre-ft) and San Antonio Reservoir beginning in October 1965 (usable capacity, 350,000 acre-ft). Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.    | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|-------|---------|---------|--------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 3.1   | 3.0     | 90      | 566    | 166   | 49    | 4.2   | 9.2   | 7.4   | 0.70  | 1.1  | 2.0   |
| 2     | 3.3   | 2.8     | 71      | 584    | 128   | 47    | 4.2   | 8.0   | 6.8   | .80   | 1.0  | 2.0   |
| 3     | 3.5   | 3.3     | 58      | 560    | 156   | 44    | 4.2   | 8.3   | 6.1   | 1.0   | 1.1  | 2.3   |
| 4     | 3.5   | 3.3     | 46      | 532    | 157   | 41    | 4.5   | 8.0   | 7.1   | .80   | 1.1  | 2.2   |
| 5     | 3.6   | 3.3     | 35      | 436    | 150   | 35    | 6.6   | 8.0   | 7.1   | .80   | 1.2  | 2.2   |
| 6     | 3.8   | 3.3     | 30      | 348    | 187   | 35    | 5.9   | 7.7   | 6.1   | .80   | 1.5  | 2.3   |
| 7     | 4.0   | 3.8     | 22      | 287    | 237   | 33    | 5.6   | 7.7   | 5.6   | .80   | 1.5  | 2.1   |
| 8     | 4.2   | 3.8     | 19      | 231    | 244   | 30    | 5.2   | 7.7   | 4.3   | .80   | 1.2  | 2.1   |
| 9     | 4.3   | 3.8     | 16      | 194    | 201   | 27    | 5.9   | 7.7   | 4.2   | .80   | 1.1  | 2.2   |
| 10    | 4.3   | 3.8     | 12      | 173    | 184   | 24    | 6.8   | 7.7   | 3.6   | .90   | 1.1  | 2.3   |
| 11    | 4.5   | 3.8     | 8.6     | 154    | 170   | 22    | 7.1   | 9.2   | 3.8   | .80   | 1.0  | 2.3   |
| 12    | 5.0   | 4.0     | 12      | 140    | 153   | 18    | 7.7   | 20    | 2.7   | .80   | 1.1  | 1.8   |
| 13    | 5.4   | 5.2     | 12      | 130    | 143   | 15    | 8.0   | 21    | 2.0   | .80   | 1.1  | 1.8   |
| 14    | 5.4   | 9.2     | 16      | 119    | 143   | 11    | 8.0   | 17    | 2.3   | .90   | 1.2  | 2.0   |
| 15    | 5.2   | 13.2    | 15      | 112    | 138   | 9.2   | 8.9   | 14    | 2.3   | .80   | 1.0  | 2.1   |
| 16    | 4.3   | 28      | 12      | 107    | 128   | 7.7   | 9.5   | 14    | 1.5   | .90   | 1.0  | 2.1   |
| 17    | 3.8   | 50      | 8.0     | 101    | 119   | 6.6   | 8.3   | 14    | 1.4   | 1.0   | 1.4  | 2.6   |
| 18    | 3.1   | 82      | 5.2     | 96     | 113   | 5.2   | 8.3   | 14    | 1.6   | .80   | 1.8  | 2.8   |
| 19    | 2.7   | 144     | 3.6     | 91     | 107   | 4.3   | 8.6   | 17    | 1.6   | .80   | 1.7  | 2.5   |
| 20    | 2.6   | 214     | 3.5     | 86     | 97    | 4.0   | 8.6   | 16    | .80   | .80   | 2.0  | 2.8   |
| 21    | 2.7   | 148     | 3.6     | 81     | 86    | 3.5   | 8.6   | 13    | .80   | .70   | 2.0  | 2.6   |
| 22    | 2.4   | 112     | 2.6     | 76     | 83    | 3.5   | 8.0   | 12    | .70   | .80   | 1.7  | 2.6   |
| 23    | 2.3   | 98      | 2.4     | 73     | 80    | 3.6   | 7.7   | 9.8   | .80   | 1.2   | 1.7  | 2.4   |
| 24    | 2.3   | 99      | 2.3     | 69     | 76    | 3.6   | 8.0   | 8.6   | .60   | 1.0   | 1.8  | 2.7   |
| 25    | 2.6   | 223     | 2.4     | 66     | 66    | 3.6   | 8.0   | 11    | .80   | .90   | 1.8  | 2.7   |
| 26    | 2.6   | 425     | 2.4     | 64     | 64    | 3.5   | 6.6   | 12    | .80   | 1.0   | 2.0  | 2.4   |
| 27    | 2.4   | 330     | 2.4     | 61     | 58    | 4.2   | 7.1   | 12    | .60   | .90   | 2.2  | 2.3   |
| 28    | 2.6   | 201     | 5.2     | 58     | 54    | 4.3   | 8.0   | 8.9   | .60   | .80   | 2.1  | 2.3   |
| 29    | 3.0   | 144     | 11      | 56     | ----- | 4.3   | 7.7   | 7.7   | .80   | .90   | 1.6  | 2.2   |
| 30    | 2.8   | 100     | 139     | 67     | ----- | 4.2   | 8.6   | 7.7   | .70   | 1.4   | 1.6  | 2.3   |
| 31    | 3.0   | -----   | 431     | 108    | ----- | 4.2   | ----- | 7.4   | ----- | 1.3   | 1.7  | ----- |
| Total | 108.3 | 2,586.4 | 1,099.2 | 5,826  | 3,688 | 510.5 | 214.4 | 346.3 | 855.0 | 2,750 | 45.4 | 68.8  |
| Mean  | 3.49  | 86.2    | 35.5    | 188    | 132   | 16.5  | 7.15  | 11.2  | 28.5  | .89   | 1.46 | 2.29  |
| Ac-ft | 215   | 5,130   | 2,180   | 11,560 | 7,320 | 1,010 | 425   | 687   | 170   | 55    | 90   | 136   |

Calendar year 1965 Max 2,540 Min .10 Mean 85.0 Ac-ft 61,540  
 Water year 1965-66 Max 584 Min .60 Mean 40.0 Ac-ft 28,970

11-1525.4. El Toro Creek near Spreckels, Calif.

Location.--Lat 36°35'00", long 121°42'50", in El Toro Grant, on right bank 0.3 mile downstream from San Benancio Gulch and 4.7 miles southwest of Spreckels, Monterey County.

Drainage area.--31.9 sq mi.

Records available.--October 1961 to September 1966. Prior to October 1962, published as Toro Creek near Spreckels.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 210 ft (from topographic map).

Average discharge.--5 years 0.28 cfs (203 acre-ft per year).

Extremes.--Maximum discharge during year, 44 cfs Dec. 31 (gage height, 3.95 ft); no flow for several months.  
1961-66: Maximum discharge, 64 cfs Mar. 28, 1963 (gage height, 4.10 ft); no flow for many days in each year.

Remarks.--Records good. No regulation or diversion above station except for minor stock ponds.

Revisions (water years).--1964 Report: 1962(M).

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May | June | July  | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|-----|------|-------|------|-------|
| 1     |      | 0     | 0     | 19    | 20    | 0.10 | 0.10  |     |      | 0     |      |       |
| 2     |      | 0     | 0     | 90    | .90   | .20  | .10   |     |      | 0     |      |       |
| 3     |      | 0     | 0     | 50    | .30   | .10  | .10   |     |      | 0     |      |       |
| 4     |      | 0     | 0     | 24    | .30   | 0    | .10   |     |      | 0     |      |       |
| 5     |      | 0     | .10   | .70   | 1.3   | 0    | 0     |     |      | 0     |      |       |
| 6     |      | 0     | 0     | .20   | 15    | 0    | .10   |     |      | 0     |      |       |
| 7     |      | 0     | 0     | .20   | 9.9   | 0    | 0     |     |      | 0     |      |       |
| 8     |      | 0     | 0     | .20   | 5.4   | 0    | .10   |     |      | 0     |      |       |
| 9     |      | 0     | 0     | .10   | 2.8   | 0    | .10   |     |      | 0     |      |       |
| 10    |      | 0     | 0     | .10   | 1.7   | 0    | .10   |     |      | 0     |      |       |
| 11    |      | 0     | .10   | .10   | .60   | 0    | .10   |     |      | 0     |      |       |
| 12    |      | 0     | .30   | .10   | .30   | 0    | .10   |     |      | 0     |      |       |
| 13    |      | 0.10  | .10   | .10   | .20   | 0    | .10   |     |      | 0     |      |       |
| 14    |      | .10   | .10   | .10   | .20   | 0    | .10   |     |      | 0     |      |       |
| 15    |      | .10   | .10   | .10   | .20   | 0    | .10   |     |      | 0     |      |       |
| 16    |      | .50   | .10   | .10   | .10   | 0    | 0     |     |      | 0     |      |       |
| 17    |      | .10   | .10   | 0     | .10   | 0    | 0     |     |      | 0     |      |       |
| 18    |      | 0     | .10   | 0     | .10   | .10  | 0     |     |      | 0     |      |       |
| 19    |      | 0     | .10   | 0     | .10   | .10  | 0     |     |      | 0     |      |       |
| 20    |      | 0     | .10   | 0     | .10   | .10  | 0     |     |      | 0     |      |       |
| 21    |      | 0     | .10   | 0     | .10   | .10  | 0     |     |      | 0     |      |       |
| 22    |      | .10   | .10   | 0     | 0     | .10  | 0     |     |      | 0     |      |       |
| 23    |      | .10   | .10   | 0     | 0     | .10  | 0     |     |      | 0     |      |       |
| 24    |      | .10   | .10   | 0     | .20   | .10  | 0     |     |      | 0     |      |       |
| 25    |      | .20   | .10   | 0     | .20   | .10  | 0     |     |      | 0     |      |       |
| 26    |      | .10   | .10   | 0     | .30   | .10  | 0     |     |      | 0     |      |       |
| 27    |      | .10   | .10   | 0     | .10   | .10  | 0     |     |      | 0     |      |       |
| 28    |      | .10   | .50   | 0     | .10   | .10  | 0     |     |      | 0     |      |       |
| 29    |      | .10   | 1.7   | .10   | ----- | .10  | 0     |     |      | 0     |      |       |
| 30    |      | .10   | 17    | 2.2   | ----- | .10  | 0     |     |      | .10   |      |       |
| 31    |      | ----- | 31    | 3.5   | ----- | .10  | ----- |     |      | 0     |      |       |
| Total | 0    | 1.90  | 52.20 | 43.30 | 42.60 | 1.80 | 1.30  | 0   | 0    | 0.10  | 0    | 0     |
| Mean  | 0    | 0.06  | 1.68  | 1.40  | 1.52  | 0.06 | 0.04  | 0   | 0    | 0.003 | 0    | 0     |
| Ac-ft | 0    | 3.8   | 104   | 86    | 84    | 3.6  | 2.6   | 0   | 0    | .2    | 0    | 0     |

Calendar year 1965 Max 31 Min 0 Mean 0.56 Ac-ft 409

Water year 1965-66 Max 31 Min 0 Mean 0.39 Ac-ft 284

Peak discharge (base, 5 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-31 | 1700 | 3.95        | 44        | 2-6  | 1600 | 3.83        | 31        |
| 1-29  | 2300 | 3.49        | 8.2       |      |      |             |           |



11-1529. Cedar Creek near Bell Station, Calif.

Location.--Lat 37°03'00", long 121°19'35", in San Luis Gonzaga Grant, on left bank 0.5 mile upstream from Hagerman Canyon and 1.3 miles northwest of Bell Station, Santa Clara County.

Drainage area.--12.8 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 390 ft (from topographic map). Prior to Apr. 19, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--5 years, 3.39 cfs (2,450 acre-ft).

Extremes.--Maximum discharge during year, 390 cfs Dec. 28 (gage height, 3.50 ft); no flow for several months.

1961-66: Maximum discharge, 3,490 cfs Jan. 31, 1963 (gage height, 6.85 ft), from rating curve extended above 260 cfs; no flow for several months in each year.

Remarks.--Records fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.50   | 28    | 5.3   | 1.1   | 0.30  | 0.10 |       |      |      |       |
| 2     |      | 0     | .40    | 11    | 4.2   | 1.0   | .30   | .10  |       |      |      |       |
| 3     |      | 0     | .40    | 5.6   | 3.2   | .90   | .30   | .10  |       |      |      |       |
| 4     |      | 0     | .30    | 3.4   | 2.6   | .90   | .30   | .10  |       |      |      |       |
| 5     |      | 0     | .30    | 2.4   | 6.5   | .80   | .30   | .10  |       |      |      |       |
| 6     |      | 0     | .30    | 1.9   | 17    | .80   | .20   | .10  |       |      |      |       |
| 7     |      | 0     | .20    | 1.5   | 8.7   | .80   | .20   | .10  |       |      |      |       |
| 8     |      | 0     | .20    | 1.4   | 5.6   | .80   | .20   | .10  |       |      |      |       |
| 9     |      | 0     | .20    | 1.1   | 3.8   | .70   | .30   | 0    |       |      |      |       |
| 10    |      | 0     | .20    | 1.0   | 2.8   | .60   | .30   | 0    |       |      |      |       |
| 11    |      | 0     | .20    | .90   | 2.2   | .60   | .30   | 0    |       |      |      |       |
| 12    |      | 0     | .20    | .80   | 1.9   | .60   | .20   | 0    |       |      |      |       |
| 13    |      | .10   | .20    | .80   | 1.6   | .60   | .20   | 0    |       |      |      |       |
| 14    |      | .20   | .20    | .80   | 1.4   | .60   | .20   | 0    |       |      |      |       |
| 15    |      | .10   | .20    | .70   | 1.3   | .60   | .20   | 0    |       |      |      |       |
| 16    |      | .30   | .20    | .70   | 1.2   | .60   | .20   | 0    |       |      |      |       |
| 17    |      | .20   | .20    | .60   | 1.1   | .60   | .20   | 0    |       |      |      |       |
| 18    |      | 1.0   | .20    | .60   | 1.1   | .60   | .20   | 0    |       |      |      |       |
| 19    |      | .50   | .20    | .60   | 1.4   | .50   | .20   | 0    |       |      |      |       |
| 20    |      | .30   | .20    | .60   | 1.3   | .50   | .20   | 0    |       |      |      |       |
| 21    |      | .20   | .20    | .60   | 1.1   | .50   | .20   | 0    |       |      |      |       |
| 22    |      | .20   | .20    | .50   | 1.1   | .50   | .20   | 0    |       |      |      |       |
| 23    |      | .80   | .20    | .50   | 1.0   | .50   | .20   | 0    |       |      |      |       |
| 24    |      | 2.4   | .20    | .50   | .90   | .50   | .20   | 0    |       |      |      |       |
| 25    |      | 7.4   | 3.4    | .50   | .90   | .40   | .10   | 0    |       |      |      |       |
| 26    |      | 2.4   | 2.0    | .50   | 1.4   | .40   | .10   | 0    |       |      |      |       |
| 27    |      | 1.1   | 1.1    | .50   | 1.3   | .40   | .10   | 0    |       |      |      |       |
| 28    |      | .80   | .67    | .50   | 1.1   | .40   | .10   | 0    |       |      |      |       |
| 29    |      | .60   | .69    | .60   | ----- | .40   | .10   | 0    |       |      |      |       |
| 30    |      | .60   | .89    | 11    | ----- | .40   | .10   | 0    |       |      |      |       |
| 31    |      | ----- | .81    | 7.4   | ----- | .20   | ----- | 0    | ----- |      |      |       |
| TOTAL | 0    | 40.80 | 318.30 | 87.50 | 83.00 | 18.90 | 6.20  | .80  | 0     | 0    | 0    | 0     |
| MEAN  | 0    | 1.36  | 10.3   | 2.82  | 2.96  | .61   | .21   | .03  | 0     | 0    | 0    | 0     |
| AC-FT | 0    | 81    | 631    | 174   | 165   | 37    | 12    | 1.6  | 0     | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 246 MIN 0 MEAN 3.43 AC-FT 2,480  
 WATER YEAR 1965-66 MAX 89 MIN 0 MEAN 1.52 AC-FT 1,100

Peak discharge (base, 150 cfs, revised).--Dec. 28 (2130) 390 cfs (3.50 ft).

11-1530. Pacheco Creek near Dunneville, Calif.

Location.--Lat 36°58'50", long 121°22'45", in Ausaymas y San Felipe Grant, on right bank 450 ft downstream from private road bridge and 3.3 miles northeast of Dunneville, San Benito County.

Drainage area.--146 sq mi.

Records available.--October 1939 to September 1966. Monthly discharge only prior to January 1940, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 230.70 ft above mean sea level, datum of 1929. Prior to Nov. 17, 1950, staff gage, at site 350 ft upstream at datum 6.00 ft higher. Nov. 17, 1950, to Aug. 18, 1960, staff gage, at site 350 ft upstream at datum 4.00 ft higher.

Average discharge.--27 years, 31.9 cfs (23,090 acre-ft per year).

Extremes.--Maximum discharge during year, 1,220 cfs Dec. 29 (gage height, 8.15 ft); no flow for several months.

1940-66: Maximum discharge, 12,600 cfs Dec. 23, 1955 (gage height, 21.0 ft, present site and datum, from floodmarks), from rating curve extended above 820 cfs on basis of slope-area measurement of maximum flow; no flow at times.

Remarks.--Records fair. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft). Small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.    | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 6.8   | 1.0   | 1.4     | 366    | 23    | 2.2   |       | 0     | 13    | 10    | 2.5   |       |
| 2     | 6.4   | .80   | .90     | 182    | 23    | 1.5   |       | 0     | 13    | 9.6   | 1.6   |       |
| 3     | 6.4   | .80   | .80     | 109    | 19    | 1.2   |       | 0     | 13    | 9.6   | 1.6   |       |
| 4     | 6.4   | .60   | .80     | 72     | 16    | .90   |       | 0     | 13    | 9.6   | 1.5   |       |
| 5     | 6.4   | .60   | .80     | 57     | 15    | .90   |       | 0     | 12    | 9.6   | 1.2   |       |
| 6     | 6.4   | .40   | .80     | 38     | 64    | 1.0   |       | 0     | 12    | 9.6   | 1.0   |       |
| 7     | 6.1   | .20   | .80     | 30     | 65    | .90   |       | 0     | 12    | 9.6   | .90   |       |
| 8     | 6.1   | .10   | .80     | 24     | 44    | .90   |       | 0     | 10    | 9.6   | .80   |       |
| 9     | 5.8   | 0     | .80     | 19     | 29    | .80   |       | 0     | 10    | 9.3   | .50   |       |
| 10    | 5.2   | 0     | .70     | 17     | 23    | .80   |       | 0     | 12    | 9.3   | .20   |       |
| 11    | 4.6   | 0     | .70     | 15     | 17    | .80   |       | 0     | 12    | 10    | 0     |       |
| 12    | 5.2   | 0     | .70     | 13     | 14    | .80   |       | 0     | 12    | 10    | 0     |       |
| 13    | 4.9   | 0     | .60     | 11     | 11    | .80   |       | 0     | 13    | 9.6   | 0     |       |
| 14    | 4.9   | 0     | .40     | 8.9    | 9.6   | .80   |       | 0     | 13    | 9.3   | 0     |       |
| 15    | 4.3   | 0     | .30     | 7.8    | 8.2   | .70   |       | 1.4   | 13    | 9.3   | 0     |       |
| 16    | 3.4   | 0     | .20     | 6.1    | 6.4   | .60   |       | 12    | 13    | 8.9   | 0     |       |
| 17    | 3.2   | 0     | .10     | 4.6    | 5.5   | .60   |       | 21    | 15    | 8.6   | 0     |       |
| 18    | 3.0   | 0     | 0       | 3.8    | 4.9   | .60   |       | 24    | 15    | 8.6   | 0     |       |
| 19    | 3.0   | 0     | 0       | 3.4    | 4.3   | .60   |       | 23    | 15    | 8.6   | 0     |       |
| 20    | 2.8   | 0     | 0       | 3.0    | 3.8   | .60   |       | 15    | 13    | 8.2   | 0     |       |
| 21    | 2.8   | 0     | 0       | 2.6    | 3.6   | .70   |       | 15    | 12    | 7.8   | 0     |       |
| 22    | 3.2   | 0     | 0       | 2.6    | 3.4   | .80   |       | 16    | 12    | 7.1   | 0     |       |
| 23    | 3.0   | 0     | 0       | 2.4    | 3.2   | .70   |       | 18    | 12    | 6.4   | 0     |       |
| 24    | 2.8   | 0     | 0       | 2.4    | 3.0   | .70   |       | 18    | 12    | 5.8   | 0     |       |
| 25    | 2.6   | 4.5   | 0       | 2.6    | 2.6   | .60   |       | 18    | 12    | 5.5   | 0     |       |
| 26    | 2.6   | 1.2   | 0       | 2.6    | 2.4   | .60   |       | 17    | 12    | 5.5   | 0     |       |
| 27    | 2.8   | 8.9   | 0       | 2.0    | 2.0   | .50   |       | 17    | 11    | 5.5   | 0     |       |
| 28    | 2.8   | 5.5   | 44      | 1.8    | 2.2   | .40   |       | 16    | 11    | 5.5   | 0     |       |
| 29    | 2.2   | 3.4   | 592     | 2.6    | ----- | .40   |       | 15    | 10    | 5.5   | 0     |       |
| 30    | 1.5   | 2.0   | 704     | 13     | ----- | .20   |       | 14    | 10    | 5.2   | 0     |       |
| 31    | 1.2   | ----- | 752     | 29     | ----- | .10   | ----- | 14    | ----- | 3.4   | 0     | ----- |
| Total | 128.8 | 40.80 | 2103.60 | 1054.2 | 428.1 | 23.70 | 0     | 274.4 | 368   | 250.1 | 11.80 | 0     |
| Mean  | 4.15  | 1.36  | 68.7    | 34.0   | 15.3  | 0.76  | 0     | 8.85  | 12.3  | 8.07  | 0.38  | 0     |
| Ac-ft | 255   | 81    | 4.170   | 2.090  | 849   | 47    | 0     | 544   | 730   | 496   | 23    | 0     |

Calendar year 1965 Max 832 Min 0 Mean 24.5 Ac-ft 17,770  
 Water year 1965-66 Max 752 Min 0 Mean 12.8 Ac-ft 9,290

Location.--Lat 37°06'50", long 121°41'25", in Las Uvas Grant, on right bank 500 ft upstream from Llagas Avenue Bridge, 0.3 mile downstream from Cheshbro Dam, 0.3 mile upstream from small tributary, and 2.3 miles west of Morgan Hill, Santa Clara County.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 445 ft (from topographic map). Prior to May 26, 1966, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 24 cfs June 20-26 (gage height, 1.46 ft); minimum daily, 0.10 cfs Jan. 24, 25, 28, Feb. 13, 14.

1951-66: Maximum discharge, 3,190 cfs Apr. 2, 1958 (gage height, 8.45 ft), from rating curve extended above 1,600 cfs on basis of computation of maximum flow over dam; no flow at times in most years.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

|                    | OCT.  | NOV.  | DEC.   | JAN. | FEB.  | MAR.  | APR.  | MAY    | JUNE  | JULY  | AUG. | SEPT. |
|--------------------|-------|-------|--------|------|-------|-------|-------|--------|-------|-------|------|-------|
| 1                  | 23    | 16    | 8.8    | 0.30 | 0.30  | 0.40  | 0.60  | 3.8    | 21    | 21    | 1.7  | 2.3   |
| 2                  | 23    | 16    | 8.8    | .30  | .30   | .40   | .60   | 4.3    | 23    | 19    | 1.7  | 2.4   |
| 3                  | 23    | 16    | 8.8    | .30  | .30   | .30   | .60   | 5.6    | 23    | 19    | 1.6  | 2.4   |
| 4                  | 23    | 16    | 8.8    | .30  | .30   | .30   | .60   | 5.9    | 23    | 18    | 1.7  | 2.3   |
| 5                  | 23    | 16    | 8.8    | .30  | .40   | .30   | .60   | 5.9    | 22    | 18    | 1.6  | 2.2   |
| 6                  | 23    | 16    | 8.8    | .30  | .40   | .30   | .60   | 5.9    | 21    | 18    | 1.5  | 2.3   |
| 7                  | 23    | 16    | 8.8    | .20  | .40   | .30   | .60   | 5.9    | 20    | 18    | 1.7  | 2.3   |
| 8                  | 23    | 16    | 8.8    | .20  | .40   | .30   | .80   | 5.9    | 20    | 17    | 1.7  | 2.3   |
| 9                  | 20    | 16    | 8.8    | .20  | .40   | .30   | .90   | 5.9    | 20    | 18    | 1.5  | 2.4   |
| 10                 | 18    | 16    | 8.8    | .20  | .60   | .30   | .90   | 5.9    | 20    | 18    | 1.4  | 2.0   |
| 11                 | 18    | 16    | 8.8    | .20  | .80   | .30   | 1.0   | 5.9    | 21    | 18    | 1.4  | 1.7   |
| 12                 | 18    | 16    | 4.8    | .20  | .40   | .30   | 1.2   | 5.9    | 22    | 18    | 1.2  | 1.7   |
| 13                 | 18    | 12    | 2.6    | .20  | .10   | .30   | 1.2   | 6.2    | 23    | 18    | 1.3  | 1.4   |
| 14                 | 17    | 9.3   | 2.6    | .20  | .10   | .30   | 1.2   | 8.8    | 23    | 17    | 1.3  | 1.4   |
| 15                 | 17    | 8.0   | 2.6    | .30  | .30   | .40   | 1.2   | 12     | 23    | 17    | 1.1  | 1.4   |
| 16                 | 17    | 8.8   | 2.6    | .80  | .30   | .40   | 1.2   | 12     | 23    | 8.8   | 1.0  | 1.4   |
| 17                 | 17    | 9.3   | 2.6    | 1.0  | .30   | .60   | 1.0   | 12     | 23    | 2.8   | 1.0  | 1.2   |
| 18                 | 17    | 9.8   | 2.6    | .60  | .20   | .60   | 1.0   | 12     | 23    | 1.8   | 1.7  | 1.1   |
| 19                 | 17    | 9.8   | 2.6    | .30  | .30   | .60   | 1.0   | 12     | 23    | 1.6   | 1.7  | 1.0   |
| 20                 | 17    | 9.8   | 2.6    | .20  | .30   | .60   | 1.0   | 12     | 23    | 1.5   | 1.6  | 1.0   |
| 21                 | 17    | 9.3   | 2.6    | .20  | .30   | .60   | 1.0   | 12     | 24    | 1.5   | 1.7  | .90   |
| 22                 | 16    | 9.3   | 2.6    | .20  | .30   | .60   | 1.0   | 14     | 24    | 1.5   | 1.8  | .90   |
| 23                 | 17    | 8.8   | 2.6    | .20  | .30   | .60   | 1.0   | 16     | 24    | 1.5   | 2.0  | .90   |
| 24                 | 17    | 9.3   | 2.6    | .10  | .30   | .60   | 1.0   | 16     | 24    | 1.4   | 2.3  | 1.0   |
| 25                 | 17    | 9.3   | 2.2    | .10  | .30   | .60   | 1.0   | 16     | 24    | 1.4   | 2.5  | .90   |
| 26                 | 17    | 9.3   | .30    | .20  | .30   | .60   | 1.0   | 17     | 24    | 1.4   | 2.7  | 1.0   |
| 27                 | 17    | 9.3   | .20    | .20  | .30   | .60   | 1.0   | 17     | 23    | 1.5   | 2.7  | 1.1   |
| 28                 | 16    | 9.3   | 1.3    | .10  | .40   | .60   | 1.2   | 17     | 23    | 1.7   | 2.4  | 1.3   |
| 29                 | 16    | 9.3   | 1.0    | .40  | ----- | .60   | 1.2   | 17     | 22    | 1.7   | 2.2  | 1.4   |
| 30                 | 16    | 8.8   | .60    | .40  | ----- | .60   | 1.6   | 17     | 22    | 1.7   | 2.2  | 1.3   |
| 31                 | 16    | ----- | .40    | .30  | ----- | .60   | ----- | 17     | ----- | 1.7   | 2.2  | ----- |
| TOTAL              | 577   | 360.8 | 138.80 | 9.00 | 9.40  | 14.20 | 28.80 | 329.8  | 674   | 305.5 | 54.1 | 46.90 |
| MEAN               | 18.6  | 12.0  | 4.48   | .29  | .34   | .46   | .96   | 10.6   | 22.5  | 9.86  | 1.75 | 1.56  |
| AC-FT              | 1,140 | 716   | 275    | 18   | 19    | 28    | 57    | 654    | 1,340 | 606   | 107  | 93    |
| CALENDAR YEAR 1965 | MAX   | 70    | MIN    | .20  | MEAN  | 14.9  | AC-FT | 10,760 |       |       |      |       |
| WATER YEAR 1965-66 | MAX   | 24    | MIN    | .10  | MEAN  | 6.98  | AC-FT | 5,050  |       |       |      |       |

11-1537. Pajaro River near Gilroy, Calif.

Location.--Lat 36°56'55", long 121°30'40", on boundary between Las Animas and Llano del Tequisquita Grants, on center pier on downstream side of highway bridge on Bolsa Road, 0.9 mile downstream from Llagas Creek, and 4.7 miles southeast of Gilroy, Santa Clara County.

Drainage area.--399 sq mi.

Records available.--March 1959 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 123.88 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 25.2 cfs (18,240 acre-ft per year).

Extremes.--Maximum discharge during year, 830 cfs Dec. 31 (gage height, 5.87 ft); minimum daily, 0.20 cfs Sept. 23-30.  
1959-66: Maximum discharge, 5,320 cfs Feb. 1, 1963 (gage height, 13.81 ft), from rating curve extended above 2,100 cfs; no flow for many days in 1961-62.

Remarks.--Records good. Flow regulated by Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir (see sta 11-1534.8) and San Felipe Lake. Many diversions above station for irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.    | JAN.  | FEB.  | MAR. | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|-------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 2.7  | 2.3   | 7.9     | 746   | 22    | 16   | 14    | 7.8   | 7.2   | 3.9   | 1.1   | 0.50  |
| 2     | 2.7  | 2.7   | 7.5     | 545   | 25    | 15   | 13    | 6.6   | 6.4   | 4.7   | 1.2   | .50   |
| 3     | 2.7  | 3.7   | 7.4     | 390   | 25    | 15   | 12    | 7.1   | 6.2   | 2.5   | 1.0   | .50   |
| 4     | 2.8  | 4.2   | 8.0     | 260   | 24    | 15   | 11    | 9.8   | 6.1   | 1.6   | 1.0   | .50   |
| 5     | 2.7  | 4.5   | 8.1     | 182   | 27    | 15   | 11    | 11    | 5.3   | 1.6   | 1.1   | .50   |
| 6     | 2.7  | 5.0   | 7.9     | 122   | 75    | 15   | 11    | 8.8   | 4.3   | 1.8   | 1.2   | .40   |
| 7     | 2.9  | 5.4   | 8.0     | 82    | 75    | 15   | 12    | 7.9   | 5.8   | 1.8   | 1.2   | .40   |
| 8     | 2.6  | 5.7   | 8.6     | 58    | 66    | 15   | 11    | 7.0   | 5.6   | 2.6   | 1.0   | .40   |
| 9     | 2.5  | 5.6   | 8.7     | 42    | 56    | 15   | 11    | 6.4   | 6.6   | 3.9   | 1.0   | .40   |
| 10    | 2.3  | 5.8   | 8.5     | 32    | 45    | 15   | 12    | 5.8   | 6.2   | 3.2   | 1.0   | .40   |
| 11    | 2.4  | 5.8   | 8.6     | 26    | 37    | 15   | 10    | 6.6   | 6.1   | 3.1   | 1.1   | .40   |
| 12    | 2.3  | 5.9   | 9.5     | 23    | 30    | 15   | 11    | 6.5   | 6.0   | 3.0   | .80   | .40   |
| 13    | 2.6  | 6.8   | 8.8     | 20    | 26    | 14   | 10    | 6.5   | 5.9   | 3.6   | .80   | .50   |
| 14    | 2.6  | 9.8   | 8.7     | 19    | 23    | 14   | 11    | 7.0   | 7.3   | 2.5   | .80   | .30   |
| 15    | 2.4  | 9.9   | 8.5     | 18    | 21    | 14   | 11    | 6.1   | 7.7   | 3.2   | .80   | .30   |
| 16    | 2.3  | 12    | 8.3     | 16    | 20    | 13   | 12    | 5.2   | 6.4   | 3.2   | .80   | .30   |
| 17    | 2.3  | 31    | 8.2     | 16    | 19    | 13   | 12    | 5.9   | 8.3   | 3.5   | .80   | .30   |
| 18    | 2.3  | 15    | 8.0     | 15    | 18    | 13   | 11    | 7.5   | 5.5   | 2.7   | .90   | .30   |
| 19    | 2.2  | 9.6   | 7.9     | 15    | 18    | 12   | 11    | 8.2   | 4.6   | 3.8   | 1.6   | .30   |
| 20    | 2.3  | 7.6   | 8.1     | 15    | 17    | 12   | 11    | 6.4   | 3.3   | 3.4   | 1.4   | .30   |
| 21    | 2.4  | 6.9   | 8.4     | 14    | 17    | 12   | 13    | 5.5   | 3.9   | 2.9   | 1.2   | .30   |
| 22    | 2.4  | 6.9   | 8.2     | 14    | 17    | 12   | 12    | 5.1   | 4.2   | 2.1   | 1.3   | .30   |
| 23    | 2.4  | 17    | 7.6     | 14    | 16    | 13   | 12    | 5.8   | 4.5   | 1.4   | .70   | .20   |
| 24    | 2.4  | 30    | 7.2     | 13    | 16    | 12   | 11    | 7.1   | 4.8   | 1.5   | .70   | .20   |
| 25    | 2.4  | 36    | 9.4     | 13    | 16    | 12   | 9.4   | 8.0   | 3.4   | 1.3   | .70   | .20   |
| 26    | 2.4  | 18    | 8.6     | 14    | 16    | 13   | 9.2   | 9.4   | 3.2   | .90   | .70   | .20   |
| 27    | 2.3  | 11    | 8.2     | 13    | 15    | 13   | 9.9   | 8.1   | 3.0   | 1.2   | .60   | .20   |
| 28    | 2.3  | 9.1   | 11      | 12    | 15    | 12   | 9.4   | 8.1   | 2.9   | 1.5   | .60   | .20   |
| 29    | 2.6  | 8.5   | 128     | 14    | ----- | 12   | 9.0   | 7.6   | 3.2   | 1.4   | .80   | .20   |
| 30    | 2.4  | 8.2   | 489     | 31    | ----- | 11   | 8.9   | 7.7   | 3.6   | 1.2   | .70   | .20   |
| 31    | 2.3  | ----- | 728     | 21    | ----- | 13   | ----- | 6.7   | ----- | 1.7   | .50   | ----- |
| TOTAL | 76.6 | 309.9 | 1,578.8 | 2,815 | 797   | 421  | 331.8 | 223.2 | 157.5 | 76.70 | 29.10 | 10.10 |
| MEAN  | 2.47 | 10.3  | 50.9    | 90.8  | 28.5  | 13.6 | 11.1  | 7.20  | 5.25  | 2.47  | .94   | .34   |
| AC-FT | 152  | 615   | 3,130   | 5,580 | 1,580 | 835  | 658   | 443   | 312   | 152   | 58    | 20    |

CALENDAR YEAR 1965 MAX 856 MIN 2.2 MEAN 31.8 AC-FT 23,040  
WATER YEAR 1965-66 MAX 746 MIN .20 MEAN 18.7 AC-FT 13,540

Peak discharge (base, 300 cfs).--Dec. 31 (2215) 830 cfs (5.87 ft).

11-1539. Uvas Creek above Uvas Reservoir, near Morgan Hill, Calif.

Location.--Lat 37°05'34", long 121°43'02", in Las Uvas Grant on left bank 0.6 mile downstream from Little Uvas Creek, 0.9 mile upstream from Hay Canyon and 4.4 miles southwest of Morgan Hill, Santa Clara County.

Drainage area.--21.0 sq mi.

Records available.--July 1961 to September 1966.

Gage.--Water-stage recorder with rain gage attachment. Altitude of gage is 500 ft (from topographic map).

Average discharge.--5 years, 23.6 cfs (17,090 acre-ft per year).

Extremes.--Maximum discharge during the year, 1,380 cfs Dec. 25 (gage height, 8.26 ft); minimum daily, 0.10 cfs for several days in July, August, and September.

1961-66: Maximum discharge, 6,580 cfs Oct. 13, 1962 (gage height, 13.18 ft); no flow July 12 to Oct. 22, 1961, Oct. 1, 1964.

Remarks.--Records good. Minor regulation and diversion above station affects low flows. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 0.90  | 0.40   | 4.5   | 59    | 30    | 12    | 4.1   | 2.7   | 1.0   | 0.90  | 0.20 | 0.10  |
| 2     | .90   | .50    | 4.2   | 42    | 26    | 12    | 3.8   | 2.6   | 1.2   | .60   | .20  | .10   |
| 3     | .90   | .40    | 3.9   | 32    | 20    | 11    | 3.9   | 2.0   | 1.7   | .70   | .40  | .10   |
| 4     | .60   | .60    | 3.6   | 28    | 28    | 11    | 4.0   | 2.3   | 1.4   | .20   | .10  | .10   |
| 5     | .50   | 1.0    | 3.3   | 45    | 37    | 10    | 3.8   | 2.4   | 1.3   | .40   | .40  | .10   |
| 6     | .50   | .90    | 3.5   | 36    | 41    | 9.6   | 3.9   | 2.3   | 1.2   | .30   | .30  | .10   |
| 7     | .70   | .80    | 3.6   | 30    | 32    | 9.6   | 3.9   | 2.1   | 1.5   | .30   | .40  | .10   |
| 8     | .80   | .40    | 3.6   | 26    | 28    | 9.3   | 4.0   | 2.1   | 1.5   | .70   | .30  | .10   |
| 9     | .90   | .30    | 2.7   | 23    | 27    | 9.3   | 5.0   | 2.4   | .90   | .80   | .30  | .20   |
| 10    | 1.0   | .80    | 2.8   | 20    | 22    | 9.3   | 9.0   | 2.3   | 1.4   | .80   | .20  | .10   |
| 11    | .80   | .90    | 3.1   | 18    | 20    | 8.7   | 5.9   | 2.3   | 1.3   | .40   | .10  | .30   |
| 12    | .70   | 1.1    | 5.0   | 16    | 18    | 8.2   | 5.7   | 2.3   | 1.2   | .50   | .30  | .30   |
| 13    | .70   | 1.8    | 4.0   | 14    | 16    | 8.2   | 4.8   | 2.3   | .60   | .30   | .20  | .30   |
| 14    | 1.1   | 14     | 3.5   | 13    | 15    | 7.7   | 4.8   | 2.1   | .50   | .40   | .30  | .30   |
| 15    | 1.2   | 3.1    | 3.3   | 12    | 14    | 7.2   | 4.2   | 2.4   | .60   | .60   | .30  | .30   |
| 16    | 1.1   | 8.6    | 3.8   | 11    | 13    | 7.2   | 3.8   | 2.0   | .70   | .60   | .10  | .20   |
| 17    | .90   | 21     | 3.6   | 10    | 13    | 7.0   | 3.8   | 1.8   | .80   | .70   | .10  | .30   |
| 18    | .50   | 33     | 3.3   | 9.8   | 13    | 6.8   | 3.4   | 1.2   | 1.0   | .30   | .10  | .30   |
| 19    | .60   | 12     | 3.3   | 9.6   | 29    | 6.3   | 3.1   | 1.90  | 1.0   | .20   | .10  | .30   |
| 20    | .50   | 6.1    | 3.5   | 9.0   | 19    | 6.6   | 2.9   | 1.0   | .60   | .20   | .10  | .50   |
| 21    | .70   | 4.5    | 3.5   | 8.4   | 16    | 6.1   | 3.3   | 1.1   | .60   | .20   | .20  | .50   |
| 22    | .60   | 4.1    | 3.3   | 7.9   | 14    | 5.9   | 3.5   | 1.5   | .40   | .10   | .20  | .40   |
| 23    | .80   | 9.0    | 2.8   | 7.7   | 14    | 5.7   | 3.1   | 1.5   | .60   | .40   | .20  | .30   |
| 24    | .80   | 28     | 22    | 7.7   | 15    | 5.7   | 2.4   | 1.1   | .90   | .40   | .10  | .20   |
| 25    | .40   | 40     | 246   | 6.8   | 14    | 5.6   | 2.0   | 1.0   | .90   | .20   | .20  | .20   |
| 26    | .30   | 14     | 30    | 6.6   | 14    | 5.4   | 2.7   | 1.2   | .50   | .10   | .20  | .30   |
| 27    | .20   | 9.0    | 18    | 6.8   | 13    | 5.4   | 2.4   | 1.3   | .30   | .10   | .20  | .30   |
| 28    | .30   | 7.0    | 173   | 6.6   | 13    | 5.0   | 2.2   | 1.8   | .30   | .30   | .10  | .30   |
| 29    | .70   | 5.9    | 196   | 30    | ----- | 4.7   | 1.9   | 2.1   | .30   | .30   | .10  | .30   |
| 30    | .70   | 5.2    | 118   | 60    | ----- | 4.5   | 2.1   | 1.8   | .40   | .70   | .10  | .20   |
| 31    | .80   | -----  | 100   | 26    | ----- | 4.7   | ----- | 1.4   | ----- | .70   | .20  | ----- |
| Total | 221.0 | 234.40 | 984.7 | 637.9 | 574   | 235.7 | 113.4 | 57.30 | 26.60 | 13.40 | 6.30 | 7.20  |
| Mean  | .71   | .781   | 31.8  | 20.6  | 20.5  | 7.60  | 3.78  | 1.85  | .89   | .43   | .20  | .24   |
| Ac-ft | 44    | 465    | 1,950 | 1,270 | 1,140 | 468   | 225   | 114   | 53    | 27    | 12   | 14    |
| (†)   | -     | -      | 6.4   | 1.8   | 1.9   | 0     | 0     | .10   | .10   | 0     | 0    | .10   |

Calendar year 1965 Max 845 Min .20 Mean 23.8 Ac-ft 17,250

Water year 1965-66 Max 246 Min .10 Mean 7.98 Ac-ft 5,780

Peak discharge (base, 800 cfs, revised).--Dec. 25 (0130) 1,380 cfs (8.26 ft).

† Precipitation, in inches.

## PAJARO RIVER BASIN

11-1541. Bodfish Creek near Gilroy, Calif.

Location.--Lat 37°00'15", long 121°40'00", in Las Animas Grant, on left bank just upstream from Whitehurst Creek, 2.7 miles upstream from mouth and 5.1 miles west of west city limits of Gilroy, Santa Clara County.

Drainage area.--7.40 sq mi.

Records available.--October 1959 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 360 ft (from topographic map). Prior to Feb. 28, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 2.88 cfs (2,090 acre-ft per year).

Extremes.--Maximum discharge during year, 130 cfs Dec. 28 (gage height, 4.21 ft), no flow for several months.

1959-66: Maximum discharge, 1,240 cfs Jan. 31, 1963 (gage height, 8.25 ft), from rating curve extended above 580 cfs; no flow for many days in each year.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.   | JAN. | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|--------|------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0    | 0     | 0.50   | 14   | 3.2   | 1.5   | 0.50  | 0.30 | 0.20  | 0.10 |      |       |
| 2     | 0    | 0     | .50    | 6.8  | 2.8   | 1.4   | .40   | .30  | .20   | .10  |      |       |
| 3     | 0    | 0     | .50    | 4.3  | 2.0   | 1.3   | .40   | .30  | .20   | 0    |      |       |
| 4     | 0    | 0     | .40    | 2.8  | 2.0   | 1.1   | .40   | .30  | .10   | .10  |      |       |
| 5     | 0    | 0     | .50    | 2.4  | 2.4   | 1.1   | .40   | .30  | .10   | 0    |      |       |
| 6     | 0    | 0     | .50    | 2.0  | 4.6   | 1.1   | .30   | 0    | .10   | 0    |      |       |
| 7     | 0    | .10   | .50    | 1.8  | 3.2   | 1.1   | .30   | .10  | .10   | 0    |      |       |
| 8     | 0    | .10   | .60    | 1.7  | 2.6   | 1.1   | .30   | .10  | .10   | 0    |      |       |
| 9     | 0    | .10   | .60    | 1.5  | 2.0   | 1.0   | .70   | .20  | .10   | 0    |      |       |
| 10    | 0    | .10   | .60    | 1.4  | 1.8   | 1.1   | 1.1   | .10  | .10   | 0    |      |       |
| 11    | 0    | .10   | .80    | 1.4  | 1.7   | .80   | .50   | .20  | .10   | 0    |      |       |
| 12    | 0    | .10   | 1.0    | 1.2  | 1.5   | .80   | .40   | .20  | .10   | 0    |      |       |
| 13    | 0    | .20   | .70    | 1.2  | 1.4   | .80   | .40   | .20  | 0     | 0    |      |       |
| 14    | 0    | 1.4   | .60    | 1.1  | 1.1   | .80   | .30   | .20  | 0     | 0    |      |       |
| 15    | 0    | .30   | .60    | 1.2  | 1.0   | .80   | .40   | .30  | .10   | 0    |      |       |
| 16    | 0    | 4.8   | .80    | 1.2  | 1.0   | .80   | .40   | .30  | .10   | 0    |      |       |
| 17    | 0    | 3.2   | .80    | 1.2  | 1.0   | .70   | .40   | .30  | .10   | 0    |      |       |
| 18    | .10  | 3.2   | .70    | 1.2  | 1.0   | .80   | .40   | .30  | 0     | 0    |      |       |
| 19    | .10  | .80   | .70    | 1.2  | 1.4   | .80   | .40   | .30  | 0     | 0    |      |       |
| 20    | 0    | .60   | .70    | 1.1  | 1.0   | .80   | .30   | .30  | .10   | 0    |      |       |
| 21    | 0    | .50   | .70    | 1.1  | 1.0   | .70   | .30   | .30  | .10   | 0    |      |       |
| 22    | 0    | .50   | .60    | 1.1  | .80   | .70   | .30   | .30  | .10   | 0    |      |       |
| 23    | 0    | 1.4   | .60    | 1.1  | 1.0   | .70   | .30   | .30  | .10   | 0    |      |       |
| 24    | 0    | 2.6   | .80    | 1.1  | 1.8   | .60   | .30   | .30  | .10   | 0    |      |       |
| 25    | 0    | 2.6   | 5.1    | 1.1  | 1.7   | .70   | .30   | .30  | .10   | 0    |      |       |
| 26    | 0    | 1.4   | 1.4    | 1.0  | 2.0   | .70   | .30   | .20  | .10   | 0    |      |       |
| 27    | 0    | 1.0   | 1.0    | 1.0  | 1.5   | .60   | .30   | .20  | 0     | 0    |      |       |
| 28    | 0    | .70   | 2.4    | 1.0  | 1.5   | .60   | .30   | .20  | 0     | 0    |      |       |
| 29    | 0    | .60   | 3.6    | 4.1  | ----- | .60   | .30   | .20  | 0     | 0    |      |       |
| 30    | 0    | .60   | 4.3    | 5.8  | ----- | .50   | .30   | .20  | .10   | 0    |      |       |
| 31    | 0    | ----- | 3.3    | 2.2  | ----- | .40   | ----- | .20  | ----- | 0    |      | ----- |
| TOTAL | .20  | 27.00 | 158.80 | 71.3 | 50.00 | 26.50 | 11.70 | 7.30 | 2.60  | .30  | 0    | 0     |
| MEAN  | .006 | .90   | 5.12   | 2.30 | 1.79  | .86   | .39   | .24  | .09   | .01  | 0    | 0     |
| AC-FT | .4   | 54    | 315    | 141  | 99    | 53    | 23    | 14   | 5.2   | .6   | 0    | 0     |

CALENDAR YEAR 1965 MAX 136 MIN 0 MEAN 3.44 AC-FT 2,490  
 WATER YEAR 1965-66 MAX 43 MIN 0 MEAN .975 AC-FT 705

Peak discharge (base, 150 cfs).--No peak above base.

Location.--Lat 36°59'35", long 121°34'20", in Las Animas Grant, on left bank 400 ft upstream from county road bridge, 0.4 mile south-west of Gilroy, Santa Clara County, and 3.9 miles downstream from Bodfish Creek.

Records available.--January 1959 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 190 ft (from topographic map). Prior to Feb. 28, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 23.5 cfs (17,010 acre-ft per year).

Extremes.--Maximum discharge during year, 288 cfs Dec. 30 (gage height, 5.20 ft); no flow for several months. 1959-66: Maximum discharge, 7,180 cfs Feb. 1, 1963 (gage height, 17.66 ft), from rating curve extended above 2,500 cfs; no flow for several months in each year.

Remarks.--Records good. Flow regulated by Uvas Reservoir (see sta 11-1540.2). Diversion above station for irrigation and municipal supply of city of Gilroy.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                                      | OCT.              | NOV.         | DEC.                   | JAN.                   | FEB.                 | MAR.                  | APR.                | MAY                  | JUNE               | JULY               | AUG.        | SEPT.       |
|--|-------------------|--------------|------------------------|------------------------|----------------------|-----------------------|---------------------|----------------------|--------------------|--------------------|-------------|-------------|
| 1  | 3.7               |              | 0                      | 100                    | 26                   | 8.9                   | 0                   | 0.70                 | 2.7                | 0.40               |             |             |
| 2  | 3.1               |              | 0                      | 61                     | 36                   | 8.8                   | 0                   | .60                  | 2.1                | .30                |             |             |
| 3  | 3.1               |              | 0                      | 46                     | 25                   | 7.6                   | 0                   | .30                  | 1.5                | .30                |             |             |
| 4  | 2.9               |              | 0                      | 37                     | 21                   | 7.3                   | 0                   | .20                  | 1.7                | .30                |             |             |
| 5  | 2.1               |              | 0                      | 30                     | 20                   | 6.8                   | 0                   | .10                  | 2.1                | .40                |             |             |
| 6  | 2.3               |              | 0                      | 25                     | 30                   | 6.6                   | 0                   | 0                    | 2.3                | 0                  |             |             |
| 7  | 2.9               |              | 0                      | 21                     | 27                   | 5.9                   | 0                   | 0                    | 1.9                | 0                  |             |             |
| 8  | 3.7               |              | 0                      | 18                     | 27                   | 5.4                   | 0                   | 0                    | .30                | 0                  |             |             |
| 9  | 4.3               |              | 0                      | 14                     | 21                   | 5.4                   | 0                   | .20                  | 0                  | 0                  |             |             |
| 10                                       | 1.3               |              | 0                      | 12                     | 18                   | 5.3                   | 0                   | .30                  | 0                  | 0                  |             |             |
| 11                                       | 0                 |              | 0                      | 11                     | 16                   | 5.0                   | 0                   | .20                  | 0                  | 0                  |             |             |
| 12                                       | 0                 |              | 0                      | 10                     | 14                   | 4.9                   | 0                   | 0                    | 0                  | 0                  |             |             |
| 13                                       | 0                 |              | 0                      | 10                     | 13                   | 4.6                   | .9                  | 0                    | 0                  | 0                  |             |             |
| 14                                       | 0                 |              | 0                      | 9.2                    | 12                   | 4.2                   | 1.9                 | 0                    | 0                  | 0                  |             |             |
| 15                                       | 0                 |              | 0                      | 8.0                    | 12                   | 3.8                   | 2.3                 | .20                  | 0                  | 0                  |             |             |
| 16                                       | 0                 |              | 0                      | 7.2                    | 10                   | 3.3                   | 2.8                 | 1.0                  | 0                  | 0                  |             |             |
| 17                                       | 0                 |              | 0                      | 7.2                    | 11                   | 3.8                   | 3.8                 | 2.0                  | 0                  | 0                  |             |             |
| 18                                       | 0                 |              | 0                      | 6.0                    | 9.6                  | 3.9                   | 4.8                 | 3.4                  | 0                  | 0                  |             |             |
| 19                                       | 0                 |              | 0                      | 5.6                    | 11                   | 3.4                   | 3.9                 | 3.7                  | 0                  | 0                  |             |             |
| 20                                       | 0                 |              | 0                      | 5.2                    | 10                   | 3.1                   | 3.6                 | 3.7                  | 0                  | 0                  |             |             |
| 21                                       | 0                 |              | 0                      | 5.2                    | 8.8                  | 1.8                   | 2.9                 | 5.2                  | 0                  | 0                  |             |             |
| 22                                       | 0                 |              | 0                      | 4.6                    | 8.4                  | 4.5                   | 2.5                 | 4.2                  | .30                | 0                  |             |             |
| 23                                       | 0                 |              | 0                      | 3.7                    | 7.6                  | 4.5                   | 1.7                 | 6.8                  | .60                | 0                  |             |             |
| 24                                       | 0                 |              | 0                      | 2.9                    | 8.8                  | 3.5                   | 1.3                 | 6.8                  | .90                | 0                  |             |             |
| 25                                       | 0                 |              | 11                     | 2.7                    | 11                   | 2.2                   | 1.1                 | 6.0                  | 1.2                | 0                  |             |             |
| 26                                       | 0                 |              | 9.2                    | 2.7                    | 11                   | 1.5                   | 1.0                 | 6.0                  | .90                | 0                  |             |             |
| 27                                       | 0                 |              | 6.0                    | 2.3                    | 9.6                  | 1.1                   | .90                 | 6.4                  | .80                | 0                  |             |             |
| 28                                       | 0                 |              | 16                     | 1.5                    | 9.1                  | .80                   | .70                 | 7.2                  | .60                | 0                  |             |             |
| 29                                       | 0                 |              | 152                    | 2.8                    | -----                | .50                   | .60                 | 6.8                  | .50                | 0                  |             |             |
| 30                                       | 0                 |              | 171                    | 25                     | -----                | .20                   | .70                 | 6.4                  | .30                | 0                  |             |             |
| 31                                       | 0                 | -----        | 167                    | 18                     | -----                | .10                   | -----               | 4.0                  | -----              | 0                  |             | -----       |
| TOTAL<br>MEAN<br>AC-FT                   | 29.4<br>.95<br>58 | 0<br>0<br>0  | 532.2<br>17.2<br>1.060 | 514.8<br>16.6<br>1.020 | 443.9<br>15.9<br>880 | 128.70<br>4.15<br>255 | 37.40<br>1.25<br>74 | 82.40<br>2.66<br>163 | 20.70<br>.69<br>41 | 1.70<br>.06<br>3.4 | 0<br>0<br>0 | 0<br>0<br>0 |
| CALENDAR YEAR 1965<br>WATER YEAR 1965-66 | MAX<br>MAX        | 1,750<br>171 | MIN<br>MIN             | 0<br>0                 | MEAN<br>MEAN         | 30.1<br>4.91          | AC-FT<br>AC-FT      | 21.760<br>33.550     |                    |                    |             |             |

11-1565. San Benito River near Willow Creek School, Calif.

Location (revised).--Lat 36°36'34", long 121°12'07", in SE¼SE¼ sec.21, T.15 S., R.7 E., on left bank 1.3 miles downstream from Willow Creek, 0.9 mile northwest of Willow Creek School, and 10 miles northwest of San Benito. Prior to Oct. 1, 1965, at site 0.9 mile downstream.

Drainage area.--249 sq mi.

Records available.--October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Altitude of gage is 930 ft (from topographic map, revised). Prior to Jan. 28, 1948, graphic water-stage recorder at site 0.9 mile downstream at different datum. Jan. 28, 1948 to Nov. 10, 1955, graphic water-stage recorder at same site and datum. Nov. 11, 1955 to Sept. 30, 1965, graphic water-stage recorder at site 0.9 mile downstream at different datum. Oct. 1, 1965 to Apr. 5, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 22.5 cfs (16,290 acre-ft per year); median of yearly mean discharges, 12 cfs (8,700 acre-ft per year).

Extremes.--Maximum discharge during year, 113 cfs Dec. 29 (gage height, 7.16 ft); minimum daily, 0.10 cfs for many days. 1939-66: Maximum discharge, 8,210 cfs Apr. 3, 1958 (gage height, 8.35 ft site and datum then in use), from rating curve extended above 600 cfs on basis of slope-area measurement of maximum flow; no flow at times in 1947, 1956, 1959, 1961-65. Flood of February 1938 reached a stage of about 9.0 ft from floodmarks.

Remarks.--Records fair. Flow regulated by Hernandez Dam beginning in December 1961 (capacity, 18,700 acre-ft). Small diversion above station for irrigation. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT. | NOV.   | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY    | JUNE  | JULY | AUG. | SEPT. |
|--------------------|------|--------|---------|-------|-------|-------|-------|--------|-------|------|------|-------|
| 1                  | 0.20 | 0.20   | 6.6     | 47    | 26    | 40    | 35    | 3.5    | 0.60  | 0.30 | 0.20 | 0.10  |
| 2                  | .20  | .20    | 5.4     | 33    | 22    | 42    | 35    | 2.9    | .60   | .30  | .10  | .10   |
| 3                  | .20  | .20    | 4.7     | 26    | 17    | 42    | 35    | 2.4    | .60   | .30  | .10  | .10   |
| 4                  | .20  | .20    | 4.1     | 19    | 15    | 42    | 35    | 2.3    | .60   | .30  | .10  | .10   |
| 5                  | .20  | .20    | 4.5     | 18    | 16    | 42    | 35    | 2.2    | .50   | .30  | .10  | .10   |
| 6                  | .20  | .20    | 4.9     | 17    | 14    | 40    | 36    | 2.0    | .60   | .30  | .10  | .10   |
| 7                  | .20  | .20    | 5.2     | 17    | 14    | 40    | 36    | 2.0    | .60   | .30  | .10  | .10   |
| 8                  | .20  | .20    | 5.4     | 16    | 13    | 40    | 38    | 2.0    | .50   | .30  | .10  | .10   |
| 9                  | .20  | .20    | 5.5     | 15    | 12    | 39    | 48    | 1.8    | .50   | .30  | .10  | .10   |
| 10                 | .20  | .20    | 5.6     | 15    | 11    | 39    | 53    | 2.1    | .50   | .30  | .10  | .10   |
| 11                 | .10  | .20    | 5.8     | 14    | 10    | 39    | 52    | 2.3    | .40   | .30  | .10  | .10   |
| 12                 | .10  | .20    | 6.9     | 14    | 9.4   | 39    | 44    | 1.9    | .40   | .30  | .10  | .10   |
| 13                 | .10  | .40    | 6.8     | 17    | 9.2   | 39    | 26    | 1.4    | .40   | .30  | .10  | .10   |
| 14                 | .10  | 3.2    | 6.1     | 53    | 8.7   | 38    | 18    | 1.4    | .30   | .30  | .10  | .10   |
| 15                 | .10  | 4.5    | 5.9     | 53    | 8.2   | 38    | 14    | 1.0    | .40   | .30  | .10  | .10   |
| 16                 | .10  | 13     | 5.8     | 52    | 7.7   | 38    | 12    | .80    | .40   | .30  | .10  | .10   |
| 17                 | .10  | 22     | 5.9     | 53    | 7.4   | 35    | 11    | .70    | .40   | .20  | .10  | .10   |
| 18                 | .10  | 33     | 5.8     | 54    | 7.4   | 35    | 11    | .60    | .30   | .20  | .10  | .10   |
| 19                 | .10  | 27     | 5.8     | 54    | 7.2   | 36    | 11    | .60    | .30   | .20  | .10  | .20   |
| 20                 | .10  | 19     | 5.7     | 55    | 7.0   | 37    | 10    | .60    | .30   | .20  | .10  | .20   |
| 21                 | .10  | 13     | 5.7     | 56    | 6.5   | 36    | 9.6   | .50    | .40   | .20  | .20  | .20   |
| 22                 | .10  | 11     | 5.7     | 54    | 6.2   | 36    | 8.4   | .60    | .40   | .20  | .20  | .10   |
| 23                 | .10  | 42     | 5.7     | 50    | 6.2   | 36    | 7.6   | .60    | .40   | .20  | .10  | .10   |
| 24                 | .10  | 50     | 5.7     | 48    | 7.2   | 35    | 6.7   | .60    | .40   | .10  | .10  | .10   |
| 25                 | .10  | 44     | 5.8     | 46    | 35    | 35    | 5.8   | .60    | .30   | .10  | .10  | .10   |
| 26                 | .20  | 31     | 5.7     | 46    | 40    | 37    | 5.0   | .60    | .30   | .10  | .10  | .10   |
| 27                 | .20  | 19     | 5.7     | 46    | 39    | 37    | 4.6   | .60    | .30   | .10  | .10  | .10   |
| 28                 | .20  | 13     | 5.9     | 46    | 39    | 37    | 4.3   | .60    | .30   | .10  | .10  | .10   |
| 29                 | .20  | 11     | 8.1     | 51    | ----- | 36    | 4.2   | .60    | .30   | .10  | .10  | .10   |
| 30                 | .10  | 8.0    | 8.6     | 80    | ----- | 36    | 3.8   | .60    | .30   | .10  | .10  | .10   |
| 31                 | .10  | -----  | 70      | 53    | ----- | 35    | ----- | .60    | ----- | .20  | .10  | ----- |
| TOTAL              | 4.50 | 366.50 | 1,592.3 | 1,218 | 421.3 | 1,176 | 655.0 | 41.00  | 12.60 | 7.30 | 3.40 | 3.30  |
| MEAN               | .15  | 12.2   | 51.4    | 39.3  | 15.0  | 37.9  | 21.8  | 1.32   | .42   | .24  | .11  | .11   |
| AC-FT              | 8.9  | 727    | 3,160   | 2,420 | 836   | 2,330 | 1,300 | 81     | 25    | 14   | 6.7  | 6.5   |
| CALENDAR YEAR 1965 | MAX  | 104    | MIN     | .10   | MEAN  | 18.4  | AC-FT | 13,280 |       |      |      |       |
| WATER YEAR 1965-66 | MAX  | 86     | MIN     | .10   | MEAN  | 15.1  | AC-FT | 10,920 |       |      |      |       |



11-1567. Pescadero Creek near Paicines, Calif.

Location.--Lat 36°41'40", long 121°18'35", in SE¼ sec.21, T.14 S., R.6 E., on left bank just downstream from Cienega Valley Road bridge, 1.5 miles upstream from mouth, and 3 miles southwest of Paicines.

Drainage area.--38.3 sq mi.

Records available.--July 1959 to September 1966.

Gage.--Water-stage recorder and, since Sept. 10, 1963, concrete control. Altitude of gage is 720 ft (from topographic map).

Average discharge.--7 years, 0.51 cfs (369 acre-ft per year).

Extremes.--Maximum discharge during year, 13 cfs Dec. 12 (gage height, 5.32 ft); no flow Aug. 6.

1959-66: Maximum discharge, 23 cfs Dec. 24, 1964 (gage height, 5.46 ft); no flow at times in each year.

Remarks.--Records good. No regulation; large groundwater withdrawals above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|-------|-------|------|------|-------|------|-------|-------|-------|------|------|-------|
| 1     | 0.40  | 0.90  | 1.6  | 3.6  | 2.1   | 1.6  | 1.2   | 0.70  | 0.90  | 0.30 | 0.10 | 0.20  |
| 2     | .40   | .90   | 1.6  | 2.6  | 2.1   | 1.8  | 1.2   | .70   | .70   | .30  | .10  | .10   |
| 3     | .50   | .90   | 1.6  | 2.1  | 1.8   | 1.8  | 1.2   | .60   | .60   | .30  | .10  | .10   |
| 4     | .60   | .90   | 1.6  | 2.1  | 1.8   | 1.8  | 1.2   | .60   | .60   | .30  | .10  | .10   |
| 5     | .60   | .90   | 1.6  | 2.1  | 1.8   | 1.8  | 1.2   | .50   | .60   | .30  | .10  | .10   |
| 6     | .60   | .90   | 1.6  | 2.1  | 2.1   | 1.8  | 1.2   | .40   | .60   | .40  | 0    | .20   |
| 7     | .60   | .90   | 1.6  | 2.1  | 2.1   | 1.8  | 1.2   | .40   | .60   | .40  | .10  | .20   |
| 8     | .70   | .90   | 1.6  | 2.1  | 1.8   | 1.8  | 1.2   | .50   | .50   | .40  | .10  | .10   |
| 9     | .90   | .90   | 1.6  | 2.1  | 1.8   | 1.8  | 1.2   | .70   | .50   | .40  | .10  | .10   |
| 10    | .90   | 1.0   | 1.6  | 2.1  | 1.8   | 1.8  | 1.4   | .70   | .50   | .40  | .10  | .10   |
| 11    | .70   | 1.0   | 1.6  | 2.1  | 1.8   | 1.8  | 1.4   | .60   | .50   | .40  | .10  | .10   |
| 12    | .70   | 1.0   | 4.6  | 2.1  | 1.8   | 1.6  | 1.2   | .60   | .50   | .40  | .20  | .20   |
| 13    | .70   | 1.0   | 2.4  | 2.1  | 1.8   | 1.6  | 1.0   | .60   | .40   | .40  | .10  | .20   |
| 14    | .90   | 2.6   | 2.1  | 2.1  | 1.8   | 1.4  | 1.0   | .70   | .40   | .40  | .20  | .20   |
| 15    | .90   | 1.6   | 2.1  | 2.1  | 1.8   | 1.4  | 1.0   | .70   | .40   | .30  | .20  | .20   |
| 16    | .90   | 3.9   | 2.1  | 2.1  | 1.8   | 1.4  | 1.0   | .70   | .40   | .20  | .10  | .20   |
| 17    | .90   | 2.1   | 1.8  | 2.1  | 1.8   | 1.4  | 1.0   | .70   | .40   | .20  | .10  | .20   |
| 18    | .90   | 1.8   | 1.8  | 2.1  | 1.8   | 1.4  | 1.0   | .50   | .40   | .20  | .20  | .20   |
| 19    | .90   | 1.6   | 1.8  | 2.1  | 1.8   | 1.4  | .90   | .50   | .40   | .20  | .20  | .30   |
| 20    | .90   | 1.6   | 1.8  | 2.1  | 1.8   | 1.4  | .70   | .50   | .40   | .20  | .30  | .40   |
| 21    | .90   | 1.6   | 1.8  | 2.1  | 1.8   | 1.4  | .70   | .50   | .40   | .20  | .30  | .30   |
| 22    | .70   | 1.8   | 1.8  | 2.1  | 1.8   | 1.6  | .70   | .50   | .40   | .10  | .30  | .30   |
| 23    | .70   | 3.6   | 1.8  | 2.1  | 1.8   | 1.6  | .70   | .60   | .30   | .10  | .30  | .30   |
| 24    | .70   | 4.4   | 1.8  | 2.1  | 1.8   | 1.6  | .70   | .50   | .20   | .10  | .20  | .30   |
| 25    | .90   | 3.3   | 2.4  | 2.1  | 1.8   | 1.6  | .70   | .50   | .20   | .10  | .20  | .40   |
| 26    | .90   | 2.1   | 2.1  | 2.1  | 1.8   | 1.6  | .70   | .70   | .20   | .10  | .20  | .40   |
| 27    | .90   | 1.8   | 2.1  | 2.1  | 1.6   | 1.6  | .70   | .70   | .20   | .10  | .20  | .40   |
| 28    | .90   | 1.6   | 3.6  | 2.1  | 1.6   | 1.6  | .70   | .70   | .20   | .10  | .20  | .40   |
| 29    | .90   | 1.6   | 5.8  | 2.1  | ----- | 1.6  | .70   | .90   | .20   | .10  | .20  | .40   |
| 30    | .70   | 1.6   | 5.4  | 3.9  | ----- | 1.6  | .70   | .90   | .30   | .20  | .20  | .40   |
| 31    | .90   | ----- | 6.6  | 2.1  | ----- | 1.4  | ----- | .90   | ----- | .10  | .20  | ----- |
| Total | 23.70 | 50.70 | 73.3 | 68.9 | 51.2  | 49.8 | 29.40 | 19.30 | 12.90 | 7.70 | 5.10 | 7.10  |
| Mean  | 0.76  | 1.69  | 2.36 | 2.22 | 1.83  | 1.61 | 0.98  | 0.62  | 0.43  | 0.25 | 0.16 | 0.24  |
| Ac-ft | 47    | 101   | 145  | 137  | 102   | 99   | 58    | 38    | 26    | 15   | 10   | 14    |

Calendar year 1965 Max 6.6 Min 0.10 Mean 0.68 Ac-ft 494  
 Water year 1965-66 Max 6.6 Min 0 Mean 1.09 Ac-ft 792

Peak discharge (base, 10 cfs, revised)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-16 | 1730 | 5.29        | 11        | 12-28 | 2300 | 5.29        | 11        |
| 12-12 | 0900 | 5.32        | 13        | 12-31 | 1630 | 5.28        | 10        |

## PAJARO RIVER BASIN

11-1575. Tres Pinos Creek near Tres Pinos, Calif.

Location.--Lat 36°45'13", long 121°17'03", in Santa Ana y Quien Sabe Grant, on right bank 3.5 miles southeast of Tres Pinos, San Benito County, and 6.2 miles upstream from mouth.

Drainage area.--206 sq mi.

Records available.--October 1939 to September 1966. Yearly estimate only for 1940 and monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Concrete control since June 3, 1954 (control ineffective since 1955 due to gravel fill). Altitude of gage is 570 ft (from topographic map). Prior to Jan. 4, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 12.9 cfs (9,340 acre-ft per year), unadjusted.

Extremes.--Maximum discharge during year, 1,350 cfs Dec. 31 (gage height, 5.40 ft); minimum daily, 0.10 cfs for many days. 1939-66: Maximum discharge, 8,060 cfs Apr. 4, 1941 (gage height, 7.75 ft), from rating curve extended above 3,500 cfs; no flow at times in 1952, 1957-61, 1965.

Flood in February 1938 reached a stage of about 9.0 ft, from floodmarks.

Remarks.--Records poor. No regulation; diversions above station for irrigation can divert total flow in summer months, and since 1962, diversions into basin above station from San Benito River for percolation and irrigation.

Revisions (water years).--1963 Report: 1962.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966.

| DAY   | OCT.  | NOV.   | DEC.    | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|-------|--------|---------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.20  | 0.50   | 1.2     | 460     | 6.8   | 9.1   | 14    | 0.10  | 0.40  | 0.20 | 0.20 | 0.10  |
| 2     | .20   | .50    | 1.0     | 151     | 7.2   | 9.6   | 14    | .50   | .30   | .20  | .30  | .10   |
| 3     | .20   | .50    | 1.0     | 71      | 5.8   | 11    | 14    | .80   | .30   | .20  | .20  | .10   |
| 4     | .20   | .60    | 1.0     | 13      | 2.9   | 11    | 13    | 1.0   | .30   | .20  | .50  | .10   |
| 5     | .20   | .60    | 1.0     | 5.8     | 2.9   | 12    | 9.3   | 1.0   | .30   | .20  | .20  | .10   |
| 6     | .20   | .60    | 1.0     | 1.6     | 3.5   | 14    | 7.2   | 1.0   | .30   | .20  | .20  | .10   |
| 7     | .20   | .50    | 1.0     | 1.6     | 6.6   | 14    | 7.2   | 1.0   | .30   | .20  | .20  | .10   |
| 8     | .20   | .50    | 1.0     | 1.6     | 7.2   | 15    | 7.2   | 1.0   | .30   | .10  | .20  | .10   |
| 9     | .20   | .60    | 1.0     | 1.2     | 12    | 15    | 5.8   | 1.0   | .30   | .10  | .10  | .20   |
| 10    | .20   | .60    | 1.0     | 1.2     | 10    | 15    | 2.0   | 1.0   | .30   | .10  | .10  | .20   |
| 11    | .20   | .60    | 1.2     | 1.2     | 10    | 17    | 2.0   | .80   | .20   | .10  | .10  | .20   |
| 12    | .20   | .60    | 10      | 1.2     | 10    | 17    | 1.6   | .50   | .20   | .10  | .10  | .20   |
| 13    | .40   | .80    | 28      | 1.2     | 10    | 16    | 1.6   | .50   | .20   | .10  | .10  | .20   |
| 14    | .40   | 2.0    | 2.9     | 1.0     | 9.3   | 14    | 1.6   | .60   | .20   | .10  | .20  | .20   |
| 15    | .50   | 1.2    | 1.2     | 7.2     | 8.2   | 15    | 1.6   | .80   | .20   | .10  | .20  | .20   |
| 16    | .50   | 2.9    | 1.0     | 11      | 8.2   | 15    | 1.2   | .60   | .20   | .10  | .20  | .20   |
| 17    | .50   | 2.4    | 1.0     | 12      | 7.2   | 15    | 1.2   | .60   | .30   | .10  | .20  | .10   |
| 18    | .50   | 1.2    | 1.2     | 17      | 7.2   | 15    | 1.2   | .40   | .30   | .10  | .20  | .10   |
| 19    | .50   | 1.2    | 1.2     | 17      | 6.6   | 15    | 1.2   | .40   | .20   | .10  | .20  | .20   |
| 20    | .60   | 1.2    | 1.2     | 18      | 6.6   | 14    | 1.2   | .40   | .20   | .20  | .20  | .20   |
| 21    | .60   | 1.2    | 1.2     | 18      | 5.8   | 11    | 1.2   | .40   | .20   | .10  | .10  | .30   |
| 22    | .60   | 1.6    | 1.2     | 20      | 5.8   | 11    | 1.2   | .40   | .20   | .10  | .10  | .40   |
| 23    | .60   | 50     | 1.2     | 20      | 5.8   | 14    | 1.2   | .20   | .30   | .10  | .10  | .20   |
| 24    | .60   | 160    | 1.2     | 20      | 5.8   | 14    | 1.2   | .20   | .70   | .10  | .10  | .50   |
| 25    | .60   | 124    | 1.2     | 20      | 5.8   | 14    | 1.2   | .20   | .30   | .10  | .10  | .40   |
| 26    | .50   | 43     | 1.6     | 22      | 7.2   | 14    | 1.2   | .40   | .20   | .10  | .10  | .50   |
| 27    | .50   | 9.3    | 1.6     | 22      | 8.2   | 13    | 1.2   | .40   | .20   | .10  | .10  | .40   |
| 28    | .50   | 2.4    | 2.0     | 22      | 7.9   | 13    | 1.2   | .40   | .20   | .10  | .10  | .40   |
| 29    | .50   | 2.0    | 110     | 22      | ----- | 14    | 1.2   | .40   | .20   | .10  | .10  | .40   |
| 30    | .50   | 1.6    | 463     | 54      | ----- | 14    | 1.0   | .40   | .20   | .20  | .10  | .30   |
| 31    | .50   | -----  | 630     | 14      | ----- | 13    | ----- | .40   | ----- | .20  | .10  | ----- |
| TOTAL | 12.30 | 414.70 | 1,273.3 | 1,048.8 | 200.5 | 423.7 | 119.9 | 17.80 | 8.00  | 4.20 | 5.30 | 7.10  |
| MEAN  | .40   | 13.8   | 41.1    | 33.8    | 7.16  | 13.7  | 4.00  | .57   | .27   | .14  | .17  | .24   |
| AC-FT | 24    | 823    | 2,530   | 2,080   | 398   | 840   | 238   | 35    | 16    | 8.3  | 11   | 14    |

CALENDAR YEAR 1965 MAX 813 MIN 0 MEAN 9.86 AC-FT 7,140  
 WATER YEAR 1965-66 MAX 630 MIN .10 MEAN 9.69 AC-FT 7,020

Peak discharge (base, 450 cfs).--Dec. 31 (2200) 1,350 cfs (5.40 ft).

11-1585. San Benito River near Hollister, Calif.

Location.--Lat 36°47'17", long 121°22'11", in SW¼ sec.24, T.13 S., R.5 E., on left bank 1,500 ft downstream from Bird Creek, 0.9 mile downstream from Tres Pinos Creek, 2.7 miles west of Tres Pinos, and 4.8 miles southeast of Hollister.

Drainage area.--586 sq mi.

Records available.--October 1949 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 370 ft (from topographic map).

Average discharge.--17 years, 24.4 cfs (17,660 acre-ft per year); median of yearly mean discharges, 7.2 cfs (5,200 acre-ft per year).

Extremes.--Maximum discharge during year, 912 cfs Jan. 1 (gage height, 5.47 ft); no flow for several months.

1949-66: Maximum discharge, 11,600 cfs Apr. 3, 1958 (gage height, 16.30 ft), from rating curve extended above 1,200 cfs on basis of flood-routing study; no flow for parts of each year.

Remarks.--Records fair. Flow regulated by Hernandez Dam beginning in December 1961 (capacity, 18,700 acre-ft). Several small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.   | Dec.    | Jan.   | Feb.  | Mar.  | Apr.   | May    | June  | July | Aug. | Sept. |
|--------------------|------|--------|---------|--------|-------|-------|--------|--------|-------|------|------|-------|
| 1                  |      | 0      | 5.2     | 470    | 19    | 13    | 12     | 39     | 0.10  |      |      |       |
| 2                  |      | 0      | 4.7     | 81     | 3.0   | 14    | 11     | 29     | .10   |      |      |       |
| 3                  |      | 0      | 4.2     | 20     | 1.2   | 20    | 10     | 20     | .10   |      |      |       |
| 4                  |      | 0      | 4.2     | 4.2    | 1.1   | 21    | 10     | 12     | .10   |      |      |       |
| 5                  |      | 0      | 3.6     | 1.2    | 1.1   | 21    | 6.3    | 1.3    | .10   |      |      |       |
| 6                  |      | 0      | 3.0     | 1.0    | 1.1   | 22    | 6.1    | .20    | .10   |      |      |       |
| 7                  |      | 0      | 24      | .90    | 1.1   | 21    | 11     | .20    | .10   |      |      |       |
| 8                  |      | 0      | 30      | .70    | 1.0   | 20    | 14     | .20    | .10   |      |      |       |
| 9                  |      | 0      | 37      | .70    | 5.0   | 20    | 13     | .20    | .10   |      |      |       |
| 10                 |      | 0      | 38      | .60    | 5.5   | 21    | 33     | .20    | 0     |      |      |       |
| 11                 |      | 0      | 40      | .60    | 5.2   | 20    | 29     | .10    | 0     |      |      |       |
| 12                 |      | 0      | 51      | .60    | 4.7   | 20    | 31     | .10    | 0     |      |      |       |
| 13                 |      | 0      | 63      | .60    | 3.2   | 19    | 28     | .10    | 0     |      |      |       |
| 14                 |      | .10    | 51      | .60    | 3.0   | 20    | 4.2    | .10    | 0     |      |      |       |
| 15                 |      | 0      | 44      | .90    | 1.4   | 20    | .60    | .10    | 0     |      |      |       |
| 16                 |      | .10    | 49      | .90    | 1.3   | 20    | .40    | .10    | 0     |      |      |       |
| 17                 |      | 0      | 53      | .90    | 1.2   | 21    | .40    | .10    | 0     |      |      |       |
| 18                 |      | 0      | 53      | 1.2    | 1.1   | 19    | .40    | .10    | 0     |      |      |       |
| 19                 |      | 4.0    | 51      | 2.6    | .90   | 18    | .40    | .10    | 0     |      |      |       |
| 20                 |      | 12     | 51      | 3.0    | .80   | 19    | .80    | .10    | 0     |      |      |       |
| 21                 |      | 7.8    | 51      | 3.4    | .70   | 22    | .80    | .10    | 0     |      |      |       |
| 22                 |      | 5.0    | 50      | 5.2    | .60   | 30    | .50    | .10    | 0     |      |      |       |
| 23                 |      | 5.0    | 49      | 9.3    | .70   | 31    | .30    | .10    | 0     |      |      |       |
| 24                 |      | 37     | 49      | 8.6    | .80   | 30    | .20    | .10    | 0     |      |      |       |
| 25                 |      | 52     | 51      | 8.6    | .70   | 29    | .20    | .10    | 0     |      |      |       |
| 26                 |      | 32     | 51      | 8.9    | .80   | 30    | .20    | .10    | 0     |      |      |       |
| 27                 |      | 9.2    | 50      | 8.9    | 5.2   | 48    | .20    | .10    | 0     |      |      |       |
| 28                 |      | 3.9    | 50      | 5.2    | 12    | 38    | .20    | .10    | 0     |      |      |       |
| 29                 |      | 7.4    | 63      | 16     | ----- | 21    | .20    | .10    | 0     |      |      |       |
| 30                 |      | 6.1    | 375     | 82     | ----- | 18    | .20    | .10    | 0     |      |      |       |
| 31                 |      | -----  | 511     | 82     | ----- | 14    | -----  | .10    | ----- |      |      | ----- |
| Total              | 0    | 181.60 | 2,009.9 | 830.30 | 83.40 | 700   | 224.60 | 104.40 | 0.90  | 0    | 0    | 0     |
| Mean               | 0    | 6.05   | 64.8    | 26.8   | 2.98  | 22.6  | 7.49   | 3.37   | 0.03  | 0    | 0    | 0     |
| Ac-ft              | 0    | 360    | 3,990   | 1,650  | 165   | 1,390 | 445    | 207    | 1.8   | 0    | 0    | 0     |
| Calendar year 1965 | Max  | 511    | Min     | 0      | Mean  | 14.7  | Ac-ft  | 10,620 |       |      |      |       |
| Water year 1965-66 | Max  | 511    | Min     | 0      | Mean  | 11.3  | Ac-ft  | 8,200  |       |      |      |       |

## PAJARO RIVER BASIN

11-1590. Pajaro River at Chittenden, Calif.

Location.--Lat 36°54'01", long 121°35'48", in Salsipuedas Grant, on downstream side of right bank pier of State highway bridge, 0.6 mile downstream from Pescadero Creek, 0.6 mile southeast of Chittenden, Santa Cruz County, and 2.3 miles downstream from San Benito River.

Drainage area.--1,186 sq mi.

Records available.--October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "near Chittenden."

Gage.--Water-stage recorder. Datum of gage is 82.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1955. Prior to May 13, 1949, wire-weight gage on former bridge 100 ft downstream at same datum except that water-stage recorder, also 100 ft downstream and at same datum, was used Dec. 20, 1946, to June 11, 1947, June 21 to Sept. 23, 1947, and Dec. 19, 1947, to May 6, 1948.

Average discharge.--27 years, 140 cfs (101,400 acre-ft per year); median of yearly mean discharges, 70 cfs (50,700 acre-ft per year).

Extremes.--Maximum discharge during year, 1,320 cfs Dec. 31 (gage height, 8.94 ft); minimum daily 0.20 cfs, Sept. 15. 1939-66: Maximum discharge, 24,000 cfs Dec. 24, 1955 (gage height, 32.46 ft) from rating curve extended above 8,300 cfs on basis of slope-conveyance study; maximum gage height, 33.11 ft Apr. 3, 1958; no flow at times in July, August 1948. Flood in February 1938 reached a stage of 31.3 ft, from floodmarks.

Remarks.--Records fair. Flow regulated by Hernandez Reservoir (capacity 18,700 acre-ft), Pacheco Lake (capacity, 6,150 acre-ft), Chesbro Reservoir (see sta 11-1534.8), Uvas Reservoir (see sta. 11-1540.2), and San Felipe Lake. Many diversions above station for irrigation. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July  | Aug. | Sept. |
|--------------------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|------|-------|
| 1                  | 2.2   | 6.9   | 17    | 1,150 | 60    | 37    | 17    | 21     | 6.2   | 3.6   | 1.8  | 0.80  |
| 2                  | 2.0   | 6.9   | 16    | 811   | 87    | 36    | 17    | 21     | 5.9   | 3.4   | 1.5  | .80   |
| 3                  | 2.2   | 6.9   | 16    | 533   | 79    | 35    | 17    | 20     | 6.4   | 3.9   | 1.5  | .60   |
| 4                  | 2.7   | 7.1   | 17    | 400   | 71    | 33    | 17    | 20     | 6.9   | 4.6   | 1.5  | .60   |
| 5                  | 2.7   | 8.5   | 18    | 290   | 68    | 32    | 16    | 20     | 7.1   | 4.8   | 1.4  | .80   |
| 6                  | 2.9   | 8.5   | 18    | 225   | 143   | 28    | 16    | 19     | 6.9   | 3.9   | 1.3  | .80   |
| 7                  | 3.2   | 8.8   | 18    | 166   | 182   | 28    | 16    | 18     | 6.9   | 3.2   | 1.4  | .40   |
| 8                  | 3.4   | 9.0   | 18    | 121   | 148   | 29    | 16    | 18     | 6.9   | 3.0   | 1.4  | .40   |
| 9                  | 3.9   | 9.9   | 18    | 80    | 125   | 28    | 15    | 17     | 6.4   | 2.7   | 1.5  | .70   |
| 10                 | 3.9   | 9.9   | 18    | 65    | 96    | 28    | 16    | 15     | 6.4   | 3.0   | 1.7  | .70   |
| 11                 | 3.7   | 11    | 19    | 54    | 75    | 28    | 17    | 13     | 6.4   | 3.7   | 1.7  | .40   |
| 12                 | 3.7   | 12    | 21    | 48    | 63    | 29    | 16    | 12     | 6.4   | 3.9   | 2.0  | .40   |
| 13                 | 3.7   | 16    | 21    | 44    | 56    | 26    | 16    | 13     | 6.6   | 4.2   | 2.2  | .40   |
| 14                 | 3.9   | 16    | 20    | 41    | 50    | 26    | 16    | 13     | 6.4   | 4.4   | 2.2  | .40   |
| 15                 | 4.2   | 16    | 19    | 40    | 47    | 26    | 18    | 12     | 6.4   | 3.9   | 2.0  | .20   |
| 16                 | 4.2   | 17    | 18    | 37    | 43    | 26    | 19    | 11     | 6.6   | 3.7   | 1.4  | .40   |
| 17                 | 4.2   | 26    | 18    | 35    | 41    | 25    | 20    | 9.3    | 6.4   | 3.0   | 1.2  | .60   |
| 18                 | 4.2   | 34    | 20    | 34    | 40    | 24    | 20    | 9.6    | 6.6   | 3.6   | 1.0  | 1.2   |
| 19                 | 4.1   | 26    | 18    | 32    | 40    | 24    | 19    | 8.8    | 6.6   | 2.6   | 1.3  | 1.9   |
| 20                 | 4.2   | 19    | 18    | 31    | 40    | 24    | 19    | 9.9    | 6.2   | 2.9   | 2.0  | .20   |
| 21                 | 4.6   | 17    | 18    | 29    | 37    | 24    | 20    | 9.6    | 5.5   | 4.4   | 2.9  | 1.7   |
| 22                 | 4.8   | 16    | 18    | 29    | 36    | 24    | 21    | 9.3    | 5.3   | 5.1   | 3.7  | 1.3   |
| 23                 | 4.8   | 17    | 16    | 29    | 36    | 26    | 21    | 9.6    | 5.3   | 4.8   | 4.1  | .90   |
| 24                 | 4.6   | 28    | 15    | 28    | 35    | 26    | 21    | 8.5    | 5.1   | 4.1   | 3.6  | .60   |
| 25                 | 4.8   | 4.9   | 18    | 28    | 37    | 26    | 21    | 7.1    | 4.8   | 3.2   | 3.4  | .90   |
| 26                 | 5.3   | 42    | 19    | 28    | 40    | 26    | 20    | 7.4    | 5.3   | 2.7   | 3.2  | .80   |
| 27                 | 5.3   | 31    | 18    | 28    | 40    | 26    | 20    | 7.7    | 4.4   | 2.3   | 3.0  | .60   |
| 28                 | 5.3   | 22    | 26    | 28    | 37    | 26    | 21    | 7.7    | 4.1   | 1.9   | 2.4  | .40   |
| 29                 | 5.3   | 19    | 253   | 28    | ----- | 26    | 21    | 7.1    | 3.7   | 1.7   | 2.3  | .40   |
| 30                 | 5.7   | 18    | 751   | 63    | ----- | 26    | 20    | 7.4    | 3.9   | 1.8   | 1.8  | .50   |
| 31                 | 6.2   | ----- | 1,150 | 78    | ----- | 22    | ----- | 7.1    | ----- | 2.2   | 1.3  | ----- |
| Total              | 125.9 | 534.4 | 2,668 | 4,633 | 1,852 | 850   | 549   | 389.1  | 178.0 | 106.2 | 63.7 | 22.60 |
| Mean               | 4.06  | 17.8  | 86.1  | 149   | 66.1  | 27.4  | 18.3  | 12.6   | 5.93  | 3.43  | 2.05 | 0.75  |
| Ac-ft              | 250   | 1,060 | 5,290 | 9,190 | 3,670 | 1,690 | 1,090 | 772    | 353   | 211   | 126  | 45    |
| Calendar year 1965 | Max   | 2,460 | Min   | 1.1   | Mean  | 76.5  | Ac-ft | 55,390 |       |       |      |       |
| Water year 1965-66 | Max   | 1,150 | Min   | 0.2   | Mean  | 32.8  | Ac-ft | 23,750 |       |       |      |       |

11-1591.5. Corralitos Creek near Corralitos, Calif

Location.--Lat 37°00'20", long 121°48'25", in Los Corralitos Grant, on left bank 0.5 mile downstream from Mormon Gulch, 1.2 miles upstream from Corralitos, Santa Cruz County, and 7 miles northwest of Watsonville.

Drainage area.--10.6 sq mi.

Records available.--October 1957 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 310 ft (from topographic map). Prior to June 30, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 8.10 cfs (5,860 acre-ft per year).

Extremes.--Maximum discharge during year, 146 cfs Dec. 25 (gage height, 2.70 ft); no flow Aug. 29 to Sept. 30.

1957-66: Maximum discharge, 1,970 cfs Apr. 2, 1958 (gage height, 7.55 ft), from rating curve extended above 430 cfs on basis of estimate of maximum flow over dam; maximum gage height, 7.62 ft Jan. 31, 1963; no flow at times.

Remarks.--Records good. No regulation; Watsonville Water Works can divert up to 8.0 cfs daily above station for municipal supply, domestic use, and irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.10 | 0.10   | 0.90   | 16    | 8.9   | 2.5   | 0.40  | 0.20 | 0.10  | 0.10 | 0.10 |       |
| 2     | .10  | .10    | .60    | 10    | 8.7   | 2.5   | .30   | .20  | .10   | .10  | .10  |       |
| 3     | .10  | .10    | .50    | 6.7   | 6.1   | 2.3   | .30   | .10  | .10   | .10  | .10  |       |
| 4     | .10  | .10    | .50    | 3.6   | 8.9   | 2.2   | .50   | .10  | .10   | .10  | .10  |       |
| 5     | .10  | .10    | .40    | 15    | 12    | 2.0   | .40   | .10  | .10   | .10  | .10  |       |
| 6     | .10  | .10    | .40    | 9.9   | 14    | 1.9   | .30   | .10  | .10   | .10  | .10  |       |
| 7     | .10  | .10    | .40    | 7.1   | 9.3   | 1.8   | .30   | .10  | .10   | .10  | .10  |       |
| 8     | .10  | .10    | .40    | 5.8   | 8.0   | 1.8   | .60   | .10  | .10   | .10  | .10  |       |
| 9     | .10  | .10    | .50    | 5.2   | 6.9   | 2.7   | 3.1   | .10  | .10   | .10  | .10  |       |
| 10    | .10  | .10    | .40    | 4.3   | 5.8   | 2.8   | 5.3   | .10  | .10   | .10  | .10  |       |
| 11    | .10  | .10    | 1.7    | 3.9   | 5.1   | 1.9   | 2.0   | .10  | .10   | .10  | .10  |       |
| 12    | .10  | .20    | 3.2    | 3.6   | 4.6   | 1.8   | 1.6   | .10  | .10   | .10  | .10  |       |
| 13    | .10  | 2.2    | 1.6    | 3.5   | 4.1   | 1.8   | .80   | .10  | .10   | .10  | .10  |       |
| 14    | .10  | 11     | .60    | 3.3   | 4.0   | 1.8   | .60   | .10  | .10   | .10  | .10  |       |
| 15    | .10  | 4.2    | .40    | 3.2   | 3.6   | 1.6   | .50   | .10  | .10   | .10  | .10  |       |
| 16    | .10  | 7.0    | .50    | 3.7   | 3.4   | 1.5   | .30   | .10  | .10   | .10  | .10  |       |
| 17    | .10  | 9.7    | .50    | 2.7   | 3.3   | 1.5   | .30   | .10  | .10   | .10  | .10  |       |
| 18    | .10  | 16     | .50    | 2.6   | 3.2   | 1.5   | .30   | .10  | .10   | .10  | .10  |       |
| 19    | .10  | 7.3    | .40    | 2.4   | 9.3   | 1.3   | .30   | .10  | .10   | .10  | .10  |       |
| 20    | .10  | 4.4    | .30    | 2.4   | 5.7   | 1.2   | .20   | .10  | .10   | .10  | .10  |       |
| 21    | .10  | 2.1    | .40    | 2.2   | 4.0   | 1.0   | .20   | .10  | .10   | .10  | .10  |       |
| 22    | .10  | 2.1    | .70    | 2.2   | 4.0   | 1.0   | .20   | .10  | .10   | .10  | .10  |       |
| 23    | .10  | 6.7    | .40    | 2.7   | 4.6   | 1.0   | .20   | .10  | .10   | .10  | .10  |       |
| 24    | .10  | 9.3    | 2.0    | 2.2   | 3.4   | 1.5   | .40   | .10  | .10   | .10  | .10  |       |
| 25    | .10  | 10     | 42     | 2.1   | 3.5   | .60   | .40   | .10  | .10   | .10  | .10  |       |
| 26    | .10  | 4.5    | 9.2    | 1.7   | 4.5   | .60   | .30   | .10  | .10   | .10  | .10  |       |
| 27    | .10  | 2.1    | 5.1    | 1.4   | 2.9   | .60   | .30   | .10  | .10   | .10  | .10  |       |
| 28    | .10  | 1.6    | 22     | 1.4   | 2.8   | .60   | .30   | .10  | .10   | .10  | .10  |       |
| 29    | .10  | 1.4    | 43     | 7.7   | ----- | .60   | .30   | .10  | .10   | .20  | 0    |       |
| 30    | .10  | 1.2    | 30     | 13    | ----- | .50   | .20   | .10  | .10   | .20  | 0    |       |
| 31    | .10  | -----  | 26     | 7.0   | ----- | .50   | ----- | .10  | ----- | .20  | 0    | ----- |
| TOTAL | 3.10 | 104.10 | 196.50 | 158.5 | 164.6 | 46.90 | 21.20 | 3.30 | 3.00  | 3.40 | 2.80 | 0     |
| MEAN  | .10  | 3.47   | 6.34   | 5.11  | 5.88  | 1.51  | .71   | .11  | .10   | .11  | .09  | 0     |
| AC-FT | 6.1  | 206    | 390    | 314   | 326   | 93    | 42    | 6.5  | 6.0   | 6.7  | 5.6  | 0     |

CALENDAR YEAR 1965 MAX 227 MIN .10 MEAN 7.87 AC-FT 5,690  
 WATER YEAR 1965-66 MAX 43 MIN 0 MEAN 1.94 AC-FT 1,400

Peak discharge (base, 300 cfs).--No peak above base.

11-1592. Corralitos Creek at Freedom, Calif.

Location.--Lat 36°56'22", long 121°46'10", in Los Corralitos Grant, on right bank just upstream from Green Valley Road bridge, 0.25 mile north of Freedom, Santa Cruz County, and 2.3 miles north of Watsonville.

Drainage area.--27.8 sq mi.

Records available.--October 1956 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 80 ft (from topographic map). Prior to Dec. 3, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--10 years, 12.0 cfs (8,690 acre-ft per year).

Extremes.--Maximum discharge during year, 199 cfs Dec. 25 (gage height, 4.09 ft); no flow for several months.

1956-66: Maximum discharge, 2,680 cfs Apr. 2, 1958 (gage height, 12.59 ft), from rating curve extended above 790 cfs on basis of contracted-opening measurement at gage height 15.6 ft; no flow at times.

Flood of Dec. 22, 1955, reached a stage of 15.6 ft, from floodmarks (discharge, 3,620 cfs on basis of contracted-opening measurement of maximum flow).

Remarks.--Records fair. No regulation; Watsonville Water Works can divert up to 8.0 cfs daily above station for municipal supply, domestic use, and irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.30   | 40    | 9.6   | 1.8   | 0.40  | 0.10 | 0.10  |      |      |       |
| 2     |      | 0     | .30    | 28    | 9.7   | 1.7   | .40   | .10  | .10   |      |      |       |
| 3     |      | 0     | .30    | 21    | 6.4   | 1.6   | .40   | .20  | .10   |      |      |       |
| 4     |      | 0     | .40    | 19    | 7.2   | 1.3   | .40   | .30  | .10   |      |      |       |
| 5     |      | .10   | .30    | 29    | 11    | 1.3   | .40   | .40  | .10   |      |      |       |
| 6     |      | .10   | .20    | 25    | 15    | .90   | .40   | .40  | .10   |      |      |       |
| 7     |      | 0     | .30    | 20    | 11    | .80   | .40   | .20  | .10   |      |      |       |
| 8     |      | 0     | .30    | 16    | 8.6   | .70   | .30   | .20  | .10   |      |      |       |
| 9     |      | 0     | .40    | 15    | 6.6   | .70   | .80   | .20  | .20   |      |      |       |
| 10    |      | 0     | .30    | 12    | 5.3   | 1.8   | 2.0   | .20  | .30   |      |      |       |
| 11    |      | 0     | .60    | 9.8   | 4.2   | .90   | .40   | .20  | .10   |      |      |       |
| 12    |      | .10   | 2.0    | 8.4   | 3.9   | .70   | .40   | .40  | .10   |      |      |       |
| 13    |      | .90   | 1.1    | 7.2   | 3.3   | .70   | .30   | .40  | .10   |      |      |       |
| 14    |      | 12    | .50    | 6.1   | 2.8   | .80   | .30   | .40  | .10   |      |      |       |
| 15    |      | 1.1   | .50    | 5.5   | 2.5   | .70   | .50   | .20  | .10   |      |      |       |
| 16    |      | 6.9   | .40    | 5.3   | 2.2   | .60   | .40   | .20  | .20   |      |      |       |
| 17    |      | 9.2   | .30    | 4.2   | 1.9   | .60   | .30   | .20  | .30   |      |      |       |
| 18    |      | 18    | .30    | 3.9   | 1.7   | .60   | .40   | .20  | .20   |      |      |       |
| 19    |      | 5.8   | .30    | 3.2   | 8.9   | .60   | .30   | .10  | .10   |      |      |       |
| 20    |      | 2.1   | .30    | 2.9   | 6.0   | .60   | .30   | .10  | 0     |      |      |       |
| 21    |      | .70   | .50    | 3.0   | 3.2   | .60   | .30   | .10  | 0     |      |      |       |
| 22    |      | .70   | .50    | 2.8   | 2.7   | .60   | .20   | .10  | 0     |      |      |       |
| 23    |      | 3.7   | .40    | 2.6   | 3.9   | .60   | .20   | .10  | 0     |      |      |       |
| 24    |      | 7.8   | .50    | 2.6   | 3.2   | .80   | .10   | .10  | 0     |      |      |       |
| 25    |      | 11    | 50     | 2.6   | 2.5   | .70   | .10   | .20  | 0     |      |      |       |
| 26    |      | 3.8   | 18     | 2.6   | 4.2   | .50   | .20   | .20  | 0     |      |      |       |
| 27    |      | .90   | 11     | 2.6   | 2.1   | .40   | .20   | .20  | 0     |      |      |       |
| 28    |      | .30   | 24     | 2.4   | 1.9   | .40   | .20   | .40  | 0     |      |      |       |
| 29    |      | .30   | 59     | 8.7   | ----- | .50   | .20   | .10  | 0     |      |      |       |
| 30    |      | .30   | 54     | 20    | ----- | .50   | .20   | .10  | 0     |      |      |       |
| 31    |      | ----- | 59     | 7.1   | ----- | .50   | ----- | .10  | ----- |      |      |       |
| TOTAL | 0    | 85.80 | 286.30 | 338.5 | 151.5 | 25.50 | 11.40 | 6.40 | 2.60  | 0    | 0    | 0     |
| MEAN  | 0    | 2.86  | 9.24   | 10.9  | 5.41  | .82   | .38   | .21  | .09   | 0    | 0    | 0     |
| AC-FT | 0    | 170   | 568    | 671   | 300   | 51    | 23    | 13   | 5.2   | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 429 MIN 0 MEAN 10.9 AC-FT 7,860  
 WATER YEAR 1965-66 MAX 59 MIN 0 MEAN 2.49 AC-FT 1,800

Peak discharge (base, 600 cfs, revised).--No peak above base.

11-1594. Green Valley Creek near Corralitos, Calif.

Location.--Lat 36°58'37", long 121°46'31", in Los Corralitos Grant, on right bank at culvert on Green Valley road and 1.9 miles south-east of Corralitos, Santa Cruz County.

Drainage area.--7.05 sq mi.

Records available.--Water years 1961-63 (annual maximum), October 1963 to September 1966.

Gage.--Water-stage recorder with rain gage attachment and crest-stage gage. Altitude of gage is 165 ft (from topographic map). Aug. 31, 1960 to Oct. 4, 1963, crest-stage gage at same site and datum.

Extremes.--Maximum discharge during year, 68 cfs Dec. 28 (gage height, 1.12 ft); no flow for several months.

1960-66: Maximum discharge 925 cfs Jan. 31, 1963 (gage height, 6.35 ft), from rating curve extended above 66 cfs on basis of computations of maximum flow through culvert at gage heights 4.45 and 6.35 ft and slope-area measurement at gage height 2.17 ft.

1963-66: No flow for many days in each year.

Remarks.--Records good. No regulation; pumpage from wells along creek for irrigation affects flow at this station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0     | 5.2   | 7.1   | 0.90 | 0.10  | 0    | 1.3   |      |      |       |
| 2     |      | .10   | 0     | 3.0   | 4.0   | .70  | .10   | 0    | 1.2   |      |      |       |
| 3     |      | .10   | 0     | 1.9   | 2.4   | .70  | .10   | 0    | 1.0   |      |      |       |
| 4     |      | .10   | 0     | 1.0   | 2.4   | .50  | .10   | 0    | .20   |      |      |       |
| 5     |      | .10   | 0     | .90   | 3.6   | .50  | .10   | 0    | 0     |      |      |       |
| 6     |      | .10   | 0     | .70   | 4.8   | .40  | .10   | 0    | 0     |      |      |       |
| 7     |      | .10   | 0     | .60   | 3.0   | .40  | .10   | 0    | 0     |      |      |       |
| 8     |      | 0     | 0     | .50   | 3.0   | .40  | .10   | 0    | 0     |      |      |       |
| 9     |      | 0     | .10   | .30   | 1.9   | .40  | .20   | 0    | 0     |      |      |       |
| 10    |      | 0     | .10   | .20   | 1.9   | .40  | .10   | 0    | 0     |      |      |       |
| 11    |      | 0     | .20   | .30   | 1.4   | .40  | .10   | 0    | 0     |      |      |       |
| 12    |      | 0     | .30   | .20   | 1.4   | .30  | .10   | 0    | 0     |      |      |       |
| 13    |      | .20   | .20   | .10   | 1.2   | .20  | .10   | 0    | 0     |      |      |       |
| 14    |      | .50   | .20   | .10   | 1.2   | .20  | .10   | 0    | 0     |      |      |       |
| 15    |      | 0     | .20   | .10   | 1.2   | .20  | .10   | 0    | 0     |      |      |       |
| 16    |      | .40   | .20   | .10   | 1.0   | .10  | .10   | 0    | 0     |      |      |       |
| 17    |      | .50   | .20   | .10   | .90   | .10  | .10   | 0    | 0     |      |      |       |
| 18    |      | .10   | .20   | .10   | .90   | .10  | .10   | 0    | 0     |      |      |       |
| 19    |      | 0     | .20   | .10   | 1.9   | .10  | .10   | 0    | 0     |      |      |       |
| 20    |      | 0     | .20   | .10   | 1.2   | .10  | .10   | 0    | 0     |      |      |       |
| 21    |      | 0     | .30   | .10   | 1.4   | .10  | .10   | 0    | 0     |      |      |       |
| 22    |      | 0     | .20   | .10   | 1.4   | .10  | .10   | 0    | 0     |      |      |       |
| 23    |      | .10   | .20   | .10   | 1.4   | .10  | .10   | 0    | 0     |      |      |       |
| 24    |      | .50   | .20   | .10   | 1.9   | .10  | 0     | 0    | 0     |      |      |       |
| 25    |      | .40   | .31   | .10   | 2.2   | .20  | 0     | 0    | 0     |      |      |       |
| 26    |      | .10   | .40   | .20   | 1.9   | .10  | 0     | .60  | 0     |      |      |       |
| 27    |      | 0     | .30   | .20   | 1.2   | .10  | 0     | 1.0  | 0     |      |      |       |
| 28    |      | 0     | .16   | .20   | 1.2   | .10  | 0     | 1.2  | 0     |      |      |       |
| 29    |      | 0     | .15   | .38   | ----- | .10  | 0     | .60  | 0     |      |      |       |
| 30    |      | 0     | .16   | .56   | ----- | .10  | 0     | .60  | 0     |      |      |       |
| 31    |      | ----- | .13   | .19   | ----- | .10  | ----- | .13  | ----- |      |      |       |
| Total | 0    | 3.40  | 67.00 | 28.00 | 59.00 | 8.30 | 2.40  | 5.30 | 3.70  | 0    | 0    | 0     |
| Mean  | 0    | .11   | 2.16  | .90   | 2.11  | .27  | .08   | .17  | .12   | 0    | 0    | 0     |
| Ac-ft | 0    | 6.7   | 133   | 56    | 117   | 16   | 4.8   | 11   | 7.3   | 0    | 0    | 0     |
| (†)   | 0    | 5.9   | 5.2   | 1.5   | 2.2   | .2   | .5    | 0    | 0     | .3   | 0    | .1    |

Calendar year 1965 Max 120 Min 0 Mean 2.66 Ac-ft 1930  
 Water year 1965-66 Max 16 Min 0 Mean .49 Ac-ft 351

Peak discharge (base, 100 cfs).--No peak above base.

† Precipitation, in inches.

## PAJARO RIVER BASIN

## Reservoirs in Pajaro River basin, Calif.

11-1534.8. Chesbro Reservoir.--Lat 37°07'00", long 121°41'34", near southwest boundary of Ojo de Agua de la Coche Grant, at left end of dam on Llagas Creek and 2.5 miles west of Morgan Hill, Santa Clara County. Drainage area, 19.4 sq mi. Records available, December 1955 to September 1966. Monthly contents prior to October 1959 published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by South Santa Clara Valley Water Conservation District). Maximum contents during year, 2,660 acre-ft Apr. 10-28 (elevation, 490.4 ft); minimum observed, 60 acre-ft Dec. 24 (elevation, 468.0 ft). Maximum contents observed during period 1955-66, 7,950 acre-ft Apr. 3, 1958 (elevation, 526.8 ft); no contents at times in 1957, 1960-62.

Reservoir is formed by earth- and rock-fill dam completed in 1955. Capacity, 7,500 acre-ft between elevations 465 (elevation of outlet gates) and 525 ft (crest of spillway). Reservoir is used for flood control and water released down Llagas Creek for irrigation. Record of contents furnished by South Santa Clara Valley Water Conservation District.

11-1540.2. Uvas Reservoir.--Lat 37°04'02", long 121°41'25", in Las Uvas Grant, at center of dam on Uvas Creek and 4.8 miles southwest of Morgan Hill, Santa Clara County. Drainage area, 30.4 sq mi. Records available, December 1957 to September 1966. Monthly contents prior to October 1959 published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by South Santa Clara Valley Water Conservation District). Maximum contents observed during year, 6,120 acre-ft Mar. 27 to Apr. 5 (elevation, 472.1 ft); minimum observed, 224 acre-ft Sept. 30 (elevation 420.6 ft). Maximum contents observed during period 1957-66, 10,760 acre-ft Feb. 1, 1963 (elevation, 489.6 ft); no contents May 18 to Nov. 30, 1961.

Reservoir is formed by earth- and rock-fill dam completed in 1957. Capacity, 10,000 acre-ft between elevations 410 (hydraulic gate valves) and 487.5 ft (crest of spillway). Water released down Uvas Creek for irrigation; at times, diverted into Llagas Creek 3.6 miles below Chesbro Reservoir for ground-water recharge by percolation. Record of contents furnished by South Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1965 to September 1966

| Date          | Chesbro Reservoir | Uvas Reservoir |
|---------------|-------------------|----------------|
| Sept. 30----- | 1,730             | 1,420          |
| Oct. 31-----  | 578               | 836            |
| Nov. 30-----  | 168               | 1,160          |
| Dec. 31-----  | 836               | 3,580          |
| Jan. 31-----  | 1,610             | 4,770          |
| Feb. 28-----  | 2,370             | 5,860          |
| Mar. 31-----  | 2,600             | 6,120          |
| Apr. 30-----  | 2,630             | 5,290          |
| May 31-----   | 1,910             | 3,830          |
| June 30-----  | 716               | 1,920          |
| July 31-----  | 286               | 574            |
| Aug. 31-----  | 180               | 340            |
| Sept. 30----- | 100               | 224            |

Note.--Contents at 0800 hours on first day of following month.



11-1597. Aptos Creek at Aptos, Calif.

Location.--Lat 36°58'35", long 121°54'05", in Aptos Grant, on left bank at Aptos, Santa Cruz County, 0.6 mile upstream from mouth.Drainage area.--12.2 sq mi.Records available.--October 1958 to September 1966.Gage.--Digital water-stage recorder. Altitude of gage is 10 ft (from topographic map). Prior to May 10, 1966, graphic water-stage recorder at same site and datum.Average discharge.--8 years, 6.48 cfs (4,690 acre-ft per year).Extremes.--Maximum discharge during year, 46 cfs Dec. 25 (gage height, 4.23 ft); no flow July 1-3.

1958-66: Maximum discharge, 2,110 cfs Jan. 31, 1963 (gage height, 10.82 ft), from rating curve extended above 980 cfs; no flow July 1-3, 1966.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.  | JAN.  | FEB.  | MAR. | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| 1     | 1.0   | 1.0   | 1.8   | 9.6   | 5.9   | 4.0  | 2.0   | 1.4  | 1.3   | 0     | 0.90  | 0.60  |
| 2     | .80   | 1.0   | 1.6   | 6.3   | 5.0   | 4.0  | 2.0   | 1.2  | 1.3   | 0     | .80   | .70   |
| 3     | .80   | 1.2   | 1.6   | 4.8   | 4.5   | 3.8  | 1.8   | 1.2  | 1.4   | 0     | .80   | .70   |
| 4     | 1.0   | 1.2   | 1.6   | 4.2   | 6.7   | 3.5  | 1.8   | 1.2  | 1.3   | .60   | .80   | .60   |
| 5     | 1.0   | 1.2   | 1.6   | 6.3   | 8.4   | 3.5  | 1.8   | 1.2  | .80   | .70   | .80   | .60   |
| 6     | 1.0   | 1.2   | 1.6   | 5.5   | 11    | 3.2  | 1.8   | 1.2  | 1.0   | .70   | .70   | .70   |
| 7     | 1.0   | 1.0   | 1.6   | 4.8   | 8.4   | 3.0  | 1.8   | 1.2  | 1.4   | .90   | .70   | .70   |
| 8     | 1.0   | 1.2   | 1.6   | 4.2   | 6.7   | 3.0  | 1.8   | 1.2  | 1.2   | .80   | .70   | .60   |
| 9     | 1.2   | 1.2   | 1.6   | 3.8   | 5.5   | 3.0  | 2.1   | 1.4  | 1.0   | .80   | .70   | .60   |
| 10    | 1.2   | 1.2   | 1.6   | 3.5   | 4.8   | 3.0  | 4.0   | 1.5  | .80   | .80   | .80   | .50   |
| 11    | 1.0   | 1.2   | 2.3   | 3.2   | 4.5   | 2.8  | 2.5   | 1.4  | .70   | .80   | .90   | .60   |
| 12    | 1.0   | 1.2   | 3.5   | 3.0   | 4.2   | 2.5  | 2.1   | 1.4  | .60   | .80   | .90   | .50   |
| 13    | 1.0   | 3.5   | 2.3   | 2.8   | 3.5   | 2.5  | 2.0   | 1.4  | .60   | .70   | .90   | .50   |
| 14    | 1.0   | 11    | 2.1   | 2.5   | 3.5   | 2.5  | 1.6   | 1.3  | .50   | .70   | .90   | .60   |
| 15    | 1.2   | 2.5   | 2.0   | 2.5   | 3.5   | 2.5  | 1.6   | 1.3  | .50   | .70   | .80   | .60   |
| 16    | 1.2   | 5.4   | 2.0   | 2.5   | 3.2   | 2.5  | 1.5   | 1.3  | .60   | .70   | .80   | .50   |
| 17    | 1.0   | 5.8   | 1.8   | 2.3   | 3.1   | 2.5  | 1.5   | 1.3  | .60   | .70   | .80   | .50   |
| 18    | 1.0   | 7.6   | 1.8   | 2.1   | 3.0   | 2.5  | 1.6   | 1.2  | .50   | .70   | .80   | .50   |
| 19    | 1.2   | 3.8   | 1.8   | 2.1   | 11    | 2.5  | 1.5   | 1.2  | .40   | .70   | .80   | .60   |
| 20    | 1.2   | 2.3   | 1.8   | 2.0   | 5.5   | 2.5  | 1.5   | 1.2  | .30   | .80   | .80   | .90   |
| 21    | 1.2   | 2.0   | 1.8   | 2.0   | 5.0   | 2.5  | 1.5   | 1.2  | .30   | .80   | .80   | .70   |
| 22    | 1.0   | 2.3   | 1.9   | 2.0   | 4.5   | 2.5  | 1.5   | 1.2  | .20   | .80   | .80   | .60   |
| 23    | 1.0   | 4.2   | 2.0   | 2.0   | 5.2   | 2.3  | 1.5   | 1.2  | .20   | .80   | .80   | .60   |
| 24    | 1.0   | 4.0   | 2.5   | 2.0   | 5.0   | 2.3  | 1.5   | 1.2  | .20   | .70   | .70   | .60   |
| 25    | 1.0   | 5.9   | 17    | 1.8   | 5.0   | 2.1  | 1.4   | 1.2  | .20   | .70   | .70   | .60   |
| 26    | 1.0   | 3.5   | 4.2   | 2.0   | 4.8   | 2.1  | 1.4   | 1.2  | .20   | .70   | .50   | .50   |
| 27    | 1.0   | 2.8   | 2.8   | 2.0   | 4.2   | 2.1  | 1.4   | 1.2  | .10   | .70   | .50   | .50   |
| 28    | 1.0   | 2.3   | 7.0   | 2.0   | 4.0   | 2.1  | 1.4   | 1.2  | .20   | .80   | .50   | .50   |
| 29    | 1.0   | 2.0   | 20    | 7.1   | ----- | 2.1  | 1.4   | 1.1  | .10   | .80   | .50   | .40   |
| 30    | 1.0   | 2.0   | 16    | 9.6   | ----- | 2.1  | 1.4   | 1.1  | .10   | 1.6   | .50   | .40   |
| 31    | 1.0   | ----- | 17    | 5.0   | ----- | 2.0  | ----- | 1.2  | ----- | 1.2   | .60   | ----- |
| TOTAL | 32.00 | 86.7  | 129.8 | 115.5 | 149.6 | 83.5 | 52.7  | 38.7 | 18.60 | 22.20 | 23.00 | 17.50 |
| MEAN  | 1.03  | 2.89  | 4.19  | 3.73  | 5.34  | 2.69 | 1.76  | 1.25 | .62   | .72   | .74   | .58   |
| AC-FT | 63    | 172   | 257   | 229   | 297   | 166  | 105   | 77   | 37    | 44    | 46    | 35    |

CALENDAR YEAR 1965 MAX 166 MIN .80 MEAN 6.12 AC-FT 4.430  
WATER YEAR 1965-66 MAX 20 MIN 0 MEAN 2.11 AC-FT 1.530

Peak discharge (base, 100 cfs).--No peak above base.

11-1598. West Branch Soquel Creek near Soquel, Calif.

Location.--Lat 37°03'05", long 121°56'20", in NW¼ sec.23, T.10 S., R.1 W., on left bank 0.5 mile upstream from Soquel Creek and 4.5 miles north of Soquel.

Drainage area.--12.2 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 220 ft (from topographic map). Prior to May 5, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 10.5 cfs (7,600 acre-ft per year).

Extremes.--Maximum discharge during the year, 260 cfs Dec. 25 (gage height, 4.63 ft), minimum, 0.60 cfs Sept. 30.

1958-66: Maximum discharge, 4,120 cfs Jan. 31, 1963 (gage height, 10.88 ft), from rating curve extended above 740 cfs on basis of slope-area measurement at gage height 7.96 ft; minimum, 0.40 cfs July 16, 1961.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 1.0   | 1.3   | 2.5   | 20    | 20    | 7.9   | 3.6   | 2.5  | 1.7   | 1.1   | 1.4   | 0.90  |
| 2     | 1.0   | 1.1   | 2.3   | 13    | 15    | 7.9   | 3.4   | 2.3  | 1.7   | .90   | 1.2   | .90   |
| 3     | 1.1   | 1.3   | 2.3   | 10    | 11    | 7.0   | 3.4   | 2.3  | 1.7   | .90   | 1.2   | .90   |
| 4     | 1.0   | 1.3   | 2.3   | 9.6   | 3.8   | 7.0   | 3.4   | 2.3  | 1.7   | 1.0   | 1.2   | .90   |
| 5     | 1.0   | 1.3   | 2.3   | 32    | 32    | 6.7   | 3.2   | 2.3  | 1.6   | 1.0   | 1.1   | .90   |
| 6     | 1.1   | 1.3   | 2.3   | 20    | 30    | 6.7   | 3.2   | 2.3  | 1.8   | 1.1   | 1.1   | .90   |
| 7     | 1.1   | 1.3   | 2.3   | 15    | 21    | 6.4   | 3.2   | 2.3  | 1.8   | 1.0   | 1.1   | .90   |
| 8     | 1.0   | 1.3   | 2.1   | 11    | 18    | 6.4   | 3.2   | 2.3  | 1.7   | 1.1   | 1.0   | .90   |
| 9     | 1.0   | 1.4   | 2.1   | 9.6   | 14    | 6.1   | 4.0   | 2.5  | 1.6   | 1.0   | 1.0   | .90   |
| 10    | 1.1   | 1.4   | 2.1   | 8.3   | 12    | 6.4   | 5.5   | 2.7  | 1.5   | 1.0   | 1.0   | .90   |
| 11    | 1.0   | 1.4   | 4.2   | 7.4   | 10    | 6.1   | 3.8   | 2.3  | 1.5   | 1.0   | 1.1   | .80   |
| 12    | 1.0   | 1.6   | 4.9   | 7.0   | 9.6   | 5.8   | 3.8   | 2.3  | 1.5   | 1.1   | 1.1   | .80   |
| 13    | .90   | 3.2   | 2.9   | 6.7   | 9.2   | 5.5   | 3.6   | 2.3  | 1.4   | 1.1   | .90   | .80   |
| 14    | 1.0   | 7.6   | 2.7   | 6.4   | 8.8   | 5.5   | 3.6   | 2.1  | 1.2   | 1.1   | 1.0   | .80   |
| 15    | 1.0   | 2.9   | 2.5   | 6.1   | 8.3   | 5.5   | 3.2   | 2.2  | 1.2   | 1.1   | .90   | .80   |
| 16    | 1.1   | 5.3   | 2.5   | 5.8   | 7.9   | 5.2   | 3.2   | 2.1  | 1.3   | 1.1   | .90   | .80   |
| 17    | 1.1   | 1.1   | 2.5   | 5.5   | 7.4   | 4.9   | 3.0   | 2.1  | 1.3   | 1.0   | .90   | .80   |
| 18    | 1.0   | 9.4   | 2.5   | 5.5   | 7.4   | 4.9   | 3.0   | 2.1  | 1.3   | 1.1   | .90   | .80   |
| 19    | 1.0   | 4.0   | 2.5   | 5.5   | 33    | 4.9   | 2.9   | 2.1  | 1.0   | 1.1   | .90   | .90   |
| 20    | 1.0   | 3.0   | 2.3   | 5.2   | 16    | 4.6   | 2.7   | 2.1  | 1.0   | 1.2   | .90   | 1.2   |
| 21    | 1.0   | 2.5   | 2.3   | 5.2   | 12    | 4.3   | 2.7   | 1.9  | .90   | 1.3   | 1.0   | 1.0   |
| 22    | 1.1   | 2.9   | 2.3   | 4.9   | 10    | 4.3   | 2.7   | 1.9  | .90   | 1.1   | 1.0   | .90   |
| 23    | 1.1   | 5.8   | 2.3   | 4.9   | 10    | 4.3   | 2.5   | 1.9  | .90   | 1.0   | 1.0   | .90   |
| 24    | 1.1   | 6.4   | 19    | 4.9   | 10    | 3.8   | 2.5   | 1.9  | .90   | 1.1   | 1.0   | .90   |
| 25    | 1.1   | 6.4   | 6.6   | 4.6   | 9.6   | 3.8   | 2.5   | 1.9  | .90   | 1.1   | .80   | .90   |
| 26    | 1.1   | 4.0   | 10    | 4.6   | 9.6   | 3.8   | 2.5   | 1.9  | .90   | 1.0   | .80   | .80   |
| 27    | 1.1   | 3.2   | 6.7   | 4.6   | 8.8   | 3.8   | 2.5   | 1.9  | 1.0   | .90   | .80   | .90   |
| 28    | 1.1   | 3.0   | 30    | 4.3   | 8.3   | 3.8   | 2.5   | 1.9  | .90   | 1.0   | .80   | .80   |
| 29    | 1.0   | 2.7   | 57    | 25    | ----- | 3.6   | 2.5   | 1.9  | 1.0   | 1.0   | .80   | .80   |
| 30    | 1.1   | 2.7   | 49    | 34    | ----- | 3.6   | 2.5   | 2.0  | 1.0   | 1.8   | .80   | .70   |
| 31    | 1.3   | ----- | 38    | 14    | ----- | 3.6   | ----- | 2.0  | ----- | 1.6   | .80   | ----- |
| TOTAL | 32.60 | 102.0 | 334.7 | 320.6 | 406.9 | 164.1 | 94.3  | 66.6 | 38.80 | 33.90 | 30.40 | 26.10 |
| MEAN  | 1.05  | 3.40  | 10.8  | 10.3  | 14.5  | 5.29  | 3.14  | 2.15 | 1.29  | 1.09  | .98   | .87   |
| AC-FT | 65    | 202   | 664   | 636   | 807   | 325   | 187   | 132  | 77    | 67    | 60    | 52    |

CALENDAR YEAR 1965 MAX 328 MIN .80 MEAN 11.5 AC-FT 8,300  
 WATER YEAR 1965-66 MAX 66 MIN .70 MEAN 4.52 AC-FT 3,270

Peak discharge (base, 300 cfs).--No peak above base.

11-1600. Soquel Creek at Soquel, Calif.

Location.--Lat 36°59'29", long 121°57'17", in NE¼ sec.10, T.11 S., R.1 W., on left bank 0.2 mile upstream from highway bridge in town of Soquel and 0.4 mile downstream from Bates Creek.

Drainage area.--40.2 sq mi.

Records available.--May 1951 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 21.38 ft above mean sea level, datum of 1929.

Average discharge.--15 years, 41.8 cfs (30,260 acre-ft per year); median of yearly mean discharges, 27 cfs (19,500 acre-ft per year).

Extremes.--Maximum discharge during year, 805 cfs Dec. 25 (gage height, 6.15 ft); minimum daily, 0.6 cfs July 16.

1951-66: Maximum discharge, 15,800 cfs Dec. 23, 1955 (gage height, 22.33 ft), from rating curve extended above 2,900 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.1 cfs Aug. 12, 19, 1964.

Remarks.--Records, good. No regulation; small diversion above station for irrigation. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.    | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|-------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1     | 1.9  | 2.2   | 8.7     | 70    | 48    | 22   | 10    | 5.5   | 4.6   | 1.3   | 2.0   | 1.1   |
| 2     | 1.9  | 2.4   | 8.3     | 46    | 38    | 22   | 10    | 7.8   | 4.0   | 1.3   | 2.0   | 1.5   |
| 3     | 2.2  | 2.4   | 8.3     | 55    | 51    | 21   | 9.2   | 5.8   | 4.0   | 1.1   | .70   | 1.6   |
| 4     | 2.2  | 2.2   | 8.3     | 32    | 72    | 20   | 9.6   | 5.8   | 3.0   | 1.0   | 1.1   | 1.6   |
| 5     | 2.4  | 2.2   | 7.8     | 74    | 76    | 19   | 9.6   | 5.8   | 2.8   | 1.0   | 1.1   | 1.6   |
| 6     | 2.7  | 2.2   | 7.8     | 58    | 80    | 18   | 9.6   | 5.2   | 3.2   | 1.6   | 1.1   | 1.5   |
| 7     | 2.7  | 2.2   | 7.4     | 42    | 56    | 18   | 9.2   | 5.2   | 4.3   | 1.6   | 1.1   | 1.6   |
| 8     | 2.7  | 3.0   | 7.4     | 34    | 44    | 18   | 8.4   | 5.5   | 3.5   | 1.6   | 1.3   | 1.0   |
| 9     | 3.7  | 3.5   | 7.4     | 30    | 36    | 18   | 12    | 6.5   | 3.0   | 1.5   | 1.3   | 1.1   |
| 10    | 3.2  | 3.5   | 7.4     | 27    | 32    | 18   | 70    | 7.1   | 2.8   | 1.5   | 1.5   | 1.5   |
| 11    | 3.0  | 3.5   | 11      | 25    | 29    | 17   | 17    | 6.5   | 2.2   | 1.5   | 1.5   | 1.3   |
| 12    | 3.0  | 4.0   | 16      | 23    | 27    | 16   | 15    | 5.5   | 2.2   | 1.5   | 1.5   | 1.1   |
| 13    | 2.7  | 11    | 11      | 22    | 26    | 16   | 12    | 5.8   | 2.0   | 1.5   | 1.3   | 1.3   |
| 14    | 2.7  | 37    | 9.2     | 20    | 24    | 16   | 11    | 4.9   | 1.6   | 1.5   | 1.1   | 1.3   |
| 15    | 3.0  | 12    | 8.7     | 19    | 23    | 15   | 11    | 4.9   | 1.6   | 1.5   | 1.1   | 1.5   |
| 16    | 2.7  | 22    | 8.3     | 19    | 22    | 14   | 9.2   | 4.9   | 1.8   | .60   | 1.0   | 1.5   |
| 17    | 2.4  | 34    | 8.3     | 18    | 21    | 14   | 8.8   | 4.9   | 2.0   | .70   | 1.1   | 1.5   |
| 18    | 2.4  | 50    | 8.3     | 18    | 20    | 14   | 9.6   | 4.3   | 1.8   | .70   | 1.1   | 1.5   |
| 19    | 2.4  | 18    | 8.3     | 17    | 68    | 14   | 9.2   | 4.3   | 1.3   | .90   | 1.3   | 1.8   |
| 20    | 2.4  | 12    | 7.8     | 17    | 40    | 13   | 8.8   | 3.8   | 1.5   | 1.3   | 1.3   | 2.4   |
| 21    | 2.2  | 10    | 7.4     | 17    | 30    | 13   | 8.4   | 3.8   | 1.5   | 1.5   | 1.3   | 2.2   |
| 22    | 1.9  | 11    | 7.4     | 16    | 27    | 13   | 8.1   | 3.8   | 1.5   | 1.1   | 1.1   | 1.8   |
| 23    | 1.4  | 17    | 7.4     | 16    | 28    | 13   | 7.4   | 3.8   | 1.3   | 1.1   | 1.1   | 1.6   |
| 24    | 1.4  | 21    | 8.3     | 15    | 26    | 12   | 6.8   | 3.8   | 1.6   | 1.0   | 1.0   | 1.8   |
| 25    | 1.4  | 28    | 239     | 15    | 26    | 12   | 6.5   | 3.8   | 1.5   | 1.0   | 1.0   | 1.8   |
| 26    | 1.4  | 16    | 48      | 14    | 25    | 13   | 6.5   | 3.8   | 1.3   | 1.1   | 1.0   | 1.8   |
| 27    | 1.7  | 12    | 32      | 14    | 23    | 12   | 6.5   | 3.8   | 1.3   | 1.1   | .90   | 1.8   |
| 28    | 1.7  | 11    | 59      | 13    | 23    | 12   | 5.5   | 4.0   | 1.3   | 1.1   | 1.0   | 1.6   |
| 29    | 1.9  | 9.7   | 178     | 39    | ----- | 12   | 6.2   | 4.6   | 1.3   | 1.1   | .90   | 1.3   |
| 30    | 1.9  | 9.2   | 144     | 96    | ----- | 11   | 6.8   | 5.2   | 1.3   | 5.0   | .80   | 1.1   |
| 31    | 2.2  | ----- | 125     | 42    | ----- | 11   | ----- | 5.2   | ----- | 2.8   | 1.0   | ----- |
| Total | 71.4 | 374.2 | 1,031.2 | 943   | 1,021 | 477  | 337.9 | 155.6 | 67.1  | 431.0 | 36.60 | 46.1  |
| Mean  | 2.30 | 12.5  | 33.3    | 30.4  | 36.5  | 15.4 | 11.3  | 5.01  | 2.24  | 1.39  | 1.18  | 1.54  |
| Ac-ft | 142  | 742   | 2,050   | 1,870 | 2,030 | 946  | 670   | 309   | 133   | 85    | 73    | 91    |

Calendar year 1965 Max 1,050 Min 1.4 Mean 37.3 Ac-ft 26,970

Water year 1965-66 Max 239 Min 0.6 Mean 12.6 Ac-ft 9,130

Peak discharge (base, 750 cfs).--Dec. 25 (0400) 805 cfs (6.15 ft).

## SAN LORENZO RIVER BASIN

11-1603. Zayante Creek at Zayante, Calif.

Location.--Lat 37°05'10", long 122°02'45", in SE¼ sec.2, T.10 S., R.2 W., on left bank at Zayante Road bridge to town of Zayante, 0.4 mile upstream from Lompico Creek, 2.0 miles east of Ben Lomond, and 3.2 miles upstream from mouth.

Drainage area.--11.1 sq mi.

Records available.--October 1957 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Average discharge.--9 years, 9.09 cfs (6,580 acre-ft per year).

Extremes.--Maximum discharge during year, 62 cfs Dec. 29 (gage height, 2.56 ft); minimum daily, 0.20 cfs several days in August and September.

1957-66: Maximum discharge, 3,700 cfs Apr. 2, 1958 (gage height, 7.70 ft), from rating curve extended above 1,200 cfs on basis of slope-area measurement of maximum flow; no flow at times, caused by filling of pools upstream.

Remarks.--Records good except those for period of no gage-height record, which are poor. No known regulation; only small diversion above station for individual use.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| 1     | 0.60  | 0.50  | 2.1   | 1.2   | 1.7   | 6.5   | 2.8   | 1.7  | 1.1   | 0.50  | 0.40 | 0.30  |
| 2     | .70   | .60   | 1.9   | 9.0   | 1.2   | 6.5   | 2.7   | 1.6  | 1.1   | .50   | .40  | .30   |
| 3     | .60   | .60   | 1.7   | 7.0   | 9.8   | 6.0   | 2.6   | 1.6  | 1.1   | .40   | .50  | .20   |
| 4     | .60   | .60   | 1.8   | 10    | 4.8   | 6.0   | 2.6   | 1.7  | 1.0   | .50   | .40  | .20   |
| 5     | .70   | .60   | 1.7   | 28    | 3.0   | 5.8   | 2.6   | 1.7  | 1.0   | .50   | .40  | .20   |
| 6     | .70   | .60   | 1.6   | 16    | 2.3   | 5.6   | 2.5   | 1.6  | 1.1   | .50   | .40  | .20   |
| 7     | .70   | .70   | 1.6   | 11    | 1.6   | 5.5   | 2.5   | 1.6  | 1.1   | .50   | .40  | .30   |
| 8     | .80   | 1.0   | 1.6   | 8.0   | 1.3   | 5.3   | 2.5   | 1.6  | 1.1   | .50   | .40  | .30   |
| 9     | .90   | .90   | 1.6   | 6.0   | 1.1   | 5.1   | 3.2   | 1.7  | 1.0   | .50   | .30  | .30   |
| 10    | .80   | .80   | 1.6   | 5.0   | 9.8   | 5.3   | 3.8   | 1.7  | 1.0   | .40   | .30  | .30   |
| 11    | .80   | .80   | 2.4   | 4.7   | 8.6   | 4.9   | 2.8   | 1.6  | 1.0   | .40   | .30  | .20   |
| 12    | .60   | .90   | 3.4   | 4.7   | 8.1   | 4.6   | 2.9   | 1.6  | .90   | .50   | .30  | .20   |
| 13    | .60   | 3.7   | 2.2   | 4.6   | 7.6   | 4.4   | 2.6   | 1.5  | .80   | .50   | .30  | .30   |
| 14    | .60   | 7.5   | 1.9   | 4.2   | 7.3   | 4.4   | 2.5   | 1.5  | .80   | .50   | .30  | .30   |
| 15    | .70   | 3.8   | 1.8   | 4.1   | 6.5   | 4.2   | 2.4   | 1.4  | .80   | .40   | .30  | .30   |
| 16    | .70   | 4.7   | 1.7   | 3.8   | 6.3   | 4.1   | 2.3   | 1.4  | .80   | .40   | .30  | .30   |
| 17    | .70   | 1.4   | 1.7   | 3.7   | 6.0   | 3.9   | 2.3   | 1.4  | .80   | .40   | .30  | .20   |
| 18    | .60   | 8.1   | 1.7   | 3.6   | 5.8   | 3.8   | 2.4   | 1.3  | .80   | .40   | .30  | .30   |
| 19    | .60   | 3.9   | 1.6   | 3.4   | 1.8   | 3.7   | 2.4   | 1.3  | .80   | .40   | .30  | .30   |
| 20    | .60   | 2.7   | 1.6   | 3.3   | 1.1   | 3.7   | 2.3   | 1.3  | .70   | .40   | .30  | .50   |
| 21    | .60   | 2.2   | 1.6   | 3.2   | 9.4   | 3.6   | 2.2   | 1.3  | .70   | .40   | .30  | .40   |
| 22    | .60   | 2.4   | 1.6   | 3.2   | 8.3   | 3.6   | 2.3   | 1.3  | .70   | .40   | .30  | .40   |
| 23    | .60   | 5.6   | 1.6   | 3.0   | 8.1   | 3.4   | 2.2   | 1.2  | .70   | .40   | .20  | .40   |
| 24    | .60   | 5.8   | 2.5   | 2.9   | 7.8   | 3.3   | 2.0   | 1.2  | .70   | .30   | .20  | .30   |
| 25    | .50   | 5.5   | 2.2   | 2.9   | 7.3   | 3.3   | 2.0   | 1.2  | .70   | .40   | .20  | .30   |
| 26    | .50   | 3.8   | 6.0   | 2.8   | 7.3   | 3.3   | 1.9   | 1.2  | .60   | .40   | .20  | .30   |
| 27    | .50   | 3.2   | 4.0   | 2.7   | 6.8   | 3.2   | 1.9   | 1.2  | .50   | .40   | .20  | .30   |
| 28    | .60   | 2.8   | 1.5   | 2.6   | 6.8   | 3.2   | 1.9   | 1.2  | .50   | .40   | .20  | .20   |
| 29    | .60   | 2.5   | 3.2   | 1.7   | ----- | 3.0   | 1.9   | 1.2  | .50   | .40   | .20  | .20   |
| 30    | .50   | 2.3   | 2.2   | 3.0   | ----- | 3.0   | 1.8   | 1.2  | .50   | .50   | .30  | .20   |
| 31    | .50   | ----- | 1.8   | 1.4   | ----- | 2.9   | ----- | 1.2  | ----- | .40   | .30  | ----- |
| Total | 19.70 | 93.10 | 163.5 | 236.4 | 336.6 | 135.1 | 72.8  | 44.2 | 24.90 | 13.50 | 9.50 | 8.50  |
| Mean  | .64   | 3.10  | 5.27  | 7.63  | 12.0  | 4.36  | 2.43  | 1.43 | .83   | .44   | .31  | .28   |
| Ac-ft | 39    | 185   | 324   | 469   | 668   | 268   | 144   | 88   | 49    | 27    | 19   | 17    |

Calendar year 1965 Max 289 Min 0.30 Mean 9.04 Ac-ft 6,550

Water year 1965-66 Max 48 Min 0.20 Mean 3.17 Ac-ft 2,300

Peak discharge (base, 450 cfs, revised).--No peak above base.

Note.--No gage-height record Dec. 13 to Jan. 10.

11-1605. San Lorenzo River at Big Trees, Calif.

Location.--Lat 37°01'40", long 122°03'30", in Canada del Rincon Grant, on right bank 0.5 mile south of Big Trees station on Southern Pacific Railroad, 1.6 miles downstream from Zayante Creek, and 4 miles north of Santa Cruz, Santa Cruz County.

Drainage area.--111 sq mi.

Records available.--October 1936 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 217.0 ft above mean sea level (levels by Topographic Division). Prior to Apr. 23, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--30 years, 132 cfs (95,560 acre-ft per year); median of yearly mean discharges, 95 cfs (68,800 acre-ft per year).

Extremes.--Maximum discharge during year, 1,080 cfs Dec. 29, Feb. 4 (gage height, 4.80 ft); minimum daily, 9.4 cfs Sept. 10. 1937-66: Maximum discharge, 30,400 cfs Dec. 23, 1955 (gage height, 22.55 ft), from rating curve extended above 11,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.8 cfs (regulated) June 25, 1939; minimum daily, 7.5 cfs July 1, 1939.

Remarks.--Records good. Flow regulated by Loch Lomond Reservoir since 1961 (capacity, 8,400 acre-ft). Many small diversions above station for domestic supply. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.  | JAN.  | FEB.   | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------|------|-------|
| 1     | 18    | 17    | 41    | 224   | 300    | 108   | 49    | 33    | 26    | 18   | 16   | 11    |
| 2     | 17    | 17    | 39    | 155   | 220    | 110   | 48    | 31    | 25    | 17   | 15   | 11    |
| 3     | 19    | 17    | 38    | 126   | 169    | 100   | 47    | 31    | 25    | 17   | 15   | 11    |
| 4     | 18    | 17    | 36    | 150   | 758    | 96    | 46    | 31    | 24    | 17   | 14   | 12    |
| 5     | 17    | 17    | 35    | 484   | 529    | 95    | 46    | 30    | 23    | 17   | 13   | 18    |
| 6     | 17    | 17    | 34    | 299   | 373    | 90    | 45    | 30    | 24    | 16   | 13   | 13    |
| 7     | 17    | 17    | 33    | 205   | 282    | 87    | 45    | 30    | 26    | 16   | 14   | 12    |
| 8     | 17    | 18    | 33    | 165   | 230    | 83    | 44    | 31    | 25    | 16   | 13   | 14    |
| 9     | 18    | 18    | 33    | 140   | 194    | 81    | 51    | 32    | 24    | 16   | 14   | 9.7   |
| 10    | 19    | 18    | 32    | 122   | 166    | 84    | 64    | 33    | 24    | 16   | 14   | 9.4   |
| 11    | 18    | 17    | 44    | 110   | 150    | 77    | 51    | 32    | 24    | 16   | 18   | 13    |
| 12    | 21    | 20    | 64    | 98    | 138    | 75    | 53    | 31    | 23    | 16   | 14   | 11    |
| 13    | 20    | 66    | 42    | 94    | 128    | 72    | 49    | 30    | 23    | 16   | 12   | 11    |
| 14    | 18    | 267   | 37    | 87    | 118    | 70    | 45    | 30    | 23    | 16   | 12   | 11    |
| 15    | 18    | 83    | 34    | 83    | 112    | 66    | 44    | 28    | 22    | 16   | 13   | 10    |
| 16    | 19    | 94    | 33    | 78    | 105    | 64    | 42    | 27    | 22    | 16   | 11   | 12    |
| 17    | 19    | 282   | 32    | 74    | 102    | 64    | 42    | 28    | 22    | 16   | 11   | 10    |
| 18    | 18    | 242   | 32    | 71    | 100    | 64    | 42    | 28    | 21    | 14   | 11   | 11    |
| 19    | 20    | 92    | 32    | 69    | 376    | 65    | 41    | 26    | 21    | 14   | 11   | 12    |
| 20    | 18    | 59    | 31    | 67    | 222    | 64    | 39    | 27    | 21    | 15   | 11   | 15    |
| 21    | 17    | 46    | 30    | 64    | 162    | 61    | 39    | 27    | 21    | 16   | 11   | 14    |
| 22    | 17    | 45    | 30    | 63    | 144    | 60    | 38    | 25    | 20    | 16   | 11   | 14    |
| 23    | 19    | 84    | 29    | 62    | 141    | 61    | 36    | 21    | 20    | 14   | 11   | 14    |
| 24    | 20    | 116   | 50    | 61    | 140    | 61    | 34    | 23    | 20    | 15   | 11   | 13    |
| 25    | 18    | 131   | 385   | 59    | 129    | 61    | 35    | 24    | 19    | 15   | 11   | 14    |
| 26    | 17    | 85    | 101   | 58    | 140    | 60    | 34    | 23    | 19    | 14   | 10   | 20    |
| 27    | 16    | 63    | 72    | 60    | 122    | 59    | 33    | 25    | 19    | 14   | 10   | 12    |
| 28    | 16    | 53    | 222   | 55    | 111    | 58    | 33    | 25    | 19    | 14   | 10   | 11    |
| 29    | 16    | 48    | 573   | 237   | -----  | 57    | 33    | 26    | 18    | 14   | 10   | 11    |
| 30    | 16    | 44    | 400   | 465   | -----  | 55    | 33    | 26    | 18    | 16   | 10   | 11    |
| 31    | 17    | ----- | 360   | 250   | -----  | 52    | ----- | 27    | ----- | 17   | 12   | ----- |
| TOTAL | 555   | 2,110 | 2,987 | 4,335 | 5,861  | 2,260 | 1,281 | 871   | 661   | 486  | 382  | 371.1 |
| MEAN  | 17.9  | 70.3  | 96.4  | 140   | 209    | 72.9  | 42.7  | 28.1  | 22.0  | 15.7 | 12.3 | 12.4  |
| AC-FT | 1,100 | 4,190 | 5,920 | 8,600 | 11,630 | 4,480 | 2,540 | 1,730 | 1,310 | 964  | 758  | 736   |

CALENDAR YEAR 1965 MAX 3,010 MIN 16 MEAN 128 AC-FT 92,640  
 WATER YEAR 1965-66 MAX 758 MIN 9.4 MEAN 60.7 AC-FT 43,960

Peak discharge (base, 1,400 cfs).--No peak above base.

## SAN LORENZO RIVER BASIN

11-1615. Branciforte Creek at Santa Cruz, Calif.

Location.--Lat 36°58'00", long 122°01'00", on right bank in Santa Cruz, Santa Cruz County, 15 ft downstream from Market Street bridge and 1.0 mile upstream from mouth.

Drainage area.--17.3 sq mi.

Records available.--January 1940 to September 1943, March 1952 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 11.22 ft above mean sea level (levels by Corps of Engineers). Jan. 3 to Nov. 14, 1940, staff gage at site 15 ft upstream at datum 3.90 ft higher. Nov. 15, 1940, to Nov. 25, 1941, staff gage at site 150 ft downstream and Nov. 26, 1941, to Sept. 30, 1943, graphic water-stage recorder at site 75 ft downstream, both at datum 4.52 ft higher. Mar. 16 to July 27, 1952, staff gages at site 150 ft downstream at present datum. July 28, 1952, to Nov. 2, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 19.6 cfs (14,190 cfs (14,190 acre-ft per year); median of yearly mean discharges, 16 cfs (11,600 acre-ft per year).

Extremes.--Maximum discharge during year, 345 cfs Feb. 19 (gage height, 6.55 ft); minimum daily, 0.70 cfs Sept. 29.

1940-43, 1952-66: Maximum discharge, 8,100 cfs Dec. 22, 1955 (gage height, 22.04 ft), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.10 cfs Aug. 18, 1954, Sept. 17, 1955.

Remarks.--Records fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 0.80  | 1.4   | 4.0   | 39    | 50    | 9.5   | 3.9   | 2.6  | 1.9   | 1.2   | 1.2   | 1.2   |
| 2     | .80   | 1.5   | 4.1   | 22    | 30    | 9.3   | 3.8   | 2.6  | 1.7   | 1.0   | 1.0   | 1.1   |
| 3     | .80   | 1.4   | 3.5   | 17    | 23    | 8.4   | 3.6   | 2.6  | 1.7   | 1.0   | 1.1   | .90   |
| 4     | 1.1   | 1.5   | 3.2   | 17    | 152   | 7.9   | 3.8   | 2.7  | 1.7   | 1.0   | 1.1   | 1.0   |
| 5     | 1.1   | 1.6   | 3.0   | 47    | 79    | 7.8   | 3.6   | 2.7  | 1.6   | 1.1   | 1.1   | .90   |
| 6     | 1.0   | 1.1   | 3.0   | 24    | 53    | 7.4   | 3.6   | 2.6  | 1.9   | 1.1   | .90   | 1.1   |
| 7     | .80   | 1.2   | 2.9   | 18    | 29    | 7.4   | 3.6   | 2.5  | 2.2   | 1.0   | .90   | 1.2   |
| 8     | 1.2   | 1.5   | 3.0   | 15    | 19    | 7.1   | 3.3   | 2.5  | 1.9   | 1.1   | 1.1   | 1.0   |
| 9     | 1.7   | 1.6   | 3.0   | 13    | 14    | 7.1   | 5.2   | 2.7  | 1.8   | 1.2   | 1.1   | .90   |
| 10    | 1.3   | 1.5   | 3.0   | 11    | 12    | 7.2   | 6.3   | 2.8  | 1.7   | 1.1   | 1.1   | 1.1   |
| 11    | 1.2   | 1.6   | 15    | 10    | 10    | 6.6   | 4.3   | 2.6  | 1.7   | 1.1   | 1.1   | .90   |
| 12    | 1.0   | 2.4   | 15    | 9.1   | 9.2   | 6.3   | 4.3   | 2.6  | 1.6   | 1.1   | 1.1   | .90   |
| 13    | 1.4   | 14    | 7.2   | 8.4   | 8.5   | 6.3   | 3.5   | 2.6  | 1.5   | 1.0   | 1.0   | .90   |
| 14    | 1.3   | 34    | 5.6   | 8.0   | 8.2   | 6.0   | 3.3   | 2.5  | 1.5   | 1.0   | 1.1   | .90   |
| 15    | 1.4   | 9.7   | 4.9   | 7.6   | 7.8   | 6.0   | 3.1   | 2.3  | 1.5   | 1.0   | 1.2   | 1.0   |
| 16    | 1.3   | 24    | 4.5   | 6.9   | 7.4   | 5.6   | 3.1   | 2.2  | 1.6   | .90   | 1.2   | .90   |
| 17    | 1.2   | 20    | 4.0   | 6.7   | 7.1   | 5.5   | 2.9   | 2.2  | 1.7   | .80   | 1.0   | .80   |
| 18    | 1.4   | 20    | 3.7   | 6.5   | 6.7   | 5.5   | 3.2   | 2.3  | 1.5   | .90   | 1.0   | 1.0   |
| 19    | 1.3   | 9.3   | 3.6   | 6.2   | 112   | 5.2   | 2.9   | 2.3  | 1.3   | .90   | 1.1   | 1.3   |
| 20    | 1.3   | 5.8   | 3.5   | 6.0   | 27    | 5.1   | 2.8   | 2.3  | 1.4   | 1.0   | 1.1   | 1.9   |
| 21    | 1.2   | 4.5   | 3.5   | 6.0   | 18    | 5.0   | 2.8   | 2.2  | 1.3   | 1.1   | 1.3   | 1.1   |
| 22    | 1.0   | 6.2   | 3.4   | 5.9   | 16    | 5.1   | 2.8   | 2.1  | 1.3   | 1.1   | 1.3   | 1.0   |
| 23    | .80   | 23    | 3.2   | 5.6   | 17    | 4.8   | 2.7   | 2.1  | 1.3   | .90   | 1.2   | 1.0   |
| 24    | .80   | 19    | 11    | 5.4   | 15    | 4.5   | 2.7   | 2.0  | 1.3   | 1.0   | 1.1   | .90   |
| 25    | 1.0   | 19    | 68    | 5.5   | 13    | 4.4   | 2.8   | 1.9  | 1.3   | 1.0   | 1.0   | .80   |
| 26    | 1.1   | 9.3   | 15    | 5.1   | 13    | 4.5   | 2.9   | 1.8  | 1.2   | 1.1   | 1.0   | 1.0   |
| 27    | 1.2   | 7.0   | 10    | 5.0   | 11    | 4.3   | 2.7   | 1.8  | 1.2   | 1.1   | .90   | 1.0   |
| 28    | 1.2   | 5.6   | 72    | 5.2   | 9.9   | 4.4   | 2.7   | 1.8  | 1.2   | .90   | 1.0   | .90   |
| 29    | 1.2   | 4.9   | 132   | 29    | ----- | 4.2   | 2.7   | 1.9  | 1.2   | 1.1   | 1.0   | .70   |
| 30    | 1.3   | 4.5   | 122   | 73    | ----- | 4.2   | 2.7   | 2.2  | 1.2   | 1.5   | 1.1   | .80   |
| 31    | 1.4   | ----- | 94    | 26    | ----- | 4.0   | ----- | 2.0  | ----- | 1.6   | 1.1   | ----- |
| TOTAL | 35.60 | 258.1 | 633.8 | 470.1 | 777.8 | 186.6 | 101.6 | 72.0 | 45.9  | 32.90 | 33.50 | 30.10 |
| MEAN  | 1.15  | 8.60  | 20.4  | 15.2  | 27.8  | 6.02  | 3.39  | 2.32 | 1.53  | 1.06  | 1.08  | 1.00  |
| AC-FT | 71    | 512   | 1,260 | 932   | 1,540 | 370   | 202   | 143  | 91    | 65    | 66    | 60    |

|                    |     |     |     |     |      |      |       |       |
|--------------------|-----|-----|-----|-----|------|------|-------|-------|
| CALENDAR YEAR 1965 | MAX | 366 | MIN | .60 | MEAN | 12.4 | AC-FT | 8,950 |
| WATER YEAR 1965-66 | MAX | 152 | MIN | .70 | MEAN | 7.34 | AC-FT | 5,310 |

Peak discharge (base, 600 cfs).--No peak above base.

11-1619. Scott Creek above Little Creek, near Davenport, Calif.

Location.--Lat 37°03'50", long 122°13'45", in Agua Puerco y las Trancas Grant, on left bank 600 ft upstream from Little Creek, 2.0 miles upstream from mouth, and 4.2 miles north of Davenport, Santa Cruz County.

Drainage area.--25.0 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

Average discharge.--8 years, 22.6 cfs (16,360 acre-ft per year).

Extremes.--Maximum discharge during year, 229 cfs Jan. 5 (gage height, 2.46 ft); minimum daily, 0.4 cfs for several days.

1958-66: Maximum discharge, 1,970 cfs Feb. 13, 1962 (gage height, 9.36 ft), from rating curve extended above 650 cfs on basis of slope-area measurement at gage height 7.35 ft; minimum daily, 0.3 cfs for several days in 1961.

Remarks.--Records good. No regulation; small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug.  | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 3.9  | 1.6   | 6.4   | 34    | 71    | 32    | 14    | 8.8   | 6.1   | 2.2  | 1.0   | 0.80  |
| 2     | 2.6  | 1.7   | 6.1   | 28    | 61    | 33    | 13    | 8.4   | 5.5   | 2.2  | .90   | .80   |
| 3     | 2.3  | 1.7   | 5.5   | 24    | 50    | 31    | 13    | 8.4   | 5.5   | 2.0  | .90   | .80   |
| 4     | 2.8  | 1.7   | 5.2   | 27    | 132   | 30    | 13    | 8.0   | 5.2   | 2.0  | .90   | .60   |
| 5     | 2.5  | 1.7   | 4.9   | 164   | 111   | 30    | 12    | 7.6   | 4.9   | 2.0  | .90   | .60   |
| 6     | 2.2  | 1.5   | 4.9   | 99    | 92    | 26    | 12    | 7.6   | 4.9   | 2.0  | .90   | .80   |
| 7     | 1.9  | 1.5   | 4.6   | 61    | 73    | 27    | 12    | 7.3   | 4.9   | 2.0  | .80   | .90   |
| 8     | 2.0  | 1.6   | 4.6   | 47    | 62    | 29    | 12    | 7.6   | 4.4   | 2.0  | .90   | .90   |
| 9     | 2.0  | 1.7   | 4.6   | 39    | 54    | 28    | 14    | 8.0   | 4.2   | 2.0  | .90   | .90   |
| 10    | 1.9  | 1.7   | 4.6   | 36    | 49    | 28    | 16    | 8.0   | 4.2   | 2.0  | 1.0   | .70   |
| 11    | 1.9  | 1.6   | 5.2   | 31    | 44    | 27    | 14    | 7.6   | 4.1   | 2.0  | 1.0   | .60   |
| 12    | 1.8  | 2.3   | 8.8   | 29    | 41    | 25    | 14    | 7.3   | 3.7   | 2.0  | 1.0   | .60   |
| 13    | 1.7  | 7.3   | 7.3   | 27    | 37    | 25    | 14    | 7.3   | 3.7   | 2.0  | 1.0   | .60   |
| 14    | 1.8  | 26    | 6.4   | 24    | 34    | 24    | 13    | 7.0   | 3.7   | 1.9  | .90   | .60   |
| 15    | 1.7  | 11    | 6.1   | 23    | 31    | 23    | 13    | 6.7   | 3.7   | 1.8  | .90   | .60   |
| 16    | 1.9  | 9.6   | 6.1   | 21    | 30    | 22    | 12    | 6.7   | 3.9   | 1.7  | .80   | .60   |
| 17    | 1.8  | 17    | 5.8   | 19    | 30    | 21    | 12    | 6.4   | 3.9   | 1.6  | .70   | .60   |
| 18    | 1.8  | 30    | 5.8   | 19    | 28    | 21    | 12    | 6.4   | 3.7   | 1.5  | .60   | .50   |
| 19    | 1.8  | 15    | 5.8   | 19    | 58    | 19    | 12    | 6.1   | 3.2   | 1.4  | .60   | .60   |
| 20    | 1.8  | 10    | 5.8   | 17    | 49    | 19    | 12    | 6.1   | 3.0   | 1.4  | .60   | .50   |
| 21    | 1.7  | 8.0   | 5.8   | 17    | 41    | 19    | 11    | 6.1   | 3.0   | 1.5  | .70   | .50   |
| 22    | 1.5  | 6.7   | 5.8   | 17    | 38    | 18    | 11    | 6.1   | 3.0   | 1.5  | .90   | .50   |
| 23    | 1.4  | 8.4   | 5.5   | 16    | 41    | 17    | 10    | 6.1   | 3.0   | 1.4  | .80   | .40   |
| 24    | 1.3  | 12    | 5.8   | 16    | 40    | 16    | 10    | 6.1   | 3.0   | 1.3  | .60   | .40   |
| 25    | 1.3  | 17    | 27    | 15    | 38    | 16    | 9.2   | 6.1   | 2.8   | 1.2  | .50   | .40   |
| 26    | 1.2  | 14    | 16    | 15    | 38    | 16    | 8.8   | 6.1   | 2.6   | 1.1  | .50   | .40   |
| 27    | 1.3  | 11    | 13    | 15    | 35    | 15    | 8.8   | 6.1   | 2.6   | 1.2  | .50   | .40   |
| 28    | 1.3  | 9.2   | 32    | 14    | 34    | 15    | 8.8   | 6.1   | 2.5   | 1.2  | .40   | .50   |
| 29    | 1.4  | 8.0   | 90    | 41    | ----- | 15    | 9.6   | 6.4   | 2.3   | 1.2  | .40   | .40   |
| 30    | 1.5  | 7.0   | 63    | 83    | ----- | 14    | 9.2   | 6.4   | 2.2   | 1.3  | .50   | .40   |
| 31    | 1.5  | ----- | 45    | 50    | ----- | 14    | ----- | 6.4   | ----- | 1.4  | .80   | ----- |
| Total | 57.5 | 247.5 | 423.4 | 1,087 | 1,442 | 695   | 355.4 | 215.3 | 113.4 | 52.0 | 23.80 | 17.90 |
| Mean  | 1.85 | 8.25  | 13.7  | 35.1  | 51.5  | 22.4  | 11.8  | 6.95  | 3.78  | 1.68 | .77   | .60   |
| Ac-ft | 114  | 491   | 840   | 2,160 | 2,860 | 1,380 | 705   | 427   | 225   | 103  | 47    | 36    |

Calendar year 1965 Max 653 Min 1.2 Mean 34.3 Ac-ft 24,830  
 Water year 1965-66 Max 164 Min .40 Mean 13.0 Ac-ft 9,380

Peak discharge (base, 300 cfs).--No peak above base.

11-1625. Pescadero Creek near Pescadero, Calif.

Location.--Lat 37°15'40", long 122°19'40", in SW¼ sec.5, T.8 S., R.4 W., on left bank at downstream side of highway bridge, 3.0 miles east of Pescadero and 5.3 miles upstream from mouth.

Drainage area.--45.9 sq mi.

Records available.--April 1951 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 62.3 ft above mean sea level, datum of 1929. Prior to Nov. 8, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--15 years, 39.7 cfs (28,740 acre-ft per year); median of yearly mean discharges, 23 cfs (16,700 acre-ft per year).

Extremes.--Maximum discharge during year, 626 cfs Dec. 28 (gage height, 6.66 ft); minimum daily, 0.40 cfs Sept. 8.  
1951-66: Maximum discharge, 9,420 cfs Dec. 23, 1955 (gage height, 21.27 ft), from rating curve extended above 2,700 cfs on basis of slope-area measurement of maximum flow; no flow at times.

Remarks.--Records fair. Small diversions above station by pumping. Minor regulation in San Mateo County Memorial Park. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1962 Report: 1961.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|------|-------|---------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 3.0  | 1.2   | 11      | 100   | 96    | 32    | 12    | 6.6   | 5.1   | 2.4  | 3.3   | 1.1   |
| 2     | 2.5  | 1.2   | 10      | 65    | 83    | 34    | 12    | 6.5   | 4.8   | 2.4  | 2.5   | 1.2   |
| 3     | 1.9  | 1.4   | 8.9     | 50    | 70    | 31    | 12    | 6.6   | 4.8   | 2.4  | 1.7   | 1.3   |
| 4     | 2.8  | 1.2   | 8.2     | 70    | 187   | 29    | 11    | 6.4   | 4.7   | 2.6  | 1.6   | .90   |
| 5     | 2.8  | 1.4   | 7.5     | 350   | 156   | 28    | 11    | 6.5   | 4.5   | 2.4  | 1.2   | .80   |
| 6     | 2.8  | 1.6   | 7.0     | 175   | 118   | 27    | 11    | 6.7   | 4.6   | 2.5  | 1.2   | 2.7   |
| 7     | 2.8  | 1.8   | 6.5     | 95    | 95    | 26    | 11    | 6.5   | 4.8   | 3.0  | 1.0   | 1.0   |
| 8     | 3.0  | 4.4   | 6.1     | 60    | 79    | 24    | 10    | 6.6   | 4.6   | 2.8  | 1.2   | .40   |
| 9     | 2.8  | 2.3   | 5.9     | 52    | 65    | 24    | 11    | 7.0   | 4.1   | 2.7  | 1.1   | .50   |
| 10    | 2.8  | 1.8   | 5.9     | 44    | 57    | 26    | 14    | 7.1   | 2.7   | 2.5  | 1.1   | .50   |
| 11    | 3.0  | 1.7   | 6.3     | 38    | 49    | 24    | 12    | 6.6   | 4.6   | 2.4  | 1.1   | .50   |
| 12    | 2.6  | 2.0   | 13      | 34    | 44    | 23    | 13    | 6.3   | 4.1   | 2.5  | .80   | 3.7   |
| 13    | 2.5  | 4.3   | 9.6     | 31    | 40    | 21    | 12    | 6.1   | 4.1   | 2.7  | .90   | 1.0   |
| 14    | 3.0  | 37    | 7.6     | 28    | 37    | 20    | 10    | 6.0   | 3.7   | 3.0  | 1.2   | .60   |
| 15    | 4.0  | 21    | 6.7     | 27    | 35    | 20    | 9.8   | 5.8   | 3.4   | 2.5  | 1.1   | .60   |
| 16    | 4.0  | 15    | 6.0     | 24    | 32    | 19    | 9.3   | 5.8   | 3.2   | 2.7  | 1.1   | .70   |
| 17    | 3.5  | 31    | 5.5     | 23    | 31    | 18    | 9.0   | 5.6   | 3.1   | 2.9  | 1.1   | .50   |
| 18    | 4.2  | 58    | 5.3     | 21    | 29    | 18    | 9.0   | 5.4   | 3.2   | 2.7  | .70   | .80   |
| 19    | 3.0  | 38    | 5.2     | 20    | 49    | 17    | 8.9   | 5.2   | 3.3   | 2.5  | .60   | 1.0   |
| 20    | 3.0  | 19    | 5.3     | 19    | 46    | 17    | 8.5   | 5.0   | 3.2   | 2.5  | .60   | 1.3   |
| 21    | 2.6  | 13    | 5.3     | 18    | 37    | 16    | 8.3   | 5.1   | 3.1   | 2.5  | .80   | 1.7   |
| 22    | 2.5  | 10    | 5.3     | 18    | 35    | 16    | 8.2   | 5.2   | 3.2   | 2.2  | .70   | 1.2   |
| 23    | 2.1  | 14    | 5.0     | 18    | 33    | 16    | 7.9   | 5.3   | 3.3   | 2.1  | .90   | .90   |
| 24    | 2.1  | 72    | 6.1     | 17    | 35    | 15    | 7.6   | 4.3   | 3.5   | 2.2  | .90   | .80   |
| 25    | 1.6  | 90    | 118     | 16    | 35    | 14    | 7.4   | 3.5   | 2.9   | 1.8  | .70   | .70   |
| 26    | 1.6  | 40    | 44      | 16    | 41    | 14    | 7.4   | 4.8   | 2.8   | 1.7  | .70   | .80   |
| 27    | 1.2  | 26    | 30      | 16    | 35    | 14    | 7.1   | 4.9   | 2.9   | 1.7  | .80   | .80   |
| 28    | 1.2  | 19    | 107     | 15    | 34    | 14    | 6.8   | 5.0   | 2.9   | 1.3  | 1.1   | 1.2   |
| 29    | 1.2  | 16    | 282     | 54    | ----- | 14    | 6.8   | 5.2   | 2.9   | 1.6  | .80   | 1.5   |
| 30    | 1.2  | 13    | 196     | 178   | ----- | 13    | 6.7   | 5.3   | 2.7   | 1.6  | 1.0   | 1.1   |
| 31    | 1.6  | ----- | 150     | 95    | ----- | 12    | ----- | 5.6   | ----- | 2.7  | 1.3   | ----- |
| TOTAL | 78.9 | 558.3 | 1,096.2 | 1,787 | 1,683 | 636   | 290.7 | 178.5 | 110.8 | 73.5 | 34.80 | 31.80 |
| MEAN  | 2.55 | 18.6  | 35.4    | 57.6  | 60.1  | 20.5  | 9.69  | 5.76  | 3.69  | 2.37 | 1.12  | 1.06  |
| AC-FT | 156  | 1,110 | 2,170   | 3,540 | 3,340 | 1,260 | 577   | 354   | 220   | 146  | 69    | 63    |

CALENDAR YEAR 1965 MAX 1,350 MIN 1.2 MEAN 42.3 AC-FT 30,650  
WATER YEAR 1965-66 MAX 350 MIN .40 MEAN 18.0 AC-FT 13,010

Peak discharge (base, 500 cfs).--Dec. 28 (2400) 626 cfs (6.66 ft); Jan. 5 (time unknown) 500 cfs.



## PESCADERO CREEK BASIN

327

11-1625.4. Butano Creek near Pescadero, Calif.

Location.--Lat 37°14'01", long 122°21'56", in Butano Grant, on right bank 0.15 mile below unnamed tributary and 1.7 miles southeast of Pescadero, San Mateo County.

Drainage area.--18.3 sq mi.

Records available.--Occasional low-flow measurements, water years 1957, 1959-62, and annual maximum, water years 1959-62. June 1962 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 70 ft (from topographic map). February 1957 to June 22, 1962, crest-stage gage at site 250 ft downstream at same datum. June 23, 1962 to Sept. 28, 1965, graphic water-stage recorder at same site and datum.

Extremes.--1964-65: Maximum discharge during water year, 1,300 cfs Jan. 5 (gage height, unknown); minimum daily, 0.30 cfs Oct. 9, 21, 22.

1965-66: Maximum discharge during water year, 163 cfs Jan. 5 (gage height 6.86 ft); minimum daily, 0.40 cfs Sept. 3, 28, 30.

1959-66: Maximum discharge, 1,600 cfs Feb. 13, 1962 (gage height, 10.04 ft, from floodmarks), by slope-area measurement of maximum flow.

1962-66: No flow July 29 to Aug. 1, 1964.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation; small diversions above station for irrigation.

Cooperation.--Records for water year 1965 furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1964 to September 1965

| Day   | Oct.  | Nov.  | Dec.    | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|-------|-------|---------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.80  | 5.3   | 2.7     | 39    | 22    | 10    | 16    | 19   | 11    | 4.4  | 1.8  | 1.5   |
| 2     | .70   | 5.2   | 3.3     | 44    | 21    | 10    | 15    | 19   | 11    | 4.4  | 1.8  | 1.6   |
| 3     | .60   | 4.2   | 3.2     | 258   | 20    | 10    | 13    | 18   | 11    | 4.2  | 1.8  | 1.9   |
| 4     | .60   | 2.7   | 2.7     | 269   | 20    | 10    | 11    | 18   | 11    | 4.0  | 1.9  | 2.1   |
| 5     | .50   | 2.4   | 2.5     | 325   | 32    | 12    | 11    | 17   | 10    | 3.9  | 2.1  | 2.3   |
| 6     | .50   | 2.2   | 2.3     | 700   | 27    | 15    | 10    | 16   | 9.3   | 3.7  | 2.0  | 2.5   |
| 7     | .60   | 2.3   | 2.3     | 400   | 23    | 12    | 11    | 16   | 9.0   | 3.6  | 1.8  | 2.8   |
| 8     | .40   | 4.8   | 2.2     | 250   | 21    | 11    | 62    | 16   | 9.0   | 3.5  | 1.8  | 2.9   |
| 9     | .30   | 2.3   | 2.2     | 150   | 20    | 11    | 301   | 16   | 9.0   | 3.3  | 1.9  | 3.3   |
| 10    | .40   | 2.8   | 2.3     | 120   | 19    | 10    | 242   | 16   | 8.8   | 3.2  | 2.0  | 3.3   |
| 11    | .50   | 16    | 3.4     | 100   | 18    | 10    | 134   | 16   | 8.6   | 3.2  | 2.0  | 2.4   |
| 12    | .50   | 17    | 2.9     | 85    | 17    | 11    | 85    | 15   | 8.3   | 3.2  | 1.9  | 2.9   |
| 13    | .70   | 12    | 2.3     | 70    | 16    | 13    | 58    | 15   | 8.6   | 3.0  | 1.8  | 3.0   |
| 14    | .80   | 7.5   | 2.4     | 60    | 15    | 14    | 50    | 12   | 8.6   | 2.9  | 1.7  | 1.0   |
| 15    | .80   | 5.5   | 2.5     | 54    | 15    | 12    | 58    | 10   | 8.6   | 2.9  | 1.7  | .90   |
| 16    | .80   | 4.4   | 2.4     | 48    | 14    | 11    | 447   | 10   | 7.3   | 2.9  | 1.8  | .90   |
| 17    | .80   | 3.7   | 2.2     | 44    | 14    | 10    | 148   | 10   | 6.5   | 2.8  | 1.8  | .80   |
| 18    | .70   | 3.0   | 2.5     | 40    | 13    | 10    | 89    | 10   | 6.9   | 2.8  | 2.1  | .60   |
| 19    | .60   | 2.6   | 2.8     | 37    | 13    | 9.5   | 65    | 10   | 6.7   | 2.9  | 2.4  | .80   |
| 20    | .50   | 2.4   | 3.7     | 32    | 12    | 9.5   | 53    | 10   | 6.9   | 2.9  | 2.4  | .70   |
| 21    | .30   | 2.5   | 144     | 31    | 12    | 9.0   | 50    | 10   | 7.3   | 2.5  | 2.4  | .80   |
| 22    | .30   | 3.6   | 481     | 29    | 12    | 8.6   | 43    | 10   | 7.7   | 2.3  | 2.4  | 1.0   |
| 23    | .50   | 2.4   | 389     | 61    | 12    | 8.6   | 36    | 10   | 7.5   | 2.4  | 2.4  | 1.1   |
| 24    | .70   | 2.3   | 263     | 68    | 12    | 8.3   | 32    | 10   | 7.7   | 2.4  | 2.4  | .80   |
| 25    | .70   | 2.3   | 125     | 43    | 11    | 8.1   | 29    | 10   | 8.1   | 2.2  | 1.8  | .80   |
| 26    | .90   | 2.4   | 113     | 38    | 11    | 8.1   | 27    | 10   | 7.1   | 2.4  | 1.7  | 1.0   |
| 27    | 1.0   | 2.5   | 143     | 34    | 15    | 18    | 25    | 10   | 5.5   | 2.2  | 1.6  | 1.1   |
| 28    | 2.5   | 2.3   | 100     | 30    | 12    | 11    | 23    | 10   | 4.5   | 2.2  | 1.7  | 1.1   |
| 29    | 7.3   | 2.2   | 70      | 28    | ----- | 9.5   | 21    | 11   | 4.4   | 2.2  | 1.9  | 1.1   |
| 30    | 6.1   | 2.2   | 65      | 26    | ----- | 9.2   | 20    | 11   | 4.4   | 2.2  | 1.4  | 1.2   |
| 31    | 2.9   | ----- | 60      | 24    | ----- | 2.2   | ----- | 11   | ----- | 2.4  | 1.8  | ----- |
| Total | 35.30 | 178.9 | 2,064.3 | 3,537 | 469   | 341.4 | 2,185 | 402  | 240.3 | 93.1 | 60.0 | 48.20 |
| Mean  | 1.14  | 5.96  | 66.6    | 114   | 16.8  | 11.0  | 72.8  | 13.0 | 8.01  | 3.00 | 1.94 | 1.61  |
| Ac-ft | 70    | 355   | 4,090   | 7,020 | 930   | 677   | 4,330 | 797  | 477   | 185  | 119  | 96    |

Calendar year 1964 Max 481 Min 0 Mean 9.63 Ac-ft 6,990  
 Water year 1964-65 Max 700 Min .30 Mean 26.5 Ac-ft 19,150

Note.--No gage-height record Jan. 5-18, Jan. 26 to Feb. 24.

## PESCADERO CREEK BASIN

11-1625.4. Butano Creek near Pescadero, Calif.--Continued.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 1.7  | 1.3   | 6.7   | 47    | 44    | 18    | 6.8   | 3.9  | 2.7   | 1.5   | 0.80  | 0.80  |
| 2     | 1.8  | 1.3   | 5.8   | 35    | 36    | 20    | 6.7   | 3.8  | 2.6   | 1.4   | .80   | .60   |
| 3     | 2.0  | 1.1   | 5.5   | 28    | 35    | 17    | 6.6   | 3.5  | 2.2   | 1.5   | .80   | .40   |
| 4     | 1.9  | 1.4   | 5.3   | 33    | 86    | 16    | 6.7   | 3.6  | 2.2   | 1.9   | .80   | .60   |
| 5     | 1.9  | 1.4   | 4.9   | 128   | 79    | 15    | 6.6   | 3.4  | 2.1   | 1.6   | .80   | .50   |
| 6     | 2.0  | 1.4   | 4.8   | 86    | 62    | 14    | 6.6   | 3.4  | 2.1   | 1.6   | .70   | .60   |
| 7     | 2.0  | 1.5   | 4.9   | 56    | 50    | 14    | 6.5   | 3.3  | 2.0   | 1.2   | 1.0   | .50   |
| 8     | 1.8  | 4.0   | 4.4   | 42    | 42    | 13    | 6.3   | 3.6  | 2.0   | 1.0   | .90   | .60   |
| 9     | 1.9  | 1.9   | 4.4   | 33    | 36    | 13    | 6.4   | 3.8  | 1.9   | 1.0   | .80   | .60   |
| 10    | 2.0  | 1.8   | 4.2   | 27    | 31    | 14    | 8.8   | 3.8  | 1.9   | 1.1   | .70   | .50   |
| 11    | 1.7  | 1.7   | 5.2   | 23    | 27    | 13    | 6.8   | 3.6  | 1.8   | .90   | .70   | .70   |
| 12    | 1.8  | 2.0   | 7.1   | 20    | 24    | 12    | 7.7   | 3.5  | 1.8   | 1.1   | .70   | .50   |
| 13    | 1.9  | 3.7   | 5.0   | 18    | 22    | 12    | 6.4   | 3.3  | 1.8   | 1.1   | .70   | .50   |
| 14    | 2.0  | 28    | 4.7   | 17    | 20    | 11    | 5.9   | 3.1  | 1.7   | .80   | .80   | .60   |
| 15    | 2.2  | 9.0   | 4.5   | 15    | 19    | 11    | 5.7   | 3.0  | 1.7   | .90   | .80   | .70   |
| 16    | 1.8  | 6.5   | 4.4   | 14    | 17    | 10    | 5.4   | 2.8  | 1.6   | .90   | .80   | .70   |
| 17    | 1.9  | 22    | 4.4   | 13    | 16    | 9.6   | 5.2   | 2.7  | 1.6   | 1.2   | .70   | .70   |
| 18    | 1.8  | 27    | 4.3   | 13    | 16    | 9.4   | 5.5   | 2.9  | 1.6   | 1.0   | .60   | .90   |
| 19    | 1.6  | 29    | 4.1   | 12    | 31    | 9.5   | 5.3   | 2.7  | 1.7   | .90   | .70   | .70   |
| 20    | 1.8  | 11    | 4.2   | 11    | 24    | 8.9   | 4.9   | 2.5  | 1.5   | .80   | .60   | .80   |
| 21    | 1.8  | 7.4   | 4.1   | 11    | 20    | 8.6   | 4.8   | 2.7  | 1.5   | .80   | .80   | .70   |
| 22    | 1.5  | 6.2   | 3.9   | 11    | 19    | 8.3   | 4.8   | 2.9  | 1.6   | .80   | .60   | .50   |
| 23    | 1.6  | 8.7   | 3.6   | 10    | 19    | 8.0   | 4.6   | 2.7  | 1.6   | .90   | .60   | .60   |
| 24    | 1.5  | 35    | 4.3   | 9.6   | 21    | 7.8   | 4.5   | 2.7  | 1.6   | 1.1   | .50   | .60   |
| 25    | 1.6  | 35    | 4.0   | 9.3   | 20    | 7.6   | 4.4   | 2.6  | 1.8   | .90   | .50   | .90   |
| 26    | 1.5  | 17    | 13    | 9.1   | 23    | 7.2   | 4.4   | 2.7  | 1.6   | .90   | .50   | .80   |
| 27    | 1.5  | 11    | 9.3   | 8.8   | 19    | 7.6   | 4.2   | 2.5  | 1.5   | .90   | .50   | .50   |
| 28    | 1.0  | 9.0   | 32    | 8.2   | 19    | 7.5   | 4.1   | 2.5  | 1.7   | .80   | .60   | .40   |
| 29    | 1.2  | 8.0   | 96    | 39    | ----- | 7.3   | 4.0   | 3.0  | 1.7   | .90   | .50   | .50   |
| 30    | 1.3  | 7.5   | 87    | 84    | ----- | 7.3   | 3.9   | 3.2  | 1.7   | .90   | .70   | .40   |
| 31    | 1.4  | ----- | 62    | 43    | ----- | 7.1   | ----- | 2.9  | ----- | 1.1   | .90   | ----- |
| TOTAL | 53.4 | 301.8 | 454.0 | 914.0 | 877   | 344.7 | 170.5 | 96.6 | 54.8  | 33.40 | 21.90 | 18.40 |
| MEAN  | 1.72 | 10.1  | 14.6  | 29.5  | 31.3  | 11.1  | 5.68  | 3.12 | 1.83  | 1.08  | .71   | .61   |
| AC-FT | 106  | 599   | 900   | 1,810 | 1,740 | 684   | 338   | 192  | 109   | 66    | 43    | 36    |

CALENDAR YEAR 1965 MAX 700 MIN .60 MEAN 22.4 AC-FT 16,240  
 WATER YEAR 1965-66 MAX 128 MIN .40 MEAN 9.15 AC-FT 6,620

Peak discharge (base, 140 cfs).--Dec. 28 (2315) 145 cfs (6.68 ft); Jan. 5 (1215) 163 cfs (6.86 ft).

11-1626. Purisima Creek near Half Moon Bay, Calif.

Location.--Lat 37°26'06", long 122°22'23", in Canada de Verde y Arroyo de la Purisima Grant, on left bank 15 ft downstream from county road bridge, 3.6 miles southeast of Half Moon Bay, San Mateo County, and 4.0 miles upstream from mouth.

Drainage area.--4.83 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 380 ft (from topographic map). Prior to Sept. 7, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 2.53 cfs (1,830 acre-ft per year).

Extremes.--Maximum discharge during year, 53 cfs Dec. 28 (gage height, 4.23 ft); minimum daily, 0.30 cfs Aug. 18, Sept. 16, 17, 25-30. 1958-66: Maximum discharge, 301 cfs Jan. 31, 1963 (gage height, 5.31 ft), from rating curve extended above 65 cfs on basis of slope-area measurement at gage-height 5.28 ft; minimum daily, 0.20 cfs Dec. 28, 29, 1959, Sept. 3-5, 1961.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.  | JAN.  | FEB.  | MAR. | APR.  | MAY  | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| 1     | 1.0   | 0.90  | 1.4   | 9.3   | 8.7   | 3.7  | 1.6   | 1.3  | 1.1   | 0.80  | 0.70  | 0.61  |
| 2     | 1.0   | 1.0   | 1.4   | 6.6   | 7.3   | 3.6  | 1.5   | 1.3  | 1.0   | .80   | .70   | .51   |
| 3     | 1.0   | 1.0   | 1.3   | 5.0   | 7.1   | 3.4  | 1.5   | 1.3  | 1.0   | .80   | .70   | .41   |
| 4     | 1.0   | .90   | 1.3   | 5.5   | 9.5   | 3.1  | 1.6   | 1.3  | 1.0   | .70   | .70   | .41   |
| 5     | 1.0   | .80   | 1.3   | 30    | 9.1   | 2.8  | 1.7   | 1.3  | 1.0   | .80   | .70   | .41   |
| 6     | 1.1   | .80   | 1.3   | 10    | 9.2   | 2.5  | 1.7   | 1.3  | 1.0   | .80   | .60   | .41   |
| 7     | 1.1   | .90   | 1.3   | 6.0   | 8.4   | 2.5  | 1.6   | 1.3  | 1.0   | .80   | .60   | .41   |
| 8     | 1.0   | 2.0   | 1.3   | 5.0   | 7.5   | 2.2  | 1.6   | 1.3  | 1.0   | .80   | .60   | .41   |
| 9     | 1.1   | .90   | 1.3   | 4.2   | 6.6   | 2.5  | 2.3   | 1.4  | 1.0   | .80   | .60   | .41   |
| 10    | 1.1   | .80   | 1.2   | 3.7   | 5.8   | 2.8  | 2.6   | 1.4  | 1.1   | .80   | .60   | .61   |
| 11    | 1.1   | .80   | 1.8   | 3.5   | 5.1   | 2.5  | 2.4   | 1.3  | 1.0   | .80   | .60   | .61   |
| 12    | 1.1   | 1.1   | 1.7   | 3.2   | 4.7   | 2.4  | 2.7   | 1.3  | .80   | .80   | .60   | .61   |
| 13    | 1.0   | 2.2   | 1.4   | 3.0   | 4.3   | 2.3  | 2.4   | 1.3  | .80   | .80   | .60   | .41   |
| 14    | 1.3   | 3.9   | 1.4   | 2.7   | 3.9   | 2.3  | 2.2   | 1.2  | .70   | .80   | .60   | .41   |
| 15    | 1.2   | 1.9   | 1.4   | 2.5   | 3.6   | 2.5  | 1.9   | 1.2  | .70   | .80   | .60   | .40   |
| 16    | 1.1   | 1.6   | 1.3   | 2.4   | 3.1   | 2.3  | 1.7   | 1.2  | .80   | .80   | .50   | .20   |
| 17    | 1.1   | 3.8   | 1.3   | 2.3   | 2.8   | 2.2  | 1.7   | 1.1  | .80   | .70   | .50   | .30   |
| 18    | 1.1   | 4.9   | 1.3   | 2.2   | 2.8   | 2.0  | 1.7   | 1.1  | .90   | .70   | .30   | .50   |
| 19    | 1.2   | 2.3   | 1.3   | 2.1   | 3.3   | 2.1  | 1.6   | 1.1  | .80   | .90   | .40   | .50   |
| 20    | 1.1   | 1.7   | 1.3   | 2.0   | 2.8   | 1.9  | 1.5   | 1.1  | .80   | .80   | .40   | .40   |
| 21    | 1.0   | 1.4   | 1.3   | 2.0   | 2.5   | 1.8  | 1.5   | 1.1  | .80   | .80   | .40   | .40   |
| 22    | 1.0   | 1.3   | 1.3   | 1.9   | 3.0   | 2.0  | 1.4   | 1.1  | .80   | .80   | .50   | .40   |
| 23    | 1.0   | 1.8   | 1.3   | 1.9   | 3.3   | 1.9  | 1.4   | 1.1  | .90   | .80   | .40   | .40   |
| 24    | .90   | 4.6   | 4.4   | 1.8   | 3.6   | 1.8  | 1.3   | 1.1  | .90   | .70   | .40   | .40   |
| 25    | .90   | 4.7   | 11    | 1.8   | 3.8   | 1.7  | 1.3   | 1.0  | .80   | .70   | .40   | .30   |
| 26    | .90   | 3.1   | 4.4   | 1.7   | 4.2   | 1.7  | 1.3   | 1.1  | .80   | .70   | .40   | .30   |
| 27    | .80   | 2.3   | 3.1   | 1.7   | 3.9   | 1.8  | 1.4   | 1.1  | .80   | .70   | .40   | .30   |
| 28    | 1.0   | 1.9   | 19    | 1.8   | 3.9   | 2.0  | 1.3   | 1.1  | .80   | .70   | .40   | .30   |
| 29    | 1.0   | 1.6   | 22    | 2.5   | ----- | 1.8  | 1.3   | 1.1  | .80   | .80   | .40   | .30   |
| 30    | .90   | 1.5   | 18    | 15    | ----- | 1.8  | 1.3   | 1.1  | .80   | .80   | .40   | .30   |
| 31    | .80   | ----- | 13    | 10    | ----- | 1.7  | ----- | 1.1  | ----- | .80   | .60   | ----- |
| TOTAL | 31.90 | 58.40 | 126.1 | 153.3 | 143.8 | 71.6 | 51.0  | 37.1 | 26.50 | 24.30 | 16.30 | 12.30 |
| MEAN  | 1.03  | 1.95  | 4.07  | 4.95  | 5.14  | 2.31 | 1.70  | 1.20 | .88   | .78   | .53   | .41   |
| AC-FT | 63    | 116   | 250   | 304   | 285   | 142  | 101   | 74   | 53    | 48    | 32    | 24    |

CALENDAR YEAR 1965 MAX 66 MIN .80 MEAN 4.69 AC-FT 3.400  
 WATER YEAR 1965-66 MAX 30 MIN .30 MEAN 2.06 AC-FT 1.490

Peak discharge (base, 30 cfs, revised).--Dec. 28 (2030) 53 cfs (4.23 ft); Jan. 5 (1115) 44 cfs (4.15 ft).

## COLMA CREEK BASIN

11-1627.2. Colma Creek at South San Francisco, Calif.

Location.--Lat 37°39'14", long 122°25'31", in Buri Buri Grant, on left bank in Orange Memorial Park, 1.0 mile southwest of South San Francisco Post Office, San Mateo County.

Drainage area.--10.9 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 12.53 ft above mean sea level datum of 1929, supplementary adjustment of 1956. Tipping-bucket rain gage 2.5 miles upstream.

Extremes.--Maximum discharge during year, 818 cfs Dec. 28 (gage height, 7.12 ft); minimum daily, 0.10 cfs June 2.  
1964-66: Maximum discharge, 1,050 cfs Jan. 20, 1964 (gage height, 8.00 ft); no flow Oct. 5, 26, 1963.

Remarks.--Records good. Low flow affected by return flow from urban irrigation. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | .50   | 0.60   | 0.50   | 5.3    | 80    | 2.1   | 0.40  | 0.70  | 0.60  | 0.70  | 0.40  | 0.30  |
| 2     | .50   | .70    | .60    | 3.0    | 6.7   | 1.2   | .60   | .90   | .10   | .40   | .60   | .40   |
| 3     | .50   | 1.2    | .60    | 3.0    | 45    | .70   | .60   | .70   | .20   | .40   | .70   | .30   |
| 4     | .50   | .90    | .60    | 64     | 59    | .70   | .60   | .90   | 1.0   | .60   | .90   | .40   |
| 5     | .40   | .60    | .60    | 76     | 8.2   | .60   | .60   | 1.2   | .90   | 1.3   | .70   | .60   |
| 6     | .40   | .70    | .60    | 8.2    | 9.9   | .60   | .40   | 1.2   | 1.9   | .90   | .60   | .40   |
| 7     | .40   | 15     | .40    | 4.6    | 3.4   | 3.3   | .40   | 1.2   | .60   | .40   | .60   | .60   |
| 8     | .40   | 4.4    | .40    | 3.4    | 2.1   | .60   | .40   | 1.2   | .40   | .30   | .60   | .60   |
| 9     | .40   | .30    | .60    | 2.5    | 1.8   | 1.2   | 3.7   | 3.6   | .30   | .30   | .40   | .60   |
| 10    | .40   | .30    | .40    | 2.1    | 1.4   | 2.1   | .90   | .60   | .30   | .30   | .40   | .40   |
| 11    | .40   | .30    | 28     | 1.8    | 1.4   | .90   | 7.4   | .20   | .30   | .30   | .40   | .40   |
| 12    | .40   | 59     | 5.3    | 1.8    | 1.2   | .70   | 1.9   | .20   | .30   | .30   | .40   | .40   |
| 13    | .60   | 98     | .70    | 1.4    | 1.2   | 1.2   | .70   | .20   | .40   | .40   | .40   | .40   |
| 14    | .60   | 49     | .70    | 1.4    | 1.2   | 1.4   | .70   | .30   | .60   | .60   | .40   | .40   |
| 15    | .60   | 6.0    | .70    | 1.2    | 1.2   | 3.2   | .90   | .20   | .40   | .60   | .40   | .40   |
| 16    | .60   | 10     | .70    | 1.2    | 1.2   | 1.8   | .70   | .30   | .40   | .60   | .40   | .40   |
| 17    | .60   | 92     | .70    | .90    | 1.2   | 1.4   | .70   | .40   | .60   | .60   | .60   | .70   |
| 18    | .60   | 27     | .70    | .90    | 5.8   | 1.8   | .70   | .60   | .40   | .60   | .60   | 3.5   |
| 19    | .60   | 1.4    | .70    | .90    | 12    | 2.7   | .70   | .20   | .40   | .60   | .60   | .60   |
| 20    | .60   | 1.2    | .70    | .90    | 1.4   | .60   | .70   | .20   | .40   | .70   | .60   | .60   |
| 21    | .60   | .70    | .70    | .90    | 1.4   | .70   | .70   | .20   | .40   | .40   | .60   | .60   |
| 22    | .60   | 1.4    | .70    | 1.8    | 17    | .60   | .70   | .20   | .40   | .40   | .60   | .60   |
| 23    | .60   | 26     | .60    | .90    | 1.8   | .70   | .70   | .30   | .40   | .40   | .40   | .60   |
| 24    | .60   | 40     | 53     | .90    | 19    | .70   | .70   | .40   | .70   | .60   | .40   | .60   |
| 25    | .60   | 15     | 11     | .70    | 16    | .60   | .70   | .30   | .70   | .60   | .40   | .60   |
| 26    | .60   | 1.2    | 1.2    | .70    | 1.8   | .60   | .70   | .40   | .60   | .60   | .40   | .60   |
| 27    | .60   | .90    | .90    | .60    | 1.4   | .70   | .70   | .40   | .60   | .60   | .40   | .70   |
| 28    | .60   | .60    | 160    | .60    | 1.4   | .60   | .70   | .40   | .60   | .40   | .40   | .70   |
| 29    | .60   | .60    | 61     | 118    | ----- | .60   | .70   | .20   | .60   | .40   | .40   | .70   |
| 30    | .60   | .60    | 53     | 31     | ----- | .60   | .70   | .40   | .70   | .40   | 20    | .60   |
| 31    | .60   | -----  | 22     | 6.0    | ----- | .60   | ----- | .40   | ----- | .40   | 30    | ----- |
| Total | 16.60 | 455.60 | 408.40 | 346.60 | 305.1 | 46.60 | 30.70 | 18.60 | 16.20 | 16.10 | 17.00 | 18.70 |
| Mean  | 0.54  | 15.2   | 13.2   | 11.2   | 10.9  | 1.50  | 1.02  | 0.60  | 0.54  | 0.52  | 0.55  | 0.62  |
| Ac-ft | 31    | 904    | 810    | 687    | 605   | 92    | 61    | 37    | 32    | 32    | 34    | 37    |
| (†)   | -     | 5.4    | 5.0    | 3.7    | 3.0   | 0.9   | 0.5   | 0.2   | 0.1   | 0     | 0.1   | 0.1   |

Calendar year 1965 Max 160 Min 0.10 Mean 5.74 Ac-ft 4,150  
Water year 1965-66 Max 160 Min 0.10 Mean 4.65 Ac-ft 3,360

Peak discharge (base, 600 cfs, revised)

† Precipitation, in inches.

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-14 | 0015 | 6.85        | 732       | 2-1  | 0500 | 6.75        | 701       |
| 12-28 | 1500 | 7.12        | 818       |      |      |             |           |

11-1627.22 Spruce Branch at South San Francisco, Calif.

Location.--Lat 37°38'46", long 122°25'15", in Buri Buri Grant, on right bank 0.5 mile upstream from mouth and 1.0 mile southwest of South San Francisco Post Office, San Mateo County.

Drainage area.--1.68 sq mi. *after Oct. 68 NW drainage of 0.79<sup>+</sup> will continue flowing past station but SW " " 0.89<sup>+</sup> will bypass gage*

Records available.--February 1965 to September 1966

Gage.--Water-stage recorder and concrete culvert control. Datum of gage is 5.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum discharge during year, 219 cfs Nov. 13 (gage height, 10.17 ft), from rating curve extended above 61 cfs; no flow for many days.

1965-66: Maximum discharge, that of Nov. 13, 1965; no flow for many days in each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|--------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     | 0    | 0      | 0.10   | 0.80  | 17    | 0.60 | 0.10  | 0.10 | 0.10  | 0.10 | 0.10 | 0.10  |
| 2     | 0    | 0      | .10    | .20   | 1.0   | .20  | .20   | .10  | .10   | .10  | .10  | .10   |
| 3     | .10  | 0      | .10    | .20   | 9.5   | .20  | .20   | .10  | .10   | .20  | .10  | .10   |
| 4     | .10  | 0      | .10    | 19    | 17    | .10  | .20   | .10  | .20   | .10  | .10  | .10   |
| 5     | .10  | 0      | .10    | 18    | .80   | .20  | .20   | .20  | .20   | .10  | .10  | .10   |
| 6     | .20  | 0      | .10    | .80   | 1.8   | .20  | .20   | .20  | .20   | 0    | .20  | .10   |
| 7     | .20  | 4.3    | .20    | .50   | .40   | 1.0  | .10   | .20  | .40   | .10  | .20  | .10   |
| 8     | .20  | .30    | .20    | .40   | .20   | .20  | .10   | .20  | .10   | .10  | .20  | .10   |
| 9     | .20  | 0      | .20    | .20   | .10   | 3.6  | 1.8   | .70  | .10   | .10  | .20  | .10   |
| 10    | .20  | 0      | .20    | .20   | .20   | .20  | .20   | .10  | .10   | .10  | .40  | .10   |
| 11    | .10  | 0      | 6.6    | .20   | .10   | .10  | 2.1   | 0    | .10   | .10  | .20  | .20   |
| 12    | .10  | 17     | 1.1    | .20   | .10   | .10  | .60   | 0    | .10   | .10  | .20  | .10   |
| 13    | .20  | 20     | .10    | .20   | .10   | .10  | .10   | 0    | .20   | .10  | .20  | .10   |
| 14    | .10  | 11     | .10    | .40   | .10   | .10  | .10   | .10  | .20   | .10  | .20  | .10   |
| 15    | .10  | .80    | .20    | .50   | .10   | .20  | .10   | .10  | .10   | .10  | .20  | .20   |
| 16    | .20  | .20    | .20    | .60   | .10   | .10  | .10   | 0    | .10   | .10  | .20  | .20   |
| 17    | .10  | .20    | .20    | .60   | .10   | .10  | .10   | .10  | .10   | .10  | .20  | .20   |
| 18    | 0    | 6.7    | .20    | .60   | .60   | .10  | .10   | .10  | .10   | .10  | .20  | .20   |
| 19    | 0    | .10    | .20    | .60   | 4.0   | .70  | .10   | .10  | .10   | .10  | .50  | 0     |
| 20    | 0    | .10    | .40    | .50   | .10   | .10  | .10   | .10  | .10   | .20  | .40  | .10   |
| 21    | 0    | .10    | .20    | .40   | .10   | .10  | .10   | .10  | .10   | .20  | .20  | .10   |
| 22    | 0    | .80    | .40    | .40   | 2.2   | .10  | .20   | .20  | .10   | .10  | .10  | .10   |
| 23    | 0    | 6.3    | .60    | .10   | .10   | .10  | .20   | .10  | .10   | .10  | .20  | .10   |
| 24    | 0    | 16     | 24     | .10   | 34    | .10  | .20   | .10  | .10   | .10  | .20  | .10   |
| 25    | 0    | 3.0    | 5.9    | .10   | 4.2   | .10  | .10   | .10  | 0     | .10  | .50  | .10   |
| 26    | .10  | .20    | .50    | .20   | .20   | .10  | .10   | .10  | 0     | .10  | .50  | .10   |
| 27    | 0    | .10    | .50    | .20   | .10   | .10  | .10   | .10  | 0     | .10  | .20  | .10   |
| 28    | 0    | .10    | 4.3    | .20   | .10   | .10  | .10   | .20  | 0     | .10  | .20  | .10   |
| 29    | .10  | .10    | 16     | 3.1   | ----- | .10  | .10   | .10  | 0     | 0    | .20  | .20   |
| 30    | 0    | .10    | 14     | 4.8   | ----- | .10  | .10   | .10  | .10   | .10  | .30  | .20   |
| 31    | 0    | -----  | 3.7    | .80   | ----- | .10  | ----- | .10  | ----- | .10  | .10  | ----- |
| Total | 2.40 | 109.10 | 119.50 | 83.00 | 63.80 | 9.30 | 8.10  | 3.90 | 3.30  | 3.20 | 6.90 | 3.60  |
| Mean  | .08  | 3.64   | 3.85   | 2.68  | 2.28  | .30  | .27   | .13  | .11   | .10  | .22  | .12   |
| Ac-ft | 4.8  | 216    | 237    | 165   | 127   | 18   | 16    | 7.7  | 6.5   | 6.3  | 14   | 7.1   |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Water year 1965-66 Max 4.3 Min 0 Mean 1.14 Ac-ft 825

Peak discharge (base, 200 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-13 | 2400 | 10.17       | 219       | 12-28 | 1530 | 10.08       | 213       |
| 12-24 | 1930 | 9.93        | 204       | 2-1   | 0500 | 9.92        | 203       |

## REDWOOD CREEK BASIN

11-1628. Redwood Creek at Redwood City, Calif.

Location--Lat 37°26'58", long 122°13'57", in Pulgas Grant, at Menlo Country Club, on right bank 200 ft upstream from Alameda de las Pulgas bridge and 2.5 miles south of Redwood City Post Office, San Mateo County.

Drainage area--1.82 sq mi.

Records available--September 1959 to September 1966.

Gage--Digital water-stage recorder. Datum of gage is 83.92 ft above mean sea level, datum of 1929. Prior to May 25, 1965, graphic water-stage recorder at same site and datum.

Average discharge--7 years, 0.70 cfs (507 acre-ft per year).

Extremes--Maximum discharge during year, 224 cfs Dec. 28 (gage height, 5.39 ft); no flow for many days.  
1959-66: Maximum discharge, 644 cfs Jan. 31, 1963 (gage height, 9.36 ft), from rating curve extended above 170 cfs on basis of slope-area measurement of maximum flow and computation of maximum flow through culvert; no flow for many days in each year.

Remarks--Records good. Low flow at times affected by return flow from urban irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.10  | 2.4   | 7.4   | 0.70  | 0.20  | 0.10 | 0     | 0    |      |       |
| 2     |      | 0     | .10   | 1.4   | 1.8   | .70   | .20   | .10  | 0     | 0    |      |       |
| 3     |      | 0     | .10   | 1.1   | 1.7   | .50   | .20   | .10  | 0     | 0    |      |       |
| 4     |      | 0     | .10   | 2.5   | 9.9   | .50   | .10   | .10  | 0     | 0    |      |       |
| 5     |      | 0     | .10   | 8.1   | 2.4   | .50   | .10   | .10  | 0     | .30  |      |       |
| 6     |      | 0     | .10   | 2.1   | 2.4   | .50   | .10   | .10  | 0     | 0    |      |       |
| 7     |      | 0     | .10   | 1.4   | 1.6   | .50   | .10   | .10  | 0     | 0    |      |       |
| 8     |      | .10   | .10   | 1.1   | 1.1   | .40   | .10   | .10  | 0     | 0    |      |       |
| 9     |      | 0     | .10   | 1.0   | 1.0   | .70   | .40   | .10  | 0     | 0    |      |       |
| 10    |      | 0     | .10   | .80   | .80   | .60   | .50   | .10  | .10   | 0    |      |       |
| 11    |      | 0     | .30   | .80   | .80   | .40   | .50   | .10  | .10   | 0    |      |       |
| 12    |      | 0     | .30   | .70   | .80   | .40   | .30   | .10  | 0     | 0    |      |       |
| 13    |      | .20   | .10   | .70   | .60   | .40   | .20   | .10  | 0     | 0    |      |       |
| 14    |      | .40   | .10   | .60   | .60   | .40   | .10   | .10  | 0     | 0    |      |       |
| 15    |      | .10   | .10   | .60   | .60   | .30   | .10   | .10  | 0     | 0    |      |       |
| 16    |      | .20   | .10   | .60   | .60   | .30   | .10   | .10  | .10   | 0    |      |       |
| 17    |      | 1.3   | .10   | .50   | .60   | .30   | .20   | .10  | .10   | 0    |      |       |
| 18    |      | .60   | .10   | .50   | .60   | .30   | .10   | .10  | 0     | 0    |      |       |
| 19    |      | .10   | .10   | .40   | 1.3   | .30   | .10   | .10  | 0     | 0    |      |       |
| 20    |      | 0     | .10   | .40   | .70   | .30   | .10   | .10  | 0     | 0    |      |       |
| 21    |      | 0     | .10   | .40   | .60   | .30   | .20   | .10  | 0     | 0    |      |       |
| 22    |      | .10   | .10   | .40   | .60   | .30   | .10   | .10  | 0     | 0    |      |       |
| 23    |      | .40   | .10   | .40   | .60   | .30   | .10   | .10  | 0     | 0    |      |       |
| 24    |      | 3.6   | 5.9   | .30   | 1.1   | .30   | .10   | 0    | 0     | 0    |      |       |
| 25    |      | 1.1   | 7.2   | .30   | 1.0   | .30   | .10   | 0    | 0     | 0    |      |       |
| 26    |      | .20   | 1.0   | .40   | 1.0   | .30   | .10   | 0    | 0     | 0    |      |       |
| 27    |      | .10   | .40   | .30   | .70   | .30   | .10   | 0    | 0     | 0    |      |       |
| 28    |      | .10   | .39   | .30   | .60   | .30   | .10   | 0    | 0     | 0    |      |       |
| 29    |      | .10   | 13    | 11    | ----- | .20   | .10   | 0    | 0     | 0    |      |       |
| 30    |      | .10   | 11    | 5.0   | ----- | .20   | .10   | 0    | 0     | 0    |      |       |
| 31    |      | ----- | 12    | 1.4   | ----- | .20   | ----- | 0    | ----- | 0    |      | ----- |
| TOTAL | 0    | 8.80  | 92.20 | 47.90 | 43.50 | 12.00 | 4.90  | 2.30 | .40   | .30  | 0    | 0     |
| MEAN  | 0    | .29   | 2.97  | 1.55  | 1.55  | .39   | .16   | .07  | .01   | .01  | 0    | 0     |
| AC-FT | 0    | 17    | 183   | 95    | 86    | 24    | 9.7   | 4.6  | .8    | .6   | 0    | 0     |

CALENDAR YEAR 1965 MAX 39 MIN 0 MEAN .946 AC-FT 685  
WATER YEAR 1965-66 MAX 39 MIN 0 MEAN .582 AC-FT 421

Peak discharge (base, 50 cfs)--Dec. 24 (2315) 51 cfs (3.03 ft); Dec. 28 (1645) 224 cfs (5.39 ft).

11-1629. Sharon Creek near Menlo Park, Calif.

Location.--Lat 37°25'45", long 122°13'02", in Pulgas Grant, at Atherton City boundary, 900 ft upstream from Atherton drainage channel and 2.6 miles southwest of Menlo Park, San Mateo County.

Drainage area.--0.38 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 146.18 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 0.10 cfs (73 acre-ft per year).

Extremes.--Maximum discharge during year, 63 cfs Dec. 28 (gage height, 2.99 ft); no flow for many days.

1958-66: Maximum discharge, 68.0 cfs Jan. 31, 1963 (gage height, 3.07 ft); maximum gage height, 3.10 ft Mar. 5, 1962, from floodmarks; no flow at times in 1958-66.

Flood of Apr. 2, 1958, reached a stage of about 4.2 ft, from floodmarks.

Remarks.--Records good except those below 1.0 cfs, which are fair. Low flow affected by runoff from urban irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.       | Dec.       | Jan.       | Feb.       | Mar.       | Apr.       | May | June | July       | Aug. | Sept. |
|-------|------|------------|------------|------------|------------|------------|------------|-----|------|------------|------|-------|
| 1     |      | 0          | 0          | 0.80       | 1.7        | 0.10       | 0          |     |      | 0          | 0    | 0     |
| 2     |      | 0          | 0          | .60        | .10        | .10        | .10        |     |      | 0          | 0    | 0     |
| 3     |      | 0          | 0          | .60        | .30        | 0          | 0          |     |      | 0          | 0    | 0     |
| 4     |      | 0          | 0          | .30        | <u>1.8</u> | 0          | 0          |     |      | 0          | 0    | 0     |
| 5     |      | 0          | 0          | 1.0        | .20        | 0          | 0          |     |      | 0          | 0    | 0     |
| 6     |      | 0          | 0          | .10        | .40        | 0          | 0          |     |      | 0          | 0    | 0     |
| 7     |      | .10        | 0          | .10        | .10        | 0          | 0          |     |      | 0          | .10  | 0     |
| 8     |      | .10        | 0          | .10        | .10        | 0          | 0          |     |      | 0          | 0    | 0     |
| 9     |      | 0          | 0          | .10        | .10        | <u>.20</u> | .20        |     |      | 0          | 0    | 0     |
| 10    |      | 0          | 0          | .10        | .10        | 0          | 0          |     |      | 0          | 0    | 0     |
| 11    |      | 0          | .20        | 0          | 0          | 0          | <u>.30</u> |     |      | .10        | 0    | 0     |
| 12    |      | .10        | .10        | 0          | 0          | 0          | .10        |     |      | 0          | 0    | 0     |
| 13    |      | .70        | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 14    |      | .60        | 0          | 0          | .10        | 0          | 0          |     |      | 0          | 0    | 0     |
| 15    |      | .20        | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 16    |      | .40        | 0          | 0          | 0          | .10        | 0          |     |      | 0          | 0    | .20   |
| 17    |      | 1.8        | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 18    |      | .30        | 0          | 0          | .10        | 0          | 0          |     |      | 0          | .10  | 0     |
| 19    |      | .10        | 0          | 0          | .20        | 0          | 0          |     |      | 0          | 0    | 0     |
| 20    |      | 0          | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 21    |      | 0          | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 22    |      | .10        | 0          | 0          | .10        | 0          | 0          |     |      | 0          | 0    | 0     |
| 23    |      | 1.1        | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 24    |      | <u>2.7</u> | 2.5        | 0          | .30        | 0          | 0          |     |      | 0          | 0    | 0     |
| 25    |      | 40         | 1.4        | 0          | .10        | 0          | 0          |     |      | 0          | 0    | 0     |
| 26    |      | .10        | .10        | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 27    |      | 0          | 0          | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 28    |      | 0          | <u>9.5</u> | 0          | 0          | 0          | 0          |     |      | 0          | 0    | 0     |
| 29    |      | 0          | <u>2.4</u> | <u>3.9</u> | -----      | 0          | 0          |     |      | 0          | 0    | .40   |
| 30    |      | 0          | 2.4        | .40        | -----      | 0          | 0          |     |      | 0          | 0    | 0     |
| 31    |      | -----      | 2.9        | .10        | -----      | 0          | -----      |     |      | <u>.20</u> | 0    | ----- |
| Total | 0    | 8.80       | 21.50      | 8.20       | 5.80       | 0.50       | 0.70       | 0   | 0    | 0.30       | 0.20 | 0.60  |
| Mean  | 0    | .29        | .69        | .26        | .21        | .02        | .02        | 0   | 0    | .01        | .006 | .02   |
| Ac-ft | 0    | 17         | 43         | 16         | 12         | 1.0        | 1.4        | 0   | 0    | .60        | .40  | 1.2   |

Calendar year 1965 Max 9.5 Min 0 Mean .18 Ac-ft 132  
 Water year 1965-66 Max 9.5 Min 0 Mean .13 Ac-ft 92

Peak discharge (base, 20 cfs, revised)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1600 | 2.99        | 63        | 2-1  | 0545 | 2.29        | 26        |
| 1-29  | 1530 | 2.22        | 22        |      |      |             |           |

## SAN FRANCISQUITO CREEK BASIN

11-1629.4 San Francisquito Creek below Ladera damsite, near Stanford University, Calif.

Location.--Lat 37°24'24", long 122°12'11", on north boundary of El Corte de Madera Grant, 1.2 miles upstream from Los Trancos Creek, 0.5 mile northwest of Ladera School, and 2.3 miles southwest of Stanford University Post Office, Santa Clara County.

Drainage area.--28.5 sq mi.

Records available.--October 1961 to September 1966. Prior to October 1962, published as "below Ladera damsite."

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 180 ft (from topographic map). Prior to Dec. 27, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--5 years, 12.6 cfs (9,120 acre-ft per year).

Extremes.--Maximum discharge during year 831 cfs Dec. 28 (gage height, 8.86 ft); no flow for many days.

1961-66: Maximum discharge, 2,880 cfs Jan. 31, 1963 (gage height, 16.04 ft), from rating curve extended above 620 cfs; no flow at times in each year.

Remarks.--Records good. Flow regulated by Searsville Lake (capacity, 952 acre-ft). Small diversions from Searsville Lake for irrigation on Stanford University campus.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.   | JAN.  | FEB.  | MAR.   | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|--------|-------|-------|--------|-------|------|-------|------|------|-------|
| 1     | 0    | 0.10  | 1.4    | 49    | 71    | 8.5    | 1.2   | 0.40 | 0.30  | 0.10 | 0    | 0.10  |
| 2     | 0.10 | .10   | 1.0    | 24    | 33    | 9.0    | 1.1   | .40  | .30   | 0    | 0    | 0     |
| 3     | 0    | .10   | .90    | 13    | 26    | 7.1    | 1.1   | .50  | .40   | 0    | .10  | 0     |
| 4     | 0    | .10   | 1.2    | 12    | 94    | 6.5    | 1.1   | .40  | .40   | 0    | 0    | 0     |
| 5     | .10  | 0     | .90    | 132   | 45    | 6.2    | 1.3   | .40  | .40   | 0    | 0    | 0     |
| 6     | 0    | .10   | .90    | 61    | 39    | 6.0    | 1.9   | .40  | .40   | 0    | 0    | 0     |
| 7     | .10  | 0     | .80    | 32    | 30    | 5.9    | 1.3   | .30  | .40   | 0    | 0    | 0     |
| 8     | .10  | .10   | .80    | 18    | 22    | 5.9    | 1.2   | .30  | .40   | 0    | 0    | .30   |
| 9     | .10  | .10   | .80    | 13    | 16    | 6.2    | 1.5   | .30  | .30   | 0    | .40  | .20   |
| 10    | 0    | .10   | .80    | 10    | 14    | 8.2    | 3.2   | .30  | .20   | 0    | 0    | 0     |
| 11    | 0    | .10   | 1.4    | 8.2   | 12    | 7.0    | 4.4   | .30  | .10   | 0    | 0    | 0     |
| 12    | 0    | .10   | 4.5    | 5.2   | 10    | 6.0    | 7.2   | .30  | .10   | .10  | 0    | 0     |
| 13    | .10  | .20   | 2.8    | 2.1   | 8.5   | 5.6    | 5.6   | .20  | .10   | 0    | 0    | .10   |
| 14    | .10  | .70   | 1.6    | 1.8   | 6.7   | 5.3    | 4.5   | .30  | 0     | 0    | 0    | 0     |
| 15    | .10  | .20   | 1.2    | 4.2   | 2.4   | 4.7    | 3.7   | .20  | 0     | 0    | 0    | 0     |
| 16    | .10  | .30   | 1.0    | 5.2   | 2.2   | .90    | 3.1   | .10  | 0     | .20  | .10  | 0     |
| 17    | 0    | 2.3   | .90    | 3.6   | 3.5   | .80    | 2.5   | .10  | .10   | 0    | 0    | 0     |
| 18    | 0    | 1.7   | .80    | 2.1   | 5.7   | 1.1    | 1.9   | .10  | .10   | 0    | 0    | 0     |
| 19    | .10  | .70   | .80    | 2.0   | 12    | 2.2    | 1.6   | .10  | .10   | 0    | .10  | 0     |
| 20    | .10  | .20   | .70    | 2.2   | 11    | 12     | 1.3   | .20  | .10   | 0    | .20  | 0     |
| 21    | .10  | .10   | .80    | 1.8   | 8.7   | 9.8    | .70   | .20  | 0     | 0    | 0    | 0     |
| 22    | .10  | .10   | .80    | 1.7   | 7.5   | 1.6    | .60   | .20  | 0     | 0    | 0    | 0     |
| 23    | .10  | .90   | .80    | 2.6   | 7.2   | 1.0    | .60   | .20  | 0     | 0    | 0    | 0     |
| 24    | 0    | 9.1   | 12     | 3.3   | 13    | .90    | .60   | .30  | 0     | 0    | 0    | 0     |
| 25    | 0    | 3.8   | 92     | 3.5   | 12    | 1.0    | .80   | .30  | 0     | .10  | 0    | 0     |
| 26    | .10  | .70   | 12     | 3.6   | 19    | .90    | .70   | .30  | 0     | 0    | 0    | 0     |
| 27    | 0    | 1.5   | 5.9    | 3.3   | 12    | 1.3    | .60   | .30  | 0     | 0    | 0    | 0     |
| 28    | .10  | 2.6   | 259    | 3.1   | 10    | 1.8    | .50   | .30  | 0     | .20  | 0    | 0     |
| 29    | .10  | 2.1   | 223    | 69    | ----- | 4.6    | .50   | .30  | 0     | .30  | 0    | 0     |
| 30    | .10  | 1.8   | 158    | 124   | ----- | 6.5    | .40   | .30  | .20   | .10  | 0    | 0     |
| 31    | .10  | ----- | 155    | 33    | ----- | 4.1    | ----- | .30  | ----- | 0    | 0    | ----- |
| TOTAL | 1.90 | 30.00 | 944.50 | 649.5 | 553.4 | 148.60 | 56.70 | 8.60 | 4.40  | 1.10 | .90  | .70   |
| MEAN  | .06  | 1.00  | 30.5   | 21.0  | 19.8  | 4.79   | 1.89  | .28  | .15   | .04  | .03  | .02   |
| AC-FT | 3.8  | 60    | 1,870  | 1,290 | 1,100 | 295    | 112   | 17   | 8.7   | 2.2  | 1.8  | 1.4   |

CALENDAR YEAR 1965 MAX 460 MIN 0 MEAN 16.2 AC-FT 11,710  
 WATER YEAR 1965-66 MAX 259 MIN 0 MEAN 6.58 AC-FT 4,760

Peak discharge (base, 600 cfs).--Dec. 28 (1945) 831 cfs (8.86 ft).



11-1632. Los Trancos Creek tributary near Stanford University, Calif.

Location--Lat 37°24'18", long 122°11'09", in El Corte de Madera Grant, on right bank 350 ft east of wooden water tanks, 0.4 mile east of Ladera, 0.6 mile upstream from mouth, and 1.7 miles southwest of Stanford University Post Office, Santa Clara County.

Drainage area--0.47 sq mi.

Records available--October 1958 to September 1966 (discontinued).

Gage--Water-stage recorder and concrete control. Datum of gage is 269.13 ft above mean sea level, datum of 1929.

Average discharge--8 years, 0.035 cfs (25 acre-ft per year).

Extremes--Maximum discharge during year, 24.0 cfs Dec. 28 (gage height, 2.15 ft); no flow for most of year.  
1958-66: Maximum discharge, 66.2 cfs Jan. 31, 1963 (gage height, 2.63 ft), from rating curve extended above 18 cfs on basis of slope-area measurement of maximum flow; no flow for many months in each year.

Remarks--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      |       | 0    | 0.10 | 0.60  |      |       |     |       |      |      |       |
| 2     |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 3     |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 4     |      |       | 0    | 0    | .50   |      |       |     |       |      |      |       |
| 5     |      |       | 0    | 0    | .10   |      |       |     |       |      |      |       |
| 6     |      |       | 0    | 0    | .20   |      |       |     |       |      |      |       |
| 7     |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 8     |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 9     |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 10    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 11    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 12    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 13    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 14    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 15    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 16    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 17    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 18    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 19    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 20    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 21    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 22    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 23    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 24    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 25    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 26    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 27    |      |       | 0    | 0    | 0     |      |       |     |       |      |      |       |
| 28    |      |       | 3.4  | 0    | 0     |      |       |     |       |      |      |       |
| 29    |      |       | .80  | .80  | ----- |      |       |     |       |      |      |       |
| 30    |      |       | 1.3  | .20  | ----- |      |       |     |       |      |      |       |
| 31    |      | ----- | 1.1  | 0    | ----- |      | ----- |     | ----- |      |      | ----- |
| Total | 0    | 0     | 6.60 | 1.10 | 1.40  | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0     | .21  | .04  | .05   | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 0     | 13   | 2.2  | 2.8   | 0    | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 5.5 Min 0 Mean 0.07 Ac-ft 53  
Water year 1965-66 Max 3.4 Min 0 Mean 0.02 Ac-ft 18

Peak discharge (base, 6 cfs)--Dec. 28 (1600) 24 cfs (2.15 ft).

## SAN FRANCISQUITO CREEK BASIN

11-1645. San Francisquito Creek at Stanford University, Calif.

Location.--Lat 37°25'24", long 122°11'18", in San Francisquito Grant at golf course, on right bank 1.1 miles downstream from Los Trancos Creek and 1.1 miles west of Stanford University Post Office, Santa Clara County.

Drainage area.--37.5 sq mi.

Records available.--October 1930 to September 1941, October 1950 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 120 ft (from topographic map).

Average discharge.--27 years, 16.8 cfs (12,160 acre-ft per year).

Extremes.--Maximum discharge during year, 880 cfs Dec. 28 (gage height, 4.80 ft); no flow for many days.  
1930-41, 1950-66: Maximum discharge, 5,560 cfs Dec. 22, 1955 (gage height, 13.60 ft); no flow at times in each year.

Remarks.--Records good. Flow regulated by Searsville Lake (capacity, 952 acre-ft). Diversions of about 700 acre-ft above station to Los Trancos and Lagunity Canals for irrigation on Stanford University campus below station. Low flow affected by waste water from Stanford Linear Accelerator.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.   | Jan.   | Feb.  | Mar.   | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|-------|-------|--------|--------|-------|--------|-------|------|-------|------|------|-------|
| 1     | 0.10  | 0.40  | 0.20   | 45     | 82    | 11     | 0.30  | 0    | 0     |      |      | 0     |
| 2     | .20   | .30   | .20    | 19     | 36    | 11     | .10   | 0    | 0     |      |      | 0     |
| 3     | .50   | .30   | .20    | 9.8    | 26    | 7.8    | .10   | 0    | .10   |      |      | 0     |
| 4     | .50   | .20   | .30    | 5.5    | 97    | 6.1    | .10   | 0    | .10   |      |      | 0     |
| 5     | .50   | .30   | .30    | 109    | 53    | 6.1    | .10   | 0    | .10   |      |      | 0     |
| 6     | .50   | .50   | .30    | 46     | 47    | 5.8    | .10   | 0    | .10   |      |      | 0     |
| 7     | .50   | .60   | .30    | 20     | 33    | 6.1    | .10   | 0    | .10   |      |      | 0     |
| 8     | .40   | 1.8   | .30    | 6.1    | 23    | 6.4    | .10   | 0    | .10   |      |      | 0     |
| 9     | .20   | .50   | .30    | 4.8    | 18    | 7.0    | .10   | .10  | .10   |      |      | 0     |
| 10    | .10   | .50   | .40    | 8.2    | 15    | 10     | .30   | .10  | .10   |      |      | 0     |
| 11    | .20   | .80   | .40    | 6.2    | 12    | 8.5    | 1.4   | .10  | .10   |      |      | 0     |
| 12    | .30   | .80   | .40    | 3.7    | 9.2   | 6.7    | 2.6   | .10  | 0     |      |      | 0     |
| 13    | .50   | 1.8   | .40    | 1.7    | 8.8   | 6.4    | .20   | .10  | 0     |      |      | 0     |
| 14    | .50   | 3.9   | .40    | 1.4    | 8.8   | 4.6    | .10   | .10  | 0     |      |      | 0     |
| 15    | .50   | 1.2   | .40    | 3.6    | 4.3   | 3.0    | .10   | .10  | 0     |      |      | 0     |
| 16    | .50   | 1.7   | .40    | 4.6    | 2.8   | .50    | .10   | .10  | 0     |      |      | 0     |
| 17    | .50   | 6.4   | .40    | 3.5    | 2.4   | .20    | .10   | .10  | 0     |      |      | 0     |
| 18    | .50   | 3.6   | .50    | 1.4    | 5.8   | .20    | .10   | .10  | 0     |      |      | 0     |
| 19    | .60   | 1.5   | .50    | 1.3    | 16    | .20    | .10   | .10  | 0     |      |      | 0     |
| 20    | .60   | .70   | .50    | 1.2    | 14    | 6.5    | .10   | .10  | 0     |      |      | 0     |
| 21    | .50   | .50   | .50    | .70    | 9.5   | 8.6    | .10   | .10  | 0     |      |      | .10   |
| 22    | .50   | .40   | .50    | .70    | 8.1   | .30    | .10   | .10  | 0     |      |      | .10   |
| 23    | .40   | 1.3   | .50    | 1.1    | 7.8   | .20    | .10   | .10  | 0     |      |      | 0     |
| 24    | .40   | 8.9   | 2.6    | 2.1    | 14    | .20    | .10   | .10  | 0     |      |      | .10   |
| 25    | .30   | .90   | 79     | 2.4    | 14    | .10    | .10   | .10  | 0     |      |      | .10   |
| 26    | .50   | .30   | 14     | 3.2    | 22    | .10    | .10   | .10  | 0     |      |      | 0     |
| 27    | .50   | .20   | 4.6    | 3.2    | 13    | .20    | .10   | .10  | 0     |      |      | 0     |
| 28    | .50   | .20   | 236    | 2.1    | 12    | .30    | 0     | .10  | 0     |      |      | 0     |
| 29    | .50   | .20   | 236    | 80     | ----- | .80    | 0     | .10  | 0     |      |      | 0     |
| 30    | .50   | .20   | 151    | 135    | ----- | 3.0    | 0     | .10  | 0     |      |      | 0     |
| 31    | .50   | ----- | 144    | 39     | ----- | 1.5    | ----- | 0    | ----- |      |      | ----- |
| Total | 13.30 | 40.90 | 875.80 | 571.50 | 614.5 | 129.40 | 7.00  | 2.20 | 0.90  | 0    | 0    | 0.40  |
| Mean  | 0.42  | 1.36  | 28.3   | 18.4   | 21.9  | 4.17   | 0.23  | 0.07 | 0.03  | 0    | 0    | 0.01  |
| Ac-ft | 26    | 81    | 1,740  | 1,130  | 1,220 | 257    | 14    | 4.4  | 1.8   | 0    | 0    | 0.8   |

Calendar year 1965 Max 533 Min 0 Mean 17.7 Ac-ft 12,820  
Water year 1965-66 Max 236 Min 0 Mean 6.18 Ac-ft 4,470

Peak discharge (base, 700 cfs).--Dec. 28 (2100) 880 cfs (4.80 ft).

11-1660. Matadero Creek at Palo Alto, Calif.

Location.--Lat 37°25'10", long 122°08'10", in Rincon de San Francisquito Grant, on right bank on Ash Street, 150 ft upstream from Lambert Avenue Bridge, and 2.1 miles southeast of post office at Palo Alto, Santa Clara County.

Drainage area.--7.24 sq mi.

Records available.--July 1952 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 22.86 ft above mean sea level (levels by Santa Clara County Flood Control and Water Conservation District). Prior to Sept. 25, 1958, at site 150 ft downstream at different datum.

Average discharge.--14 years, 1.19 cfs (862 acre-ft per year); median of mean annual discharges, 0.70 cfs (510 acre-ft per year).

Extremes.--Maximum discharge during year, 311 cfs Dec. 28 (gage height, 2.71 ft), from rating curve extended above 92 cfs on basis of critical-depth determination at gage height 2.85 ft; no flow for most of year.

1952-66: Maximum discharge, 854 cfs Dec. 22, 1955 (gage height, 9.60 ft), from rating curve extended above 390 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 9.88 ft Dec. 23, 1955, site and datum then in use (backwater from culvert); no flow for many months in each year.

Remarks.--Records good except those above 30 cfs, which are fair. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|------|-------|-----|-------|------|------|-------|
| 1     | 0.10 | 0     | 0      | 4.7   | 9.1   | 0.40 | 0     |     |       | 0    | 0    | 0     |
| 2     | .10  | 0     | 0      | 2.1   | 2.1   | .20  | 0     |     |       | 0    | 0    | 0     |
| 3     | 0    | 0     | 0      | 1.4   | 2.5   | 0    | 0     |     |       | 0    | 0    | 0     |
| 4     | 0    | 0     | 0      | 1.0   | 6.7   | 0    | 0     |     |       | 0    | .10  | 0     |
| 5     | 0    | 0     | .70    | 1.6   | 2.7   | 0    | 0     |     |       | 0    | 0    | 0     |
| 6     | 0    | .10   | .20    | .50   | 4.5   | .10  | 0     |     |       | 0    | 0    | 0     |
| 7     | .10  | 0     | .30    | .40   | 2.1   | .10  | 0     |     |       | 0    | 0    | 0     |
| 8     | .10  | 2.0   | 0      | .10   | 1.6   | 0    | 0     |     |       | 0    | 0    | 0     |
| 9     | .10  | 0     | 1.0    | .10   | .70   | 1.6  | .10   |     |       | 0    | 0    | 0     |
| 10    | 0    | 0     | 1.8    | 0     | .90   | .30  | .10   |     |       | 0    | 0    | 0     |
| 11    | 0    | 0     | 3.9    | 0     | 1.0   | 0    | .80   |     |       | 0    | 0    | 0     |
| 12    | 0    | .60   | 2.1    | 0     | 1.0   | 0    | 1.4   |     |       | 0    | 0    | 0     |
| 13    | 0    | 2.3   | .10    | 0     | .90   | 0    | .40   |     |       | 0    | 0    | 0     |
| 14    | 0    | 5.9   | .10    | .10   | .80   | 0    | .20   |     |       | 0    | 0    | 0     |
| 15    | 0    | .60   | .10    | .10   | .80   | 0    | .10   |     |       | 0    | 0    | 0     |
| 16    | 0    | 4.3   | .10    | 0     | .70   | 0    | 0     |     |       | 0    | 0    | 0     |
| 17    | 0    | 10    | 0      | 0     | .80   | 0    | 0     |     |       | 0    | 0    | 0     |
| 18    | 0    | 3.5   | 0      | 0     | .70   | 0    | 0     |     |       | 0    | 0    | 0     |
| 19    | 0    | .70   | 0      | 0     | 2.5   | .10  | 0     |     |       | 0    | 0    | .10   |
| 20    | 0    | .20   | 0      | 0     | .80   | 0    | 0     |     |       | 0    | 0    | 0     |
| 21    | 0    | .10   | 0      | .10   | .70   | 0    | 0     |     |       | 0    | 0    | 0     |
| 22    | 0    | 0     | 0      | 0     | .70   | 0    | 0     |     |       | 0    | 0    | 0     |
| 23    | 0    | 6.0   | 0      | 0     | .60   | 0    | 0     |     |       | 0    | 0    | 0     |
| 24    | 0    | 29    | 3.1    | 0     | 2.4   | 0    | 0     |     |       | 0    | 0    | 0     |
| 25    | 0    | 4.0   | 8.8    | 0     | 1.2   | 0    | 0     |     |       | 0    | 0    | 0     |
| 26    | 0    | .40   | .20    | 0     | .40   | 0    | 0     |     |       | 0    | 0    | 0     |
| 27    | 0    | 0     | .10    | 0     | 0     | 0    | 0     |     |       | 0    | 0    | 0     |
| 28    | .10  | 0     | .72    | 0     | 0     | 0    | 0     |     |       | 0    | 0    | 0     |
| 29    | 0    | 0     | .28    | .24   | ----- | 0    | 0     |     |       | 0    | 0    | 0     |
| 30    | 0    | 0     | 30     | 8.5   | ----- | 0    | 0     |     |       | .70  | 0    | 0     |
| 31    | 0    | ----- | 33     | 1.9   | ----- | 0    | ----- |     | ----- | 0    | 0    | ----- |
| Total | .60  | 69.70 | 192.60 | 46.60 | 48.90 | 2.80 | 3.10  | 0   | 0     | .70  | .10  | .10   |
| Mean  | .02  | 2.32  | 6.21   | 1.50  | 1.75  | .09  | .10   | 0   | 0     | .02  | .003 | .003  |
| Ac-ft | 1.2  | 138   | 382    | 92    | 97    | 5.6  | 6.1   | 0   | 0     | 1.4  | .2   | .2    |

Calendar year 1965 Max 79 Min 0 Mean 1.47 Ac-ft 1,070  
 Water year 1965-66 Max 79 Min 0 Mean 1.00 Ac-ft 724

Peak discharge (base, 50 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-24 | 0200 | 1.66        | 116       | 12-31 | 0430 | 1.57        | 101       |
| 12-28 | 1700 | 2.71        | 311       | 1-29  | 2030 | 1.67        | 117       |

## STEVENS CREEK BASIN

11-1664.8. Stevens Creek Reservoir near Monte Vista, Calif.

Location.--Lat 37°17'55", long 122°04'34", in NW¼ sec.27, T.7 S., R.2 W., at center of dam on Stevens Creek, 2.0 miles southwest of Monte Vista.

Drainage area.--17.3 sq mi.

Records available.--December 1935 to September 1966. Monthly contents prior to October 1959 published in WSP 1735.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District).

Extremes.--Maximum contents observed during year, 2,390 acre-ft Apr. 4 (elevation, 519.21 ft); minimum observed, 209 acre-ft Sept. 30 (elevation, 472.86 ft).

1935-66: Maximum contents observed, 4,100 acre-ft Dec. 26, 1955 (elevation, 538.61 ft); maximum elevation, 539.48 ft Jan. 31, 1963; no contents for part of most years.

Remarks.--Reservoir is formed by earth-fill dam completed in 1936. Capacity, 3,860 acre-ft between elevations 444.9 (invert of outlet tunnel) and 537.14 ft (crest of spillway). Water released down Stevens Creek for irrigation and ground-water recharge by percolation.

Cooperation.--Record of contents furnished by Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1965 to September 1966

| Date          | Contents† |
|---------------|-----------|
| Sept. 30..... | 346       |
| Oct. 31.....  | 308       |
| Nov. 30.....  | 731       |
| Dec. 31.....  | 1,170     |
| Jan. 31.....  | 1,500     |
| Feb. 28.....  | 2,140     |
| Mar. 31.....  | 2,380     |
| Apr. 30.....  | 1,750     |
| May 31.....   | 1,150     |
| June 30.....  | 372       |
| July 31.....  | 293       |
| Aug. 31.....  | 243       |
| Sept. 30..... | 208       |

† Contents at 0800 hours on first day of following month.

11-1669. Alamitos Creek near New Almaden, Calif.

Location.--Lat 37°13'21", long 121°51'00", in Pueblo Lands of San Jose Grant, on left bank at Greystone bridge, 1.1 miles downstream from Arroyo Calero, 3.4 miles southwest of Edenvale, and 3.5 miles northwest of New Almaden, Santa Clara County.

Drainage area.--31.9 sq mi.

Records available.--April 1958 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 247 ft (from topographic map). Prior to July 15, 1958, staff gage at same site and datum. July 15, 1958, to Nov. 2, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 14.5 cfs (10,500 acre-ft per year).

Extremes.--Maximum discharge during year, 372 cfs Dec. 28 (gage height, 3.98 ft); no flow Apr. 19, May 27-29, June 25 to Sept. 30. 1958-66: Maximum discharge, 4,300 cfs Apr. 2, 1958 (gage height, 9.67 ft), from rating curve extended above 710 cfs on basis of slope-area measurement at gage height 7.98 ft.

Remarks.--Records good. Flow regulated by Calero (see sta. 11-1667.4) and Almaden (see sta. 11-1666.7) Reservoirs; water released during summer. Small diversions above station.

Cooperation.--Two discharge measurements furnished by Santa Clara Valley Water Conservation District.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT.  | NOV.  | DEC.  | JAN.  | FEB.  | MAR.  | APR.   | MAY    | JUNE   | JULY | AUG. | SEPT. |
|--------------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|------|------|-------|
| 1                  | 9.2   | 25    | 22    | 19    | 4.9   | 17    | 6.4    | 16     | 14     |      |      |       |
| 2                  | 10    | 25    | 22    | 13    | 4.4   | 18    | 6.0    | 16     | 16     |      |      |       |
| 3                  | 16    | 24    | 8.7   | 11    | 3.7   | 21    | 5.7    | 13     | 16     |      |      |       |
| 4                  | 18    | 24    | 13    | 8.8   | 3.4   | 22    | 5.6    | 8.7    | 17     |      |      |       |
| 5                  | 22    | 24    | 16    | 7.6   | 3.7   | 18    | 5.4    | 9.8    | 17     |      |      |       |
| 6                  | 22    | 23    | 16    | 6.7   | 9.2   | 16    | 5.2    | 8.5    | 21     |      |      |       |
| 7                  | 28    | 23    | 17    | 8.0   | 5.8   | 14    | 5.3    | 8.7    | 32     |      |      |       |
| 8                  | 37    | 23    | 18    | 6.7   | 5.8   | 14    | 5.2    | 10     | 30     |      |      |       |
| 9                  | 38    | 24    | 22    | 6.3   | 12    | 14    | 5.5    | 10     | 29     |      |      |       |
| 10                 | 38    | 24    | 27    | 5.8   | 15    | 7.8   | 5.8    | 9.5    | 29     |      |      |       |
| 11                 | 37    | 24    | 30    | 19    | 17    | 13    | 5.9    | 9.4    | 27     |      |      |       |
| 12                 | 23    | 23    | 21    | 26    | 18    | 14    | 5.4    | 9.4    | 26     |      |      |       |
| 13                 | 16    | 18    | 28    | 17    | 18    | 9.5   | 4.3    | 9.3    | 26     |      |      |       |
| 14                 | 15    | 18    | 25    | 18    | 17    | 15    | 1.8    | 9.3    | 32     |      |      |       |
| 15                 | 15    | 16    | 25    | 17    | 17    | 15    | 1.3    | 11     | 23     |      |      |       |
| 16                 | 15    | 15    | 26    | 17    | 20    | 15    | .80    | 9.7    | 3.6    |      |      |       |
| 17                 | 15    | 8.3   | 27    | 15    | 22    | 14    | .70    | 7.8    | 3.8    |      |      |       |
| 18                 | 17    | 3.9   | 24    | 14    | 22    | 12    | .40    | 2.1    | 2.5    |      |      |       |
| 19                 | 30    | 2.5   | 24    | 15    | 11    | 12    | 0      | 1.0    | .90    |      |      |       |
| 20                 | 32    | 2.1   | 23    | 17    | 3.6   | 12    | 1.3    | .80    | 1.2    |      |      |       |
| 21                 | 31    | 1.8   | 21    | 16    | 4.1   | 12    | 8.7    | .70    | .80    |      |      |       |
| 22                 | 26    | 2.1   | 20    | 16    | 13    | 13    | 10     | .60    | .80    |      |      |       |
| 23                 | 26    | 8.1   | 20    | 16    | 14    | 13    | 12     | .30    | .30    |      |      |       |
| 24                 | 27    | 13    | 17    | 13    | 14    | 13    | 17     | .10    | .20    |      |      |       |
| 25                 | 29    | 8.7   | 16    | 6.2   | 4.7   | 11    | 18     | .10    | 0      |      |      |       |
| 26                 | 31    | 7.0   | 14    | 5.7   | 4.4   | 7.2   | 17     | .10    | 0      |      |      |       |
| 27                 | 32    | 6.7   | 13    | 5.1   | 8.0   | 6.7   | 18     | 0      | 0      |      |      |       |
| 28                 | 32    | 7.4   | 85    | 12    | 12    | 6.5   | 19     | 0      | 0      |      |      |       |
| 29                 | 30    | 8.2   | 89    | 16    | ----- | 6.5   | 18     | 0      | 0      |      |      |       |
| 30                 | 26    | 15    | 42    | 12    | ----- | 6.3   | 15     | 2.9    | 0      |      |      |       |
| 31                 | 26    | ----- | 33    | 5.0   | ----- | 6.5   | -----  | 8.8    | -----  |      |      |       |
| TOTAL              | 769.2 | 447.8 | 804.7 | 390.9 | 307.9 | 395.0 | 230.70 | 193.60 | 369.10 | 0    | 0    | 0     |
| MEAN               | 24.8  | 14.9  | 26.0  | 12.6  | 11.0  | 12.7  | 7.69   | 6.25   | 12.3   | 0    | 0    | 0     |
| AC-FT              | 1,530 | 888   | 1,600 | 775   | 611   | 783   | 458    | 384    | 732    | 0    | 0    | 0     |
| CALENDAR YEAR 1965 | MAX   | 272   | MIN   | 1.3   | MEAN  | 17.8  | AC-FT  | 12,910 |        |      |      |       |
| WATER YEAR 1965-66 | MAX   | 89    | MIN   | 0     | MEAN  | 10.7  | AC-FT  | 7,750  |        |      |      |       |

## GUADALUPE RIVER BASIN

11-1676.6. Ross Creek at San Jose, Calif.

Location.--Lat 37°14'56", long 121°54'45", in SE¼ sec.12, T.8 S., R.1 W., on right bank 600 ft downstream from Lone Hill Creek, 200 ft upstream from Harwood Avenue, and at south city limits of San Jose. Prior to Mar. 10, 1966, at site 500 ft upstream.

Drainage area.--5.70 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 194.8 ft above mean sea level (levels by Santa Clara County Flood Control and Water Conservation District). Prior to Apr. 13, 1965, graphic water-stage recorder and Apr. 13, 1965 to Mar. 10, 1966, digital water-stage recorder, at site 500 ft upstream at different datum.

Average discharge.--5 years, 1.83 cfs (1,320 acre-ft per year).

Extremes.--Maximum discharge during year, 254 cfs Dec. 28 (gage height, 5.24 ft); no flow for many days.

1961-66: Maximum discharge, 542 cfs Nov. 10, 1964 (gage height 6.34 ft, site and datum then in use); no flow for many days in each year.

Remarks.--Records fair. Natural flow of stream affected by imported water from South Bay Aqueduct. During periods of high flows, no water imported.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.   | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0     | 0.10   | 4.6   | 9.4   | 0.10  | 2.4   | 0     | 6.1   | 1.7  | 4.1  | 0     |
| 2     | 0    | 0     | 1.2    | 3.0   | 1.8   | 0     | 2.4   | 0     | 5.1   | 1.7  | 0    | 0     |
| 3     | 0    | 0     | 0      | 2.1   | 1.2   | 0     | 2.4   | 0     | 0     | 1.9  | 0    | 0     |
| 4     | 0    | 0     | 0      | 1.5   | 4.6   | 0     | 2.7   | 0     | 0     | 1.8  | 0    | 0     |
| 5     | 0    | 0     | 0      | 1.1   | 9.0   | 0     | 2.8   | 0     | 0     | 1.8  | 0    | 0     |
| 6     | 0    | 0     | 0      | .80   | 7.6   | 0     | 2.8   | 0     | 0     | 1.8  | 0    | 0     |
| 7     | .10  | 0     | 0      | .60   | 2.9   | 0     | 2.8   | .10   | 0     | 1.7  | 0    | 0     |
| 8     | 0    | .10   | 0      | .40   | 1.5   | 0     | 3.1   | .10   | 0     | 1.7  | 0    | 0     |
| 9     | 0    | 0     | 0      | .20   | 1.6   | 0     | 3.4   | .10   | 0     | 1.6  | 0    | 0     |
| 10    | 0    | 0     | 0      | .30   | 3.2   | 0     | 3.5   | .40   | 0     | 1.7  | 0    | 0     |
| 11    | 0    | 0     | 1.3    | .30   | 2.7   | 0     | 4.6   | 0     | 0     | 1.3  | 0    | 0     |
| 12    | 0    | 1.2   | 2.2    | .20   | 2.1   | 0     | 3.7   | 0     | .20   | 0    | 0    | 0     |
| 13    | .10  | 2.1   | 0      | .30   | .50   | 0     | 2.2   | 0     | .20   | 0    | 0    | 0     |
| 14    | 0    | 4.7   | 0      | .20   | .10   | 0     | 1.4   | 0     | .10   | 0    | 0    | .40   |
| 15    | 0    | 0     | 0      | .20   | 0     | 0     | .80   | .10   | .20   | 0    | 0    | 0     |
| 16    | 0    | 14    | 0      | .20   | 0     | 0     | .50   | 0     | .40   | 0    | 0    | 0     |
| 17    | 0    | 21    | 0      | .20   | 0     | 0     | .10   | 0     | 1.9   | 0    | 0    | 0     |
| 18    | 0    | 2.9   | 1.5    | .20   | .40   | 0     | 0     | 0     | 1.9   | 0    | 0    | .10   |
| 19    | .10  | .10   | .10    | .10   | 6.1   | 0     | 0     | 0     | 2.1   | 0    | 0    | .10   |
| 20    | 0    | 0     | 0      | 0     | .10   | 0     | 0     | 0     | 1.8   | 0    | 0    | 0     |
| 21    | 0    | 0     | 0      | 0     | 0     | 0     | 0     | 0     | 1.8   | 0    | 0    | 0     |
| 22    | 0    | 5.2   | 0      | .10   | 0     | 0     | 0     | 0     | 1.8   | 0    | 0    | 0     |
| 23    | 0    | 5.0   | 0      | 0     | .20   | 0     | .90   | 0     | 1.9   | 0    | 0    | 0     |
| 24    | 0    | 14    | 5.9    | .10   | 1.8   | 0     | 2.7   | 0     | 1.9   | 0    | 0    | 0     |
| 25    | 0    | 4.1   | 9.0    | .10   | .60   | .90   | 2.7   | .10   | 1.9   | 1.0  | 0    | 0     |
| 26    | 0    | .10   | .20    | 0     | .20   | 1.4   | 2.7   | 2.5   | 2.0   | 3.0  | 0    | 0     |
| 27    | 0    | 0     | .10    | 0     | 0     | 1.4   | 1.4   | .90   | 1.9   | 0    | 0    | 0     |
| 28    | 0    | 0     | .65    | 0     | 0     | 1.4   | 0     | 6.0   | 1.7   | 3.6  | 0    | 0     |
| 29    | 0    | 0     | 24     | 32    | ----- | 1.4   | 0     | 6.9   | 1.8   | 8.2  | 0    | 0     |
| 30    | 0    | 0     | 21     | 5.7   | ----- | 1.7   | 0     | 7.8   | 1.7   | 9.1  | 0    | 0     |
| 31    | 0    | ----- | 17     | 1.4   | ----- | 2.5   | ----- | 4.9   | ----- | 6.4  | 0    | ----- |
| TOTAL | .30  | 74.50 | 148.60 | 56.00 | 57.70 | 10.80 | 52.00 | 29.90 | 38.40 | 50.0 | 4.1  | .60   |
| MEAN  | .01  | 2.48  | 4.79   | 1.81  | 2.06  | .35   | 1.73  | .97   | 1.28  | 1.61 | .13  | .02   |
| AC-FT | .6   | 148   | 295    | 111   | 114   | 21    | 103   | 59    | 76    | 99   | 8.1  | 1.2   |

CALENDAR YEAR 1965 MAX 76 MIN 0 MEAN 1.54 AC-FT 1,120  
 WATER YEAR 1965-66 MAX 65 MIN 0 MEAN 1.43 AC-FT 1,040

## Peak discharge (base, 110 cfs)

| Date  | Time | Gage height | Discharge | Date  | Time | Gage height | Discharge |
|-------|------|-------------|-----------|-------|------|-------------|-----------|
| 11-17 | 1600 | 4.94        | 199       | 12-28 | 1945 | 5.24        | 254       |
| 12-25 | 0015 | 4.38        | 122       | 1-29  | 1715 | 5.00        | 209       |

11-1680. Los Gatos Creek at Los Gatos, Calif.

Location.--Lat 37°12'30", long 121°59'15", in NE¼ sec.29, T.8 S., R.1 W., on left bank 0.3 mile downstream from Trout Creek, 0.5 mile downstream from Lexington Reservoir, and 1.0 mile south of Los Gatos.

Drainage area.--38.6 sq mi.

Records available.--October 1929 to September 1944, October 1953 to September 1966. Yearly estimate for water year 1930 (incomplete) and monthly discharge only for June to September 1944, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Altitude of gage is 420 ft, (from topographic map). Prior to Oct. 1, 1943, graphic water-stage recorder, with concrete control after October 1934, at site 1 mile downstream and October 1943 to May 1944 at site 0.5 mile downstream at different datums. May 1944 to July 10, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--28 years, 46.2 cfs (33,450 acre-ft per year), adjusted for diversion.

Extremes.--Maximum discharge during year, 96 cfs Jan. 16, 29 (gage height, 4.81 ft); minimum daily, 0.30 cfs Jan. 7. 1929-44, 1953-66: Maximum discharge, 7,110 cfs Feb. 27, 1940 (gage height, 14.71 ft, site and datum then in use), from rating curve extended above 2,300 cfs; no flow for part of some years.

Remarks.--Records good. Flow regulated by Lexington Reservoir (see sta. 11-1679.8) and Lake Elsmar (see sta. 11-1679.5). Several diversions for irrigation above station and diversion by San Jose Water Works. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 40    | 2.8   | 22    | 1.0    | 4.4   | 2.0   | 6.5   | 7.2   | 11    | 3.1  | 1.7  | 6.3   |
| 2     | 60    | 2.6   | 31    | .80    | 3.2   | 2.2   | 6.5   | 7.5   | 11    | 2.6  | 1.6  | 2.2   |
| 3     | 65    | 2.7   | 30    | .50    | 3.0   | 2.2   | 6.3   | 14    | 11    | 2.5  | 1.7  | 2.2   |
| 4     | 63    | 2.6   | 30    | .50    | 4.4   | 2.2   | 6.1   | 16    | 11    | 2.3  | 1.7  | 2.1   |
| 5     | 62    | 2.5   | 30    | .50    | 3.5   | 2.2   | 6.1   | 15    | 9.9   | 2.3  | 1.7  | 2.2   |
| 6     | 61    | 2.4   | 38    | .40    | 3.5   | 2.2   | 6.1   | 15    | 9.9   | 2.2  | 1.7  | 2.2   |
| 7     | 31    | 2.5   | 30    | .40    | 2.8   | 2.2   | 6.1   | 15    | 9.6   | 2.1  | 1.7  | 2.2   |
| 8     | 4.1   | 2.8   | 45    | .40    | 2.6   | 2.0   | 6.1   | 15    | 9.6   | 2.0  | 1.6  | 2.1   |
| 9     | 4.0   | 2.8   | 65    | .50    | 2.6   | 2.0   | 6.1   | 14    | 9.7   | 1.9  | 1.6  | 2.0   |
| 10    | 3.8   | 2.8   | 75    | .50    | 2.5   | 2.0   | 6.1   | 14    | 9.0   | 1.9  | 1.6  | 2.0   |
| 11    | 3.8   | 6.1   | 55    | 12     | 4.1   | 2.0   | 6.1   | 14    | 8.9   | 1.8  | 1.6  | 2.0   |
| 12    | 3.6   | 8.3   | 25    | 32     | 35    | 2.0   | 6.1   | 13    | 8.2   | 1.7  | 1.6  | 2.0   |
| 13    | 3.6   | 8.5   | 30    | 50     | 45    | 2.0   | 6.1   | 12    | 7.7   | 1.7  | 1.7  | 1.9   |
| 14    | 3.5   | 8.5   | 55    | 57     | 43    | 1.9   | 6.1   | 10    | 6.9   | 1.7  | 1.7  | 1.9   |
| 15    | 3.3   | 8.0   | 40    | 55     | 35    | 2.0   | 6.1   | 9.5   | 6.7   | 1.6  | 1.6  | 1.9   |
| 16    | 3.3   | 6.5   | 20    | 81     | 24    | 2.0   | 5.9   | 8.8   | 6.7   | 1.6  | 1.6  | 1.9   |
| 17    | 3.3   | 6.5   | 10    | 92     | 16    | 2.0   | 5.9   | 11    | 6.3   | 1.6  | 1.6  | 1.9   |
| 18    | 3.3   | 4.4   | 10    | 58     | 8.3   | 2.0   | 5.9   | 11    | 6.3   | 1.6  | 1.6  | 1.8   |
| 19    | 3.2   | 3.0   | 10    | 30     | 7.5   | 2.0   | 5.9   | 11    | 6.1   | 1.6  | 1.6  | 1.8   |
| 20    | 3.2   | 12    | 10    | 30     | 12    | 2.2   | 5.9   | 11    | 6.0   | 1.6  | 1.6  | 1.7   |
| 21    | 3.2   | 24    | 10    | 27     | 16    | 2.2   | 8.3   | 11    | 6.1   | 1.6  | 1.7  | 1.7   |
| 22    | 3.2   | 27    | 10    | 24     | 8.5   | 2.2   | 11    | 11    | 5.9   | 1.6  | 1.7  | 1.6   |
| 23    | 3.0   | 29    | 9.0   | 35     | 3.0   | 8.3   | 9.6   | 11    | 5.8   | 1.6  | 1.6  | 1.5   |
| 24    | 3.0   | 26    | 12    | 33     | 2.8   | 15    | 9     | 10    | 5.0   | 1.6  | 1.6  | 1.5   |
| 25    | 3.0   | 21    | 15    | 2.5    | 2.5   | 12    | 7.2   | 10    | 4.3   | 1.6  | 2.1  | 1.5   |
| 26    | 3.0   | 27    | 8.0   | 2.4    | 2.2   | 7.7   | 7.2   | 10    | 4.1   | 1.7  | 3.6  | 1.5   |
| 27    | 3.0   | 32    | 6.0   | 30     | 2.2   | 7.7   | 7.5   | 10    | 3.8   | 1.6  | 3.6  | 1.1   |
| 28    | 2.8   | 32    | 20    | 57     | 2.1   | 7.7   | 7.5   | 9.9   | 3.6   | 1.6  | 3.5  | 1.3   |
| 29    | 2.8   | 32    | 5.4   | 58     | ----- | 6.7   | 7.2   | 9.9   | 3.4   | 1.6  | 7.2  | 1.3   |
| 30    | 2.8   | 25    | 5.6   | 6.3    | ----- | 6.7   | 7.2   | 9.9   | 3.5   | 1.6  | 12   | 6.5   |
| 31    | 2.8   | ----- | 5.2   | 3.2    | ----- | 6.5   | ----- | 11    | ----- | 1.6  | 1.3  | ----- |
| Total | 460.6 | 373.3 | 767.2 | 780.70 | 301.7 | 124.0 | 203.7 | 357.7 | 217.0 | 57.1 | 84.4 | 97.1  |
| Mean  | 14.9  | 12.4  | 24.7  | 25.2   | 10.8  | 4.00  | 6.80  | 11.5  | 7.23  | 1.84 | 2.72 | 3.24  |
| Ac-ft | 914   | 740   | 1,520 | 1,550  | 598   | 246   | 404   | 709   | 430   | 113  | 167  | 193   |
| (†)   | 695   | 212   | 151   | 708    | 822   | 522   | 640   | 880   | 818   | 787  | 790  | 728   |

Calendar year 1965 Max 150 Min 2.4 Mean 43.2 Ac-ft 31,280 † 14,620  
 Water year 1965-66 Max 92 Min .30 Mean 10.5 Ac-ft 7,590 † 7,750

† Diversion, in acre-feet, furnished by San Jose Water Works.

11-1690. Guadalupe River at San Jose, Calif.

Location.--Lat 37°20'00", long 121°54'00", at San Jose, Santa Clara County, on right bank 100 ft downstream from Los Gatos Creek.Drainage area.--146 sq mi.Records available.--October 1929 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Prior to 1945, published as Guadalupe Creek at San Jose.Gage.--Digital water-stage recorder and concrete control. Datum of gage is 72.00 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 1, 1965, graphic water-stage recorder at same site and datum.Extremes.--Maximum discharge during year, 1,380 cfs Dec. 28 (gage height, 4.31 ft); no flow for many days.

1929-66: Maximum discharge, 9,150 cfs Apr. 2, 1958 (gage height, 16.55 ft); no flow for many days in each year.

Remarks.--Records good. Flow regulated by Calero, Almaden, Guadalupe and Lexington Reservoirs, and Lake Elsmar, given elsewhere in this report, with water released during summer for percolation in spreading basins on tributaries. Diversions by San Jose Water Works for urban use (see sta. 11-1680). Diversion of 1,310 acre-ft into Alamitos Percolation Ponds from Coyote Creek basin during year.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|--------------------|-------|--------|--------|--------|--------|-------|-------|-------|-------|------|-------|-------|
| 1                  | 0.30  | 0.20   | 0.30   | 43     | 27     | 0.60  | 0     | 0     | 0.10  | 0    | 0.30  | 0.30  |
| 2                  | .20   | .20    | .30    | 19     | 7.2    | .20   | .10   | 0     | 0     | 0    | .30   | .40   |
| 3                  | .20   | .20    | .30    | 8.1    | .60    | 0     | .10   | 0     | 0     | 0    | .40   | .50   |
| 4                  | .30   | .20    | .20    | 3.8    | .20    | 0     | .20   | 0     | 0     | 0    | .40   | .20   |
| 5                  | .30   | .10    | .20    | 1.7    | 7.8    | 0     | .10   | 0     | 0     | 0    | .40   | 0     |
| 6                  | .30   | .10    | .20    | .40    | 28     | 0     | .10   | 0     | .10   | 0    | .20   | .20   |
| 7                  | .40   | 0      | .20    | .20    | 6.3    | 0     | .10   | 0     | .10   | 0    | .10   | .30   |
| 8                  | .50   | .20    | .10    | .10    | 1.2    | .10   | 0     | 0     | 0     | 0    | .10   | .20   |
| 9                  | .40   | .10    | .30    | 0      | .30    | 5.3   | .30   | .10   | 3.0   | 0    | .70   | .20   |
| 10                 | .30   | .10    | .30    | 0      | 0      | 1.7   | .10   | .20   | 5.0   | 0    | .40   | .20   |
| 11                 | .50   | .20    | 6.5    | 0      | .10    | .20   | 2.2   | 0     | 4.6   | 0    | .40   | .10   |
| 12                 | .40   | 15     | 15     | 2.5    | 0      | .10   | 2.8   | 0     | .40   | 0    | 1.8   | .10   |
| 13                 | .40   | 20     | .70    | 5.0    | 0      | .10   | .20   | 0     | .30   | 0    | 1.2   | .20   |
| 14                 | 3.4   | 64     | 2.6    | .40    | 0      | .10   | .20   | 0     | .40   | 0    | .30   | .20   |
| 15                 | .50   | 1.7    | .80    | 0      | .10    | .10   | .10   | 0     | .60   | 0    | .30   | .30   |
| 16                 | .20   | 134    | 0      | 0      | 0      | .10   | .10   | 0     | .90   | 0    | .50   | .30   |
| 17                 | .20   | 61     | .10    | .70    | 0      | .10   | .10   | .10   | .10   | 0    | .50   | .30   |
| 18                 | .30   | 18     | 1.6    | .50    | 3.1    | .10   | .20   | .20   | 0     | 0    | .40   | 1.1   |
| 19                 | .20   | 5.6    | 2.0    | .90    | 31     | .10   | 0     | .10   | 0     | .20  | .40   | 0     |
| 20                 | .20   | 1.7    | 1.3    | 1.8    | 9.6    | 0     | .10   | .20   | 0     | .30  | .30   | .10   |
| 21                 | .20   | 1.0    | 2.2    | .50    | 2.0    | .10   | 0     | .10   | 0     | .40  | .20   | 0     |
| 22                 | .30   | 9.0    | 1.0    | 2.7    | .60    | .70   | 0     | 0     | 0     | .40  | .10   | 0     |
| 23                 | .30   | 54     | .50    | .70    | 1.5    | .70   | 0     | .10   | 0     | .20  | .20   | .10   |
| 24                 | .30   | 65     | 2.2    | 3.3    | 5.0    | .50   | 0     | .40   | 0     | .10  | .20   | 0     |
| 25                 | .30   | 35     | 50     | 1.2    | 4.5    | .20   | .10   | .40   | 0     | .10  | 2.1   | 0     |
| 26                 | .30   | 4.0    | 7.3    | .10    | 2.7    | 0     | 0     | .40   | 0     | 0    | 1.1   | 0     |
| 27                 | .30   | .40    | 2.3    | 0      | 0      | 0     | 0     | .30   | 0     | .20  | .10   | .10   |
| 28                 | .30   | 1.4    | 279    | 0      | 0      | 0     | 0     | .10   | 0     | .20  | .10   | .10   |
| 29                 | .20   | .90    | 275    | 113    | -----  | .10   | 0     | 0     | 0     | .30  | 0     | 0     |
| 30                 | 0     | .30    | 164    | 45     | -----  | .10   | 0     | 0     | 0     | 2.1  | .20   | 0     |
| 31                 | 0     | -----  | 118    | 12     | -----  | 0     | ----- | 0     | ----- | .30  | .30   | ----- |
| TOTAL              | 12.00 | 493.60 | 934.50 | 266.60 | 138.80 | 11.30 | 7.20  | 2.70  | 15.60 | 4.80 | 14.00 | 5.50  |
| MEAN               | .39   | 16.5   | 30.1   | 8.60   | 4.96   | .37   | .24   | .09   | .52   | .16  | .45   | .18   |
| AC-FT              | 24    | 979    | 1,850  | 529    | 275    | 22    | 14    | 5.4   | 31    | 9.5  | 28    | 11    |
| CALENDAR YEAR 1965 | MAX   | 596    | MIN    | 0      | MEAN   | 12.9  | AC-FT | 9,360 |       |      |       |       |
| WATER YEAR 1965-66 | MAX   | 279    | MIN    | 0      | MEAN   | 5.22  | AC-FT | 3,780 |       |      |       |       |



11-1695. Saratoga Creek at Saratoga, Calif.

Location--Lat 37°15'15", long 122°02'25", in Quito Grant, on right bank on downstream side of private road bridge, 0.5 miles south-west of Saratoga, Santa Clara County, and 0.7 mile downstream from diversion dam.

Drainage area--9.22 sq mi.

Records available--October 1933 to September 1966. Prior to October 1951, published as Campbell Creek at Saratoga.

Gage--Digital water-stage recorder and concrete control. Altitude of gage is 500 ft (from topographic map). Prior to Apr. 13, 1965, graphic water-stage recorder at same site and datum.

Average discharge--33 years, 9.42 cfs (6,820 acre-ft per year), adjusted for diversion.

Extremes--Maximum discharge during year, 151 cfs Dec. 28 (gage height, 2.98 ft); no flow June 13, 14.

1933-66: Maximum discharge, 2,730 cfs Dec. 22, 1955 (gage height, 6.40 ft), from rating curve extended above 510 cfs on basis of slope-area measurement of maximum flow; no flow for part of each year except possibly 1941, 1943, 1945.

Remarks--Records good. Water is diverted for municipal use by San Jose Water Works at diversion dam above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.   | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|-------|--------|--------|--------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.90  | 1.5    | 3.1    | 21     | 18    | 2.2   | 0.20  | 0.20 | 0.10  | 0.10 | 0.10 | 0.30  |
| 2     | .80   | 1.5    | 2.8    | 9.1    | 10    | 1.9   | .20   | .20  | .10   | .10  | .10  | .40   |
| 3     | .90   | 1.2    | 2.8    | 6.6    | 7.0   | 2.9   | .20   | .20  | .10   | .10  | .10  | .20   |
| 4     | 1.0   | .90    | 2.6    | 8.0    | 19    | 1.2   | 1.4   | .20  | .10   | .10  | .10  | .20   |
| 5     | 1.0   | .90    | 2.5    | 17     | 19    | 1.1   | .30   | .20  | .10   | .10  | .10  | .20   |
| 6     | 1.1   | .90    | 2.4    | 11     | 20    | .90   | .20   | .30  | .20   | .10  | .10  | .30   |
| 7     | 1.0   | .90    | 2.4    | 7.2    | 13    | .70   | .30   | .20  | .10   | .10  | .10  | .30   |
| 8     | 1.0   | 1.1    | 2.3    | 5.2    | 10    | .40   | .60   | .20  | .20   | .10  | .10  | .30   |
| 9     | 1.1   | 1.0    | 1.6    | 3.9    | 8.3   | 2.3   | .40   | .20  | .10   | .10  | .10  | .30   |
| 10    | 1.1   | 1.1    | .40    | 3.1    | 7.1   | 2.3   | 1.4   | .20  | .10   | .10  | .10  | .30   |
| 11    | 1.0   | 1.1    | 2.1    | 2.4    | 5.7   | .30   | .20   | .20  | .10   | .10  | .20  | .30   |
| 12    | 1.0   | 1.2    | 4.2    | 2.6    | 5.0   | .30   | .60   | .20  | .10   | .10  | .20  | .40   |
| 13    | .90   | 1.9    | 1.1    | 1.0    | 4.0   | .30   | .30   | .20  | 0     | .10  | .10  | .40   |
| 14    | 1.1   | 6.8    | .10    | .60    | 3.5   | .20   | .20   | .10  | 0     | .10  | .20  | .40   |
| 15    | 1.1   | 4.6    | .10    | .80    | 2.6   | .50   | .20   | .20  | .10   | .10  | .20  | .40   |
| 16    | 1.0   | 6.5    | .10    | .40    | 2.1   | .70   | .50   | .20  | .20   | .10  | .20  | .30   |
| 17    | .90   | 32     | .20    | .30    | 1.6   | .20   | .30   | .10  | .10   | .10  | .40  | .30   |
| 18    | .90   | 18     | .70    | .50    | 2.0   | .30   | .30   | .20  | .10   | .10  | .40  | .30   |
| 19    | 1.0   | 8.6    | .30    | .40    | 15    | .40   | .20   | .20  | .10   | .10  | .30  | .30   |
| 20    | .90   | 5.5    | .40    | 1.1    | 6.7   | .30   | .40   | .20  | .10   | .10  | .40  | .30   |
| 21    | .90   | 4.3    | .10    | .30    | 3.4   | .40   | .20   | .20  | .10   | .10  | .40  | .30   |
| 22    | .90   | 3.7    | .10    | .30    | 2.9   | .30   | .20   | .50  | .10   | .10  | .40  | .30   |
| 23    | .80   | 5.5    | .10    | .30    | 2.7   | .60   | .10   | .60  | .10   | .10  | .40  | .40   |
| 24    | .80   | 14     | 4.6    | .20    | 7.1   | .40   | .20   | .80  | .10   | .10  | .30  | .30   |
| 25    | .80   | 15     | 21     | .20    | 5.8   | .20   | .20   | .20  | .10   | .10  | .30  | .30   |
| 26    | .80   | 7.7    | 5.7    | .30    | 5.8   | .20   | .20   | .10  | .10   | .10  | .30  | .40   |
| 27    | .80   | 5.8    | 2.6    | .30    | 2.6   | .20   | .20   | .10  | .10   | .10  | .30  | .40   |
| 28    | .80   | 4.7    | 56     | .20    | 2.3   | .20   | .20   | .10  | .10   | .10  | .20  | .30   |
| 29    | .80   | 3.8    | 4.9    | 26     | ----- | .20   | .20   | .20  | .10   | .10  | .30  | .50   |
| 30    | .80   | 3.2    | 33     | 28     | ----- | .30   | .20   | .20  | .10   | .10  | .30  | .40   |
| 31    | 1.0   | -----  | 36     | 11     | ----- | .30   | ----- | .10  | ----- | .10  | .30  | ----- |
| TOTAL | 28.90 | 164.90 | 240.40 | 169.30 | 212.2 | 22.70 | 10.30 | 7.00 | 3.10  | 3.10 | 7.10 | 9.80  |
| MEAN  | .93   | 5.50   | 7.75   | 5.46   | 7.58  | .73   | .34   | .23  | .10   | .10  | .23  | .33   |
| AC-FT | 57    | 327    | 477    | 336    | 421   | 45    | 20    | 14   | 6.1   | 6.1  | 14   | 19    |
| (+)   | 0     | 0      | 77     | 289    | 276   | 308   | 179   | 116  | 68    | 40   | 11   | 0     |

|                    |     |     |     |   |      |      |       |       |   |       |
|--------------------|-----|-----|-----|---|------|------|-------|-------|---|-------|
| CALENDAR YEAR 1965 | MAX | 240 | MIN | 0 | MEAN | 9.49 | AC-FT | 6,870 | † | 1,960 |
| WATER YEAR 1965-66 | MAX | 56  | MIN | 0 | MEAN | 2.41 | AC-FT | 1,740 | † | 1,360 |

Peak discharge (base, 110 cfs)--Nov. 17 (1615) 112 cfs (2.74 ft); Dec. 28 (2100) 151 cfs (2.98 ft).

† Diversion, in acre-feet, furnished by San Jose Water Works.

## Reservoirs in Guadalupe River basin, Calif.

11-1666.7. Almaden Reservoir.--Lat 37°09'54", long 121°49'39", in San Vicente Grant, at center of dam on Alamitos Creek, 0.7 mile southwest of New Almaden, Santa Clara County, and 7 miles south of Edenvale. Drainage area, 12.0 sq mi. Records available, January 1936 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 633 acre-ft Dec. 30 (elevation, 578.19 ft); minimum observed, 142 acre-ft Sept. 30 (elevation, 533.14 ft). Maximum contents observed during period 1936-66, 2,150 acre-ft Jan. 31, 1963 (elevation, 610.24 ft, from floodmarks); no contents for part of each year except 1942, 1943, 1962-63, 1966.

Reservoir is formed by earth-fill dam completed in 1936. Capacity, 1,960 acre-ft between elevations 533.1 (invert of outlet tunnel) and 607 ft (crest of spillway). Water released down Alamitos Creek for ground-water recharge by percolation and minor irrigation. Up to 100 cfs diverted to Calero Reservoir at times. Record of contents furnished by Santa Clara Valley Water Conservation District.

11-1667.4. Calero Reservoir.--Lat 37°11'00", long 121°47'28", in San Vicente Grant, at center of dam on Arroyo Calero, 1.7 miles northeast of New Almaden, Santa Clara County, and 6 miles southeast of Edenvale. Drainage area, 6.95 sq mi. Records available, January 1936 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 4,290 acre-ft Oct. 1 (elevation, 463.21 ft); minimum observed, 307 acre-ft Nov. 4 (elevation, 422.50 ft). Maximum contents observed during period 1936-66, 9,760 acre-ft Mar. 28, 1963 (elevation, 484.32 ft); no contents for part of each year except 1942-45, 1963-66.

Reservoir is formed by earth-fill dam completed to crest elevation 482.55 ft in 1936 and raised to 483.90 ft in 1962. Capacity, 9,630 acre-ft between elevations 393.7 (center of outlet tunnel) and 483.90 (crest of spillway). Water released down Arroyo Calero for ground-water recharge by percolation and minor irrigation. Up to 100 cfs diverted from Almaden Reservoir to Calero Reservoir at times. Record of contents furnished by Santa Clara Valley Water Conservation District.

11-1673.7. Guadalupe Reservoir.--Lat 37°11'57", long 121°52'42", in Los Capitancillos Grant, at center of dam on Guadalupe Creek, 3.6 miles northwest of New Almaden, Santa Clara County, and 5.0 miles southeast of Los Gatos. Drainage area, 5.94 sq mi. Records available, January 1936 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 1,180 acre-ft Feb. 26 (elevation 574.02 ft); minimum observed, 194 acre-ft Nov. 13 (elevation, 538.58 ft). Maximum contents observed during period 1936-66, 3,610 acre-ft Feb. 1, 1963 (elevation, 619.26 ft, from floodmarks); no contents for part of each year except 1941-43, 1962-63, 1966.

Reservoir is formed by earth-fill dam completed in 1936. Capacity, 3,460 acre-ft between elevations 506.8 (invert of outlet tunnel and 617.0 ft (crest of spillway). Water released down Guadalupe Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara Valley Water Conservation District.

11-1679.5. Lake Elsmán.--Lat 37°07'51", long 121°55'47", in SE¼ sec.23, T.9 S., R.1 W., at center of Austrian Dam on Los Gatos Creek and 7.3 miles southeast of Los Gatos. Drainage area, 9.78 sq mi. Records available, February 1951 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by San Jose Water Works). Maximum contents observed during year, 3,630 acre-ft Apr. 15 (elevation 1,081.7 ft); minimum observed 617 acre-ft Sept. 30. (elevation, 1,019.5 ft). Maximum contents observed during period 1951-66, 6,640 acre-ft Jan. 31, 1963 (elevation, 1,115.1 ft); minimum observed, 169 acre-ft Dec. 29, 1956 (elevation, 996.8 ft).

Reservoir is formed by earth-fill dam completed in 1951. Usable capacity, 6,090 acre-ft between elevations 944 (elevation of outlet gates) and 1,110 ft (crest of spillway). Dead storage, 60 acre-ft. Water released down Los Gatos Creek for domestic and industrial use. Record of contents furnished by San Jose Water Works.

11-1679.8. Lexington Reservoir.--Lat 37°12'06", long 121°59'17", in SE¼ sec.29, T.8 S., R.1 W., at center of dam on Los Gatos Creek and 1.7 miles south of Los Gatos. Drainage area, 37.0 sq mi. Records available, December 1952 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 2,700 acre-ft Mar. 23 (elevation 575.54 ft); minimum observed, 554 acre-ft Dec. 23 (elevation, 544.78 ft). Maximum contents observed during period 1952-66, 22,760 acre-ft Apr. 13, 1958 (elevation, 652.96 ft); no contents for part of each year except 1963, 1966.

Reservoir is formed by earth-fill dam completed in 1952. Capacity, 21,430 acre-ft between elevations 519 (invert at outlet tunnel) and 650 ft (crest of spillway). Dead storage, 31 acre-ft. Water released down Los Gatos Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1965 to September 1966

| Date          | Almaden Reservoir† | Calero Reservoir† | Guadalupe Reservoir† | Lake Elsmán† | Lexington Reservoir† |
|---------------|--------------------|-------------------|----------------------|--------------|----------------------|
| Sept. 30..... | 296                | 4,290             | 255                  | 1,300        | 2,250                |
| Oct. 31.....  | 275                | 2,660             | 206                  | 810          | 1,420                |
| Nov. 30.....  | 506                | 1,910             | 221                  | 733          | 1,850                |
| Dec. 31.....  | 509                | 1,840             | 734                  | 1,440        | 1,980                |
| Jan. 31.....  | 355                | 2,420             | 939                  | 2,220        | 1,720                |
| Feb. 28.....  | 325                | 2,900             | 1,170                | 3,000        | 2,490                |
| Mar. 31.....  | 272                | 2,620             | 1,030                | 3,380        | 2,610                |
| Apr. 30.....  | 327                | 2,120             | 1,050                | 3,380        | 2,410                |
| May 31.....   | 278                | 1,570             | 953                  | 2,880        | 1,730                |
| June 30.....  | 231                | 403               | 781                  | 2,350        | 1,260                |
| July 31.....  | 184                | 372               | 578                  | 1,780        | 1,150                |
| Aug. 31.....  | 171                | 345               | 483                  | 1,170        | 953                  |
| Sept. 30..... | 141                | 324               | 455                  | 555          | 690                  |

† Contents at 0800 hours on first day of following month.

†† Contents at 0800 hours on last day of month.

11-1698. Coyote Creek near Gilroy, Calif.

Location.--Lat 37°04'40", long 121°29'36", in NE¼SE¼ sec.11, T.10 S., R.4 E., on left bank 0.7 mile downstream from Bear Creek, 5.0 miles upstream from Coyote Creek Dam and 6.4 miles northeast of Gilroy.

Drainage area.--109 sq mi.

Records available.--October 1960 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 790 ft (from topographic map). Prior to Nov. 14, 1963, at site 0.4 mile downstream at different datum.

Average discharge.--6 years, 34.4 cfs (24,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,650 cfs Dec. 28 (gage height, 7.04 ft), from rating curve extended above 540 cfs; no flow Oct. 1 to Nov. 17, Aug. 1 to Sept. 30.

1960-66: Maximum discharge, 10,100 cfs Jan. 31, 1963 (gage height, 12.60 ft, site and datum then in use), from rating curve extended above 3,200 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records good except those above 1,000 cfs, which are fair. No regulation or diversion above station. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Cooperation.--Four discharge measurements furnished by Santa Clara Valley Water Conservation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.    | Jan.    | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|-------|---------|---------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     |      | 0     | 7.6     | 276     | 52    | 12    | 4.6   | 1.6   | 0.80  | 0.60  |      |       |
| 2     |      | 0     | 6.9     | 130     | 41    | 11    | 4.6   | 1.6   | .70   | .60   |      |       |
| 3     |      | 0     | 6.1     | 75      | 31    | 11    | 4.6   | 1.6   | .70   | .60   |      |       |
| 4     |      | 0     | 5.0     | 53      | 29    | 11    | 3.8   | 1.6   | .60   | .60   |      |       |
| 5     |      | 0     | 4.6     | 43      | 69    | 9.8   | 3.8   | 1.6   | .60   | .60   |      |       |
| 6     |      | 0     | 4.0     | 33      | 185   | 9.8   | 3.8   | 1.6   | .60   | .60   |      |       |
| 7     |      | 0     | 3.7     | 29      | 101   | 9.8   | 3.8   | 1.8   | .60   | .60   |      |       |
| 8     |      | 0     | 3.4     | 24      | 61    | 9.2   | 3.4   | 1.8   | .60   | .60   |      |       |
| 9     |      | 0     | 3.1     | 22      | 40    | 8.7   | 4.6   | 1.8   | .60   | .60   |      |       |
| 10    |      | 0     | 2.9     | 20      | 32    | 9.8   | 9.2   | 1.8   | .60   | .60   |      |       |
| 11    |      | 0     | 3.1     | 18      | 26    | 9.8   | 6.5   | 1.8   | .60   | .60   |      |       |
| 12    |      | 0     | 7.4     | 16      | 22    | 9.2   | 5.5   | 1.8   | .60   | .50   |      |       |
| 13    |      | 0     | 6.9     | 14      | 20    | 8.7   | 4.6   | 1.8   | .60   | .50   |      |       |
| 14    |      | 0     | 4.6     | 12      | 18    | 8.7   | 3.8   | 1.8   | .60   | .50   |      |       |
| 15    |      | 0     | 4.0     | 12      | 16    | 8.7   | 3.4   | 2.1   | .60   | .40   |      |       |
| 16    |      | 0     | 3.4     | 11      | 15    | 7.6   | 3.1   | 2.1   | .60   | .40   |      |       |
| 17    |      | 0     | 2.9     | 9.8     | 14    | 7.6   | 2.7   | 2.1   | .60   | .40   |      |       |
| 18    |      | 54    | 2.4     | 9.8     | 14    | 7.0   | 2.7   | 2.1   | .60   | .40   |      |       |
| 19    |      | 28    | 2.2     | 9.8     | 16    | 6.5   | 2.4   | 1.8   | .60   | .40   |      |       |
| 20    |      | 13    | 2.2     | 9.2     | 17    | 6.5   | 2.1   | 1.8   | .50   | .30   |      |       |
| 21    |      | 8.2   | 2.4     | 8.7     | 14    | 6.0   | 2.1   | 1.6   | .50   | .20   |      |       |
| 22    |      | 6.1   | 2.2     | 8.7     | 13    | 6.0   | 2.1   | 1.6   | .50   | .20   |      |       |
| 23    |      | 4.1   | 2.2     | 8.7     | 12    | 5.5   | 1.6   | 1.4   | .50   | .20   |      |       |
| 24    |      | 17.9  | 2.2     | 8.2     | 14    | 5.5   | 1.6   | 1.2   | .50   | .10   |      |       |
| 25    |      | 17.5  | 8.5     | 8.2     | 14    | 5.5   | 1.4   | 1.0   | .50   | .10   |      |       |
| 26    |      | 68    | 50      | 8.2     | 20    | 5.5   | 1.4   | 1.0   | .50   | .10   |      |       |
| 27    |      | 31    | 27      | 8.2     | 15    | 5.5   | 1.4   | 1.0   | .50   | .10   |      |       |
| 28    |      | 18    | 27.9    | 7.6     | 13    | 5.5   | 1.4   | .80   | .50   | .10   |      |       |
| 29    |      | 13    | 7.2     | 11      | ----- | 5.0   | 1.4   | .70   | .50   | .10   |      |       |
| 30    |      | 11    | 6.90    | 11.2    | ----- | 5.0   | 1.4   | .80   | .60   | .10   |      |       |
| 31    |      | ----- | 5.55    | 6.9     | ----- | 4.6   | ----- | .80   | ----- | .10   |      |       |
| Total | 0    | 645.3 | 2,573.4 | 1,085.1 | 934   | 2,420 | 98.8  | 4,790 | 1,740 | 11.80 | 0    | 0     |
| Mean  | 0    | 21.5  | 83.0    | 35.0    | 33.4  | 7.81  | 3.29  | 1.55  | 0.58  | 0.38  | 0    | 0     |
| Ac-ft | 0    | 1,280 | 5,100   | 2,150   | 1,850 | 480   | 196   | 95    | 35    | 23    | 0    | 0     |

Calendar year 1965 Max 3,500 Min 0 Mean 55.1 Ac-ft 39,870

Water year 1965-66 Max 792 Min 0 Mean 15.5 Ac-ft 11,220

Peak discharge (base, 1,000 cfs, revised).--Dec. 28 (2330) 1,650 cfs (7.04 ft).

## COYOTE CREEK BASIN

11-1700. Coyote Creek near Madrone, Calif.

Location.--Lat 37°10'06", long 121°38'55", near southeast corner of La Laguna Seca Grant, on right bank 1.2 miles downstream from Anderson Dam and 1.8 miles northeast of Madrone, Santa Clara County.

Drainage area.--196 sq mi.

Records available.--October 1902 to September 1912, December 1916 to September 1966. Records for water years 1917-19 incomplete, yearly estimates published in WSP 1315-B. Published as Coyote River near Madrone 1902-12, 1916-26.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 375 ft (from topographic map). Prior to Mar. 1, 1950, staff gages and water-stage recorders at various sites within 1.4 miles upstream at different datums.

Average discharge.--60 years, 66.6 cfs (48,220 acre-ft per year).

Extremes.--Maximum discharge during year, 110 cfs May 2-4 (gage height, 2.57 ft); no flow at times.

1902-12, 1916-66; Maximum discharge, 25,000 cfs probably Mar. 7, 1911 (record furnished by Duryea, Haehl & Gilman); no flow at times.

Remarks.--Records good. Flow regulated by Coyote (see sta.11-1698.8) and Anderson (see sta.11-1699.2) Lakes: water released during summer. Water is diverted to Main Avenue percolation ponds by Santa Clara Valley Water Conservation District. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.   | Feb.   | Mar.   | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|------|-------|
| 1     | 77    | 59    | 31    | 6.8    | 5.7    | 1.7    | 34    | 75    | 80    | 24    | 0    |       |
| 2     | 77    | 56    | 36    | 6.8    | 5.7    | .10    | 34    | 90    | 85    | 1.3   | 0    |       |
| 3     | 77    | 56    | 27    | 6.8    | 5.7    | 0      | 40    | 110   | 85    | 1.2   | 0    |       |
| 4     | 77    | 56    | 37    | 6.8    | 5.3    | 0      | 50    | 61    | 85    | 1.1   | .10  |       |
| 5     | 75    | 54    | 37    | 6.8    | 4.0    | 2.2    | 52    | 37    | 85    | .90   | .50  |       |
| 6     | 70    | 54    | 37    | 6.8    | 3.4    | 2.6    | 52    | 36    | 88    | .80   | .40  |       |
| 7     | 67    | 54    | 37    | 6.8    | 3.3    | 3.5    | 56    | 80    | 88    | 1.0   | 0    |       |
| 8     | 67    | 54    | 37    | 6.8    | 3.2    | 5.3    | 63    | 105   | 88    | 1.2   | 0    |       |
| 9     | 67    | 50    | 32    | 7.6    | 3.2    | 5.3    | 63    | 105   | 85    | 1.1   | 0    |       |
| 10    | 67    | 46    | 28    | 5.3    | 3.2    | 5.3    | 63    | 85    | 85    | 1.1   | 0    |       |
| 11    | 67    | 46    | 27    | .20    | 6.8    | 5.3    | 63    | 75    | 67    | .80   | 0    |       |
| 12    | 67    | 46    | 27    | .10    | 5.7    | 5.3    | 67    | 75    | 61    | .50   | 0    |       |
| 13    | 67    | 44    | 27    | .10    | 5.7    | 5.3    | 70    | 77    | 61    | .50   | 0    |       |
| 14    | 65    | 44    | 27    | .90    | 5.7    | 5.3    | 59    | 70    | 61    | .60   | 0    |       |
| 15    | 63    | 44    | 27    | 7.6    | 5.7    | 6.2    | 61    | 67    | 61    | .50   | 0    |       |
| 16    | 63    | 35    | 27    | 7.6    | 3.9    | 6.8    | 63    | 70    | 63    | .40   | 0    |       |
| 17    | 63    | 18    | 27    | 7.6    | .20    | 7.6    | 63    | 70    | 63    | .50   | 0    |       |
| 18    | 59    | 21    | 27    | 7.6    | .10    | 7.6    | 61    | 67    | 65    | .40   | .10  |       |
| 19    | 54    | 21    | 27    | 8.3    | 2.6    | 7.6    | 61    | 67    | 70    | .40   | 0    |       |
| 20    | 52    | 21    | 27    | 9.9    | 3.4    | 7.6    | 67    | 67    | 75    | .60   | 0    |       |
| 21    | 50    | 21    | 28    | 9.9    | 5.0    | 8.3    | 75    | 70    | 85    | .40   | 0    |       |
| 22    | 44    | 21    | 32    | 9.1    | 5.0    | 8.3    | 77    | 70    | 90    | .60   | 0    |       |
| 23    | 42    | 21    | 34    | 9.1    | 3.3    | 7.6    | 77    | 70    | 90    | .50   | 0    |       |
| 24    | 44    | 21    | 32    | 9.1    | .10    | 7.6    | 77    | 72    | 90    | .30   | 0    |       |
| 25    | 44    | 21    | 32    | 9.1    | .90    | 7.6    | 77    | 70    | 88    | .20   | 0    |       |
| 26    | 46    | 37    | 31    | 9.1    | 2.6    | 6.8    | 75    | 72    | 88    | .20   | 0    |       |
| 27    | 48    | 56    | 30    | 9.1    | 2.7    | 6.2    | 75    | 72    | 85    | .20   | 0    |       |
| 28    | 50    | 56    | 18    | 9.1    | 2.6    | 2.2    | 75    | 70    | 85    | .20   | 0    |       |
| 29    | 54    | 52    | 7.6   | 9.9    | -----  | 31     | 75    | 70    | 83    | 0     | 0    |       |
| 30    | 59    | 35    | 6.8   | 6.8    | -----  | 34     | 75    | 67    | 83    | 0     | 0    |       |
| 31    | 59    | ----- | 6.8   | 5.7    | -----  | 34     | ----- | 72    | ----- | .10   | 0    | ----- |
| Total | 1,881 | 1,220 | 877.2 | 213.20 | 104.70 | 264.00 | 1,900 | 2,264 | 2,368 | 41.60 | 1.10 | 0     |
| Mean  | 60.7  | 40.6  | 28.3  | 6.88   | 3.74   | 8.52   | 63.3  | 73.0  | 78.9  | 1.34  | .04  | 0     |
| Ac-ft | 3,730 | 2,420 | 1,740 | 423    | 208    | 524    | 3,770 | 4,490 | 4,700 | 83    | 2.2  | 0     |
| (†)   | 173   | 76    | 0     | 0      | 0      | 257    | 424   | 410   | 159   | 0     | 0    | 0     |

Calendar year 1965 Max 110 Min 5.7 Mean 59.5 Ac-ft 43,050 †2,430  
 Water year 1965-66 Max 110 Min 0 Mean 30.5 Ac-ft 22,090 †1,500

† Diversion, in acre-feet, to Main Avenue percolation ponds, furnished by Santa Clara Valley Water Conservation District.

11-1721. Upper Penitencia Creek at San Jose, Calif.

Location.--Lat 37°23'43", long 121°49'38", on north boundary of San Jose Pala Grant, on left bank at downstream side of county road bridge, 0.1 mile upstream from Dutard Creek, near Northeast limits of San Jose, Santa Clara County.

Drainage area.--21.5 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Water-stage recorder and, since Sept. 12, 1963, concrete control. Datum of gage is 265.30 ft above mean sea level, datum of 1929. Prior to Aug. 3, 1962, at site 0.4 mile downstream at different datum.

Average discharge.--5 years, 3.21 cfs (2,320 acre-ft per year).

Extremes.--Maximum discharge during year, 80 cfs Dec. 28 (gage height, 4.00 ft); minimum daily, 0.10 cfs for many days.

1961-66: Maximum discharge, 800 cfs Dec. 23, 1964 (gage height, 6.5 ft, from floodmarks); no flow at times in most years. Maximum discharge known since at least 1935, 2,100 cfs Apr. 2, 1958, from information furnished by Santa Clara Valley Water Conservation District.

Remarks.--Records fair. Flow partly regulated by Cherry Flat Reservoir (capacity, 500 acre-ft).

Cooperation.--One discharge measurement furnished by Santa Clara Valley Water Conservation District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0.20  | 0.70   | 21    | 7.0   | 2.7  | 1.0   | 0.40  | 0.30  | 0.10 | 0.10 | 0.10  |
| 2     | .10  | .20   | .80    | 14    | 5.6   | 2.7  | 1.0   | .50   | .30   | .10  | .10  | .10   |
| 3     | .10  | .20   | .70    | 9.2   | 4.3   | 3.3  | .80   | .40   | .30   | .10  | .10  | .10   |
| 4     | .20  | .20   | .70    | 6.5   | 3.8   | 2.9  | .80   | .40   | .30   | .10  | .10  | .10   |
| 5     | .20  | .20   | .70    | 5.3   | 3.8   | 2.7  | .80   | .40   | .30   | .10  | .10  | .10   |
| 6     | .20  | .20   | .60    | 4.3   | 13    | 2.6  | .80   | .40   | .30   | .10  | .10  | .30   |
| 7     | .20  | .10   | .60    | 3.5   | 12    | 2.4  | .80   | .30   | .30   | .20  | .10  | .10   |
| 8     | .10  | .20   | .60    | 4.5   | 8.0   | 2.4  | .80   | .30   | .30   | .20  | .10  | .10   |
| 9     | .10  | .20   | .50    | 4.3   | 5.8   | 2.4  | .80   | .40   | .30   | .20  | .10  | .10   |
| 10    | .20  | .20   | .50    | 3.1   | 5.1   | 3.3  | .80   | .50   | .20   | .20  | .10  | .10   |
| 11    | .10  | .20   | .70    | 2.7   | 4.3   | 2.9  | 1.2   | .40   | .30   | .20  | .10  | .10   |
| 12    | .10  | .30   | .80    | 2.5   | 3.8   | 2.6  | 1.4   | .40   | .30   | .20  | .10  | .10   |
| 13    | .20  | .50   | 1.0    | 2.2   | 3.8   | 2.4  | 1.0   | .40   | .30   | .20  | .10  | .10   |
| 14    | .40  | .50   | .90    | 2.0   | 2.9   | 2.1  | .90   | .30   | .10   | .20  | .10  | .10   |
| 15    | .20  | .20   | .80    | 1.7   | 2.6   | 1.9  | .70   | .40   | .10   | .20  | .10  | .10   |
| 16    | .20  | 1.3   | .70    | 1.6   | 2.4   | 1.9  | .70   | .40   | .20   | .10  | .10  | .10   |
| 17    | .20  | .60   | .60    | 1.5   | 2.1   | 1.9  | .60   | .30   | .20   | .20  | .10  | .10   |
| 18    | .20  | .70   | .50    | 1.4   | 1.9   | 1.6  | .50   | .30   | .20   | .10  | .10  | .20   |
| 19    | .30  | .50   | .40    | 1.4   | 2.2   | 1.5  | .40   | .30   | .20   | .10  | .10  | .30   |
| 20    | .20  | .40   | .40    | 1.3   | 2.4   | 1.4  | .40   | .30   | .20   | .10  | .10  | .20   |
| 21    | .20  | .40   | .40    | 1.3   | 2.1   | 1.3  | .40   | .60   | .20   | .10  | .10  | .20   |
| 22    | .20  | .50   | .40    | 1.3   | 1.9   | 1.3  | .40   | .60   | .20   | .10  | .10  | .10   |
| 23    | .10  | .90   | .40    | 1.2   | 2.2   | 1.3  | .30   | .50   | .20   | .10  | .10  | .10   |
| 24    | .10  | .23   | .40    | 1.2   | 2.6   | 1.2  | .30   | .50   | .20   | .10  | .10  | .10   |
| 25    | .20  | .43   | .34    | 1.2   | 2.9   | 1.0  | .30   | .40   | .10   | .10  | .10  | .20   |
| 26    | .10  | .29   | .32    | 1.2   | 4.7   | 1.0  | .30   | .50   | .10   | .10  | .10  | .30   |
| 27    | .20  | 1.8   | .30    | 1.1   | 3.3   | 1.0  | .30   | .50   | .10   | .10  | .10  | .20   |
| 28    | .20  | .13   | .15    | 1.1   | 2.7   | 1.0  | .30   | .50   | .10   | .10  | .10  | .10   |
| 29    | .10  | 1.0   | .36    | 2.0   | ----- | 1.0  | .30   | .50   | .10   | .10  | .10  | .20   |
| 30    | .10  | .90   | .35    | 10    | ----- | 1.0  | .30   | .40   | .10   | .20  | .10  | .30   |
| 31    | .10  | ----- | .33    | 8.8   | ----- | 1.0  | ----- | .40   | ----- | .20  | .10  | ----- |
| Total | 5.20 | 23.40 | 143.40 | 124.4 | 119.2 | 59.7 | 19.40 | 12.90 | 6.40  | 4.30 | 3.10 | 4.40  |
| Mean  | 0.16 | 0.78  | 4.63   | 4.01  | 4.26  | 1.93 | 0.65  | 0.42  | 0.21  | 0.14 | 0.10 | 0.14  |
| Ac-ft | 10   | 46    | 284    | 247   | 236   | 118  | 38    | 26    | 13    | 8.5  | 6.1  | 8.7   |

Calendar year 1965 Max 218 Min 0 Mean 5.46 Ac-ft 3,950

Water year 1965-66 Max 36 Min 0.10 Mean 1.44 Ac-ft 1,040

Peak discharge (base, 80 cfs, revised).--Dec. 28 (2230) 80 cfs (4.00 ft).

## COYOTE CREEK BASIN

## Reservoirs in Coyote Creek basin, Calif.

11-1698.5. Coyote Lake.--Lat 37°07'06", long 121°32'55", in SE¼ sec.29, T.9 S., R.4 E., at center of dam on Coyote Creek, 3.8 miles northeast of San Martin. Drainage area, 120 sq mi. Records available, February 1936 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 10,190 acre-ft Mar. 22 (elevation, 750.17 ft); no contents Oct. 26 to Nov. 24. Maximum contents observed during period 1936-66, 28,120 acre-ft Dec. 8, 1950 (elevation, 782.5 ft); no contents at times.

Reservoir is formed by rock- and earth-fill dam completed in 1936. Capacity, 24,510 acre-ft between elevations 693.3 (invert of outlet tunnel) and 777 ft (crest of spillway). Water released down Coyote Creek for storage in Anderson Lake. Record of contents furnished by Santa Clara Valley Water Conservation District.

11-1699.2. Anderson Lake.--Lat 37°09'56", long 121°37'42", in southeast corner of La Laguna Seca Grant, at center of dam on Coyote Creek, 2.5 miles northeast of Madrone, Santa Clara County. Drainage area, 195 sq mi. Records available, December 1950 to September 1966. Monthly contents prior to October 1959, published in WSP 1735. Staff gage read once daily. Datum of gage is at mean sea level (levels by Santa Clara Valley Water Conservation District). Maximum contents observed during year, 11,210 acre-ft Oct. 1 (elevation, 514.89 ft); minimum observed, 699 acre-ft Sept. 30 (elevation 455.84 ft). Maximum contents during period 1950-66, 95,990 acre-ft Apr. 3, 1958 (elevation, 628.67 ft, from floodmarks); no contents at times in 1960-62.

Reservoir is formed by earth- and rock-fill dam completed in 1950. Capacity, 91,310 acre-ft between elevations 439 (invert of outlet tunnel) and 625 ft (crest of spillway). Water released down Coyote Creek for irrigation and ground-water recharge by percolation. Record of contents furnished by Santa Clara Valley Water Conservation District.

Month-end contents, in acre-feet, water year October 1965 to September 1966

| Date          | Coyote Lake | Anderson Lake |
|---------------|-------------|---------------|
| Sept. 30..... | 1,550       | 11,210        |
| Oct. 31.....  | 0           | 8,680         |
| Nov. 30.....  | 1,100       | 6,600         |
| Dec. 31.....  | 5,810       | 6,300         |
| Jan. 31.....  | 7,770       | 6,380         |
| Feb. 28.....  | 9,840       | 6,730         |
| Mar. 31.....  | 8,530       | 7,800         |
| Apr. 30.....  | 4,210       | 7,860         |
| May 31.....   | 949         | 5,800         |
| June 30.....  | 998         | 983           |
| July 31.....  | 976         | 889           |
| Aug. 31.....  | 916         | 783           |
| Sept. 30..... | 868         | 697           |

Note.--Contents at 0800 hours on first day of following month.

11-1760. Arroyo Mocho near Livermore, Calif.

Location.--Lat 37°37'35", long 121°42'13", NW¼SE¼ sec.36, T.3 S., R.2 E., on right bank 100 ft downstream from Mines Road bridge, 2.4 miles upstream from unnamed tributary, and 5.2 miles southeast of Livermore.

Drainage area.--38.2 sq mi.

Records available.--January 1912 to September 1930, October 1963 to September 1966. Records for water year 1914 incomplete, yearly estimate and monthly discharge only for some months, published in WSP 1315-B.

Gage.--Water-stage recorder, and since Aug. 5, 1964, concrete control. Datum of gage is 746.49 ft above mean sea level, datum of 1929. 1912 to October 1914, at present site at different datum. November 1914 to September 30, 1930, at site 1 mile upstream at different datum.

Average discharge.--21 years, 3.92 cfs (2,840 acre-ft per year); median of yearly mean discharges, 2.3 cfs (1,700 acre-ft per year).

Extremes.--Maximum discharge during year, 60 cfs Dec. 29 (gage height, 4.10 ft); no flow for many days.

1912-30, 1963-66: Maximum daily discharge, 1,000 cfs Jan. 25, 1914 (estimated); no flow for parts of most years.

Flood of Dec. 23, 1955, discharge 1,880 cfs (by slope-area measurement of maximum flow).

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|--------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      | 0     | 0.70   | 1.8   | 3.5   | 1.2   | 0.40  | 0.20 | 0     |      |      |       |
| 2     |      | 0     | .70    | 7.2   | 4.2   | 1.2   | .40   | .20  | 0     |      |      |       |
| 3     |      | 0     | .60    | 4.2   | 3.3   | 1.2   | .40   | .20  | 0     |      |      |       |
| 4     |      | .10   | .60    | 3.3   | 2.8   | .90   | .40   | .20  | .10   |      |      |       |
| 5     |      | .10   | .60    | 2.8   | 3.0   | .90   | .40   | .20  | .10   |      |      |       |
| 6     |      | .10   | .60    | 2.0   | 6.0   | .80   | .40   | .20  | .10   |      |      |       |
| 7     |      | .10   | .60    | 1.9   | 7.2   | .80   | .40   | .20  | .10   |      |      |       |
| 8     |      | .10   | .60    | 1.6   | 4.5   | .80   | .30   | .20  | .10   |      |      |       |
| 9     |      | .10   | .60    | 1.4   | 3.3   | .80   | .30   | .20  | .10   |      |      |       |
| 10    |      | .10   | .60    | 1.2   | 2.4   | 1.0   | .40   | .20  | .10   |      |      |       |
| 11    |      | .10   | .60    | 1.0   | 2.0   | 1.0   | .40   | .20  | 0     |      |      |       |
| 12    |      | .10   | .60    | .90   | 1.8   | .80   | .50   | .10  | 0     |      |      |       |
| 13    |      | .10   | .80    | .90   | 1.6   | .70   | .50   | .10  | 0     |      |      |       |
| 14    |      | .10   | .70    | .90   | 1.4   | .70   | .50   | .10  | 0     |      |      |       |
| 15    |      | .10   | .60    | .80   | 1.2   | .70   | .50   | .10  | 0     |      |      |       |
| 16    |      | .10   | .60    | .80   | 1.0   | .70   | .40   | .10  | 0     |      |      |       |
| 17    |      | .10   | .60    | .70   | 1.0   | .60   | .40   | .10  | 0     |      |      |       |
| 18    |      | .10   | .50    | .70   | 1.0   | .60   | .40   | .10  | 0     |      |      |       |
| 19    |      | .10   | .50    | .70   | 1.2   | .60   | .40   | .10  | 0     |      |      |       |
| 20    |      | .30   | .50    | .70   | 1.6   | .50   | .40   | .10  | 0     |      |      |       |
| 21    |      | .40   | .50    | .70   | 1.6   | .50   | .40   | .10  | 0     |      |      |       |
| 22    |      | .40   | .50    | .70   | 1.3   | .50   | .30   | .10  | 0     |      |      |       |
| 23    |      | .50   | .40    | .70   | 1.2   | .40   | .20   | .10  | 0     |      |      |       |
| 24    |      | 1.6   | .40    | .70   | 1.0   | .40   | .20   | .10  | 0     |      |      |       |
| 25    |      | 3.0   | 1.2    | .70   | 1.2   | .40   | .20   | .10  | 0     |      |      |       |
| 26    |      | 2.4   | 1.8    | .60   | 1.3   | .40   | .20   | .10  | 0     |      |      |       |
| 27    |      | 1.6   | 1.0    | .60   | 1.4   | .40   | .20   | .10  | 0     |      |      |       |
| 28    |      | 1.2   | 1.4    | .60   | 1.2   | .40   | .20   | 0    | 0     |      |      |       |
| 29    |      | .90   | .29    | .70   | ----- | .40   | .20   | 0    | 0     |      |      |       |
| 30    |      | .80   | 27     | 5.9   | ----- | .40   | .20   | 0    | 0     |      |      |       |
| 31    |      | ----- | 32     | 4.2   | ----- | .40   | ----- | 0    | ----- |      |      |       |
| Total | 0    | 14.70 | 107.40 | 67.80 | 64.2  | 21.10 | 10.50 | 3.80 | 0.70  | 0    | 0    | 0     |
| Mean  | 0    | 0.49  | 3.46   | 2.19  | 2.29  | 0.68  | 0.35  | 0.12 | 0.02  | 0    | 0    | 0     |
| Ac-ft | 0    | 29    | 213    | 134   | 127   | 42    | 21    | 7.5  | 1.4   | 0    | 0    | 0     |

Calendar year 1965 Max 68 Min 0 Mean 2.86 Ac-ft 2,070

Water year 1965-66 Max 32 Min 0 Mean 0.80 Ac-ft 576

Peak discharge (base, 30 cfs).--Dec. 29 (0200) 60 cfs (4.10 ft); Dec. 31 (1700 hrs) 38 cfs (3.90 ft).

## ALAMEDA CREEK BASIN

11-1762. Arroyo Mocho near Pleasanton, Calif.

Location.--Lat 37°41'19", long 121°52'41", in Santa Rita Grant, on left bank 320 ft downstream from Santa Rita Road, 0.7 mile upstream from Tassajara Creek, and 1.8 miles north of Pleasanton, Alameda County.

Drainage area.--143 sq mi. *pending confirmation*

Records available.--September 1962 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 328.55 ft above mean sea level (levels by Alameda County Flood Control and Water Conservation District). Prior to May 11, 1964, graphic water-stage at same site and datum.

Extremes.--Maximum discharge during year, 164 cfs Dec. 29 (gage height, 3.51 ft, backwater from road crossing); no flow for many days. 1962-66: Maximum discharge, 1,760 cfs Feb. 1, 1963 (gage height, 8.60 ft), from rating curve extended above 58 cfs on basis of slope-area measurement of maximum flow; no flow for many days in each year.

Remarks.--Records good except those above 100 cfs, which are poor. Natural flow of stream affected by imported water from Delta-Mendota Canal by way of Arroyo Las Positas and South Bay Aqueduct. During periods of high flows, no water imported.

Revisions (water years).--1964 Report: 1962-63.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 42    | 18     | 1.9    | 23     | 21     | 1.2   | 0.80  | 2.1   | 0.90  | 2.1   | 0.30  | 0.50  |
| 2     | 43    | 17     | 2.0    | 4.7    | 8.8    | .60   | 3.8   | 0     | 2.4   | 1.6   | .50   | .50   |
| 3     | 44    | 15     | 2.2    | 4.3    | 5.5    | 0     | 5.2   | .90   | 2.5   | .10   | .50   | .50   |
| 4     | 43    | 1.2    | 3.0    | 15     | 6.1    | 0     | 5.1   | 1.0   | 3.7   | 0     | .50   | 1.1   |
| 5     | 42    | 0      | .30    | 17     | 5.6    | 0     | .40   | 1.3   | .40   | 0     | .40   | 2.0   |
| 6     | 45    | 0      | 0      | 8.6    | 18     | .20   | 1.3   | 1.2   | .20   | .10   | .80   | .70   |
| 7     | 45    | 0      | 1.9    | 3.0    | 5.9    | .50   | 2.5   | .80   | 2.8   | 1.3   | .30   | .30   |
| 8     | 45    | .10    | 2.2    | .80    | 2.6    | 0     | 2.2   | 1.1   | 2.4   | .60   | .30   | .10   |
| 9     | 44    | 1.5    | 3.1    | 0      | 1.7    | .80   | 4.2   | 2.6   | 3.1   | 2.4   | .20   | .20   |
| 10    | 45    | 2.1    | 3.1    | 0      | 2.4    | 0     | 2.8   | 2.2   | 2.7   | .70   | .20   | 0     |
| 11    | 44    | 2.0    | 2.9    | 1.8    | 23     | 0     | 2.1   | 1.7   | 2.5   | .70   | .20   | .20   |
| 12    | 43    | 1.5    | 3.5    | 3.0    | 22     | 0     | 5.6   | 2.2   | .10   | 1.9   | .40   | .30   |
| 13    | 43    | 7.8    | 1.5    | 2.5    | 20     | 0     | 4.3   | 2.0   | 0     | 1.6   | .20   | 0     |
| 14    | 44    | 14     | 2.3    | 2.1    | 20     | 0     | 3.0   | 3.6   | 1.9   | .30   | .30   | 0     |
| 15    | 31    | 4.2    | 2.2    | .10    | 18     | 0     | 2.8   | 3.3   | 2.9   | .10   | .60   | 0     |
| 16    | 43    | 20     | 2.6    | 0      | 11     | .10   | 4.1   | .60   | 2.9   | 0     | .50   | 0     |
| 17    | 44    | 27     | 3.7    | 0      | 1.0    | .30   | 4.8   | 2.2   | 2.6   | .10   | .60   | 0     |
| 18    | 43    | 43     | 3.9    | .70    | .30    | 0     | 3.3   | 1.7   | 2.3   | .50   | .50   | .20   |
| 19    | 43    | 13     | 4.2    | 2.1    | .10    | .10   | .10   | 1.7   | .10   | 0     | .50   | .10   |
| 20    | 42    | 4.0    | 3.0    | 2.5    | .10    | 0     | 1.2   | 2.7   | 0     | .50   | .20   | 0     |
| 21    | 29    | 3.7    | 2.8    | 2.0    | 0      | 0     | 1.7   | 3.8   | 1.2   | .80   | .30   | .10   |
| 22    | 31    | 2.2    | 2.4    | .40    | 0      | 0     | 1.6   | 4.2   | 2.0   | .90   | .30   | 0     |
| 23    | 44    | 11     | 2.3    | 0      | 0      | 0     | 3.2   | 1.4   | 1.8   | 1.1   | .40   | 0     |
| 24    | 48    | 6.4    | 3.5    | 0      | 0      | .30   | 3.6   | 3.2   | 2.0   | 1.1   | 0     | 0     |
| 25    | 46    | 20     | 6.4    | 1.6    | 0      | 1.6   | .20   | 3.3   | 3.1   | .70   | .40   | 0     |
| 26    | 44    | 3.4    | 4.3    | 2.7    | 0      | 2.9   | 1.5   | 2.8   | 1.7   | .30   | .50   | 0     |
| 27    | 41    | 1.9    | 2.5    | 2.3    | 0      | .30   | 1.5   | 2.1   | 1.1   | .20   | .40   | 0     |
| 28    | 17    | 1.9    | 4.1    | 2.5    | 0      | 0     | 1.1   | .60   | 2.4   | .20   | .50   | 0     |
| 29    | 17    | 4.0    | .98    | 2.3    | -----  | 1.3   | 1.0   | .30   | 3.1   | .50   | .20   | 0     |
| 30    | 19    | 2.0    | 50     | 31     | -----  | 1.6   | 2.7   | .30   | 1.1   | .50   | .20   | 0     |
| 31    | 20    | -----  | 64     | 5.0    | -----  | 1.7   | ----- | 0     | ----- | .70   | .30   | ----- |
| TOTAL | 1,214 | 305.50 | 289.80 | 141.00 | 214.70 | 13.50 | 77.70 | 56.90 | 55.90 | 21.60 | 11.50 | 6.80  |
| MEAN  | 39.2  | 10.2   | 9.35   | 4.55   | 7.67   | .44   | 2.59  | 1.84  | 1.86  | .70   | .37   | .23   |
| AC-FT | 2,410 | 606    | 575    | 280    | 426    | 27    | 154   | 113   | 111   | 43    | 23    | 13    |

CALENDAR YEAR 1965 MAX 205 MIN 0 MEAN 25.1 AC-FT 18,170  
 WATER YEAR 1965-66 MAX 98 MIN 0 MEAN 6.60 AC-FT 4,780

Peak discharge (base, 150 cfs).--Dec. 29 (0300) 164 cfs (3.51 ft).

Note.--Backwater from road crossing Nov. 24, Dec. 28, 29.



11-1764. Arroyo Valle above Lang Canyon, near Livermore, Calif.

Location.--Lat 37°33'00", long 121°39'57", in SE¼ sec.29, T.4 N., R.3 E., on left bank 700 ft upstream from unnamed tributary, 1,200 ft upstream from Lang Canyon, and 10.5 miles southeast of Livermore.

Drainage area.--126 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 800 ft (from topographic map).. Prior to Dec. 27, 1965 graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 430 cfs Dec. 29 (gage height, 4.02 ft); no flow Oct. 1 to Nov. 3, June 25 to Sept. 30. 1963-66; Maximum discharge, 2,330 cfs Dec. 23, 1964 (gage height, 6.12 ft); no flow at times in each year.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.    | JAN.  | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|---------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 7.8     | 160   | 26    | 8.8   | 3.9   | 1.4   | 0.40  |      |      |       |
| 2     |      | 0      | 7.0     | 80    | 24    | 9.2   | 4.0   | 1.4   | .50   |      |      |       |
| 3     |      | 0      | 5.7     | 52    | 19    | 8.2   | 3.6   | 1.3   | .50   |      |      |       |
| 4     |      | .10    | 4.9     | 40    | 18    | 7.2   | 3.5   | 1.3   | .50   |      |      |       |
| 5     |      | .10    | 4.5     | 33    | 20    | 7.4   | 3.5   | 1.2   | .40   |      |      |       |
| 6     |      | .10    | 3.6     | 26    | 43    | 7.2   | 3.4   | 1.2   | .50   |      |      |       |
| 7     |      | .10    | 3.4     | 21    | 47    | 6.8   | 3.2   | 1.2   | .60   |      |      |       |
| 8     |      | .10    | 3.1     | 19    | 35    | 6.4   | 3.3   | 1.2   | .60   |      |      |       |
| 9     |      | .10    | 3.1     | 16    | 25    | 6.9   | 3.4   | 1.3   | .60   |      |      |       |
| 10    |      | .10    | 3.1     | 15    | 20    | 9.3   | 4.8   | 1.9   | .50   |      |      |       |
| 11    |      | .10    | 3.4     | 13    | 17    | 9.2   | 5.4   | 2.5   | .50   |      |      |       |
| 12    |      | .30    | 5.7     | 12    | 15    | 7.8   | 5.1   | 1.7   | .40   |      |      |       |
| 13    |      | .40    | 5.3     | 11    | 13    | 7.6   | 4.8   | 1.4   | .30   |      |      |       |
| 14    |      | 1.5    | 4.5     | 10    | 12    | 7.2   | 3.8   | 1.3   | .20   |      |      |       |
| 15    |      | .60    | 3.8     | 9.2   | 11    | 6.8   | 3.2   | 1.1   | .20   |      |      |       |
| 16    |      | 4.1    | 3.4     | 8.3   | 11    | 6.4   | 2.9   | 1.0   | .20   |      |      |       |
| 17    |      | 16     | 2.9     | 7.6   | 9.8   | 6.2   | 3.0   | .90   | .20   |      |      |       |
| 18    |      | 31     | 2.6     | 7.0   | 9.4   | 5.7   | 2.9   | .80   | .10   |      |      |       |
| 19    |      | 14     | 2.6     | 6.7   | 12    | 5.7   | 2.8   | .70   | .10   |      |      |       |
| 20    |      | 6.6    | 2.6     | 6.1   | 13    | 5.5   | 2.6   | .60   | .10   |      |      |       |
| 21    |      | 3.1    | 2.6     | 5.5   | 10    | 5.5   | 2.5   | .60   | .10   |      |      |       |
| 22    |      | 2.4    | 2.6     | 5.3   | 9.5   | 5.1   | 2.7   | .60   | .10   |      |      |       |
| 23    |      | 5.4    | 2.4     | 5.3   | 8.9   | 4.9   | 2.4   | .50   | .10   |      |      |       |
| 24    |      | 38     | 3.3     | 5.0   | 8.9   | 4.9   | 2.1   | .50   | .10   |      |      |       |
| 25    |      | 45     | 3.9     | 4.7   | 9.4   | 5.3   | 1.9   | .40   | 0     |      |      |       |
| 26    |      | 28     | 2.5     | 4.3   | 12    | 5.0   | 1.7   | .40   | 0     |      |      |       |
| 27    |      | 18     | 1.7     | 4.0   | 11    | 4.7   | 1.6   | .40   | 0     |      |      |       |
| 28    |      | 13     | .66     | 3.8   | 9.2   | 4.6   | 1.5   | .40   | 0     |      |      |       |
| 29    |      | 12     | 2.54    | 5.6   | ----- | 4.7   | 1.4   | .40   | 0     |      |      |       |
| 30    |      | 9.9    | 2.65    | 2.4   | ----- | 4.3   | 1.4   | .40   | 0     |      |      |       |
| 31    |      | -----  | 2.80    | 2.5   | ----- | 4.0   | ----- | .40   | ----- |      |      |       |
| TOTAL | 0    | 250.10 | 1,039.9 | 645.4 | 479.1 | 198.6 | 92.3  | 30.40 | 7.80  | 0    | 0    | 0     |
| MEAN  | 0    | 8.34   | 33.5    | 20.8  | 17.1  | 6.41  | 3.08  | .98   | .26   | 0    | 0    | 0     |
| AC-FT | 0    | 496    | 2,060   | 1,280 | 950   | 394   | 183   | 60    | 15    | 0    | 0    | 0     |

CALENDAR YEAR 1965 MAX 902 MIN 0 MEAN 29.2 AC-FT 21,100  
 WATER YEAR 1965-66 MAX 280 MIN 0 MEAN 7.52 AC-FT 5,440

Peak discharge (base, 170 cfs).--Dec. 29 (0230) 430 cfs (4.02 ft).

11-1765. Arroyo Valle near Livermore, Calif.

Location.--Lat 37°37'24", long 121°45'28", in Valle de San Jose Grant, on right bank 900 ft downstream from highway bridge, 1.1 miles upstream from Dry Creek, 4.1 miles south of Livermore, Alameda County, and 6.9 miles southeast of Pleasanton.

Drainage area.--147 sq mi.

Records available.--January 1912 to September 1930, October 1957 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Published as Arroyo del Valle near Livermore, 1912-29.

Gage.--Water-stage recorder and concrete control. Datum of gage is 510.44 ft above mean sea level, datum of 1929. Prior to November 1914, at site 900 ft upstream at different datum. Nov. 1, 1914, to Sept. 30, 1930, at site 300 ft upstream at different datum.

Average discharge.--27 years, 29.4 cfs (21,280 acre-ft per year); median of yearly mean discharges, 20 cfs (14,500 acre-ft per year).

Extremes.--Maximum discharge during year, 370 cfs Dec. 29 (gage height, 4.04 ft); no flow Oct. 1 to Nov. 12, July 23 to Sept. 30. 1912-30, 1957-66: Maximum discharge, 12,200 cfs Apr. 2, 1958 (gage height, 10.91 ft); no flow at times in each year.

Flood of Dec. 23, 1955, reached a stage of 13.93 ft, from floodmarks (discharge, 18,200 cfs on basis of contracted-opening and slope-area measurement of maximum flow).

Remarks.--Records good. No regulation or diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 7.5   | 17.4  | 26    | 11    | 2.6   | 1.8   | 0.50  | 0.20 |      |       |
| 2     |      | 0      | 7.0   | 8.4   | 27    | 11    | 2.9   | 1.4   | .40   | .20  |      |       |
| 3     |      | 0      | 6.0   | 60    | 22    | 11    | 3.2   | 1.4   | .50   | .20  |      |       |
| 4     |      | 0      | 5.5   | 47    | 20    | 9.4   | 2.9   | 1.2   | .60   | .20  |      |       |
| 5     |      | 0      | 4.8   | 38    | 21    | 8.8   | 2.9   | 1.2   | .60   | .20  |      |       |
| 6     |      | 0      | 4.6   | 34    | 32    | 7.8   | 2.9   | 1.2   | .70   | .30  |      |       |
| 7     |      | 0      | 4.6   | 25    | 49    | 7.4   | 2.9   | 1.1   | .60   | .40  |      |       |
| 8     |      | 0      | 4.6   | 22    | 40    | 7.0   | 2.9   | 1.2   | .50   | .40  |      |       |
| 9     |      | 0      | 4.2   | 19    | 32    | 7.0   | 3.2   | 1.2   | .50   | .40  |      |       |
| 10    |      | 0      | 4.2   | 17    | 26    | 7.4   | 4.2   | 1.1   | .50   | .40  |      |       |
| 11    |      | 0      | 3.8   | 15    | 23    | 8.2   | 3.5   | 1.1   | .50   | .40  |      |       |
| 12    |      | 0      | 4.6   | 13    | 20    | 7.8   | 4.2   | .90   | .60   | .30  |      |       |
| 13    |      | .20    | 5.0   | 12    | 18    | 7.4   | 3.5   | .80   | .50   | .20  |      |       |
| 14    |      | .30    | 5.0   | 12    | 15    | 7.0   | 3.5   | .90   | .30   | .30  |      |       |
| 15    |      | .30    | 4.2   | 11    | 13    | 6.6   | 2.9   | 1.1   | .30   | .30  |      |       |
| 16    |      | .20    | 3.8   | 9.9   | 13    | 6.6   | 3.3   | .90   | .30   | .20  |      |       |
| 17    |      | 1.0    | 3.5   | 9.4   | 12    | 6.2   | 3.2   | .70   | .20   | .10  |      |       |
| 18    |      | 7.0    | 3.5   | 8.8   | 12    | 5.8   | 2.8   | .70   | .30   | .20  |      |       |
| 19    |      | 10     | 3.2   | 8.2   | 12    | 5.8   | 2.4   | .60   | .30   | .10  |      |       |
| 20    |      | 9.0    | 3.2   | 7.8   | 8.8   | 5.4   | 2.4   | .50   | .40   | .10  |      |       |
| 21    |      | 6.0    | 3.5   | 7.8   | 7.4   | 5.4   | 2.0   | .60   | .40   | .10  |      |       |
| 22    |      | 3.5    | 3.5   | 7.4   | 9.4   | 5.0   | 1.8   | .80   | .40   | .10  |      |       |
| 23    |      | 4.0    | 3.5   | 7.4   | 11    | 4.2   | 1.8   | .60   | .30   | 0    |      |       |
| 24    |      | 10     | 3.8   | 7.4   | 11    | 3.5   | 2.0   | .50   | .20   | 0    |      |       |
| 25    |      | 30     | 19    | 7.0   | 12    | 3.5   | 1.8   | .60   | .20   | 0    |      |       |
| 26    |      | 27     | 31    | 7.0   | 12    | 3.2   | 1.6   | .50   | .30   | 0    |      |       |
| 27    |      | 18     | 20    | 6.6   | 13    | 3.5   | 1.6   | .60   | .20   | 0    |      |       |
| 28    |      | 13     | 17    | 6.2   | 13    | 3.2   | 1.6   | .80   | .20   | 0    |      |       |
| 29    |      | 9.9    | 21.6  | 7.4   | ----- | 2.9   | 1.6   | .80   | .20   | 0    |      |       |
| 30    |      | 8.5    | 22.3  | 17    | ----- | 2.9   | 1.8   | .80   | .20   | 0    |      |       |
| 31    |      | -----  | 25.4  | 26    | ----- | 2.9   | ----- | .60   | ----- | 0    |      |       |
| Total | 0    | 157.90 | 887.1 | 734.3 | 530.6 | 194.8 | 79.9  | 28.20 | 11.70 | 5.30 | 0    | 0     |
| Mean  | 0    | 5.26   | 28.6  | 23.7  | 19.0  | 6.28  | 2.66  | 0.91  | 0.39  | 0.17 | 0    | 0     |
| Ac-ft | 0    | 313    | 1,760 | 1,460 | 1,050 | 387   | 158   | 56    | 23    | 11   | 0    | 0     |

Calendar year 1965 Max 898 Min 0 Mean 29.1 Ac-ft 21,070

Water year 1965-66 Max 254 Min 0 Mean 7.20 Ac-ft 5,220

Peak discharge (base, 200 cfs)--Dec. 29 (0630) 370 cfs (4.04 ft); Dec. 31 (1700) 284 cfs (3.73 ft).

11-1766. Arroyo Valle at Pleasanton, Calif.

Location.--Lat 37°40'02", long 121°53'02", in Valle de San Jose Grant, on right bank 0.4 mile northwest of Pleasanton, Alameda County, and 5.8 miles west of Livermore.

Drainage area.--171 sq mi.

Records available.--October 1957 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 311.80 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 26.0 cfs (18,820 acre-ft per year).

Extremes.--Maximum discharge during year, 416 cfs Dec. 31 (gage height, 8.19 ft); no flow for several months.  
1957-66: Maximum discharge, 11,300 cfs Apr. 3, 1958 (gage height, 25.36 ft); no flow for several months in each year.

Remarks.--Records fair. No regulation; pumping for irrigation above station during periods of low flow.

| Discharge, in cubic feet per second, water year October 1965 to September 1966 |      |       |       |       |        |      |       |     |       |      |      |       |
|--|------|-------|-------|-------|--------|------|-------|-----|-------|------|------|-------|
| Day  | Oct. | Nov.  | Dec.  | Jan.  | Feb.   | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
| 1  |      |       | 0     | 308   | 18     | 3.8  |       |     |       |      |      |       |
| 2  |      |       | 0     | 148   | 18     | 3.4  |       |     |       |      |      |       |
| 3  |      |       | 0     | 78    | 18     | 1.7  |       |     |       |      |      |       |
| 4  |      |       | 0     | 46    | 17     | .20  |       |     |       |      |      |       |
| 5  |      |       | 0     | 34    | 14     | 0    |       |     |       |      |      |       |
| 6  |      |       | 0     | 25    | 16     | 0    |       |     |       |      |      |       |
| 7  |      |       | 0     | 21    | 30     | 0    |       |     |       |      |      |       |
| 8  |      |       | 0     | 16    | 37     | 0    |       |     |       |      |      |       |
| 9  |      |       | 0     | 11    | 28     | 0    |       |     |       |      |      |       |
| 10   |      |       | 0     | 7.8   | 21     | 0    |       |     |       |      |      |       |
| 11   |      |       | 0     | 5.5   | 16     | 0    |       |     |       |      |      |       |
| 12   |      |       | 0     | 5.8   | 13     | 0    |       |     |       |      |      |       |
| 13   |      |       | 0     | 5.2   | 9.8    | 0    |       |     |       |      |      |       |
| 14   |      |       | 0     | 2.6   | 9.4    | 0    |       |     |       |      |      |       |
| 15   |      |       | 0     | 1.2   | 7.8    | 0    |       |     |       |      |      |       |
| 16   |      |       | 0     | 0     | 5.5    | 0    |       |     |       |      |      |       |
| 17   |      |       | 0     | 0     | 4.9    | 0    |       |     |       |      |      |       |
| 18   |      |       | 0     | 0     | 3.6    | 0    |       |     |       |      |      |       |
| 19   |      |       | 0     | 0     | 3.6    | 0    |       |     |       |      |      |       |
| 20   |      |       | 0     | 0     | 2.8    | 0    |       |     |       |      |      |       |
| 21   |      |       | 0     | 0     | 1.9    | 0    |       |     |       |      |      |       |
| 22   |      |       | 0     | 0     | 1.0    | 0    |       |     |       |      |      |       |
| 23   |      |       | 0     | 0     | .60    | 0    |       |     |       |      |      |       |
| 24   |      |       | 0     | 0     | 2.0    | 0    |       |     |       |      |      |       |
| 25   |      |       | 0     | 0     | 3.2    | 0    |       |     |       |      |      |       |
| 26   |      |       | 0     | 0     | 3.6    | 0    |       |     |       |      |      |       |
| 27   |      |       | 0     | 0     | 3.2    | 0    |       |     |       |      |      |       |
| 28   |      |       | 2.4   | 0     | 3.2    | 0    |       |     |       |      |      |       |
| 29   |      |       | 140   | 0     | -----  | 0    |       |     |       |      |      |       |
| 30   |      |       | 303   | 0     | -----  | 0    |       |     |       |      |      |       |
| 31   |      | ----- | 385   | 0     | -----  | 0    | ----- |     | ----- |      |      | ----- |
| Total  | 0    | 0     | 830.4 | 715.1 | 312.10 | 9.10 | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean   | 0    | 0     | 26.8  | 23.1  | 11.1   | 0.29 | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft  | 0    | 0     | 1,650 | 1,420 | 619    | 18   | 0     | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 942 Min 0 Mean 26.1 Ac-ft 18,890  
Water year 1965-66 Max 385 Min 0 Mean 5.11 Ac-ft 3,700

Peak discharge (base, 200 cfs).--Dec. 31 (2400) 416 cfs (8.19 ft).



11-1805. Dry Creek at Union City, Calif.

Location.--Lat 37°36'22", long 122°01'22", in Arroyo de la Alameda Grant, on right bank 900 ft downstream from bridge on State Highway 9 in Decoto District in Union City, Alameda County, and 1.7 miles upstream from mouth.

Drainage area.--9.41 sq mi.

Records available.--October 1916 to September 1919 (published as "near Decoto"), April 1959 to September 1966.

Gage.--Water-stage recorder and concrete control. Datum of gage is 85.12 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1959, at site 1.4 miles downstream at different datum.

Average discharge.--10 years, 1.14 cfs (825 acre-ft per year); median of yearly mean discharge, 0.8 cfs (580 acre-ft per year).

Extremes.--Maximum discharge during year, 29 cfs Jan. 30 (gage height, 2.17 ft); no flow for several months.

1916-19, 1959-66: Maximum discharge, 930 cfs Oct. 13, 1962 (gage height, 5.27 ft from outside gage), from rating curve extended above 140 cfs on basis of slope-area measurement of maximum flow; no flow most of each year.

Remarks.--Records good. No regulation or diversion above station.

Revisions (water years).--1963 Report: 1962(M).

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      | 0     | 0     | 6.2   | 8.3   | 0.70 | 0     |     |       |      |      |       |
| 2     |      | 0     | 0     | 3.4   | 5.4   | .60  | 0     |     |       |      |      |       |
| 3     |      | 0     | 0     | 2.2   | 4.8   | .60  | 0     |     |       |      |      |       |
| 4     |      | 0     | 0     | 1.6   | 7.1   | .50  | 0     |     |       |      |      |       |
| 5     |      | 0     | 0     | 1.4   | 5.6   | .50  | 0     |     |       |      |      |       |
| 6     |      | 0     | 0     | 1.1   | 1.3   | .40  | 0     |     |       |      |      |       |
| 7     |      | 0     | 0     | .80   | 6.5   | .40  | 0     |     |       |      |      |       |
| 8     |      | 0     | 0     | .50   | 5.0   | .30  | 0     |     |       |      |      |       |
| 9     |      | 0     | 0     | .40   | 3.8   | .40  | .20   |     |       |      |      |       |
| 10    |      | 0     | 0     | .30   | 3.1   | .60  | 0     |     |       |      |      |       |
| 11    |      | 0     | 0     | .20   | 2.5   | .60  | 0     |     |       |      |      |       |
| 12    |      | .10   | 0     | .10   | 1.8   | .40  | .10   |     |       |      |      |       |
| 13    |      | 0     | 0     | .10   | 1.4   | .30  | .10   |     |       |      |      |       |
| 14    |      | 0     | 0     | 0     | 1.2   | .20  | 0     |     |       |      |      |       |
| 15    |      | 0     | 0     | 0     | 1.0   | .20  | 0     |     |       |      |      |       |
| 16    |      | 0     | 0     | 0     | .90   | .10  | 0     |     |       |      |      |       |
| 17    |      | 0     | 0     | 0     | .80   | .10  | 0     |     |       |      |      |       |
| 18    |      | 0     | 0     | 0     | .80   | .10  | 0     |     |       |      |      |       |
| 19    |      | 0     | 0     | 0     | .80   | .10  | 0     |     |       |      |      |       |
| 20    |      | 0     | 0     | 0     | .80   | .10  | 0     |     |       |      |      |       |
| 21    |      | 0     | 0     | 0     | .70   | .10  | 0     |     |       |      |      |       |
| 22    |      | 0     | 0     | 0     | .60   | .10  | 0     |     |       |      |      |       |
| 23    |      | 0     | 0     | 0     | .60   | 0    | 0     |     |       |      |      |       |
| 24    |      | .10   | .20   | 0     | 1.2   | 0    | 0     |     |       |      |      |       |
| 25    |      | 0     | .10   | 0     | 1.1   | 0    | 0     |     |       |      |      |       |
| 26    |      | 0     | 0     | 0     | 1.6   | 0    | 0     |     |       |      |      |       |
| 27    |      | 0     | 0     | 0     | .90   | 0    | 0     |     |       |      |      |       |
| 28    |      | 0     | 5.0   | 0     | .70   | 0    | 0     |     |       |      |      |       |
| 29    |      | 0     | 5.9   | 3.2   | ----- | 0    | 0     |     |       |      |      |       |
| 30    |      | 0     | 8.4   | 12    | ----- | 0    | 0     |     |       |      |      |       |
| 31    |      | ----- | 14    | 4.8   | ----- | 0    | ----- |     | ----- |      |      | ----- |
| Total | 0    | 0.20  | 33.60 | 38.30 | 82.00 | 7.40 | 0.40  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0.007 | 1.08  | 1.24  | 2.93  | 0.24 | 0.01  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 0.4   | 67    | 76    | 163   | 15   | 0.8   | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 71 Min 0 Mean 1.55 Ac-ft 1,120

Water year 1965-66 Max 14 Min 0 Mean 0.44 Ac-ft 323

Peak discharge (base, 40 cfs, revised).--No peak above base.

## ALAMEDA CREEK BASIN

11-1807. Patterson Creek at Union City, Calif.

Location.--Lat 37°35'03", long 122°02'56", in Portero de Los Cerritos Grant, on right bank 75 ft upstream from bridge on State Highway 17 (Nimitz Freeway), 0.3 mile below effluence, and 1.9 miles southeast of Alvarado District in Union City, Alameda County.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 4.13 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 26.8 cfs (19,400 acre-ft per year).

Extremes.--Maximum discharge during year, 739 cfs Dec. 29 (gage height, 9.54 ft); no flow most of year.

1958-66: Maximum discharge, 10,500 cfs Feb. 1, 1963 (gage height, 20.4 ft, from floodmarks); no flow for most of each year.

Remarks.--Records good. This stream is a distributary of Alameda Creek. See Remarks for Alameda Creek at Union City.

Revisions (water years).--1964 Report: 1963.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.    | Jan.     | Feb.  | Mar.  | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|-------|---------|----------|-------|-------|-------|-----|-------|------|------|-------|
| 1     |      |       | 0       | 439      | 68    | 50    | 0.90  |     |       |      |      |       |
| 2     |      |       | 0       | 222      | 109   | 22    | 1.1   |     |       |      |      |       |
| 3     |      |       | 0       | 83       | 37    | .90   | 2.0   |     |       |      |      |       |
| 4     |      |       | 0       | 46       | 74    | 1.8   | 1.8   |     |       |      |      |       |
| 5     |      |       | 0       | 69       | 53    | 1.2   | .50   |     |       |      |      |       |
| 6     |      |       | 0       | 36       | 27    | 2.8   | .10   |     |       |      |      |       |
| 7     |      |       | 0       | 76       | 57    | 2.6   | 0     |     |       |      |      |       |
| 8     |      |       | 0       | 28       | 41    | 2.0   | 0     |     |       |      |      |       |
| 9     |      |       | 0       | .90      | 32    | .50   | 0     |     |       |      |      |       |
| 10    |      |       | 0       | .20      | 22    | .30   | 0     |     |       |      |      |       |
| 11    |      |       | 0       | 0        | 40    | .10   | 0     |     |       |      |      |       |
| 12    |      |       | 0       | 0        | 30    | 0     | 0     |     |       |      |      |       |
| 13    |      |       | 0       | 0        | 38    | 0     | 0     |     |       |      |      |       |
| 14    |      |       | 0       | 0        | 33    | 0     | 0     |     |       |      |      |       |
| 15    |      |       | 0       | 0        | 30    | 0     | 0     |     |       |      |      |       |
| 16    |      |       | 0       | 0        | 26    | 0     | 0     |     |       |      |      |       |
| 17    |      |       | 0       | 0        | 18    | 0     | 0     |     |       |      |      |       |
| 18    |      |       | 0       | 0        | 11    | 0     | 0     |     |       |      |      |       |
| 19    |      |       | 0       | 0        | 11    | 0     | 0     |     |       |      |      |       |
| 20    |      |       | 0       | 0        | 9.7   | .10   | 0     |     |       |      |      |       |
| 21    |      |       | 0       | 0        | 8.5   | 1.8   | 0     |     |       |      |      |       |
| 22    |      |       | 0       | 0        | 9.3   | .40   | 0     |     |       |      |      |       |
| 23    |      |       | 0       | 0        | 7.0   | .10   | 0     |     |       |      |      |       |
| 24    |      |       | 0       | 0        | 8.5   | 0     | 0     |     |       |      |      |       |
| 25    |      |       | 54      | 0        | 11    | 0     | 0     |     |       |      |      |       |
| 26    |      |       | 47      | 0        | 18    | 0     | 0     |     |       |      |      |       |
| 27    |      |       | 9.8     | 0        | 14    | 0     | 0     |     |       |      |      |       |
| 28    |      |       | 19      | 0        | 9.7   | 0     | 0     |     |       |      |      |       |
| 29    |      |       | 445     | 2.6      | ----- | 0     | 0     |     |       |      |      |       |
| 30    |      |       | 485     | 215      | ----- | 0     | 0     |     |       |      |      |       |
| 31    |      | ----- | 571     | 86       | ----- | 0     | ----- |     | ----- |      |      | ----- |
| Total | 0    | 0     | 1,630.8 | 1,210.10 | 738.4 | 21.80 | 6.40  | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 0     | 52.6    | 39.0     | 26.4  | 0.70  | 0.21  | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 0     | 3,230   | 2,400    | 1,460 | 43    | 13    | 0   | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 1,790 Min 0 Mean 56.3 Ac-ft 40,760

Water year 1965-66 Max 571 Min 0 Mean 9.88 Ac-ft 7,160

Location.--Lat 37°35'46", long 122°03'15", in Arroyo de la Alameda Grant, on left bank 5 ft downstream from bridge on Baker Road, 1 mile downstream from Dry Creek, and 1.4 miles east of Alvarado District in Union City, Alameda County.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Alameda County Flood Control and Water Conservation District).

Average discharge.--8 years, 2.10 cfs (1,520 acre-ft per year).

Extremes.--Maximum discharge during year, 233 cfs Nov. 24 (gage height, 11.46 ft); no flow for most of year.  
1958-66: Maximum discharge, 1,770 cfs Feb. 1, 1963 (gage height, 19.25 ft, from floodmarks); no flow for most of each year.

Remarks--Records fair. For total flow in Alameda Creek, add flow of Patterson Creek at Union City (see Remarks for Alameda Creek near Niles). Diversion of 6,150 acre-ft to percolation ponds during the year between stations near Niles and at Union City.

| Day   | Oct. | Nov.   | Dec. | Jan. | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-------|------|--------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1     |      | 0      | 0    | 16   |       |      |       |     |       |      |      |       |
| 2     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 3     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 4     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 5     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 6     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 7     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 8     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 9     |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 10    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 11    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 12    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 13    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 14    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 15    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 16    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 17    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 18    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 19    |      | 7.3    | 0    | 0    |       |      |       |     |       |      |      |       |
| 20    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 21    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 22    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 23    |      | 0      | 0    | 0    |       |      |       |     |       |      |      |       |
| 24    |      | 28     | 0    | 0    |       |      |       |     |       |      |      |       |
| 25    |      | 113    | 0    | 0    |       |      |       |     |       |      |      |       |
| 26    |      | 31     | 0    | 0    |       |      |       |     |       |      |      |       |
| 27    |      | 6.5    | 0    | 0    |       |      |       |     |       |      |      |       |
| 28    |      | .60    | 0    | 0    |       |      |       |     |       |      |      |       |
| 29    |      | 0      | 21   | 0    | ----- |      |       |     |       |      |      |       |
| 30    |      | 0      | 21   | 0    | ----- |      |       |     |       |      |      |       |
| 31    |      | -----  | 38   | 0    | ----- |      | ----- |     | ----- |      |      | ----- |
| Total | 0    | 186.40 | 80   | 16   | 0     | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Mean  | 0    | 6.21   | 2.6  | 0.5  | 0     | 0    | 0     | 0   | 0     | 0    | 0    | 0     |
| Ac-ft | 0    | 370    | 159  | 32   | 0     | 0    | 0     | 0   | 0     | 0    | 0    | 0     |

|                    |     |     |     |   |      |      |       |      |
|--------------------|-----|-----|-----|---|------|------|-------|------|
| Calendar year 1965 | Max | 364 | Min | 0 | Mean | 3.92 | Ac-ft | 2840 |
| Water year 1965-66 | Max | 113 | Min | 0 | Mean | 0.77 | Ac-ft | 560  |

11-1810. San Lorenzo Creek at Hayward, Calif.

Location---Lat 37°41'11", long 122°03'44", in San Lorenzo Grant, on right bank at bridge on B Street, just outside city limits of Hayward, Alameda County, 0.5 mile downstream from Crow Creek.

Drainage area---37.5 sq mi.

Records available---October 1939 to September 1940, October 1946 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage---Digital water-stage recorder and concrete control (control ineffective since 1952 due to gravel fill). Datum of gage is 133.16 ft above mean sea level, datum of 1929. January to September 1940 wire-weight gage on bridge at present site and datum. Oct. 9, 1946 to Oct. 22, 1965, graphic water-stage recorder at same site and datum.

Average discharge---21 years, 13.7 cfs (9,920 acre-ft per year); median of yearly mean discharges, 7.0 cfs (5,100 acre-ft per year).

Extremes---Maximum discharge during year, 252 cfs Jan. 29 (gage height, 7.01 ft); no flow at times.

1939-40, 1946-66: Maximum discharge, 7,460 cfs Oct. 13, 1962 (gage height, 19.73 ft, from floodmarks), from rating curve extended above 2,700 cfs on basis of slope-area measurement of maximum flow; maximum gage height, 20.82 ft, from floodmarks, Dec. 22, 1955; no flow at times in each year.

Remarks---Records good. Flow partly regulated by Cull Creek Reservoir beginning in October 1962 (capacity, 310 acre-ft and San Lorenzo Creek Reservoir beginning in January 1965 (capacity, 380 acre-ft). A few very small diversions above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.   | JAN.  | FEB.  | MAR.  | APR.   | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|------|-------|--------|-------|-------|-------|--------|-------|-------|------|-------|-------|
| 1     | 0.20 | 0.20  | 0.50   | 17    | 69    | 11    | 6.0    | 0.60  | 0.80  | 0.10 | 0     | 0.80  |
| 2     | .20  | .30   | .70    | 13    | 28    | 11    | 6.1    | .60   | 1.2   | 0    | 0     | .80   |
| 3     | .20  | .50   | 2.0    | 11    | 27    | 8.5   | 6.3    | .70   | 1.0   | 0    | 0     | .90   |
| 4     | .20  | .50   | 3.6    | 11    | 33    | 6.5   | 5.4    | .70   | 1.1   | 0    | 0     | .90   |
| 5     | .30  | .60   | 3.5    | 38    | 25    | 3.4   | 4.5    | .90   | 1.2   | 0    | 0     | .90   |
| 6     | .20  | .60   | 3.3    | 18    | 32    | 3.2   | 2.4    | 1.1   | 1.2   | 0    | 0     | .90   |
| 7     | .20  | .80   | 3.2    | 15    | 23    | 4.2   | 2.1    | 1.8   | 1.1   | 0    | 0     | .80   |
| 8     | .20  | 1.0   | 3.7    | 13    | 20    | 4.8   | 3.0    | 2.4   | .80   | .10  | 1.4   | .80   |
| 9     | .10  | .40   | 4.2    | 13    | 18    | 7.3   | 6.6    | 5.5   | .70   | 0    | 4.6   | .70   |
| 10    | .10  | .30   | 3.8    | 11    | 16    | 8.6   | 7.9    | 6.0   | .70   | 0    | 4.8   | .80   |
| 11    | .10  | .30   | 5.2    | 10    | 15    | 7.4   | 5.3    | 3.7   | .50   | 0    | 4.7   | .80   |
| 12    | .10  | 2.4   | 4.8    | 8.0   | 14    | 9.2   | 7.4    | 3.0   | .40   | .10  | 4.3   | .90   |
| 13    | .10  | 4.5   | 1.9    | 6.5   | 12    | 9.2   | 5.5    | 2.4   | .20   | .10  | 4.2   | .90   |
| 14    | .50  | 4.0   | .50    | 6.0   | 12    | 8.7   | 5.5    | 2.4   | .10   | .10  | 4.0   | 1.0   |
| 15    | .30  | .90   | .40    | 5.8   | 12    | 8.7   | 5.0    | 2.4   | .10   | .10  | 3.9   | 1.0   |
| 16    | .10  | .90   | .30    | 4.1   | 11    | 8.6   | 5.0    | 2.4   | .10   | .10  | 3.9   | .80   |
| 17    | .10  | 5.6   | .30    | 3.3   | 11    | 7.6   | 5.0    | 2.1   | .10   | .10  | 3.8   | .70   |
| 18    | .10  | 4.6   | .30    | 3.5   | 11    | 7.0   | 4.6    | 1.8   | .10   | 0    | 3.7   | 1.0   |
| 19    | .20  | 1.2   | .30    | 3.4   | 15    | 7.5   | 2.6    | 1.5   | .10   | 0    | 3.8   | .70   |
| 20    | .30  | .60   | .30    | 2.9   | 12    | 6.9   | 1.5    | 1.5   | .10   | .10  | 3.8   | .50   |
| 21    | .20  | .50   | .40    | 2.9   | 12    | 5.4   | .60    | 1.5   | .10   | 0    | 3.5   | .50   |
| 22    | .20  | .50   | .40    | 3.5   | 11    | 3.1   | .60    | 1.5   | .10   | 0    | 2.7   | .50   |
| 23    | .10  | 1.1   | .40    | 3.7   | 11    | 1.7   | .30    | 1.5   | .10   | 0    | .80   | .50   |
| 24    | 0    | 1.6   | 5.6    | 3.6   | 15    | 1.6   | .30    | 1.3   | .10   | 0    | .60   | .60   |
| 25    | 0    | 7.8   | 26     | 5.9   | 13    | 1.7   | .60    | 1.3   | .10   | 0    | .70   | .60   |
| 26    | 0    | 1.9   | 2.2    | 7.4   | 15    | 2.4   | .80    | 1.3   | .10   | 0    | .70   | .60   |
| 27    | 0    | .90   | 1.0    | 7.1   | 12    | 2.0   | .60    | 1.5   | .10   | 0    | .70   | .60   |
| 28    | 0    | .60   | 5.3    | 5.8   | 11    | 4.0   | .40    | 1.3   | .10   | 0    | .60   | .60   |
| 29    | .10  | .60   | 31     | 55    | ----- | 6.3   | .80    | 1.3   | .10   | 0    | .70   | .60   |
| 30    | .10  | .50   | 39     | 94    | ----- | 6.4   | .50    | 1.3   | .10   | .30  | .80   | .60   |
| 31    | .20  | ----- | 42     | 24    | ----- | 6.4   | -----  | 1.1   | ----- | .10  | .80   | ----- |
| TOTAL | 4.70 | 60.60 | 243.80 | 426.4 | 516   | 190.3 | 103.20 | 58.40 | 12.60 | 1.30 | 63.50 | 22.30 |
| MEAN  | .15  | 2.02  | 7.87   | 13.8  | 18.4  | 6.14  | 3.44   | 1.88  | .42   | .04  | 2.05  | .74   |
| AC-FT | 9.3  | 120   | 484    | 846   | 1,020 | 377   | 205    | 116   | 25    | 2.6  | 126   | 44    |

CALENDAR YEAR 1965 MAX 401 MIN 0 MEAN 13.5 AC-FT 9,780  
 WATER YEAR 1965-66 MAX 94 MIN 0 MEAN 4.67 AC-FT 3,370

Peak discharge (base, 350 cfs)---No peak above base.



11-1814. Wildcat Creek at Richmond, Calif.

Location.--Lat 37°57'41", long 122°21'33"; in San Pablo Grant, on left bank 200 ft downstream from Southern Pacific Railway bridge at east city limits of Richmond, Contra Costa County, and 2 miles upstream from mouth.

Drainage area.--8.67 sq mi.

Records available.--July 1964 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 20.62 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 482 cfs Jan. 5 (gage height, 7.82 ft), from rating curve extended above 66 cfs on basis of slope-area measurement at gage height 7.59 ft; no flow for many days.

1964-66: Maximum discharge, that of Jan. 5, 1966; no flow for many days in each year.

Remarks.--Records good. Minor storage in Lake Anza and Jewel Lake. No diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.   | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|-------|--------|-------|------|-------|------|-------|------|------|-------|
| 1     | 0    | 0      | 0     | 5.2    | 30    | 4.9  | 1.4   | 0    |       |      |      |       |
| 2     | 0    | 0      | 0     | 2.6    | 12    | 4.5  | 1.4   | 0    |       |      |      |       |
| 3     | 0    | 0      | 0     | 1.9    | 32    | 3.8  | 1.4   | 0    |       |      |      |       |
| 4     | 0    | 0      | 0     | 42     | 39    | 3.6  | 1.4   | 0    |       |      |      |       |
| 5     | 9.6  | 0      | 0     | 234    | 16    | 3.4  | 1.3   | 0    |       |      |      |       |
| 6     | 11   | 0      | 0     | 30     | 12    | 3.4  | 1.4   | 0    |       |      |      |       |
| 7     | 11   | .60    | 0     | 12     | 8.7   | 4.7  | 1.3   | 0    |       |      |      |       |
| 8     | 11   | 1.4    | 0     | 6.6    | 7.0   | 3.4  | 1.0   | 0    |       |      |      |       |
| 9     | 10   | 0      | 0     | 4.5    | 5.6   | 4.2  | 1.8   | .10  |       |      |      |       |
| 10    | 10   | 0      | 0     | 3.2    | 5.1   | 4.5  | 3.2   | .40  |       |      |      |       |
| 11    | 10   | 0      | 9.4   | 2.2    | 4.1   | 3.4  | 2.7   | 0    |       |      |      |       |
| 12    | 10   | 5.6    | 6.8   | 1.6    | 3.6   | 3.0  | 3.8   | 0    |       |      |      |       |
| 13    | 9.6  | 9.4    | 3.8   | 1.3    | 3.0   | 3.4  | 1.5   | 0    |       |      |      |       |
| 14    | 1.8  | 14     | 5.4   | .90    | 2.8   | 3.0  | 1.0   | 0    |       |      |      |       |
| 15    | 0    | 4.9    | 3.8   | .80    | 2.4   | 3.0  | .70   | 0    |       |      |      |       |
| 16    | 0    | 2.2    | 0     | .50    | 2.2   | 3.0  | .60   | 0    |       |      |      |       |
| 17    | 0    | 1.8    | 0     | .30    | 2.2   | 2.4  | .60   | 0    |       |      |      |       |
| 18    | 0    | 1.5    | 0     | .30    | 3.4   | 2.4  | .60   | 0    |       |      |      |       |
| 19    | 0    | 5.7    | 0     | .30    | 8.0   | 2.2  | .60   | 0    |       |      |      |       |
| 20    | 0    | 2.5    | 0     | .20    | 3.8   | 2.1  | .30   | 0    |       |      |      |       |
| 21    | 0    | 0      | 0     | .20    | 2.2   | 2.1  | .30   | 0    |       |      |      |       |
| 22    | 0    | 0      | 0     | .60    | 1.3   | 2.1  | .20   | 0    |       |      |      |       |
| 23    | 0    | 6.5    | 0     | .30    | 24    | 1.9  | .10   | 0    |       |      |      |       |
| 24    | 0    | 1.7    | 1.3   | .30    | 11    | 1.8  | 0     | 0    |       |      |      |       |
| 25    | 0    | 10     | 1.3   | .10    | 9.8   | 1.8  | 0     | 0    |       |      |      |       |
| 26    | 0    | 6.8    | 3.2   | .10    | 8.6   | 1.8  | 0     | 0    |       |      |      |       |
| 27    | 0    | 4.1    | 1.8   | .10    | 5.6   | 1.8  | 0     | 0    |       |      |      |       |
| 28    | 0    | 1.9    | 2.2   | 0      | 5.1   | 1.9  | 0     | 0    |       |      |      |       |
| 29    | 0    | .10    | 1.5   | 3.7    | ----- | 1.9  | 0     | 0    |       |      |      |       |
| 30    | 0    | 0      | 1.3   | 4.1    | ----- | 1.6  | 0     | 0    |       |      |      |       |
| 31    | 0    | -----  | 1.2   | 1.2    | ----- | 1.6  | ----- | 0    | ----- |      |      | ----- |
| Total | 94.0 | 125.70 | 122.2 | 442.10 | 282.2 | 88.6 | 28.60 | 0.50 | 0     | 0    | 0    | 0     |
| Mean  | 3.03 | 4.19   | 3.94  | 14.3   | 10.1  | 2.86 | 0.95  | 0.02 | 0     | 0    | 0    | 0     |
| Ac-ft | 186  | 249    | 242   | 877    | 560   | 176  | 57    | 1.0  | 0     | 0    | 0    | 0     |

Calendar year 1965 Max 134 Min 0 Mean 3.66 Ac-ft 2,650

Water year 1965-66 Max 234 Min 0 Mean 3.24 Ac-ft 2,350

Peak discharge (base, 100 cfs, revised).--Jan. 5 (0700) 482 cfs (7.82 ft); Jan. 29 (1530) 172 cfs (5.30 ft).

## RHEEM CREEK BASIN

11-1820.3 Rheem Creek at San Pablo, Calif.

Location.--Lat 37°58'38", long 122°21'10", in San Pablo Grant, on left bank 50 feet downstream from Santa Fe Railway bridge at San Pablo, Contra Costa County, and 0.7 mile upstream from mouth.

Drainage area.--1.09 sq mi.

Records available.--December 1960 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 13.63 ft above mean sea level (Corps of Engineers bench mark). Prior to Aug. 13, 1965, graphic water-stage recorder at site 0.2 mile upstream at datum 7.74 ft higher. Aug. 13 to Dec. 15, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--5 years (1961-66), 1.19 cfs (862 acre-ft per year).

Extremes.--Maximum discharge during year, 275 cfs Jan. 29 (gage height, 5.40 ft); no flow Oct. 16, Sept. 20, 21.  
1960-66: Maximum discharge, 346 cfs Jan. 20, 1964 (gage height, 3.54 ft, site and datum then in use), from rating curve extended above 140 cfs on basis of slope-area measurements at gage heights 3.30 and 3.54 ft; no flow at times in each year.

Remarks.--Records good. Low flow affected by return flow from industrial waste, leakage and infrequent releases from off stream North Reservoir.

Revisions (water years).--1962 Report: 1961(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.   | FEB.  | MAR. | APR.  | MAY  | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|-------|--------|-------|------|-------|------|-------|------|------|-------|
| 1     | 0.10 | 0.10  | 0.10  | 0.80   | 16    | 0.30 | 0.20  | 0.20 | 0.20  | 0.20 | 0.10 | 0.10  |
| 2     | .10  | .10   | .10   | .40    | .80   | .20  | .20   | .20  | .20   | .20  | .20  | .10   |
| 3     | .10  | .20   | .10   | .30    | 17    | .20  | .20   | .20  | .20   | .20  | .10  | .10   |
| 4     | .10  | .10   | .10   | 40     | 9.9   | .20  | .10   | .20  | .10   | .20  | .10  | .10   |
| 5     | .10  | .10   | .10   | 39     | 1.2   | .20  | .10   | .10  | .10   | .20  | .10  | .10   |
| 6     | .10  | .10   | .10   | 2.1    | .70   | .20  | .10   | .10  | .30   | .20  | .10  | .10   |
| 7     | .10  | 1.8   | 5.4   | .90    | .60   | 1.2  | .10   | .10  | .10   | .20  | .10  | .30   |
| 8     | .10  | 1.1   | .10   | .60    | .50   | .20  | .10   | .10  | .20   | .20  | .10  | .20   |
| 9     | .10  | .10   | .10   | .70    | .40   | 1.2  | 1.2   | .40  | .20   | .10  | .20  | .10   |
| 10    | .10  | .10   | .10   | .40    | .30   | .40  | .30   | .50  | .20   | .20  | .20  | .10   |
| 11    | .10  | .10   | 7.8   | .30    | .20   | .20  | 1.6   | .10  | .20   | .20  | .20  | .10   |
| 12    | .10  | 4.8   | .30   | .30    | .20   | .20  | .80   | .10  | .20   | .30  | .20  | .10   |
| 13    | .10  | 11    | .20   | .30    | .20   | .40  | .10   | .10  | .20   | .30  | .10  | .10   |
| 14    | .50  | 6.3   | .10   | .30    | .30   | .20  | .10   | .10  | .20   | .20  | .10  | .20   |
| 15    | .10  | .70   | .10   | .20    | .30   | .20  | .20   | .10  | .20   | .20  | .20  | .10   |
| 16    | 0    | 1.5   | .10   | .20    | .30   | .20  | .20   | .20  | .10   | .20  | .50  | .10   |
| 17    | .10  | 20    | .10   | .20    | .30   | .10  | .10   | .20  | .10   | .10  | .10  | .10   |
| 18    | .10  | 3.9   | .10   | .20    | 6.6   | .20  | .10   | .20  | .10   | .20  | .10  | .80   |
| 19    | .10  | .30   | .10   | .20    | 4.5   | .20  | .20   | .20  | .10   | .20  | .10  | .10   |
| 20    | .10  | .10   | .10   | .20    | .30   | .10  | .10   | .20  | .20   | .20  | .10  | 0     |
| 21    | .10  | .10   | .10   | .20    | .20   | .10  | .20   | .10  | .20   | .20  | .10  | 0     |
| 22    | .10  | .10   | .10   | .40    | 6.9   | .10  | .20   | .20  | .20   | .20  | .10  | .20   |
| 23    | .10  | 4.6   | .10   | .20    | .70   | .10  | .20   | .10  | .20   | .10  | .20  | .20   |
| 24    | .10  | 12    | 8.4   | .20    | 2.2   | .20  | .10   | .30  | .20   | .10  | .10  | .20   |
| 25    | .10  | 4.0   | 2.6   | .10    | 3.8   | .10  | .10   | .20  | .10   | .20  | .30  | .10   |
| 26    | .10  | .40   | .20   | .10    | .60   | .10  | .20   | .20  | .10   | .20  | .10  | .10   |
| 27    | .10  | .20   | .20   | .10    | .30   | .10  | .10   | .10  | .20   | .10  | .10  | .10   |
| 28    | .10  | .10   | 22    | .10    | .30   | .10  | .20   | .10  | .20   | .10  | .10  | .20   |
| 29    | .10  | .10   | 6.3   | 28     | ----- | .20  | .10   | .10  | .20   | .10  | .10  | .20   |
| 30    | .10  | .10   | 7.7   | 11     | ----- | .20  | .20   | .10  | .10   | .10  | .70  | .10   |
| 31    | .10  | ----- | 7.3   | 1.0    | ----- | .20  | ----- | .10  | ----- | .10  | .10  | ----- |
| TOTAL | 3.40 | 74.20 | 70.30 | 129.00 | 75.60 | 7.80 | 7.70  | 5.10 | 5.10  | 5.50 | 5.00 | 4.40  |
| MEAN  | .11  | 2.47  | 2.27  | 4.16   | 2.70  | .25  | .26   | .17  | .17   | .18  | .16  | .15   |
| AC-FT | 6.7  | 147   | 139   | 256    | 150   | 15   | 15    | 10   | 10    | 11   | 9.9  | 8.7   |

CALENDAR YEAR 1965 MAX 33 MIN 0 MEAN 1.13 AC-FT 820  
WATER YEAR 1965-66 MAX 40 MIN 0 MEAN 1.08 AC-FT 778

## Peak discharge (base, 150 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 1400 | 4.68        | 194       | 1-29 | 1445 | 5.40        | 275       |
| 1-4   | 2200 | 4.55        | 181       | 2-1  | 0545 | 4.61        | 187       |

11-1821. Pinole Creek at Pinole, Calif.

Location--Lat 37°58'21", long 122°14'43", in Pinole Grant, on left bank 0.2 mile downstream from county bridge on Pinole Valley Road 0.8 mile upstream from Pinole city boundary, Contra Costa County.

Drainage area--10.0 sq mi.

Records available--December 1938 to September 1966. Monthly discharge only for water years 1939-59, published in WSP 1735.

Gage--Water-stage recorder and concrete control. Altitude of gage is 170 ft (from topographic map).

Average discharge--27 years (1939-66), 3.44 cfs 2,490 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,200 acre-ft per year).

Extremes--Maximum discharge during year, 240 cfs Jan. 5 (gage height, 3.91 ft); no flow for many days.

1938-66: Maximum discharge, 1,660 cfs Apr. 2, 1958 (gage height, 11.63 ft); no flow at times.

Remarks--No storage or diversion above station except for minor stock ponds.

Cooperation--Records furnished by East Bay Municipal Utility District and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0.10  | 0.30  | 4.1   | 22    | 3.1  | 1.2   | 0.80  | 0.40  | 0.10 | 0    | 0.10  |
| 2     | .10  | .10   | .40   | 2.3   | 5.9   | 2.7  | 1.2   | .80   | .30   | .20  | 0    | .10   |
| 3     | .10  | .10   | .40   | 1.8   | 33    | 2.3  | 1.2   | .80   | .20   | .10  | 0    | 0     |
| 4     | .10  | .10   | .40   | 19    | 35    | 2.4  | 1.1   | .80   | .30   | .10  | 0    | 0     |
| 5     | .10  | .10   | .40   | 110   | 10    | 2.5  | 1.2   | .80   | .20   | .10  | 0    | 0     |
| 6     | .10  | .10   | .40   | 11    | 7.6   | 2.4  | 1.2   | .90   | .30   | .20  | 0    | 0     |
| 7     | 0    | .20   | .40   | 5.6   | 5.4   | 2.5  | 1.1   | .90   | .40   | .20  | 0    | .10   |
| 8     | 0    | .40   | .40   | 4.0   | 4.5   | 2.3  | 1.1   | .80   | .30   | .20  | 0    | .10   |
| 9     | .10  | .20   | .40   | 3.1   | 4.0   | 2.4  | 1.3   | .80   | .30   | .20  | 0    | 0     |
| 10    | .10  | .20   | .40   | 2.6   | 3.6   | 2.6  | 1.8   | .80   | .20   | .20  | 0    | 0     |
| 11    | .10  | .20   | .70   | 2.2   | 3.2   | 2.2  | 1.3   | .80   | .20   | .20  | 0    | 0     |
| 12    | .10  | .40   | .90   | 1.9   | 3.1   | 2.1  | 1.4   | .60   | .20   | .10  | 0    | 0     |
| 13    | 0    | .60   | .50   | 1.7   | 2.9   | 2.1  | 1.1   | .60   | .20   | .20  | 0    | 0     |
| 14    | .10  | 1.1   | .40   | 1.6   | 2.9   | 2.0  | 1.1   | .60   | .20   | .20  | 0    | 0     |
| 15    | .20  | .40   | .40   | 1.6   | 2.7   | 1.9  | 1.0   | .50   | .20   | .10  | 0    | 0     |
| 16    | .10  | .40   | .40   | 1.4   | 2.6   | 1.8  | 1.0   | .50   | .10   | 0    | 0    | 0     |
| 17    | .10  | 1.7   | .40   | 1.4   | 2.6   | 1.7  | .90   | .40   | .10   | 0    | 0    | 0     |
| 18    | .10  | 2.3   | .40   | 1.4   | 2.6   | 1.7  | 1.0   | .40   | .10   | 0    | 0    | 0     |
| 19    | .10  | .50   | .40   | 1.3   | 4.1   | 1.7  | 1.0   | .30   | .10   | 0    | 0    | .10   |
| 20    | .10  | .40   | .40   | 1.2   | 3.1   | 1.6  | 1.0   | .30   | 0     | 0    | 0    | 0     |
| 21    | .10  | .40   | .40   | 1.2   | 2.7   | 1.7  | .90   | .40   | 0     | 0    | 0    | 0     |
| 22    | .10  | .40   | .40   | 1.3   | 4.7   | 1.6  | .90   | .40   | 0     | 0    | 0    | 0     |
| 23    | 0    | .40   | .40   | 1.2   | 6.5   | 1.5  | .90   | .30   | .10   | 0    | 0    | 0     |
| 24    | 0    | 2.9   | 16    | 1.2   | 4.4   | 1.5  | .90   | .30   | .10   | 0    | 0    | 0     |
| 25    | 0    | 1.2   | 5.1   | 1.2   | 6.7   | 1.5  | .80   | .30   | 0     | 0    | 0    | .10   |
| 26    | 0    | .70   | 1.1   | 1.2   | 5.6   | 1.4  | .80   | .40   | 0     | 0    | 0    | .10   |
| 27    | .10  | .50   | .80   | 1.2   | 3.6   | 1.4  | .80   | .40   | 0     | 0    | 0    | 0     |
| 28    | .10  | .40   | 2.7   | 1.1   | 3.4   | 1.4  | .80   | .40   | 0     | 0    | 0    | 0     |
| 29    | .10  | .40   | 8.7   | 28    | ----- | 1.4  | .80   | .50   | .10   | 0    | 0    | 0     |
| 30    | .10  | .40   | 8.7   | 31    | ----- | 1.4  | .80   | .50   | .10   | 0    | .10  | 0     |
| 31    | .10  | ----- | 17    | 6.0   | ----- | 1.3  | ----- | .40   | ----- | .10  | .10  | ----- |
| Total | 2.50 | 17.30 | 94.40 | 253.8 | 198.4 | 60.1 | 31.60 | 17.50 | 4.70  | 2.50 | 0.20 | 0.70  |
| Mean  | .08  | .58   | 3.05  | 8.19  | 7.09  | 1.94 | 1.05  | .56   | .16   | .08  | .006 | .02   |
| Ac-ft | 5.0  | 34    | 187   | 503   | 394   | 119  | 63    | 35    | 9.3   | 5.0  | .4   | 1.4   |

Calendar year 1965 Max 156 Min 0 Mean 3.13 Ac-ft 2,260  
 Water year 1965-66 Max 110 Min 0 Mean 1.87 Ac-ft 1,360

Peak discharge (base, 130 cfs, revised)--Jan. 5 (0045) 240 cfs (3.91 ft); Jan. 29 (1930) 131 cfs (3.22 ft).

## ARROYO DEL HAMBRE BASIN

11-1824. Arroyo del Hambre at Martinez, Calif.

Location.--Lat 38°00'12", long 122°07'44", in Las Juntas Grant, on right bank 40 ft upstream from D Street Bridge in Martinez, Contra Costa County.

Drainage area.--15.0 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 48.33 ft above mean sea level (levels by Contra Costa County Flood Control District). Prior to May 5, 1966, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 105 cfs Feb. 1 (gage height, 3.20 ft); no flow June 19, Sept. 19-30.

1964-66: Maximum discharge, 780 cfs Jan. 5, 1965 (gage height, 6.63 ft), from rating curve extended above 90 cfs on basis of computation of maximum flow over dam; no flow at times each year.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.  | FEB.  | MAR. | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0.20  | 0.20  | 3.0   | 21    | 3.0  | 1.8   | 0.40  | 0.20  | 0.10 | 0.10 | 0.10  |
| 2     | .10  | .20   | .20   | 2.2   | 6.2   | 2.4  | 1.8   | .40   | .20   | .10  | .10  | .10   |
| 3     | .10  | .20   | .20   | 2.0   | 23    | 2.2  | 1.6   | .40   | .30   | .10  | .10  | .10   |
| 4     | .20  | .20   | .20   | 11    | 27    | 2.2  | 1.7   | .40   | .20   | .10  | .10  | .10   |
| 5     | .20  | .20   | .20   | 29    | 9.0   | 2.2  | 1.7   | .40   | .10   | .10  | .10  | .10   |
| 6     | .20  | .20   | .20   | 4.7   | 7.9   | 2.4  | 1.4   | .40   | .20   | .10  | .10  | .10   |
| 7     | .20  | .40   | .20   | 3.2   | 5.7   | 2.4  | 1.3   | .50   | .30   | .10  | .10  | .10   |
| 8     | .30  | .60   | .20   | 2.8   | 5.0   | 2.4  | 1.2   | .50   | .30   | .10  | .10  | .10   |
| 9     | .10  | .10   | .20   | 2.2   | 4.2   | 2.8  | 1.8   | .90   | .20   | .10  | .10  | .10   |
| 10    | .10  | .10   | .20   | 2.0   | 4.0   | 2.5  | 1.8   | .70   | .20   | .10  | .10  | .10   |
| 11    | .10  | .10   | 3.0   | 1.8   | 4.0   | 2.4  | 1.8   | .60   | .20   | .10  | .10  | .20   |
| 12    | .10  | 2.4   | .90   | 1.8   | 3.7   | 2.2  | 2.0   | .50   | .10   | .10  | .10  | .10   |
| 13    | .10  | 2.2   | .40   | 1.7   | 3.4   | 2.2  | 1.3   | .40   | .10   | .10  | .10  | .10   |
| 14    | .30  | 2.4   | .30   | 1.6   | 3.4   | 2.2  | 1.0   | .40   | .10   | .20  | .10  | .10   |
| 15    | .30  | .30   | .30   | 1.6   | 3.4   | 2.2  | .90   | .40   | .10   | .10  | .10  | .10   |
| 16    | .20  | 1.5   | .40   | 1.6   | 3.0   | 2.2  | 1.0   | .40   | .10   | .10  | .10  | .10   |
| 17    | .10  | 4.9   | .50   | 1.7   | 3.0   | 2.5  | .90   | .40   | .10   | .10  | .10  | .10   |
| 18    | .10  | 3.0   | .60   | 1.7   | 3.5   | 2.0  | .90   | .40   | .10   | .10  | .10  | .20   |
| 19    | .10  | .60   | .60   | 1.6   | 5.2   | 2.0  | .80   | .30   | 0     | .10  | .10  | 0     |
| 20    | .10  | .30   | .60   | 1.6   | 3.2   | 2.0  | .90   | .20   | .10   | .10  | .20  | 0     |
| 21    | .10  | .20   | .60   | 1.6   | 2.8   | 2.2  | 1.0   | .20   | .10   | .10  | .20  | 0     |
| 22    | .10  | .20   | .60   | 1.6   | 3.8   | 2.2  | 1.0   | .20   | .10   | .10  | .20  | 0     |
| 23    | .10  | .70   | .60   | 1.6   | 4.7   | 2.2  | 1.2   | .20   | .10   | .10  | .20  | 0     |
| 24    | .10  | 9.6   | 16    | 1.6   | 4.9   | 2.4  | .90   | .20   | .10   | .10  | .20  | 0     |
| 25    | .10  | 2.6   | 4.7   | 1.4   | 6.5   | 2.2  | .90   | .20   | .10   | .10  | .10  | 0     |
| 26    | .20  | .70   | 1.3   | 1.6   | 5.3   | 2.0  | 1.0   | .20   | .10   | .10  | .10  | 0     |
| 27    | .20  | .40   | .80   | 1.6   | 3.2   | 1.8  | .80   | .20   | .10   | .10  | .10  | 0     |
| 28    | .20  | .40   | 22    | 1.4   | 3.0   | 1.8  | .80   | .20   | .10   | .10  | .10  | 0     |
| 29    | .20  | .40   | 7.3   | 20    | ----- | 1.8  | .80   | .20   | .10   | .10  | .10  | 0     |
| 30    | .20  | .30   | 7.2   | 27    | ----- | 1.8  | .70   | .20   | .10   | .20  | .30  | 0     |
| 31    | .20  | ----- | 13    | 5.4   | ----- | 1.8  | ----- | .20   | ----- | .10  | .10  | ----- |
| TOTAL | 4.80 | 35.60 | 83.70 | 143.6 | 183.0 | 68.6 | 36.70 | 11.20 | 4.20  | 3.30 | 3.80 | 2.00  |
| MEAN  | .16  | 1.19  | 2.70  | 4.63  | 6.54  | 2.21 | 1.22  | .36   | .14   | .11  | .12  | .07   |
| AC-FT | 9.5  | 71    | 166   | 285   | 363   | 136  | 73    | 22    | 8.3   | 6.5  | 7.5  | 4.0   |

CALENDAR YEAR 1965 MAX 127 MIN .10 MEAN 3.04 AC-FT 2,200  
 WATER YEAR 1965-66 MAX 29 MIN 0 MEAN 1.59 AC-FT 1,150

Peak discharge (base, 100 cfs, revised).--Feb. 1 (0830) 105 cfs (3.20 ft).

11-1825. San Ramon Creek at San Ramon, Calif.

Location.--Lat 37°46'20", long 121°59'40", in sec.8, T.2 S., R.1 W., on right bank 0.2 mile downstream from Bollinger Creek and 1.0 mile southwest of San Ramon.

Drainage area.--5.89 sq mi.

Records available.--October 1952 to September 1966.

Gage.--Water-stage recorder with rain gage attachment and concrete control. Altitude of gage is 530 ft (from topographic map).

Average discharge.--14 years, 2.67 cfs (1,930 acre-ft per year); median of yearly mean discharges, 1.2 cfs (870 acre-ft per year).

Extremes.--Maximum discharge during year, 92 cfs Jan. 29 (gage height, 2.97 ft); no flow Oct. 1-6, June 26 to Sept. 30.

1952-66: Maximum discharge, 1,600 cfs Oct. 13, 1962, (gage height, 16.98 ft), from rating curve extended above 90 cfs on basis of indirect measurements of maximum flow through culvert at gage heights 12.09 and 16.98 ft; no flow for parts of each year.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.   | Feb.  | Mar. | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|-------|--------|-------|------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0.10  | 0.30  | 3.0    | 1.3   | 2.2  | 1.0   | 0.50  | 0.30  |      |      |       |
| 2     | 0    | .10   | .30   | 2.2    | 5.2   | 2.2  | 1.0   | .40   | .30   |      |      |       |
| 3     | 0    | .10   | .30   | 1.8    | 6.7   | 2.0  | 1.0   | .50   | .30   |      |      |       |
| 4     | 0    | .10   | .20   | 4.4    | 9.7   | 1.8  | 1.0   | .50   | .20   |      |      |       |
| 5     | 0    | .20   | .20   | 2.0    | 6.2   | 1.6  | 1.1   | .50   | .20   |      |      |       |
| 6     | 0    | .20   | .20   | 4.4    | 6.6   | 1.6  | 1.2   | .40   | .20   |      |      |       |
| 7     | .10  | .10   | .20   | 3.2    | 4.4   | 1.6  | 1.2   | .40   | .20   |      |      |       |
| 8     | .10  | .20   | .20   | 2.6    | 3.8   | 1.5  | 1.1   | .40   | .20   |      |      |       |
| 9     | .10  | .20   | .30   | 2.2    | 3.2   | 1.8  | 1.7   | .60   | .20   |      |      |       |
| 10    | .10  | .20   | .30   | 2.0    | 2.6   | 2.2  | 2.0   | .50   | .20   |      |      |       |
| 11    | .10  | .20   | .60   | 2.0    | 2.4   | 1.8  | 1.1   | .40   | .10   |      |      |       |
| 12    | .10  | .30   | .50   | 2.0    | 2.4   | 1.8  | 1.2   | .40   | .10   |      |      |       |
| 13    | .10  | .60   | .30   | 1.8    | 2.2   | 1.6  | 1.0   | .40   | .10   |      |      |       |
| 14    | .10  | .40   | .30   | 1.8    | 2.2   | 1.6  | 1.0   | .40   | .10   |      |      |       |
| 15    | .10  | .20   | .20   | 1.6    | 1.8   | 1.6  | .90   | .40   | .10   |      |      |       |
| 16    | .10  | .20   | .20   | 1.4    | 1.8   | 1.6  | .80   | .30   | .10   |      |      |       |
| 17    | .10  | 1.2   | .20   | 1.2    | 1.8   | 1.5  | .80   | .30   | .10   |      |      |       |
| 18    | .10  | .80   | .20   | 1.2    | 2.0   | 1.4  | .90   | .30   | .10   |      |      |       |
| 19    | .10  | .40   | .20   | 1.1    | 3.0   | 1.5  | .70   | .30   | .10   |      |      |       |
| 20    | .10  | .30   | .20   | 1.0    | 2.2   | 1.4  | .70   | .30   | .10   |      |      |       |
| 21    | .10  | .30   | .20   | 1.0    | 2.0   | 1.4  | .70   | .30   | .10   |      |      |       |
| 22    | .10  | .30   | .20   | 1.0    | 1.8   | 1.4  | .60   | .30   | .10   |      |      |       |
| 23    | .10  | .40   | .20   | 1.0    | 1.8   | 1.5  | .60   | .30   | .10   |      |      |       |
| 24    | .10  | 2.2   | 5.5   | .90    | 2.6   | 1.5  | .60   | .30   | .10   |      |      |       |
| 25    | .10  | 1.0   | 7.0   | .80    | 3.3   | 1.5  | .60   | .30   | .10   |      |      |       |
| 26    | .10  | .40   | .30   | .90    | 3.0   | 1.5  | .50   | .30   | 0     |      |      |       |
| 27    | .10  | .40   | .20   | .80    | 2.4   | 1.5  | .40   | .30   | 0     |      |      |       |
| 28    | .10  | .30   | 2.3   | .80    | 2.2   | 1.5  | .50   | .30   | 0     |      |      |       |
| 29    | .10  | .30   | 7.4   | 1.7    | ----- | 1.2  | .50   | .30   | 0     |      |      |       |
| 30    | .10  | .30   | 11    | 2.0    | ----- | 1.2  | .50   | .30   | 0     |      |      |       |
| 31    | .10  | ----- | 10    | 4.4    | ----- | 1.1  | ----- | .30   | ----- |      |      |       |
| Total | 2.50 | 12.00 | 70.40 | 109.50 | 102.3 | 49.6 | 26.90 | 11.50 | 3.80  | 0    | 0    | 0     |
| Mean  | 0.08 | 0.40  | 2.27  | 3.53   | 3.65  | 1.60 | 0.90  | 0.37  | 0.13  | 0    | 0    | 0     |
| Ac-ft | 5.0  | 24    | 140   | 217    | 203   | 98   | 53    | 23    | 7.5   | 0    | 0    | 0     |
| (†)   | 0    | 6.3   | 5.3   | 2.7    | 2.3   | 0.5  | 0.8   | 0.3   | 0     | 0.1  | 0    | 0     |

Calendar year 1965 Max 93 Min 0 Mean 3.18 Ac-ft 2,310  
 Water year 1965-66 Max 23 Min 0 Mean 1.06 Ac-ft 771

Peak discharge (base, 100 cfs).--No peak above base.

† Precipitation, in inches.

## PACHECO CREEK BASIN

11-1830. San Ramon Creek at Walnut Creek, Calif.

Location.--Lat 37°53'04", long 122°03'00", on boundary between Arroyo de las Nueces y Bolbones and San Ramon Grants, on left bank at town of Walnut Creek, Contra Costa County, 0.3 mile downstream from small tributary, and 1.2 miles upstream from confluence with Las Trampas Creek.

Drainage area.--50.8 sq mi.

Records available.--October 1952 to September 1966.

Gage.--Water-stage recorder and, since Dec. 4, 1962, concrete control. Altitude of gage is 170 ft (from topographic map).

Average discharge.--14 years, 13.3 cfs (9,630 acre-ft per year); median of yearly mean discharges, 5.5 cfs (4,000 acre-ft per year).

Extremes.--Maximum discharge during year, 814 cfs Dec. 28 (gage height, 5.16 ft); minimum daily 0.60 cfs Aug. 14.

1952-66: Maximum discharge, 7,980 cfs Jan. 31, 1963 (gage height, 14.40), from rating curve extended above 2,200 cfs on basis of computed discharge at gage height 13.16 ft; maximum gage height, 14.55 ft Dec. 23, 1955; no flow at times in most years.

Remarks.--Records good. No regulation; pumping for irrigation above station during periods of low flow.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug.  | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| 1     | 1.5  | 1.3   | 3.6   | 1.7   | 10.8  | 6.9   | 4.4   | 1.8  | 1.6   | 1.0   | 1.1   | 1.1   |
| 2     | 1.1  | 1.3   | 3.4   | 1.2   | 2.2   | 6.6   | 4.0   | 1.7  | 1.7   | 1.0   | 1.0   | 1.1   |
| 3     | 1.0  | 1.3   | 3.2   | 8.9   | 2.9   | 6.4   | 3.8   | 1.8  | 1.7   | 1.0   | .90   | 1.1   |
| 4     | 1.0  | 1.4   | 3.2   | 1.5   | 5.1   | 6.1   | 3.8   | 1.8  | 1.8   | .90   | .90   | 1.0   |
| 5     | 1.0  | 1.4   | 4.2   | 7.6   | 2.0   | 6.1   | 3.6   | 1.8  | 1.7   | .90   | .80   | 1.0   |
| 6     | 1.0  | 1.4   | 3.8   | 1.8   | 2.0   | 5.9   | 3.6   | 1.8  | 1.6   | 1.4   | .70   | .90   |
| 7     | 1.0  | 1.5   | 3.2   | 1.1   | 1.3   | 5.9   | 3.4   | 1.9  | 1.7   | 1.1   | .70   | .90   |
| 8     | 1.1  | 1.8   | 3.1   | 9.2   | 1.1   | 5.6   | 3.6   | 2.0  | 1.7   | 1.0   | .70   | .90   |
| 9     | 1.1  | 1.6   | 3.2   | 8.3   | 9.8   | 5.9   | 3.7   | 2.9  | 1.6   | .90   | .70   | .90   |
| 10    | 1.1  | 1.7   | 3.2   | 7.8   | 8.9   | 6.1   | 7.5   | 2.9  | 2.9   | .90   | .70   | .90   |
| 11    | 1.1  | 1.6   | 5.1   | 7.2   | 8.0   | 6.6   | 4.9   | 2.6  | 2.0   | .90   | .70   | .90   |
| 12    | 1.1  | 2.8   | 9.5   | 6.6   | 8.0   | 6.9   | 3.6   | 2.5  | 1.5   | .90   | .70   | .90   |
| 13    | 1.2  | 5.6   | 5.6   | 6.4   | 7.8   | 6.5   | 3.2   | 2.3  | 1.3   | 1.1   | .70   | .90   |
| 14    | 1.3  | 1.2   | 4.0   | 6.1   | 7.5   | 6.4   | 2.9   | 2.2  | 1.1   | 1.1   | .60   | .90   |
| 15    | 1.3  | 6.4   | 3.6   | 5.9   | 7.5   | 5.4   | 2.9   | 2.0  | 1.2   | 1.1   | .70   | .90   |
| 16    | 1.2  | 3.6   | 3.6   | 5.6   | 7.5   | 5.4   | 2.8   | 2.0  | 1.3   | 1.1   | 1.6   | .90   |
| 17    | 1.2  | 8.2   | 3.4   | 5.2   | 7.2   | 5.2   | 2.5   | 1.9  | 1.2   | 1.0   | 1.8   | .90   |
| 18    | 1.2  | 1.6   | 3.2   | 5.2   | 7.2   | 5.2   | 2.3   | 3.5  | 1.2   | 1.1   | 1.0   | 1.1   |
| 19    | 1.2  | 6.7   | 3.2   | 4.9   | 1.2   | 5.2   | 2.2   | 2.2  | 1.1   | 1.0   | .80   | .80   |
| 20    | 1.2  | 4.4   | 3.2   | 4.7   | 8.3   | 5.2   | 2.2   | 1.8  | 1.3   | 1.1   | .80   | .90   |
| 21    | 1.2  | 3.4   | 3.2   | 4.4   | 7.5   | 4.9   | 2.3   | 1.6  | 1.1   | .90   | .80   | .90   |
| 22    | 1.2  | 2.9   | 3.2   | 4.4   | 7.2   | 4.9   | 2.3   | 1.8  | 1.0   | 1.1   | .90   | .90   |
| 23    | 1.2  | 4.0   | 3.2   | 4.4   | 6.9   | 4.4   | 2.2   | 1.8  | 1.0   | 1.1   | 1.0   | .90   |
| 24    | 1.2  | 4.9   | 1.4   | 4.4   | 9.5   | 4.2   | 2.0   | 1.5  | 1.3   | 1.1   | .90   | .80   |
| 25    | 1.2  | 2.1   | 9.1   | 4.4   | 9.8   | 4.2   | 1.9   | 1.5  | 1.1   | 1.0   | .90   | .80   |
| 26    | 1.2  | 7.5   | 9.8   | 4.4   | 1.4   | 4.2   | 2.0   | 1.7  | 1.3   | .90   | 1.0   | .80   |
| 27    | 1.2  | 4.9   | 5.9   | 4.4   | 8.0   | 4.2   | 2.0   | 1.6  | 1.2   | .90   | .90   | .80   |
| 28    | 1.4  | 3.8   | 2.19  | 4.4   | 7.5   | 4.0   | 1.9   | 1.6  | 1.0   | 1.0   | 1.0   | .70   |
| 29    | 1.4  | 3.6   | 7.4   | 8.9   | ----- | 4.0   | 1.9   | 1.7  | 1.0   | 1.0   | 1.0   | .70   |
| 30    | 1.3  | 3.6   | 6.9   | 1.56  | ----- | 4.0   | 1.9   | 1.7  | 1.0   | 1.2   | 1.4   | .80   |
| 31    | 1.3  | ----- | 8.2   | 1.9   | ----- | 4.2   | ----- | 1.8  | ----- | 1.0   | 1.3   | ----- |
| Total | 36.7 | 185.7 | 652.8 | 540.2 | 444.1 | 166.7 | 91.3  | 61.7 | 42.2  | 31.70 | 28.70 | 27.00 |
| Mean  | 1.18 | 6.19  | 21.1  | 17.4  | 15.9  | 5.38  | 3.04  | 1.99 | 1.41  | 1.02  | 0.93  | 0.90  |
| Ac-ft | 73   | 368   | 1,290 | 1,070 | 881   | 331   | 181   | 122  | 84    | 63    | 57    | 54    |

Calendar year 1965 Max 542 Min 0.90 Mean 15.4 Ac-ft 11,140

Water year 1965-66 Max 219 Min 0.60 Mean 6.33 Ac-ft 4,580

Peak discharge (base, 500 cfs).--Dec. 28 (1900) 814 cfs (5.16 ft).

11-1835. Walnut Creek at Walnut Creek, Calif.

Location.--Lat 37°54'21", long 122°03'22", in Arroyo de las Nueces y Bolbones Grant, on right bank at Southern Pacific Railroad bridge at town of Walnut Creek, Contra Costa County, 0.7 mile downstream from confluence of San Ramon and Las Trampas Creeks.

Drainage area.--79.2 sq mi.

Records available.--October 1952 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 102.71 ft above mean sea level, datum of 1929. Prior to June 20, 1957, graphic water-stage recorder at site 0.6 mile upstream at different datum. June 20, 1957, to Oct. 5, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--14 years, 26.6 cfs (19,260 acre-ft per year); median of yearly mean discharges, 13 cfs (9,400 acre-ft per year).

Extremes.--Maximum discharge during year, 1,410 cfs Dec. 28 (gage height, 4.81 ft), from rating curve extended above 440 cfs on basis of theoretical rating of flow over dam; minimum daily, 1.5 cfs, Sept. 29. 1952-66; Maximum discharge, 12,200 cfs Apr. 2, 1958 (gage height, 20.2 ft); no flow July 29 to Nov. 7, 1954, part of July 10, 1957, Oct. 1, 1962.

Remarks.--Records good except those above 1,000 cfs, which are poor. Flow slightly regulated by storage in Lafayette Reservoir (capacity, 4,240 acre-ft). Some small diversions for irrigation above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.    | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 4.7   | 4.3   | 8.6     | 37      | 207   | 15    | 10    | 6.7   | 4.7   | 3.2   | 4.6   | 5.5   |
| 2     | 3.4   | 2.5   | 7.4     | 25      | 50    | 14    | 9.1   | 6.7   | 4.9   | 3.4   | 3.9   | 4.2   |
| 3     | 2.1   | 3.6   | 6.7     | 23      | 88    | 13    | 8.8   | 6.2   | 4.7   | 3.3   | 3.1   | 3.5   |
| 4     | 3.7   | 4.1   | 6.7     | 119     | 128   | 13    | 8.8   | 6.9   | 4.6   | 2.5   | 4.1   | 3.7   |
| 5     | 3.2   | 4.4   | 8.6     | 296     | 46    | 12    | 9.2   | 6.6   | 4.9   | 2.8   | 4.1   | 3.1   |
| 6     | 3.6   | 3.9   | 8.2     | 45      | 40    | 13    | 8.4   | 5.5   | 4.7   | 3.4   | 3.5   | 3.9   |
| 7     | 4.0   | 7.0   | 7.1     | 32      | 30    | 14    | 7.7   | 5.9   | 5.6   | 3.6   | 3.3   | 2.3   |
| 8     | 3.8   | 24    | 6.5     | 25      | 25    | 12    | 7.4   | 6.5   | 5.3   | 3.8   | 3.8   | 2.3   |
| 9     | 3.5   | 4.8   | 9.0     | 21      | 22    | 18    | 13    | 13    | 4.5   | 3.5   | 3.9   | 2.5   |
| 10    | 3.2   | 4.8   | 8.0     | 17      | 20    | 16    | 15    | 8.9   | 5.9   | 3.0   | 3.4   | 2.7   |
| 11    | 3.8   | 4.0   | 36      | 14      | 18    | 13    | 11    | 6.1   | 6.2   | 3.2   | 3.1   | 2.3   |
| 12    | 3.9   | 43    | 23      | 13      | 17    | 13    | 9.9   | 6.0   | 4.5   | 3.7   | 3.3   | 2.1   |
| 13    | 3.4   | 34    | 12      | 12      | 17    | 12    | 6.5   | 6.1   | 4.0   | 4.2   | 3.6   | 2.7   |
| 14    | 3.4   | 56    | 8.5     | 12      | 15    | 11    | 6.1   | 7.4   | 4.9   | 3.7   | 3.1   | 2.7   |
| 15    | 4.0   | 15    | 7.6     | 12      | 15    | 11    | 6.2   | 7.1   | 4.4   | 3.7   | 4.1   | 2.1   |
| 16    | 3.5   | 14    | 6.9     | 12      | 15    | 11    | 6.2   | 7.7   | 3.5   | 3.5   | 4.4   | 3.5   |
| 17    | 3.1   | 106   | 7.1     | 11      | 15    | 10    | 6.6   | 7.5   | 3.5   | 3.3   | 6.9   | 3.3   |
| 18    | 11    | 56    | 6.7     | 10      | 16    | 10    | 6.0   | 9.2   | 4.6   | 3.9   | 4.7   | 2.3   |
| 19    | 11    | 15    | 6.7     | 10      | 49    | 11    | 6.6   | 8.2   | 3.3   | 6.0   | 3.5   | 3.3   |
| 20    | 12    | 9.5   | 6.6     | 9.5     | 32    | 10    | 7.9   | 7.1   | 3.4   | 5.3   | 3.0   | 3.3   |
| 21    | 6.8   | 7.1   | 6.9     | 9.3     | 20    | 10    | 5.8   | 6.8   | 3.3   | 3.4   | 2.9   | 2.5   |
| 22    | 3.5   | 7.0   | 7.0     | 9.2     | 15    | 9.8   | 6.7   | 6.6   | 3.8   | 4.3   | 3.5   | 3.5   |
| 23    | 3.5   | 22    | 6.7     | 9.1     | 15    | 9.1   | 6.1   | 7.6   | 3.7   | 3.8   | 4.0   | 2.3   |
| 24    | 3.4   | 171   | 119     | 9.2     | 41    | 9.1   | 6.4   | 6.5   | 3.8   | 2.8   | 3.0   | 2.7   |
| 25    | 4.1   | 58    | 157     | 8.8     | 41    | 9.3   | 7.0   | 7.2   | 4.0   | 3.0   | 3.0   | 2.7   |
| 26    | 3.2   | 19    | 21      | 9.0     | 37    | 9.0   | 5.9   | 7.9   | 6.0   | 4.2   | 4.4   | 3.1   |
| 27    | 3.3   | 12    | 13      | 9.5     | 20    | 8.7   | 6.8   | 8.1   | 7.4   | 3.4   | 4.2   | 2.7   |
| 28    | 4.5   | 9.9   | 393     | 8.9     | 16    | 9.1   | 7.1   | 8.1   | 6.1   | 3.6   | 2.9   | 3.5   |
| 29    | 4.4   | 8.6   | 141     | 217     | ----- | 8.8   | 6.0   | 8.4   | 4.4   | 2.9   | 3.0   | 1.5   |
| 30    | 3.5   | 8.7   | 121     | 274     | ----- | 9.0   | 7.4   | 8.4   | 4.0   | 6.6   | 6.1   | 1.8   |
| 31    | 3.4   | ----- | 138     | 47      | ----- | 9.5   | ----- | 7.3   | ----- | 4.8   | 6.9   | ----- |
| TOTAL | 138.9 | 740.2 | 1,321.5 | 1,366.5 | 1,070 | 353.4 | 235.6 | 228.2 | 138.6 | 115.9 | 121.3 | 94.6  |
| MEAN  | 4.48  | 24.7  | 42.6    | 44.1    | 38.2  | 11.4  | 7.85  | 7.36  | 4.62  | 3.74  | 3.91  | 3.15  |
| AC-FT | 276   | 1,470 | 2,620   | 2,710   | 2,120 | 701   | 467   | 453   | 275   | 230   | 241   | 188   |

|                    |     |     |     |     |      |      |       |        |
|--------------------|-----|-----|-----|-----|------|------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 912 | MIN | 3.1 | MEAN | 32.3 | AC-FT | 23,360 |
| WATER YEAR 1965-66 | MAX | 393 | MIN | 1.5 | MEAN | 16.2 | AC-FT | 11,750 |

## Peak discharge (base, 600 cfs)

| Date  | Time  | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|-------|-------------|-----------|------|------|-------------|-----------|
| 12-25 | 00045 | 3.97        | 714       | 1-29 | 2130 | 4.12        | 820       |
| 12-28 | 1945  | 4.81        | 1,410     |      |      |             |           |

## NAPA RIVER BASIN

11-4559.5. Sulphur Creek near St. Helena, Calif.

Location.--Lat 38°29'20", long 122°28'50", in NE¼ sec.2, T.7 N., R.6 W., on right bank just downstream from private road bridge, 1,000 ft upstream from Heath Canyon and 1.3 miles southwest of St. Helena.

Drainage area.--4.50 sq mi.

Records available.--Water years 1958-66 (annual maximum). February to September 1966.

Gage.--Water-stage recorder with rain-gage attachment and crest-stage gage. Datum of gage is 303.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Oct. 25, 1957, to Jan. 31, 1966, crest-stage gage on upstream side of bridge at different datum.

Extremes.--1965-66: Maximum discharge during water year, 506 cfs Jan. 5 (gage height, 10.51 ft); minimum during period February to September, no flow June 4 to Sept. 30.

1958-66: Maximum discharge, 980 cfs Dec. 23, 1964 (gage height, 10.80 ft) by critical-depth measurement of maximum flow. Flood of Dec. 21, 1955, reached a stage of 15.80 ft, from floodmarks.

Remarks.--Records fair. No regulation or diversion above station.

Discharge, in cubic feet per second, February to September 1966

| Day   | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      |      |      |      | 26    | 7.5   | 3.0   | 1.4   | 0.10  |      |      |       |
| 2     |      |      |      |      | 15    | 6.2   | 3.0   | 1.3   | .10   |      |      |       |
| 3     |      |      |      |      | 15    | 5.8   | 2.8   | 1.3   | .10   |      |      |       |
| 4     |      |      |      | †215 | 19    | 5.6   | 2.8   | 1.4   | 0     |      |      |       |
| 5     |      |      |      |      | 16    | 5.1   | 2.6   | 1.3   | 0     |      |      |       |
| 6     |      |      |      |      | 17    | 4.8   | 2.4   | 1.2   | 0     |      |      |       |
| 7     |      |      |      |      | 15    | 5.1   | 2.4   | 1.0   | 0     |      |      |       |
| 8     |      |      |      |      | 13    | 4.6   | 2.4   | 1.2   | 0     |      |      |       |
| 9     |      |      |      |      | 12    | 6.8   | 3.0   | 1.0   | 0     |      |      |       |
| 10    |      |      |      |      | 11    | 11    | 3.6   | 1.0   | 0     |      |      |       |
| 11    |      |      |      |      | 9.2   | 6.6   | 3.4   | 1.0   | 0     |      |      |       |
| 12    |      |      |      |      | 8.3   | 6.2   | 4.1   | 1.0   | 0     |      |      |       |
| 13    |      |      |      |      | 7.5   | 6.2   | 3.2   | .90   | 0     |      |      |       |
| 14    |      |      |      |      | 7.1   | 5.8   | 2.4   | .80   | 0     |      |      |       |
| 15    |      |      |      |      | 6.6   | 5.6   | 2.2   | .70   | 0     |      |      |       |
| 16    |      |      |      |      | 6.2   | 5.3   | 2.2   | 1.4   | 0     |      |      |       |
| 17    |      |      |      |      | 5.8   | 5.3   | 2.2   | 1.6   | 0     |      |      |       |
| 18    |      |      |      |      | 5.9   | 5.1   | 2.0   | 1.4   | 0     |      |      |       |
| 19    |      |      |      |      | 13    | 5.1   | 1.8   | 1.3   | 0     |      |      |       |
| 20    |      |      |      |      | 7.9   | 4.8   | 1.8   | 1.3   | 0     |      |      |       |
| 21    |      |      |      |      | 6.6   | 4.4   | 1.8   | 1.2   | 0     |      |      |       |
| 22    |      |      |      |      | 7.1   | 4.1   | 1.8   | 1.0   | 0     |      |      |       |
| 23    |      |      |      |      | 7.1   | 3.9   | 1.6   | .90   | 0     |      |      |       |
| 24    |      |      |      |      | 7.9   | 3.9   | 1.6   | .90   | 0     |      |      |       |
| 25    |      |      |      |      | 11    | 3.9   | 1.4   | .70   | 0     |      |      |       |
| 26    |      |      |      |      | 11    | 3.9   | 1.4   | .60   | 0     |      |      |       |
| 27    |      |      |      |      | 9.2   | 3.6   | 1.4   | .50   | 0     |      |      |       |
| 28    |      |      |      |      | 8.3   | 3.6   | 1.4   | .20   | 0     |      |      |       |
| 29    |      |      |      |      | ----- | 3.4   | 1.4   | .20   | 0     |      |      |       |
| 30    |      |      |      |      | ----- | 3.2   | 1.4   | .20   | 0     |      |      |       |
| 31    |      |      |      | †8.9 | ----- | 3.0   | ----- | 1.0   | ----- |      |      | ----- |
| Total |      |      |      |      | 304.7 | 159.4 | 68.5  | 30.00 | 0.30  | 0    | 0    | 0     |
| Mean  |      |      |      |      | 10.9  | 5.14  | 2.28  | .97   | .01   | 0    | 0    | 0     |
| Ac-ft |      |      |      |      | 604   | 316   | 136   | 60    | .60   | 0    | 0    | 0     |
| (#)   |      |      |      |      | 5.6   | 1.0   | 1.3   | 0     | 0     | 0    | 0.2  | 0.2   |

|               |     |     |      |       |
|---------------|-----|-----|------|-------|
| Calendar year | Max | Min | Mean | Ac-ft |
| Water year    | Max | Min | Mean | Ac-ft |

† Result of discharge measurement.

# Precipitation, in inches.



11-4560. Napa River near St. Helena, Calif.

Location.--Lat 38°29'40", long 122°25'50", in SE¼ sec.32, T.8 N., R.5 W., on right bank 0.2 mile upstream from highway bridge, 1.3 miles northeast of Zinfandel, and 2.5 miles east of St. Helena.

Drainage area.--81.4 sq mi.

Records available.--October 1929 to September 1932, October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 173.17 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Nov. 22, 1958, graphic water-stage recorder at datum 1.00 ft higher. Nov. 22, 1958 to Sept. 25, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--30 years, 87.6 cfs (63,420 acre-ft per year); median of yearly mean discharges, 68 cfs (49,200 acre-ft per year).

Extremes.--Maximum discharge during year, 9,190 cfs Jan. 5 (gage height, 13.13 ft); minimum daily, 0.10 cfs Aug. 6.

1929-32, 1939-66: Maximum discharge, 12,600 cfs Dec. 22, 1955 (gage height, 16.17 ft, present datum); no flow at times in 1947-49, 1952-57, 1959-64.

Remarks.--Records good. No regulation; small diversions above station for irrigation. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.    | Jan.   | Feb.   | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|-------|---------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.80  | 2.2   | 18      | 211    | 547    | 103   | 31    | 16    | 6.8   | 1.4   | 0.70  | 0.80  |
| 2     | .50   | 1.9   | 16      | 146    | 342    | 85    | 30    | 16    | 6.1   | 1.3   | .80   | .80   |
| 3     | .80   | 2.2   | 15      | 154    | 396    | 76    | 28    | 16    | 6.4   | 1.4   | .30   | .90   |
| 4     | 1.2   | 2.2   | 14      | 3,220  | 795    | 72    | 27    | 16    | 6.4   | 1.2   | .20   | 1.1   |
| 5     | 1.4   | 2.2   | 13      | 5,390  | 497    | 68    | 27    | 15    | 5.4   | 1.2   | .20   | .80   |
| 6     | 1.8   | 2.0   | 13      | 1,250  | 346    | 64    | 25    | 14    | 6.1   | 1.3   | .10   | .60   |
| 7     | 1.4   | 2.2   | 13      | 642    | 256    | 63    | 25    | 14    | 7.3   | 1.5   | .30   | .70   |
| 8     | .90   | 30    | 12      | 433    | 202    | 58    | 27    | 14    | 6.6   | 1.6   | .20   | .90   |
| 9     | .60   | 7.6   | 12      | 300    | 164    | 69    | 31    | 15    | 5.4   | 2.0   | .20   | .90   |
| 10    | .50   | 4.8   | 12      | 226    | 137    | 134   | 41    | 15    | 4.8   | 1.9   | .20   | .90   |
| 11    | .60   | 4.4   | 12      | 179    | 118    | 102   | 41    | 15    | 4.6   | 1.5   | .20   | .80   |
| 12    | .80   | 5.2   | 15      | 150    | 105    | 85    | 63    | 14    | 5.0   | 1.6   | .20   | .80   |
| 13    | .90   | 15    | 13      | 127    | 93     | 83    | 44    | 13    | 4.6   | 1.3   | .20   | .90   |
| 14    | .80   | 91    | 12      | 112    | 87     | 76    | 36    | 13    | 3.9   | .90   | .20   | .80   |
| 15    | .60   | 30    | 12      | 98     | 79     | 70    | 32    | 12    | 3.7   | .90   | .30   | .80   |
| 16    | .80   | 14    | 11      | 85     | 72     | 65    | 30    | 12    | 4.1   | .90   | .40   | .80   |
| 17    | 1.1   | 28    | 11      | 77     | 68     | 59    | 28    | 10    | 3.0   | 1.4   | .30   | .80   |
| 18    | 1.7   | 134   | 10      | 73     | 64     | 57    | 28    | 9.7   | 2.8   | 1.5   | .30   | .90   |
| 19    | 1.7   | 75    | 10      | 67     | 168    | 56    | 25    | 9.7   | 3.5   | 1.3   | .20   | 1.0   |
| 20    | 2.8   | 42    | 10      | 62     | 119    | 53    | 23    | 9.1   | 3.4   | 1.7   | .50   | .80   |
| 21    | 2.2   | 25    | 10      | 57     | 96     | 50    | 24    | 9.7   | 2.8   | 1.6   | .60   | .80   |
| 22    | 2.8   | 18    | 10      | 55     | 90     | 47    | 21    | 8.8   | 2.4   | 1.7   | .50   | .80   |
| 23    | 2.8   | 16    | 9.7     | 53     | 102    | 45    | 19    | 8.1   | 2.3   | 1.8   | .90   | .70   |
| 24    | 1.8   | 163   | 106     | 51     | 108    | 44    | 17    | 8.1   | 2.3   | 1.6   | .50   | .50   |
| 25    | 1.5   | 110   | 216     | 46     | 123    | 44    | 18    | 8.1   | 2.4   | 1.6   | .40   | 1.0   |
| 26    | 1.6   | 57    | 92      | 45     | 164    | 38    | 18    | 7.8   | 2.6   | 1.7   | .40   | .80   |
| 27    | 1.7   | 39    | 57      | 41     | 122    | 36    | 17    | 7.3   | 2.2   | 2.0   | .40   | .60   |
| 28    | 1.8   | 30    | 648     | 38     | 110    | 33    | 16    | 7.1   | 2.4   | 1.1   | .30   | .50   |
| 29    | 1.8   | 24    | 556     | 158    | -----  | 33    | 17    | 7.1   | 1.3   | .90   | .40   | .70   |
| 30    | 2.0   | 20    | 342     | 434    | -----  | 32    | 16    | 7.3   | 1.6   | .80   | .50   | .90   |
| 31    | 2.2   | ----- | 391     | 209    | -----  | 31    | ----- | 7.6   | ----- | 1.4   | .60   | ----- |
| Total | 44.60 | 997.9 | 2,691.7 | 14,189 | 5,570  | 1,931 | 825   | 355.5 | 122.2 | 44.00 | 11.50 | 24.10 |
| Mean  | 1.44  | 33.3  | 86.8    | 458    | 199    | 62.3  | 27.5  | 11.5  | 4.07  | 1.42  | .37   | .80   |
| Ac-ft | 88    | 1,980 | 5,340   | 28,140 | 11,050 | 3,830 | 1,640 | 705   | 242   | 87    | 23    | 48    |

Calendar year 1965 Max 5,540 Min 0.50 Mean 84.8 Ac-ft 61,420

Water year 1965-66 Max 5,390 Min 0.10 Mean 73.4 Ac-ft 53,170

Peak discharge (base, 2,300 cfs).--Jan. 5 (0500) 9190 cfs (13.13 ft).

11-4570. Dry Creek near Napa, Calif.

Location.--Lat 38°21'23", long 122°21'50", in Napa Grant, on right bank 3.7 miles upstream from mouth and 5.5 miles northwest of Napa, Napa County.

Drainage area.--17.4 sq mi.

Records available.--January 1951 to September 1966 (discontinued).

Gage.--Water-stage recorder and, since June 14, 1955, concrete control. Altitude of gage is 190 ft (from topographic map). Prior to June 14, 1955, at site 350 ft downstream at different datum.

Average discharge.--15 years, 19.6 cfs (14,190 acre-ft per year); median of yearly mean discharges, 15 cfs (10,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,100 cfs Jan. 5 (gage height, 5.52 ft); no flow for many days.

1951-66: Maximum discharge, 3,460 cfs Feb. 24, 1958 (gage height, 8.11 ft); no flow for many days in each year.

Remarks.--Records good. No regulation; several small diversions for irrigation above station. Occasional diversion around station through 6-inch pipe for domestic use on farm below station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0    | 0.10   | 3.5   | 42    | 74    | 26    | 8.8   | 4.0  | 1.5   | 0.30 |      |       |
| 2     | 0    | .10    | 3.0   | 31    | 57    | 24    | 8.6   | 3.6  | 1.4   | .20  |      |       |
| 3     | 0    | .10    | 2.7   | 26    | 64    | 22    | 8.3   | 3.5  | 1.4   | .20  |      |       |
| 4     | .10  | .20    | 2.6   | 436   | 117   | 21    | 6.9   | 3.5  | 1.2   | .10  |      |       |
| 5     | .10  | .20    | 2.4   | 744   | 83    | 20    | 5.6   | 3.4  | 1.2   | .10  |      |       |
| 6     | 0    | .20    | 2.3   | 246   | 69    | 19    | 5.6   | 3.4  | 1.4   | .10  |      |       |
| 7     | 0    | .20    | 2.3   | 126   | 57    | 18    | 5.6   | 3.0  | 1.8   | .10  |      |       |
| 8     | 0    | .20    | 2.3   | 79    | 48    | 17    | 5.5   | 3.0  | 1.4   | .10  |      |       |
| 9     | 0    | .40    | 2.4   | 59    | 39    | 17    | 5.9   | 3.0  | 1.2   | .10  |      |       |
| 10    | 0    | .40    | 2.4   | 48    | 35    | 20    | 6.8   | 3.2  | 1.1   | .10  |      |       |
| 11    | 0    | .40    | 3.5   | 38    | 29    | 17    | 6.6   | 3.0  | .80   | .20  |      |       |
| 12    | 0    | .80    | 5.6   | 32    | 26    | 16    | 7.1   | 2.7  | .70   | .20  |      |       |
| 13    | .10  | 4.5    | 4.2   | 27    | 23    | 15    | 6.0   | 2.4  | .60   | .10  |      |       |
| 14    | .10  | 18     | 3.5   | 24    | 21    | 15    | 5.8   | 2.3  | .60   | .10  |      |       |
| 15    | .10  | 12     | 3.2   | 21    | 20    | 14    | 5.5   | 2.3  | .60   | .10  |      |       |
| 16    | .10  | 6.4    | 3.0   | 19    | 18    | 14    | 5.4   | 2.1  | .60   | .10  |      |       |
| 17    | .10  | 20     | 2.9   | 17    | 17    | 13    | 5.2   | 2.1  | .70   | .10  |      |       |
| 18    | .10  | 31     | 2.7   | 16    | 17    | 13    | 5.1   | 2.0  | .60   | .10  |      |       |
| 19    | .10  | 14     | 2.7   | 15    | 43    | 12    | 4.9   | 1.6  | .50   | .10  |      |       |
| 20    | .10  | 8.1    | 2.7   | 14    | 26    | 12    | 4.8   | 1.8  | .50   | .10  |      |       |
| 21    | .10  | 5.4    | 2.7   | 13    | 22    | 12    | 4.8   | 1.8  | .50   | .10  |      |       |
| 22    | .10  | 4.0    | 2.7   | 13    | 21    | 11    | 4.6   | 1.8  | .40   | .10  |      |       |
| 23    | .10  | 3.8    | 2.6   | 12    | 24    | 11    | 4.6   | 1.6  | .40   | 0    |      |       |
| 24    | .10  | 22     | 2.7   | 12    | 26    | 11    | 4.6   | 1.6  | .40   | .10  |      |       |
| 25    | .10  | 17     | 3.1   | 11    | 32    | 10    | 4.6   | 1.5  | .30   | .10  |      |       |
| 26    | .10  | 10     | 2.0   | 11    | 39    | 10    | 4.6   | 1.5  | .30   | .10  |      |       |
| 27    | .10  | 7.7    | 1.6   | 11    | 31    | 10    | 4.4   | 1.5  | .20   | .10  |      |       |
| 28    | .10  | 6.0    | 1.3   | 10    | 29    | 9.9   | 4.4   | 1.5  | .30   | .10  |      |       |
| 29    | .10  | 5.1    | 7.0   | 41    | ----- | 9.5   | 4.1   | 1.5  | .30   | .10  |      |       |
| 30    | .10  | 4.4    | 5.7   | 78    | ----- | 9.3   | 4.1   | 1.6  | .30   | .10  |      |       |
| 31    | .10  | -----  | 6.2   | 43    | ----- | 9.1   | ----- | 1.5  | ----- | .10  |      | ----- |
| Total | 2.10 | 202.70 | 463.9 | 2,315 | 1,107 | 457.8 | 168.8 | 73.3 | 23.20 | 3.60 | 0    | 0     |
| Mean  | .07  | 6.76   | 15.0  | 74.7  | 39.5  | 14.8  | 5.63  | 2.36 | .77   | .12  | 0    | 0     |
| Ac-ft | 4.2  | 402    | 920   | 4,590 | 2,200 | 908   | 335   | 145  | 46    | 7.1  | 0    | 0     |

Calendar year 1965 Max 856 Min 0 Mean 17.8 Ac-ft 12,860

Water year 1965-66 Max 744 Min 0 Mean 13.2 Ac-ft 9,550

Peak discharge (base, 450 cfs).--Jan. 5 (0400) 1,100 cfs (5.52 ft).

11-4580. Napa River near Napa, Calif.

Location.--Lat 38°22'06", long 122°18'08", in Yajome Grant, on left bank at downstream side of Oak Knoll Avenue bridge, 0.4 mile downstream from Dry Creek and 5 miles north of Napa, Napa County.

Drainage area.--218 sq mi.

Records available.--October 1929 to September 1932, October 1959 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 24.74 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 2, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--10 years, 130 cfs (94,120 acre-ft per year).

Extremes.--Maximum discharge during year, 11,100 cfs Jan. 5 (gage height, 21.51 ft); no flow for several days.

1929-32, 1959-66: Maximum discharge, 16,900 cfs Jan. 31, 1963 (gage height, 27.59 ft); no flow at times in each year.

Remarks.--Records good. Flow slightly regulated by Lake Hennessey beginning in December 1945 (capacity, 31,000 acre-ft). Numerous diversions for irrigation above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.  | JAN.   | FEB.   | MAR.  | APR.  | MAY   | JUNE   | JULY  | AUG.  | SEPT. |
|-------|------|---------|-------|--------|--------|-------|-------|-------|--------|-------|-------|-------|
| 1     | 1.7  | 2.3     | 34    | 372    | 1,100  | 240   | 57    | 25    | 9.2    | 0.80  | 0.50  | 0.50  |
| 2     | 2.3  | 2.3     | 29    | 267    | 842    | 210   | 56    | 23    | 7.6    | .40   | .40   | .60   |
| 3     | 1.8  | 3.5     | 27    | 237    | 822    | 183   | 54    | 21    | 3.1    | .40   | .20   | .10   |
| 4     | 1.3  | 3.0     | 25    | 3,010  | 1,800  | 173   | 51    | 20    | 5.0    | .20   | 0     | 0     |
| 5     | 1.8  | 3.8     | 23    | 8,730  | 1,180  | 163   | 51    | 22    | 5.0    | .20   | .10   | 0     |
| 6     | 4.4  | 2.8     | 22    | 3,090  | 846    | 157   | 51    | 21    | 5.8    | .40   | .60   | 0     |
| 7     | 3.3  | 1.5     | 21    | 1,590  | 644    | 149   | 51    | 22    | 7.0    | .40   | .60   | 0     |
| 8     | 2.8  | 3.3     | 20    | 1,090  | 511    | 141   | 51    | 20    | 7.6    | .50   | 1.0   | 0     |
| 9     | 2.3  | 13      | 20    | 782    | 408    | 143   | 51    | 22    | 6.2    | .50   | 1.1   | 0     |
| 10    | 2.1  | 12      | 20    | 641    | 351    | 228   | 65    | 23    | 5.4    | .40   | .50   | 0     |
| 11    | 1.6  | 6.8     | 21    | 557    | 297    | 195   | 62    | 23    | 3.8    | 1.3   | .30   | 0     |
| 12    | 1.4  | 6.8     | 27    | 480    | 264    | 168   | 81    | 20    | 4.6    | 1.3   | .40   | 0     |
| 13    | 1.2  | 12      | 25    | 417    | 230    | 159   | 71    | 21    | 4.2    | .80   | .50   | 0     |
| 14    | 1.6  | 91      | 21    | 378    | 213    | 151   | 56    | 19    | 2.0    | .60   | .80   | 0     |
| 15    | 2.3  | 80      | 19    | 348    | 195    | 137   | 53    | 18    | 1.3    | .60   | .50   | 0     |
| 16    | 2.1  | 41      | 18    | 315    | 178    | 130   | 53    | 17    | .80    | .60   | .40   | 0     |
| 17    | 1.5  | 46      | 16    | 285    | 170    | 123   | 50    | 16    | 1.5    | .60   | 1.0   | 0     |
| 18    | 1.4  | 216     | 16    | 264    | 161    | 116   | 49    | 15    | 2.3    | .50   | .80   | 0     |
| 19    | 1.8  | 144     | 14    | 246    | 369    | 109   | 45    | 15    | 3.0    | .50   | .90   | 0     |
| 20    | 2.8  | 95      | 14    | 230    | 309    | 101   | 37    | 14    | 3.4    | .20   | .80   | 0     |
| 21    | 3.3  | 56      | 14    | 215    | 238    | 96    | 38    | 14    | 2.8    | .20   | 1.1   | .40   |
| 22    | 3.8  | 40      | 14    | 208    | 218    | 92    | 37    | 15    | 1.9    | .20   | 1.3   | .30   |
| 23    | 3.5  | 33      | 14    | 200    | 252    | 90    | 33    | 14    | .60    | .10   | .60   | .30   |
| 24    | 3.3  | 202     | 61    | 193    | 255    | 83    | 32    | 13    | .40    | 0     | .50   | .40   |
| 25    | 3.5  | 232     | 408   | 183    | 261    | 81    | 31    | 13    | .60    | 0     | .20   | .30   |
| 26    | 2.8  | 119     | 196   | 178    | 381    | 74    | 32    | 12    | 2.3    | .10   | .50   | .60   |
| 27    | 2.8  | 78      | 123   | 170    | 291    | 72    | 30    | 11    | 2.8    | .10   | .50   | .60   |
| 28    | 2.6  | 61      | 711   | 157    | 255    | 69    | 28    | 10    | 1.3    | 0     | .60   | .60   |
| 29    | 2.3  | 48      | 977   | 396    | -----  | 66    | 25    | 12    | 1.3    | 0     | .50   | .60   |
| 30    | 2.1  | 40      | 536   | 1,120  | -----  | 63    | 23    | 11    | 1.3    | .10   | .50   | .50   |
| 31    | 2.1  | -----   | 582   | 623    | -----  | 59    | ----- | 10    | -----  | .10   | .50   | ----- |
| TOTAL | 73.6 | 1,695.1 | 4,068 | 26,972 | 13,041 | 4,021 | 1,404 | 532   | 104.10 | 12.10 | 18.30 | 5.80  |
| MEAN  | 2.37 | 56.5    | 131   | 870    | 466    | 130   | 46.8  | 17.2  | 3.47   | .39   | .59   | .19   |
| AC-FT | 146  | 3,360   | 8,070 | 53,500 | 25,870 | 7,980 | 2,780 | 1,060 | 206    | 24    | 36    | 12    |

CALENDAR YEAR 1965 MAX 8,170 MIN .20 MEAN 170 AC-FT 123,200  
 WATER YEAR 1965-66 MAX 8,730 MIN 0 MEAN 142 AC-FT 103,000

Peak discharge (base, 2,500 cfs).--Jan. 5 (0630) 11,100 cfs (21.51 ft).

## NAPA RIVER BASIN

11-4582. Redwood Creek near Napa, Calif.

Location.--Lat 38°19'05", long 122°20'35", in Napa Grant, on right bank 2.9 miles upstream from confluence with Browns Valley Creek and 3.4 miles northwest of Napa, Napa County.

Drainage area.--9.81 sq mi.

Records available.--July 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 166.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge.--8 years, 7.64 cfs (5,530 acre-ft per year).

Extremes.--Maximum discharge during year, 1,250 cfs Jan. 5 (gage height, 9.50 ft), from rating curve extended above 330 cfs as explained below; no flow for many days.

1958-66: Maximum discharge, 1,450 cfs Jan. 5, 1965 (gage height, 10.44 ft), from rating curve extended above 330 cfs on basis of slope-area measurement at gage height 8.60 ft; no flow for many days in each year.

Remarks.--Records good. Small storage and release affects summer flow.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.    | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|--------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 1.0   | 4.1    | 14      | 42    | 13    | 2.9   | 1.5   | 0.70  | 0.10 |      |       |
| 2     | 0    | 0     | 1.2    | 8.5     | 27    | 11    | 2.7   | 1.2   | .80   | .10  |      |       |
| 3     | 0    | 0     | 1.1    | 6.7     | 33    | 9.2   | 2.6   | 1.1   | .70   | .10  |      |       |
| 4     | 0    | 0     | 1.0    | 399     | 59    | 8.9   | 2.2   | 1.2   | .70   | 0    |      |       |
| 5     | 0    | 0     | 1.0    | 693     | 37    | 8.5   | 2.2   | 1.3   | .60   | .10  |      |       |
| 6     | 0    | 0     | .90    | 138     | 30    | 8.2   | 2.4   | 1.3   | .60   | .10  |      |       |
| 7     | 0    | 0     | .80    | 59      | 25    | 7.8   | 2.6   | 1.4   | .60   | 0    |      |       |
| 8     | 0    | 0     | .80    | 40      | 22    | 7.4   | 2.6   | 1.6   | .50   | 0    |      |       |
| 9     | 0    | 0     | .80    | 30      | 19    | 7.4   | 2.6   | 1.5   | .50   | 0    |      |       |
| 10    | 0    | 0     | .80    | 25      | 17    | 14    | 4.3   | 1.8   | .50   | 0    |      |       |
| 11    | 0    | 0     | 1.0    | 22      | 14    | 10    | 3.8   | 1.9   | .40   | 0    |      |       |
| 12    | 0    | 0     | 2.2    | 19      | 12    | 8.9   | 4.6   | 1.6   | .30   | 0    |      |       |
| 13    | 0    | 1.2   | 1.5    | 16      | 10    | 8.9   | 3.8   | 1.5   | .30   | 0    |      |       |
| 14    | 0    | 1.1   | 1.4    | 14      | 8.9   | 8.5   | 3.3   | 1.3   | .20   | 0    |      |       |
| 15    | 0    | 5.5   | 1.2    | 13      | 8.2   | 8.2   | 3.1   | 1.3   | .20   | 0    |      |       |
| 16    | 0    | 2.6   | 1.1    | 10      | 7.4   | 7.4   | 2.8   | 1.3   | .20   | 0    |      |       |
| 17    | 0    | 8.6   | 1.3    | 9.2     | 7.1   | 7.1   | 2.4   | 1.0   | .20   | 0    |      |       |
| 18    | 0    | 1.3   | .90    | 8.5     | 6.7   | 6.4   | 2.2   | .90   | .20   | 0    |      |       |
| 19    | 0.3  | 5.3   | .80    | 8.2     | 31    | 6.0   | 2.2   | .80   | .10   | 0    |      |       |
| 20    | 4.3  | 3.3   | .80    | 7.1     | 18    | 5.5   | 2.2   | .80   | .10   | 0    |      |       |
| 21    | .20  | 2.2   | .80    | 6.7     | 13    | 5.5   | 1.9   | .90   | .10   | 0    |      |       |
| 22    | .20  | 1.6   | .80    | 6.4     | 12    | 5.0   | 1.8   | 1.1   | .10   | 0    |      |       |
| 23    | .20  | 1.5   | .80    | 5.8     | 18    | 4.8   | 1.5   | 1.0   | .10   | 0    |      |       |
| 24    | .10  | 9.2   | 13     | 5.3     | 16    | 4.6   | 1.4   | .80   | .10   | 0    |      |       |
| 25    | .10  | 7.1   | 14     | 5.0     | 17    | 4.3   | 1.4   | .80   | .10   | 0    |      |       |
| 26    | .10  | 3.8   | 6.0    | 4.8     | 21    | 3.6   | 1.5   | .70   | .10   | 0    |      |       |
| 27    | .10  | 2.9   | 3.3    | 4.6     | 16    | 3.4   | 1.4   | .70   | .10   | 0    |      |       |
| 28    | .10  | 2.4   | 3.0    | 4.1     | 14    | 3.6   | 1.4   | .70   | .10   | 0    |      |       |
| 29    | 0    | 1.9   | 24     | 30      | ----- | 3.3   | 1.5   | .70   | .10   | 0    |      |       |
| 30    | 0    | 3.1   | 27     | 53      | ----- | 3.1   | 1.5   | .70   | .10   | 0    |      |       |
| 31    | 0    | ----- | 30     | 24      | ----- | 3.1   | ----- | .70   | ----- | 0    |      | ----- |
| Total | 5.70 | 87.2  | 174.40 | 1,689.9 | 561.3 | 216.6 | 72.8  | 351.0 | 9.40  | 0.50 | 0    | 0     |
| Mean  | .18  | 2.91  | 5.63   | 54.5    | 20.0  | 6.99  | 2.43  | 1.13  | .31   | .02  | 0    | 0     |
| Ac-ft | 11   | 173   | 346    | 3,350   | 1,110 | 430   | 144   | 70    | 19    | 1.0  | 0    | 0     |

Calendar year 1965 Max 417 Min 0 Mean 8.32 Ac-ft 6,020

Water year 1965-66 Max 693 Min 0 Mean 7.82 Ac-ft 5,660

Peak discharge (base, 200 cfs).--Jan. 5 (0500) 1,250 cfs (9.50 ft).

11-4585. Sonoma Creek at Boyes Hot Springs, Calif.

Location.--Lat 38°18'49", long 122°29'09", in Agua Caliente Grant, on left bank 10 ft downstream from county highway bridge at Boyes Hot Springs, Sonoma County, and 2.2 miles northwest of Sonoma.

Drainage area.--62.2 sq mi.

Records available.--February 1955 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 90.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 30, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--11 years, 66.1 cfs (47,850 acre-ft per year); median of yearly mean discharges, 55 cfs (39,800 acre-ft per year).

Extremes.--Maximum discharge during year, 8,180 cfs Jan. 5 (gage height, 13.60 ft); minimum daily, 0.20 cfs Sept. 22, 23. 1955-66: Maximum discharge, 8,880 cfs Dec. 22, 1955 (gage height, 17.10 ft);, from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year except 1965-66.

Remarks.--Records fair. Some regulation during summer months at swimming pools above station. No diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.    | JAN.   | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 1.2   | 1.0   | 14      | 124    | 374   | 72    | 27    | 6.9   | 9.5   | 0.90  | 1.7   | 1.4   |
| 2     | 1.0   | 1.5   | 12      | 94     | 231   | 65    | 29    | 6.4   | 6.6   | .60   | 1.2   | 1.4   |
| 3     | 1.0   | 1.2   | 11      | 85     | 288   | 64    | 28    | 5.9   | 7.4   | .80   | 1.4   | .90   |
| 4     | .90   | 1.3   | 10      | 3,230  | 432   | 64    | 23    | 7.4   | 6.4   | .60   | 1.4   | 1.4   |
| 5     | .80   | 1.3   | 10      | 4,960  | 294   | 62    | 19    | 7.4   | 5.4   | .60   | .80   | 1.1   |
| 6     | 1.2   | 1.2   | 9.0     | 964    | 252   | 62    | 18    | 7.4   | 5.9   | 1.2   | .80   | .80   |
| 7     | 1.1   | 1.3   | 9.0     | 476    | 214   | 62    | 19    | 5.5   | 6.4   | 1.9   | .80   | .80   |
| 8     | .90   | 3.5   | 9.0     | 299    | 187   | 62    | 18    | 7.0   | 3.5   | 1.9   | .80   | .90   |
| 9     | 1.1   | 2.2   | 9.0     | 238    | 163   | 68    | 29    | 7.0   | 2.8   | 1.9   | .90   | 1.1   |
| 10    | 1.3   | 1.8   | 7.8     | 187    | 148   | 88    | 47    | 14    | 3.2   | 1.9   | .90   | 1.2   |
| 11    | 1.5   | 1.6   | 14      | 152    | 129   | 59    | 38    | 15    | 1.9   | 2.8   | .60   | 1.1   |
| 12    | 1.1   | 4.9   | 24      | 193    | 113   | 58    | 59    | 15    | 1.7   | 1.9   | .90   | .90   |
| 13    | .80   | 39    | 17      | 117    | 99    | 56    | 40    | 14    | 1.7   | 1.8   | 1.6   | .80   |
| 14    | .90   | 50    | 12      | 101    | 88    | 54    | 30    | 15    | 1.7   | 2.8   | .90   | .80   |
| 15    | 1.1   | 42    | 11      | 89     | 77    | 52    | 28    | 12    | 1.6   | 2.8   | 1.1   | .60   |
| 16    | 1.1   | 12    | 9.0     | 77     | 68    | 50    | 27    | 6.6   | 1.5   | 3.8   | 1.2   | .60   |
| 17    | .80   | 72    | 8.2     | 68     | 60    | 49    | 26    | 10    | 1.4   | 2.8   | 1.7   | .50   |
| 18    | 1.0   | 76    | 8.2     | 59     | 53    | 47    | 26    | 9.8   | 1.3   | 2.8   | .50   | .50   |
| 19    | .80   | 31    | 7.8     | 49     | 166   | 46    | 20    | 5.9   | 2.2   | 1.9   | .80   | .40   |
| 20    | .80   | 22    | 7.4     | 44     | 89    | 45    | 17    | 5.4   | 1.7   | 1.9   | .90   | .30   |
| 21    | .90   | 15    | 7.4     | 44     | 71    | 42    | 18    | 5.1   | 1.9   | 1.6   | .90   | .30   |
| 22    | .80   | 12    | 7.8     | 42     | 71    | 40    | 18    | 5.9   | 2.2   | .40   | 1.2   | .20   |
| 23    | .90   | 16    | 7.8     | 42     | 84    | 36    | 15    | 4.8   | 4.4   | 1.1   | 1.2   | .20   |
| 24    | .80   | 102   | 81      | 42     | 86    | 33    | 13    | 5.4   | 3.5   | 1.6   | 1.2   | .40   |
| 25    | .90   | 44    | 124     | 41     | 98    | 27    | 12    | 4.2   | 5.4   | 1.6   | .90   | .50   |
| 26    | .60   | 30    | 55      | 41     | 109   | 25    | 12    | 6.9   | 5.1   | 1.6   | .60   | .40   |
| 27    | .60   | 29    | 35      | 40     | 84    | 23    | 8.5   | 6.4   | 5.1   | .50   | .60   | .40   |
| 28    | .80   | 24    | 634     | 37     | 77    | 21    | 6.4   | 6.6   | 4.1   | .60   | .80   | .40   |
| 29    | .80   | 20    | 295     | 160    | ----- | 20    | 5.9   | 8.0   | 3.2   | 1.2   | .60   | .40   |
| 30    | .90   | 17    | 252     | 340    | ----- | 22    | 6.4   | 3.5   | 1.6   | 1.2   | .60   | .40   |
| 31    | .90   | ----- | 252     | 144    | ----- | 26    | ----- | 7.4   | ----- | 1.7   | 1.1   | ----- |
| TOTAL | 29,30 | 675.8 | 1,970.4 | 12,519 | 4,205 | 1,500 | 683.2 | 247.8 | 110.3 | 50.70 | 30.60 | 21.10 |
| MEAN  | .95   | 22.5  | 63.6    | 404    | 150   | 48.4  | 22.8  | 7.99  | 3.68  | 1.64  | .99   | .70   |
| AC-FT | 58    | 1,340 | 3,910   | 24,830 | 8,340 | 2,980 | 1,360 | 492   | 219   | 101   | 61    | 42    |

|                    |     |       |     |     |      |      |       |        |
|--------------------|-----|-------|-----|-----|------|------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 2,790 | MIN | .60 | MEAN | 54.5 | AC-FT | 39,460 |
| WATER YEAR 1965-66 | MAX | 4,960 | MIN | .20 | MEAN | 60.4 | AC-FT | 43,730 |

Peak discharge (base, 1,400 cfs).--Dec. 28 (1545) 1,600 cfs (6.14 ft); Jan. 5 (0300) 8,180 cfs (13.60 ft).

## NOVATO CREEK BASIN

11-4595. Novato Creek near Novato, Calif.

Location.--Lat 38°06'45", long 122°35'05", in Novato Grant, on right bank 500 ft downstream from highway bridge and 1 mile west of U. S. Highway 101 in Novato, Marin County.

Drainage area.--17.5 sq mi.

Records available.--October 1946 to September 1966. Records of diversions for water years 1952-53, estimated.

Gage.--Water-stage recorder. Datum of gage is 32.3 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge.--20 years, 10.6 cfs (7,670 acre-ft per year), adjusted for diversion.

Extremes.--Maximum discharge during year, 545 cfs Jan. 4 (gage height, 4.78 ft); no flow for many days.

1946-66: Maximum discharge, 1,330 cfs Jan. 20, 1964 (gage height, 8.74 ft); no flow for many days in each year.

Remarks.--Records good. Flow regulated by Stafford Lake beginning Dec. 1, 1951 (capacity, 4,500 acre-ft since Oct. 18, 1954); contents, 3,100 acre-ft Sept. 30, 1965, and 2,460 acre-ft Sept. 30, 1966. Diversion from Stafford Lake for municipal water supply began Apr. 25, 1952, and amounted to 2,180 acre-ft for water year 1966.

Cooperation.--Record of diversions furnished by North Marin County Water District.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.   | Jan.    | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|-------|--------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0.10 | 0     | 1.3    | 14      | 43    | 12    | 1.7   | 0.70  | 0.20  | 0.10 |      | 0     |
| 2     | .10  | 0     | 1.2    | 11      | 19    | 9.8   | 1.8   | .70   | .20   | .10  |      | 0     |
| 3     | .20  | 0     | 1.1    | 11      | 56    | 7.5   | 1.7   | .60   | .30   | .20  |      | 0     |
| 4     | .20  | 0     | .90    | 165     | 214   | 7.3   | 1.5   | .60   | .20   | .20  |      | 0     |
| 5     | .20  | 0     | .90    | 274     | 141   | 7.1   | 1.5   | .60   | .20   | .20  |      | 0     |
| 6     | .20  | 0     | .90    | 100     | 93    | 6.8   | 1.5   | .60   | .30   | .30  |      | 0     |
| 7     | .20  | 0     | 1.1    | 141     | 63    | 6.4   | 1.4   | .60   | .20   | .30  |      | 0     |
| 8     | .20  | .10   | .80    | 127     | 44    | 5.7   | 1.4   | .50   | .30   | .30  |      | 0     |
| 9     | .20  | 0     | .80    | 115     | 33    | 5.9   | 1.7   | .60   | .30   | .30  |      | 0     |
| 10    | .20  | 0     | .80    | 73      | 27    | 5.9   | 1.4   | .60   | .20   | .20  |      | 0     |
| 11    | .20  | 0     | 3.0    | 14      | 22    | 5.0   | 1.5   | .60   | .20   | .20  |      | 0     |
| 12    | .20  | 1.9   | 1.4    | 12      | 18    | 4.3   | 1.5   | .50   | .20   | .20  |      | 0     |
| 13    | .20  | 1.3   | .90    | 10      | 16    | 4.4   | 1.2   | .60   | .20   | .20  |      | 0     |
| 14    | .30  | 6.0   | .80    | 9.2     | 15    | 4.1   | 1.2   | .50   | .20   | .20  |      | 0     |
| 15    | .30  | 4.1   | .80    | 8.6     | 13    | 3.9   | 1.2   | .50   | .10   | .10  |      | 0     |
| 16    | .40  | .90   | .80    | 7.8     | 11    | 3.6   | 1.2   | .60   | .10   | .10  |      | 0     |
| 17    | .30  | 6.9   | .80    | 7.5     | 11    | 3.2   | 1.2   | .50   | .30   | .10  |      | 0     |
| 18    | .30  | 3.3   | .80    | 7.3     | 11    | 2.9   | 1.2   | .50   | .10   | .10  |      | 0     |
| 19    | .40  | 5.4   | .80    | 6.8     | 41    | 2.9   | 1.1   | .50   | 0     | 0    |      | 1.3   |
| 20    | .30  | 1.0   | .80    | 6.6     | 24    | 2.6   | 1.1   | .50   | 0     | .10  |      | 4.9   |
| 21    | 0    | .80   | .80    | 6.2     | 18    | 2.5   | 1.0   | .50   | .1    | 0    |      | .30   |
| 22    | 0    | .80   | .80    | 6.2     | 16    | 2.4   | .90   | .40   | .1    | 0    |      | 0     |
| 23    | 0    | 4.4   | .70    | 6.8     | 16    | 2.3   | .90   | .30   | .1    | 0    |      | 0     |
| 24    | 0    | 1.9   | 6.8    | 5.7     | 16    | 2.2   | .90   | .30   | .2    | 0    |      | 0     |
| 25    | 0    | 4.1   | 2.4    | 5.5     | 17    | 2.2   | .90   | .40   | .1    | 0    |      | 0     |
| 26    | 0    | 1.9   | 1.4    | 5.5     | 20    | 2.1   | .80   | .40   | .1    | 0    |      | 0     |
| 27    | 0    | 1.7   | 1.3    | 5.3     | 15    | 2.0   | .80   | .30   | .1    | 0    |      | 0     |
| 28    | 0    | 1.5   | 6.1    | 5.2     | 13    | 1.9   | .80   | .40   | 0     | 0    |      | 0     |
| 29    | 0    | 1.4   | 2.9    | 2.9     | ----- | 1.9   | .80   | .30   | 0     | 0    |      | 0     |
| 30    | 0    | 1.3   | 2.3    | 3.7     | ----- | 1.8   | .70   | .30   | 0     | 0    |      | 0     |
| 31    | 0    | ----- | 3.1    | 1.4     | ----- | 1.8   | ----- | .30   | ----- | 0    |      | ----- |
| Total | 4.70 | 79.50 | 178.90 | 1,247.2 | 1,046 | 134.4 | 36.50 | 15.30 | 4.60  | 3.50 | 0    | 6.50  |
| Mean  | .15  | 2.65  | 5.77   | 40.2    | 37.4  | 4.34  | 1.22  | .49   | .15   | .11  | 0    | .22   |
| Ac-ft | 9.3  | 158   | 355    | 2,470   | 2,070 | 267   | 72    | 30    | 9.1   | 6.9  | 0    | 1.3   |

|                    |     |     |     |   |      |      |       |       |
|--------------------|-----|-----|-----|---|------|------|-------|-------|
| Calendar year 1965 | Max | 505 | Min | 0 | Mean | 9.95 | Ac-ft | 7,200 |
| Water year 1965-66 | Max | 274 | Min | 0 | Mean | 7.55 | Ac-ft | 5,470 |

11-4600. Corte Madera Creek at Ross, Calif.

Location.--Lat 37°57'45", long 122°33'20", in Punta de Quentin Grant, on left bank behind fire station at Ross, Marin County, 1.7 miles southwest of San Rafael and 4 miles upstream from mouth.

Drainage area.--18.1 sq mi.

Records available.--February 1951 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 10.60 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 11, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--15 years, 21.6 cfs (18,390 acre-ft per year).

Extremes.--Maximum discharge during year, 2,880 cfs Jan. 5 (gage height, 16.62 ft); minimum daily, 0.10 cfs Sept. 2-7.  
1951-66: Maximum discharge, 3,620 cfs Dec. 22, 1955 (gage height, 17.45 ft), from rating curve extended above 1,600 cfs; no flow at times in most years.

Remarks.--Records good. Flow regulated by Phoenix Lake (capacity, 612 acre-ft). Diversion on tributary above station by Marin Municipal Water District.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.  | JAN.    | FEB.  | MAR.  | APR.  | MAY  | JUNE  | JULY  | AUG. | SEPT. |
|-------|-------|--------|-------|---------|-------|-------|-------|------|-------|-------|------|-------|
| 1     | 0.60  | 0.90   | 4.0   | 42      | 191   | 26    | 7.5   | 2.8  | 1.5   | 0.70  | 0.40 | 0.20  |
| 2     | .40   | .60    | 4.0   | 28      | 102   | 23    | 7.3   | 2.6  | 1.5   | .80   | .70  | .10   |
| 3     | .50   | .90    | 3.7   | 34      | 233   | 19    | 6.6   | 2.5  | 1.5   | .70   | .30  | .10   |
| 4     | .50   | .50    | 3.4   | 880     | 576   | 18    | 6.6   | 2.4  | 1.6   | .70   | .30  | .10   |
| 5     | .50   | .80    | 3.7   | 1,510   | 216   | 16    | 6.6   | 2.4  | 1.5   | .70   | .40  | .10   |
| 6     | .50   | 1.2    | 3.4   | 363     | 111   | 15    | 6.6   | 5.6  | 1.6   | .70   | .40  | .10   |
| 7     | .50   | 2.1    | 3.1   | 224     | 74    | 14    | 6.2   | 2.7  | 1.7   | .70   | .20  | .10   |
| 8     | 1.1   | 1.7    | 3.1   | 139     | 52    | 14    | 6.1   | 2.5  | 1.4   | .70   | .30  | .20   |
| 9     | 1.3   | .30    | 3.4   | 64      | 39    | 15    | 9.0   | 2.8  | 1.2   | .70   | .30  | .20   |
| 10    | .50   | .80    | 3.1   | 49      | 31    | 14    | 7.2   | 3.0  | 1.2   | .60   | .30  | .20   |
| 11    | .50   | .40    | 11    | 38      | 26    | 12    | 6.8   | 2.5  | 1.1   | .60   | .30  | .20   |
| 12    | .50   | 12     | 4.7   | 29      | 23    | 12    | 7.3   | 2.3  | 1.1   | .60   | .30  | .20   |
| 13    | .60   | 73     | 3.7   | 24      | 20    | 14    | 6.2   | 2.1  | 1.0   | .60   | .20  | .20   |
| 14    | .40   | 17     | 3.4   | 19      | 18    | 11    | 5.8   | 2.1  | .80   | .50   | .20  | .20   |
| 15    | .60   | 19     | 3.1   | 17      | 16    | 11    | 5.6   | 2.0  | .80   | .40   | .20  | .20   |
| 16    | 1.9   | 4.0    | 4.0   | 15      | 14    | 10    | 5.6   | 1.9  | .90   | .40   | .20  | .20   |
| 17    | .40   | 32     | 4.7   | 13      | 13    | 9.5   | 5.4   | 2.3  | .90   | .40   | .20  | .20   |
| 18    | .60   | 21     | 3.1   | 11      | 18    | 9.4   | 5.2   | 1.9  | .90   | .40   | .20  | .30   |
| 19    | .50   | 7.1    | 3.1   | 10      | 123   | 9.3   | 5.0   | 1.9  | .80   | .40   | .20  | .30   |
| 20    | .40   | 4.0    | 3.1   | 9.0     | 43    | 8.5   | 4.7   | 2.1  | .80   | .50   | .20  | .30   |
| 21    | .50   | 3.4    | 3.1   | 8.5     | 33    | 8.3   | 4.3   | 2.1  | .80   | .40   | .20  | .20   |
| 22    | .40   | 3.4    | 3.4   | 9.5     | 32    | 8.0   | 3.9   | 2.0  | .80   | .40   | .20  | .20   |
| 23    | .50   | 11     | 2.9   | 8.0     | 28    | 8.0   | 3.7   | 1.7  | .80   | .40   | .20  | .20   |
| 24    | .50   | 26     | 52    | 7.5     | 33    | 7.8   | 3.6   | 1.7  | .80   | .40   | .20  | .30   |
| 25    | .40   | 11     | 26    | 7.1     | 36    | 7.5   | 3.5   | 1.6  | .70   | .40   | .20  | .20   |
| 26    | .50   | 6.6    | 11    | 7.1     | 36    | 7.1   | 3.5   | 1.8  | .60   | .40   | .20  | .20   |
| 27    | .70   | 5.8    | 8.7   | 6.6     | 31    | 7.1   | 3.3   | 1.6  | .60   | .40   | .20  | .20   |
| 28    | .80   | 5.4    | 210   | 6.2     | 28    | 7.1   | 3.3   | 1.6  | .60   | .40   | .20  | .20   |
| 29    | .80   | 4.7    | 131   | 180     | ----- | 7.1   | 3.1   | 1.7  | .60   | .40   | .20  | .20   |
| 30    | .80   | 4.4    | 93    | 173     | ----- | 7.1   | 2.9   | 1.6  | .70   | .40   | .40  | .20   |
| 31    | .90   | -----  | 81    | 82      | ----- | 6.7   | ----- | 1.4  | ----- | .40   | .30  | ----- |
| TOTAL | 19.60 | 281.00 | 700.9 | 4,013.5 | 2,196 | 362.5 | 162.4 | 69.2 | 30.80 | 16.20 | 8.30 | 5.80  |
| MEAN  | .63   | 9.37   | 22.6  | 129     | 78.4  | 11.7  | 5.41  | 2.23 | 1.03  | .52   | .27  | .19   |
| AC-FT | 39    | 557    | 1,390 | 7,960   | 4,360 | 719   | 322   | 137  | 61    | 32    | 16   | 12    |

CALENDAR YEAR 1965 MAX 678 MIN .20 MEAN 20.1 AC-FT 14,550  
WATER YEAR 1965-66 MAX 1,510 MIN .10 MEAN 21.6 AC-FT 15,600

Peak discharge (base, 1,000 cfs).--Jan. 5 (0315) 2,880 cfs (16.62 ft).

11-4601. Arroyo Corte Madera del Presidio at Mill Valley, Calif.

Location.--Lat 37°53'50", long 122°32'06", in Sausalito Grant, on right bank near south boundary of town of Mill Valley 1 mile upstream from mouth.

Drainage area.--4.69 sq mi.

Records available.--October 1965 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1.85 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum discharge during year, 620 cfs Jan. 5 (gage height, 6.70 ft); minimum daily, 0.10 cfs for many days.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.  | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|-------|--------|--------|-------|-------|-------|-------|------|-------|-------|------|-------|
| 1     | 0.40  | 0.30   | 1.3    | 9.2   | 4.7   | 9.2   | 2.5   | 1.4  | 1.0   | 0.70  | 0.20 | 0.40  |
| 2     | .40   | .30    | 1.2    | 6.4   | 26    | 8.2   | 2.5   | 1.4  | 1.0   | .70   | .10  | .40   |
| 3     | .30   | .30    | 1.0    | 5.3   | 34    | 7.0   | 2.5   | 1.4  | 1.0   | .70   | .20  | .30   |
| 4     | .40   | .30    | 1.0    | 108   | 26    | 6.4   | 2.5   | 1.4  | 1.0   | .70   | .20  | .40   |
| 5     | .40   | .30    | 1.1    | 367   | 52    | 5.9   | 2.5   | 1.4  | .90   | .70   | .20  | .40   |
| 6     | .40   | .30    | 1.0    | 9.4   | 29    | 5.6   | 2.4   | 1.4  | 1.1   | .70   | .20  | .60   |
| 7     | .40   | .80    | .80    | 36    | 19    | 7.0   | 2.1   | 1.4  | 1.0   | .70   | .10  | .60   |
| 8     | .40   | 1.1    | .80    | 20    | 15    | 5.3   | 2.1   | 1.4  | .70   | .40   | .10  | .70   |
| 9     | .40   | .50    | .80    | 13    | 11    | 14    | 2.5   | 1.6  | 1.0   | .50   | .10  | .70   |
| 10    | .40   | .50    | .70    | 10    | 8.9   | 34    | 2.5   | 1.7  | 1.1   | .40   | .10  | .60   |
| 11    | .40   | .70    | 5.4    | 7.8   | 7.2   | 21    | 3.2   | 1.4  | 1.0   | .50   | .20  | .60   |
| 12    | .40   | 9.5    | 2.4    | 6.4   | 6.4   | 16    | 4.7   | 1.4  | .90   | .50   | .20  | .30   |
| 13    | .40   | 15     | 1.9    | 5.3   | 5.6   | 14    | 2.7   | 1.4  | .90   | .50   | .30  | .10   |
| 14    | 1.0   | 6.8    | 1.4    | 5.0   | 5.1   | 12    | 2.4   | 1.4  | .90   | .40   | .10  | .10   |
| 15    | .60   | 3.1    | 1.3    | 4.8   | 4.6   | 10    | 2.3   | 1.3  | .90   | .40   | .20  | .10   |
| 16    | .40   | 1.9    | 1.1    | 4.2   | 4.4   | 9.2   | 2.1   | 1.3  | .90   | .30   | .30  | .10   |
| 17    | .40   | 8.2    | 1.0    | 3.8   | 4.4   | 7.8   | 2.3   | 1.3  | .90   | .20   | .10  | .10   |
| 18    | .40   | 4.8    | .90    | 3.6   | 5.3   | 7.2   | 2.3   | 1.2  | .90   | .30   | .10  | .20   |
| 19    | .40   | 2.4    | .90    | 3.4   | 10    | 6.7   | 2.0   | 1.1  | .70   | .30   | .10  | .20   |
| 20    | .40   | 1.7    | .80    | 3.2   | 5.9   | 6.2   | 2.0   | 1.1  | .40   | .30   | .10  | .20   |
| 21    | .50   | 1.4    | .80    | 3.0   | 5.6   | 5.6   | 1.9   | 1.2  | .40   | .30   | .10  | .10   |
| 22    | .50   | 1.3    | .80    | 3.2   | 9.2   | 5.1   | 1.7   | 1.3  | .40   | .40   | .10  | .10   |
| 23    | .40   | 48     | .80    | 3.0   | 11    | 4.8   | 1.6   | 1.2  | .60   | .40   | .10  | .10   |
| 24    | .20   | 7.0    | 12     | 2.8   | 11    | 4.6   | 1.4   | 1.1  | .50   | .30   | .10  | .20   |
| 25    | .20   | 4.6    | 5.3    | 2.5   | 12    | 4.4   | 1.4   | 1.2  | .50   | .30   | .20  | .20   |
| 26    | .20   | 3.0    | 3.0    | 2.4   | 12    | 4.2   | 1.4   | 1.2  | .40   | .40   | .40  | .80   |
| 27    | .20   | 3.8    | 2.4    | 2.3   | 11    | 4.0   | 1.4   | 1.1  | .50   | .40   | .20  | .20   |
| 28    | .30   | 2.4    | 4.5    | 2.1   | 10    | 3.8   | 1.4   | 1.1  | .40   | .40   | .40  | .10   |
| 29    | .30   | 2.0    | 26     | 14    | ----- | 3.6   | 1.4   | 1.2  | .40   | .40   | .20  | .10   |
| 30    | .30   | 1.4    | 15     | 27    | ----- | 3.6   | 1.6   | 1.2  | .50   | .50   | .60  | .20   |
| 31    | .30   | -----  | 15     | 13    | ----- | 3.2   | ----- | 1.1  | .60   | .30   | .60  | ----- |
| Total | 121.0 | 133.70 | 152.90 | 791.7 | 478.6 | 259.6 | 65.3  | 40.3 | 22.90 | 14.00 | 6.20 | 9.20  |
| Mean  | 0.39  | 4.46   | 4.93   | 25.5  | 17.1  | 8.37  | 2.18  | 1.30 | 0.76  | 0.45  | 0.20 | 0.31  |
| Ac-ft | 24    | 265    | 303    | 1,570 | 949   | 515   | 130   | 80   | 45    | 28    | 12   | 18    |

Calendar year 1965 Max - Min - Mean Ac-ft -  
 Water year 1965-66 Max 367 Min 0.10 Mean 5.44 Ac-ft 3,940

Peak discharge (base, 150 cfs)

| Date | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|------|------|-------------|-----------|------|------|-------------|-----------|
| 1- 5 | 0330 | 6.70        | 620       | 2-1  | 0500 | 4.36        | 170       |
| 1-30 | 0130 | 4.27        | 158       |      |      |             |           |



11-4608. Walker Creek near Tomales, Calif.

Location.--Lat 38°12'35", long 122°51'35", in Nicasio Grant, on left bank 1,300 ft upstream from Chileno Creek, and 3.5 miles south-east of Tomales, Marin County.

Drainage area.--37.1 sq mi.

Records available.--June 1959 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 56.74 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 14, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 32.1 cfs (23,240 acre-ft per year).

Extremes.--Maximum discharge during year, 5,420 cfs Jan. 5 (gage height, 22.23 ft); no flow for several months.  
1959-66: Maximum discharge, that of Jan. 5, 1966; no flow for several months in each year.

Remarks.--Records good. No regulation; small diversions above station for irrigation and stock watering.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.    | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|---------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0      | 5.0     | 142     | 320   | 40    | 7.1   | 1.6   | 0.60  |      |      |       |
| 2     |      | 0      | 3.8     | 91      | 189   | 36    | 7.1   | 1.6   | .50   |      |      |       |
| 3     |      | 0      | 3.0     | 84      | 262   | 29    | 6.7   | 1.8   | .40   |      |      |       |
| 4     |      | 0      | 2.6     | 1,410   | 912   | 26    | 6.7   | 1.7   | .40   |      |      |       |
| 5     |      | 0      | 2.2     | 3,400   | 443   | 24    | 6.3   | 1.7   | .40   |      |      |       |
| 6     |      | 0      | 2.0     | 838     | 294   | 22    | 5.9   | 1.7   | .50   |      |      |       |
| 7     |      | 0      | 2.0     | 329     | 192   | 20    | 5.9   | 1.7   | .70   |      |      |       |
| 8     |      | 0      | 2.0     | 202     | 128   | 18    | 5.5   | 1.8   | .70   |      |      |       |
| 9     |      | 0      | 2.0     | 143     | 90    | 19    | 6.3   | 2.0   | .60   |      |      |       |
| 10    |      | 0      | 1.8     | 99      | 67    | 25    | 8.3   | 2.2   | .40   |      |      |       |
| 11    |      | 0      | 2.2     | 74      | 50    | 18    | 8.7   | 1.9   | .30   |      |      |       |
| 12    |      | .10    | 4.5     | 58      | 41    | 16    | 11    | 1.7   | .20   |      |      |       |
| 13    |      | .90    | 3.8     | 47      | 33    | 18    | 7.5   | 1.3   | .20   |      |      |       |
| 14    |      | 7.1    | 2.8     | 38      | 29    | 16    | 5.5   | 1.1   | .10   |      |      |       |
| 15    |      | 3.0    | 2.4     | 32      | 26    | 15    | 5.0   | 1.1   | .10   |      |      |       |
| 16    |      | 2.4    | 2.2     | 27      | 23    | 15    | 4.5   | 1.0   | .10   |      |      |       |
| 17    |      | 1.8    | 2.0     | 23      | 20    | 12    | 4.2   | .90   | .10   |      |      |       |
| 18    |      | 3.8    | 1.8     | 21      | 20    | 12    | 4.0   | .90   | .10   |      |      |       |
| 19    |      | 3.5    | 1.6     | 18      | 69    | 13    | 3.8   | .80   | .10   |      |      |       |
| 20    |      | 2.0    | 1.6     | 15      | 37    | 11    | 3.2   | .80   | .10   |      |      |       |
| 21    |      | 1.4    | 1.6     | 14      | 28    | 11    | 3.2   | .80   | .10   |      |      |       |
| 22    |      | .90    | 1.6     | 15      | 29    | 11    | 3.0   | .80   | .10   |      |      |       |
| 23    |      | 1.2    | 1.6     | 14      | 38    | 10    | 2.6   | .80   | .10   |      |      |       |
| 24    |      | 20     | 5.9     | 12      | 43    | 8.3   | 2.2   | .70   | .10   |      |      |       |
| 25    |      | 20     | 32      | 11      | 50    | 8.3   | 2.2   | .70   | .10   |      |      |       |
| 26    |      | 16     | 14      | 10      | 92    | 7.9   | 2.2   | .70   | .10   |      |      |       |
| 27    |      | 14     | 10      | 9.5     | 52    | 7.5   | 2.0   | .70   | .10   |      |      |       |
| 28    |      | 11     | 409     | 7.5     | 46    | 7.9   | 1.8   | .70   | .10   |      |      |       |
| 29    |      | 8.7    | 385     | 53      | ----- | 7.9   | 1.8   | .80   | 0     |      |      |       |
| 30    |      | 6.7    | 297     | 247     | ----- | 7.9   | 1.8   | .80   | 0     |      |      |       |
| 31    |      |        | 259     | 135     | ----- | 7.5   | ----- | .70   | ----- |      |      |       |
| TOTAL | 0    | 124.50 | 1,468.0 | 7,619.0 | 3,623 | 500.2 | 146.0 | 37.50 | 7.40  | 0    | 0    | 0     |
| MEAN  | 0    | 4.15   | 47.4    | 246     | 129   | 16.1  | 4.87  | 1.21  | .25   | 0    | 0    | 0     |
| AC-FT | 0    | 247    | 2,910   | 15,110  | 7,190 | 992   | 290   | 74    | 15    | 0    | 0    | 0     |

|               |         |     |       |     |   |      |      |       |        |
|---------------|---------|-----|-------|-----|---|------|------|-------|--------|
| CALENDAR YEAR | 1965    | MAX | 1,890 | MIN | 0 | MEAN | 38.1 | AC-FT | 27,560 |
| WATER YEAR    | 1965-66 | MAX | 3,400 | MIN | 0 | MEAN | 37.1 | AC-FT | 26,830 |

## Peak discharge (base, 1,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1845 | 10.21       | 1,010     | 2-4  | 0200 | 11.16       | 1,260     |
| 1- 5  | 0315 | 22.23       | 5,420     |      |      |             |           |

11-4609.2. Salmon Creek at Bodega, Calif.

Location.--Lat 38°20'54", long 122°58'45", in Estero Americano Grant, on left bank 100 ft upstream from private road bridge, 0.3 mile upstream from unnamed tributary, and 0.4 mile northwest of Bodega, Sonoma County.

Drainage area.--15.7 sq mi.

Records available.--July 1962 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 81.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Extremes.--Maximum discharge during year, 1,960 cfs Jan. 5 (gage height, 18.89 ft), from rating curve extended above 800 cfs; no flow for many days.

1962-66: Maximum discharge, that of Jan. 5, 1966; no flow for many days in each year.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.    | FEB.    | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|-------|---------|---------|-------|-------|-------|-------|------|------|-------|
| 1     |      | 0.10   | 3.2   | 52      | 205     | 21    | 5.1   | 2.1   | 0.70  | 0    |      |       |
| 2     |      | .10    | 2.9   | 41      | 66      | 18    | 4.9   | 2.0   | .60   | 0    |      |       |
| 3     |      | .20    | 2.6   | 76      | 220     | 15    | 4.3   | 1.6   | .40   | 0    |      |       |
| 4     |      | .20    | 2.6   | 825     | 423     | 14    | 4.0   | 1.6   | .30   | 0    |      |       |
| 5     |      | .20    | 2.6   | 1,140   | 132     | 13    | 4.0   | 1.4   | .30   | 0    |      |       |
| 6     |      | .20    | 3.1   | 228     | 73      | 12    | 3.8   | 1.8   | .50   | 0    |      |       |
| 7     |      | .30    | 2.4   | 93      | 48      | 15    | 3.7   | 1.5   | .90   | 0    |      |       |
| 8     |      | 1.0    | 2.1   | 88      | 34      | 12    | 3.4   | 1.3   | .70   | 0    |      |       |
| 9     |      | .50    | 2.0   | 54      | 26      | 49    | 4.7   | 1.4   | .70   | .10  |      |       |
| 10    |      | .50    | 1.8   | 39      | 22      | 97    | 10    | 1.7   | .50   | .10  |      |       |
| 11    |      | .40    | 2.3   | 31      | 18      | 35    | 9.7   | 1.5   | .30   | .10  |      |       |
| 12    |      | 5.6    | 5.8   | 25      | 16      | 25    | 32    | 1.4   | .20   | .10  |      |       |
| 13    |      | 43     | 3.2   | 21      | 14      | 32    | 10    | 1.5   | .10   | .20  |      |       |
| 14    |      | 76     | 2.6   | 19      | 13      | 25    | 7.4   | 1.4   | .20   | 0    |      |       |
| 15    |      | 11     | 2.3   | 17      | 12      | 23    | 6.3   | 1.0   | .10   | .10  |      |       |
| 16    |      | 6.3    | 2.1   | 14      | 10      | 21    | 5.4   | .80   | 0     | .10  |      |       |
| 17    |      | 4.6    | 2.0   | 12      | 9.7     | 16    | 5.1   | 1.0   | .10   | 0    |      |       |
| 18    |      | 20     | 1.9   | 11      | 9.7     | 14    | 4.9   | 1.0   | .30   | 0    |      |       |
| 19    |      | 8.4    | 1.9   | 10      | 77      | 16    | 4.2   | 1.0   | .20   | 0    |      |       |
| 20    |      | 4.0    | 1.9   | 9.4     | 28      | 12    | 3.7   | 1.3   | .20   | 0    |      |       |
| 21    |      | 2.6    | 1.9   | 9.2     | 20      | 11    | 3.5   | 1.1   | .10   | 0    |      |       |
| 22    |      | 2.0    | 1.9   | 9.7     | 34      | 10    | 3.3   | 1.3   | .20   | 0    |      |       |
| 23    |      | 2.9    | 1.7   | 9.4     | 41      | 8.9   | 2.9   | 1.1   | .20   | 0    |      |       |
| 24    |      | 30     | 17    | 8.3     | 53      | 8.1   | 2.6   | 1.0   | .20   | 0    |      |       |
| 25    |      | 21     | 48    | 7.8     | 54      | 7.6   | 2.5   | 1.0   | .10   | 0    |      |       |
| 26    |      | 11     | 21    | 7.6     | 51      | 7.1   | 2.4   | 1.1   | .10   | 0    |      |       |
| 27    |      | 15     | 15    | 7.1     | 29      | 6.7   | 2.3   | .90   | .10   | 0    |      |       |
| 28    |      | 8.6    | 194   | 6.9     | 24      | 6.5   | 2.2   | .90   | .10   | 0    |      |       |
| 29    |      | 6.0    | 144   | 62      | -----   | 6.3   | 2.2   | 1.1   | 0     | 0    |      |       |
| 30    |      | 4.6    | 90    | 260     | -----   | 5.8   | 2.2   | 1.0   | 0     | 0    |      |       |
| 31    |      |        | 81    | 59      | -----   | 5.4   | ----- | .90   | ----- | 0    |      |       |
| TOTAL | 0    | 286.30 | 666.8 | 3,252.4 | 1,762.4 | 568.4 | 162.7 | 39.70 | 8.40  | .80  | 0    | 0     |
| MEAN  | 0    | 9.54   | 21.5  | 105     | 62.9    | 18.3  | 5.42  | 1.28  | .28   | .03  | 0    | 0     |
| AC-FT | 0    | 568    | 1,320 | 6,450   | 3,500   | 1,130 | 323   | 79    | 17    | 1.6  | 0    | 0     |

CALENDAR YEAR 1965 MAX 682 MIN 0 MEAN 17.1 AC-FT 12,390  
 WATER YEAR 1965-66 MAX 1,140 MIN 0 MEAN 18.5 AC-FT 13,390

Peak discharge (base, 750 cfs).--Jan. 5 (0300) 1,960 cfs (18.89 ft); Feb. 4 (0145) 823 cfs (11.52 ft).

11-4609.4. Russian River near Redwood Valley, Calif.

Location.--Lat 39°19'10", long 123°13'20", in NW¼ sec.20, T.17 N., R.12 W., on left bank 600 ft upstream from Rocky Creek and 3.8 miles north of town of town of Redwood Valley.

Drainage area.--14.1 sq mi.

Records available.--August 1963 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 799.70 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 23, 1965, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 2,390 cfs Jan. 4 (gage height, 8.70 ft); no flow for many days.  
1963-66: Maximum discharge, 4,400 cfs Dec. 22 1964 (gage height, 11.71 ft); no flow for several months in each year.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.   | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|--------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0      | 8.0    | 38      | 64    | 28    | 9.7   | 4.2   | 0.90  | 0.10 |      |       |
| 2     | 0    | .70    | 7.0    | 32      | 38    | 24    | 9.1   | 4.0   | .90   | .10  |      |       |
| 3     | 0    | 1.4    | 6.2    | 215     | 49    | 22    | 8.4   | 3.9   | 1.0   | .10  |      |       |
| 4     | 0    | 1.3    | 6.0    | 1,560   | 215   | 20    | 7.5   | 3.8   | .90   | .10  |      |       |
| 5     | 0    | 0      | 5.7    | 815     | 100   | 28    | 7.0   | 3.6   | 1.2   | .10  |      |       |
| 6     | 0    | 0      | 5.5    | 260     | 81    | 24    | 6.6   | 3.5   | 1.3   | .10  |      |       |
| 7     | 0    | .50    | 5.2    | 85      | 55    | 23    | 6.2   | 3.5   | 1.4   | .10  |      |       |
| 8     | 0    | .70    | 5.0    | 54      | 44    | 34    | 6.0   | 3.4   | 1.2   | .10  |      |       |
| 9     | 0    | .10    | 4.8    | 38      | 38    | 118   | 7.5   | 3.3   | .80   | .10  |      |       |
| 10    | 0    | .10    | 4.0    | 30      | 32    | 108   | 19    | 3.3   | .60   | .10  |      |       |
| 11    | 0    | .10    | 4.4    | 25      | 29    | 62    | 44    | 3.2   | .40   | .10  |      |       |
| 12    | 0    | 11     | 5.5    | 22      | 25    | 45    | 46    | 3.0   | .40   | 0    |      |       |
| 13    | 0    | 39     | 4.8    | 19      | 22    | 44    | 28    | 2.8   | .40   | 0    |      |       |
| 14    | 0    | 44     | 3.5    | 18      | 20    | 38    | 21    | 2.5   | .30   | 0    |      |       |
| 15    | 0    | 49     | 1.5    | 16      | 18    | 39    | 18    | 2.3   | .20   | 0    |      |       |
| 16    | .20  | 19     | .40    | 15      | 17    | 38    | 15    | 2.2   | .20   | 0    |      |       |
| 17    | 1.0  | 39     | .20    | 14      | 16    | 35    | 13    | 2.2   | .10   | 0    |      |       |
| 18    | 1.1  | 79     | .20    | 13      | 15    | 32    | 12    | 2.2   | .10   | 0    |      |       |
| 19    | 1.1  | 34     | .20    | 12      | 31    | 33    | 10    | 1.9   | .10   | 0    |      |       |
| 20    | 1.1  | 16     | .10    | 11      | 22    | 29    | 9.3   | 1.9   | .10   | 0    |      |       |
| 21    | .90  | 11     | .10    | 11      | 19    | 27    | 9.0   | 1.7   | .10   | 0    |      |       |
| 22    | .90  | 8.4    | .10    | 11      | 22    | 25    | 8.4   | 1.5   | .10   | 0    |      |       |
| 23    | .80  | 9.1    | .10    | 10      | 23    | 21    | 7.6   | 1.0   | .10   | 0    |      |       |
| 24    | .10  | 57     | 23     | 9.8     | 35    | 20    | 7.0   | .90   | .10   | 0    |      |       |
| 25    | 0    | 55     | 23     | 9.4     | 40    | 18    | 6.4   | .70   | .10   | 0    |      |       |
| 26    | 0    | 29     | 16     | 9.4     | 41    | 16    | 6.0   | .40   | .10   | 0    |      |       |
| 27    | 0    | 21     | 13     | 9.1     | 35    | 14    | 5.8   | .90   | .10   | 0    |      |       |
| 28    | 0    | 15     | 116    | 8.4     | 31    | 13    | 5.2   | .70   | .10   | 0    |      |       |
| 29    | 0    | 11     | 60     | 36      | ----- | 12    | 4.8   | 1.3   | .10   | 0    |      |       |
| 30    | 0    | 9.4    | 45     | 55      | ----- | 11    | 4.5   | 1.5   | .10   | 0    |      |       |
| 31    | 0    | -----  | 73     | 33      | ----- | 10    | ----- | 1.3   | ----- | 0    |      |       |
| TOTAL | 7.2  | 560.80 | 447.50 | 3,494.1 | 1,177 | 1,011 | 368.0 | 72.60 | 13.50 | 1.10 | 0    | 0     |
| MEAN  | .23  | 18.7   | 14.4   | 113     | 42.0  | 32.6  | 12.3  | 2.34  | .45   | .04  | 0    | 0     |
| AC-FT | 14   | 1,110  | 888    | 6,930   | 2,330 | 2,010 | 730   | 144   | 27    | 2.2  | 0    | 0     |

Calendar year 1965 Max 1,030 Min 0 Mean 19.3 Ac-ft 13,980

Water year 1965-66 Max 1,560 Min 0 Mean 19.6 Ac-ft 14,190

Peak discharge (base, 600 cfs).--Jan. 4 (1800) 2,390 cfs (8.70 ft).

## RUSSIAN RIVER BASIN

11-4610. Russian River near Ukiah, Calif.

Location.--Lat 39°12'07", long 123°11'55", in Yokayo Rancho Grant, on left bank 200 ft downstream from York Creek, 0.7 mile upstream from East Fork, and 3.6 miles north of Ukiah, Mendocino County.

Drainage area.--99.7 sq mi.

Records available.--August 1911 to September 1913, October 1952 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 611.98 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to October 1952, staff gage at bridge 0.6 mile downstream at different datum. Oct. 1, 1952, to Feb. 16, 1959, at datum 2.00 ft higher. Feb. 17, 1959, to Sept. 30, 1961, at datum 1.00 ft higher.

Average discharge.--16 years, 172 cfs (124,500 acre-ft per year); median of yearly mean discharges, 150 cfs (109,000 acre-ft per year).

Extremes.--Maximum discharge during year, 10,900 cfs Jan. 4 (gage height, 14.20 ft); minimum daily, 0.10 cfs Aug. 18-27, Sept. 29. 1911-13, 1952-66: Maximum discharge, 18,900 cfs Dec. 21, 1955 (gage height, 21.0 ft, present datum; no flow at times in 1911, 1952-53, 1960-61, 1964-65).

Remarks.--Records good. No regulation; small diversions above station for irrigation. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.   | Feb.   | Mar.   | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|-------|---------|--------|--------|--------|--------|-------|------|-------|-------|------|-------|
| 1     | 0.70  | 1.0     | 75     | 468    | 651    | 188    | 63    | 25   | 12    | 1.1   | 0.20 | 0.20  |
| 2     | .60   | 1.0     | 62     | 368    | 306    | 165    | 60    | 25   | 11    | 1.1   | .20  | .20   |
| 3     | .60   | 1.2     | 52     | 1,060  | 502    | 145    | 57    | 24   | 9.0   | 1.1   | .20  | .20   |
| 4     | .60   | 1.8     | 44     | 6,840  | 1,660  | 137    | 51    | 22   | 9.6   | 1.2   | .20  | .20   |
| 5     | .70   | 1.2     | 38     | 4,470  | 783    | 175    | 50    | 22   | 9.1   | 1.1   | .20  | .20   |
| 6     | .80   | 1.1     | 34     | 1,700  | 710    | 159    | 47    | 22   | 11    | 1.0   | .20  | .20   |
| 7     | .80   | 2.0     | 30     | 809    | 500    | 152    | 47    | 20   | 8.6   | 1.1   | .20  | .20   |
| 8     | .90   | 7.6     | 27     | 546    | 384    | 168    | 44    | 20   | 8.1   | 1.0   | .20  | .20   |
| 9     | .90   | 5.8     | 26     | 364    | 302    | 516    | 50    | 20   | 8.1   | .90   | .20  | .20   |
| 10    | .80   | 4.5     | 24     | 279    | 252    | 581    | 68    | 20   | 7.6   | 1.0   | .20  | .20   |
| 11    | .90   | 3.1     | 25     | 234    | 201    | 368    | 253   | 18   | 7.2   | 1.2   | .20  | .20   |
| 12    | .80   | 23      | 33     | 201    | 175    | 279    | 359   | 16   | 7.6   | 1.8   | .20  | .20   |
| 13    | .90   | 91      | 26     | 175    | 154    | 279    | 165   | 14   | 7.6   | 1.8   | .20  | .20   |
| 14    | 1.0   | 219     | 23     | 161    | 139    | 237    | 124   | 14   | 5.8   | 1.8   | .20  | .20   |
| 15    | 1.1   | 204     | 22     | 147    | 124    | 249    | 102   | 14   | 3.8   | 1.8   | .20  | .20   |
| 16    | 1.1   | 49      | 20     | 134    | 113    | 285    | 67    | 14   | 3.4   | 2.2   | .20  | .20   |
| 17    | 1.1   | 179     | 18     | 124    | 107    | 234    | 78    | 14   | 2.6   | 2.1   | .20  | .20   |
| 18    | 1.1   | 812     | 17     | 107    | 102    | 201    | 71    | 14   | 2.1   | 1.4   | .10  | .20   |
| 19    | 1.1   | 380     | 17     | 89     | 246    | 204    | 62    | 13   | 1.2   | 1.1   | .10  | .20   |
| 20    | 1.0   | 165     | 17     | 77     | 159    | 170    | 58    | 13   | 1.2   | .70   | .10  | .20   |
| 21    | 1.0   | 109     | 16     | 68     | 130    | 161    | 54    | 13   | 1.1   | .50   | .10  | .20   |
| 22    | 1.1   | 80      | 15     | 63     | 137    | 145    | 49    | 12   | 1.0   | .50   | .10  | .20   |
| 23    | 1.1   | 70      | 15     | 57     | 154    | 134    | 46    | 12   | 1.2   | .40   | .10  | .20   |
| 24    | 1.1   | 666     | 248    | 52     | 288    | 124    | 42    | 12   | 1.4   | .40   | .10  | .20   |
| 25    | 1.1   | 757     | 313    | 48     | 386    | 109    | 40    | 12   | 2.0   | .30   | .10  | .20   |
| 26    | 1.0   | 392     | 165    | 46     | 376    | 97     | 36    | 12   | 2.1   | .30   | .10  | .20   |
| 27    | 1.0   | 313     | 120    | 44     | 270    | 90     | 35    | 11   | 2.1   | .30   | .10  | .20   |
| 28    | 1.0   | 182     | 1,450  | 42     | 219    | 82     | 34    | 10   | 1.4   | .30   | .20  | .20   |
| 29    | 1.1   | 130     | 836    | 294    | -----  | 76     | 30    | 11   | 1.2   | .30   | .20  | .10   |
| 30    | 1.0   | 102     | 595    | 869    | -----  | 72     | 29    | 12   | 1.1   | .30   | .20  | .20   |
| 31    | 1.0   | -----   | 901    | 273    | -----  | 68     | ----- | 12   | ----- | .30   | .20  | ----- |
| Total | 29.00 | 4,953.3 | 5,304  | 20,209 | 9,530  | 6,050  | 2,271 | 493  | 151.2 | 30.40 | 5.20 | 5.90  |
| Mean  | .94   | 165     | 171    | 652    | 340    | 195    | 75.7  | 15.9 | 5.11  | .98   | .17  | .20   |
| Ac-ft | 58    | 9,820   | 10,520 | 40,080 | 18,900 | 12,000 | 4,504 | 978  | 300   | 60    | 10   | 12    |

Calendar year 1965 Max 5,460 Min 0.10 Mean 149 Ac-ft 107,700  
 Water year 1965-66 Max 6,840 Min 0.10 Mean 134 Ac-ft 97,250

Peak discharge (base, 4,000 cfs).--Jan. 4 (1900) 10,900 cfs (14.20 ft).

11-4615. East Fork Russian River near Calpella, Calif.

Location--Lat 39°14'48", long 123°07'45", in NW¼ sec.18, T.16 N., R.11 W., on left bank 0.1 mile downstream from Cold Creek and 3.9 miles east of Calpella. Prior to Apr. 6, 1966, at site 0.4 mile downstream.

Drainage area--92.2 sq mi; 93.0 at former site.

Records available--October 1941 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage--Graphic water-stage recorder. Datum of gage is 787.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to May 28, 1957, at site 1.3 miles downstream at different datum. May 28, 1957 to May 19, 1964, graphic water-stage recorder and May 20, 1964 to Apr. 5, 1966, digital water-stage recorder at site 0.4 mile downstream at same datum.

Average discharge--25 years, 330 cfs (238,900 acre-ft per year).

Extremes--Maximum discharge during year, 9,890 cfs Jan. 4 (gage height, 13.66 ft); minimum daily, 4.6 cfs Nov. 4, 5.  
1941-66: Maximum discharge, 18,700 cfs Dec. 22, 1964 (gage height, 20.21 ft); minimum daily, 3.8 cfs Oct. 30, 31, 1959.

Remarks--Records good. Flow greatly affected by diversion from Eel River through Potter Valley powerhouse (see sta 11-4710). Small diversion for irrigation above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.    | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE  | JULY   | AUG.   | SEPT.  |
|-------|--------|---------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|
| 1     | 319    | 122     | 279    | 630    | 927    | 428    | 344    | 340    | 122   | 98     | 191    | 173    |
| 2     | 317    | 7.3     | 205    | 552    | 541    | 414    | 341    | 340    | 140   | 102    | 186    | 175    |
| 3     | 317    | 5.2     | 202    | 1,110  | 903    | 398    | 338    | 320    | 143   | 116    | 186    | 175    |
| 4     | 319    | 4.6     | 199    | 6,290  | 1,460  | 392    | 335    | 325    | 118   | 149    | 184    | 175    |
| 5     | 319    | 4.6     | 197    | 2,980  | 828    | 417    | 335    | 330    | 115   | 122    | 193    | 175    |
| 6     | 318    | 184     | 196    | 1,220  | 746    | 404    | 348    | 302    | 118   | 132    | 209    | 175    |
| 7     | 319    | 200     | 194    | 748    | 572    | 398    | 340    | 315    | 116   | 170    | 205    | 170    |
| 8     | 312    | 198     | 192    | 631    | 504    | 404    | 338    | 305    | 133   | 175    | 180    | 165    |
| 9     | 322    | 152     | 192    | 516    | 463    | 663    | 345    | 312    | 137   | 179    | 168    | 220    |
| 10    | 320    | 167     | 190    | 488    | 410    | 592    | 393    | 322    | 132   | 189    | 166    | 275    |
| 11    | 284    | 194     | 190    | 470    | 301    | 466    | 531    | 335    | 115   | 197    | 170    | 275    |
| 12    | 288    | 214     | 202    | 470    | 410    | 442    | 573    | 310    | 111   | 189    | 180    | 275    |
| 13    | 299    | 278     | 195    | 477    | 398    | 452    | 431    | 300    | 112   | 225    | 184    | 275    |
| 14    | 316    | 338     | 192    | 398    | 392    | 421    | 420    | 310    | 106   | 213    | 188    | 275    |
| 15    | 325    | 362     | 190    | 386    | 389    | 442    | 398    | 310    | 107   | 195    | 175    | 275    |
| 16    | 325    | 218     | 189    | 374    | 380    | 452    | 402    | 293    | 118   | 201    | 175    | 265    |
| 17    | 323    | 268     | 188    | 368    | 374    | 424    | 408    | 279    | 115   | 199    | 179    | 260    |
| 18    | 68     | 588     | 188    | 362    | 371    | 414    | 372    | 193    | 108   | 207    | 166    | 275    |
| 19    | 11     | 350     | 191    | 359    | 473    | 424    | 370    | 133    | 112   | 199    | 171    | 275    |
| 20    | 10     | 222     | 310    | 332    | 398    | 389    | 360    | 137    | 119   | 189    | 173    | 275    |
| 21    | 275    | 238     | 323    | 353    | 386    | 398    | 362    | 135    | 115   | 184    | 175    | 275    |
| 22    | 319    | 309     | 323    | 353    | 414    | 386    | 360    | 154    | 115   | 184    | 175    | 275    |
| 23    | 316    | 341     | 321    | 347    | 410    | 380    | 358    | 154    | 116   | 180    | 173    | 275    |
| 24    | 318    | 951     | 525    | 344    | 488    | 377    | 360    | 154    | 130   | 186    | 175    | 275    |
| 25    | 320    | 855     | 571    | 338    | 588    | 371    | 365    | 139    | 125   | 189    | 184    | 275    |
| 26    | 320    | 546     | 420    | 338    | 531    | 320    | 365    | 125    | 106   | 89     | 182    | 275    |
| 27    | 321    | 502     | 383    | 332    | 452    | 308    | 365    | 122    | 89    | 149    | 175    | 275    |
| 28    | 320    | 405     | 1,380  | 332    | 431    | 300    | 360    | 128    | 81    | 217    | 175    | 273    |
| 29    | 318    | 380     | 911    | 784    | -----  | 298    | 348    | 125    | 82    | 193    | 173    | 270    |
| 30    | 318    | 365     | 844    | 1,100  | -----  | 293    | 333    | 126    | 89    | 193    | 173    | 275    |
| 31    | 318    | -----   | 1,180  | 493    | -----  | 300    | -----  | 125    | ----- | 195    | 173    | -----  |
| TOTAL | 8,894  | 8,968.7 | 11,262 | 24,275 | 14,940 | 12,567 | 11,298 | 7,298  | 3,445 | 5,405  | 5,564  | 7,346  |
| MEAN  | 287    | 299     | 363    | 783    | 534    | 405    | 377    | 235    | 115   | 174    | 179    | 245    |
| AC-FT | 17,640 | 17,790  | 22,340 | 48,150 | 29,630 | 24,930 | 22,410 | 14,480 | 6,430 | 10,720 | 11,040 | 14,570 |

CALENDAR YEAR 1965 MAX 6,080 MIN 4.6 MEAN 354 AC-FT 256,500

WATER YEAR 1965-66 MAX 6,290 MIN 4.6 MEAN 332 AC-FT 240,500

Peak discharge (base, 3,300 cfs)--Jan. 4 (1830) 9,890 cfs (13.66 ft).

11-4618. Lake Mendocino near Ukiah, Calif.

Location.--Lat 39°11'53", long 123°10'50" in Yokayo Rancho Grant, in intake tower 30 ft upstream from Coyote Dam on East Fork Russian River and 3.6 miles northeast of Ukiah.

Drainage area.--105 sq mi.

Record available.--October 1965 to September 1966. Records prior to October 1965 in files of Corps of Engineers.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels of Engineers).

Extremes.--Maximum contents during year, 90,400 acre-ft Jan. 6 (elevation, 747.76 ft); minimum, 52,600 acre-ft Nov. 22 (elevation 725.20 ft).

Remarks.--Reservoir is formed by earth-fill dam; storage began in November 1958. Capacity, 122,900 acre-ft between elevations 637.0 (invert of outlet tunnel) and 764.8 ft (spillway crest) above mean sea level. Storage affected by diversions from Eel River through Potter Valley powerhouse (see sta 11-4710). Water is released down East Fork Russian River for irrigation and recreation use. Records given herein represent total contents. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Contents, in thousands of acre-feet, at 2400 hours, water year October 1965 to September 1966

| Day | Oct.        | Nov.        | Dec.        | Jan.        | Feb.        | Mar.        | Apr.        | May         | June        | July        | Aug.        | Sept.       |
|-----|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 1   | 72.6        | <u>71.1</u> | 61.9        | 67.5        | 72.4        | <u>75.7</u> | <u>73.1</u> | <u>80.8</u> | <u>79.6</u> | <u>73.5</u> | 68.4        | 63.7        |
| 2   | 72.6        | 70.6        | 62.2        | 67.5        | 69.5        | 73.0        | 73.4        | 80.8        | 79.6        | 73.2        | 68.3        | 63.6        |
| 3   | 72.7        | 70.0        | 62.5        | 68.7        | 68.8        | 72.1        | 73.8        | 80.8        | 79.5        | 72.9        | 68.2        | 63.6        |
| 4   | 72.8        | 69.4        | 62.7        | 82.6        | 70.7        | 72.2        | 74.2        | 80.7        | 79.5        | 72.7        | 68.1        | 63.5        |
| 5   | 72.9        | 68.7        | 63.0        | <u>89.2</u> | 68.7        | 72.3        | 74.5        | 80.6        | 79.4        | 72.4        | 68.0        | 63.3        |
| 6   | 73.1        | 68.3        | 63.3        | 88.2        | 65.9        | 72.3        | 74.9        | 80.5        | 79.3        | 72.1        | 67.9        | 63.1        |
| 7   | <u>73.2</u> | 68.2        | 63.5        | 82.8        | 63.4        | 72.3        | 75.3        | 80.4        | 79.2        | 71.8        | 67.8        | 62.9        |
| 8   | 73.0        | 67.9        | 63.5        | 77.6        | 60.5        | 72.4        | 75.6        | 80.4        | 79.2        | 71.7        | 67.6        | 62.7        |
| 9   | 72.7        | 67.5        | 63.2        | 71.9        | <u>60.0</u> | 73.0        | 76.1        | 80.3        | 79.1        | 71.5        | 67.5        | <u>62.3</u> |
| 10  | 72.4        | 67.2        | 62.9        | 66.6        | 60.7        | 73.2        | 76.6        | 80.1        | 79.1        | 71.3        | 67.3        | 62.7        |
| 11  | 72.1        | 66.9        | 62.7        | 61.2        | 61.6        | 73.1        | 77.3        | 80.0        | 79.2        | 71.2        | 67.0        | 62.7        |
| 12  | 71.9        | 66.9        | 62.4        | <u>59.7</u> | 62.5        | 73.3        | 77.9        | 79.7        | 79.0        | 71.1        | 66.9        | 62.7        |
| 13  | 71.8        | 66.9        | 62.2        | 60.5        | 63.2        | 73.4        | 78.1        | 79.5        | 78.9        | 71.1        | 66.6        | 62.7        |
| 14  | 72.0        | 67.0        | 61.8        | 61.3        | 64.0        | 73.3        | 78.0        | 79.4        | 78.9        | 71.1        | 66.5        | 62.8        |
| 15  | 72.1        | 65.1        | 61.5        | 62.8        | 64.8        | 73.0        | 77.4        | <u>79.3</u> | 78.8        | 71.0        | 66.3        | 62.9        |
| 16  | 72.2        | 61.4        | 61.2        | 62.8        | 65.6        | 72.8        | 78.4        | 79.5        | 78.7        | 70.9        | 66.1        | 63.0        |
| 17  | 72.3        | 57.9        | 60.9        | 63.5        | 66.3        | 72.4        | 78.6        | 79.9        | 78.5        | 70.9        | 66.0        | 63.0        |
| 18  | 72.0        | 55.1        | 60.6        | 64.2        | 69.2        | 72.2        | 78.8        | 80.1        | 78.4        | 70.8        | 65.8        | 63.1        |
| 19  | 71.6        | 53.1        | 60.4        | 65.2        | 68.5        | 72.1        | 79.1        | 80.1        | 78.2        | 70.8        | 65.6        | 63.2        |
| 20  | 71.1        | 52.9        | <u>60.2</u> | 65.6        | 68.8        | 71.9        | 79.4        | 80.1        | 77.9        | 70.7        | 65.4        | 63.3        |
| 21  | <u>71.0</u> | <u>52.6</u> | 60.2        | 66.2        | 69.6        | <u>71.7</u> | 79.8        | 80.1        | 77.6        | 70.6        | 65.3        | 63.3        |
| 22  | 71.0        | 52.9        | 60.2        | 67.0        | 70.5        | 71.7        | 80.1        | 80.2        | 77.4        | 70.4        | 65.2        | 63.4        |
| 23  | 71.2        | 53.6        | 60.6        | 67.7        | 71.3        | 71.7        | 80.4        | 80.2        | 77.1        | 70.2        | 64.9        | 63.4        |
| 24  | 71.3        | 55.5        | 61.1        | 68.4        | 72.3        | 71.8        | 80.7        | 80.3        | 76.9        | 70.0        | 64.8        | 63.4        |
| 25  | 71.4        | 57.2        | 61.3        | 69.1        | 73.7        | 71.8        | 80.8        | 80.3        | 76.5        | 69.8        | 64.6        | 63.6        |
| 26  | 71.4        | 58.1        | 61.3        | 69.8        | 74.9        | 71.9        | 80.8        | 80.2        | 75.9        | 69.4        | 64.4        | 63.7        |
| 27  | 71.5        | 59.3        | 61.6        | 70.5        | 76.0        | 71.9        | 80.8        | 79.4        | 75.4        | 69.2        | 64.3        | 63.8        |
| 28  | 71.6        | 60.1        | 64.6        | 71.2        | <u>76.9</u> | 72.0        | 80.8        | 80.0        | 74.9        | 69.0        | 64.1        | <u>63.9</u> |
| 29  | 71.6        | 60.8        | 65.7        | 73.3        | -----       | 72.2        | <u>80.9</u> | 79.9        | 74.4        | 68.9        | 63.9        | 63.9        |
| 30  | 71.6        | 61.4        | 65.3        | 76.0        | -----       | 72.4        | 80.8        | 79.9        | <u>74.0</u> | 68.8        | <u>63.8</u> | 63.8        |
| 31  | 71.6        | -----       | <u>66.5</u> | 74.5        | -----       | 72.7        | -----       | 79.7        | -----       | <u>68.5</u> | <u>63.8</u> | -----       |
| (+) | 737.08      | 730.97      | 734.02      | 738.70      | 740.00      | 737.73      | 742.39      | 741.73      | 738.43      | 735.25      | 732.31      | 732.35      |
| (#) | -1.000      | -10.200     | +5.100      | +8.000      | +2.400      | -4.200      | +8.100      | -1.100      | -5.700      | -5.500      | -4.700      | 0           |

Calendar year 1965..... †-15,200

Water year 1965-66..... †-8,800

† Elevation, in feet, at end of month.

# Change in contents, in acre-feet.

11-4620. East Fork Russian River near Ukiah, Calif.

Location.--Lat 39°11'45", long 123°11'30", in Yokayo Rancho Grant, on right bank of outlet channel, 500 ft downstream from Coyote Dam, 1,300 ft upstream from mouth, and 3.2 miles northeast of Ukiah, Mendocino County.

Drainage area.--105 sq mi.

Records available.--August 1911 to September 1913, October 1951 to June 1956, October 1957 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 614.41 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to October 1951, staff gage at site half a mile upstream at different datum. October 1951 to June 1956, graphic water-stage recorder at site 1.0 mile upstream at different datum. Nov. 15, 1957, to Aug. 2, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--15 years (1911-13, 1951-55, 1957-66), 332 cfs (240,400 acre-ft per year).

Extremes.--Maximum discharge during year, 3,270 cfs Jan. 6 (gage height, 7.02 ft); minimum daily, 2.9 cfs Jan. 5. 1911-13, 1951-56, 1957-66 (prior to regulation by Lake Mendocino): Maximum discharge, 13,300 cfs Dec. 21, 1955 (gage height, 16.86 ft, site and datum then in use), from rating curve extended above 1,700 cfs on basis of maximum flow at station upstream which was defined to 8,600 cfs; no flow Aug. 13-15, 1913. 1957-66: Maximum discharge, 6,780 cfs Dec. 30, 1964 (gage height, 10.82 ft), minimum daily, 2.9 cfs Jan. 5, 1966.

Remarks.--Records good. Flow affected by diversion from Eel River through Potter Valley powerhouse (see sta 11-4710) and since November 1958 by storage in Lake Mendocino (see sta 11-4618). Small diversions above station for irrigation. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.   | DEC.   | JAN.     | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEPT.  |
|-------|--------|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 258    | 299    | 21     | 558      | 1,720  | 808    | 160    | 297    | 148    | 244    | 232    | 248    |
| 2     | 258    | 297    | 32     | 558      | 1,700  | 1,340  | 160    | 297    | 148    | 244    | 223    | 248    |
| 3     | 265    | 297    | 36     | 700      | 795    | 715    | 160    | 297    | 148    | 244    | 223    | 248    |
| 4     | 265    | 297    | 36     | 59       | 474    | 359    | 160    | 313    | 148    | 244    | 223    | 248    |
| 5     | 270    | 297    | 36     | 2.9      | 1,690  | 406    | 160    | 323    | 148    | 244    | 232    | 248    |
| 6     | 275    | 296    | 33     | 1,420    | 1,680  | 406    | 160    | 324    | 148    | 244    | 237    | 248    |
| 7     | 280    | 296    | 63     | 3,200    | 1,660  | 406    | 163    | 325    | 145    | 244    | 237    | 248    |
| 8     | 347    | 296    | 168    | 3,130    | 1,640  | 406    | 163    | 325    | 145    | 244    | 234    | 248    |
| 9     | 421    | 297    | 311    | 3,070    | 558    | 406    | 163    | 325    | 145    | 244    | 234    | 248    |
| 10    | 419    | 298    | 311    | 3,000    | 17     | 500    | 163    | 374    | 145    | 244    | 234    | 248    |
| 11    | 418    | 298    | 311    | 2,950    | 16     | 508    | 163    | 398    | 145    | 226    | 252    | 248    |
| 12    | 348    | 298    | 311    | 1,160    | 16     | 406    | 165    | 398    | 145    | 213    | 262    | 248    |
| 13    | 240    | 298    | 311    | 16       | 17     | 406    | 276    | 365    | 144    | 213    | 262    | 248    |
| 14    | 241    | 297    | 311    | 13       | 17     | 501    | 360    | 323    | 143    | 213    | 262    | 248    |
| 15    | 221    | 1,210  | 311    | 8.8      | 17     | 558    | 279    | 325    | 143    | 210    | 252    | 248    |
| 16    | 248    | 1,900  | 311    | 8.8      | 17     | 558    | 230    | 184    | 143    | 209    | 248    | 245    |
| 17    | 248    | 1,870  | 311    | 8.8      | 17     | 558    | 230    | 95     | 159    | 209    | 248    | 244    |
| 18    | 247    | 1,850  | 311    | 8.8      | 17     | 502    | 210    | 95     | 173    | 221    | 248    | 244    |
| 19    | 246    | 1,200  | 307    | 7.9      | 17     | 470    | 165    | 97     | 171    | 227    | 248    | 244    |
| 20    | 244    | 234    | 307    | 7.9      | 17     | 470    | 168    | 98     | 182    | 236    | 248    | 244    |
| 21    | 244    | 234    | 307    | 7.9      | 17     | 470    | 168    | 99     | 221    | 241    | 248    | 244    |
| 22    | 244    | 83     | 307    | 7.9      | 17     | 402    | 168    | 100    | 234    | 250    | 248    | 244    |
| 23    | 244    | 21     | 307    | 7.9      | 17     | 363    | 168    | 100    | 252    | 255    | 248    | 244    |
| 24    | 244    | 20     | 304    | 7.9      | 18     | 332    | 169    | 134    | 283    | 255    | 248    | 244    |
| 25    | 244    | 20     | 307    | 7.9      | 18     | 314    | 255    | 149    | 292    | 255    | 247    | 244    |
| 26    | 245    | 20     | 307    | 7.9      | 18     | 314    | 318    | 148    | 290    | 255    | 248    | 244    |
| 27    | 245    | 20     | 202    | 7.9      | 18     | 314    | 306    | 148    | 290    | 254    | 248    | 244    |
| 28    | 245    | 20     | 28     | 8.4      | 18     | 276    | 293    | 148    | 290    | 253    | 248    | 244    |
| 29    | 282    | 21     | 355    | 9.3      | -----  | 192    | 296    | 148    | 262    | 251    | 248    | 244    |
| 30    | 299    | 21     | 640    | 8.8      | -----  | 160    | 297    | 148    | 244    | 251    | 248    | 244    |
| 31    | 298    | -----  | 558    | 1,060    | -----  | 160    | -----  | 148    | -----  | 251    | 248    | -----  |
| TOTAL | 8,593  | 12,905 | 7,771  | 21,029.7 | 12,243 | 13,986 | 6,296  | 7,048  | 5,674  | 7,388  | 7,566  | 7,381  |
| MEAN  | 277    | 430    | 251    | 678      | 437    | 451    | 210    | 227    | 189    | 238    | 244    | 246    |
| AC-FT | 17,040 | 25,600 | 15,410 | 41,710   | 24,280 | 27,740 | 12,490 | 13,980 | 11,250 | 14,650 | 15,010 | 14,640 |

|                    |     |       |     |     |      |     |       |         |
|--------------------|-----|-------|-----|-----|------|-----|-------|---------|
| CALENDAR YEAR 1965 | MAX | 4,110 | MIN | 4.4 | MEAN | 355 | AC-FT | 257,000 |
| WATER YEAR 1965-66 | MAX | 3,200 | MIN | 2.9 | MEAN | 323 | AC-FT | 233,800 |

## RUSSIAN RIVER BASIN

11-4625. Russian River near Hopland, Calif.

Location.--Lat 39°01'35", long 123°07'45", in Rancho de Sanel Grant, on right bank at abandoned highway bridge, 0.2 mile downstream from McNab Creek, 4 miles north of Hopland, Mendocino County, and 17 miles upstream from Sulphur Creek.

Drainage area.--362 sq mi.

Records available.--October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 497.61 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 9, 1943, wire-weight gage and Sept. 9, 1943 to Feb. 15, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 706 cfs (511,100 acre-ft per year).

Extremes.--Maximum discharge during year, 27,100 cfs Jan. 5 (gage height, 21.31 ft); minimum daily, 118 cfs May 23.  
1939-66: Maximum discharge, 45,000 cfs Dec. 22, 1955 (gage height, 27.00 ft); minimum daily, 26 cfs Dec. 18, 1943, June 26, 1949.

Flood in December 1937 reached a stage of 30.0 ft, from floodmarks.

Remarks.--Records good. Small diversions for irrigation above station. Flow also affected by diversion into basin (see Remarks for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (see sta 11-4618). Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.   | DEC.   | JAN.    | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEPT.  |
|-------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 255    | 325    | 265    | 1,990   | 3,560  | 916    | 403    | 369    | 149    | 228    | 228    | 240    |
| 2     | 256    | 324    | 247    | 1,630   | 2,820  | 1,750  | 391    | 365    | 146    | 228    | 210    | 237    |
| 3     | 259    | 326    | 247    | 2,710   | 2,840  | 1,310  | 380    | 365    | 149    | 231    | 207    | 237    |
| 4     | 258    | 328    | 233    | 14,300  | 4,190  | 710    | 369    | 372    | 154    | 231    | 204    | 243    |
| 5     | 256    | 327    | 216    | 13,600  | 3,970  | 780    | 357    | 384    | 156    | 225    | 207    | 240    |
| 6     | 256    | 327    | 200    | 5,420   | 3,510  | 765    | 350    | 384    | 156    | 228    | 219    | 237    |
| 7     | 273    | 341    | 188    | 5,380   | 3,010  | 755    | 338    | 380    | 154    | 228    | 219    | 237    |
| 8     | 303    | 342    | 203    | 4,720   | 2,690  | 750    | 334    | 380    | 149    | 225    | 219    | 237    |
| 9     | 432    | 335    | 338    | 4,200   | 1,790  | 1,020  | 342    | 380    | 144    | 225    | 222    | 234    |
| 10    | 448    | 335    | 364    | 3,860   | 790    | 1,420  | 369    | 410    | 146    | 228    | 222    | 234    |
| 11    | 454    | 334    | 384    | 3,620   | 660    | 1,180  | 483    | 450    | 144    | 222    | 231    | 237    |
| 12    | 441    | 355    | 420    | 2,260   | 572    | 928    | 735    | 446    | 144    | 199    | 250    | 237    |
| 13    | 283    | 439    | 411    | 765     | 509    | 928    | 554    | 430    | 144    | 196    | 253    | 237    |
| 14    | 274    | 766    | 406    | 615     | 458    | 922    | 590    | 365    | 139    | 196    | 256    | 240    |
| 15    | 258    | 1,510  | 393    | 532     | 422    | 1,030  | 527    | 361    | 132    | 193    | 253    | 234    |
| 16    | 270    | 2,520  | 393    | 462     | 372    | 1,120  | 434    | 306    | 130    | 193    | 243    | 237    |
| 17    | 274    | 2,620  | 398    | 410     | 336    | 1,050  | 414    | 169    | 137    | 193    | 243    | 234    |
| 18    | 275    | 2,780  | 393    | 376     | 317    | 964    | 388    | 149    | 161    | 199    | 243    | 243    |
| 19    | 275    | 2,690  | 389    | 331     | 581    | 910    | 338    | 139    | 161    | 204    | 243    | 240    |
| 20    | 274    | 840    | 389    | 286     | 462    | 856    | 324    | 132    | 164    | 207    | 243    | 237    |
| 21    | 272    | 608    | 389    | 243     | 391    | 838    | 313    | 125    | 193    | 213    | 243    | 240    |
| 22    | 271    | 447    | 385    | 234     | 384    | 775    | 306    | 120    | 216    | 219    | 246    | 246    |
| 23    | 270    | 237    | 384    | 228     | 430    | 695    | 296    | 118    | 225    | 228    | 246    | 243    |
| 24    | 271    | 1,270  | 853    | 207     | 536    | 655    | 289    | 125    | 253    | 234    | 243    | 240    |
| 25    | 265    | 1,780  | 1,260  | 196     | 670    | 600    | 324    | 149    | 272    | 234    | 243    | 240    |
| 26    | 272    | 1,040  | 898    | 188     | 814    | 586    | 403    | 144    | 275    | 231    | 240    | 243    |
| 27    | 273    | 763    | 687    | 177     | 620    | 572    | 403    | 149    | 275    | 231    | 240    | 243    |
| 28    | 273    | 470    | 3,610  | 169     | 554    | 550    | 380    | 149    | 272    | 234    | 240    | 243    |
| 29    | 288    | 360    | 2,810  | 770     | -----  | 483    | 376    | 154    | 262    | 234    | 240    | 240    |
| 30    | 319    | 301    | 2,160  | 2,330   | -----  | 422    | 372    | 156    | 231    | 237    | 246    | 240    |
| 31    | 323    | -----  | 2,750  | 1,770   | -----  | 414    | -----  | 154    | -----  | 237    | 243    | -----  |
| TOTAL | 9,171  | 26,440 | 22,663 | 73,979  | 38,258 | 26,654 | 11,882 | 8,279  | 5,433  | 6,811  | 7,285  | 7,170  |
| MEAN  | 296    | 881    | 731    | 2,386   | 1,366  | 860    | 396    | 267    | 181    | 220    | 235    | 239    |
| AC-FT | 18,190 | 52,440 | 44,950 | 146,700 | 75,880 | 52,870 | 23,570 | 16,420 | 10,780 | 13,510 | 14,450 | 14,220 |

CALENDAR YEAR 1965 MAX 15,500 MIN 163 MEAN 740 AC-FT 327,400  
WATER YEAR 1965-66 MAX 14,300 MIN 118 MEAN 669 AC-FT 484,000

Peak discharge (base, 9,600 cfs).--Jan. 5 (0030) 27,100 cfs (21.31 ft).



11-4627. Feliz Creek near Hopland, Calif.

Location.--Lat 38°58'20", long 123°08'30", in Rancho de Sanel Grant, on left bank just upstream from county road bridge, 0.1 mile upstream from Johnson Creek, and 1.4 miles west of Hopland, Mendocino County.

Drainage area.--31.1 sq mi.

Records available.--August 1958 to September 1966 (discontinued).

Gage.--Digital water-stage recorder. Datum of gage is 507.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 30, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 46.5 cfs (33,660 acre-ft per year).

Extremes.--Maximum discharge during year, 4,190 cfs Jan. 4 (gage height, 11.74 ft); no flow for many days.

1958-66: Maximum discharge, 6,080 cfs Dec. 22, 1964 (gage height, 14.10 ft); no flow for several months in each year.

Flood of Dec. 23, 1955, reached a stage of 13.60 ft, from floodmarks, (discharge, 2,710 cfs on basis of slope-area measurement of maximum flow).

Remarks.--Records fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.    | JAN.   | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|----------|---------|--------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0.10     | 9.4     | 115    | 482   | 51    | 19    | 6.0   | 2.2   | 0.10 |      |       |
| 2     | 0    | .20      | 8.0     | 79     | 150   | 46    | 18    | 5.7   | 1.4   | .10  |      |       |
| 3     | 0    | .20      | 7.4     | 294    | 640   | 42    | 17    | 5.4   | 1.2   | .40  |      |       |
| 4     | 0    | .10      | 7.0     | 3,080  | 1,110 | 38    | 16    | 5.3   | .60   | .50  |      |       |
| 5     | 0    | 0        | 6.4     | 1,440  | 430   | 39    | 15    | 5.3   | .50   | .40  |      |       |
| 6     | 0    | .10      | 6.0     | 398    | 283   | 36    | 14    | 5.5   | .60   | .10  |      |       |
| 7     | 0    | 1.7      | 5.6     | 163    | 163   | 34    | 14    | 5.2   | .40   | .10  |      |       |
| 8     | 0    | .80      | 5.2     | 107    | 115   | 35    | 13    | 5.3   | .70   | .20  |      |       |
| 9     | 0    | .40      | 4.8     | 72     | 86    | 109   | 16    | 5.6   | 1.2   | .10  |      |       |
| 10    | 0    | .20      | 4.5     | 51     | 70    | 93    | 21    | 6.2   | 1.0   | .20  |      |       |
| 11    | 0    | .30      | 5.0     | 42     | 56    | 59    | 32    | 6.0   | .90   | .10  |      |       |
| 12    | 0    | .90      | 20      | 36     | 49    | 50    | 41    | 5.2   | .80   | .10  |      |       |
| 13    | 0    | 188      | 13      | 31     | 44    | 55    | 25    | 4.6   | .60   | .10  |      |       |
| 14    | 0    | 134      | 10      | 27     | 40    | 47    | 20    | 4.3   | .50   | .10  |      |       |
| 15    | 0    | 61       | 8.0     | 25     | 36    | 50    | 18    | 4.1   | .10   | .10  |      |       |
| 16    | 0    | 35       | 7.2     | 23     | 34    | 55    | 16    | 3.8   | .20   | .10  |      |       |
| 17    | 0    | 52       | 6.6     | 21     | 31    | 47    | 15    | 3.5   | .20   | 0    |      |       |
| 18    | 0    | 350      | 6.2     | 20     | 31    | 44    | 14    | 2.8   | .20   | 0    |      |       |
| 19    | 0    | 120      | 5.7     | 19     | 193   | 46    | 13    | 1.6   | .80   | 0    |      |       |
| 20    | .10  | 60       | 5.3     | 18     | 61    | 41    | 12    | 2.1   | .80   | 0    |      |       |
| 21    | .10  | 38       | 4.8     | 17     | 49    | 40    | 11    | 2.1   | .40   | 0    |      |       |
| 22    | .10  | 35       | 4.4     | 18     | 53    | 38    | 11    | 1.7   | .80   | 0    |      |       |
| 23    | .10  | 70       | 3.5     | 17     | 54    | 35    | 9.9   | 1.7   | .40   | 0    |      |       |
| 24    | .10  | 250      | 298     | 15     | 69    | 33    | 9.0   | 1.5   | .10   | 0    |      |       |
| 25    | .10  | 130      | 255     | 13     | 86    | 30    | 8.2   | 1.7   | .60   | 0    |      |       |
| 26    | .10  | 60       | 91      | 13     | 80    | 29    | 7.5   | 1.8   | .60   | .50  |      |       |
| 27    | 0    | 35       | 88      | 12     | 64    | 27    | 7.3   | 3.3   | .60   | .10  |      |       |
| 28    | .10  | 24       | 1,780   | 11     | 56    | 25    | 7.0   | 8.2   | .10   | .10  |      |       |
| 29    | .10  | 15       | 358     | 450    | ----- | 23    | 6.5   | 7.5   | .10   | .10  |      |       |
| 30    | .10  | 11       | 217     | 466    | ----- | 22    | 6.3   | 7.0   | .10   | 0    |      |       |
| 31    | .10  | -----    | 245     | 124    | ----- | 21    | ----- | 6.2   | ----- | 0    |      |       |
| TOTAL | 1.10 | 1,673.10 | 3,496.0 | 7,217  | 4,615 | 1,340 | 452.7 | 136.3 | 18.70 | 3.60 | 0    | 0     |
| MEAN  | .04  | 55.8     | 113     | 233    | 165   | 43.2  | 15.1  | 4.40  | .62   | .12  | 0    | 0     |
| AC-FT | 2.2  | 3,320    | 6,930   | 14,310 | 9,150 | 2,660 | 898   | 270   | 37    | 7.1  | 0    | 0     |

CALENDAR YEAR 1965 MAX 2,470 MIN 0 MEAN 60.3 AC-FT 43,680  
 WATER YEAR 1965-66 MAX 3,080 MIN 0 MEAN 51.9 AC-FT 37,580

Peak discharge (base, 2,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-28 | 1045 | 11.15       | 3,720     | 2-1  | 0445 | 9.54        | 2,500     |
| 1- 4  | 0930 | 11.74       | 4,190     | 2-3  | 1945 | 9.78        | 2,680     |
| 1-29  | 1330 | 9.05        | 2,140     |      |      |             |           |

Note.--No gage-height record Nov. 15 to Dec. 17.

## RUSSIAN RIVER BASIN

11-4630. Russian River near Cloverdale, Calif.

Location.--Lat 38°52'55", long 123°03'15", in SW¼ sec.14, T.12 N., R.11 W., on left bank at Lambert Ranch, 400 ft downstream from Cumisky Creek and 5 miles northwest of Cloverdale.

Drainage area.--502 sq mi.

Records available.--July 1951 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 373.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 23, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--15 years, 972 cfs (703,700 acre-ft per year).

Extremes.--Maximum discharge during year, 32,600 cfs Jan. 5 (gage height, 24.37 ft); minimum daily, 123 cfs June 17.

1951-66: Maximum discharge, 55,200 cfs Dec. 22, 1964 (gage height, 31.60 ft), from rating curve extended above 21,000 cfs on basis of determination of maximum flow at upstream and downstream stations; minimum daily, 81 cfs Nov. 24, 1958.

Remarks.--Records good. Small diversions for irrigation above station. Flow also affected by diversion into basin (see Remarks for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (see sta 11-4618). Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.   | DEC.   | JAN.    | FEB.    | MAR.   | APR.   | MAY    | JUNE   | JULY   | AUG.   | SEPT.  |
|-------|--------|--------|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 1     | 246    | 302    | 360    | 2,310   | 5,690   | 1,070  | 450    | 406    | 156    | 222    | 229    | 226    |
| 2     | 247    | 306    | 311    | 1,680   | 4,390   | 2,230  | 434    | 401    | 156    | 221    | 208    | 222    |
| 3     | 249    | 306    | 280    | 2,840   | 4,940   | 1,990  | 422    | 395    | 157    | 224    | 203    | 218    |
| 4     | 249    | 306    | 260    | 17,300  | 7,300   | 970    | 409    | 394    | 158    | 228    | 198    | 226    |
| 5     | 246    | 306    | 242    | 21,700  | 6,040   | 1,020  | 407    | 410    | 160    | 222    | 199    | 231    |
| 6     | 246    | 306    | 232    | 8,110   | 5,110   | 990    | 399    | 411    | 163    | 215    | 213    | 226    |
| 7     | 247    | 316    | 216    | 7,000   | 4,410   | 940    | 394    | 404    | 162    | 214    | 216    | 226    |
| 8     | 267    | 335    | 228    | 6,050   | 3,890   | 920    | 385    | 403    | 156    | 212    | 216    | 231    |
| 9     | 376    | 320    | 355    | 5,320   | 3,060   | 1,590  | 397    | 403    | 149    | 213    | 217    | 231    |
| 10    | 403    | 316    | 408    | 4,910   | 1,480   | 2,280  | 432    | 415    | 147    | 219    | 218    | 226    |
| 11    | 414    | 316    | 442    | 4,630   | 1,160   | 1,830  | 559    | 457    | 145    | 221    | 227    | 231    |
| 12    | 420    | 325    | 528    | 3,660   | 970     | 1,420  | 964    | 457    | 146    | 197    | 248    | 231    |
| 13    | 306    | 564    | 469    | 1,330   | 824     | 1,390  | 678    | 451    | 147    | 186    | 254    | 231    |
| 14    | 268    | 1,170  | 452    | 1,010   | 728     | 1,290  | 726    | 397    | 138    | 183    | 257    | 236    |
| 15    | 260    | 1,610  | 442    | 872     | 640     | 1,480  | 660    | 383    | 133    | 185    | 257    | 231    |
| 16    | 249    | 2,120  | 430    | 792     | 568     | 1,630  | 526    | 368    | 124    | 184    | 245    | 231    |
| 17    | 260    | 2,580  | 425    | 712     | 518     | 1,500  | 498    | 222    | 123    | 185    | 245    | 231    |
| 18    | 260    | 2,920  | 420    | 624     | 488     | 1,360  | 474    | 191    | 146    | 187    | 244    | 231    |
| 19    | 260    | 2,960  | 420    | 554     | 1,200   | 1,270  | 413    | 173    | 154    | 197    | 242    | 236    |
| 20    | 260    | 1,030  | 414    | 500     | 824     | 1,190  | 392    | 164    | 162    | 197    | 239    | 231    |
| 21    | 256    | 756    | 414    | 452     | 648     | 1,160  | 379    | 152    | 170    | 210    | 241    | 222    |
| 22    | 256    | 624    | 408    | 400     | 616     | 1,080  | 372    | 147    | 200    | 212    | 246    | 226    |
| 23    | 252    | 403    | 403    | 355     | 672     | 920    | 362    | 138    | 209    | 222    | 241    | 226    |
| 24    | 256    | 1,390  | 1,120  | 305     | 776     | 856    | 350    | 128    | 229    | 225    | 233    | 225    |
| 25    | 253    | 1,820  | 1,440  | 270     | 980     | 777    | 349    | 154    | 255    | 226    | 242    | 225    |
| 26    | 253    | 1,250  | 990    | 255     | 1,380   | 730    | 435    | 159    | 269    | 228    | 234    | 225    |
| 27    | 256    | 918    | 822    | 240     | 1,020   | 695    | 441    | 153    | 272    | 228    | 230    | 225    |
| 28    | 256    | 654    | 6,020  | 218     | 872     | 657    | 424    | 156    | 266    | 227    | 231    | 225    |
| 29    | 260    | 534    | 4,360  | 2,040   | -----   | 578    | 416    | 156    | 263    | 227    | 228    | 225    |
| 30    | 293    | 436    | 2,730  | 5,040   | -----   | 501    | 410    | 165    | 232    | 226    | 230    | 225    |
| 31    | 302    | -----  | 3,340  | 2,810   | -----   | 468    | -----  | 161    | -----  | 226    | 230    | -----  |
| TOTAL | 8,626  | 28,509 | 29,381 | 104,289 | 61,194  | 36,782 | 13,957 | 8,974  | 5,347  | 6,569  | 7,161  | 6,832  |
| MEAN  | 278    | 950    | 948    | 3,364   | 2,186   | 1,187  | 465    | 289    | 178    | 212    | 231    | 228    |
| AC-FT | 17,110 | 56,550 | 58,280 | 206,900 | 121,400 | 72,960 | 27,680 | 17,800 | 10,610 | 13,030 | 14,200 | 13,550 |

CALENDAR YEAR 1965 MAX 23,000 MIN 167 MEAN 867 AC-FT 627,300  
 WATER YEAR 1965-66 MAX 21,700 MIN 123 MEAN 870 AC-FT 630,100

Peak base (13,000 cfs).--Jan. 5 (0315) 32,600 cfs (24.37 ft).

11-4632. Big Sulphur Creek near Cloverdale, Calif.

Location.--Lat 38°49'21", long 122°59'07", in SW¼SW¼ sec.4, T.11 N., R.10 W., on right bank 0.5 mile downstream from unnamed tributary, 1.9 miles upstream from mouth, and 2.0 miles northeast of Cloverdale.

Drainage area.--82.3 sq mi.

Records available.--July 1957 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 392.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 23, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 182 cfs (131,800 acre-ft).

Extremes.--Maximum discharge during year, 11,100 cfs Jan. 4 (gage height, 12.96 ft), from rating curve extended above 4,100 cfs as explained below; minimum daily, 3.3 cfs Sept. 5, 6, 29, 30.

1957-66: Maximum discharge, 15,700 cfs Dec. 22, 1964 (gage height, 15.08 ft), from rating curve extended above 4,100 cfs on basis of slope-area measurement at gage height 16.8 ft; minimum daily, 1.8 cfs Sept. 24, Oct. 20, 1964.

Flood of Dec. 22, 1955, reached a stage of 16.8 ft, from floodmarks, present datum (discharge, 20,000 cfs on basis of slope-area measurement of maximum flow).

Remarks.--Records good. No regulation or diversion above station. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1965 Report: 1958-63, 1964(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|---------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 5.8   | 5.6     | 92     | 416    | 926    | 203    | 92    | 43    | 23    | 9.2   | 6.2   | 5.3   |
| 2     | 5.9   | 5.8     | 81     | 291    | 529    | 190    | 90    | 41    | 23    | 9.3   | 5.9   | 4.5   |
| 3     | 6.0   | 5.8     | 70     | 752    | 862    | 177    | 85    | 39    | 23    | 9.2   | 5.7   | 3.9   |
| 4     | 6.1   | 6.0     | 63     | 6,500  | 1,720  | 167    | 83    | 39    | 22    | 9.0   | 5.6   | 3.5   |
| 5     | 6.4   | 6.0     | 58     | 5,630  | 995    | 157    | 81    | 39    | 21    | 8.7   | 5.4   | 3.3   |
| 6     | 6.6   | 6.0     | 56     | 2,380  | 701    | 150    | 79    | 40    | 22    | 8.6   | 5.3   | 3.3   |
| 7     | 6.3   | 11      | 50     | 1,410  | 508    | 145    | 77    | 38    | 23    | 8.8   | 5.1   | 3.5   |
| 8     | 6.0   | 37      | 48     | 917    | 410    | 140    | 74    | 37    | 22    | 9.2   | 4.9   | 3.9   |
| 9     | 6.0   | 14      | 46     | 520    | 344    | 304    | 87    | 41    | 20    | 10    | 4.8   | 4.0   |
| 10    | 6.6   | 11      | 43     | 378    | 298    | 404    | 140   | 42    | 19    | 11    | 4.9   | 3.9   |
| 11    | 6.6   | 9.5     | 49     | 298    | 259    | 263    | 158   | 40    | 18    | 10    | 4.7   | 3.7   |
| 12    | 6.3   | 12      | 66     | 253    | 236    | 226    | 235   | 37    | 17    | 9.8   | 4.9   | 3.6   |
| 13    | 6.0   | 106     | 50     | 221    | 216    | 245    | 140   | 34    | 16    | 9.7   | 4.9   | 3.6   |
| 14    | 6.3   | 249     | 44     | 197    | 202    | 211    | 110   | 33    | 15    | 9.5   | 4.8   | 3.7   |
| 15    | 6.3   | 457     | 40     | 182    | 189    | 212    | 102   | 32    | 14    | 9.1   | 5.0   | 3.8   |
| 16    | 6.6   | 179     | 38     | 170    | 177    | 207    | 95    | 32    | 13    | 8.7   | 4.6   | 3.6   |
| 17    | 6.6   | 382     | 37     | 161    | 168    | 187    | 92    | 30    | 13    | 8.3   | 4.5   | 3.5   |
| 18    | 6.6   | 670     | 36     | 152    | 160    | 177    | 91    | 30    | 12    | 8.1   | 4.3   | 3.6   |
| 19    | 6.6   | 418     | 35     | 146    | 437    | 174    | 81    | 28    | 12    | 7.9   | 4.0   | 4.0   |
| 20    | 6.6   | 221     | 34     | 137    | 255    | 158    | 76    | 28    | 11    | 7.5   | 4.0   | 4.2   |
| 21    | 6.3   | 152     | 34     | 132    | 215    | 151    | 71    | 28    | 11    | 7.5   | 4.3   | 3.9   |
| 22    | 6.0   | 107     | 34     | 129    | 215    | 138    | 66    | 29    | 12    | 7.3   | 4.1   | 3.8   |
| 23    | 5.8   | 95      | 32     | 123    | 228    | 126    | 62    | 27    | 12    | 7.1   | 3.9   | 3.8   |
| 24    | 5.6   | 595     | 134    | 118    | 254    | 123    | 58    | 26    | 12    | 6.7   | 3.9   | 4.0   |
| 25    | 5.6   | 390     | 225    | 112    | 263    | 121    | 55    | 25    | 11    | 6.7   | 3.7   | 3.9   |
| 26    | 5.6   | 229     | 225    | 110    | 263    | 116    | 51    | 24    | 11    | 6.7   | 3.8   | 4.0   |
| 27    | 5.4   | 201     | 231    | 105    | 231    | 109    | 49    | 24    | 10    | 6.2   | 3.8   | 3.8   |
| 28    | 5.6   | 161     | 3,200  | 100    | 216    | 104    | 48    | 24    | 9.8   | 6.0   | 3.7   | 3.5   |
| 29    | 5.6   | 135     | 1,510  | 814    | -----  | 102    | 46    | 25    | 9.6   | 6.1   | 4.1   | 3.3   |
| 30    | 5.6   | 113     | 1,010  | 1,240  | -----  | 100    | 44    | 26    | 9.5   | 6.3   | 4.3   | 3.3   |
| 31    | 5.6   | -----   | 835    | 506    | -----  | 97     | ----- | 25    | ----- | 6.6   | 5.4   | ----- |
| TOTAL | 189.5 | 4,989.7 | 8,506  | 24,600 | 11,477 | 5,384  | 2,618 | 1,006 | 466.9 | 254.8 | 144.5 | 113.7 |
| MEAN  | 6.11  | 166     | 274    | 794    | 410    | 174    | 87.3  | 32.5  | 15.6  | 8.22  | 4.66  | 3.79  |
| AC-FT | 376   | 9,900   | 16,870 | 48,790 | 22,760 | 10,680 | 5,190 | 2,000 | 926   | 505   | 287   | 226   |

CALENDAR YEAR 1965 MAX 7,750 MIN 5.3 MEAN 188 AC-FT 136,100  
 WATER YEAR 1965-66 MAX 6,500 MIN 3.3 MEAN 164 AC-FT 118,500

Peak discharge (base, 3,200 cfs).--Dec. 28 (1145) 7,060 cfs (10.74 ft); Jan. 4 (2200) 11,100 cfs (12.96 ft).

## RUSSIAN RIVER BASIN

11-4639. Maacama Creek near Kellogg, Calif. .

Location.--Lat 38°38'25", long 122°45'45", in SW¼ sec.9, T.9 N., R.8 W., on right bank 0.5 mile downstream from Redwood Creek, and 4.4 miles west of Kellogg.

Drainage area.--43.4 sq mi.

Records available.--Occasional low-flow measurements and annual maximum, water years 1958-60. December 1960 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 188.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Dec. 20, 1960, crest-stage gage only at site 700 ft upstream at different datum. Dec. 20, 1960 to Oct. 13, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--5 years (1961-66), 77.8 cfs (56,320 acre-ft per year).

Extremes.--Maximum discharge during year, 5,650 cfs Jan. 4 (gage height, 14.60 ft); minimum daily, 0.20 cfs Aug. 19, Sept. 27, 28. 1958-66: Maximum discharge, 8,920 cfs Dec. 22, 1964 (gage height, 17.56 ft). 1960-66: No flow for many days in August and September 1964.

Remarks.--Records good. No regulation or diversion above station. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.  | JAN.   | FEB.   | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|----------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.70  | 0.80     | 34    | 174    | 396    | 101   | 28    | 19    | 7.7   | 1.9   | 0.80  | 1.0   |
| 2     | .70   | .80      | 30    | 130    | 209    | 90    | 27    | 18    | 7.4   | 2.3   | .60   | .70   |
| 3     | .80   | .90      | 28    | 278    | 367    | 80    | 25    | 17    | 7.3   | 2.2   | 1.1   | .40   |
| 4     | .90   | .90      | 25    | 2,970  | 668    | 74    | 24    | 17    | 7.1   | 1.8   | 1.1   | .40   |
| 5     | 1.0   | .80      | 24    | 2,920  | 436    | 69    | 24    | 17    | 6.9   | 1.6   | .40   | .30   |
| 6     | 1.0   | .70      | 23    | 948    | 303    | 66    | 23    | 17    | 7.7   | 1.4   | .30   | .60   |
| 7     | .90   | 2.0      | 21    | 497    | 226    | 68    | 23    | 16    | 7.6   | 2.1   | .30   | 1.6   |
| 8     | .90   | 4.0      | 21    | 385    | 179    | 61    | 22    | 15    | 7.4   | 2.4   | .30   | 1.2   |
| 9     | 1.1   | 1.7      | 20    | 277    | 146    | 115   | 58    | 16    | 6.8   | 3.2   | .30   | .90   |
| 10    | 1.3   | 1.4      | 19    | 216    | 124    | 186   | 79    | 16    | 6.3   | 3.2   | 1.0   | 1.3   |
| 11    | 1.1   | 1.4      | 25    | 175    | 107    | 109   | 99    | 15    | 6.3   | 3.0   | .40   | 1.0   |
| 12    | 1.2   | 4.5      | 33    | 145    | 96     | 90    | 149   | 14    | 4.2   | 3.0   | .40   | 1.2   |
| 13    | 1.1   | 135      | 23    | 120    | 85     | 99    | 77    | 13    | 5.7   | 2.9   | .40   | 1.5   |
| 14    | 1.5   | 195      | 21    | 106    | 79     | 85    | 60    | 12    | 5.4   | 2.5   | .40   | 2.3   |
| 15    | 1.9   | 99       | 19    | 93     | 72     | 81    | 50    | 12    | 4.5   | 2.8   | .40   | 2.1   |
| 16    | 1.4   | 33       | 17    | 81     | 66     | 76    | 44    | 12    | 4.8   | .80   | .70   | 1.3   |
| 17    | 1.1   | 92       | 17    | 73     | 62     | 68    | 41    | 12    | 5.0   | 1.2   | .50   | .50   |
| 18    | 1.1   | 251      | 16    | 68     | 60     | 64    | 39    | 11    | 4.4   | 2.1   | .60   | 1.5   |
| 19    | 1.3   | 293      | 15    | 63     | 316    | 64    | 34    | 11    | 3.5   | 1.9   | .20   | 1.3   |
| 20    | 1.2   | 87       | 15    | 58     | 126    | 57    | 31    | 11    | 4.3   | 1.7   | .30   | 1.0   |
| 21    | 1.1   | 49       | 14    | 54     | 98     | 53    | 30    | 11    | 4.2   | 1.8   | .30   | 1.6   |
| 22    | 1.0   | 35       | 14    | 53     | 103    | 49    | 28    | 11    | 4.3   | 1.5   | .60   | .60   |
| 23    | .80   | 41       | 13    | 50     | 110    | 45    | 26    | 10    | 4.2   | 2.9   | .60   | 1.5   |
| 24    | .80   | 284      | 391   | 46     | 161    | 43    | 25    | 9.6   | 3.7   | 1.2   | 1.1   | .40   |
| 25    | .70   | 143      | 243   | 43     | 169    | 41    | 24    | 9.2   | 2.8   | 1.5   | 1.0   | .30   |
| 26    | .70   | 93       | 111   | 41     | 158    | 39    | 23    | 9.0   | 2.4   | 1.3   | .90   | .30   |
| 27    | .70   | 91       | 81    | 38     | 124    | 37    | 21    | 8.9   | 2.3   | .70   | .90   | .20   |
| 28    | .70   | 63       | 841   | 36     | 111    | 36    | 21    | 8.8   | 2.0   | .80   | .80   | .20   |
| 29    | .80   | 50       | 471   | 206    | -----  | 34    | 20    | 9.1   | 1.8   | 1.0   | .70   | .50   |
| 30    | .70   | 40       | 313   | 406    | -----  | 32    | 20    | 9.2   | 2.2   | .90   | .80   | .40   |
| 31    | .70   | -----    | 316   | 162    | -----  | 30    | ----- | 8.6   | ----- | 1.1   | 1.3   | ----- |
| TOTAL | 30.90 | 2,093.90 | 3,254 | 10,912 | 5,157  | 2,142 | 1,195 | 395.4 | 150.2 | 58.80 | 19.50 | 28.10 |
| MEAN  | 1.00  | 69.8     | 105   | 352    | 184    | 69.1  | 39.8  | 12.8  | 5.01  | 1.90  | .63   | .94   |
| AC-FT | 61    | 4,150    | 6,450 | 21,640 | 10,230 | 4,250 | 2,370 | 784   | 298   | 117   | 39    | 56    |

CALENDAR YEAR 1965 MAX 3,340 MIN .20 MEAN 75.9 AC-FT 54,970  
 WATER YEAR 1965-66 MAX 2,970 MIN .20 MEAN 69.7 AC-FT 50,450

Peak discharge (base, 2,000 cfs, revised).--Dec. 28 (1015) 2,380 cfs (10.25 ft); Jan. 4 (2045) 5,650 cfs (14.60 ft).

11-4639.4 Franz Creek near Kellogg, Calif.

Location.--Lat 38°36'30", long 122°41'35", in Mallacomes Grant, on left bank at downstream side of highway bridge, 100 ft downstream from Bidwell Creek, and 2 miles south of Kellogg, Sonoma County.

Drainage area.--15.7 sq mi.

Records available.--Occasional low-flow measurements, water years 1957-62, and annual maximum, water years 1956, 1958-62, October 1963 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 343.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Oct. 25, 1957, to Sept. 30, 1962, crest-stage gage only, at site 75 ft downstream at same datum.

Extremes.--Maximum discharge during year, 1,880 cfs Jan. 4 (gage height, 6.10 ft, from high-water mark); no flow for many days. 1955-66: Maximum discharge 5,780 cfs Jan. 5, 1965 (gage height, 8.31 ft), from rating curve extended above 860 cfs on basis of slope area measurements at gage heights 6.93 and 7.8 ft. 1963-66: No flow at times in each year.

Remarks.--Records good except those for period of no gage height record, which are fair. Small diversions above station for irrigation and stock ponds.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.    | Jan.    | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|--------|---------|---------|-------|-------|-------|------|-------|------|------|-------|
| 1     | 0.10 | 0.60   | 12      | 50      | 151   | 28    | 5.8   | 3.4  | 1.5   | 0.30 | 0.10 | 0     |
| 2     | .10  | .60    | 11      | 40      | 80    | 25    | 5.5   | 3.6  | 1.3   | .20  | 0    | 0     |
| 3     | .10  | .70    | 9.5     | 85      | 139   | 22    | 5.8   | 3.6  | 1.3   | .20  | 0    | 0     |
| 4     | .10  | .60    | 8.7     | 1,000   | 215   | 20    | 6.7   | 3.4  | 1.3   | .10  | 0    | 0     |
| 5     | .10  | .60    | 7.8     | 900     | 135   | 18    | 6.7   | 3.2  | 1.3   | .10  | .10  | 0     |
| 6     | .10  | .40    | 7.3     | 378     | 88    | 17    | 6.4   | 3.4  | 1.1   | .10  | .10  | 0     |
| 7     | .10  | .80    | 6.8     | 203     | 64    | 18    | 6.4   | 3.4  | 1.2   | .10  | 0    | 0     |
| 8     | .10  | 3.3    | 6.4     | 140     | 48    | 15    | 5.8   | 3.4  | 1.1   | .10  | 0    | 0     |
| 9     | .10  | .80    | 6.1     | 100     | 40    | 24    | 11    | 3.4  | .70   | .20  | 0    | 0     |
| 10    | .20  | .60    | 5.9     | 80      | 34    | 37    | 17    | 3.4  | .60   | .10  | 0    | 0     |
| 11    | .20  | .60    | 6.4     | 58      | 30    | 27    | 16    | 3.0  | .70   | .10  | 0    | 0     |
| 12    | .20  | .80    | 7.3     | 46      | 26    | 23    | 21    | 2.7  | .70   | .20  | 0    | 0     |
| 13    | .20  | 58     | 6.1     | 38      | 22    | 23    | 14    | 2.7  | .50   | .20  | 0    | 0     |
| 14    | .20  | 94     | 5.4     | 53      | 20    | 20    | 11    | 2.7  | .50   | .20  | 0    | 0     |
| 15    | .20  | 35     | 5.4     | 28      | 18    | 18    | 9.7   | 2.7  | .50   | .10  | 0    | 0     |
| 16    | .20  | 14     | 5.0     | 24      | 16    | 16    | 8.9   | 2.6  | .50   | .10  | 0    | 0     |
| 17    | .10  | 48     | 4.8     | 20      | 15    | 15    | 7.9   | 2.6  | .60   | .10  | 0    | 0     |
| 18    | .10  | 51     | 4.7     | 18      | 14    | 15    | 7.6   | 2.3  | .40   | .10  | 0    | 0     |
| 19    | .10  | 87     | 5.0     | 16      | 73    | 14    | 6.7   | 2.3  | .30   | .10  | 0    | 0     |
| 20    | .10  | 27     | 5.4     | 15      | 35    | 12    | 6.1   | 1.7  | .30   | .10  | 0    | .10   |
| 21    | .10  | 17     | 5.0     | 13      | 27    | 11    | 5.8   | 1.7  | .30   | .10  | 0    | .10   |
| 22    | .10  | 13     | 4.7     | 13      | 28    | 10    | 5.2   | 1.9  | .40   | .10  | 0    | .10   |
| 23    | .10  | 15     | 4.3     | 12      | 30    | 9.7   | 4.9   | 1.8  | .40   | 0    | 0    | .10   |
| 24    | .10  | 146    | 143     | 11      | 37    | 93    | 4.9   | 1.5  | .30   | 0    | 0    | .10   |
| 25    | .20  | 57     | 90      | 9.7     | 43    | 8.5   | 4.6   | 1.6  | .20   | .10  | 0    | .10   |
| 26    | .20  | 35     | 37      | 9.3     | 48    | 8.2   | 4.3   | 1.4  | .40   | .20  | 0    | .10   |
| 27    | .30  | 27     | 26      | 8.2     | 36    | 7.9   | 4.1   | 1.4  | .30   | .10  | 0    | .10   |
| 28    | .20  | 21     | 270     | 7.6     | 32    | 7.9   | 3.8   | 1.3  | .30   | .10  | 0    | 0     |
| 29    | .30  | 17     | 170     | 107     | ----- | 7.3   | 3.8   | 1.5  | .20   | .10  | 0    | 0     |
| 30    | .30  | 14     | 112     | 166     | ----- | 6.6   | 3.4   | 1.7  | .30   | .10  | 0    | 0     |
| 31    | .40  | -----  | 96      | 69      | ----- | 6.1   | ----- | 1.6  | ----- | .10  | 0    | ----- |
| Total | 5.00 | 786.40 | 1,095.0 | 3,697.8 | 1,544 | 499.5 | 230.8 | 76.9 | 19.50 | 3.80 | 0.30 | 0.80  |
| Mean  | .16  | 26.2   | 35.3    | 119     | 55.1  | 16.1  | 7.69  | 2.48 | .65   | .12  | .01  | .03   |
| Ac-ft | 9.9  | 1,560  | 2,170   | 7,330   | 3,060 | 991   | 458   | 153  | 39    | 7.5  | .60  | 1.6   |

Calendar year 1965 Max 1,630 Min 0 Mean 22.6 Ac-ft 16,340  
 Water year 1965-66 Max 1,000 Min 0 Mean 21.8 Ac-ft 15,790

Peak discharge (base, 700 cfs).--Jan. 4 (time unknown) 1,880 cfs (6.10 ft).

Note.--No gage-height record Dec. 24 to Jan. 5.

## RUSSIAN RIVER BASIN

11-4640. Russian River near Healdsburg, Calif.

Location--Lat 38°36'48", long 122°50'07", in Sotoyome Grant, on left bank 2 miles east of Healdsburg, Sonoma County, and 3.5 miles upstream from Dry Creek.

Drainage area--793 sq mi.

Records available--October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage--Water-stage recorder. Datum of gage is 77.01 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge--27 years, 1,388 cfs (1,005,000 acre-ft per year).

Extremes--Maximum discharge during year, 49,400 cfs Jan. 5 (gage height, 22.00 ft); minimum daily, 96 cfs June 18.

1939-66: Maximum discharge, 71,300 cfs Dec. 23, 1964 (gage-height, 27.00 ft); maximum gage height, 30.0 ft Feb. 28, 1940; minimum daily discharge, 38 cfs July 2, 1950.

Flood in December 1937 reached a stage of 30.8 ft, from floodmarks.

Remarks--Records good. Several small diversions for irrigation above station. Flow also affected by diversion into basin (see Remarks for East Fork Russian River stations) and since November 1958 by storage in Lake Mendocino (see 11-4618). Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.   | Dec.    | Jan.    | Feb.    | Mar.   | Apr.   | May    | June  | July   | Aug.   | Sept.  |
|-------|--------|--------|---------|---------|---------|--------|--------|--------|-------|--------|--------|--------|
| 1     | 234    | 297    | 805     | 4,290   | 7,310   | 1,420  | 676    | 501    | 170   | 222    | 204    | 232    |
| 2     | 234    | 306    | 710     | 3,150   | 6,240   | 2,170  | 644    | 494    | 163   | 207    | 199    | 226    |
| 3     | 237    | 309    | 636     | 3,540   | 5,990   | 2,520  | 620    | 487    | 147   | 196    | 186    | 222    |
| 4     | 237    | 312    | 584     | 18,600  | 11,800  | 1,690  | 599    | 480    | 147   | 196    | 178    | 218    |
| 5     | 243    | 312    | 540     | 42,800  | 3,880   | 1,420  | 578    | 487    | 152   | 199    | 170    | 218    |
| 6     | 243    | 306    | 496     | 15,800  | 6,970   | 1,430  | 564    | 494    | 154   | 196    | 170    | 218    |
| 7     | 240    | 315    | 465     | 10,600  | 5,830   | 1,380  | 543    | 487    | 168   | 191    | 176    | 218    |
| 8     | 243    | 339    | 440     | 9,460   | 4,940   | 1,320  | 529    | 480    | 166   | 186    | 183    | 207    |
| 9     | 249    | 345    | 420     | 7,150   | 4,320   | 1,600  | 543    | 480    | 158   | 193    | 180    | 207    |
| 10    | 285    | 327    | 426     | 6,290   | 2,670   | 3,180  | 720    | 462    | 145   | 193    | 183    | 202    |
| 11    | 324    | 321    | 458     | 5,750   | 2,060   | 2,520  | 750    | 501    | 138   | 196    | 186    | 199    |
| 12    | 348    | 324    | 520     | 5,270   | 1,770   | 2,060  | 1,270  | 529    | 132   | 199    | 191    | 199    |
| 13    | 357    | 415    | 584     | 2,950   | 1,560   | 1,930  | 1,180  | 522    | 126   | 183    | 210    | 202    |
| 14    | 327    | 2,700  | 588     | 2,280   | 1,410   | 1,810  | 970    | 494    | 124   | 173    | 222    | 200    |
| 15    | 294    | 2,980  | 580     | 1,970   | 1,270   | 1,830  | 930    | 444    | 116   | 168    | 226    | 192    |
| 16    | 279    | 2,000  | 548     | 1,780   | 1,150   | 1,990  | 820    | 432    | 108   | 163    | 222    | 190    |
| 17    | 267    | 2,120  | 524     | 1,620   | 1,070   | 1,910  | 692    | 395    | 101   | 158    | 212    | 190    |
| 18    | 267    | 4,330  | 516     | 1,510   | 980     | 1,790  | 668    | 308    | 96    | 156    | 207    | 192    |
| 19    | 267    | 4,220  | 508     | 1,400   | 2,360   | 1,690  | 620    | 248    | 104   | 156    | 204    | 198    |
| 20    | 267    | 2,060  | 493     | 1,300   | 1,880   | 1,600  | 564    | 239    | 114   | 158    | 210    | 200    |
| 21    | 264    | 1,270  | 490     | 1,210   | 1,410   | 1,510  | 536    | 221    | 118   | 158    | 212    | 195    |
| 22    | 261    | 1,020  | 486     | 1,140   | 1,280   | 1,460  | 508    | 208    | 126   | 166    | 212    | 192    |
| 23    | 261    | 930    | 476     | 1,080   | 1,390   | 1,330  | 487    | 195    | 154   | 173    | 222    | 200    |
| 24    | 258    | 1,750  | 1,250   | 1,010   | 1,470   | 1,230  | 474    | 188    | 176   | 183    | 218    | 200    |
| 25    | 258    | 2,410  | 3,140   | 940     | 1,660   | 1,130  | 462    | 182    | 199   | 191    | 218    | 202    |
| 26    | 258    | 2,080  | 1,860   | 890     | 2,100   | 1,060  | 480    | 178    | 222   | 193    | 222    | 252    |
| 27    | 258    | 1,480  | 1,430   | 830     | 1,760   | 990    | 536    | 173    | 240   | 188    | 218    | 195    |
| 28    | 261    | 1,160  | 8,710   | 770     | 1,550   | 920    | 536    | 170    | 250   | 191    | 215    | 192    |
| 29    | 264    | 978    | 10,200  | 1,790   | -----   | 860    | 522    | 168    | 243   | 193    | 212    | 190    |
| 30    | 267    | 912    | 5,660   | 9,630   | -----   | 800    | 508    | 173    | 240   | 196    | 218    | 188    |
| 31    | 282    | -----  | 5,960   | 4,400   | -----   | 730    | -----  | 176    | ----- | 207    | 232    | -----  |
| Total | 9,334  | 39,628 | 50,503  | 169,200 | 93,080  | 49,280 | 19,529 | 10,996 | 4,697 | 5,728  | 6,318  | 6,136  |
| Mean  | 269    | 1,288  | 1,629   | 5,458   | 3,324   | 1,590  | 651    | 355    | 157   | 185    | 204    | 205    |
| Ac-ft | 16,530 | 76,620 | 100,200 | 335,600 | 184,600 | 97,750 | 39,720 | 21,810 | 9,320 | 11,360 | 12,530 | 12,170 |

Calendar year 1965 Max 30,400 Min 104 Mean 1,284 Ac-ft 929,800  
 Water year 1965-66 Max 42,800 Min 96 Mean 1,267 Ac-ft 917,200

Peak discharge (base, 19,000 cfs)--Jan. 5 (0800) 49,400 cfs (22.00 ft).

11-4645. Dry Creek near Cloverdale, Calif.

Location.--Lat 38°44'59", long 123°05'28", in NE¼NE¼ sec.5, T.10 N., R.11 W., on left bank 500 ft downstream from Smith Creek and 5 miles southwest of Cloverdale.

Drainage area.--87.8 sq mi.

Records available.--October 1941 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 304.04 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Apr. 9, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--25 years, 154 cfs (111,500 acre-ft per year); median of yearly mean discharges, 140 cfs (101,000 acre-ft per year).

Extremes.--Maximum discharge during year, 10,700 cfs Jan. 4 (gage height, 13.54 ft); minimum daily, 0.40 cfs Sept. 10-19, 30.

1941-66: Maximum discharge, 18,100 cfs Dec. 22, 1964 (gage height, 18.09 ft); minimum, 0.10 cfs several days in 1944, 1949, 1951-53, 1962, 1964.

Flood in December 1937 reached a stage of about 18 ft, from floodmarks.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report. *Warm Springs Dam (Lake Sonoma) under const. 1968 will have this sta. in BW when completed + 3 to 8 years (filling) Cap. 35,000 a-f. Conserv. Pool: 245,000; Min Pool: 20,000 a-f.*

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|---|------|---------|--------|--------|--------|--------|-------|-------|-------|------|-------|-------|
| 1   | 1.8  | 1.9     | 82     | 482    | 856    | 198    | 81    | 31    | 13    | 3.1  | 1.3   | 0.80  |
| 2   | 1.8  | 1.9     | 70     | 386    | 593    | 182    | 78    | 29    | 13    | 3.1  | 1.3   | .70   |
| 3   | 1.9  | 2.1     | 62     | 588    | 868    | 168    | 75    | 28    | 13    | 3.4  | 1.3   | .60   |
| 4   | 1.9  | 2.1     | 54     | 6,020  | 1,780  | 158    | 73    | 28    | 12    | 3.4  | 1.3   | .60   |
| 5   | 2.2  | 2.1     | 48     | 4,920  | 1,110  | 152    | 71    | 28    | 12    | 3.4  | 1.2   | .50   |
| 6   | 2.2  | 2.1     | 43     | 1,910  | 765    | 144    | 68    | 28    | 12    | 3.1  | 1.0   | .50   |
| 7   | 2.2  | 6.9     | 40     | 1,070  | 580    | 136    | 66    | 27    | 13    | 2.8  | 1.0   | .50   |
| 8   | 2.2  | 15      | 36     | 695    | 458    | 138    | 63    | 26    | 12    | 2.8  | .90   | .50   |
| 9   | 2.1  | 6.9     | 33     | 470    | 370    | 474    | 81    | 28    | 10    | 3.4  | .90   | .50   |
| 10  | 2.1  | 4.9     | 30     | 366    | 323    | 402    | 93    | 31    | 9.1   | 3.7  | .90   | .40   |
| 11  | 2.1  | 4.3     | 62     | 308    | 284    | 287    | 116   | 28    | 8.6   | 3.4  | .90   | .40   |
| 12  | 2.1  | 15      | 140    | 275    | 257    | 254    | 170   | 19    | 8.2   | 3.4  | 1.0   | .40   |
| 13  | 1.9  | 402     | 73     | 242    | 235    | 266    | 94    | 22    | 8.2   | 3.4  | .90   | .40   |
| 14  | 2.1  | 685     | 63     | 218    | 220    | 235    | 78    | 21    | 7.8   | 3.1  | .90   | .40   |
| 15  | 2.1  | 518     | 54     | 192    | 205    | 238    | 71    | 20    | 6.8   | 3.1  | .90   | .40   |
| 16  | 2.2  | 170     | 46     | 168    | 190    | 230    | 66    | 18    | 6.4   | 3.1  | .90   | .40   |
| 17  | 2.2  | 418     | 41     | 152    | 178    | 210    | 63    | 18    | 6.4   | 2.5  | .70   | .40   |
| 18  | 2.2  | 530     | 37     | 140    | 172    | 195    | 59    | 18    | 5.5   | 2.4  | .70   | .40   |
| 19  | 2.2  | 339     | 34     | 125    | 438    | 192    | 54    | 16    | 5.2   | 2.2  | .60   | .40   |
| 20  | 2.2  | 200     | 32     | 112    | 248    | 170    | 52    | 16    | 5.2   | 2.2  | .70   | .60   |
| 21  | 2.1  | 134     | 30     | 102    | 218    | 166    | 50    | 15    | 4.9   | 2.2  | .70   | .60   |
| 22  | 2.1  | 94      | 28     | 101    | 220    | 154    | 47    | 15    | 5.2   | 2.2  | .70   | .60   |
| 23  | 2.1  | 84      | 25     | 94     | 220    | 142    | 45    | 15    | 5.2   | 1.9  | .70   | .60   |
| 24  | 2.1  | 366     | 466    | 87     | 232    | 132    | 42    | 14    | 4.9   | 1.8  | .70   | .60   |
| 25  | 1.9  | 299     | 349    | 81     | 251    | 123    | 41    | 13    | 4.9   | 1.8  | .60   | .60   |
| 26  | 1.9  | 240     | 225    | 77     | 251    | 114    | 39    | 13    | 4.0   | 1.8  | .60   | .60   |
| 27  | 1.8  | 208     | 195    | 71     | 220    | 107    | 37    | 13    | 4.0   | 1.8  | .60   | .60   |
| 28  | 1.8  | 162     | 1,560  | 66     | 208    | 93     | 36    | 13    | 3.7   | 1.8  | .50   | .50   |
| 29  | 1.8  | 128     | 1,040  | 593    | -----  | 98     | 34    | 13    | 3.4   | 1.6  | .50   | .50   |
| 30  | 1.8  | 102     | 725    | 1,080  | -----  | 92     | 32    | 15    | 3.4   | 1.6  | .60   | .40   |
| 31  | 1.9  | -----   | 670    | 625    | -----  | 87     | ----- | 14    | ----- | 1.4  | .80   | ----- |
| TOTAL   | 63.0 | 5,144.2 | 6,393  | 21,816 | 11,950 | 5,737  | 1,975 | 633   | 231.0 | 80.9 | 26.30 | 15.40 |
| MEAN  | 2.03 | 171     | 206    | 704    | 427    | 185    | 65.8  | 20.4  | 7.70  | 2.61 | .85   | .51   |
| AC-FT   | 125  | 10,200  | 12,680 | 43,270 | 23,700 | 11,380 | 3,920 | 1,260 | 458   | 160  | 52    | 31    |
| CALENDAR YEAR 1965 MAX 6,350 MIN 1.7 MEAN 159 AC-FT 115,300 |      |         |        |        |        |        |       |       |       |      |       |       |
| WATER YEAR 1965-66 MAX 6,020 MIN .40 MEAN 148 AC-FT 107,200 |      |         |        |        |        |        |       |       |       |      |       |       |

Peak discharge (base, 3,300 cfs), on Jan. 4 (1900) 10,700 cfs (13.54 ft).

## RUSSIAN RIVER BASIN

11-4652. Dry Creek near Geyserville, Calif.

Location.--Lat 38°41'55", long 122°57'25", in Tzabaco Grant, on left bank pier of bridge, 0.3 mile downstream from Pena Creek and 3 miles west of Geyserville, Sonoma County.

Drainage area.--162 sq mi.

Records available.--October 1959 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to Oct. 1, 1964, at datum 1.00 ft higher.

Average discharge.--7 years, 277 cfs (200,500 acre-ft per year).

Extremes.--Maximum discharge during year, 19,800 cfs Jan. 4 (gage height, 14.95 ft); minimum daily, 0.1 cfs Sept. 18-30.  
1959-66: Maximum discharge, 32,400 cfs Jan. 31, 1963 (gage height, 17.50 ft, present datum); no flow at times in each year except 1965-66.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation; small diversion above station for orchard irrigation in summer. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report. *Warm Springs Cr Dam (under construction) comes in between Cloverdale & Geyserville sta.*

Revisions (water years).--1965 Report: 1962(M), 1963(M).

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.     | Dec.   | Jan.   | Feb.   | Mar.   | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|----------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 1.0  | 1.3      | 152    | 964    | 1,870  | 390    | 148   | 63    | 28    | 7.2   | 1.9   | 0.60  |
| 2     | 1.0  | 1.3      | 136    | 745    | 1,230  | 349    | 142   | 60    | 28    | 7.0   | 1.8   | .60   |
| 3     | 1.0  | 1.4      | 122    | 991    | 1,790  | 321    | 140   | 58    | 25    | 6.6   | 1.7   | .60   |
| 4     | 1.0  | 1.5      | 110    | 9,580  | 4,430  | 297    | 134   | 58    | 23    | 6.3   | 1.6   | .50   |
| 5     | 1.4  | 1.5      | 98     | 10,400 | 2,530  | 282    | 132   | 44    | 23    | 6.0   | 1.5   | .50   |
| 6     | 1.9  | 1.5      | 89     | 3,560  | 1,620  | 267    | 130   | 55    | 23    | 5.8   | 1.4   | .50   |
| 7     | 2.2  | 2.0      | 82     | 2,180  | 1,180  | 252    | 126   | 56    | 24    | 5.6   | 1.2   | .60   |
| 8     | 2.6  | 7.0      | 77     | 1,560  | 958    | 240    | 120   | 53    | 24    | 5.4   | 1.1   | .50   |
| 9     | 2.7  | 1.7      | 72     | 1,140  | 780    | 668    | 126   | 52    | 23    | 5.2   | 1.0   | .50   |
| 10    | 2.9  | 1.4      | 68     | 904    | 661    | 810    | 154   | 56    | 20    | 5.0   | .80   | .40   |
| 11    | 2.9  | 1.3      | 79     | 730    | 553    | 566    | 154   | 56    | 18    | 4.8   | .70   | .40   |
| 12    | 2.7  | 1.7      | 193    | 612    | 486    | 474    | 234   | 52    | 17    | 4.6   | .60   | .40   |
| 13    | 2.5  | 600      | 130    | 526    | 430    | 474    | 160   | 41    | 15    | 4.4   | .60   | .40   |
| 14    | 2.2  | 1,700    | 110    | 454    | 386    | 406    | 142   | 41    | 14    | 4.2   | .60   | .40   |
| 15    | 2.0  | 1,270    | 100    | 398    | 346    | 394    | 132   | 41    | 14    | 4.1   | .60   | .30   |
| 16    | 2.0  | 402      | 93     | 342    | 318    | 394    | 122   | 41    | 14    | 4.0   | .60   | .30   |
| 17    | 2.1  | 615      | 84     | 300    | 291    | 349    | 114   | 39    | 13    | 3.9   | .60   | .20   |
| 18    | 2.2  | 1,110    | 74     | 279    | 282    | 314    | 110   | 36    | 13    | 3.7   | .60   | .10   |
| 19    | 2.2  | 695      | 69     | 255    | 925    | 297    | 102   | 33    | 12    | 3.6   | .60   | .10   |
| 20    | 2.2  | 370      | 60     | 234    | 580    | 273    | 96    | 32    | 12    | 3.5   | .60   | .10   |
| 21    | 2.2  | 246      | 59     | 222    | 466    | 261    | 95    | 33    | 11    | 3.3   | .60   | .10   |
| 22    | 2.0  | 182      | 58     | 210    | 450    | 249    | 89    | 31    | 11    | 3.2   | .60   | .10   |
| 23    | 1.8  | 152      | 56     | 200    | 446    | 231    | 86    | 29    | 10    | 3.1   | .60   | .10   |
| 24    | 1.7  | 718      | 676    | 185    | 458    | 216    | 80    | 29    | 9.7   | 2.9   | .60   | .10   |
| 25    | 1.6  | 648      | 750    | 170    | 486    | 202    | 74    | 29    | 9.3   | 2.8   | .60   | .10   |
| 26    | 1.4  | 454      | 430    | 162    | 548    | 192    | 74    | 26    | 9.0   | 2.7   | .60   | .10   |
| 27    | 1.3  | 363      | 363    | 158    | 458    | 182    | 77    | 25    | 8.6   | 2.5   | .60   | .10   |
| 28    | 1.2  | 279      | 3,870  | 150    | 422    | 172    | 72    | 27    | 8.2   | 2.4   | .60   | .10   |
| 29    | 1.2  | 216      | 2,280  | 1,100  | -----  | 165    | 68    | 27    | 7.8   | 2.3   | .60   | .10   |
| 30    | 1.3  | 180      | 1,390  | 2,520  | -----  | 156    | 68    | 28    | 7.5   | 2.1   | .60   | .10   |
| 31    | 1.3  | -----    | 1,330  | 1,300  | -----  | 152    | ----- | 28    | ----- | 2.0   | .60   | ----- |
| Total | 57.7 | 10,278.5 | 13,260 | 42,531 | 25,380 | 9,995  | 3,501 | 1,279 | 475.1 | 130.2 | 26.70 | 9.00  |
| Mean  | 1.86 | 343      | 428    | 1,372  | 906    | 322    | 117   | 41.3  | 15.8  | 4.20  | .86   | .30   |
| Ac-ft | 114  | 20,390   | 26,300 | 84,360 | 50,340 | 19,820 | 6,940 | 2,540 | 942   | 258   | 53    | 18    |

Calendar year 1965 Max 11,700 Min 1.0 Mean 305 Ac-ft 221,000  
Water year 1965-66 Max 10,400 Min 0.10 Mean 293 Ac-ft 212,100

Peak discharge (base, 4,500 cfs)

Note.--No gage-height record June 18 to Aug. 12.

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1400 | 9.68        | 7,090     | 2-4  | 0300 | 8.38        | 5,080     |
| 1-4   | 2300 | 14.95       | 19,800    |      |      |             |           |



11-4658, Santa Rosa Creek near Santa Rosa, Calif.

Location.--Lat 38°27'25", long 122°37'50", in Los Guilicos Grant, on left bank 500 ft downstream from highway bridge, 1,500 ft upstream from unnamed tributary, and 4.6 miles east of Santa Rosa, Sonoma County.

Drainage area.--12.5 sq mi.

Records available.--July 1959 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 318.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 30, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 14.9 cfs (10,790 acre-ft per year).

Extremes.--Maximum discharge during year, 1,590 cfs Jan. 5 (gage height, 10.39 ft), from rating curve extended above 520 cfs as explained below; no flow Aug. 6, Sept. 28-30.

1959-66: Maximum discharge, 3,200 cfs Feb. 8, 1960 (gage height, 13.35 ft, from floodmarks), from rating curve extended above 520 cfs on basis of slope-area measurements at gage heights 11.0 and 13.35 ft; no flow at times in each year.

Remarks.--Records fair. No regulation; pumping for irrigation above station during periods of low flow.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.  | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|-------|--------|-------|---------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 0.20  | 0.40   | 2.7   | 20      | 90    | 20    | 6.7   | 3.5   | 1.2   | 1.1   | 0.30 | 0.80  |
| 2     | .20   | .40    | 2.4   | 11      | 51    | 17    | 6.7   | 3.4   | 1.3   | .90   | .20  | .60   |
| 3     | .20   | .40    | 2.2   | 12      | 55    | 16    | 6.0   | 3.2   | 1.4   | .40   | .10  | .50   |
| 4     | .20   | .40    | 2.0   | 490     | 91    | 15    | 5.8   | 3.4   | 1.2   | .50   | .20  | .30   |
| 5     | .20   | .40    | 2.0   | 813     | 62    | 14    | 5.8   | 3.4   | 1.2   | .50   | .20  | .30   |
| 6     | .20   | .40    | 1.9   | 190     | 47    | 13    | 5.6   | 3.6   | 1.4   | .60   | 0    | .50   |
| 7     | .20   | .60    | 1.7   | 96      | 36    | 13    | 7.1   | 3.4   | 1.7   | .40   | .10  | .60   |
| 8     | .20   | .90    | 1.7   | 64      | 30    | 12    | 9.2   | 3.2   | 1.5   | .10   | .10  | .60   |
| 9     | .30   | .90    | 1.7   | 46      | 26    | 17    | 9.8   | 3.6   | 1.4   | .20   | .10  | .40   |
| 10    | .40   | .50    | 1.6   | 35      | 22    | 40    | 10    | 4.0   | 1.3   | .40   | .10  | .30   |
| 11    | .40   | .50    | 2.0   | 29      | 19    | 24    | 11    | 3.7   | 1.1   | .30   | .20  | .30   |
| 12    | .40   | 1.2    | 5.0   | 25      | 17    | 20    | 19    | 3.5   | 1.1   | .50   | .10  | .20   |
| 13    | .40   | 7.0    | 3.5   | 22      | 16    | 20    | 12    | 3.3   | .90   | .50   | .30  | .20   |
| 14    | .40   | 10     | 3.0   | 20      | 14    | 17    | 9.5   | 2.9   | .80   | .40   | .40  | .30   |
| 15    | .40   | 8.0    | 2.3   | 18      | 13    | 17    | 8.1   | 1.7   | .70   | .30   | .30  | .30   |
| 16    | .40   | 2.5    | 1.6   | 17      | 12    | 16    | 7.2   | .20   | .90   | .20   | .20  | .20   |
| 17    | .40   | 13     | 1.5   | 15      | 12    | 14    | 6.4   | .20   | .90   | .10   | .10  | .10   |
| 18    | .40   | 15     | 1.3   | 14      | 11    | 13    | 5.8   | .20   | .90   | .10   | .10  | .20   |
| 19    | .40   | 6.5    | 1.2   | 13      | 28    | 13    | 5.3   | .10   | .70   | .20   | .20  | .40   |
| 20    | .40   | 4.0    | 1.1   | 12      | 17    | 12    | 4.8   | .20   | .60   | .10   | .30  | .40   |
| 21    | .40   | 3.0    | 1.1   | 11      | 14    | 12    | 4.8   | .20   | .90   | .10   | .40  | .30   |
| 22    | .40   | 2.4    | 1.2   | 11      | 16    | 11    | 4.6   | .30   | 1.0   | .10   | .50  | .20   |
| 23    | .40   | 3.5    | 1.1   | 10      | 19    | 10    | 4.2   | .20   | 1.3   | .30   | .50  | .20   |
| 24    | .40   | 21     | 12    | 9.8     | 20    | 9.8   | 4.0   | .10   | 1.3   | .30   | .40  | .20   |
| 25    | .40   | 11     | 18    | 9.2     | 29    | 9.5   | 4.0   | .10   | 1.1   | .30   | .30  | .30   |
| 26    | .40   | 6.0    | 11    | 9.2     | 33    | 8.8   | 3.8   | .10   | 1.0   | .30   | .30  | .20   |
| 27    | .40   | 5.5    | 6.0   | 8.5     | 25    | 8.5   | 3.5   | .20   | 1.1   | .40   | .30  | .10   |
| 28    | .40   | 5.0    | 90    | 7.8     | 22    | 8.1   | 3.8   | .70   | .80   | .40   | .20  | 0     |
| 29    | .40   | 4.5    | 42    | 24      | ----- | 7.8   | 3.8   | 1.4   | .80   | .30   | .20  | 0     |
| 30    | .40   | 3.5    | 30    | 63      | ----- | 7.5   | 3.7   | 1.6   | 1.1   | .30   | .40  | 0     |
| 31    | .40   | -----  | 33    | 30      | ----- | 7.2   | ----- | 1.4   | ----- | .50   | .90  | ----- |
| TOTAL | 10.70 | 138.40 | 287.8 | 2,155.5 | 847   | 443.2 | 202.0 | 57.00 | 32.60 | 11.10 | 8.00 | 9.00  |
| MEAN  | .35   | 4.61   | 9.28  | 69.5    | 30.3  | 14.3  | 6.73  | 1.84  | 1.09  | .36   | .26  | .30   |
| AC-FT | 21    | 275    | 571   | 4,280   | 1,680 | 879   | 401   | 113   | 65    | 22    | 16   | 18    |

CALENDAR YEAR 1965 MAX 843 MIN 0 MEAN 16.7 AC-FT 12,120

WATER YEAR 1965-66 MAX 813 MIN 0 MEAN 11.5 AC-FT 8,340

Peak discharge (base, 500 cfs).--Jan. 5 (0400) 1,590 cfs (10.39 ft).

## RUSSIAN RIVER BASIN

11-4665. Laguna de Santa Rosa near Graton, Calif.

Location.--Lat 38°27'10", long 122°50'05", in Molinos Grant on downstream side of left bank pier of highway bridge, 0.2 mile downstream from Santa Rosa Creek, and 2 miles northeast of Graton, Sonoma County.

Records available.--February 1940 to September 1949 (contents only), October 1964 to September 1966 in reports of Geological Survey. October 1949 to September 1964 available in files of district office.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to Dec. 31, 1958, at site 75 ft downstream at same datum.

Extremes.--Maximum elevation during year, 69.4 ft Jan. 5.  
1949-66: Maximum elevation, 73.3 ft Dec. 23, 1964.

Remarks.--The laguna is a natural water channel and overflow basin connecting Santa Rosa Creek, Mark West Creek, and other smaller creeks with Russian River. During floods directions of flow may be either to or from Russian River and the laguna acts as a natural regulator of floods on lower Russian River.

Elevations, in feet, at 2400 hours, water year October 1965 to September 1966

| Day | Oct. | Nov.  | Dec. | Jan. | Feb.  | Mar. | Apr.  | May | June  | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1   |      | -     | -    | 52.6 | 55.1  | 50.9 |       |     |       |      |      |       |
| 2   |      | -     | -    | 52.1 | 53.9  | 50.6 |       |     |       |      |      |       |
| 3   |      | -     | -    | 52.3 | 54.2  | 50.4 |       |     |       |      |      |       |
| 4   |      | -     | -    | 61.8 | 55.4  | 50.3 |       |     |       |      |      |       |
| 5   |      | -     | -    | 68.9 | 54.5  | 50.2 |       |     |       |      |      |       |
| 6   |      | -     | -    | 62.0 | 53.3  | 50.1 |       |     |       |      |      |       |
| 7   |      | -     | -    | 57.5 | 52.6  | 50.1 |       |     |       |      |      |       |
| 8   |      | -     | -    | 55.0 | 52.1  | 50.1 |       |     |       |      |      |       |
| 9   |      | -     | -    | 53.3 | 51.7  | 51.0 |       |     |       |      |      |       |
| 10  |      | -     | -    | 52.5 | 51.4  | 51.3 |       |     |       |      |      |       |
| 11  |      | -     | -    | 52.0 | 51.0  | 51.2 |       |     |       |      |      |       |
| 12  |      | -     | -    | 51.7 | 50.7  | 50.9 |       |     |       |      |      |       |
| 13  |      | 53.1  | -    | 51.3 | 50.6  | 50.6 |       |     |       |      |      |       |
| 14  |      | 50.9  | -    | 51.1 | 50.4  | 50.4 |       |     |       |      |      |       |
| 15  |      | 50.6  | -    | 50.7 | 50.3  | 50.3 |       |     |       |      |      |       |
| 16  |      | 50.5  | -    | 50.5 | 50.2  | 50.2 |       |     |       |      |      |       |
| 17  |      | 50.8  | -    | 50.4 | 50.1  | 50.2 |       |     |       |      |      |       |
| 18  |      | 50.9  | -    | 50.3 | 50.1  | 50.1 |       |     |       |      |      |       |
| 19  |      | 50.5  | -    | 50.2 | 51.5  | 50.0 |       |     |       |      |      |       |
| 20  |      | 50.3  | -    | 50.2 | 51.5  | -    |       |     |       |      |      |       |
| 21  |      | 50.2  | -    | 50.1 | 51.2  | -    |       |     |       |      |      |       |
| 22  |      | 50.1  | -    | 50.1 | 51.5  | -    |       |     |       |      |      |       |
| 23  |      | 50.0  | -    | 50.1 | 51.2  | -    |       |     |       |      |      |       |
| 24  |      | 51.4  | 50.2 | 50.1 | 51.4  | -    |       |     |       |      |      |       |
| 25  |      | 51.1  | 50.9 | 50.1 | 52.3  | -    |       |     |       |      |      |       |
| 26  |      | 50.7  | -    | 50.1 | 51.8  | -    |       |     |       |      |      |       |
| 27  |      | 50.4  | -    | 50.0 | 51.6  | -    |       |     |       |      |      |       |
| 28  |      | 50.2  | 54.3 | 50.0 | 51.3  | -    |       |     |       |      |      |       |
| 29  |      | 50.1  | 54.6 | 52.8 | ----- | -    |       |     |       |      |      |       |
| 30  |      | -     | 53.9 | 54.8 | ----- | -    |       |     |       |      |      |       |
| 31  |      | ----- | 53.5 | 53.7 | ----- | -    | ----- |     | ----- |      |      | ----- |

11-4670. Russian River near Guerneville, Calif.

Location.--Lat 38°30'00", long 122°56'05", in NE¼ sec.35, T.8 N., R.10 W., on left bank 0.6 mile downstream from Hobson Creek and 3.4 miles east of Guerneville.

Drainage area.--1,340 sq mi.

Records available.--October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1954, published as "at Guerneville."

Gage.--Digital water-stage recorder. Datum of gage is 17.25 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1954, wire-weight gage at bridge 5.3 miles downstream at datum 8.58 ft lower. Oct. 1, 1954, to Sept. 19, 1966, graphic water-stage recorder at same site and datum. Supplementary graphic water-stage recorder 2.1 miles downstream used during periods of low flow 1948-54.

Average discharge.--27 years, 2,211 cfs (1,601,000 acre-ft per year).

Extremes.--Maximum discharge during year, 77,000 cfs Jan. 5 (gage height, 45.28 ft); minimum daily, 107 cfs June 19. 1939-66: Maximum discharge, 93,400 cfs Dec. 23, 1964 (gage height, 49.6 ft, from floodmarks); maximum gage height, 49.7 ft Dec. 23, 1955, from floodmarks; minimum daily discharge, 52 cfs May 30, 1964.

Remarks.--Records good. Many diversions above station for irrigation. Flow also affected by diversion into basin (see Remarks for East Fork Russian River stations), since November 1958 by storage in Lake Mendocino (see sta 11-4618), and by diversion at Wohler pumping plant beginning in May 1959. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.   | May    | June  | July  | Aug.   | Sept.  |
|-------|--------|---------|---------|---------|---------|---------|--------|--------|-------|-------|--------|--------|
| 1     | 215    | 243     | 1,220   | 9,000   | 11,100  | 2,400   | 1,050  | 640    | 198   | 180   | 175    | 200    |
| 2     | 199    | 263     | 1,030   | 6,990   | 10,800  | 2,730   | 1,010  | 624    | 190   | 175   | 173    | 203    |
| 3     | 199    | 259     | 872     | 7,430   | 9,080   | 3,200   | 972    | 610    | 180   | 170   | 163    | 198    |
| 4     | 203    | 271     | 772     | 33,300  | 22,600  | 2,710   | 940    | 599    | 170   | 170   | 152    | 195    |
| 5     | 211    | 271     | 690     | 73,700  | 17,400  | 2,090   | 912    | 581    | 168   | 170   | 154    | 193    |
| 6     | 207    | 275     | 612     | 53,000  | 12,000  | 2,030   | 888    | 603    | 170   | 170   | 150    | 195    |
| 7     | 203    | 284     | 558     | 25,500  | 9,330   | 1,950   | 872    | 603    | 180   | 170   | 152    | 195    |
| 8     | 199    | 340     | 502     | 15,100  | 7,550   | 1,860   | 844    | 585    | 180   | 168   | 158    | 198    |
| 9     | 223    | 360     | 475     | 11,200  | 6,450   | 2,090   | 852    | 578    | 178   | 168   | 158    | 190    |
| 10    | 288    | 335     | 602     | 9,110   | 4,780   | 4,860   | 1,070  | 578    | 165   | 170   | 152    | 190    |
| 11    | 355    | 320     | 700     | 7,850   | 3,610   | 3,990   | 1,080  | 617    | 154   | 178   | 150    | 188    |
| 12    | 385    | 335     | 1,080   | 7,040   | 3,080   | 3,240   | 1,460  | 636    | 152   | 178   | 156    | 188    |
| 13    | 395    | 541     | 1,020   | 4,790   | 2,670   | 2,960   | 1,630  | 628    | 144   | 175   | 168    | 188    |
| 14    | 335    | 6,600   | 884     | 3,520   | 2,370   | 2,800   | 1,260  | 610    | 132   | 163   | 185    | 185    |
| 15    | 288    | 7,530   | 805     | 3,030   | 2,130   | 2,600   | 1,190  | 554    | 130   | 156   | 180    | 225    |
| 16    | 267    | 4,540   | 772     | 2,650   | 1,910   | 2,760   | 1,110  | 522    | 116   | 152   | 178    | 215    |
| 17    | 251    | 3,970   | 739     | 2,330   | 1,740   | 2,670   | 1,010  | 501    | 113   | 152   | 183    | 243    |
| 18    | 235    | 7,730   | 695     | 2,100   | 1,620   | 2,480   | 960    | 407    | 109   | 150   | 175    | 223    |
| 19    | 223    | 8,560   | 673     | 1,900   | 4,110   | 2,350   | 912    | 353    | 107   | 146   | 180    | 215    |
| 20    | 219    | 5,550   | 651     | 1,760   | 3,730   | 2,220   | 844    | 299    | 111   | 144   | 183    | 212    |
| 21    | 227    | 2,950   | 640     | 1,620   | 2,640   | 2,050   | 796    | 284    | 113   | 142   | 190    | 208    |
| 22    | 231    | 2,090   | 624     | 1,520   | 2,330   | 1,950   | 764    | 278    | 115   | 142   | 193    | 200    |
| 23    | 231    | 1,620   | 607     | 1,460   | 2,580   | 1,820   | 732    | 253    | 122   | 144   | 195    | 212    |
| 24    | 227    | 3,390   | 1,370   | 1,380   | 2,560   | 1,680   | 692    | 134    | 136   | 150   | 203    | 202    |
| 25    | 215    | 5,700   | 7,020   | 1,280   | 2,740   | 1,580   | 660    | 150    | 146   | 156   | 195    | 200    |
| 26    | 207    | 4,890   | 4,680   | 1,200   | 3,420   | 1,470   | 648    | 185    | 163   | 152   | 193    | 213    |
| 27    | 203    | 3,510   | 2,970   | 1,160   | 3,080   | 1,400   | 692    | 183    | 175   | 158   | 193    | 220    |
| 28    | 211    | 2,660   | 12,800  | 1,100   | 2,660   | 1,330   | 692    | 198    | 180   | 158   | 188    | 188    |
| 29    | 211    | 1,980   | 21,600  | 2,410   | -----   | 1,260   | 672    | 195    | 185   | 160   | 190    | 179    |
| 30    | 211    | 1,540   | 12,100  | 14,400  | -----   | 1,180   | 656    | 200    | 185   | 160   | 193    | 175    |
| 31    | 255    | -----   | 11,200  | 8,670   | -----   | 1,110   | -----  | 203    | ----- | 168   | 200    | -----  |
| Total | 7,529  | 78,907  | 90,963  | 317,500 | 160,070 | 70,820  | 27,870 | 13,391 | 4,567 | 4,995 | 5,458  | 6,036  |
| Mean  | 243    | 2,630   | 2,934   | 10,240  | 5,717   | 2,285   | 929    | 432    | 152   | 161   | 176    | 201    |
| Ac-ft | 14,930 | 156,500 | 180,400 | 629,800 | 317,500 | 140,500 | 55,280 | 26,560 | 9,060 | 9,910 | 10,830 | 11,970 |

Calendar year 1965 Max 64,100 Min 126 Mean 2,228 Ac-ft 1,613,000  
 Water year 1965-66 Max 73,700 Min 107 Mean 2,161 Ac-ft 1,564,000

Peak discharge (base, 23,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 2400 | 27.05       | 27,900    | 2-4  | 1400 | 25.84       | 25,200    |
| 1- 5  | 1400 | 45.28       | 77,000    |      |      |             |           |

## RUSSIAN RIVER BASIN

11-4672. Austin Creek near Cazadero, Calif.

Location.--Lat 38°30'05", long 123°04'05", on left bank 0.6 mile downstream from confluence of Big Austin and East Austin Creeks, 2.3 miles southeast of Cazadero, Sonoma County, and 3.4 miles upstream from mouth.

Drainage area.--63.1 sq mi.

Records available.--May 1959 to September 1966 (discontinued).

Gage.--Water-stage recorder and crest-stage gage. Datum of gage is 38.31 ft above mean sea level, datum of 1929.

Average discharge.--7 years, 169 cfs (122,400 acre-ft per year).

Extremes.--Maximum discharge during year, 14,000 cfs Jan. 4 (gage height, 18.00 ft); no flow Sept. 30.

1959-66: Maximum discharge, 15,100 cfs Feb. 13, 1962 (gage height, 20.6 ft, crest-stage gage); no flow Aug. 19 to Sept. 17, 1959, Sept. 30, 1966.

Remarks.--Records good except those for periods of no gage-height record or indefinite stage-discharge relation, which are poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.   | Feb.   | Mar.   | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 0.10  | 1.8     | 66     | 395    | 1,250  | 210    | 71    | 36    | 16    | 5.9   | 1.5   | 0.40  |
| 2     | .10   | 1.7     | 58     | 310    | 630    | 186    | 68    | 35    | 16    | 5.7   | 1.4   | .40   |
| 3     | .10   | 1.7     | 55     | 676    | 1,590  | 170    | 62    | 33    | 15    | 5.5   | 1.4   | .30   |
| 4     | .10   | 1.6     | 51     | 7,870  | 2,830  | 155    | 62    | 33    | 15    | 5.4   | 1.3   | .30   |
| 5     | .10   | 1.5     | 47     | 6,220  | 1,460  | 140    | 61    | 33    | 15    | 5.2   | 1.3   | .30   |
| 6     | .10   | 1.5     | 46     | 2,040  | 815    | 131    | 56    | 33    | 14    | 5.0   | 1.2   | .30   |
| 7     | .10   | 2.0     | 45     | 1,060  | 540    | 128    | 55    | 33    | 14    | 4.8   | 1.2   | .30   |
| 8     | .10   | 1.8     | 41     | 744    | 399    | 123    | 53    | 32    | 14    | 4.6   | 1.1   | .30   |
| 9     | .10   | 1.1     | 41     | 540    | 310    | 653    | 75    | 32    | 13    | 4.4   | 1.1   | .20   |
| 10    | .10   | 6.9     | 39     | 423    | 258    | 570    | 94    | 31    | 13    | 4.2   | 1.0   | .20   |
| 11    | .10   | 1.3     | 46     | 347    | 216    | 347    | 109   | 31    | 12    | 4.0   | 1.0   | .20   |
| 12    | .10   | 1.05    | 59     | 296    | 183    | 276    | 161   | 31    | 12    | 3.8   | .90   | .20   |
| 13    | .10   | 1,760   | 47     | 258    | 155    | 304    | 101   | 30    | 11    | 3.6   | .90   | .20   |
| 14    | .10   | 1,170   | 45     | 223    | 128    | 251    | 82    | 28    | 11    | 3.4   | .80   | .20   |
| 15    | .10   | 332     | 41     | 199    | 109    | 254    | 71    | 26    | 11    | 3.3   | .80   | .20   |
| 16    | .10   | 164     | 40     | 177    | 92     | 237    | 66    | 25    | 10    | 3.2   | .80   | .20   |
| 17    | .10   | 367     | 39     | 161    | 80     | 216    | 61    | 23    | 10    | 3.0   | .70   | .20   |
| 18    | .10   | 371     | 39     | 146    | 82     | 199    | 58    | 22    | 9.6   | 2.9   | .70   | .20   |
| 19    | .10   | 203     | 38     | 137    | 642    | 193    | 55    | 21    | 9.2   | 2.8   | .70   | .10   |
| 20    | .10   | 128     | 37     | 126    | 290    | 170    | 52    | 20    | 9.0   | 2.7   | .60   | .10   |
| 21    | .20   | 92      | 37     | 114    | 237    | 158    | 50    | 20    | 8.7   | 2.6   | .60   | .10   |
| 22    | .20   | 75      | 37     | 112    | 254    | 146    | 47    | 19    | 8.4   | 2.4   | .60   | .10   |
| 23    | .20   | 66      | 36     | 104    | 248    | 131    | 43    | 18    | 8.0   | 2.3   | .60   | .10   |
| 24    | .20   | 278     | 764    | 96     | 262    | 123    | 42    | 18    | 7.7   | 2.2   | .50   | .10   |
| 25    | 1.0   | 193     | 514    | 89     | 265    | 112    | 42    | 17    | 7.4   | 2.1   | .50   | .10   |
| 26    | 3.0   | 146     | 293    | 87     | 272    | 104    | 42    | 17    | 7.2   | 2.0   | .50   | .10   |
| 27    | 2.0   | 143     | 258    | 84     | 244    | 96     | 40    | 16    | 6.9   | 1.9   | .50   | .10   |
| 28    | 2.0   | 109     | 2,660  | 78     | 223    | 92     | 39    | 16    | 6.6   | 1.8   | .40   | .10   |
| 29    | 1.8   | 89      | 1,310  | 851    | -----  | 87     | 39    | 16    | 6.4   | 1.8   | .40   | .10   |
| 30    | 1.8   | 77      | 738    | 1,280  | -----  | 80     | 37    | 16    | 6.2   | 1.7   | .40   | 0     |
| 31    | 1.8   | -----   | 595    | 532    | -----  | 75     | ----- | 16    | ----- | 1.6   | .40   | ----- |
| Total | 16.20 | 5,928.7 | 8,162  | 25,775 | 14,064 | 6,117  | 1,894 | 777   | 323.3 | 1,058 | 25.80 | 5.70  |
| Mean  | .52   | 198     | 263    | 831    | 502    | 197    | 63.1  | 25.1  | 10.8  | 3.41  | .83   | .19   |
| Ac-ft | 32    | 11,760  | 16,190 | 51,120 | 27,900 | 12,130 | 3,760 | 1,540 | 641   | 210   | 51    | 11    |

Calendar year 1965 Max 4,910 Min 0.10 Mean 158 Ac-ft 114,200

Water year 1965-66 Max 7,870 Min 0. Mean 173 Ac-ft 125,300

Peak discharge (base, 4,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-13 | 2200 | 11.60       | 5,520     | 1-4  | 2000 | 18.00       | 14,000    |
| 12-28 | 1000 | 12.10       | 6,120     | 2-3  | 2300 | 10.35       | 4,100     |

Note.--No gage-height record May 9 to June 27, July 14 to Sept. 16. Stage-discharge relation indefinite Oct. 1 to Nov. 8.

## GUALALA RIVER BASIN

395

11-4675. South Fork Gualala River near Annapolis, Calif.

Location.--Lat 38°42'14", long 123°25'13", in German Grant, on left bank 2,700 ft downstream from Wheatfield Fork Gualala River and 3.1 miles southwest of Annapolis, Sonoma County.

Drainage area.--161 sq mi.

Records available.--October 1950 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 43.63 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Aug. 30, 1962, graphic water-stage recorder at site 1,700 ft upstream at different datum. Aug. 30, 1962 to June 15, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--16 years, 419 cfs (303,300 acre-ft per year).

Extremes.--Maximum discharge during year, 47,800 cfs Jan. 4 (gage height, 24.09 ft); minimum daily, 1.2 cfs Sept. 29, 30.

1950-66: Maximum discharge, 55,000 cfs Dec. 22, 1955 (gage height, 24.57 ft, site and datum then in use), from rating curve extended above 13,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.40 cfs Sept. 13, 1951.

Remarks.--Records good except those for period of no gage-height record or indefinite stage discharge relation, which are poor. No regulation or diversion above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|----------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 6.0   | 6.7      | 203    | 1,010  | 1,250  | 450    | 158   | 69    | 34    | 15    | 9.2   | 3.5   |
| 2     | 6.0   | 6.7      | 172    | 751    | 920    | 398    | 149   | 67    | 33    | 15    | 9.0   | 3.3   |
| 3     | 5.8   | 6.7      | 144    | 1,100  | 1,300  | 350    | 146   | 65    | 28    | 14    | 8.8   | 3.2   |
| 4     | 5.8   | 7.0      | 124    | 11,200 | 5,000  | 314    | 137   | 63    | 31    | 14    | 8.6   | 3.1   |
| 5     | 6.8   | 7.0      | 108    | 8,500  | 3,000  | 294    | 134   | 61    | 30    | 14    | 8.0   | 3.0   |
| 6     | 7.0   | 7.0      | 96     | 5,000  | 1,700  | 274    | 128   | 65    | 29    | 14    | 7.8   | 2.9   |
| 7     | 6.8   | 8.9      | 86     | 2,700  | 1,250  | 274    | 125   | 61    | 29    | 13    | 7.6   | 2.7   |
| 8     | 6.7   | 34       | 78     | 1,700  | 965    | 250    | 120   | 59    | 30    | 13    | 7.2   | 2.6   |
| 9     | 6.3   | 26       | 72     | 1,000  | 748    | 1,180  | 131   | 59    | 29    | 13    | 7.0   | 2.5   |
| 10    | 6.3   | 14       | 64     | 720    | 622    | 1,640  | 209   | 69    | 26    | 13    | 6.8   | 2.4   |
| 11    | 6.7   | 11       | 72     | 500    | 530    | 930    | 233   | 61    | 24    | 13    | 6.6   | 2.3   |
| 12    | 6.7   | 25       | 200    | 400    | 465    | 700    | 550   | 58    | 23    | 13    | 6.4   | 2.3   |
| 13    | 6.5   | 2,360    | 134    | 350    | 406    | 742    | 290   | 55    | 22    | 13    | 6.2   | 2.2   |
| 14    | 6.7   | 2,650    | 106    | 305    | 370    | 585    | 219   | 53    | 21    | 13    | 6.0   | 2.1   |
| 15    | 7.1   | 849      | 89     | 270    | 338    | 575    | 185   | 50    | 20    | 12    | 5.8   | 2.0   |
| 16    | 7.3   | 460      | 76     | 245    | 310    | 570    | 167   | 49    | 19    | 12    | 5.7   | 2.0   |
| 17    | 7.0   | 715      | 66     | 220    | 290    | 485    | 155   | 47    | 19    | 12    | 5.5   | 1.9   |
| 18    | 6.8   | 1,280    | 61     | 200    | 278    | 440    | 143   | 46    | 17    | 12    | 5.4   | 1.9   |
| 19    | 6.7   | 735      | 54     | 185    | 772    | 430    | 131   | 44    | 17    | 12    | 5.3   | 1.8   |
| 20    | 6.7   | 431      | 51     | 175    | 525    | 370    | 120   | 43    | 16    | 12    | 5.1   | 1.7   |
| 21    | 6.4   | 301      | 48     | 170    | 406    | 346    | 115   | 44    | 16    | 12    | 4.9   | 1.7   |
| 22    | 6.9   | 230      | 47     | 160    | 410    | 314    | 108   | 43    | 16    | 12    | 4.8   | 1.6   |
| 23    | 7.2   | 203      | 42     | 152    | 515    | 290    | 103   | 42    | 16    | 11    | 4.7   | 1.6   |
| 24    | 6.9   | 777      | 861    | 145    | 545    | 266    | 96    | 39    | 16    | 11    | 4.5   | 1.5   |
| 25    | 6.7   | 691      | 1,160  | 138    | 600    | 243    | 92    | 39    | 16    | 11    | 4.4   | 1.5   |
| 26    | 6.7   | 550      | 592    | 132    | 766    | 229    | 87    | 38    | 16    | 10    | 4.3   | 1.4   |
| 27    | 6.6   | 508      | 426    | 130    | 580    | 215    | 83    | 37    | 16    | 10    | 4.2   | 1.3   |
| 28    | 6.5   | 380      | 5,580  | 125    | 510    | 203    | 79    | 36    | 16    | 10    | 4.0   | 1.3   |
| 29    | 6.6   | 301      | 2,850  | 490    | -----  | 191    | 77    | 34    | 15    | 10    | 3.9   | 1.2   |
| 30    | 6.7   | 254      | 1,580  | 1,660  | -----  | 182    | 73    | 38    | 15    | 10    | 3.7   | 1.2   |
| 31    | 6.7   | -----    | 1,610  | 840    | -----  | 170    | ----- | 37    | ----- | 9.8   | 3.6   | ----- |
| TOTAL | 205.6 | 13,835.0 | 16,852 | 40,673 | 25,371 | 13,900 | 4,543 | 1,571 | 655   | 378.8 | 185.0 | 63.7  |
| MEAN  | 6.63  | 461      | 544    | 1,312  | 906    | 448    | 151   | 50.7  | 21.8  | 12.2  | 5.97  | 2.12  |
| AC-FT | 408   | 27,440   | 33,430 | 80,670 | 50,320 | 27,570 | 9,010 | 3,120 | 1,300 | 751   | 367   | 126   |

CALENDAR YEAR 1965 MAX 10,800 MIN 5.3 MEAN 349  
 WATER YEAR 1965-66 MAX 11,200 MIN 1.2 MEAN 324 AC-FT 252,900  
 AC-FT 234,500

Peak discharge (base, 10,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-13 | 2330 | 11.32       | 10,400    | 1-4  | 2245 | 24.09       | 47,800    |
| 12-28 | 1445 | 11.90       | 11,600    |      |      |             |           |

Note.--No gage-height record Jan. 5 to Feb. 7. Stage-discharge relation indefinite June 25 to Sept. 30.

## GARCIA RIVER BASIN

11-4676. Garcia River near Point Arena, Calif.

Location.--Lat 38°55'35", long 123°37'45", in SW¼SW¼ sec.3, T.12 N., R.16 W., on left bank 0.9 mile downstream from North Fork Garcia River and 3.5 miles northeast of town of Point Arena.

Drainage area.--98.5 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-56, and annual maximum, water years 1952-56. August 1962 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 55.31 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. July 17, 1951, to Jan. 31, 1956, crest-stage only, at site 15 ft upstream at different datum.

Extremes.--Maximum discharge during year, 28,700 cfs Jan. 4 (gage height, 16.41 ft), from rating curve extended above 9,600 cfs on basis of slope-area measurement at gage height 15.11 ft; minimum daily, 13 cfs for several days.  
1951-56, 1962-66: Maximum discharge, that of Jan. 4, 1966. A discharge of 10.1 cfs was measured on Sept. 25, 1951.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 13   | 13     | 190    | 838    | 1,010  | 342    | 174   | 87    | 46    | 27    | 19    | 17    |
| 2     | 13   | 13     | 158    | 740    | 748    | 315    | 166   | 84    | 44    | 27    | 20    | 17    |
| 3     | 13   | 14     | 138    | 1,670  | 1,130  | 285    | 158   | 82    | 45    | 27    | 20    | 16    |
| 4     | 13   | 13     | 120    | 15,300 | 3,880  | 255    | 147   | 79    | 45    | 26    | 20    | 15    |
| 5     | 15   | 13     | 111    | 10,900 | 2,120  | 250    | 141   | 78    | 44    | 27    | 19    | 15    |
| 6     | 15   | 13     | 99     | 4,160  | 1,350  | 230    | 138   | 82    | 42    | 26    | 18    | 14    |
| 7     | 14   | 30     | 90     | 1,910  | 955    | 230    | 135   | 77    | 42    | 26    | 19    | 14    |
| 8     | 14   | 114    | 85     | 1,190  | 724    | 245    | 129   | 75    | 42    | 25    | 18    | 14    |
| 9     | 13   | 36     | 80     | 748    | 583    | 955    | 126   | 73    | 40    | 24    | 17    | 15    |
| 10    | 14   | 24     | 75     | 548    | 499    | 1,400  | 166   | 73    | 40    | 24    | 17    | 15    |
| 11    | 14   | 21     | 80     | 438    | 426    | 892    | 178   | 72    | 39    | 25    | 17    | 15    |
| 12    | 14   | 57     | 90     | 366    | 378    | 668    | 360   | 68    | 37    | 25    | 16    | 14    |
| 13    | 14   | 1,100  | 78     | 315    | 336    | 646    | 315   | 65    | 35    | 26    | 17    | 13    |
| 14    | 14   | 937    | 70     | 285    | 305    | 513    | 250   | 62    | 34    | 25    | 17    | 13    |
| 15    | 16   | 471    | 65     | 255    | 285    | 499    | 210   | 62    | 33    | 25    | 17    | 13    |
| 16    | 14   | 255    | 59     | 230    | 265    | 520    | 186   | 61    | 33    | 24    | 16    | 13    |
| 17    | 14   | 305    | 55     | 210    | 245    | 464    | 170   | 57    | 34    | 24    | 15    | 13    |
| 18    | 14   | 1,500  | 53     | 198    | 235    | 420    | 158   | 54    | 33    | 23    | 15    | 15    |
| 19    | 14   | 804    | 51     | 182    | 432    | 408    | 141   | 54    | 31    | 22    | 16    | 15    |
| 20    | 14   | 426    | 49     | 170    | 325    | 378    | 134   | 54    | 29    | 23    | 16    | 14    |
| 21    | 13   | 270    | 47     | 158    | 290    | 336    | 128   | 53    | 34    | 23    | 16    | 14    |
| 22    | 13   | 198    | 47     | 158    | 305    | 325    | 122   | 52    | 29    | 23    | 16    | 14    |
| 23    | 13   | 190    | 44     | 147    | 336    | 300    | 117   | 51    | 30    | 22    | 16    | 13    |
| 24    | 13   | 838    | 668    | 138    | 384    | 280    | 110   | 49    | 32    | 22    | 16    | 13    |
| 25    | 13   | 820    | 684    | 132    | 444    | 260    | 107   | 48    | 29    | 21    | 16    | 13    |
| 26    | 13   | 611    | 426    | 126    | 506    | 245    | 102   | 47    | 30    | 20    | 16    | 13    |
| 27    | 13   | 541    | 342    | 123    | 432    | 226    | 98    | 47    | 30    | 19    | 15    | 13    |
| 28    | 13   | 396    | 4,590  | 117    | 384    | 214    | 98    | 46    | 30    | 19    | 16    | 13    |
| 29    | 13   | 305    | 2,450  | 497    | -----  | 202    | 93    | 47    | 30    | 19    | 15    | 13    |
| 30    | 13   | 235    | 1,260  | 1,360  | -----  | 194    | 90    | 48    | 26    | 18    | 16    | 13    |
| 31    | 13   | -----  | 1,050  | 684    | -----  | 182    | ----- | 48    | ----- | 19    | 17    | ----- |
| TOTAL | 422  | 10,563 | 13,404 | 44,293 | 19,312 | 12,679 | 4,647 | 1,935 | 1,068 | 726   | 524   | 422   |
| MEAN  | 13.6 | 352    | 432    | 1,429  | 690    | 409    | 155   | 62.4  | 35.6  | 23.4  | 16.9  | 14.1  |
| AG-FT | 837  | 20,950 | 26,590 | 87,850 | 38,300 | 25,150 | 9,220 | 3,840 | 2,120 | 1,440 | 1,040 | 837   |

|               |         |     |        |     |    |      |     |       |         |
|---------------|---------|-----|--------|-----|----|------|-----|-------|---------|
| CALENDAR YEAR | 1965    | MAX | 9,530  | MIN | 13 | MEAN | 278 | AC-FT | 48,380  |
| WATER YEAR    | 1965-66 | MAX | 15,300 | MIN | 13 | MEAN | 301 | AC-FT | 218,200 |

Peak discharge (base, 5,000 cfs).--Dec. 28 (1215) 8,520 cfs (10.09 ft); Jan. 4 (1945) 28,700 cfs (16.41 ft).

11-4678. Rancheria Creek near Boonville, Calif.

Location.--Lat 38°59'35", long 123°26'00", in SE¼ sec.7, T.13 N., R.14 W., on left bank at county road bridge, 100 ft downstream from Minnie Creek and 3.7 miles west of Boonville.

Drainage area.--65.6 sq mi.

Records available.--August 1959 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 450.81 (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 135 cfs (97,740 acre-ft per year).

Extremes.--Maximum discharge during year, 10,300 cfs Jan. 4 (gage height, 16.08 ft); from rating curve extended above 4,200 cfs as explained below; minimum daily, 1.8 cfs Sept. 4, 6-17, 21-30.

1959-66: Maximum discharge, 20,000 cfs Dec. 22, 1964 (gage height, 20.52 ft), from rating curve extended above 4,200 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.80 cfs Sept. 16-19, 1964.

Remarks.--Records good except those for the period of no gage height record, which are fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|------|---------|--------|--------|--------|--------|-------|-------|-------|-------|------|-------|
| 1     | 2.2  | 2.9     | 35     | 475    | 804    | 129    | 70    | 31    | 13    | 5.8   | 2.4  | 1.9   |
| 2     | 2.1  | 2.9     | 34     | 414    | 566    | 116    | 66    | 30    | 12    | 5.5   | 2.4  | 1.9   |
| 3     | 2.1  | 2.9     | 33     | 682    | 840    | 100    | 61    | 29    | 11    | 5.2   | 2.4  | 1.9   |
| 4     | 2.1  | 2.9     | 32     | 5,750  | 1,610  | 90     | 58    | 28    | 11    | 5.0   | 2.3  | 1.8   |
| 5     | 2.2  | 2.9     | 31     | 4,170  | 931    | 90     | 54    | 27    | 10    | 5.0   | 2.2  | 1.9   |
| 6     | 2.2  | 2.9     | 31     | 1,530  | 626    | 90     | 52    | 27    | 10    | 5.0   | 2.2  | 1.8   |
| 7     | 2.2  | 5.4     | 30     | 950    | 500    | 88     | 50    | 26    | 11    | 4.6   | 2.2  | 1.8   |
| 8     | 2.1  | 4.4     | 30     | 740    | 378    | 92     | 48    | 25    | 11    | 4.5   | 2.1  | 1.8   |
| 9     | 2.1  | 3.9     | 31     | 470    | 304    | 500    | 60    | 25    | 9.7   | 4.6   | 2.8  | 1.8   |
| 10    | 2.1  | 3.6     | 33     | 355    | 262    | 515    | 82    | 24    | 9.7   | 4.5   | 2.1  | 1.8   |
| 11    | 2.1  | 3.4     | 34     | 300    | 208    | 329    | 110   | 23    | 9.0   | 4.3   | 2.0  | 1.8   |
| 12    | 2.1  | 4.4     | 41     | 260    | 182    | 252    | 150   | 23    | 8.4   | 4.3   | 2.0  | 1.8   |
| 13    | 2.1  | 168     | 36     | 230    | 162    | 248    | 115   | 22    | 8.2   | 4.1   | 2.0  | 1.8   |
| 14    | 2.1  | 244     | 34     | 210    | 148    | 190    | 96    | 22    | 7.4   | 4.1   | 1.9  | 1.8   |
| 15    | 2.2  | 150     | 33     | 190    | 138    | 202    | 82    | 21    | 6.5   | 4.0   | 1.9  | 1.8   |
| 16    | 2.1  | 69      | 33     | 170    | 129    | 193    | 72    | 20    | 6.9   | 3.7   | 2.0  | 1.8   |
| 17    | 2.1  | 205     | 32     | 150    | 120    | 178    | 65    | 19    | 6.5   | 3.6   | 2.1  | 1.8   |
| 18    | 2.1  | 516     | 30     | 135    | 116    | 168    | 57    | 18    | 6.7   | 3.5   | 2.1  | 1.9   |
| 19    | 2.1  | 248     | 30     | 122    | 300    | 173    | 53    | 18    | 6.7   | 3.4   | 2.0  | 1.9   |
| 20    | 2.1  | 120     | 29     | 114    | 185    | 162    | 49    | 17    | 6.7   | 3.4   | 2.0  | 1.9   |
| 21    | 2.1  | 82      | 29     | 105    | 145    | 164    | 45    | 16    | 6.5   | 3.2   | 2.0  | 1.8   |
| 22    | 2.1  | 65      | 28     | 100    | 152    | 152    | 43    | 15    | 6.5   | 3.2   | 1.9  | 1.8   |
| 23    | 2.9  | 86      | 26     | 92     | 152    | 142    | 41    | 14    | 5.2   | 2.9   | 1.9  | 1.8   |
| 24    | 3.0  | 404     | 234    | 86     | 175    | 130    | 39    | 14    | 6.5   | 2.8   | 1.9  | 1.8   |
| 25    | 2.9  | 241     | 214    | 81     | 199    | 120    | 37    | 13    | 6.5   | 2.8   | 1.9  | 1.8   |
| 26    | 2.9  | 43      | 114    | 76     | 202    | 110    | 36    | 13    | 6.3   | 2.7   | 2.0  | 1.8   |
| 27    | 2.9  | 41      | 94     | 72     | 168    | 98     | 35    | 14    | 6.1   | 2.7   | 2.0  | 1.8   |
| 28    | 2.9  | 39      | 1,550  | 66     | 148    | 92     | 33    | 14    | 6.1   | 2.6   | 1.9  | 1.8   |
| 29    | 2.9  | 38      | 938    | 714    | -----  | 86     | 32    | 14    | 5.8   | 2.6   | 1.9  | 1.8   |
| 30    | 2.9  | 36      | 654    | 970    | -----  | 81     | 31    | 16    | 5.8   | 2.6   | 2.0  | 1.8   |
| 31    | 2.9  | -----   | 599    | 621    | -----  | 77     | ----- | 14    | ----- | 2.6   | 1.9  | ----- |
| TOTAL | 72.9 | 2,837.5 | 5,132  | 20,400 | 9,850  | 5,157  | 1,822 | 632   | 242.7 | 118.8 | 64.4 | 54.7  |
| MEAN  | 2.35 | 94.6    | 166    | 658    | 352    | 166    | 60.7  | 20.4  | 8.09  | 3.83  | 2.08 | 1.82  |
| AC-FT | 145  | 5,630   | 10,180 | 40,460 | 19,540 | 10,230 | 3,610 | 1,250 | 481   | 236   | 128  | 108   |

CALENDAR YEAR 1965 MAX 5,040 MIN 2.1 MEAN 125 AC-FT 90,320  
 WATER YEAR 1965-66 MAX 5,750 MIN 1.8 MEAN 127 AC-FT 92,000

Peak discharge (base, 2,000 cfs)

Note.--No gage-height record Mar. 22 to Apr. 27.

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1315 | 11.25       | 3,100     | 2-4  | 0830 | 10.25       | 2,080     |
| 1-4   | 1815 | 16.08       | 10,300    |      |      |             |           |

## NAVARRO RIVER BASIN

11-4678.5. Soda Creek tributary near Boonville, Calif.

Location.--Lat 39°01'32", long 123°17'25", in SE¼ sec.33, T.14 N., R.13 W., on right bank at culvert, 70 feet upstream from Soda Creek, and 4.2 miles northeast of Boonville.

Drainage area.--1.53 sq mi.

Records available.--Water years 1962-64 (annual maximum), October 1964 to September 1966.

Gage.--Water-stage recorder with rain gage attachment and crest-stage gage. Datum of gage is 1551.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Aug. 23, 1961 to Sept. 2, 1964, crest-stage gage only.

Extremes.--Maximum discharge during year, 138 cfs Jan. 4 (gage height, 9.25 ft); no flow for several months.

1961-66: Maximum discharge, 394 cfs Dec. 22, 1964 (gage height, 21.03 ft, from floodmarks), by computation of maximum flow through culvert and over road embankment.

1964-66: No flow for several months in each year.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar. | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|------|-------|------|-------|------|------|-------|
| 1     |      | 0     | .70   | 5.0   | 10    | 2.6  | 1.1   | 0.50 | 0.20  |      |      |       |
| 2     |      | 0     | .60   | 4.1   | 9.6   | 2.5  | 1.0   | .40  | .20   |      |      |       |
| 3     |      | 0     | .50   | 6.3   | 9.2   | 2.2  | 1.0   | .40  | .20   |      |      |       |
| 4     |      | 0     | .50   | 7.9   | 3.1   | 2.1  | .90   | .40  | .20   |      |      |       |
| 5     |      | 0     | .40   | 5.5   | 2.3   | 2.0  | .90   | .40  | .20   |      |      |       |
| 6     |      | 0     | .40   | 2.2   | 1.8   | 1.9  | .80   | .40  | .20   |      |      |       |
| 7     |      | 0     | .30   | 1.1   | 9.9   | 1.8  | .80   | .40  | .10   |      |      |       |
| 8     |      | 0     | .20   | 8.0   | 5.8   | 1.8  | .70   | .40  | .10   |      |      |       |
| 9     |      | 0     | .20   | 6.0   | 4.3   | 2.1  | .70   | .30  | .10   |      |      |       |
| 10    |      | 0     | .20   | 5.0   | 4.3   | 6.0  | .90   | .30  | .10   |      |      |       |
| 11    |      | 0     | .20   | 4.5   | 4.3   | 7.0  | 1.1   | .30  | .10   |      |      |       |
| 12    |      | 0     | .30   | 3.7   | 3.7   | 4.5  | 1.5   | .30  | .10   |      |      |       |
| 13    |      | .30   | .20   | 3.1   | 3.3   | 3.7  | 2.0   | .20  | .10   |      |      |       |
| 14    |      | 1.5   | .20   | 2.7   | 3.0   | 3.1  | 1.8   | .20  | .10   |      |      |       |
| 15    |      | 1.2   | .20   | 2.5   | 2.8   | 2.9  | 1.5   | .20  | 0     |      |      |       |
| 16    |      | .90   | .20   | 2.3   | 2.6   | 2.7  | 1.3   | .20  | .10   |      |      |       |
| 17    |      | 1.5   | .20   | 2.0   | 2.4   | 2.6  | 1.1   | .20  | .10   |      |      |       |
| 18    |      | 3.4   | .20   | 1.9   | 2.3   | 2.4  | 1.0   | .20  | .10   |      |      |       |
| 19    |      | 2.6   | .20   | 1.7   | 4.0   | 2.4  | .90   | .20  | .10   |      |      |       |
| 20    |      | 1.9   | .20   | 1.6   | 4.6   | 2.4  | .80   | .20  | .10   |      |      |       |
| 21    |      | 1.5   | .20   | 1.5   | 3.0   | 2.4  | .80   | .20  | .10   |      |      |       |
| 22    |      | 1.2   | .20   | 1.4   | 3.0   | 2.2  | .70   | .20  | .10   |      |      |       |
| 23    |      | 1.7   | .20   | 1.3   | 3.0   | 2.1  | .70   | .20  | .10   |      |      |       |
| 24    |      | 3.7   | 1.0   | 1.2   | 3.0   | 2.0  | .60   | .20  | .10   |      |      |       |
| 25    |      | 3.9   | 1.3   | 1.1   | 3.2   | 1.8  | .60   | .20  | 0     |      |      |       |
| 26    |      | 3.0   | 1.1   | 1.1   | 3.3   | 1.7  | .60   | .20  | 0     |      |      |       |
| 27    |      | 2.4   | 1.0   | 1.0   | 3.1   | 1.6  | .60   | .20  | 0     |      |      |       |
| 28    |      | 1.7   | .20   | 1.0   | 2.9   | 1.5  | .60   | .20  | 0     |      |      |       |
| 29    |      | 1.2   | 1.1   | 9.0   | ----- | 1.4  | .60   | .20  | 0     |      |      |       |
| 30    |      | .90   | 8.5   | 1.4   | ----- | 1.3  | .60   | .20  | 0     |      |      |       |
| 31    |      | ----- | 7.1   | 1.1   | ----- | 1.2  | ----- | .20  | ----- |      |      |       |
| Total | 0    | 34.50 | 57.70 | 271.0 | 182.6 | 77.9 | 28.20 | 8.30 | 2.80  | 0    | 0    | 0     |
| Mean  | 0    | 1.15  | 1.86  | 8.74  | 6.52  | 2.51 | .94   | .27  | .09   | 0    | 0    | 0     |
| Ac-ft | 0    | 68    | 114   | 538   | 362   | 155  | 56    | 16   | 5.6   | 0    | 0    | 0     |
| (†)   | 0.4  | 10.3  | 5.9   | 1.0   | -     | -    | -     | -    | -     | 0    | 0.2  | 0     |

Calendar year 1965 Max 92 Min 0 Mean 2.14 Ac-ft 1,550

Water year 1965-66 Max 79 Min 0 Mean 1.82 Ac-ft 1,320

Peak discharge (base, 80 cfs).--Jan. 4 (1930) 138 cfs (9.25 ft).

† Precipitation, in inches.

Note.--No gage-height record Feb. 17 to Mar. 16, Mar. 19 to Apr. 28.



11-4680. Navarro River near Navarro, Calif.

Location.--Lat 39°10'15", long 123°39'55", in SE¼ sec.7, T.15 N., R.16 W., on left bank 2.7 miles downstream from North Fork, 5.4 miles upstream from mouth, and 6.6 miles west of Navarro.

Drainage area.--303 sq mi.

Records available.--October 1950 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 6.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 16, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--16 years, 514 cfs (372,100 acre-ft per year); median of yearly mean discharges, 470 cfs (340,000 acre-ft per year).

Extremes.--Maximum discharge during year, 33,100 cfs Jan. 5 (gage height, 34.34 ft, from high-water marks); minimum, 5.0 cfs Sept. 7, 8, 11.

1950-66: Maximum discharge, 64,500 cfs Dec. 22, 1955 (gage height, 40.60 ft), from rating curve extended above 19,000 cfs on basis of slope-area measurement of maximum flow; minimum, 4.7 cfs Aug. 26, 27, 1959.  
Flood in December 1937 reached a stage of 38.2 ft, from floodmarks.

Remarks.--Records fair. No regulation or diversion above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY  | OCT.  | NOV.   | DEC.   | JAN.    | FEB.   | MAR.   | APR.   | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|--|-------|--------|--------|---------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1  | 17    | 12     | 285    | 1,360   | 2,180  | 782    | 276    | 95    | 54    | 20    | 10    | 9.3   |
| 2  | 15    | 12     | 249    | 1,300   | 1,820  | 686    | 264    | 94    | 51    | 21    | 10    | 10    |
| 3  | 12    | 12     | 216    | 2,900   | 1,720  | 578    | 252    | 89    | 50    | 20    | 9.3   | 8.5   |
| 4  | 12    | 14     | 184    | 6,200   | 4,860  | 500    | 237    | 86    | 51    | 20    | 9.3   | 7.1   |
| 5  | 20    | 15     | 153    | 13,500  | 3,370  | 466    | 228    | 84    | 47    | 20    | 9.3   | 6.5   |
| 6  | 19    | 17     | 127    | 5,800   | 2,430  | 441    | 216    | 87    | 49    | 18    | 8.5   | 6.0   |
| 7  | 20    | 36     | 108    | 2,950   | 1,840  | 417    | 207    | 82    | 49    | 17    | 9.3   | 5.5   |
| 8  | 20    | 82     | 99     | 2,050   | 1,440  | 399    | 200    | 81    | 48    | 15    | 9.3   | 5.5   |
| 9  | 18    | 72     | 90     | 1,490   | 1,130  | 514    | 192    | 80    | 48    | 15    | 8.5   | 5.5   |
| 10   | 18    | 63     | 82     | 1,160   | 946    | 1,320  | 192    | 82    | 45    | 15    | 8.5   | 5.5   |
| 11   | 16    | 57     | 80     | 929     | 806    | 982    | 210    | 82    | 43    | 17    | 9.3   | 5.0   |
| 12   | 15    | 63     | 95     | 770     | 674    | 854    | 511    | 76    | 41    | 18    | 10    | 5.5   |
| 13   | 16    | 92     | 106    | 650     | 584    | 782    | 402    | 72    | 41    | 20    | 10    | 5.5   |
| 14   | 19    | 722    | 110    | 560     | 522    | 710    | 327    | 68    | 38    | 18    | 10    | 11    |
| 15   | 17    | 595    | 105    | 480     | 472    | 634    | 282    | 68    | 35    | 17    | 11    | 14    |
| 16   | 18    | 303    | 98     | 427     | 430    | 646    | 258    | 66    | 31    | 14    | 11    | 14    |
| 17   | 17    | 187    | 95     | 369     | 399    | 630    | 240    | 63    | 33    | 13    | 11    | 14    |
| 18   | 17    | 1,480  | 91     | 348     | 378    | 602    | 225    | 62    | 29    | 15    | 10    | 17    |
| 19   | 19    | 1,030  | 86     | 324     | 710    | 585    | 207    | 56    | 20    | 14    | 11    | 17    |
| 20   | 19    | 508    | 82     | 300     | 646    | 553    | 181    | 55    | 18    | 13    | 10    | 18    |
| 21   | 19    | 414    | 78     | 273     | 514    | 508    | 162    | 55    | 23    | 12    | 9.3   | 17    |
| 22   | 19    | 384    | 76     | 276     | 476    | 478    | 154    | 53    | 26    | 11    | 9.3   | 15    |
| 23   | 18    | 342    | 80     | 276     | 539    | 445    | 145    | 55    | 26    | 9.3   | 8.5   | 13    |
| 24   | 17    | 923    | 680    | 243     | 650    | 414    | 139    | 51    | 26    | 8.5   | 8.5   | 12    |
| 25   | 22    | 1,250  | 600    | 228     | 924    | 384    | 131    | 48    | 22    | 9.3   | 9.3   | 12    |
| 26   | 17    | 802    | 350    | 225     | 1,250  | 366    | 124    | 48    | 25    | 8.5   | 9.3   | 12    |
| 27   | 13    | 570    | 290    | 222     | 987    | 354    | 120    | 49    | 23    | 8.5   | 8.5   | 12    |
| 28   | 12    | 399    | 4,200  | 216     | 834    | 336    | 110    | 48    | 23    | 9.3   | 9.3   | 12    |
| 29   | 12    | 324    | 2,600  | 620     | -----  | 321    | 105    | 49    | 19    | 9.3   | 8.5   | 12    |
| 30   | 13    | 318    | 2,100  | 2,700   | -----  | 309    | 101    | 51    | 18    | 9.3   | 8.5   | 11    |
| 31   | 13    | -----  | 1,600  | 1,770   | -----  | 291    | -----  | 56    | ----- | 9.3   | 10    | ----- |
| TOTAL  | 519   | 11,098 | 15,195 | 50,916  | 33,531 | 17,287 | 6,398  | 2,091 | 1,052 | 444.3 | 294.3 | 318.4 |
| MEAN   | 16.7  | 370    | 490    | 1,642   | 1,198  | 558    | 213    | 67.5  | 35.1  | 14.3  | 9.49  | 10.6  |
| AC-FT  | 1,030 | 22,010 | 30,140 | 101,000 | 66,510 | 34,290 | 12,690 | 4,150 | 2,090 | 881   | 584   | 632   |
| CALENDAR YEAR 1965 MAX 13,900 MIN 11 MEAN 464 AC-FT 336,100  |       |        |        |         |        |        |        |       |       |       |       |       |
| WATER YEAR 1965-66 MAX 13,500 MIN 5.0 MEAN 381 AC-FT 276,000 |       |        |        |         |        |        |        |       |       |       |       |       |

Peak discharge (base, 7,000 cfs).--Jan. 5 (time unknown) 33,100 cfs (34.34 ft).

Note.--No gage-height record Dec. 14 to Jan. 6.

## ALBION RIVER BASIN

11-4680.1. Albion River near Comptche, Calif.

Location.--Lat 39°15'40", long 123°37'00", in SW $\frac{1}{4}$  sec.11, T.16 N., R.16 W., on right bank 2,000 ft downstream from Morrison Gulch and 1.7 miles west of Comptche.

Drainage area.--14.4 sq mi.

Records available.--July 1961 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 106.59 ft, above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--5 years, 18.3 cfs (13,250 acre-ft per year).

Extremes.--Maximum discharge during year, 2,390 cfs Jan. 4 (gage height, 9.98 ft), from rating curve extended above 480 cfs on basis of slope-area measurement at gage height 9.50 ft; no flow Oct. 1-4, July 23 to Sept. 30.

1961-66: Maximum discharge, that of Jan. 4; no flow for many days in each year.

Remarks.--Records good. No regulation or diversion above station.

Revisions (water years).--1965 Report: 1962-64.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.    | FEB.    | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|--------|-------|---------|---------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0.10   | 5.0   | 51      | 125     | 37    | 6.4   | 2.1   | 0.70  | 0.20 |      |       |
| 2     | 0    | .10    | 4.0   | 38      | 100     | 31    | 5.9   | 2.0   | .50   | .20  |      |       |
| 3     | 0    | .10    | 3.4   | 108     | 100     | 23    | 5.5   | 1.9   | .60   | .20  |      |       |
| 4     | 0    | .10    | 2.8   | 1,360   | 180     | 19    | 5.0   | 1.9   | .60   | .20  |      |       |
| 5     | .10  | .10    | 2.6   | 676     | 130     | 19    | 4.8   | 1.8   | .60   | .10  |      |       |
| 6     | .10  | .10    | 2.4   | 245     | 135     | 18    | 4.4   | 1.9   | .60   | .10  |      |       |
| 7     | .10  | .80    | 2.1   | 118     | 82      | 18    | 4.0   | 1.7   | .60   | .10  |      |       |
| 8     | .10  | .60    | 2.0   | 82      | 52      | 18    | 3.6   | 1.7   | .60   | .10  |      |       |
| 9     | .10  | .20    | 1.8   | 51      | 41      | 55    | 3.9   | 1.7   | .50   | .10  |      |       |
| 10    | .10  | .20    | 1.7   | 39      | 32      | 87    | 6.5   | 1.8   | .50   | .10  |      |       |
| 11    | .10  | .20    | 2.0   | 30      | 24      | 66    | 18    | 1.7   | .40   | .10  |      |       |
| 12    | .10  | 1.1    | 2.6   | 24      | 20      | 50    | 23    | 1.5   | .40   | .10  |      |       |
| 13    | .10  | 2.2    | 2.0   | 19      | 17      | 47    | 16    | 1.4   | .40   | .10  |      |       |
| 14    | .10  | 3.7    | 1.8   | 15      | 15      | 39    | 13    | 1.3   | .40   | .10  |      |       |
| 15    | .10  | 3.2    | 1.5   | 13      | 13      | 38    | 11    | 1.3   | .30   | .10  |      |       |
| 16    | .10  | 1.4    | 1.4   | 11      | 11      | 43    | 9.4   | 1.3   | .30   | .10  |      |       |
| 17    | .10  | 2.2    | 1.3   | 9.7     | 10      | 40    | 8.0   | 1.1   | .30   | .10  |      |       |
| 18    | .10  | 8.7    | 1.3   | 8.6     | 9.8     | 39    | 7.1   | 1.1   | .40   | .10  |      |       |
| 19    | .10  | 5.9    | 1.2   | 7.6     | 39      | 39    | 6.1   | 1.0   | .30   | .10  |      |       |
| 20    | .10  | 3.3    | 1.2   | 6.7     | 31      | 28    | 5.2   | .90   | .30   | .10  |      |       |
| 21    | .10  | 2.2    | 1.2   | 6.0     | 27      | 28    | 4.6   | .90   | .40   | .10  |      |       |
| 22    | .10  | 1.6    | 1.1   | 7.6     | 33      | 22    | 4.2   | .90   | .40   | .10  |      |       |
| 23    | .10  | 1.6    | 1.0   | 7.2     | 36      | 19    | 3.6   | .80   | .40   | 0    |      |       |
| 24    | .10  | 30     | 17    | 6.7     | 77      | 17    | 3.2   | .80   | .30   | 0    |      |       |
| 25    | .10  | 42     | 26    | 6.2     | 107     | 15    | 2.9   | .60   | .30   | 0    |      |       |
| 26    | .10  | 28     | 18    | 5.8     | 100     | 13    | 2.8   | .80   | .20   | 0    |      |       |
| 27    | .10  | 19     | 14    | 5.6     | 68      | 11    | 2.6   | .80   | .20   | 0    |      |       |
| 28    | .10  | 13     | 100   | 7.0     | 49      | 10    | 2.4   | .70   | .20   | 0    |      |       |
| 29    | .10  | 8.9    | 80    | 35      | -----   | 8.7   | 2.2   | .70   | .20   | 0    |      |       |
| 30    | .10  | 6.4    | 60    | 130     | -----   | 7.8   | 2.2   | .80   | .20   | 0    |      |       |
| 31    | .10  | -----  | 78    | 95      | -----   | 7.1   | ----- | .80   | ----- | 0    |      |       |
| TOTAL | 2.70 | 187.00 | 440.4 | 3,224.7 | 1,663.8 | 912.6 | 197.5 | 39.90 | 12.10 | 2.60 | 0    | 0     |
| MEAN  | .09  | 6.23   | 14.2  | 104     | 59.4    | 29.4  | 6.58  | 1.29  | .40   | .08  | 0    | 0     |
| AC-FT | 5.4  | 371    | 874   | 6,400   | 3,300   | 1,810 | 392   | 79    | 24    | 5.2  | 0    | 0     |

CALENDAR YEAR 1965 MAX 312 MIN 0 MEAN 13.4 AC-FT 9,670  
 WATER YEAR 1965-66 MAX 1,360 MIN 0 MEAN 18.3 AC-FT 13,260

Peak discharge (base, 350 cfs).--Jan. 4 (1965) 2,390 cfs (9.98 ft).

11-4680.7. South Fork Big River near Comptche, Calif.

Location.--Lat 39°13'45", long 123°27'55", in sec.19, T.16 N., R.14 W., on left bank 250 ft downstream from Daugherty Creek and 7.2 miles east of Comptche.

Drainage area.--36.2 sq mi.

Records available.--August 1960 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 500 ft (from topographic map). Prior to Oct. 7, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--6 years, 47.7 cfs (34,530 acre-ft per year).

Extremes.--Maximum discharge during year, 5,970 cfs Jan. 4 (gage height, 14.27 ft), from rating curve extended above 1,700 cfs as explained below; minimum daily, 0.70 cfs Aug. 17-29, Sept. 4-14, 16, 17.

1960-66: Maximum discharge 8,200 cfs Dec. 22, 1964 (gage height, 16.30 ft), from rating curve extended above 1,700 cfs on basis of slope-area measurement of maximum flow; minimum, 0.60 cfs many days in September 1960.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

Revisions (water years).--1962 Report: 1961(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC.  | JAN.   | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 1.2  | 1.2   | 15    | 109    | 162   | 72    | 25    | 12    | 4.4   | 2.0   | 0.90  | 0.80  |
| 2     | 1.2  | 1.2   | 13    | 73     | 128   | 64    | 23    | 12    | 4.3   | 2.0   | .90   | .80   |
| 3     | 1.2  | 1.2   | 12    | 132    | 128   | 56    | 22    | 11    | 4.2   | 2.0   | .90   | .80   |
| 4     | 1.2  | 1.4   | 11    | 2,900  | 259   | 51    | 21    | 11    | 4.1   | 2.0   | .80   | .70   |
| 5     | 1.5  | 1.4   | 9.6   | 1,570  | 221   | 55    | 20    | 11    | 4.1   | 1.8   | .80   | .70   |
| 6     | 1.6  | 1.4   | 8.8   | 592    | 234   | 49    | 19    | 10    | 4.0   | 1.7   | .80   | .70   |
| 7     | 1.4  | 1.8   | 8.0   | 315    | 177   | 48    | 19    | 9.9   | 4.0   | 1.7   | .80   | .70   |
| 8     | 1.1  | 1.5   | 7.2   | 200    | 143   | 48    | 18    | 9.8   | 3.8   | 1.8   | .80   | .70   |
| 9     | 1.2  | 1.3   | 6.6   | 137    | 110   | 67    | 19    | 9.5   | 3.7   | 1.7   | .80   | .70   |
| 10    | 1.2  | 1.3   | 6.2   | 105    | 94    | 92    | 25    | 9.4   | 3.6   | 1.7   | .80   | .70   |
| 11    | 1.3  | 1.3   | 6.4   | 85     | 79    | 84    | 55    | 9.1   | 3.4   | 1.6   | .80   | .70   |
| 12    | 1.4  | 3.0   | 6.6   | 72     | 67    | 76    | 72    | 8.5   | 3.3   | 1.7   | .80   | .70   |
| 13    | 1.1  | 5.0   | 5.9   | 61     | 59    | 75    | 50    | 8.2   | 3.3   | 1.7   | .80   | .70   |
| 14    | 1.3  | 8.2   | 5.6   | 53     | 52    | 67    | 41    | 7.9   | 3.1   | 1.6   | .80   | .70   |
| 15    | 1.5  | 7.5   | 5.4   | 48     | 48    | 69    | 36    | 7.5   | 3.1   | 1.6   | .80   | .80   |
| 16    | 1.3  | 5.2   | 4.9   | 43     | 43    | 79    | 33    | 7.3   | 2.8   | 1.5   | .80   | .70   |
| 17    | 1.4  | 6.6   | 4.9   | 38     | 39    | 73    | 30    | 6.9   | 2.8   | 1.4   | .70   | .70   |
| 18    | 1.5  | 15    | 4.7   | 36     | 37    | 70    | 27    | 6.8   | 2.7   | 1.3   | .70   | 1.1   |
| 19    | 1.8  | 11    | 4.5   | 33     | 58    | 73    | 24    | 6.5   | 2.7   | 1.3   | .70   | 1.0   |
| 20    | 1.4  | 9.0   | 4.5   | 31     | 44    | 63    | 22    | 6.1   | 2.7   | 1.3   | .70   | .90   |
| 21    | 1.2  | 7.8   | 4.5   | 28     | 39    | 61    | 21    | 6.0   | 2.5   | 1.2   | .70   | .80   |
| 22    | 1.2  | 7.6   | 4.5   | 30     | 40    | 55    | 19    | 5.9   | 2.5   | 1.2   | .70   | .80   |
| 23    | 1.2  | 7.6   | 4.1   | 27     | 40    | 51    | 18    | 5.5   | 2.5   | 1.1   | .70   | .80   |
| 24    | 1.2  | 45    | 29    | 26     | 67    | 46    | 17    | 5.3   | 2.5   | 1.0   | .70   | .80   |
| 25    | 1.2  | 70    | 41    | 24     | 104   | 42    | 16    | 5.1   | 2.5   | 1.0   | .70   | .80   |
| 26    | 1.2  | 45    | 29    | 23     | 117   | 38    | 15    | 5.0   | 2.2   | .90   | .70   | .80   |
| 27    | 1.2  | 31    | 22    | 22     | 96    | 36    | 15    | 4.7   | 2.2   | .90   | .70   | .80   |
| 28    | 1.0  | 22    | 278   | 21     | 82    | 34    | 14    | 4.6   | 2.2   | .90   | .70   | .80   |
| 29    | 1.1  | 18    | 148   | 72     | ----- | 31    | 13    | 4.7   | 2.1   | .90   | .70   | .80   |
| 30    | 1.2  | 16    | 113   | 164    | ----- | 28    | 13    | 4.7   | 2.1   | .90   | .80   | .80   |
| 31    | 1.2  | ----- | 173   | 110    | ----- | 27    | ----- | 4.7   | ----- | 1.0   | 1.0   | ----- |
| TOTAL | 39.7 | 355.5 | 996.9 | 7,180  | 2,767 | 1,780 | 763   | 236.6 | 93.4  | 44.40 | 24.00 | 23.30 |
| MEAN  | 1.28 | 11.9  | 32.2  | 232    | 98.8  | 57.4  | 25.4  | 7.63  | 3.11  | 1.43  | .77   | .78   |
| AC-FT | 79   | 705   | 1,980 | 14,240 | 5,490 | 3,530 | 1,510 | 469   | 185   | 88    | 48    | 46    |

CALENDAR YEAR 1965 MAX 1,500 MIN 1.0 MEAN 39.8 AC-FT 28,030  
 WATER YEAR 1965-66 MAX 2,900 MIN .70 MEAN 39.2 AC-FT 28,370

Peak discharge (base, 700 cfs).--Jan. 4 (1815) 5,970 cfs (14.27 ft).

Note.--No gage-height record Nov. 7 to Dec. 9.

11-4685. Noyo River near Fort Bragg, Calif.

Location.--Lat 39°25'31", long 123°44'10", in SW¼ sec.10, T.18 N., R.17 W., on right bank 0.7 mile downstream from South Fork and 3.5 miles east of Fort Bragg.

Drainage area.--106 sq mi.

Records available.--August 1951 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 11.73 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 17, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--15 years, 219 cfs (158,500 acre-ft per year); median of yearly mean discharges, 180 cfs (130,000 acre-ft per year).

Extremes.--Maximum discharge during year, 19,200 cfs Jan. 5 (gage height, 24.67 ft), from rating curve extended above 7,400 cfs on basis of slope-conveyance study; minimum daily, 3.1 cfs Sept. 15.

1951-66: Maximum discharge, 24,000 cfs Dec. 22, 1964 (gage height, 26.30 ft), from rating curve extended above 7,400 cfs on basis of slope-conveyance study; minimum daily, 2.4 cfs Aug. 25-28, Sept. 12, 1959.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1965 Report: 1964.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT.  | NOV.    | DEC.  | JAN.   | FEB.   | MAR.   | APR.  | MAY     | JUNE  | JULY  | AUG.  | SEPT. |
|--------------------|-------|---------|-------|--------|--------|--------|-------|---------|-------|-------|-------|-------|
| 1                  | 5.4   | 4.3     | 42    | 324    | 840    | 315    | 115   | 66      | 24    | 15    | 6.8   | 4.2   |
| 2                  | 5.4   | 4.5     | 37    | 246    | 960    | 285    | 108   | 63      | 23    | 17    | 7.4   | 5.1   |
| 3                  | 5.1   | 5.1     | 34    | 405    | 800    | 250    | 104   | 61      | 22    | 17    | 7.5   | 5.1   |
| 4                  | 5.1   | 5.7     | 32    | 4,940  | 1,600  | 225    | 99    | 59      | 22    | 18    | 5.8   | 4.6   |
| 5                  | 6.1   | 5.4     | 30    | 12,200 | 1,220  | 205    | 94    | 57      | 21    | 18    | 6.8   | 4.3   |
| 6                  | 5.9   | 5.7     | 29    | 3,620  | 1,000  | 195    | 90    | 56      | 21    | 18    | 6.5   | 3.9   |
| 7                  | 5.9   | 10      | 28    | 1,480  | 720    | 180    | 89    | 53      | 21    | 18    | 6.5   | 3.8   |
| 8                  | 6.7   | 23      | 28    | 960    | 500    | 175    | 85    | 52      | 19    | 18    | 6.2   | 3.8   |
| 9                  | 7.2   | 11      | 28    | 680    | 405    | 350    | 85    | 51      | 19    | 18    | 6.3   | 3.4   |
| 10                 | 7.2   | 7.2     | 27    | 530    | 318    | 760    | 101   | 50      | 17    | 5.8   | 6.3   | 3.3   |
| 11                 | 7.1   | 7.2     | 26    | 440    | 246    | 670    | 214   | 49      | 17    | 4.6   | 6.3   | 3.3   |
| 12                 | 7.8   | 11      | 26    | 340    | 206    | 540    | 482   | 47      | 15    | 4.4   | 6.2   | 3.3   |
| 13                 | 8.0   | 30      | 25    | 270    | 181    | 460    | 361   | 45      | 15    | 4.6   | 6.2   | 3.4   |
| 14                 | 8.5   | 40      | 24    | 220    | 160    | 382    | 276   | 43      | 13    | 5.8   | 5.9   | 3.5   |
| 15                 | 8.6   | 28      | 24    | 195    | 145    | 388    | 218   | 41      | 13    | 6.1   | 5.8   | 3.1   |
| 16                 | 10    | 16      | 24    | 172    | 133    | 380    | 181   | 40      | 12    | 5.7   | 5.4   | 3.2   |
| 17                 | 6.0   | 15      | 24    | 155    | 125    | 344    | 162   | 38      | 11    | 5.3   | 5.6   | 3.5   |
| 18                 | 4.2   | 57      | 24    | 142    | 119    | 324    | 147   | 37      | 11    | 6.4   | 5.4   | 4.7   |
| 19                 | 4.4   | 75      | 24    | 125    | 216    | 344    | 131   | 35      | 9.6   | 5.7   | 5.3   | 4.8   |
| 20                 | 4.8   | 35      | 24    | 111    | 195    | 307    | 118   | 34      | 9.0   | 5.9   | 4.7   | 4.7   |
| 21                 | 4.8   | 19      | 24    | 107    | 170    | 302    | 108   | 32      | 9.0   | 5.8   | 4.4   | 4.9   |
| 22                 | 4.5   | 13      | 24    | 110    | 170    | 272    | 101   | 31      | 9.5   | 5.6   | 4.2   | 4.6   |
| 23                 | 4.2   | 13      | 24    | 106    | 210    | 244    | 96    | 30      | 9.9   | 5.0   | 4.3   | 4.4   |
| 24                 | 4.2   | 91      | 41    | 97     | 270    | 216    | 90    | 30      | 10    | 4.6   | 4.1   | 4.5   |
| 25                 | 4.2   | 222     | 125   | 93     | 400    | 195    | 86    | 28      | 10    | 4.1   | 4.0   | 4.5   |
| 26                 | 4.1   | 182     | 118   | 90     | 600    | 172    | 82    | 27      | 11    | 4.4   | 3.9   | 6.6   |
| 27                 | 3.8   | 124     | 90    | 86     | 430    | 160    | 79    | 26      | 11    | 4.8   | 3.8   | 7.1   |
| 28                 | 3.8   | 90      | 186   | 83     | 355    | 151    | 75    | 26      | 12    | 6.0   | 4.0   | 7.2   |
| 29                 | 3.8   | 65      | 695   | 350    | -----  | 139    | 73    | 22      | 13    | 7.4   | 3.9   | 6.8   |
| 30                 | 4.0   | 51      | 376   | 1,180  | -----  | 130    | 69    | 25      | 15    | 8.3   | 4.3   | 6.8   |
| 31                 | 4.1   | -----   | 318   | 980    | -----  | 122    | ----- | 25      | ----- | 7.7   | 4.4   | ----- |
| TOTAL              | 174.9 | 1,266.1 | 2,581 | 30,837 | 12,694 | 9,182  | 4,119 | 1,279   | 445.0 | 281.0 | 168.2 | 136.4 |
| MEAN               | 5.64  | 42.2    | 83.3  | 995    | 453    | 296    | 137   | 41.3    | 14.8  | 9.07  | 5.43  | 4.55  |
| AC-FT              | 347   | 2,510   | 5,120 | 61,160 | 25,180 | 18,210 | 8,170 | 2,540   | 883   | 557   | 334   | 271   |
| CALENDAR YEAR 1965 | MAX   | 2,880   | MIN   | 3.3    | MEAN   | 137    | AC-FT | 99,470  |       |       |       |       |
| WATER YEAR 1965-66 | MAX   | 12,200  | MIN   | 3.1    | MEAN   | 173    | AC-FT | 125,300 |       |       |       |       |

Peak discharge (base, 2,400 cfs).--Jan. 5 (0630) 19,200 cfs (24.67 ft).

Note.--No gage-height record Jan. 8 to Feb. 9.

11-4685.4. Pudding Creek near Fort Bragg, Calif.

Location.--Lat 39°27'25", long 123°43'20", in NE¼NW¼ sec.2, T.18 N., R.17 W., on right bank at old town site of Glenblair, 0.7 mile downstream from Little Valley Creek, and 4.5 miles east northeast of Fort Bragg.

Drainage area.--12.5 sq mi.

Records available.--October 1963 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 88.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Oct. 1, 1964, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 1,960 cfs Jan. 4 (gage height, 8.49 ft); no flow July 31 to Sept. 30.  
1963-66: Maximum discharge, 2,000 cfs Dec. 21, 1964 (gage height, 8.55 ft); no flow at times in each year.

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT. | NOV.   | DEC.  | JAN.    | FEB.  | MAR.  | APR.  | MAY   | JUNE   | JULY | AUG. | SEPT. |
|--------------------|------|--------|-------|---------|-------|-------|-------|-------|--------|------|------|-------|
| 1                  | 0.10 | 0.20   | 5.6   | 53      | 45    | 25    | 6.9   | 3.1   | 1.1    | 0.30 |      |       |
| 2                  | .10  | .20    | 4.6   | 47      | 34    | 27    | 6.3   | 2.8   | 1.0    | .30  |      |       |
| 3                  | .10  | .20    | 4.3   | 186     | 30    | 20    | 5.7   | 2.8   | 1.0    | .30  |      |       |
| 4                  | .10  | .40    | 4.0   | 1,330   | 71    | 17    | 5.3   | 2.7   | 1.0    | .20  |      |       |
| 5                  | .10  | .50    | 3.5   | 636     | 63    | 18    | 5.3   | 2.6   | .90    | .20  |      |       |
| 6                  | .20  | .50    | 3.0   | 224     | 65    | 18    | 5.1   | 2.6   | 1.0    | .20  |      |       |
| 7                  | .20  | 2.0    | 2.5   | 107     | 42    | 22    | 5.0   | 2.3   | 1.0    | .20  |      |       |
| 8                  | .20  | 3.3    | 2.0   | 84      | 24    | 23    | 4.6   | 2.4   | .90    | .20  |      |       |
| 9                  | .20  | 1.3    | 2.0   | 53      | 22    | 70    | 4.6   | 2.5   | .80    | .20  |      |       |
| 10                 | .20  | 1.0    | 1.8   | 37      | 22    | 133   | 13    | 2.5   | .80    | .20  |      |       |
| 11                 | .30  | 1.3    | 1.7   | 27      | 17    | 79    | 42    | 2.3   | .80    | .20  |      |       |
| 12                 | .20  | 2.3    | 1.9   | 21      | 14    | 49    | 66    | 2.1   | .70    | .20  |      |       |
| 13                 | .30  | 6.7    | 1.7   | 17      | 12    | 53    | 35    | 2.0   | .60    | .30  |      |       |
| 14                 | .40  | 8.9    | 1.6   | 14      | 10    | 35    | 24    | 1.9   | .50    | .20  |      |       |
| 15                 | .40  | 4.6    | 1.5   | 12      | 9.2   | 47    | 18    | 1.8   | .50    | .20  |      |       |
| 16                 | .30  | 2.9    | 1.4   | 11      | 8.1   | 47    | 15    | 1.7   | .50    | .20  |      |       |
| 17                 | .30  | 3.7    | 1.3   | 9.4     | 7.5   | 35    | 12    | 1.6   | .50    | .20  |      |       |
| 18                 | .30  | 20     | 1.3   | 8.4     | 7.3   | 30    | 10    | 1.6   | .40    | .20  |      |       |
| 19                 | .40  | 18     | 1.2   | 7.7     | 29    | 47    | 8.6   | 1.5   | .40    | .20  |      |       |
| 20                 | .40  | 8.6    | 1.2   | 7.3     | 18    | 31    | 7.2   | 1.4   | .40    | .10  |      |       |
| 21                 | .40  | 5.1    | 1.2   | 7.3     | 15    | 28    | 6.4   | 1.4   | .40    | .10  |      |       |
| 22                 | .30  | 3.5    | 1.2   | 10      | 19    | 24    | 5.7   | 1.4   | .40    | .10  |      |       |
| 23                 | .30  | 3.4    | 1.1   | 10      | 27    | 20    | 5.1   | 1.3   | .40    | .10  |      |       |
| 24                 | .20  | 44     | 16    | 10      | 60    | 17    | 4.6   | 1.3   | .40    | .10  |      |       |
| 25                 | .20  | 87     | 20    | 10      | 74    | 14    | 4.3   | 1.2   | .40    | .10  |      |       |
| 26                 | .10  | 50     | 14    | 10      | 77    | 12    | 4.0   | 1.3   | .50    | .10  |      |       |
| 27                 | .10  | 26     | 11    | 10      | 49    | 11    | 3.8   | 1.3   | .50    | .10  |      |       |
| 28                 | .10  | 16     | 127   | 10      | 33    | 10    | 3.6   | 1.2   | .50    | .10  |      |       |
| 29                 | .10  | 11     | 138   | 36      | ----- | 9.1   | 3.4   | 1.2   | .40    | .10  |      |       |
| 30                 | .20  | 7.7    | 94    | 34      | ----- | 8.3   | 3.1   | 1.4   | .30    | .10  |      |       |
| 31                 | .20  | -----  | 82    | 25      | ----- | 7.5   | ----- | 1.3   | -----  | 0    |      |       |
| TOTAL              | 7.00 | 340.30 | 553.6 | 3,064.1 | 904.1 | 986.9 | 343.6 | 58.5  | 19.00  | 5.30 | 0    | 0     |
| MEAN               | .23  | 11.3   | 17.9  | 98.8    | 32.3  | 31.8  | 11.5  | 1.89  | .63    | .17  | 0    | 0     |
| AC-FT              | 14   | 675    | 1,100 | 6,080   | 1,790 | 1,960 | 682   | 116   | 38     | 11   | 0    | 0     |
| CALENDAR YEAR 1965 |      | MAX    | 260   | MIN     | 0     | MEAN  | 12.5  | AC-FT | 9,080  |      |      |       |
| WATER YEAR 1965-66 |      | MAX    | 1,330 | MIN     | 0     | MEAN  | 17.2  | AC-FT | 12,470 |      |      |       |

Peak discharge (base, 500 cfs).--Jan. 4 (1900) 1,960 cfs (8.49 ft).

11-4686. Middle Fork Tenmile River near Fort Bragg, Calif.

Location.--Lat 39°34'20", long 123°41'45", in NE¼NE¼ sec.25, T.20 N., R.17 W., on right bank 0.9 mile upstream from confluence with North Fork Tenmile River and 10.4 miles (revised) northeast of Fort Bragg.

Drainage area.--32.9 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-56, 1961. August 1964 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 53.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Extremes.--Maximum discharge during year, 4,160 cfs Jan. 4 (gage height, 13.30 ft); minimum daily, 2.7 cfs Sept. 29, 30.

1964-66: Maximum discharge, 5,670 cfs Dec. 21, 1964 (gage height, 15.34 ft); minimum daily, 2.3 cfs Sept. 12-19, 1964.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.    | Jan.   | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 2.8   | 3.0     | 24      | 181    | 120   | 114   | 49    | 28    | 13    | 7.5   | 4.6   | 3.5   |
| 2     | 2.8   | 3.0     | 20      | 151    | 119   | 100   | 47    | 28    | 13    | 7.5   | 4.4   | 3.5   |
| 3     | 3.0   | 3.0     | 17      | 491    | 113   | 86    | 45    | 26    | 13    | 7.3   | 4.4   | 3.0   |
| 4     | 3.2   | 6.4     | 16      | 2,940  | 196   | 77    | 44    | 26    | 12    | 7.3   | 4.4   | 2.8   |
| 5     | 4.7   | 4.8     | 14      | 2,390  | 216   | 76    | 42    | 26    | 12    | 7.0   | 4.4   | 2.8   |
| 6     | 3.7   | 3.9     | 13      | 1,160  | 228   | 78    | 41    | 24    | 12    | 7.0   | 4.4   | 2.8   |
| 7     | 3.5   | 13      | 13      | 555    | 200   | 82    | 39    | 24    | 12    | 7.0   | 4.2   | 2.8   |
| 8     | 3.5   | 26      | 12      | 372    | 167   | 99    | 38    | 23    | 12    | 7.0   | 4.2   | 2.8   |
| 9     | 3.5   | 12      | 12      | 258    | 131   | 188   | 38    | 23    | 11    | 7.0   | 3.9   | 2.8   |
| 10    | 3.5   | 8.8     | 11      | 194    | 110   | 333   | 52    | 23    | 11    | 6.7   | 3.9   | 2.8   |
| 11    | 3.5   | 8.4     | 11      | 146    | 89    | 284   | 117   | 22    | 11    | 6.7   | 3.9   | 2.8   |
| 12    | 3.5   | 14      | 11      | 113    | 78    | 218   | 174   | 21    | 10    | 6.7   | 3.9   | 2.8   |
| 13    | 3.5   | 35      | 10      | 90     | 68    | 194   | 125   | 20    | 10    | 7.0   | 3.9   | 3.0   |
| 14    | 4.4   | 4.7     | 10      | 77     | 62    | 156   | 99    | 20    | 9.8   | 7.0   | 3.7   | 3.0   |
| 15    | 4.4   | 32      | 9.8     | 68     | 57    | 159   | 82    | 20    | 9.5   | 6.7   | 3.7   | 2.8   |
| 16    | 3.9   | 20      | 9.1     | 61     | 54    | 170   | 71    | 19    | 9.1   | 6.4   | 3.7   | 2.8   |
| 17    | 3.5   | 22      | 8.8     | 55     | 51    | 156   | 64    | 18    | 8.8   | 6.1   | 3.7   | 2.8   |
| 18    | 3.5   | 85      | 8.4     | 52     | 48    | 146   | 58    | 18    | 8.8   | 6.1   | 3.5   | 3.9   |
| 19    | 3.7   | 80      | 8.1     | 47     | 81    | 179   | 52    | 17    | 8.8   | 5.9   | 3.5   | 3.5   |
| 20    | 3.7   | 38      | 8.1     | 44     | 70    | 152   | 48    | 17    | 8.4   | 5.9   | 3.5   | 3.2   |
| 21    | 3.5   | 26      | 8.1     | 42     | 62    | 152   | 45    | 16    | 8.4   | 5.6   | 3.5   | 3.0   |
| 22    | 3.5   | 19      | 8.1     | 46     | 66    | 131   | 43    | 16    | 8.4   | 5.6   | 3.2   | 2.8   |
| 23    | 3.2   | 17      | 7.8     | 43     | 75    | 114   | 40    | 15    | 8.4   | 5.3   | 3.2   | 2.8   |
| 24    | 3.0   | 122     | 56      | 41     | 119   | 100   | 37    | 14    | 8.4   | 5.1   | 3.2   | 2.8   |
| 25    | 3.0   | 165     | 66      | 38     | 172   | 88    | 35    | 14    | 8.1   | 5.1   | 3.2   | 2.8   |
| 26    | 3.0   | 106     | 49      | 37     | 200   | 78    | 34    | 14    | 7.8   | 5.1   | 3.5   | 2.8   |
| 27    | 3.0   | 75      | 39      | 36     | 170   | 70    | 33    | 14    | 7.8   | 4.8   | 3.2   | 2.8   |
| 28    | 3.0   | 53      | 283     | 34     | 136   | 65    | 31    | 14    | 7.8   | 4.6   | 3.2   | 2.8   |
| 29    | 3.0   | 40      | 312     | 67     | ----- | 60    | 30    | 14    | 7.8   | 4.6   | 3.2   | 2.7   |
| 30    | 3.0   | 30      | 246     | 86     | ----- | 55    | 29    | 14    | 7.5   | 4.6   | 3.7   | 2.7   |
| 31    | 3.0   | -----   | 248     | 78     | ----- | 52    | ----- | 14    | ----- | 4.6   | 3.2   | ----- |
| Total | 106.0 | 1,118.3 | 1,569.3 | 9,993  | 3,258 | 4,012 | 1,682 | 602   | 295.6 | 190.8 | 116.1 | 88.2  |
| Mean  | 3.42  | 37.3    | 50.6    | 322    | 116   | 129   | 56.1  | 19.4  | 9.85  | 6.15  | 3.75  | 2.94  |
| Ac-ft | 210   | 2,220   | 3,110   | 19,820 | 6,460 | 7,960 | 3,340 | 1,190 | 586   | 378   | 230   | 175   |

Calendar year 1965 Max 1,090 Min 2.8 Mean 58.7 Ac-ft 42,480

Water year 1965-66 Max 2,940 Min 2.7 Mean 63.1 Ac-ft 45,680

Peak discharge (base, 600 cfs).--Jan. 4 (1900) 4,160 cfs (13.30 ft).

11-4690. Mattole River near Petrolia, Calif.

Location.--Lat 40°18'40", long 124°16'10", in NW¼ sec.11, T.2 S., R.2 W., on right bank 0.2 mile downstream from Clear Creek, 1.2 miles southeast of Petrolia, and 1.3 miles upstream from North Fork.

Drainage area.--240 sq mi.

Records available.--October 1911 to December 1913, October 1950 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Altitude of gage is 40 ft (from topographic map). November 1911 to December 1913, staff or chain gages at several sites upstream within 0.7 mile of present site at various datums. Dec. 11, 1950, to July 14, 1955, graphic water-stage recorder at site 0.7 mile upstream at datum 7.48 ft higher. July 15, 1955, to Dec. 9, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 1,343 cfs (972,300 acre-ft per year).

Extremes.--Maximum discharge during year, 56,900 cfs Jan. 4 (gage height, 24.48 ft), from rating curve extended above 24,000 cfs as explained below; minimum daily, 30 cfs Oct. 1-3, Sept. 28-30.

1911-13, 1950-66: Maximum discharge, 90,400 cfs Dec. 22, 1955 (gage height, 29.60 ft), from rating curve extended above 24,000 cfs on basis of slope-area measurement of maximum flow; minimum observed, 20 cfs Sept. 1, 2, 15-30, Oct. 27-31, 1913.

Remarks.--Records good. Small diversions for irrigation above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.    | JAN.    | FEB.    | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|---------|---------|---------|---------|--------|--------|-------|-------|-------|-------|
| 1     | 30    | 36     | 1,020   | 3,850   | 3,090   | 1,270   | 841    | 323    | 145   | 65    | 42    | 38    |
| 2     | 30    | 36     | 874     | 5,830   | 2,490   | 1,190   | 777    | 322    | 143   | 66    | 42    | 38    |
| 3     | 30    | 58     | 761     | 19,200  | 2,740   | 1,080   | 721    | 311    | 144   | 63    | 43    | 37    |
| 4     | 32    | 499    | 841     | 46,800  | 5,030   | 950     | 670    | 300    | 133   | 63    | 43    | 36    |
| 5     | 56    | 250    | 1,090   | 21,900  | 4,700   | 1,110   | 634    | 290    | 129   | 62    | 42    | 34    |
| 6     | 72    | 117    | 924     | 12,600  | 4,190   | 1,640   | 585    | 311    | 129   | 58    | 42    | 34    |
| 7     | 54    | 111    | 801     | 6,880   | 3,440   | 2,390   | 555    | 290    | 129   | 58    | 42    | 34    |
| 8     | 45    | 255    | 713     | 5,300   | 2,780   | 8,510   | 520    | 265    | 122   | 57    | 41    | 34    |
| 9     | 42    | 175    | 638     | 3,340   | 2,140   | 15,300  | 578    | 255    | 116   | 57    | 39    | 33    |
| 10    | 40    | 121    | 570     | 2,290   | 1,740   | 10,900  | 882    | 246    | 114   | 57    | 40    | 33    |
| 11    | 39    | 139    | 527     | 1,750   | 1,400   | 6,100   | 1,320  | 237    | 107   | 56    | 40    | 33    |
| 12    | 38    | 1,010  | 492     | 1,410   | 1,170   | 4,060   | 2,000  | 224    | 103   | 56    | 40    | 32    |
| 13    | 37    | 3,180  | 446     | 1,200   | 968     | 3,800   | 1,380  | 215    | 99    | 54    | 40    | 31    |
| 14    | 40    | 3,330  | 408     | 1,070   | 841     | 3,310   | 1,100  | 215    | 96    | 54    | 40    | 31    |
| 15    | 42    | 2,630  | 378     | 968     | 737     | 3,490   | 968    | 206    | 90    | 54    | 39    | 32    |
| 16    | 42    | 1,360  | 349     | 908     | 660     | 3,440   | 865    | 202    | 89    | 54    | 39    | 32    |
| 17    | 40    | 1,210  | 327     | 801     | 593     | 2,930   | 793    | 190    | 86    | 51    | 38    | 32    |
| 18    | 39    | 3,870  | 305     | 698     | 548     | 2,720   | 729    | 186    | 82    | 51    | 38    | 41    |
| 19    | 39    | 4,280  | 285     | 578     | 1,130   | 3,220   | 668    | 178    | 80    | 50    | 38    | 46    |
| 20    | 39    | 2,230  | 270     | 453     | 1,080   | 2,800   | 623    | 170    | 79    | 48    | 38    | 42    |
| 21    | 38    | 1,480  | 265     | 355     | 849     | 2,740   | 593    | 170    | 80    | 46    | 38    | 38    |
| 22    | 37    | 1,080  | 260     | 366     | 1,160   | 2,330   | 548    | 167    | 76    | 47    | 37    | 36    |
| 23    | 36    | 942    | 237     | 280     | 1,530   | 2,050   | 513    | 160    | 78    | 47    | 37    | 35    |
| 24    | 37    | 3,180  | 2,880   | 206     | 1,860   | 1,800   | 485    | 160    | 77    | 45    | 37    | 34    |
| 25    | 36    | 4,700  | 2,270   | 170     | 2,000   | 1,620   | 459    | 160    | 73    | 46    | 37    | 34    |
| 26    | 37    | 3,440  | 1,670   | 149     | 2,200   | 1,420   | 433    | 153    | 71    | 43    | 37    | 34    |
| 27    | 36    | 2,960  | 1,780   | 126     | 1,780   | 1,290   | 414    | 149    | 69    | 43    | 37    | 23    |
| 28    | 36    | 2,050  | 10,000  | 111     | 1,460   | 1,150   | 378    | 149    | 68    | 43    | 37    | 20    |
| 29    | 36    | 1,520  | 8,820   | 4,930   | -----   | 1,050   | 360    | 146    | 66    | 43    | 36    | 30    |
| 30    | 36    | 1,230  | 5,960   | 4,460   | -----   | 977     | 342    | 149    | 65    | 43    | 37    | 30    |
| 31    | 36    | -----  | 4,800   | 2,680   | -----   | 908     | -----  | 149    | ----- | 43    | 39    | ----- |
| TOTAL | 1,227 | 47,479 | 50,961  | 151,659 | 54,306  | 97,545  | 21,741 | 6,658  | 2,938 | 1,623 | 1,215 | 1,037 |
| MEAN  | 39.6  | 1,583  | 1,644   | 4,892   | 1,940   | 3,147   | 725    | 215    | 97.9  | 52.4  | 39.2  | 34.6  |
| AC-FT | 2,430 | 94,170 | 101,100 | 300,800 | 107,700 | 193,500 | 43,120 | 13,210 | 5,830 | 3,220 | 2,410 | 2,060 |

CALENDAR YEAR 1965 MAX 10,200 MIN 30 MEAN 958 AC-FT 693,600  
 WATER YEAR 1965-66 MAX 46,800 MIN 30 MEAN 1,201 AC-FT 869,600

Peak discharge (base, 15,000 cfs, revised).--Jan. 4 (0600) 56,900 cfs (24.48 ft); Mar. 9 (1145) 16,600 cfs (14.56 ft).

11-4700. Lake Pillsbury near Potter Valley, Calif.

Location.--Lat 39°24'30", long 122°57'30", on line between secs.14 and 23, T.18 N., R.10 W., at Scott Dam near right bank of Eel River, 0.3 mile downstream from Rice Fork, and 10.2 miles northeast of town of Potter Valley.

Drainage area.--289 sq mi.

Records available.--October 1922 to September 1928 (daily gage heights only), October 1928 to September 1966. Month-end contents only for some periods, published in WSP 1315-B. Prior to October 1953, published as "at Hullville."

Gage.--Water-stage recorder and wire-weight gage. Datum of gage is 81.7 ft below mean sea level (river-profile survey). Prior to Jan. 26, 1950, staff gage at same site and datum.

Extremes.--Maximum contents during year, 86,700 acre-ft May 11 (gage height, 1,909.95 ft); minimum, 17,800 acre-ft Nov. 13 (gage height, 1,863.40 ft).  
1922-66: Maximum contents, 95,600 acre-ft May 13, 16, 1925 (gage height, 1,910.8 ft); maximum gage height, 1,911.84 ft Dec. 22, 1964, from floodmarks; minimum contents, 10 acre-ft Dec. 9, 10, 1931 (gage height, 1,822.5 ft).

Remarks.--Reservoir is formed by concrete overflow type dam; storage began in December 1921. Usable capacity, 86,400 acre-ft between gage heights 1,822.4 (sill of outlet gate) and 1,910.0 ft (top of spillway gates); dead storage, 397 acre-ft; spillway at gage height 1,900.0 ft. Water is released down Eel River to Van Arsdale Reservoir, from which it is diverted through tunnel to Potter Valley powerhouse; part is then used for irrigation and remainder flows into East Fork Russian River. Records given herein represent total contents. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Cooperation.--Record of contents furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Contents, in acre-feet, at 2400 hours, water year October 1965 to September 1966

| Day | Oct.     | Nov.     | Dec.     | Jan.     | Feb.     | Mar.     | Apr.     | May      | June     | July     | Aug.     | Sept.    |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1   | 35,500   | 19,000   | 36,500   | 49,000   | 67,500   | 67,000   | 77,000   | 85,800   | 86,200   | 81,300   | 69,000   | 55,400   |
| 2   | 34,600   | 19,000   | 36,700   | 49,700   | 67,300   | 66,900   | 78,300   | 85,900   | 86,100   | 81,000   | 68,500   | 55,000   |
| 3   | 34,500   | 19,000   | 37,000   | 54,300   | 68,100   | 66,900   | 79,400   | 86,000   | 86,100   | 80,800   | 68,100   | 54,600   |
| 4   | 33,900   | 19,000   | 37,200   | 77,200   | 69,300   | 66,900   | 80,500   | 86,200   | 86,000   | 80,600   | 67,700   | 54,200   |
| 5   | 33,100   | 18,900   | 37,600   | 74,200   | 68,800   | 67,000   | 81,500   | 86,400   | 86,000   | 80,400   | 67,200   | 53,700   |
| 6   | 32,700   | 18,600   | 37,800   | 71,600   | 68,300   | 67,100   | 82,400   | 86,400   | 85,900   | 80,000   | 66,800   | 53,300   |
| 7   | 32,100   | 18,400   | 37,900   | 69,900   | 67,900   | 67,100   | 83,000   | 86,500   | 85,800   | 79,600   | 66,300   | 52,800   |
| 8   | 31,500   | 18,400   | 38,000   | 69,100   | 67,600   | 67,400   | 83,100   | 86,600   | 85,700   | 79,200   | 65,900   | 52,300   |
| 9   | 31,000   | 18,300   | 38,100   | 68,500   | 67,400   | 68,900   | 83,500   | 86,600   | 85,600   | 78,800   | 65,500   | 51,700   |
| 10  | 30,300   | 18,100   | 38,200   | 68,000   | 67,300   | 68,700   | 84,500   | 86,600   | 85,500   | 78,400   | 65,000   | 51,200   |
| 11  | 29,600   | 18,000   | 38,200   | 67,700   | 67,100   | 68,200   | 83,700   | 86,600   | 85,400   | 78,000   | 64,600   | 50,600   |
| 12  | 29,000   | 17,800   | 38,200   | 67,500   | 67,100   | 68,000   | 83,100   | 86,600   | 85,200   | 77,600   | 64,100   | 50,000   |
| 13  | 28,400   | 18,900   | 38,200   | 67,400   | 67,000   | 67,900   | 82,500   | 86,600   | 85,100   | 77,200   | 63,700   | 49,300   |
| 14  | 27,800   | 21,300   | 38,100   | 67,300   | 66,900   | 67,900   | 82,500   | 86,400   | 85,000   | 76,800   | 63,300   | 48,500   |
| 15  | 27,100   | 22,300   | 38,000   | 67,200   | 66,900   | 67,800   | 82,600   | 86,300   | 84,800   | 76,300   | 62,900   | 48,000   |
| 16  | 26,600   | 23,600   | 37,900   | 67,200   | 66,900   | 67,700   | 82,800   | 86,100   | 84,600   | 75,900   | 62,400   | 47,500   |
| 17  | 26,100   | 26,500   | 37,700   | 67,100   | 66,800   | 67,500   | 83,000   | 86,100   | 84,400   | 75,400   | 62,000   | 46,900   |
| 18  | 26,000   | 28,800   | 37,500   | 67,000   | 66,800   | 67,400   | 83,000   | 86,100   | 84,200   | 75,000   | 61,500   | 46,300   |
| 19  | 26,000   | 30,000   | 37,200   | 67,000   | 67,100   | 67,300   | 83,100   | 86,200   | 84,000   | 74,500   | 61,000   | 45,700   |
| 20  | 26,000   | 30,600   | 36,900   | 66,900   | 67,100   | 67,200   | 83,400   | 86,300   | 83,800   | 74,100   | 60,600   | 45,200   |
| 21  | 25,300   | 30,700   | 36,500   | 66,800   | 67,000   | 67,200   | 83,700   | 86,400   | 83,600   | 73,700   | 60,100   | 44,600   |
| 22  | 24,500   | 30,600   | 36,200   | 66,800   | 67,000   | 67,100   | 83,900   | 86,500   | 83,300   | 73,200   | 59,700   | 43,900   |
| 23  | 24,000   | 30,700   | 35,800   | 66,700   | 67,100   | 67,100   | 84,200   | 86,500   | 83,000   | 72,800   | 59,300   | 43,300   |
| 24  | 22,800   | 33,200   | 36,400   | 66,700   | 67,100   | 67,100   | 84,500   | 86,500   | 82,800   | 72,300   | 58,900   | 42,700   |
| 25  | 22,300   | 34,400   | 38,500   | 66,600   | 67,200   | 67,700   | 84,800   | 86,500   | 82,600   | 72,000   | 58,500   | 42,000   |
| 26  | 21,500   | 35,300   | 40,400   | 66,600   | 67,100   | 68,800   | 85,200   | 86,500   | 82,400   | 71,700   | 58,100   | 41,400   |
| 27  | 20,800   | 35,700   | 41,400   | 66,600   | 67,100   | 70,100   | 85,400   | 86,500   | 82,200   | 71,300   | 57,600   | 40,800   |
| 28  | 20,300   | 36,100   | 42,600   | 66,600   | 67,000   | 71,500   | 85,500   | 86,500   | 81,900   | 70,800   | 57,200   | 40,200   |
| 29  | 19,600   | 36,300   | 44,500   | 67,700   | -----    | 72,800   | 85,600   | 86,400   | 81,700   | 70,300   | 56,800   | 39,700   |
| 30  | 19,200   | 36,300   | 46,400   | 67,600   | -----    | 74,200   | 85,700   | 86,400   | 81,500   | 69,900   | 56,300   | 39,100   |
| 31  | 18,700   | -----    | 48,200   | 67,300   | -----    | 75,600   | -----    | 86,300   | -----    | 69,400   | 55,800   | -----    |
| (+) | 1,864.60 | 1,881.40 | 1,889.87 | 1,900.82 | 1,900.65 | 1,904.87 | 1,909.54 | 1,909.80 | 1,907.64 | 1,901.87 | 1,894.53 | 1,883.68 |
| (+) | -17.200  | +17.600  | +11.900  | +19.100  | -300     | +8.600   | +10.100  | +600     | -4.800   | -12.100  | -13.600  | -16.700  |

Calendar year 1965..... ±- 20,300

Water year 1965-66..... ±3,200

+ Elevation, in feet, at end of month.

+ Change in contents, in acre-feet.



11-4705. Eel River below Scott Dam, near Potter Valley, Calif.

Location.--Lat 39°24'30", long 122°58'15", in SE¼ sec.15, T.18 N., R.10 W., on left bank 0.4 mile upstream from Soda Creek, 0.7 mile downstream from Scott Dam, and 9.7 miles northeast of town of Potter Valley.

Drainage area.--290 sq mi.

Records available.--October 1922 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Hullville, and October 1929 to September 1953 as "at Hullville."

Gage.--Water-stage recorder. Altitude of gage is 1,740 ft (from topographic map). Prior to Dec. 15, 1930, at datum 3.00 ft higher.

Average discharge.--44 years, 523 cfs (378,600 acre-ft per year).

Extremes.--Maximum discharge during year, 18,400 cfs Jan. 5 (gage height, 16.36 ft); minimum daily, 15 cfs Nov. 3, 4.

1922-66: Maximum discharge, 56,300 cfs Dec. 22, 1964 (gage height, 24.24 ft, from floodmarks), from rating curve extended above 9,400 cfs on basis of computed flow over Scott Dam at gage heights 18.50 and 21.85 ft; minimum daily, 0.1 cfs Sept. 8, 1924.

Remarks.--Records good. Flow regulated by Lake Pillsbury (see sta 11-4700). No diversion above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Cooperation.--Gage-height record and 10 discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

| Discharge, in cubic feet per second, water year October 1965 to September 1966 |            |        |          |               |        |        |        |        |       |        |        |        |
|--|------------|--------|----------|---------------|--------|--------|--------|--------|-------|--------|--------|--------|
| Day  | Oct.       | Nov.   | Dec.     | Jan.          | Feb.   | Mar.   | Apr.   | May    | June  | July   | Aug.   | Sept.  |
| 1  | 312        | 19     | 156      | 191           | 935    | 695    | 227    | 281    | 123   | 136    | 233    | 226    |
| 2  | 294        | 16     | 122      | 285           | 917    | 650    | 220    | 281    | 123   | 136    | 231    | 227    |
| 3  | 309        | 15     | 123      | 193           | 995    | 605    | 224    | 281    | 125   | 134    | 226    | 231    |
| 4  | 332        | 15     | 129      | 5,140         | 2,660  | 575    | 227    | 277    | 126   | 134    | 220    | 231    |
| 5  | 323        | 93     | 133      | 15,000        | 2,670  | 635    | 236    | 277    | 127   | 133    | 220    | 231    |
| 6  | 323        | 173    | 133      | 9,910         | 2,070  | 695    | 245    | 275    | 129   | 194    | 218    | 229    |
| 7  | 339        | 168    | 138      | 5,320         | 1,580  | 755    | 402    | 275    | 129   | 229    | 217    | 229    |
| 8  | 334        | 126    | 146      | 3,270         | 1,270  | 826    | 624    | 275    | 130   | 229    | 220    | 262    |
| 9  | 332        | 132    | 149      | 2,290         | 1,060  | 1,550  | 631    | 275    | 130   | 229    | 222    | 312    |
| 10   | 334        | 169    | 149      | 1,720         | 940    | 2,510  | 782    | 275    | 136   | 229    | 220    | 318    |
| 11   | 337        | 169    | 150      | 1,330         | 840    | 1,960  | 2,060  | 275    | 140   | 229    | 220    | 318    |
| 12   | 337        | 173    | 150      | 1,100         | 770    | 1,530  | 1,980  | 273    | 140   | 229    | 218    | 318    |
| 13   | 332        | 147    | 150      | 935           | 695    | 1,450  | 1,380  | 273    | 140   | 227    | 218    | 325    |
| 14   | 334        | 118    | 150      | 836           | 665    | 1,390  | 936    | 281    | 140   | 226    | 218    | 325    |
| 15   | 334        | 111    | 153      | 760           | 620    | 1,290  | 757    | 290    | 152   | 226    | 226    | 323    |
| 16   | 332        | 110    | 156      | 720           | 590    | 1,210  | 696    | 287    | 168   | 224    | 229    | 323    |
| 17   | 223        | 132    | 159      | 666           | 560    | 1,060  | 696    | 230    | 157   | 224    | 229    | 323    |
| 18   | 22         | 115    | 159      | 628           | 560    | 935    | 696    | 148    | 155   | 235    | 229    | 323    |
| 19   | 22         | 86     | 194      | 575           | 665    | 890    | 573    | 122    | 155   | 240    | 229    | 321    |
| 20   | 172        | 140    | 307      | 525           | 740    | 800    | 403    | 122    | 154   | 240    | 229    | 323    |
| 21   | 334        | 195    | 307      | 480           | 695    | 740    | 339    | 122    | 152   | 240    | 229    | 323    |
| 22   | 332        | 264    | 305      | 468           | 665    | 700    | 334    | 122    | 171   | 238    | 227    | 328    |
| 23   | 330        | 296    | 305      | 440           | 725    | 673    | 318    | 122    | 184   | 238    | 224    | 332    |
| 24   | 334        | 158    | 314      | 411           | 770    | 673    | 307    | 122    | 157   | 238    | 226    | 332    |
| 25   | 339        | 88     | 302      | 385           | 784    | 418    | 307    | 122    | 140   | 148    | 226    | 334    |
| 26   | 337        | 174    | 287      | 362           | 784    | 132    | 305    | 122    | 140   | 151    | 226    | 328    |
| 27   | 334        | 219    | 287      | 344           | 740    | 136    | 305    | 123    | 140   | 231    | 226    | 328    |
| 28   | 334        | 222    | 235      | 321           | 710    | 139    | 305    | 123    | 139   | 271    | 226    | 325    |
| 29   | 334        | 247    | 86       | 517           | -----  | 143    | 287    | 125    | 137   | 236    | 226    | 325    |
| 30   | 334        | 249    | 67       | 1,110         | -----  | 144    | 281    | 125    | 137   | 236    | 227    | 323    |
| 31   | 303        | -----  | 67       | 935           | -----  | 201    | -----  | 125    | ----- | 236    | 226    | -----  |
| Total  | 9,322      | 4,339  | 5,668    | 57,167        | 27,675 | 26,110 | 17,083 | 6,426  | 4,276 | 6,546  | 6,961  | 8,996  |
| Mean   | 301        | 145    | 183      | 1,844         | 988    | 842    | 569    | 207    | 143   | 211    | 225    | 300    |
| Ac-ft  | 18,500     | 8,610  | 11,240   | 113,400       | 54,890 | 51,790 | 33,880 | 12,750 | 8,480 | 12,980 | 13,810 | 17,840 |
| Calendar year 1965   | Max 13,700 | Min 15 | Mean 655 | Ac-ft 474,000 |        |        |        |        |       |        |        |        |
| Water year 1965-66   | Max 15,000 | Min 15 | Mean 495 | Ac-ft 358,200 |        |        |        |        |       |        |        |        |

Note.--No gage-height record Feb. 2 to Mar. 9.

## EEL RIVER BASIN

11-4710. Potter Valley powerhouse tailrace near Potter Valley, Calif.

Location.--Lat 39°21'42", long 123°07'38", in SW¼NW¼ sec.6, T.17 N., R.11 W., on right bank 100 ft downstream from powerhouse of Pacific Gas & Electric Co., 1.8 miles southwest of Van Arsdale Dam, and 2.9 miles northwest of town of Potter Valley.

Records available.--December 1909 to September 1966. Prior to October 1922, monthly discharge only, published in WSP 1315-B. Prior to October 1931, published as Snow Mountain Water and Power Co.'s tailrace near Potter Valley.

Gage.--Water-stage recorder and concrete Parshall flume. Altitude of gage is 1,020 ft (from topographic map). No gage prior to Dec. 1, 1922. Dec. 1, 1922, to Sept. 30, 1923, float gage and Oct. 1, 1923, to Apr. 12, 1950, water-stage recorder, at site 50 ft upstream at different datum.

Average discharge.--56 years (1910-66), 197 cfs (142,600 acre-ft per year).

Extremes.--1922-66: Maximum daily discharge, 348 cfs Apr. 24, 1953; no flow at times in several years.

Remarks.--Records excellent. Water is diverted from Eel River above Van Arsdale Dam. After passing through powerhouse, part of it is used for irrigation in Potter Valley and remainder flows into East Fork Russian River. Water for irrigation diverted from tailrace is included in figures of discharge. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Cooperation.--Gage-height record and eight discharge measurements furnished by Pacific Gas and Electric Co. in connection with a Federal Power Commission project.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.    | Nov.     | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May     | June  | July   | Aug.   | Sept.  |
|--------------------|---------|----------|--------|--------|--------|--------|--------|---------|-------|--------|--------|--------|
| 1                  | 320     | 62       | 210    | 306    | 306    | 303    | 312    | 308     | 127   | 129    | 221    | 220    |
| 2                  | 318     | .40      | 164    | 303    | 308    | 303    | 312    | 309     | 126   | 130    | 219    | 220    |
| 3                  | 321     | .40      | 163    | 303    | 308    | 303    | 310    | 310     | 126   | 130    | 219    | 220    |
| 4                  | 322     | .40      | 163    | 221    | 308    | 303    | 310    | 310     | 126   | 130    | 220    | 220    |
| 5                  | 322     | 34       | 163    | 261    | 309    | 303    | 304    | 310     | 126   | 131    | 220    | 220    |
| 6                  | 321     | 167      | 163    | 306    | 308    | 303    | 312    | 310     | 126   | 185    | 220    | 216    |
| 7                  | 322     | 167      | 163    | 303    | 308    | 303    | 310    | 311     | 126   | 215    | 219    | 210    |
| 8                  | 322     | 165      | 162    | 306    | 308    | 303    | 309    | 308     | 126   | 213    | 216    | 242    |
| 9                  | 324     | 120      | 162    | 308    | 308    | 303    | 308    | 308     | 126   | 212    | 211    | 317    |
| 10                 | 324     | 147      | 162    | 306    | 223    | 283    | 308    | 305     | 126   | 216    | 213    | 319    |
| 11                 | 326     | 165      | 161    | 306    | 286    | 294    | 308    | 304     | 127   | 218    | 213    | 321    |
| 12                 | 326     | 165      | 161    | 308    | 310    | 306    | 306    | 302     | 129   | 219    | 218    | 322    |
| 13                 | 326     | 165      | 162    | 315    | 310    | 306    | 293    | 291     | 116   | 258    | 220    | 322    |
| 14                 | 320     | 165      | 162    | 287    | 309    | 306    | 300    | 308     | 125   | 241    | 221    | 317    |
| 15                 | 322     | 164      | 163    | 314    | 309    | 304    | 312    | 304     | 140   | 228    | 219    | 312    |
| 16                 | 326     | 154      | 163    | 314    | 309    | 304    | 312    | 304     | 147   | 227    | 220    | 306    |
| 17                 | 302     | 146      | 163    | 310    | 309    | 304    | 309    | 282     | 144   | 226    | 221    | 325    |
| 18                 | 27      | 163      | 164    | 310    | 309    | 303    | 306    | 199     | 131   | 225    | 220    | 324    |
| 19                 | 20      | 163      | 171    | 310    | 310    | 302    | 306    | 133     | 137   | 225    | 221    | 324    |
| 20                 | 96      | 163      | 320    | 289    | 309    | 289    | 308    | 137     | 141   | 221    | 221    | 323    |
| 21                 | 326     | 215      | 320    | 314    | 309    | 303    | 310    | 135     | 136   | 222    | 224    | 320    |
| 22                 | 323     | 295      | 320    | 306    | 309    | 303    | 309    | 136     | 134   | 220    | 228    | 322    |
| 23                 | 323     | 309      | 320    | 308    | 308    | 304    | 308    | 135     | 128   | 220    | 227    | 323    |
| 24                 | 325     | 327      | 310    | 309    | 303    | 309    | 310    | 135     | 127   | 220    | 229    | 321    |
| 25                 | 326     | 258      | 315    | 308    | 303    | 308    | 310    | 135     | 125   | 215    | 229    | 323    |
| 26                 | 326     | 318      | 315    | 308    | 303    | 248    | 310    | 129     | 124   | 125    | 225    | 323    |
| 27                 | 326     | 330      | 315    | 308    | 303    | 243    | 309    | 127     | 119   | 206    | 221    | 323    |
| 28                 | 325     | 328      | 315    | 308    | 303    | 240    | 310    | 131     | 117   | 254    | 220    | 313    |
| 29                 | 323     | 328      | 310    | 306    | -----  | 240    | 322    | 131     | 119   | 224    | 220    | 312    |
| 30                 | 323     | 328      | 308    | 306    | -----  | 237    | 300    | 131     | 126   | 222    | 220    | 314    |
| 31                 | 323     | -----    | 308    | 306    | -----  | 262    | -----  | 135     | ----- | 223    | 219    | -----  |
| Total              | 9,071.6 | 5,512.20 | 6,921  | 9,373  | 8,505  | 9,025  | 9,253  | 7,113   | 3,853 | 6,330  | 6,834  | 8,794  |
| Mean               | 293     | 184      | 223    | 302    | 304    | 291    | 308    | 229     | 128   | 204    | 220    | 293    |
| Ac-ft              | 17,990  | 10,930   | 13,730 | 18,590 | 16,870 | 17,900 | 18,350 | 14,110  | 7,640 | 12,560 | 13,560 | 17,430 |
| Calendar year 1965 | Max     | 331      | Min    | 0.4    | Mean   | 249    | Ac-ft  | 180,500 |       |        |        |        |
| Water year 1965-66 | Max     | 330      | Min    | 0.4    | Mean   | 248    | Ac-ft  | 179,700 |       |        |        |        |

11-4715. Eel River at Van Arsdale Dam, near Potter Valley, Calif.

Location.--Lat 39°23'20", long 123°06'55", in NE¼ sec.30, T.18 N., R.11 W., on left bank 1,000 ft downstream from Van Arsdale Dam and 4.6 miles north of town of Potter Valley.

Drainage area.--349 sq mi.

Records available.--November 1909 to September 1922 (combined monthly discharge only, of Eel River at this station and Snow Mountain Water & Power Co.'s tailrace near Potter Valley), October 1922 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1929, published as South Eel River at Van Arsdale Dam, near Potter Valley.

Gage.--Digital water-stage recorder. Altitude of gage is 1,400 ft (from topographic map). Nov. 18, 1909, to Mar. 3, 1927, recorder in reservoir 800 ft upstream from Van Arsdale Dam at different datum. Oct. 1, 1927, to Feb. 28, 1937, staff gage at present site and datum. Mar. 1, 1937 to July 28, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--57 years (1909-66), 617 cfs (446,700 acre-ft per year), combined flow of Eel River at Van Arsdale Dam and Potter Valley powerhouse tailrace.

Extremes.--Maximum discharge during year, 20,500 cfs Jan. 5 (gage height, 20.72 ft); no flow Oct. 13, 14, Nov. 22, 26, Dec. 8, 9, 18, 19.

1909-66: Maximum discharge, 64,100 cfs Dec. 22, 1964 (gage height, 33.9 ft, from floodmarks); no flow Nov. 1, 1945, Sept. 13, 14, 1953, Oct. 13, 14, Nov. 22, 26, Dec. 8, 9, 18, 19, 1965.

Remarks.--Records good. Flow regulated by Lake Pillsbury (see sta 11-4700). Water is diverted from Van Arsdale Reservoir through tunnel to Potter Valley powerhouse (see sta 11-4710), after which part is used for irrigation and remainder flows into East Fork Russian River. Records given herein show only flow passing dam down Eel River.

Cooperation.--Gage-height record and 12 discharge measurements furnished by Pacific Gas & Electric Co. in connection with a Federal Power Commission project.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1965, superseding figures published in Basic Data Report, are given herewith:

| Date    | Discharge | Date      | Discharge | Date      | Discharge | Date      | Discharge |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965    |           | 1965-Con. |           | 1965-Con. |           | 1965-Con. |           |
| Apr. 10 | 100       | Apr. 21   | 2,630     | May 1     | 526       | May 12    | 132       |
| 11      | 525       | 22        | 2,500     | 2         | 526       | 13        | 160       |
| 12      | 350       | 23        | 1,500     | 3         | 436       | 14        | 192       |
| 13      | 225       | 24        | 900       | 4         | 355       | 15        | 192       |
| 14      | 250       | 25        | 1,250     | 5         | 275       | 16        | 92        |
| 15      | 900       | 26        | 1,300     | 6         | 192       | 17        | 60        |
| 16      | 3,200     | 27        | 1,000     | 7         | 192       | 18        | 41        |
| 17      | 2,500     | 28        | 845       | 8         | 192       | 19        | 29        |
| 18      | 4,150     | 29        | 655       | 9         | 192       |           |           |
| 19      | 3,280     | 30        | 560       | 10        | 185       |           |           |
| 20      | 2,720     |           |           | 11        | 150       |           |           |

| Month                   | Cfs-days | Maximum | Minimum | Mean  | Acre-feet |
|-------------------------|----------|---------|---------|-------|-----------|
| April 1965.....         | 31,358.0 | 4,150   | 2.0     | 1,045 | 62,200    |
| May.....                | 4,149.0  | 526     | 2.5     | 134   | 8,230     |
| Water year 1964-65..... | -        | 49,500  | 0.3     | 939   | 680,100   |

## EEL RIVER BASIN

11-4715. Eel River at Van Arsdale Dam, near Potter Valley, Calif.--Continued.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY                | OCT.   | NOV.     | DEC.     | JAN.    | FEB.   | MAR.     | APR.     | MAY     | JUNE  | JULY | AUG. | SEPT. |
|--------------------|--------|----------|----------|---------|--------|----------|----------|---------|-------|------|------|-------|
| 1                  | 4.0    | 44       | 43       | 122     | 864    | 452      | 12       | 20      | 1.4   | 2.6  | 2.1  | 1.7   |
| 2                  | 4.0    | 97       | 8.3      | 402     | 853    | 427      | 3.1      | 17      | 1.6   | 1.9  | 2.2  | 1.6   |
| 3                  | 1.6    | 93       | .80      | 1,310   | 804    | 370      | 2.7      | 14      | 1.6   | 1.4  | 2.0  | 1.6   |
| 4                  | 23     | 109      | .40      | 8,140   | 2,420  | 325      | 2.2      | 10      | 1.6   | 1.2  | 2.0  | 1.6   |
| 5                  | 22     | 77       | .30      | 16,300  | 2,580  | 400      | 2.2      | 6.0     | 1.6   | 1.2  | 2.0  | 1.6   |
| 6                  | 2.6    | 11       | .30      | 9,790   | 2,040  | 452      | 3.5      | 4.4     | 1.6   | 1.2  | 1.8  | 1.6   |
| 7                  | 1.7    | 40       | .10      | 5,030   | 1,520  | 531      | 109      | 3.4     | 1.6   | 1.3  | 1.8  | 1.6   |
| 8                  | 3.4    | 37       | 0        | 3,040   | 1,190  | 608      | 421      | 2.5     | 1.7   | 1.2  | 1.7  | 1.6   |
| 9                  | 3.2    | 6.0      | 0        | 2,170   | 946    | 1,440    | 424      | 2.1     | 2.1   | 1.1  | 1.7  | 1.6   |
| 10                 | 2.6    | 8.7      | .10      | 1,620   | 809    | 2,470    | 628      | 2.2     | 2.1   | 1.2  | 1.7  | 1.6   |
| 11                 | 2.6    | 8.2      | .30      | 1,260   | 659    | 1,920    | 1,830    | 2.2     | 2.1   | 1.9  | 1.8  | 1.6   |
| 12                 | .80    | 53       | 3.2      | 993     | 544    | 1,500    | 1,890    | 2.0     | 2.4   | 2.0  | 1.8  | 1.5   |
| 13                 | 0      | 209      | 3.3      | 802     | 454    | 1,390    | 1,330    | 2.0     | 2.7   | 1.9  | 1.8  | 1.4   |
| 14                 | 0      | 266      | .80      | 699     | 404    | 1,310    | 852      | 1.7     | 2.9   | 1.6  | 1.8  | 1.4   |
| 15                 | .40    | 223      | .60      | 585     | 355    | 1,220    | 632      | 1.7     | 2.1   | 1.4  | 1.8  | 1.4   |
| 16                 | 1.9    | .40      | .40      | 531     | 310    | 1,170    | 540      | 2.1     | 1.8   | 1.4  | 1.7  | 1.4   |
| 17                 | 4.8    | 78       | .40      | 467     | 282    | 991      | 532      | 2.2     | 2.2   | 1.4  | 1.6  | 1.5   |
| 18                 | 1.9    | 694      | 0        | 423     | 268    | 858      | 523      | 1.9     | 5.5   | 1.4  | 1.7  | 1.5   |
| 19                 | 73     | 241      | 0        | 373     | 380    | 835      | 436      | 3.6     | 2.8   | 1.4  | 1.7  | 1.4   |
| 20                 | 351    | 106      | 1.9      | 334     | 460    | 730      | 253      | 1.8     | 2.9   | 1.4  | 1.8  | 1.4   |
| 21                 | 41     | 15       | 12       | 262     | 404    | 649      | 145      | 1.9     | 2.7   | 1.4  | 1.8  | 1.4   |
| 22                 | 11     | 0        | 10       | 245     | 383    | 595      | 135      | 1.8     | 2.7   | 1.4  | 1.8  | 1.3   |
| 23                 | 9.9    | 8.1      | 6.9      | 223     | 451    | 547      | 113      | 1.9     | 3.5   | 1.4  | 1.8  | 1.3   |
| 24                 | 7.3    | 612      | 550      | 180     | 504    | 523      | 87       | 1.7     | 4.1   | 1.5  | 1.8  | 1.3   |
| 25                 | 7.8    | 12       | 498      | 148     | 533    | 377      | 87       | 1.5     | 3.8   | 1.6  | 1.7  | 1.3   |
| 26                 | 8.3    | 0        | 235      | 123     | 546    | 2.7      | 80       | 1.4     | 3.7   | 1.4  | 1.7  | 1.4   |
| 27                 | 8.6    | 128      | 167      | 95      | 508    | 3.4      | 69       | 1.9     | 3.7   | 1.4  | 1.6  | 1.4   |
| 28                 | 7.0    | 21       | 944      | 68      | 471    | 3.4      | 67       | 1.9     | 3.7   | 1.4  | 1.6  | 1.4   |
| 29                 | 7.8    | 2.8      | 429      | 282     | -----  | 2.7      | 45       | 1.6     | 3.5   | 2.0  | 1.6  | 1.3   |
| 30                 | 8.3    | 23       | 216      | 1,060   | -----  | 2.5      | 24       | 1.6     | 2.9   | 2.1  | 1.7  | 1.4   |
| 31                 | 8.2    | -----    | 331      | 875     | -----  | 2.7      | -----    | 1.5     | ----- | 2.2  | 1.7  | ----- |
| TOTAL              | 629.70 | 3,223.20 | 3,463.10 | 57,952  | 21,942 | 22,107.4 | 11,277.7 | 121.5   | 78.6  | 47.9 | 55.3 | 44.1  |
| MEAN               | 20.3   | 107      | 112      | 1,869   | 784    | 713      | 376      | 3.92    | 2.62  | 1.55 | 1.78 | 1.47  |
| AC-FT              | 1,250  | 6,390    | 6,870    | 114,900 | 43,520 | 43,850   | 22,370   | 241     | 156   | 95   | 110  | 87    |
| CALENDAR YEAR 1965 | MAX    | 17,300   | MIN      | 0       | MEAN   | 509      | AC-FT    | 369,600 |       |      |      |       |
| WATER YEAR 1965-66 | MAX    | 16,300   | MIN      | 0       | MEAN   | 331      | AC-FT    | 239,800 |       |      |      |       |

11-4718. Tomki Creek near Willits, Calif.

Location.--Lat 39°25'10", long 123°13'40", in NE¼ sec.18, T.18 N., R.12 W., on left bank 500 ft upstream from Halfmile Creek, 5.8 miles upstream from mouth, and 6.8 miles east of Willits.

Drainage area.--43.4 sq mi.

Records available.--July 1963 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,591.91 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 23, 1965, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 7,300 cfs Jan. 4 (gage height, 11.41 ft); no flow on many days.

1963-66: Maximum discharge, 16,500 cfs Dec. 22, 1964 (gage height, 15.92 ft), from rating curve extended above 4,000 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year.

Remarks.--Records fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.    | JAN.   | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|----------|---------|--------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0.20     | 25      | 278    | 277   | 139   | 39    | 18    | 2.5   | 0.10 |      | 0     |
| 2     | 0    | .20      | 20      | 248    | 198   | 126   | 38    | 17    | 2.4   | .10  |      | 0     |
| 3     | 0    | .20      | 17      | 815    | 274   | 108   | 35    | 16    | 2.4   | .10  |      | 0     |
| 4     | 0    | .20      | 16      | 4,590  | 670   | 100   | 33    | 15    | 2.0   | .10  |      | 0     |
| 5     | 0    | .20      | 14      | 2,670  | 405   | 158   | 31    | 14    | 1.7   | .10  |      | 0     |
| 6     | .10  | .20      | 12      | 1,070  | 359   | 135   | 30    | 13    | 1.7   | .20  |      | 0     |
| 7     | 0    | 1.7      | 11      | 450    | 266   | 141   | 28    | 13    | 1.7   | .30  |      | 0     |
| 8     | 0    | .90      | 11      | 323    | 202   | 223   | 27    | 12    | 1.5   | .30  |      | 0     |
| 9     | 0    | .40      | 10      | 224    | 147   | 515   | 31    | 11    | 1.5   | .30  |      | 0     |
| 10    | 0    | .30      | 10      | 166    | 122   | 481   | 54    | 10    | 1.2   | .30  |      | 0     |
| 11    | 0    | .30      | 10      | 120    | 97    | 266   | 195   | 10    | 1.4   | .30  |      | 0     |
| 12    | 0    | 3.1      | 13      | 93     | 77    | 189   | 236   | 9.0   | 1.2   | .30  |      | 0     |
| 13    | 0    | 49       | 10      | 77     | 68    | 193   | 112   | 8.6   | 1.1   | .20  |      | 0     |
| 14    | .10  | 91       | 6.0     | 69     | 56    | 151   | 79    | 8.2   | 1.0   | .20  |      | 0     |
| 15    | .10  | 91       | 5.2     | 56     | 53    | 152   | 60    | 7.7   | .80   | .20  |      | 0     |
| 16    | .10  | 18       | 5.2     | 44     | 46    | 162   | 53    | 7.3   | .70   | .20  |      | 0     |
| 17    | .10  | 93       | 4.8     | 38     | 44    | 132   | 48    | 6.3   | .90   | .20  |      | 0     |
| 18    | .10  | 289      | 4.4     | 33     | 42    | 114   | 44    | 6.0   | .70   | .20  |      | 1.6   |
| 19    | .10  | 103      | 4.1     | 30     | 158   | 137   | 39    | 5.5   | .50   | .20  |      | .20   |
| 20    | .10  | 39       | 3.9     | 30     | 110   | 106   | 37    | 5.2   | .50   | .20  |      | 0     |
| 21    | .10  | 20       | 3.9     | 31     | 87    | 100   | 35    | 4.8   | .50   | .20  |      | 0     |
| 22    | .10  | 12       | 3.9     | 33     | 100   | 88    | 33    | 4.8   | .50   | .20  |      | 0     |
| 23    | .10  | 12       | 3.5     | 31     | 108   | 79    | 30    | 4.4   | .40   | .20  |      | 0     |
| 24    | .10  | 336      | 106     | 28     | 185   | 72    | 28    | 3.9   | .50   | .20  |      | 0     |
| 25    | .10  | 275      | 130     | 27     | 210   | 68    | 27    | 3.7   | .50   | .20  |      | 0     |
| 26    | .10  | 173      | 72      | 26     | 207   | 61    | 25    | 3.5   | .60   | .10  |      | 0     |
| 27    | .10  | 146      | 54      | 24     | 180   | 56    | 23    | 3.5   | .30   | .10  |      | 0     |
| 28    | .10  | 74       | 590     | 22     | 156   | 52    | 22    | 3.3   | .10   | .10  |      | 0     |
| 29    | .10  | 47       | 463     | 272    | ----- | 49    | 21    | 3.3   | .10   | .10  |      | 0     |
| 30    | .10  | 32       | 403     | 377    | ----- | 44    | 19    | 3.3   | 0     | .10  |      | 0     |
| 31    | .10  | -----    | 455     | 211    | ----- | 42    | ----- | 3.1   | ----- | .10  |      | ----- |
| TOTAL | 1.90 | 1,907.90 | 2,496.9 | 12,506 | 4,905 | 4,439 | 1,512 | 254.4 | 30.90 | 5.70 | 0    | 1.80  |
| MEAN  | .06  | 63.6     | 80.5    | 403    | 175   | 143   | 50.4  | 8.21  | 1.03  | .18  | 0    | .06   |
| AC-FT | 3.8  | 3,780    | 4,950   | 24,810 | 9,730 | 8,800 | 3,000 | 505   | 61    | 11   | 0    | 3.6   |

|                    |     |       |     |   |      |      |       |        |
|--------------------|-----|-------|-----|---|------|------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 3,310 | MIN | 0 | MEAN | 68.2 | AC-FT | 49,340 |
| WATER YEAR 1965-66 | MAX | 4,590 | MIN | 0 | MEAN | 76.9 | AC-FT | 55,660 |

Peak discharge (base, 4,000 cfs).--Jan. 4 (1745) 7,300 cfs (11.41 ft).

## EEL RIVER BASIN

11-4722. Outlet Creek near Longvale, Calif.

Location.--Lat 39°37'05", long 123°21'20", in NE¼ sec.1, T.20 N., R.14 W., on right bank 0.2 mile downstream from Bloody Run Creek, 0.9 mile upstream from mouth, and 8.2 miles downstream from Longvale.

Drainage area.--161 sq mi.

Records available.--October 1956 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,018.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to May 25, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--10 years, 429 cfs (310,600 acre-ft per year).

Extremes.--Maximum discharge during year, 28,900 cfs Jan. 4 (gage height, 18.99 ft), from rating curve extended above 9,900 cfs as explained below; minimum daily, 0.20 cfs Aug. 20-26.

1956-66: Maximum discharge, 77,900 cfs Dec. 22, 1964 (gage height, 30.6 ft, from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement of maximum flow; no flow Aug. 15-17, 1959.

Remarks.--Records good. No regulation or diversion above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1965 Report: 1958(M), 1960, 1963, 1964(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.   | JAN.    | FEB.   | MAR.   | APR.   | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|-------|---------|--------|---------|--------|--------|--------|-------|-------|------|-------|-------|
| 1     | 1.0   | 1.4     | 128    | 1,150   | 1,190  | 450    | 134    | 54    | 19    | 5.3  | 1.4   | 1.4   |
| 2     | .60   | 1.4     | 95     | 1,040   | 801    | 435    | 124    | 51    | 18    | 5.0  | 1.2   | 1.4   |
| 3     | .50   | 1.4     | 79     | 4,610   | 815    | 385    | 115    | 49    | 18    | 5.0  | 1.0   | 1.2   |
| 4     | .60   | 3.8     | 68     | 21,100  | 2,390  | 338    | 106    | 46    | 18    | 4.7  | 1.0   | .90   |
| 5     | 2.0   | 4.3     | 60     | 15,600  | 1,760  | 510    | 97     | 44    | 16    | 4.7  | .80   | .80   |
| 6     | 3.4   | 3.4     | 53     | 7,380   | 1,540  | 598    | 92     | 43    | 17    | 3.4  | .80   | .50   |
| 7     | 2.6   | 14      | 47     | 3,080   | 1,060  | 586    | 86     | 42    | 17    | 3.1  | .80   | .50   |
| 8     | 1.5   | 33      | 42     | 1,940   | 710    | 922    | 82     | 38    | 17    | 3.1  | .60   | .50   |
| 9     | 1.2   | 28      | 41     | 1,040   | 544    | 1,790  | 86     | 39    | 16    | 3.4  | .60   | .60   |
| 10    | 1.2   | 20      | 38     | 703     | 455    | 1,880  | 226    | 39    | 16    | 3.7  | .60   | .60   |
| 11    | 1.4   | 17      | 37     | 562     | 375    | 1,010  | 930    | 38    | 15    | 3.7  | .50   | .60   |
| 12    | 1.1   | 28      | 40     | 475     | 334    | 682    | 1,080  | 37    | 13    | 3.4  | .50   | .60   |
| 13    | 1.0   | 268     | 40     | 410     | 298    | 874    | 550    | 34    | 13    | 3.4  | .50   | .80   |
| 14    | 1.8   | 442     | 36     | 358     | 270    | 640    | 358    | 32    | 12    | 3.4  | .50   | .90   |
| 15    | 3.5   | 282     | 31     | 334     | 243    | 696    | 278    | 31    | 11    | 3.4  | .50   | .90   |
| 16    | 3.5   | 136     | 29     | 302     | 222    | 822    | 232    | 30    | 10    | 3.4  | .40   | .90   |
| 17    | 1.8   | 191     | 27     | 266     | 204    | 616    | 198    | 30    | 9.3   | 3.4  | .40   | .60   |
| 18    | 1.6   | 1,070   | 26     | 254     | 194    | 510    | 171    | 28    | 8.5   | 3.1  | .40   | 1.6   |
| 19    | 1.9   | 764     | 25     | 232     | 634    | 675    | 147    | 26    | 8.1   | 3.1  | .50   | 1.8   |
| 20    | 2.1   | 264     | 24     | 215     | 510    | 495    | 130    | 25    | 7.7   | 2.7  | .20   | 1.6   |
| 21    | 1.7   | 150     | 24     | 198     | 342    | 465    | 117    | 22    | 7.3   | 2.7  | .20   | 1.6   |
| 22    | 1.5   | 99      | 25     | 222     | 385    | 400    | 108    | 23    | 7.3   | 2.4  | .20   | 1.5   |
| 23    | 1.5   | 80      | 24     | 243     | 495    | 350    | 97     | 21    | 6.9   | 2.0  | .20   | 2.4   |
| 24    | 1.2   | 1,360   | 797    | 198     | 836    | 310    | 90     | 25    | 7.3   | 2.0  | .20   | 2.4   |
| 25    | 1.4   | 1,480   | 1,020  | 180     | 922    | 278    | 80     | 20    | 6.9   | 1.8  | .20   | 2.1   |
| 26    | 1.4   | 1,060   | 573    | 171     | 954    | 243    | 76     | 15    | 6.9   | 1.8  | .20   | 2.0   |
| 27    | 1.2   | 726     | 332    | 162     | 647    | 222    | 69     | 18    | 6.5   | 1.6  | .30   | 1.8   |
| 28    | 1.2   | 364     | 2,580  | 147     | 510    | 198    | 65     | 18    | 6.1   | 1.5  | .30   | 1.5   |
| 29    | 1.2   | 231     | 2,250  | 954     | -----  | 180    | 62     | 18    | 5.7   | 1.4  | .30   | 1.4   |
| 30    | 1.2   | 171     | 1,700  | 1,610   | -----  | 162    | 58     | 18    | 5.7   | 1.4  | .90   | 1.4   |
| 31    | 1.2   | -----   | 1,700  | 898     | -----  | 147    | -----  | 19    | ----- | 1.4  | 1.4   | ----- |
| TOTAL | 49.00 | 9,293.7 | 11,991 | 66,034  | 19,640 | 17,869 | 6,044  | 973   | 346.2 | 94.4 | 17.40 | 37.20 |
| MEAN  | 1.58  | 310     | 387    | 2,130   | 701    | 576    | 201    | 31.4  | 11.5  | 3.05 | .56   | 1.24  |
| AC-FT | 97    | 18,430  | 23,780 | 131,000 | 38,960 | 35,440 | 11,990 | 1,930 | 687   | 187  | 35    | 74    |

CALENDAR YEAR 1965 MAX 10,900 MIN .50 MEAN 299 AC-FT 216,700  
WATER YEAR 1965-66 MAX 21,100 MIN .20 MEAN 363 AC-FT 262,600

Peak discharge (base, 7,000 cfs, revised).---Jan. 4 (1745) 28,900 cfs (18.99 ft).

11-4729. Black Butte River near Covelo, Calif.

Location.--Lat 39°49'15", long 123°04'50", in SE¼ sec.28, T.23 N., R.11 W., on right bank 10 ft upstream from highway bridge, 0.5 mile upstream from mouth, and 9.5 miles east of Covelo.

Drainage area.--162 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-56 and annual maximum, water years 1954-57, October 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1,456.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Sept. 10, 1953 to Sept. 30, 1957, crest-stage gage only at same site at different datum. Oct. 1, 1958 to Dec. 22, 1964, water-stage recorder at site 0.1 mile upstream at same datum.

Average discharge.--8 years, 267 cfs (193,300 acre-ft per year).

Extremes.--Maximum discharge during year, 7,660 cfs, Jan. 4 (gage height, 16.12 ft, from crest-stage gage); minimum daily, 3.5 cfs Aug. 22-24.

1953-57, 1958-66: Maximum discharge, 29,000 cfs Dec. 22, 1964 (gage height, 26.4 ft, from floodmarks, site then in use), from rating curve extended above 4,200 cfs on basis of slope-area measurement of maximum flow.

1958-66: Minimum discharge, 1.2 cfs Sept. 11, 1959.

Flood of Dec. 11, 1937, reached a stage of 36.2 ft, from floodmarks at crest-stage site (discharge, 26,000 cfs).

Remarks.--Records poor. No regulation or diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June  | July  | Aug.  | Sept. |
|-------|-------|---------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1     | 4.4   | 5.0     | 115    | 250    | 220    | 200    | 715    | 262    | 66    | 23    | 6.4   | 5.4   |
| 2     | 4.1   | 5.4     | 105    | 210    | 193    | 186    | 881    | 244    | 62    | 23    | 6.1   | 5.4   |
| 3     | 4.1   | 5.4     | 120    | 1,110  | 442    | 216    | 675    | 262    | 62    | 23    | 5.7   | 5.4   |
| 4     | 4.1   | 6.4     | 135    | 4,700  | 1,320  | 255    | 725    | 320    | 62    | 21    | 5.7   | 5.4   |
| 5     | 4.7   | 6.4     | 160    | 4,050  | 1,060  | 288    | 627    | 314    | 58    | 21    | 5.4   | 5.4   |
| 6     | 5.4   | 6.4     | 181    | 2,680  | 1,090  | 358    | 627    | 262    | 58    | 20    | 5.7   | 5.0   |
| 7     | 5.8   | 14      | 136    | 2,020  | 958    | 395    | 776    | 233    | 60    | 18    | 5.4   | 4.7   |
| 8     | 5.8   | 55      | 125    | 2,120  | 828    | 454    | 685    | 228    | 60    | 18    | 5.0   | 4.7   |
| 9     | 5.4   | 24      | 125    | 1,910  | 705    | 744    | 818    | 238    | 58    | 18    | 5.7   | 4.5   |
| 10    | 5.4   | 15      | 106    | 1,580  | 636    | 800    | 1,050  | 233    | 55    | 18    | 6.4   | 4.5   |
| 11    | 5.4   | 13      | 84     | 1,270  | 454    | 720    | 1,060  | 228    | 49    | 18    | 5.4   | 5.0   |
| 12    | 5.0   | 24      | 88     | 1,090  | 431    | 650    | 870    | 206    | 47    | 21    | 5.4   | 5.0   |
| 13    | 4.7   | 221     | 81     | 870    | 320    | 740    | 796    | 186    | 44    | 18    | 5.4   | 5.0   |
| 14    | 5.0   | 446     | 62     | 665    | 294    | 700    | 656    | 178    | 43    | 18    | 5.0   | 5.4   |
| 15    | 5.8   | 288     | 52     | 552    | 211    | 650    | 589    | 164    | 40    | 18    | 4.7   | 5.4   |
| 16    | 6.1   | 103     | 49     | 463    | 211    | 620    | 608    | 151    | 51    | 16    | 4.5   | 5.4   |
| 17    | 6.1   | 229     | 41     | 314    | 268    | 580    | 796    | 144    | 40    | 15    | 4.2   | 5.7   |
| 18    | 5.8   | 704     | 41     | 307    | 294    | 540    | 755    | 136    | 38    | 14    | 4.0   | 7.1   |
| 19    | 6.1   | 412     | 38     | 255    | 495    | 520    | 534    | 129    | 35    | 14    | 4.0   | 7.8   |
| 20    | 6.8   | 238     | 34     | 155    | 438    | 461    | 534    | 125    | 34    | 13    | 3.7   | 8.1   |
| 21    | 6.4   | 244     | 35     | 125    | 373    | 507    | 328    | 125    | 32    | 12    | 3.7   | 7.4   |
| 22    | 6.1   | 222     | 35     | 122    | 395    | 429    | 274    | 115    | 31    | 11    | 3.5   | 6.7   |
| 23    | 5.8   | 178     | 29     | 94     | 344    | 450    | 294    | 103    | 31    | 10    | 3.5   | 6.7   |
| 24    | 5.4   | 454     | 151    | 88     | 238    | 460    | 274    | 100    | 31    | 9.2   | 3.5   | 6.7   |
| 25    | 5.0   | 281     | 168    | 84     | 294    | 480    | 244    | 88     | 30    | 8.1   | 3.7   | 6.4   |
| 26    | 5.0   | 173     | 118    | 66     | 238    | 500    | 294    | 86     | 28    | 8.1   | 4.0   | 6.7   |
| 27    | 5.0   | 200     | 148    | 60     | 300    | 520    | 294    | 81     | 27    | 8.1   | 4.0   | 7.1   |
| 28    | 5.0   | 150     | 636    | 53     | 300    | 580    | 268    | 79     | 26    | 7.4   | 4.0   | 6.4   |
| 29    | 5.0   | 130     | 685    | 233    | -----  | 680    | 288    | 77     | 25    | 6.7   | 4.0   | 6.4   |
| 30    | 5.0   | 120     | 755    | 358    | -----  | 760    | 274    | 77     | 24    | 6.7   | 4.5   | 6.1   |
| 31    | 5.0   | -----   | 638    | 280    | -----  | 704    | -----  | 75     | ----- | 6.7   | 5.0   | ----- |
| Total | 164.7 | 4,973.0 | 5,276  | 28,134 | 13,350 | 16,147 | 17,609 | 5,249  | 1,307 | 462.0 | 147.2 | 176.9 |
| Mean  | 5.31  | 166     | 170    | 908    | 477    | 521    | 587    | 169    | 43.6  | 14.9  | 4.75  | 5.90  |
| Ac-ft | 327   | 9,860   | 10,460 | 55,800 | 26,480 | 32,030 | 34,930 | 10,410 | 2,590 | 916   | 292   | 351   |

Calendar year 1965 Max 6,000 Min 4.1 Mean 338 Ac-ft 244,600  
 Water year 1965-66 Max 4,700 Min 3.5 Mean 255 Ac-ft 184,500

Peak discharge (base, 5,500 cfs).--Jan. 4 (1800) 7,660 cfs (16.12 ft).

Note.--Fragmentary gage-height record Jan. 4.

11-4730. Middle Fork Eel River below Black Butte River, near Covelo, Calif.

Location.--Lat 39°49'35", long 123°05'30", in NW¼ sec.28, T.23 N., R.11 W., on right bank 0.2 mile downstream from Black Butte River and 8.6 miles east of Covelo.

Drainage area.--367 sq mi.

Records available.--August 1951 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1,435.07 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge.--15 years, 1,042 cfs (754,400 acre-ft per year); median of yearly mean discharges, 920 cfs (666,000 acre-ft per year).

Extremes.--Maximum discharge during year, 15,800 cfs (gage height, 16.20 ft, from crest-stage gage); minimum daily, 8.0 cfs Oct. 12, 13. 1951-66: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 31.7 ft, from floodmarks), from rating curve extended above 19,000 cfs on basis of slope-area measurement at gage height 25.0 ft; minimum, 4.4 cfs Sept. 22-26, 1951.

Remarks.--Records poor. No regulation or diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.    | Feb.   | Mar.    | Apr.    | May    | June  | July  | Aug. | Sept. |
|-------|-------|--------|--------|---------|--------|---------|---------|--------|-------|-------|------|-------|
| 1     | 8.7   | 11     | 460    | 836     | 740    | 540     | 2,900   | 908    | 270   | 65    | 22   | 16    |
| 2     | 8.7   | 11     | 440    | 917     | 635    | 530     | 3,220   | 1,030  | 250   | 63    | 21   | 16    |
| 3     | 8.7   | 13     | 550    | 1,940   | 836    | 500     | 3,080   | 1,240  | 225   | 62    | 20   | 15    |
| 4     | 8.7   | 18     | 650    | 9,500   | 2,560  | 540     | 3,080   | 1,780  | 210   | 60    | 20   | 15    |
| 5     | 9.7   | 20     | 790    | 10,200  | 2,400  | 560     | 3,180   | 1,560  | 200   | 58    | 19   | 15    |
| 6     | 11    | 18     | 920    | 8,150   | 1,750  | 620     | 3,080   | 1,120  | 200   | 56    | 18   | 14    |
| 7     | 11    | 68     | 800    | 6,000   | 1,300  | 1,320   | 2,950   | 971    | 190   | 54    | 18   | 14    |
| 8     | 9.7   | 280    | 699    | 5,100   | 1,100  | 1,990   | 2,900   | 944    | 185   | 52    | 18   | 14    |
| 9     | 8.7   | 50     | 484    | 4,200   | 960    | 2,810   | 2,800   | 935    | 175   | 51    | 19   | 14    |
| 10    | 8.7   | 21     | 354    | 3,600   | 860    | 2,900   | 4,500   | 926    | 170   | 50    | 20   | 14    |
| 11    | 8.7   | 12     | 300    | 3,200   | 760    | 2,350   | 3,500   | 863    | 160   | 49    | 19   | 14    |
| 12    | 8.0   | 121    | 332    | 2,600   | 710    | 2,190   | 2,500   | 758    | 150   | 49    | 18   | 14    |
| 13    | 8.0   | 700    | 300    | 2,200   | 660    | 2,580   | 2,200   | 715    | 140   | 48    | 17   | 14    |
| 14    | 8.7   | 1,500  | 265    | 2,000   | 620    | 2,300   | 1,900   | 683    | 135   | 46    | 17   | 14    |
| 15    | 13    | 900    | 224    | 1,750   | 600    | 2,380   | 1,800   | 635    | 125   | 45    | 16   | 14    |
| 16    | 13    | 518    | 220    | 1,500   | 560    | 2,060   | 1,900   | 628    | 120   | 43    | 16   | 14    |
| 17    | 13    | 550    | 188    | 1,250   | 540    | 1,820   | 2,300   | 598    | 115   | 40    | 15   | 16    |
| 18    | 13    | 2,300  | 192    | 1,100   | 650    | 1,780   | 2,100   | 575    | 110   | 38    | 14   | 23    |
| 19    | 15    | 1,700  | 176    | 971     | 750    | 1,820   | 1,850   | 560    | 105   | 35    | 14   | 26    |
| 20    | 15    | 800    | 156    | 917     | 720    | 1,500   | 1,790   | 540    | 100   | 32    | 13   | 24    |
| 21    | 14    | 500    | 156    | 809     | 660    | 1,420   | 1,680   | 535    | 96    | 32    | 13   | 22    |
| 22    | 13    | 400    | 149    | 715     | 640    | 1,400   | 1,570   | 500    | 92    | 31    | 13   | 21    |
| 23    | 13    | 350    | 124    | 640     | 640    | 1,380   | 1,520   | 460    | 90    | 30    | 12   | 20    |
| 24    | 12    | 1,700  | 342    | 582     | 660    | 1,440   | 1,520   | 430    | 88    | 29    | 12   | 20    |
| 25    | 12    | 1,300  | 700    | 530     | 620    | 1,520   | 1,700   | 420    | 84    | 28    | 12   | 20    |
| 26    | 12    | 750    | 450    | 497     | 580    | 1,580   | 1,590   | 415    | 80    | 28    | 13   | 18    |
| 27    | 12    | 800    | 370    | 438     | 570    | 1,600   | 1,120   | 400    | 76    | 27    | 13   | 17    |
| 28    | 11    | 600    | 2,900  | 371     | 550    | 1,670   | 971     | 360    | 74    | 26    | 13   | 16    |
| 29    | 11    | 520    | 1,370  | 778     | -----  | 1,960   | 917     | 340    | 70    | 25    | 14   | 14    |
| 30    | 11    | 480    | 1,150  | 872     | -----  | 2,220   | 899     | 310    | 68    | 24    | 14   | 13    |
| 31    | 11    | -----  | 1,050  | 724     | -----  | 2,510   | -----   | 290    | ----- | 23    | 14   | ----- |
| Total | 341.0 | 17,011 | 17,261 | 74,887  | 24,631 | 51,790  | 67,017  | 22,429 | 4,153 | 1,299 | 497  | 501   |
| Mean  | 11.0  | 567    | 557    | 2,416   | 880    | 1,671   | 2,234   | 724    | 138   | 41.9  | 16.0 | 16.7  |
| Ac-ft | 676   | 33,740 | 34,240 | 148,500 | 48,850 | 102,700 | 132,900 | 44,490 | 8,240 | 2,580 | 986  | 994   |

Calendar year 1965 Max 16,000 Min 8.0 Mean 915 Ac-ft 662,400  
 Water year 1965-66 Max 10,200 Min 8.0 Mean 772 Ac-ft 559,000

Peak discharge (base, 10,000 cfs).--Jan. 4 (time unknown) 15,800 cfs (16.20 ft).



11-4731. Williams Creek near Covelo, Calif.

Location.--Lat 39°49'30", long 123°08'25", in S½NE¼ sec.25, T.23 N., R.12 W., on right bank 1.0 mile upstream from mouth and 6.1 miles northeast of Covelo.

Drainage area.--30.4 sq mi.

Records available.--October 1961 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,435.92 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 25, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--5 years, 85.7 cfs (62,040 acre-ft per year).

Extremes.--Maximum discharge during year, 3,430 cfs Jan. 4 (gage height, 9.20 ft); minimum daily, 0.30 cfs Sept. 16, 17, 20-23, 28-30. 1961-66: Maximum discharge, 11,300 cfs Dec. 22, 1964 (gage height, 14.25 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement of maximum flow; minimum 0.10 cfs Sept. 20-29, 1962, Aug. 17 to Oct. 11, 1964.

Remarks.--Records fair. No regulation or diversion above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1963 Report: 1962(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.    | JAN.   | FEB.  | MAR.  | APR.  | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|-------|----------|---------|--------|-------|-------|-------|-------|-------|------|-------|-------|
| 1     | 0.40  | 0.60     | 39      | 93     | 145   | 69    | 134   | 50    | 16    | 3.4  | 0.80  | 0.40  |
| 2     | .40   | .60      | 39      | 103    | 80    | 66    | 130   | 50    | 14    | 3.4  | .60   | .40   |
| 3     | .40   | .60      | 45      | 540    | 140   | 62    | 127   | 52    | 14    | 3.4  | .60   | .40   |
| 4     | .40   | .70      | 44      | 2,490  | 310   | 63    | 124   | 59    | 13    | 3.0  | .80   | .40   |
| 5     | .40   | .60      | 49      | 1,650  | 250   | 83    | 124   | 59    | 12    | 2.7  | .80   | .40   |
| 6     | .40   | .60      | 47      | 1,020  | 228   | 124   | 138   | 50    | 12    | 2.7  | .60   | .40   |
| 7     | .40   | 10       | 39      | 552    | 184   | 112   | 115   | 46    | 12    | 2.7  | .60   | .50   |
| 8     | .40   | 10       | 33      | 366    | 163   | 224   | 107   | 46    | 10    | 2.7  | .60   | .50   |
| 9     | .40   | 4.1      | 28      | 214    | 144   | 417   | 117   | 46    | 9.8   | 2.7  | .60   | .40   |
| 10    | .40   | 3.0      | 23      | 168    | 127   | 390   | 174   | 45    | 9.2   | 2.7  | .60   | .40   |
| 11    | .40   | 3.0      | 20      | 133    | 112   | 238   | 180   | 42    | 9.2   | 2.7  | .60   | .40   |
| 12    | .40   | 22       | 18      | 113    | 101   | 208   | 156   | 39    | 8.6   | 2.7  | .60   | .40   |
| 13    | .40   | 89       | 16      | 100    | 89    | 235   | 127   | 39    | 8.6   | 2.7  | .60   | .40   |
| 14    | .60   | 72       | 15      | 93     | 83    | 200   | 112   | 37    | 8.0   | 2.4  | .60   | .40   |
| 15    | .50   | 43       | 13      | 93     | 75    | 194   | 110   | 33    | 7.4   | 2.1  | .60   | .40   |
| 16    | .50   | 20       | 12      | 87     | 76    | 192   | 115   | 32    | 6.8   | 2.1  | .60   | .30   |
| 17    | .50   | 42       | 11      | 80     | 68    | 163   | 117   | 31    | 6.8   | 2.1  | .50   | .30   |
| 18    | .50   | 164      | 10      | 75     | 63    | 147   | 103   | 29    | 6.2   | 2.1  | .50   | .50   |
| 19    | .40   | 112      | 9.8     | 70     | 86    | 163   | 87    | 32    | 6.2   | 1.8  | .50   | .40   |
| 20    | .40   | 51       | 9.4     | 66     | 79    | 138   | 73    | 32    | 6.2   | 1.8  | .50   | .30   |
| 21    | .40   | 33       | 9.0     | 62     | 72    | 130   | 68    | 31    | 5.7   | 1.5  | .50   | .30   |
| 22    | .40   | 26       | 8.7     | 66     | 77    | 121   | 66    | 28    | 5.7   | 1.5  | .50   | .30   |
| 23    | .40   | 21       | 7.7     | 61     | 77    | 118   | 66    | 26    | 5.7   | 1.2  | .50   | .30   |
| 24    | .40   | 129      | 51      | 56     | 89    | 118   | 73    | 25    | 5.7   | 1.2  | .50   | .40   |
| 25    | .50   | 93       | 50      | 53     | 89    | 121   | 76    | 24    | 4.7   | 1.2  | .50   | .40   |
| 26    | .50   | 63       | 32      | 50     | 82    | 127   | 73    | 23    | 4.4   | 1.2  | .50   | .40   |
| 27    | .60   | 64       | 32      | 48     | 76    | 133   | 62    | 23    | 4.1   | 1.0  | .50   | .40   |
| 28    | .60   | 50       | 293     | 45     | 72    | 135   | 58    | 22    | 3.8   | 1.0  | .50   | .30   |
| 29    | .60   | 43       | 198     | 170    | ----- | 135   | 54    | 20    | 3.4   | 1.0  | .40   | .30   |
| 30    | .60   | 40       | 161     | 180    | ----- | 137   | 52    | 19    | 3.4   | 1.0  | .60   | .30   |
| 31    | .60   | -----    | 142     | 95     | ----- | 135   | ----- | 18    | ----- | 1.0  | .60   | ----- |
| TOTAL | 14.20 | 1,210.80 | 1,504.6 | 8,992  | 3,237 | 4,896 | 3,118 | 1,108 | 242.6 | 64.7 | 17.80 | 11.40 |
| MEAN  | .46   | 40.4     | 48.5    | 290    | 116   | 158   | 104   | 35.7  | 8.09  | 2.09 | .57   | .38   |
| AC-FT | 28    | 2,400    | 2,980   | 17,840 | 6,420 | 9,720 | 6,180 | 2,200 | 481   | 128  | 35    | 23    |

CALENDAR YEAR 1965 MAX 952 MIN .20 MEAN 56.9 AC-FT 41,170  
 WATER YEAR 1965-66 MAX 2,490 MIN .30 MEAN 66.9 AC-FT 48,440

Peak discharge (base, 1,200 cfs).--Jan. 4 (1800) 3,430 cfs (9.20 ft).

## EEL RIVER BASIN

11-4736. Short Creek near Covelo, Calif.

Location.--Lat 39°49'50", long 123°10'56" (revised), in NE¼ sec.27, T.23 N., R.12 W., on left bank 0.4 mile downstream from unnamed tributary, 0.7 mile upstream from wooden bridge, and 4.5 miles northeast of Covelo. Prior to June 25, 1966, at site 100 ft upstream.

Drainage area.--15.2 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1440.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to June 25, 1966, graphic water-stage recorder at site 100 ft upstream at datum 2.98 ft lower.

Average discharge.--8 years, 21.4 cfs (15,490 acre-ft per year).

Extremes.--Maximum discharge during year, 1,850 cfs Jan. 4 (gage height, 7.22 ft), from rating curve extended above 690 cfs as explained below; no flow Oct. 1-17, Oct. 19 to Nov. 12.

1958-65: Maximum discharge, 3,600 cfs Dec. 22, 1964 (gage height, 9.20 ft in gage well, 10.4 ft from outside floodmarks), from rating curve extended above 690 cfs on basis of slope-area measurement of Dec. 21, 1955; no flow for several months in each year.

Flood of Dec. 21, 1955, reached a stage of 10.56 ft, from floodmarks (discharge, 3,780 cfs on basis of slope-area measurement of maximum flow).

Remarks.--Records good. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.  | JAN.    | FEB.    | MAR.  | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|--------|-------|---------|---------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0    | 0      | 14    | 55      | 59      | 28    | 14    | 4.7   | 0.80  | 0.60  | 0.40  | 0.20  |
| 2     | 0    | 0      | 10    | 63      | 40      | 27    | 13    | 4.3   | .80   | .60   | .40   | .10   |
| 3     | 0    | 0      | 8.8   | 420     | 69      | 24    | 12    | 3.9   | 1.0   | .60   | .40   | .10   |
| 4     | 0    | 0      | 7.8   | 1,400   | 146     | 23    | 10    | 3.9   | 1.0   | .50   | .50   | .10   |
| 5     | 0    | 0      | 6.9   | 660     | 97      | 67    | 9.3   | 3.5   | .80   | .40   | .60   | .10   |
| 6     | 0    | 0      | 5.5   | 312     | 95      | 99    | 8.8   | 3.2   | .80   | .40   | .70   | .10   |
| 7     | 0    | 0      | 4.3   | 151     | 67      | 80    | 7.8   | 2.8   | 1.0   | .40   | .70   | .10   |
| 8     | 0    | 0      | 3.9   | 115     | 46      | 146   | 7.4   | 2.4   | 1.0   | .40   | .80   | .10   |
| 9     | 0    | 0      | 3.5   | 74      | 32      | 212   | 9.3   | 2.4   | 1.0   | .40   | .90   | .10   |
| 10    | 0    | 0      | 3.2   | 54      | 26      | 155   | 17    | 2.1   | .80   | .40   | .80   | .20   |
| 11    | 0    | 0      | 2.8   | 41      | 19      | 102   | 34    | 2.1   | .80   | .40   | 1.0   | .20   |
| 12    | 0    | 0      | 2.4   | 32      | 16      | 76    | 43    | 1.8   | .80   | .40   | 1.0   | .20   |
| 13    | 0    | .90    | 2.8   | 26      | 13      | 84    | 26    | 1.8   | .60   | .40   | 1.6   | .20   |
| 14    | 0    | 9.8    | 2.4   | 23      | 12      | 66    | 20    | 1.8   | .60   | .40   | 1.6   | .20   |
| 15    | 0    | 16     | 2.1   | 20      | 14      | 74    | 17    | 1.8   | .60   | .50   | 1.6   | .20   |
| 16    | 0    | 5.1    | 1.8   | 18      | 8.8     | 93    | 15    | 1.8   | .60   | .50   | 1.4   | .20   |
| 17    | 0    | 4.3    | 1.8   | 16      | 7.4     | 77    | 14    | 1.5   | .60   | .50   | .90   | .10   |
| 18    | .10  | 58     | 1.5   | 14      | 7.8     | 65    | 13    | 1.5   | .60   | .50   | .70   | .20   |
| 19    | 0    | 44     | 1.2   | 13      | 30      | 76    | 12    | 1.2   | .60   | .50   | .60   | .20   |
| 20    | 0    | 11     | 1.2   | 11      | 19      | 60    | 10    | 1.0   | .60   | .50   | .60   | .20   |
| 21    | 0    | 6.4    | 1.2   | 10      | 14      | 53    | 9.8   | 1.2   | .60   | .40   | .60   | .20   |
| 22    | 0    | 4.3    | 1.2   | 12      | 22      | 44    | 9.3   | 1.2   | .60   | .40   | .60   | .20   |
| 23    | 0    | 3.9    | 1.5   | 12      | 29      | 38    | 8.8   | 1.0   | .60   | .40   | .50   | .20   |
| 24    | 0    | 97     | 14    | 10      | 56      | 34    | 7.8   | 1.0   | .60   | .40   | .30   | .20   |
| 25    | 0    | 67     | 26    | 9.3     | 68      | 29    | 7.4   | 1.0   | .60   | .40   | .30   | .20   |
| 26    | 0    | 43     | 17    | 9.3     | 57      | 26    | 6.9   | .80   | .60   | .40   | .20   | .20   |
| 27    | 0    | 45     | 16    | 8.8     | 42      | 24    | 6.4   | .80   | .60   | .40   | .40   | .30   |
| 28    | 0    | 29     | 147   | 8.3     | 34      | 21    | 5.9   | .80   | .60   | .40   | .30   | .20   |
| 29    | 0    | 22     | 125   | 46      | -----   | 19    | 5.5   | .80   | .60   | .40   | .20   | .20   |
| 30    | 0    | 18     | 100   | 68      | -----   | 18    | 5.1   | 1.0   | .60   | .40   | .20   | .20   |
| 31    | 0    | -----  | 91    | 37      | -----   | 16    | ----- | 1.0   | ----- | .40   | .20   | ----- |
| TOTAL | .10  | 484.70 | 627.8 | 3,748.7 | 1,146.0 | 1,956 | 385.5 | 60.10 | 21.40 | 13.70 | 21.00 | 5.20  |
| MEAN  | .003 | 16.2   | 20.3  | 121     | 40.9    | 63.1  | 12.9  | 1.94  | .71   | .44   | .68   | .17   |
| AC-FT | .2   | 961    | 1,250 | 7,440   | 2,270   | 3,880 | 765   | 119   | 42    | 27    | 42    | 10    |

CALENDAR YEAR 1965 MAX 670 MIN 0 MEAN 19.9 AC-FT 14,440  
 WATER YEAR 1965-66 MAX 1,400 MIN 0 MEAN 23.2 AC-FT 16,810

Peak discharge (base, 500 cfs).--Jan. 4 (1600) 1,850 cfs (7.22 ft).

11-4737. Mill Creek near Covelo, Calif.

Location.--Lat 39°44'45", long 123°10'15", in SW¼ sec.23, T.22 N., R.12 W., on right bank 50 ft upstream from unnamed tributary, 0.65 mile downstream from county road bridge, and 5.2 miles southeast of Covelo.

Drainage area.--96.9 sq mi.

Records available.--September 1956 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1314.44 ft above mean sea level, datum of 1929 (preliminary).

Average discharge.--10 years, 152 cfs (110,000 acre-ft per year).

Extremes.--Maximum discharge during year, 11,500 cfs Jan. 4 (gage height, 15.96 ft), from rating curve extended above 2,300 cfs as explained below; no flow for several months.

1956-66: Maximum discharge, 24,100 cfs Dec. 22, 1964 (gage height, 20.97 ft), from rating curve extended above 2,300 cfs on basis of slope-area measurement at gage heights 14.50 and 20.97 ft; no flow for several months in each year.

Remarks.--Records fair except those for period of no gage height record, which are poor. No regulation or diversion above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1963 Report: 1960-62.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.     | DEC.    | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY | AUG. | SEPT. |
|-------|------|----------|---------|--------|--------|--------|-------|-------|-------|------|------|-------|
| 1     |      | 0        | 54      | 260    | 465    | 167    | 66    | 19    | 6.0   | 1.4  |      |       |
| 2     |      | 0        | 43      | 268    | 315    | 165    | 60    | 17    | 5.5   | 1.3  |      |       |
| 3     |      | 0        | 39      | 2,280  | 355    | 150    | 58    | 16    | 5.5   | 1.1  |      |       |
| 4     |      | 0        | 39      | 8,610  | 917    | 143    | 55    | 15    | 5.5   | .90  |      |       |
| 5     |      | 0        | 35      | 4,970  | 537    | 282    | 52    | 14    | 5.0   | .80  |      |       |
| 6     |      | 0        | 25      | 2,360  | 570    | 453    | 48    | 13    | 5.0   | .60  |      |       |
| 7     |      | .80      | 17      | 917    | 371    | 353    | 47    | 13    | 5.0   | .20  |      |       |
| 8     |      | .90      | 12      | 887    | 277    | 795    | 45    | 12    | 5.0   | .10  |      |       |
| 9     |      | .70      | 9.4     | 615    | 223    | 1,200  | 60    | 12    | 5.0   | .10  |      |       |
| 10    |      | .50      | 6.9     | 471    | 200    | 841    | 100   | 12    | 5.0   | .30  |      |       |
| 11    |      | .50      | 5.6     | 398    | 172    | 421    | 240   | 12    | 4.6   | .30  |      |       |
| 12    |      | 1.3      | 5.3     | 345    | 157    | 284    | 300   | 12    | 4.3   | .20  |      |       |
| 13    |      | 1.6      | 4.1     | 310    | 143    | 348    | 150   | 11    | 4.0   | .20  |      |       |
| 14    |      | 69       | 3.7     | 284    | 136    | 240    | 85    | 10    | 3.7   | .20  |      |       |
| 15    |      | 84       | 3.2     | 272    | 132    | 268    | 70    | 10    | 3.4   | .20  |      |       |
| 16    |      | 15       | 2.4     | 252    | 120    | 366    | 60    | 9.5   | 3.2   | .20  |      |       |
| 17    |      | 51       | 2.1     | 237    | 117    | 259    | 55    | 9.2   | 3.0   | .20  |      |       |
| 18    |      | 397      | 1.9     | 225    | 115    | 207    | 50    | 8.9   | 2.7   | 0    |      |       |
| 19    |      | 269      | 1.8     | 213    | 246    | 272    | 46    | 8.5   | 2.5   | 0    |      |       |
| 20    |      | 52       | 1.8     | 198    | 185    | 186    | 43    | 8.0   | 2.4   | 0    |      |       |
| 21    |      | 27       | 1.9     | 186    | 146    | 164    | 39    | 7.5   | 2.3   | 0    |      |       |
| 22    |      | 15       | 1.9     | 205    | 167    | 143    | 37    | 7.0   | 2.3   | 0    |      |       |
| 23    |      | 10       | 1.8     | 198    | 201    | 126    | 35    | 7.0   | 2.2   | 0    |      |       |
| 24    |      | 616      | 112     | 183    | 291    | 116    | 33    | 7.0   | 2.2   | 0    |      |       |
| 25    |      | 345      | 191     | 176    | 296    | 109    | 30    | 7.0   | 2.2   | 0    |      |       |
| 26    |      | 210      | 88      | 172    | 274    | 103    | 28    | 6.0   | 2.1   | 0    |      |       |
| 27    |      | 211      | 73      | 155    | 207    | 99     | 26    | 5.0   | 2.0   | 0    |      |       |
| 28    |      | 118      | 1,300   | 146    | 185    | 91     | 24    | 5.5   | 1.9   | 0    |      |       |
| 29    |      | 81       | 771     | 560    | -----  | 80     | 22    | 5.5   | 1.8   | 0    |      |       |
| 30    |      | 66       | 610     | 601    | -----  | 75     | 21    | 5.5   | 1.6   | 0    |      |       |
| 31    |      | -----    | 650     | 308    | -----  | 71     | ----- | 6.0   | ----- | 0    |      | ----- |
| TOTAL | 0    | 2,642.30 | 4,112.8 | 27,262 | 7,520  | 8,577  | 1,985 | 311.1 | 106.9 | 8.30 | 0    | 0     |
| MEAN  | 0    | 88.1     | 133     | 879    | 269    | 277    | 66.2  | 10.0  | 3.56  | .27  | 0    | 0     |
| AC-FT | 0    | 5,240    | 8,160   | 54,070 | 14,920 | 17,010 | 3,940 | 617   | 212   | 16   | 0    | 0     |

CALENDAR YEAR 1965 MAX 5,180 MIN 0 MEAN 133 AC-FT 96,430  
 WATER YEAR 1965-66 MAX 8,610 MIN 0 MEAN 144 AC-FT 104,200

Peak discharge (base, 3,000 cfs).--Dec. 28 (1330) 3,080 cfs (9.39 ft); Jan. 4 (1915) 11,500 cfs (15.96 ft).

Note.--No gage-height record Apr. 6 to June 23.

Location.--Lat 39°38'57", long 123°07'12", in NE¼ sec.30, T.21 N., R.11 W., on right bank 300 ft upstream from unnamed tributary and 13.5 miles northeast of Hearst.

Records available.--July 1964 to September 1966.

Extremes.--Maximum discharge during year, 7,180 cfs Jan. 4 (gage height, 12.95 ft); minimum daily, 1.4 cfs Aug. 23, 24.

1964-66: Maximum discharge, 25,000 cfs Dec. 22, 1964 (gage height, 19.8 ft, from floodmarks), from rating curve extended above 9,900 cfs on basis of slope-area measurement at gage height 19.8 ft; minimum daily, 0.10 cfs Sept. 24 to Oct. 11, 1964.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

| Day   | Oct.       | Nov.       | Dec.         | Jan.         | Feb.         | Mar.       | Apr.       | May        | June      | July       | Aug.       | Sept.      |
|-------|------------|------------|--------------|--------------|--------------|------------|------------|------------|-----------|------------|------------|------------|
| 1     | 1.7        | <u>1.5</u> | 52           | 165          | 207          | 310        | 430        | 127        | <u>28</u> | <u>10</u>  | <u>2.7</u> | 1.7        |
| 2     | 1.7        | 1.5        | 51           | 128          | 169          | 295        | 454        | 122        | 27        | 9.5        | 2.6        | <u>1.6</u> |
| 3     | <u>1.5</u> | 1.7        | 55           | 941          | 413          | 251        | 488        | 127        | 27        | 9.0        | 2.6        | 1.6        |
| 4     | 1.7        | 2.0        | 65           | <u>5,570</u> | <u>1,260</u> | 247        | 479        | <u>140</u> | 26        | 8.6        | 2.4        | 1.6        |
| 5     | <u>2.0</u> | 2.0        | 62           | 3,670        | 806          | 315        | 462        | 127        | 24        | 8.2        | 2.4        | 1.6        |
| 6     | 2.0        | 2.0        | 61           | 2,080        | 722          | 359        | 376        | 109        | 24        | 7.8        | 2.2        | 1.6        |
| 7     | 1.7        | 6.5        | 56           | 1,180        | 574          | 391        | 398        | 100        | 26        | 7.5        | 2.0        | 1.7        |
| 8     | 1.7        | 85         | 56           | 758          | 464          | 426        | 341        | 100        | 26        | 7.3        | 1.9        | 1.8        |
| 9     | 1.5        | 14         | 54           | 440          | 384          | 480        | 348        | 96         | 23        | 7.6        | 1.9        | 1.8        |
| 10    | 1.7        | 8.4        | 51           | 280          | 337          | <u>488</u> | 506        | 93         | 22        | 7.3        | 1.9        | 1.8        |
| 11    | 1.5        | 6.5        | 47           | 176          | 260          | 341        | 696        | 90         | 21        | 7.3        | 1.9        | 1.8        |
| 12    | 1.5        | 20         | 45           | 125          | 219          | 236        | <u>804</u> | 86         | 20        | 7.0        | 1.9        | 1.8        |
| 13    | 1.5        | 173        | 40           | 108          | 179          | 242        | 533        | 79         | 19        | 7.0        | 1.7        | 1.8        |
| 14    | 2.0        | 96         | 38           | 101          | 159          | 206        | 355        | 72         | 18        | 6.1        | 1.7        | 1.9        |
| 15    | 1.7        | 83         | 37           | 96           | 148          | 200        | 284        | 65         | 17        | 5.5        | 1.6        | 1.8        |
| 16    | 1.7        | 28         | 35           | 92           | 139          | 206        | 302        | 63         | 15        | 5.3        | 1.6        | 1.7        |
| 17    | 1.7        | 120        | 33           | 88           | 139          | 206        | 278        | 57         | 14        | 5.1        | 1.6        | 1.7        |
| 18    | 2.0        | <u>525</u> | 33           | 83           | 137          | 266        | 341        | 52         | 14        | 4.7        | 1.6        | <u>3.6</u> |
| 19    | 2.0        | <u>165</u> | 30           | 79           | <u>275</u>   | 320        | 272        | 50         | 13        | 4.6        | 1.6        | 3.2        |
| 20    | 1.7        | 69         | <u>29</u>    | 73           | 256          | 224        | 200        | 46         | 13        | 4.4        | 1.5        | 2.4        |
| 21    | 1.7        | 50         | 30           | 72           | 211          | 248        | 194        | 44         | 13        | 4.2        | 1.5        | 2.1        |
| 22    | 1.7        | 38         | 30           | 75           | 224          | 206        | 224        | 41         | 13        | 3.6        | 1.5        | 2.0        |
| 23    | 1.7        | 38         | 29           | 73           | 295          | 194        | 242        | 39         | 12        | 3.4        | <u>1.4</u> | 2.1        |
| 24    | 1.7        | 409        | 178          | 72           | 310          | <u>172</u> | 248        | 36         | 12        | 3.3        | 1.4        | 2.0        |
| 25    | 1.7        | 195        | 125          | 72           | 326          | <u>206</u> | 242        | 34         | 12        | 3.3        | 1.5        | 2.1        |
| 26    | 1.7        | 101        | 77           | 70           | 342          | 290        | 218        | 34         | 11        | 3.2        | 1.6        | 2.2        |
| 27    | 1.7        | 94         | 73           | 70           | 310          | 320        | 178        | 32         | 11        | 3.0        | 1.5        | 2.2        |
| 28    | 1.7        | 70         | <u>1,100</u> | <u>69</u>    | 300          | 308        | 150        | 30         | 11        | 2.8        | 1.5        | 2.0        |
| 29    | 1.7        | 61         | <u>529</u>   | 352          | -----        | 302        | 136        | <u>29</u>  | <u>10</u> | 2.7        | 1.5        | 2.1        |
| 30    | 1.7        | 56         | 342          | 302          | -----        | 348        | <u>132</u> | <u>28</u>  | <u>10</u> | 2.7        | 2.1        | 2.0        |
| 31    | 1.7        | -----      | 310          | 169          | -----        | 470        | -----      | 28         | -----     | <u>2.6</u> | 1.9        | -----      |
| Total | 53.2       | 2,522.1    | 3,753        | 17,629       | 9,565        | 9,073      | 10,311     | 2,176      | 532       | 174.6      | 56.7       | 59.3       |
| Mean  | 1.72       | 84.1       | 121          | 569          | 342          | 293        | 344        | 70.2       | 17.7      | 56.3       | 1.83       | 1.98       |
| Ac-ft | 106        | 5,000      | 7,440        | 34,970       | 18,970       | 18,000     | 20,450     | 4,320      | 1,060     | 346        | 112        | 118        |

|                    |     |       |     |     |      |     |       |         |
|--------------------|-----|-------|-----|-----|------|-----|-------|---------|
| Calendar year 1965 | Max | 2,200 | Min | 1.5 | Mean | 143 | Ac-ft | 103,700 |
| Water year 1965-66 | Max | 5,570 | Min | 1.4 | Mean | 153 | Ac-ft | 110,900 |

Peak discharge (base, 1,800 cfs).--Dec. 28 (1200) 3,310 cfs (10.45 ft); Jan. 4 (1500) 7,180 cfs (12.95 ft).

11-4739. Middle Fork Eel River near Dos Rios, Calif.

Location.--Lat 39°42'23", long 123°19'27", in NE¼SE¼ sec.5, T.21 N., R.13 W., on left bank 0.6 mile upstream from Eastman Creek, 1.7 miles southeast of Dos Rios, and 1.9 miles upstream from mouth.

Drainage area.--745 sq mi.

Records available.--October 1965 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 901.58 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Extremes.--Maximum discharge during year, 70,200 cfs Jan. 4 (gage height, 32.86 ft, from high-water marks); minimum daily, 17 cfs for several days in August and September.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No regulation or diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.    | Feb.    | Mar.    | Apr.    | May    | June   | July  | Aug.  | Sept. |
|-------|-------|--------|--------|---------|---------|---------|---------|--------|--------|-------|-------|-------|
| 1     | 18    | 19     | 770    | 1,530   | 2,400   | 1,400   | 4,600   | 1,490  | 343    | 82    | 31    | 21    |
| 2     | 18    | 20     | 722    | 1,270   | 1,800   | 1,400   | 4,510   | 1,510  | 313    | 79    | 30    | 21    |
| 3     | 18    | 20     | 788    | 5,720   | 5,000   | 1,220   | 4,220   | 1,520  | 279    | 78    | 30    | 19    |
| 4     | 18    | 21     | 928    | 45,000  | 5,500   | 1,190   | 4,150   | 1,840  | 251    | 76    | 29    | 19    |
| 5     | 18    | 22     | 1,010  | 32,000  | 4,360   | 1,470   | 4,050   | 2,040  | 276    | 74    | 28    | 18    |
| 6     | 19    | 22     | 1,330  | 21,140  | 3,940   | 2,150   | 4,070   | 1,480  | 239    | 69    | 26    | 18    |
| 7     | 19    | 30     | 1,080  | 9,870   | 3,000   | 2,400   | 3,950   | 1,340  | 254    | 67    | 26    | 17    |
| 8     | 19    | 240    | 914    | 7,480   | 2,400   | 3,160   | 3,730   | 1,300  | 233    | 64    | 25    | 17    |
| 9     | 19    | 147    | 782    | 5,310   | 2,160   | 6,360   | 3,380   | 1,320  | 219    | 64    | 24    | 17    |
| 10    | 18    | 72     | 656    | 3,900   | 1,700   | 7,540   | 6,100   | 1,300  | 214    | 64    | 24    | 17    |
| 11    | 18    | 54     | 560    | 2,950   | 1,600   | 5,180   | 4,930   | 1,240  | 198    | 58    | 24    | 17    |
| 12    | 18    | 58     | 515    | 2,470   | 1,400   | 4,190   | 4,860   | 1,030  | 177    | 57    | 22    | 17    |
| 13    | 18    | 530    | 447    | 2,150   | 1,320   | 4,860   | 3,530   | 992    | 168    | 60    | 22    | 17    |
| 14    | 18    | 2,820  | 391    | 1,960   | 1,320   | 4,690   | 3,040   | 928    | 163    | 57    | 22    | 17    |
| 15    | 20    | 1,880  | 331    | 1,850   | 1,240   | 4,530   | 2,980   | 860    | 151    | 55    | 22    | 18    |
| 16    | 21    | 764    | 286    | 1,850   | 1,240   | 4,400   | 3,390   | 770    | 160    | 54    | 21    | 18    |
| 17    | 22    | 890    | 266    | 1,740   | 1,160   | 3,800   | 3,690   | 740    | 147    | 45    | 21    | 18    |
| 18    | 22    | 4,200  | 245    | 1,650   | 1,240   | 3,450   | 3,300   | 704    | 134    | 43    | 20    | 21    |
| 19    | 22    | 2,590  | 236    | 1,550   | 2,160   | 3,660   | 2,640   | 710    | 130    | 42    | 19    | 27    |
| 20    | 22    | 1,100  | 214    | 1,400   | 1,600   | 3,180   | 2,230   | 734    | 125    | 41    | 18    | 24    |
| 21    | 22    | 764    | 205    | 1,340   | 1,400   | 3,000   | 2,050   | 734    | 120    | 40    | 18    | 22    |
| 22    | 22    | 614    | 211    | 1,280   | 1,320   | 2,880   | 1,970   | 668    | 115    | 41    | 18    | 21    |
| 23    | 21    | 545    | 192    | 1,250   | 1,800   | 2,760   | 2,040   | 560    | 115    | 40    | 17    | 20    |
| 24    | 21    | 3,210  | 1,080  | 1,240   | 2,160   | 2,880   | 2,160   | 555    | 110    | 38    | 17    | 19    |
| 25    | 21    | 2,160  | 1,300  | 1,180   | 2,300   | 3,120   | 2,380   | 540    | 105    | 37    | 17    | 19    |
| 26    | 20    | 1,260  | 800    | 1,160   | 2,500   | 3,450   | 2,380   | 530    | 100    | 35    | 17    | 18    |
| 27    | 20    | 1,350  | 680    | 1,160   | 2,000   | 3,730   | 1,920   | 495    | 95     | 35    | 17    | 18    |
| 28    | 19    | 1,020  | 5,470  | 1,160   | 1,600   | 3,930   | 1,700   | 470    | 92     | 34    | 17    | 18    |
| 29    | 19    | 908    | 3,840  | 4,000   | -----   | 4,120   | 1,630   | 416    | 88     | 33    | 17    | 17    |
| 30    | 19    | 842    | 2,640  | 2,500   | -----   | 4,320   | 1,540   | 403    | 85     | 32    | 17    | 17    |
| 31    | 19    | -----  | 2,820  | 2,450   | -----   | 4,390   | -----   | 366    | -----  | 32    | 20    | ----- |
| Total | 608   | 28,172 | 31,709 | 171,510 | 61,620  | 108,810 | 97,120  | 29,585 | 5,199  | 1,626 | 676   | 567   |
| Mean  | 19.6  | 939    | 1,023  | 5,533   | 2,201   | 3,510   | 3,237   | 954    | 173    | 52.5  | 21.8  | 18.9  |
| Ac-ft | 1,210 | 55,880 | 62,890 | 340,200 | 122,200 | 215,800 | 192,600 | 58,680 | 10,310 | 3,230 | 1,340 | 1,120 |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Water year 1965-66 Max 45,000 Min 17 Mean 1,472 Ac-ft 1,066,000

Peak discharge (base, 35,000 cfs).--Jan. 4 (2200) 70,200 cfs (32.86 ft).

Note.--No gage-height record Jan. 4, 5, Jan. 20 to Mar. 2.

## EEL RIVER BASIN

11-4739.8. Goforth Creek at Dos Rios, Calif.

Location.--Lat 39°42'45", long 123°20'29", in NE¼ sec.6, T.21 N., R.13 W., on left bank at culvert 150 ft upstream from Middle Fork Eel River and 0.7 mile southeast of Dos Rios.

Drainage area.--3.83 sq mi.

Records available.--Water years 1963-65 (annual maximum), October 1965 to September 1966.

Gage.--Water-stage recorder with rain-gage attachment and crest-stage gage. Datum of gage is 907.45 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Sept. 25, 1962 to Nov. 18, 1965, crest-stage gage only at same site and datum.

Extremes.--Maximum discharge during year, 810 cfs Jan. 4 (gage height, 18.00 ft), from rating curve extended above 95 cfs on basis of culvert computations at gage heights 14.15, 15.66, and 36.00 ft; minimum daily, 0.10 cfs Aug. 22-27, Sept. 6, 7, 27-30.

1962-66: Maximum discharge, 2,340 cfs Dec. 22, 1964 (gage height, 36.00 ft), by computation of maximum flow through culvert.

1965-66: Minimum daily discharge, 0.10 cfs Aug. 22-27, Sept. 6, 7, 27-30, 1966.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.   | Jan.    | Feb.  | Mar.  | Apr.  | May  | June  | July  | Aug. | Sept. |
|-------|------|--------|--------|---------|-------|-------|-------|------|-------|-------|------|-------|
| 1     |      |        | 2.8    | 13      | 18    | 7.8   | 4.3   | 1.8  | 1.1   | 0.60  | 0.30 | 0.20  |
| 2     |      |        | 2.2    | 15      | 13    | 7.8   | 4.3   | 1.7  | 1.1   | .60   | .30  | .20   |
| 3     |      |        | 1.9    | 107     | 10    | 7.5   | 3.9   | 1.7  | 1.1   | .60   | .30  | .20   |
| 4     |      |        | 1.7    | 482     | 28    | 7.8   | 3.8   | 1.7  | 1.1   | .60   | .30  | .20   |
| 5     |      |        | 1.5    | 398     | 22    | 15    | 3.8   | 1.6  | 1.0   | .60   | .20  | .20   |
| 6     |      | 0.20   | 1.3    | 78      | 22    | 16    | 3.8   | 1.6  | 1.1   | .60   | .20  | .10   |
| 7     |      |        | 1.2    | 35      | 19    | 13    | 3.6   | 1.6  | 1.1   | .50   | .20  | .10   |
| 8     |      |        | 1.2    | 30      | 14    | 40    | 3.6   | 1.6  | 1.0   | .50   | .20  | .20   |
| 9     |      |        | 1.1    | 16      | 12    | 61    | 3.9   | 1.5  | 1.0   | .50   | .20  | .20   |
| 10    |      |        | 1.1    | 13      | 11    | 37    | 4.7   | 1.5  | 1.0   | .60   | .20  | .20   |
| 11    |      |        | 1.1    | 11      | 9.2   | 22    | 7.4   | 1.5  | 1.0   | .60   | .20  | .20   |
| 12    |      |        | 1.1    | 8.8     | 8.8   | 18    | 6.4   | 1.5  | 1.0   | .60   | .20  | .20   |
| 13    |      | .50    | 1.0    | 7.5     | 8.0   | 19    | 4.3   | 1.5  | 1.0   | .50   | .20  | .20   |
| 14    |      | 3.0    | 1.0    | 6.8     | 7.8   | 16    | 4.1   | 1.4  | 1.0   | .50   | .20  | .20   |
| 15    | 0.20 | 5.0    | .90    | 6.4     | 7.0   | 18    | 3.8   | 1.4  | .90   | .50   | .20  | .20   |
| 16    |      | 2.5    | .90    | 6.0     | 6.6   | 19    | 3.6   | 1.4  | .90   | .50   | .20  | .20   |
| 17    |      | 2.0    | .90    | 5.5     | 6.4   | 15    | 3.6   | 1.4  | .80   | .50   | .20  | .20   |
| 18    |      | 1.5    | .90    | 5.5     | 6.0   | 13    | 3.4   | 1.3  | .80   | .40   | .20  | .20   |
| 19    |      | 8.7    | .80    | 5.3     | 9.0   | 15    | 3.0   | 1.3  | .80   | .40   | .20  | .20   |
| 20    |      | 2.9    | .80    | 4.9     | 7.0   | 11    | 2.8   | 1.3  | .80   | .40   | .20  | .20   |
| 21    |      | 2.6    | .80    | 4.9     | 6.0   | 11    | 2.6   | 1.3  | .80   | .40   | .20  | .20   |
| 22    |      | 2.2    | .80    | 5.5     | 6.6   | 9.5   | 2.6   | 1.2  | .80   | .30   | .10  | .20   |
| 23    |      | 2.8    | .70    | 5.1     | 7.0   | 8.8   | 2.5   | 1.2  | .80   | .30   | .10  | .20   |
| 24    |      | 2.6    | 10     | 4.9     | 11    | 8.0   | 2.5   | 1.2  | .70   | .30   | .10  | .20   |
| 25    |      | 19     | 7.5    | 4.9     | 11    | 7.5   | 2.2   | 1.1  | .70   | .30   | .10  | .20   |
| 26    |      | 15     | 4.3    | 4.7     | 11    | 7.0   | 2.0   | 1.1  | .70   | .30   | .10  | .20   |
| 27    |      | 13     | 5.6    | 4.7     | 9.0   | 6.6   | 2.0   | 1.1  | .70   | .30   | .10  | .10   |
| 28    |      | 7.0    | 5.7    | 4.5     | 8.5   | 6.2   | 1.9   | 1.1  | .70   | .30   | .20  | .10   |
| 29    |      | 5.2    | 2.7    | 1.5     | ----- | 5.5   | 1.8   | 1.0  | .70   | .30   | .30  | .10   |
| 30    |      | 3.6    | 23     | 1.7     | ----- | 4.9   | 1.8   | 1.1  | .70   | .30   | .40  | .10   |
| 31    |      | -----  | 22     | 10      | ----- | 4.7   | ----- | 1.1  | ----- | .30   | .20  | ----- |
| Total | 6.20 | 138.40 | 184.10 | 1,335.9 | 314.9 | 458.6 | 104.0 | 42.8 | 26.90 | 14.00 | 6.30 | 5.40  |
| Mean  | .20  | 4.61   | 5.94   | 4.31    | 11.2  | 14.8  | 3.47  | 1.38 | .90   | .45   | .20  | .18   |
| Ac-ft | 12   | 275    | 365    | 2,650   | 625   | 910   | 206   | 85   | 53    | 28    | 12   | 11    |
| (+)   | -    | -      | 6.5    | 13.9    | 5.1   | 5.1   | 1.4   | 0    | 0     | 0     | 0    | .2    |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Water year 1965-66 Max 482 Min .10 Mean 7.23 Ac-ft 5,230

Peak discharge (base, 100 cfs).--Dec. 28 (0900) 141 cfs (12.23 ft); Jan. 4 (1800) 810 cfs (18.00 ft).

+ Precipitation, in inches.

Note.--No gage-height record Oct. 1 to Nov. 18, June 22 to July 21.

11-4740. Eel River below Dos Rios, Calif.

Location.--Lat 39°44'15", long 123°22'15", in NE¼ sec.25, T.22 N., R.14 W., on left bank 1.1 miles downstream from Burger Creek, 1.7 miles northwest of Dos Rios, and 2.2 miles downstream from Middle Fork.

Drainage area.--1,484 sq mi.

Records available.--October 1911 to December 1913, October 1951 to September 1966 (discontinued). Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Laytonville" 1911 and as "at Two Rivers" 1912-13.

Gage.--Digital water-stage recorder. Datum of gage is 820.84 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Dec. 30, 1913, staff gage at bridge 500 ft downstream from Middle Fork at different datum. Oct. 26, 1951 to May 8, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 3,221 cfs (2,332,000 acre-ft per year); median of yearly mean discharges, 2,790 cfs (2,020,000 acre-ft per year).

Extremes.--Maximum discharge during year, 110,000 cfs Jan. 4 (gage height, 34.47 ft); minimum daily, 19 cfs Aug. 22-26, 29, Sept. 30. 1911-13, 1951-66: Maximum discharge, 460,000 cfs Dec. 22, 1964 (gage height, 62.5 ft, from floodmarks), from rating curve extending above 120,000 cfs on basis of maximum flow at upstream and downstream stations; minimum, 5.2 cfs Sept. 13, 1955.

Remarks.--Records fair. Flow partly regulated by Lake Pillsbury (see sta 11-4700) and by diversion through Potter Valley powerhouse (see sta 11-4710). Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1965, superseding figures published in 1965 Report, are given herewith:

| Date    | Discharge | Date      | Discharge | Date      | Discharge | Date      | Discharge |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1965    |           | 1965-Con. |           | 1965-Con. |           | 1965-Con. |           |
| Apr. 15 | 7,000     | Apr. 21   | 11,500    | Apr. 27   | 3,600     | May 3     | 2,200     |
| 16      | 17,000    | 22        | 8,000     | 28        | 3,000     | 4         | 2,100     |
| 17      | 8,000     | 23        | 6,000     | 29        | 2,800     | 5         | 1,900     |
| 18      | 11,000    | 24        | 5,000     | 30        | 2,600     | 6         | 1,700     |
| 19      | 17,000    | 25        | 4,000     | May 1     | 2,400     | 7         | 1,700     |
| 20      | 13,000    | 26        | 3,800     | 2         | 2,300     | 8         | 1,600     |

| Month                   | Cfs-days | Maximum | Minimum | Mean  | Acre-feet |
|-------------------------|----------|---------|---------|-------|-----------|
| April 1965-----         | 155,440  | 17,000  | 1,370   | 5,181 | 308,300   |
| May-----                | 39,955   | 2,400   | 640     | 1,289 | 79,250    |
| Water year 1964-65----- | -        | 351,000 | 6.8     | 6,054 | 4,383,000 |

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May    | June   | July  | Aug.  | Sept. |
|-------|-------|--------|---------|---------|---------|---------|---------|--------|--------|-------|-------|-------|
| 1     | 26    | 32     | 988     | 4,300   | 6,400   | 3,060   | 4,790   | 1,720  | 542    | 98    | 34    | 26    |
| 2     | 25    | 31     | 884     | 3,740   | 5,000   | 2,920   | 4,740   | 1,740  | 486    | 98    | 32    | 26    |
| 3     | 25    | 31     | 890     | 14,100  | 13,500  | 2,550   | 4,440   | 1,800  | 456    | 98    | 34    | 26    |
| 4     | 25    | 37     | 1,010   | 76,000  | 14,100  | 2,310   | 4,440   | 2,130  | 428    | 98    | 32    | 25    |
| 5     | 26    | 56     | 1,020   | 80,400  | 11,500  | 3,190   | 4,330   | 2,340  | 400    | 98    | 31    | 23    |
| 6     | 30    | 56     | 1,210   | 48,400  | 10,300  | 4,140   | 4,210   | 1,790  | 386    | 92    | 31    | 22    |
| 7     | 31    | 102    | 1,050   | 25,500  | 7,800   | 4,580   | 4,210   | 1,570  | 407    | 86    | 29    | 21    |
| 8     | 31    | 330    | 925     | 16,300  | 6,000   | 6,560   | 4,140   | 1,520  | 393    | 81    | 27    | 21    |
| 9     | 30    | 272    | 818     | 10,600  | 4,830   | 11,600  | 4,040   | 1,520  | 379    | 81    | 26    | 21    |
| 10    | 30    | 146    | 716     | 7,860   | 4,090   | 14,700  | 5,330   | 1,570  | 351    | 81    | 27    | 22    |
| 11    | 30    | 105    | 645     | 6,340   | 3,430   | 10,000  | 8,140   | 1,540  | 330    | 81    | 27    | 22    |
| 12    | 30    | 212    | 625     | 5,190   | 2,980   | 7,720   | 9,750   | 1,360  | 302    | 81    | 27    | 21    |
| 13    | 28    | 946    | 575     | 4,330   | 2,580   | 8,120   | 6,820   | 1,320  | 274    | 86    | 26    | 21    |
| 14    | 30    | 4,010  | 520     | 3,880   | 2,320   | 7,600   | 5,150   | 1,250  | 260    | 81    | 26    | 23    |
| 15    | 32    | 2,630  | 466     | 3,750   | 2,310   | 7,300   | 4,500   | 1,150  | 239    | 75    | 24    | 22    |
| 16    | 34    | 1,220  | 414     | 3,300   | 2,270   | 7,480   | 4,530   | 1,100  | 225    | 70    | 22    | 20    |
| 17    | 34    | 946    | 398     | 3,000   | 1,750   | 6,370   | 4,750   | 1,020  | 204    | 70    | 24    | 22    |
| 18    | 32    | 6,500  | 370     | 2,760   | 1,720   | 5,550   | 4,360   | 1,000  | 162    | 61    | 24    | 24    |
| 19    | 34    | 4,410  | 362     | 2,450   | 3,250   | 5,890   | 3,620   | 1,030  | 148    | 58    | 22    | 31    |
| 20    | 36    | 1,740  | 342     | 2,130   | 3,170   | 4,970   | 2,960   | 1,050  | 127    | 55    | 20    | 32    |
| 21    | 40    | 1,090  | 330     | 1,890   | 2,420   | 4,560   | 2,560   | 1,060  | 120    | 52    | 20    | 31    |
| 22    | 91    | 806    | 334     | 1,780   | 2,420   | 4,140   | 2,410   | 980    | 114    | 49    | 19    | 27    |
| 23    | 52    | 675    | 326     | 1,520   | 3,220   | 3,860   | 2,450   | 870    | 114    | 46    | 19    | 26    |
| 24    | 40    | 5,550  | 1,630   | 1,400   | 4,170   | 3,760   | 2,530   | 809    | 114    | 46    | 19    | 26    |
| 25    | 37    | 5,290  | 3,280   | 1,280   | 4,390   | 3,860   | 2,740   | 782    | 109    | 43    | 19    | 26    |
| 26    | 36    | 3,200  | 967     | 1,200   | 4,630   | 3,730   | 2,740   | 764    | 103    | 40    | 19    | 26    |
| 27    | 34    | 2,760  | 630     | 1,080   | 3,750   | 3,860   | 2,220   | 737    | 98     | 37    | 20    | 26    |
| 28    | 34    | 1,780  | 10,600  | 3,000   | 3,320   | 4,090   | 2,010   | 702    | 98     | 37    | 21    | 22    |
| 29    | 34    | 1,370  | 9,240   | 10,500  | -----   | 4,260   | 1,920   | 654    | 98     | 34    | 19    | 20    |
| 30    | 32    | 1,160  | 6,880   | 6,900   | -----   | 4,440   | 1,840   | 614    | 98     | 34    | 22    | 19    |
| 31    | 32    | -----  | 7,000   | 6,600   | -----   | 4,560   | -----   | 566    | -----  | 34    | 24    | ----- |
| Total | 1,061 | 47,493 | 55,445  | 361,480 | 137,620 | 171,730 | 122,670 | 38,058 | 7,565  | 2,081 | 766   | 720   |
| Mean  | 34.2  | 1,583  | 1,789   | 11,660  | 4,915   | 5,540   | 4,089   | 1,228  | 252    | 67.1  | 24.7  | 24.0  |
| Ac-ft | 2,100 | 94,200 | 110,000 | 717,000 | 273,000 | 340,600 | 243,300 | 75,490 | 15,000 | 4,130 | 1,520 | 1,430 |

Calendar year 1965 Max 83,400 Min 24 Mean 3,165 Ac-ft 2,292,000

Water year 1965-66 Max 80,400 Min 19 Mean 2,594 Ac-ft 1,878,000

Peak discharge (base, 40,000 cfs, revised).--Jan. 4 (1815) 110,000 cfs (34.47 ft).

11-4745. North Fork Eel River near Mina, Calif.

Location.--Lat 39°56'10", long 123°21'10", in SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.7, T.24 N., R.13 W., on left bank 0.8 mile upstream from Asbill Creek and 2 miles south of Mina.

Drainage area.--<sup>248</sup>250 sq mi.

Records available.--August 1953 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1,001.68 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Aug. 27, 1953, to Jan. 15, 1954, water-stage recorder and Jan. 16 to June 22, 1954, wire-weight gage, at bridge 0.2 mile upstream at different datums. June 23, 1954 to Dec. 21, 1964, water-stage recorder and Feb. 7 to July 8, 1965, staff gage at site 0.4 mile upstream at different datums.

Average discharge.--13 years, 621 cfs (449,600 acre-ft per year); median of yearly mean discharges, 500 cfs (362,000 acre-ft per year).

Extremes.--Maximum discharge during year, 52,300 cfs Jan. 4 (gage height, 25.39 ft), from rating curve extended above 12,000 cfs as explained below; minimum daily, 2.1 cfs Aug. 25-27.

1953-66: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 34.5 ft, present site, from floodmarks, from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; minimum, 0.1 cfs Aug. 30, 31, 1959.

Remarks.--Records good. No regulation or diversion above station. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.     | Dec.   | Jan.    | Feb.   | Mar.   | Apr.   | May   | June  | July  | Aug. | Sept. |
|-------|-------|----------|--------|---------|--------|--------|--------|-------|-------|-------|------|-------|
| 1     | 3.0   | 3.9      | 496    | 810     | 1,140  | 600    | 575    | 114   | 33    | 11    | 3.8  | 3.8   |
| 2     | 2.8   | 3.9      | 440    | 739     | 1,030  | 575    | 550    | 110   | 32    | 11    | 3.6  | 3.3   |
| 3     | 2.6   | 3.9      | 496    | 4,650   | 1,210  | 540    | 495    | 104   | 32    | 11    | 3.4  | 3.0   |
| 4     | 2.6   | 4.8      | 556    | 35,200  | 3,150  | 555    | 465    | 106   | 31    | 11    | 3.3  | 2.8   |
| 5     | 2.6   | 8.6      | 548    | 17,900  | 2,220  | 916    | 435    | 108   | 29    | 10    | 3.1  | 2.6   |
| 6     | 2.6   | 11       | 488    | 7,760   | 1,950  | 1,830  | 402    | 100   | 29    | 9.4   | 3.1  | 2.5   |
| 7     | 2.8   | 12       | 357    | 4,000   | 1,410  | 1,880  | 378    | 94    | 29    | 8.3   | 3.1  | 2.6   |
| 8     | 2.8   | 132      | 285    | 3,440   | 1,100  | 3,230  | 342    | 90    | 29    | 8.3   | 3.0  | 2.6   |
| 9     | 2.8   | 48       | 232    | 2,200   | 916    | 3,830  | 334    | 88    | 28    | 8.3   | 3.0  | 2.6   |
| 10    | 2.8   | 24       | 190    | 1,560   | 808    | 3,390  | 510    | 88    | 26    | 8.7   | 3.0  | 2.6   |
| 11    | 2.8   | 18       | 159    | 1,240   | 655    | 2,220  | 976    | 82    | 24    | 8.7   | 3.1  | 2.8   |
| 12    | 3.0   | 59       | 140    | 960     | 570    | 1,600  | 1,320  | 78    | 24    | 9.1   | 3.0  | 2.8   |
| 13    | 3.0   | 696      | 122    | 850     | 465    | 1,760  | 778    | 74    | 23    | 16    | 3.0  | 3.0   |
| 14    | 3.6   | 990      | 111    | 700     | 406    | 1,440  | 605    | 69    | 21    | 11    | 3.0  | 3.4   |
| 15    | 4.1   | 715      | 99     | 656     | 366    | 1,480  | 505    | 68    | 19    | 8.7   | 2.8  | 3.0   |
| 16    | 3.7   | 250      | 89     | 640     | 318    | 1,640  | 460    | 63    | 18    | 8.0   | 2.8  | 3.0   |
| 17    | 3.7   | 3,310    | 80     | 552     | 303    | 1,430  | 422    | 60    | 16    | 7.2   | 2.6  | 3.0   |
| 18    | 4.5   | 2,440    | 76     | 508     | 296    | 1,280  | 378    | 57    | 15    | 6.8   | 2.6  | 4.8   |
| 19    | 4.5   | 1,740    | 73     | 440     | 500    | 1,790  | 326    | 54    | 15    | 6.1   | 2.5  | 6.1   |
| 20    | 4.5   | 468      | 65     | 360     | 700    | 1,360  | 278    | 51    | 14    | 6.1   | 2.3  | 5.6   |
| 21    | 4.5   | 275      | 69     | 320     | 510    | 1,260  | 247    | 48    | 14    | 5.6   | 2.3  | 6.5   |
| 22    | 4.5   | 188      | 63     | 305     | 505    | 1,060  | 231    | 46    | 14    | 5.4   | 2.3  | 5.1   |
| 23    | 4.5   | 199      | 54     | 299     | 748    | 922    | 213    | 44    | 14    | 5.4   | 2.2  | 4.8   |
| 24    | 4.5   | 2,620    | 590    | 280     | 754    | 814    | 201    | 43    | 14    | 5.1   | 2.6  | 4.6   |
| 25    | 4.3   | 1,280    | 637    | 265     | 820    | 754    | 192    | 39    | 13    | 5.1   | 2.1  | 4.4   |
| 26    | 4.3   | 880      | 360    | 252     | 778    | 710    | 178    | 37    | 13    | 4.8   | 2.1  | 4.4   |
| 27    | 4.1   | 939      | 465    | 240     | 725    | 685    | 158    | 35    | 12    | 4.8   | 2.1  | 3.8   |
| 28    | 4.1   | 690      | 5,700  | 222     | 645    | 655    | 148    | 35    | 11    | 4.4   | 2.3  | 3.6   |
| 29    | 4.1   | 600      | 2,850  | 1,070   | -----  | 630    | 135    | 35    | 11    | 3.3   | 2.3  | 3.6   |
| 30    | 4.1   | 536      | 1,790  | 1,520   | -----  | 610    | 124    | 36    | 11    | 3.8   | 2.6  | 3.3   |
| 31    | 4.1   | -----    | 1,330  | 1,460   | -----  | 595    | -----  | 36    | ----- | 3.8   | 3.1  | ----- |
| Total | 111.9 | 19,145.1 | 19,010 | 91,398  | 24,998 | 42,041 | 12,361 | 2,092 | 614   | 236.2 | 86.1 | 110.0 |
| Mean  | 3.61  | 638      | 613    | 2,948   | 893    | 1,356  | 412    | 67.5  | 20.5  | 7.62  | 2.78 | 3.63  |
| Ac-ft | 222   | 37,970   | 37,710 | 181,300 | 49,580 | 83,390 | 24,520 | 4,150 | 1,220 | 468   | 171  | 218   |

Calendar year 1965 Max 11,000 Min 2.6 Mean 567 Ac-ft 410,400

Water year 1965-66 Max 35,200 Min 2.1 Mean 581 Ac-ft 420,900

Peak discharge (base, 8,000 cfs).--Dec. 28 (1300) 12,400 cfs (15.75 ft); Jan. 4 (1700) 52,300 cfs (25.39 ft).



11-4750. Eel River at Fort Seward, Calif.  
(Formerly published as Eel River at Alderpoint)

Location.--Lat 40°13'05", long 123°37'54", in SE¼NE¼ sec.8, T.3 S., R.5 E., on right bank at downstream side of bridge, 1.0 mile south-east of Fort Seward, 1.9 miles upstream from Dobbyn Creek, and 11.8 miles northeast of Garberville. Prior to Oct. 1, 1965, at site 7.7 miles upstream.

Drainage area.--2,107 sq mi.

Records available.--September 1955 to September 1966. Prior to October 1965, published as "at Alderpoint."

Gage.--Digital water-stage recorder. Datum of gage is 217.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1964, graphic water-stage recorder at site 7.5 miles upstream at datum 46.55 ft higher. Feb. 2 to Sept. 30, 1965, graphic water-stage recorder at site 7.7 miles upstream at datum 49.42 ft higher.

Average discharge.--11 years, 4,702 cfs (3,404,000 acre-ft per year).

Extremes.--Maximum discharge during year, 163,000 cfs Jan. 4 (gage height, 43.33 ft); minimum daily, 31 cfs Sept. 12, 13.  
1955-66: Maximum discharge, 561,000 cfs Dec. 22, 1964 (gage height, 87.2 ft, from floodmarks, site and datum then in use), from rating curve extended above 110,000 cfs on basis of slope-area measurement at gage height 72.5 ft; minimum daily, 10 cfs Aug. 30 to Sept. 5, 1964.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow slightly regulated by Lake Pillsbury (see sta 11-4700) and by diversion through Potter Valley powerhouse (see sta 11-4710). Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1965, superseding figures published in 1965 Report, are given herewith:

|                     |                    |
|---------------------|--------------------|
| 1965                | 1965-Con.          |
| April 16.....27,000 | Apr. 20.....20,000 |
| 17.....14,000       | 21.....17,000      |
| 18.....20,000       | 22.....11,000      |
| 19.....26,000       | 23.....7,000       |

| Month                   | Cfs-days | Maximum | Minimum | Mean  | Acre-feet |
|-------------------------|----------|---------|---------|-------|-----------|
| April 1965.....         | 208,470  | 27,000  | 1,600   | 6,949 | 413,500   |
| Water year 1964-65..... | -        | 434,000 | 12      | 8,317 | 6,021,000 |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY    | JUNE   | JULY  | AUG.  | SEPT. |
|-------|-------|---------|---------|---------|---------|---------|---------|--------|--------|-------|-------|-------|
| 1     | 38    | 40      | 2,400   | 8,100   | 7,800   | 4,480   | 5,440   | 1,900  | 544    | 146   | 55    | 36    |
| 2     | 38    | 42      | 2,100   | 6,100   | 7,600   | 4,360   | 5,500   | 1,850  | 497    | 142   | 55    | 35    |
| 3     | 38    | 47      | 1,900   | 18,700  | 5,920   | 4,000   | 5,260   | 1,860  | 457    | 138   | 54    | 36    |
| 4     | 39    | 76      | 1,980   | 105,000 | 16,000  | 3,400   | 5,100   | 1,980  | 438    | 134   | 52    | 38    |
| 5     | 39    | 85      | 2,010   | 120,000 | 17,500  | 4,800   | 4,980   | 2,530  | 411    | 133   | 48    | 38    |
| 6     | 39    | 77      | 2,100   | 69,600  | 15,200  | 6,950   | 4,860   | 2,340  | 394    | 129   | 49    | 37    |
| 7     | 39    | 111     | 2,040   | 40,200  | 11,800  | 8,180   | 4,760   | 2,050  | 383    | 122   | 49    | 36    |
| 8     | 39    | 203     | 1,720   | 26,600  | 8,750   | 11,600  | 4,580   | 1,870  | 390    | 118   | 47    | 34    |
| 9     | 39    | 533     | 1,470   | 19,500  | 7,520   | 17,200  | 4,540   | 1,860  | 379    | 115   | 47    | 33    |
| 10    | 40    | 432     | 1,210   | 13,700  | 7,500   | 20,900  | 5,340   | 1,860  | 366    | 114   | 47    | 33    |
| 11    | 40    | 294     | 1,010   | 9,920   | 6,320   | 16,000  | 8,180   | 1,830  | 344    | 112   | 46    | 33    |
| 12    | 40    | 257     | 880     | 7,650   | 4,400   | 11,700  | 11,800  | 1,710  | 330    | 112   | 46    | 31    |
| 13    | 40    | 590     | 804     | 6,250   | 3,740   | 11,200  | 8,540   | 1,570  | 314    | 110   | 46    | 31    |
| 14    | 41    | 5,210   | 733     | 5,380   | 3,140   | 10,900  | 6,300   | 1,480  | 294    | 110   | 40    | 32    |
| 15    | 41    | 4,680   | 675     | 4,800   | 2,760   | 9,920   | 5,340   | 1,380  | 286    | 112   | 39    | 33    |
| 16    | 40    | 3,100   | 621     | 4,340   | 2,430   | 10,700  | 5,180   | 1,290  | 271    | 109   | 39    | 34    |
| 17    | 40    | 1,490   | 572     | 3,900   | 2,170   | 9,320   | 5,360   | 1,210  | 254    | 106   | 37    | 35    |
| 18    | 39    | 8,700   | 549     | 3,400   | 2,050   | 7,850   | 5,160   | 1,120  | 244    | 100   | 37    | 42    |
| 19    | 39    | 10,200  | 520     | 3,010   | 3,290   | 8,840   | 4,420   | 1,090  | 228    | 96    | 37    | 43    |
| 20    | 39    | 4,470   | 509     | 2,600   | 5,260   | 7,580   | 3,700   | 1,100  | 214    | 86    | 36    | 43    |
| 21    | 39    | 2,350   | 484     | 2,260   | 3,820   | 6,600   | 3,220   | 1,100  | 204    | 82    | 36    | 44    |
| 22    | 39    | 1,580   | 472     | 2,110   | 3,270   | 5,950   | 2,860   | 1,060  | 199    | 79    | 35    | 46    |
| 23    | 39    | 1,250   | 470     | 2,120   | 4,620   | 5,360   | 2,730   | 971    | 192    | 78    | 35    | 47    |
| 24    | 39    | 9,240   | 994     | 1,840   | 5,420   | 5,020   | 2,760   | 854    | 184    | 76    | 34    | 45    |
| 25    | 39    | 11,100  | 6,300   | 1,660   | 6,420   | 4,960   | 2,840   | 757    | 180    | 66    | 34    | 42    |
| 26    | 39    | 7,570   | 4,230   | 1,510   | 6,520   | 4,900   | 2,910   | 746    | 176    | 65    | 32    | 40    |
| 27    | 39    | 6,370   | 2,660   | 1,400   | 5,640   | 4,740   | 2,660   | 729    | 168    | 63    | 32    | 39    |
| 28    | 39    | 4,600   | 16,300  | 1,260   | 4,920   | 4,940   | 2,280   | 696    | 161    | 60    | 32    | 39    |
| 29    | 39    | 3,600   | 20,300  | 2,940   | -----   | 5,080   | 2,080   | 666    | 154    | 59    | 32    | 38    |
| 30    | 39    | 2,900   | 12,900  | 12,600  | -----   | 5,220   | 1,960   | 619    | 150    | 56    | 33    | 38    |
| 31    | 39    | -----   | 12,000  | 8,180   | -----   | 5,340   | -----   | 589    | -----  | 56    | 34    | ----- |
| TOTAL | 1,216 | 91,197  | 102,913 | 516,630 | 181,780 | 247,990 | 140,640 | 42,667 | 8,806  | 3,084 | 1,275 | 1,131 |
| MEAN  | 39.2  | 3,040   | 3,320   | 16,670  | 6,492   | 8,000   | 4,688   | 1,376  | 294    | 99.5  | 41.1  | 37.7  |
| AC-FT | 2,410 | 180,900 | 204,100 | 1,025M  | 360,600 | 491,900 | 279,000 | 84,630 | 17,470 | 6,120 | 2,530 | 2,240 |

CALENDAR YEAR 1965 MAX 90,000 MIN 38 MEAN 3,815 AC-FT 2,762M  
WATER YEAR 1965-66 MAX 120,000 MIN 31 MEAN 3,669 AC-FT 2,657M

Peak discharge (base, 41,000 cfs).--Jan. 4 (2300) 163,000 cfs (43.33 ft).

Note.--No gage-height record Oct. 1 to Nov. 3.

11-4755. South Fork Eel River near Branscomb, Calif.

Location.--Lat 39°43'09", long 123°39'06", in NW¼ sec.32, T.22 N., R.16 W., on right bank 0.4 mile upstream from Jack of Hearts Creek and 4.7 miles north of Branscomb.

Drainage area.--43.9 sq mi.

Records available.--October 1946 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 1,383.63 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Average discharge.--20 years, 172 cfs (124,500 acre-ft per year).

Extremes.--Maximum discharge during year, 16,400 cfs Jan. 4 (gage height, 14.68 ft), from rating curve extended above 4,600 cfs as explained below; minimum, 0.90 cfs Sept. 7.

1946-66: Maximum discharge, 20,100 cfs Dec. 22, 1955 (gage height, 16.20 ft), from rating curve extended above 4,600 cfs on basis of slope-area measurement of maximum flow; minimum, 0.90 cfs Sept. 7, 1966.

Remarks.--Records good. No regulation or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.  | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG. | SEPT. |
|-------|-------|---------|-------|--------|--------|--------|-------|-------|-------|-------|------|-------|
| 1     | 2.5   | 2.9     | 68    | 425    | 280    | 203    | 90    | 47    | 19    | 8.2   | 3.9  | 3.1   |
| 2     | 2.2   | 2.9     | 56    | 450    | 262    | 192    | 82    | 45    | 18    | 8.2   | 3.4  | 2.7   |
| 3     | 2.4   | 3.8     | 46    | 2,070  | 242    | 170    | 80    | 42    | 19    | 8.2   | 3.4  | 2.2   |
| 4     | 2.7   | 9.5     | 42    | 11,100 | 390    | 155    | 75    | 41    | 18    | 8.2   | 2.9  | 1.6   |
| 5     | 5.9   | 8.5     | 39    | 5,380  | 384    | 168    | 72    | 40    | 18    | 8.2   | 2.7  | 1.4   |
| 6     | 5.1   | 7.1     | 34    | 2,380  | 425    | 211    | 67    | 38    | 15    | 7.7   | 2.7  | 1.3   |
| 7     | 4.1   | 14      | 31    | 1,100  | 355    | 228    | 62    | 37    | 12    | 7.7   | 2.4  | 1.3   |
| 8     | 3.6   | 40      | 29    | 762    | 304    | 345    | 59    | 36    | 12    | 7.7   | 2.2  | 1.3   |
| 9     | 3.1   | 17      | 27    | 526    | 253    | 646    | 58    | 35    | 13    | 7.7   | 1.9  | 1.4   |
| 10    | 3.1   | 12      | 24    | 412    | 217    | 910    | 80    | 34    | 15    | 7.7   | 2.2  | 1.6   |
| 11    | 3.3   | 11      | 24    | 329    | 182    | 610    | 244   | 33    | 15    | 7.7   | 2.2  | 1.9   |
| 12    | 3.1   | 27      | 23    | 265    | 160    | 464    | 368   | 31    | 15    | 7.7   | 1.9  | 1.7   |
| 13    | 2.9   | 76      | 20    | 222    | 140    | 425    | 230   | 30    | 14    | 7.7   | 2.2  | 1.7   |
| 14    | 4.8   | 95      | 19    | 188    | 129    | 348    | 180   | 28    | 13    | 7.7   | 2.2  | 1.9   |
| 15    | 6.7   | 58      | 18    | 162    | 118    | 355    | 152   | 27    | 12    | 7.0   | 1.7  | 2.2   |
| 16    | 5.1   | 31      | 17    | 138    | 107    | 368    | 134   | 26    | 12    | 6.6   | 1.7  | 2.2   |
| 17    | 4.4   | 48      | 17    | 124    | 99     | 323    | 124   | 25    | 12    | 5.9   | 1.7  | 1.9   |
| 18    | 4.4   | 203     | 17    | 112    | 92     | 301    | 118   | 25    | 12    | 5.5   | 1.6  | 4.8   |
| 19    | 4.4   | 153     | 16    | 99     | 152    | 352    | 107   | 24    | 11    | 5.2   | 1.4  | 4.8   |
| 20    | 4.4   | 74      | 15    | 90     | 138    | 295    | 101   | 23    | 11    | 4.8   | 1.4  | 3.9   |
| 21    | 4.1   | 46      | 15    | 84     | 124    | 283    | 93    | 22    | 11    | 4.8   | 1.6  | 3.1   |
| 22    | 4.1   | 36      | 15    | 90     | 134    | 244    | 88    | 21    | 11    | 4.5   | 1.6  | 2.9   |
| 23    | 3.8   | 43      | 14    | 84     | 160    | 217    | 80    | 21    | 11    | 4.1   | 1.4  | 2.7   |
| 24    | 3.6   | 354     | 194   | 75     | 239    | 190    | 75    | 21    | 11    | 4.1   | 1.7  | 2.7   |
| 25    | 3.6   | 348     | 228   | 70     | 286    | 168    | 70    | 19    | 11    | 3.9   | 1.7  | 2.9   |
| 26    | 3.3   | 280     | 160   | 64     | 295    | 145    | 65    | 20    | 9.6   | 4.1   | 1.7  | 2.7   |
| 27    | 3.1   | 247     | 129   | 62     | 259    | 131    | 60    | 19    | 9.6   | 4.1   | 1.9  | 2.7   |
| 28    | 3.1   | 160     | 862   | 58     | 225    | 122    | 56    | 19    | 9.1   | 3.9   | 2.2  | 2.7   |
| 29    | 3.1   | 114     | 790   | 142    | -----  | 112    | 53    | 19    | 9.1   | 3.9   | 1.7  | 2.4   |
| 30    | 3.1   | 87      | 618   | 198    | -----  | 103    | 50    | 18    | 8.7   | 3.9   | 2.7  | 1.9   |
| 31    | 2.9   | -----   | 600   | 170    | -----  | 97     | ----- | 19    | ----- | 3.9   | 3.6  | ----- |
| TOTAL | 116.0 | 2,608.7 | 4,207 | 27,431 | 6,151  | 8,881  | 3,173 | 885   | 387.1 | 190.5 | 67.5 | 71.6  |
| MEAN  | 3.74  | 87.0    | 136   | 885    | 220    | 286    | 106   | 28.5  | 12.9  | 6.15  | 2.18 | 2.39  |
| AC-FT | 230   | 5,170   | 8,340 | 54,410 | 12,200 | 17,620 | 6,290 | 1,760 | 768   | 378   | 134  | 142   |

|                    |     |        |     |     |      |     |       |         |
|--------------------|-----|--------|-----|-----|------|-----|-------|---------|
| CALENDAR YEAR 1965 | MAX | 2,300  | MIN | 1.9 | MEAN | 107 | AC-FT | 77,100  |
| WATER YEAR 1965-66 | MAX | 11,100 | MIN | 1.3 | MEAN | 148 | AC-FT | 107,400 |

Peak discharge (base, 2,000 cfs).--Jan. 4 (1700) 16,400 cfs (14.68 ft).

11-4757. Tenmile Creek near Laytonville, Calif.

Location.--Lat 39°45'45", long 123°32'30", in NW¼ sec.16, T.22 N., R.15 W., on right bank 0.1 mile downstream from Step Gulch Creek and 6.0 miles northwest of Laytonville.

Drainage area.--50.3 sq mi.

Records available.--October 1957 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,427.42 ft above mean sea level, datum of 1929, supplementary adjustment of 1960. Prior to Mar. 24, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 153 cfs (110,800 acre-ft per year).

Extremes.--Maximum discharge during year, 8,160 cfs Jan. 4 (gage height, 15.26 ft, from high-water mark); no flow Sept. 30.

1957-66: Maximum discharge, 14,500 cfs Dec. 22, 1964 (gage height, 21.3 ft, from floodmarks), from rating curve extended above 4,300 cfs on basis of slope-area measurement at gage height 22.9 ft; no flow at times each year except 1960, 1963-65.

Flood of Dec. 22, 1955, reached a stage of 22.9 ft, from floodmarks (discharge, 16,300 cfs by slope-area measurement of maximum flow).

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|------|---------|--------|--------|--------|--------|-------|-------|-------|------|-------|-------|
| 1     | 1.2  | 2.0     | 53     | 700    | 506    | 152    | 64    | 29    | 11    | 4.0  | 1.2   | 0.60  |
| 2     | 1.0  | 2.0     | 45     | 600    | 263    | 153    | 60    | 27    | 12    | 3.8  | 1.1   | .60   |
| 3     | 1.0  | 2.7     | 38     | 2,500  | 275    | 130    | 56    | 26    | 12    | 3.8  | 1.0   | .50   |
| 4     | 1.0  | 5.1     | 35     | 5,500  | 784    | 120    | 51    | 25    | 11    | 3.7  | .90   | .40   |
| 5     | 2.0  | 5.1     | 32     | 3,120  | 488    | 300    | 49    | 25    | 11    | 3.7  | .80   | .30   |
| 6     | 2.6  | 3.7     | 29     | 1,620  | 520    | 440    | 47    | 25    | 11    | 3.3  | .80   | .30   |
| 7     | 1.9  | 17      | 27     | 756    | 340    | 388    | 44    | 24    | 12    | 3.3  | .80   | .30   |
| 8     | 1.7  | 28      | 25     | 648    | 250    | 728    | 43    | 21    | 11    | 3.3  | .70   | .20   |
| 9     | 1.6  | 9.4     | 23     | 415    | 189    | 1,110  | 49    | 21    | 10    | 3.3  | .60   | .30   |
| 10    | 1.6  | 6.2     | 21     | 310    | 161    | 814    | 104   | 21    | 9.4   | 3.3  | .50   | .30   |
| 11    | 1.7  | 5.8     | 21     | 240    | 136    | 488    | 288   | 19    | 9.1   | 3.0  | .50   | .30   |
| 12    | 1.6  | 55      | 23     | 189    | 124    | 370    | 262   | 18    | 0.3   | 2.9  | .40   | .20   |
| 13    | 1.5  | 160     | 20     | 159    | 108    | 410    | 127   | 19    | 7.7   | 2.9  | .40   | .30   |
| 14    | 2.3  | 145     | 18     | 139    | 98     | 300    | 95    | 20    | 6.9   | 2.7  | .40   | .30   |
| 15    | 3.0  | 101     | 17     | 124    | 89     | 346    | 81    | 17    | 6.5   | 2.7  | .30   | .20   |
| 16    | 2.6  | 38      | 16     | 109    | 83     | 367    | 75    | 16    | 6.0   | 2.6  | .30   | .20   |
| 17    | 2.3  | 88      | 16     | 98     | 78     | 268    | 67    | 16    | 6.0   | 2.5  | .30   | .20   |
| 18    | 2.2  | 424     | 14     | 92     | 76     | 233    | 61    | 15    | 5.6   | 2.2  | .30   | .30   |
| 19    | 2.4  | 208     | 14     | 84     | 235    | 319    | 55    | 15    | 5.3   | 2.0  | .30   | .30   |
| 20    | 2.3  | 72      | 13     | 78     | 140    | 214    | 50    | 14    | 5.3   | 1.8  | .30   | .30   |
| 21    | 2.2  | 44      | 13     | 74     | 107    | 197    | 49    | 14    | 5.6   | 1.8  | .30   | .20   |
| 22    | 1.9  | 33      | 13     | 90     | 140    | 162    | 46    | 14    | 5.8   | 1.7  | .30   | .10   |
| 23    | 1.8  | 62      | 12     | 81     | 212    | 140    | 43    | 13    | 5.6   | 1.6  | .30   | .10   |
| 24    | 1.7  | 676     | 460    | 72     | 367    | 120    | 41    | 12    | 5.1   | 1.5  | .30   | .10   |
| 25    | 1.7  | 520     | 397    | 67     | 316    | 111    | 38    | 12    | 4.7   | 1.5  | .30   | .10   |
| 26    | 1.5  | 364     | 161    | 62     | 285    | 99     | 36    | 12    | 4.6   | 1.4  | .30   | .10   |
| 27    | 1.5  | 263     | 140    | 58     | 206    | 90     | 35    | 12    | 4.4   | 1.4  | .50   | .10   |
| 28    | 1.5  | 125     | 1,620  | 54     | 167    | 84     | 33    | 11    | 4.4   | 1.4  | .50   | .10   |
| 29    | 1.7  | 87      | 1,050  | 382    | -----  | 78     | 32    | 11    | 4.2   | 1.4  | .40   | .10   |
| 30    | 1.8  | 68      | 1,100  | 391    | -----  | 73     | 30    | 11    | 4.2   | 1.3  | .50   | 0     |
| 31    | 1.9  | -----   | 1,250  | 212    | -----  | 68     | ----- | 11    | 1.3   | .70  | ----- | ----- |
| TOTAL | 56.7 | 3,620.0 | 6,716  | 19,024 | 6,743  | 8,892  | 2,111 | 546   | 225.7 | 77.1 | 16.30 | 7.40  |
| MEAN  | 1.83 | 121     | 217    | 614    | 241    | 287    | 70.4  | 17.6  | 7.52  | 2.49 | .53   | .25   |
| AC-FT | 112  | 7,180   | 13,320 | 37,730 | 13,370 | 17,640 | 4,190 | 1,080 | 448   | 153  | 32    | 15    |

|                    |     |       |     |     |      |     |       |        |
|--------------------|-----|-------|-----|-----|------|-----|-------|--------|
| CALENDAR YEAR 1965 | MAX | 3,050 | MIN | .60 | MEAN | 111 | AC-FT | 80,660 |
| WATER YEAR 1965-66 | MAX | 5,500 | MIN | 0   | MEAN | 132 | AC-FT | 95,270 |

Peak discharge (base, 5,000 cfs).--Jan. 4 (1600) 8,160 cfs (15.26 ft).

Note.--No gage-height record Dec. 29 to Jan. 4.

## EEL RIVER BASIN

11-4758. South Fork Eel River at Leggett, Calif.

Location.--Lat 39°52'30", long 123°43'10", in NE¼SE¼ sec.3, T.23 N., R.17 W., on right bank near Standish-Hickey State Park at Leggett, 0.2 mile upstream from Rock Creek, and 0.5 mile northwest of Leggett.

Drainage area.--248 sq mi.

Records available.--October 1965 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage 693.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1960.

Extremes.--Maximum discharge during year, 72,700 cfs Jan. 4 (25.4 ft, from floodmarks), from rating curve extended above 21,000 cfs on basis of slope-area measurement at gage height 26.13 ft; minimum daily, 17 cfs Aug. 5, 9, 23-25.

Flood of Dec. 22, 1964, reached a stage of 26.13 ft, from floodmarks (discharge, 78,700 cfs by slope-area measurement of maximum flow).

Remarks.--Records good. No diversion or regulation above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.   | MAR.   | APR.   | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1     | 20    | 22     | 350    | 2,170   | 2,100  | 1,170  | 548    | 229   | 110   | 57    | 34    | 35    |
| 2     | 20    | 22     | 295    | 2,020   | 1,640  | 1,110  | 521    | 217   | 108   | 54    | 36    | 34    |
| 3     | 20    | 30     | 266    | 3,890   | 1,550  | 990    | 496    | 209   | 121   | 54    | 36    | 31    |
| 4     | 20    | 49     | 236    | 49,800  | 3,080  | 890    | 470    | 205   | 136   | 52    | 19    | 25    |
| 5     | 32    | 57     | 212    | 26,600  | 2,620  | 1,240  | 449    | 199   | 133   | 51    | 17    | 23    |
| 6     | 30    | 52     | 190    | 12,600  | 2,770  | 1,510  | 429    | 199   | 132   | 48    | 20    | 20    |
| 7     | 28    | 58     | 174    | 5,870   | 2,330  | 1,530  | 415    | 191   | 123   | 44    | 20    | 19    |
| 8     | 27    | 100    | 161    | 4,350   | 1,780  | 2,650  | 394    | 190   | 118   | 49    | 19    | 19    |
| 9     | 26    | 135    | 150    | 2,900   | 1,520  | 4,120  | 388    | 184   | 115   | 51    | 17    | 20    |
| 10    | 25    | 90     | 139    | 2,270   | 1,360  | 4,680  | 483    | 182   | 115   | 53    | 19    | 20    |
| 11    | 24    | 78     | 131    | 1,760   | 1,140  | 3,020  | 819    | 177   | 114   | 54    | 18    | 20    |
| 12    | 24    | 96     | 131    | 1,540   | 1,000  | 2,180  | 1,370  | 174   | 110   | 51    | 19    | 20    |
| 13    | 23    | 230    | 123    | 1,360   | 884    | 2,120  | 850    | 168   | 107   | 50    | 20    | 21    |
| 14    | 28    | 490    | 114    | 1,160   | 800    | 1,680  | 682    | 167   | 104   | 49    | 22    | 22    |
| 15    | 30    | 340    | 108    | 1,010   | 728    | 1,680  | 588    | 164   | 100   | 48    | 22    | 21    |
| 16    | 29    | 260    | 101    | 896     | 665    | 1,870  | 524    | 161   | 97    | 46    | 23    | 19    |
| 17    | 28    | 215    | 97     | 812     | 620    | 1,690  | 483    | 157   | 97    | 44    | 21    | 18    |
| 18    | 29    | 860    | 94     | 746     | 585    | 1,540  | 445    | 149   | 94    | 41    | 20    | 41    |
| 19    | 28    | 1,040  | 90     | 680     | 1,040  | 1,870  | 411    | 141   | 91    | 38    | 18    | 48    |
| 20    | 27    | 400    | 86     | 625     | 1,030  | 1,560  | 380    | 138   | 88    | 34    | 20    | 42    |
| 21    | 26    | 300    | 85     | 585     | 836    | 1,480  | 359    | 132   | 85    | 33    | 19    | 36    |
| 22    | 26    | 250    | 84     | 605     | 830    | 1,340  | 345    | 130   | 86    | 30    | 18    | 32    |
| 23    | 26    | 240    | 82     | 605     | 1,050  | 1,230  | 328    | 125   | 83    | 27    | 17    | 28    |
| 24    | 26    | 1,450  | 929    | 535     | 1,440  | 1,080  | 313    | 121   | 88    | 25    | 17    | 26    |
| 25    | 25    | 2,000  | 1,250  | 506     | 1,510  | 983    | 298    | 119   | 86    | 23    | 17    | 26    |
| 26    | 24    | 1,500  | 829    | 486     | 1,600  | 872    | 283    | 117   | 77    | 22    | 20    | 25    |
| 27    | 23    | 1,200  | 678    | 462     | 1,470  | 782    | 272    | 116   | 72    | 22    | 22    | 24    |
| 28    | 22    | 600    | 3,500  | 438     | 1,320  | 734    | 260    | 113   | 67    | 23    | 23    | 23    |
| 29    | 22    | 475    | 4,700  | 1,160   | -----  | 678    | 250    | 112   | 62    | 22    | 23    | 23    |
| 30    | 22    | 415    | 3,200  | 1,790   | -----  | 634    | 238    | 112   | 60    | 24    | 29    | 21    |
| 31    | 22    | -----  | 3,000  | 1,390   | -----  | 591    | -----  | 112   | ----- | 28    | 33    | ----- |
| TOTAL | 782   | 13,054 | 21,585 | 131,621 | 39,298 | 49,504 | 14,091 | 4,910 | 2,979 | 1,247 | 678   | 782   |
| MEAN  | 25.2  | 435    | 696    | 4,246   | 1,404  | 1,597  | 470    | 158   | 99.3  | 40.2  | 21.9  | 26.1  |
| AC-FT | 1,550 | 25,890 | 42,810 | 261,100 | 77,950 | 98,190 | 27,950 | 9,740 | 5,910 | 2,470 | 1,340 | 1,550 |

|               |         |     |        |     |    |      |     |       |         |
|---------------|---------|-----|--------|-----|----|------|-----|-------|---------|
| CALENDAR YEAR | 1965    | MAX | -      | MIN | -  | MEAN | -   | AC-FT | -       |
| WATER YEAR    | 1965-66 | MAX | 49,800 | MIN | 17 | MEAN | 769 | AC-FT | 556,500 |

Peak discharge (base, 7,000 cfs).--Jan. 4 (1830) 72,700 cfs (25.4 ft).

Note.--No gage-height record Oct. 6 to Dec. 2, Jan. 4-6.

11-4759.4 East Branch South Fork Eel River near Garberville, Calif.

Location.--Lat 40°04'27", long 123°46'08", in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.31, T.4 S., R.4 E., on left bank just upstream from Panther Canyon, 1.9 miles upstream from mouth, and 2.3 miles southeast of Garberville.

Drainage area.--74.3 sq mi.

Records available.--June to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 385.32 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum daily discharge during period, 17 cfs June 21-23; minimum daily, 3.4 cfs Sept. 6, 29, 30.

Remarks.--Records good. No regulation; small diversion above station for irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.  | DEC. | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY  | AUG.  | SEPT. |
|-------|------|-------|------|------|------|------|------|-----|------|-------|-------|-------|
| 1     |      |       |      |      |      |      |      |     | -    | 15    | 5.8   | 5.8   |
| 2     |      |       |      |      |      |      |      |     | -    | 15    | 5.8   | 5.2   |
| 3     |      |       |      |      |      |      |      |     | -    | 15    | 5.8   | 5.2   |
| 4     |      |       |      |      |      |      |      |     | -    | 15    | 6.5   | 4.6   |
| 5     |      |       |      |      |      |      |      |     | -    | 15    | 6.5   | 4.0   |
| 6     |      |       |      |      |      |      |      |     | -    | 13    | 6.5   | 3.4   |
| 7     |      |       |      |      |      |      |      |     | -    | 12    | 6.5   | 4.0   |
| 8     |      |       |      |      |      |      |      |     | -    | 12    | 6.5   | 4.0   |
| 9     |      |       |      |      |      |      |      |     | -    | 12    | 6.5   | 4.0   |
| 10    |      |       |      |      |      |      |      |     | -    | 12    | 7.1   | 4.0   |
| 11    |      |       |      |      |      |      |      |     | -    | 11    | 7.1   | 4.0   |
| 12    |      |       |      |      |      |      |      |     | -    | 12    | 6.5   | 4.0   |
| 13    |      |       |      |      |      |      |      |     | -    | 11    | 6.5   | 4.0   |
| 14    |      |       |      |      |      |      |      |     | -    | 10    | 6.5   | 4.0   |
| 15    |      |       |      |      |      |      |      |     | -    | 10    | 6.5   | 4.0   |
| 16    |      |       |      |      |      |      |      |     | -    | 10    | 6.5   | 4.0   |
| 17    |      |       |      |      |      |      |      |     | -    | 10    | 6.5   | 4.0   |
| 18    |      |       |      |      |      |      |      |     | -    | 9.5   | 7.1   | 15    |
| 19    |      |       |      |      |      |      |      |     | -    | 9.5   | 7.1   | 12    |
| 20    |      |       |      |      |      |      |      |     | -    | 8.9   | 7.1   | 8.3   |
| 21    |      |       |      |      |      |      |      |     | 17   | 8.3   | 7.1   | 6.5   |
| 22    |      |       |      |      |      |      |      |     | 17   | 7.7   | 7.1   | 5.8   |
| 23    |      |       |      |      |      |      |      |     | 17   | 7.1   | 7.1   | 4.6   |
| 24    |      |       |      |      |      |      |      |     | 16   | 7.7   | 7.1   | 4.6   |
| 25    |      |       |      |      |      |      |      |     | 16   | 7.7   | 7.1   | 4.6   |
| 26    |      |       |      |      |      |      |      |     | 16   | 7.1   | 6.5   | 4.0   |
| 27    |      |       |      |      |      |      |      |     | 15   | 7.1   | 6.5   | 4.0   |
| 28    |      |       |      |      |      |      |      |     | 15   | 6.5   | 5.8   | 4.0   |
| 29    |      |       |      |      |      |      |      |     | 15   | 6.5   | 6.5   | 3.4   |
| 30    |      |       |      |      |      |      |      |     | 15   | 6.5   | 8.3   | 3.4   |
| 31    |      | ----- |      |      |      |      |      |     | -    | 6.5   | 8.3   | ----- |
| TOTAL |      |       |      |      |      |      |      |     | -    | 316.6 | 208.3 | 152.4 |
| MEAN  |      |       |      |      |      |      |      |     | -    | 10.2  | 6.72  | 5.08  |
| AC-FT |      |       |      |      |      |      |      |     | -    | 628   | 413   | 302   |

11-4765. South Fork Eel River near Miranda, Calif.

Location.--Lat 40°10'55", long 123°46'30", in NW¼ sec.30, T.3 S., R.4 E., on right bank at Sylvandale Campgrounds on U. S. Highway 101, 0.5 mile upstream from Rocky Glen Creek, 4.3 miles southeast of Miranda, and 20 miles upstream from mouth.

Drainage area.--537 sq mi.

Records available.--October 1939 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 217.57 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Nov. 2, 1940, staff gage at site 200 ft upstream at datum 0.8 ft higher. Nov. 2, 1940, to Oct. 31, 1944, staff gage at present site and datum. Oct. 31, 1944 to Dec. 22, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 1,835 cfs (1,328,000 acre-ft per year).

Extremes.--Maximum discharge during year, 107,000 cfs Jan. 4 (gage height, 32.92 ft), from rating curve extended above 52,000 cfs as explained below; minimum daily, 33 cfs Aug. 25.

1940-66: Maximum discharge, 199,000 cfs Dec. 22, 1964 (gage height, 46.0 ft, from floodmarks), from rating curve extended above 52,000 cfs on basis of slope-area measurement at gage height 42.7 ft; minimum observed, 9 cfs Oct. 17, 1944.

Remarks.--Records good. Occasional storage and release for recreation use during summer months at Benbow Dam. No diversion above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.    | JAN.    | FEB.    | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|---------|---------|---------|---------|--------|--------|-------|-------|-------|-------|
| 1     | 46    | 48     | 810     | 5,230   | 2,990   | 2,460   | 1,010  | 495    | 190   | 100   | 58    | 49    |
| 2     | 45    | 48     | 694     | 4,820   | 2,990   | 2,350   | 916    | 485    | 190   | 100   | 54    | 51    |
| 3     | 47    | 53     | 609     | 21,100  | 2,990   | 2,090   | 860    | 465    | 200   | 100   | 53    | 48    |
| 4     | 47    | 97     | 539     | 84,400  | 4,880   | 1,880   | 860    | 445    | 215   | 98    | 53    | 46    |
| 5     | 55    | 122    | 489     | 58,700  | 6,280   | 2,120   | 860    | 435    | 202   | 96    | 51    | 45    |
| 6     | 65    | 103    | 446     | 31,200  | 6,220   | 2,660   | 916    | 430    | 195   | 91    | 49    | 40    |
| 7     | 62    | 108    | 408     | 15,900  | 5,170   | 3,100   | 916    | 420    | 187   | 89    | 48    | 36    |
| 8     | 59    | 252    | 378     | 10,500  | 4,070   | 6,140   | 916    | 410    | 182   | 87    | 45    | 37    |
| 9     | 57    | 315    | 355     | 7,060   | 3,260   | 9,870   | 924    | 400    | 178   | 87    | 46    | 38    |
| 10    | 55    | 204    | 333     | 5,330   | 2,740   | 11,300  | 1,040  | 390    | 172   | 89    | 46    | 38    |
| 11    | 54    | 160    | 315     | 4,160   | 2,370   | 7,680   | 1,670  | 375    | 168   | 87    | 46    | 37    |
| 12    | 52    | 206    | 308     | 3,250   | 2,030   | 5,390   | 2,940  | 365    | 165   | 87    | 46    | 39    |
| 13    | 50    | 659    | 292     | 2,770   | 1,750   | 4,970   | 2,160  | 355    | 160   | 87    | 46    | 77    |
| 14    | 53    | 1,140  | 274     | 2,430   | 1,600   | 3,980   | 1,640  | 350    | 155   | 85    | 47    | 79    |
| 15    | 61    | 803    | 258     | 2,050   | 1,480   | 3,710   | 1,380  | 340    | 150   | 83    | 47    | 79    |
| 16    | 58    | 570    | 243     | 1,840   | 1,320   | 4,050   | 1,220  | 325    | 145   | 85    | 44    | 77    |
| 17    | 58    | 441    | 231     | 1,670   | 1,210   | 3,620   | 1,100  | 315    | 140   | 84    | 43    | 74    |
| 18    | 59    | 2,040  | 221     | 1,550   | 1,130   | 3,140   | 964    | 300    | 137   | 82    | 42    | 86    |
| 19    | 58    | 2,500  | 213     | 1,390   | 2,130   | 3,680   | 908    | 290    | 132   | 77    | 39    | 65    |
| 20    | 56    | 1,060  | 205     | 1,270   | 2,270   | 3,200   | 850    | 280    | 125   | 77    | 39    | 68    |
| 21    | 55    | 690    | 200     | 1,160   | 1,690   | 2,900   | 800    | 270    | 122   | 74    | 40    | 58    |
| 22    | 55    | 512    | 195     | 1,190   | 1,700   | 2,690   | 760    | 260    | 120   | 70    | 39    | 55    |
| 23    | 54    | 503    | 191     | 1,190   | 2,290   | 2,340   | 720    | 250    | 118   | 66    | 37    | 53    |
| 24    | 54    | 3,700  | 1,030   | 990     | 3,090   | 2,080   | 690    | 240    | 115   | 67    | 35    | 50    |
| 25    | 52    | 4,840  | 2,790   | 916     | 3,600   | 1,800   | 660    | 235    | 112   | 62    | 33    | 51    |
| 26    | 50    | 3,410  | 1,680   | 860     | 3,840   | 1,630   | 630    | 228    | 108   | 61    | 37    | 50    |
| 27    | 48    | 3,020  | 1,280   | 852     | 3,170   | 1,510   | 600    | 220    | 108   | 59    | 39    | 47    |
| 28    | 47    | 1,700  | 10,500  | 852     | 2,780   | 1,370   | 570    | 212    | 102   | 59    | 39    | 46    |
| 29    | 48    | 1,190  | 12,500  | 3,480   | -----   | 1,250   | 540    | 205    | 100   | 58    | 40    | 45    |
| 30    | 48    | 948    | 8,100   | 5,510   | -----   | 1,160   | 515    | 198    | 100   | 51    | 47    | 43    |
| 31    | 47    | -----  | 7,390   | 3,480   | -----   | 1,080   | -----  | 192    | ----- | 58    | 48    | ----- |
| TOTAL | 1,655 | 31,442 | 53,477  | 287,100 | 81,040  | 107,200 | 30,535 | 10,180 | 4,493 | 2,456 | 1,376 | 1,607 |
| MEAN  | 53.4  | 1,048  | 1,725   | 9,261   | 2,894   | 3,458   | 1,018  | 328    | 150   | 79.2  | 44.4  | 53.6  |
| AC-FT | 3,280 | 62,360 | 106,100 | 569,500 | 160,700 | 212,600 | 60,570 | 20,190 | 8,910 | 4,870 | 2,730 | 3,190 |

CALENDAR YEAR 1965 MAX 16,000 MIN 43 MEAN 1,135 AC-FT 821,700  
 WATER YEAR 1965-66 MAX 84,400 MIN 33 MEAN 1,678 AC-FT 1,215M

Peak discharge (base, 15,000 cfs, revised).--Dec. 28 (2030) 17,800 cfs (13.00 ft); Jan. 4 (2000) 107,000 cfs (32.92 ft).

Note.--No gage-height record Apr. 20 to June 24.

11-4766. Bull Creek near Weott, Calif.

Location.--Lat 40°21'05", long 124°00'10", in SW 1/4 sec. 30, T.1 S., R.2 E., on left bank 0.2 mile downstream from Albee Creek, 4.5 miles northwest of Weott, and 4.6 miles upstream from mouth.

Drainage area.--28.1 sq mi.

Records available.--October 1960 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 269.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1964, graphic water-stage recorder, and Jan. 14 to Aug. 10, 1965, wire-weight gage at site 150 ft downstream at datum 8.90 ft ~~higher~~ *lower*.

Average discharge.--6 years, 113 cfs (81,810 acre-ft per year).

Extremes.--Maximum discharge during year, 5,000 cfs Jan. 4; minimum daily, 2.0 cfs Oct. 1-3, 11-13, 26, 29, Sept. 30.

1960-66: Maximum discharge, 6,520 cfs Dec. 22, 1964 (gage height, 20.6 ft, from floodmarks, site and datum then in use), from rating curve extended above 2,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.90 cfs Oct. 20, 1964.

Remarks.--Records good prior to Nov. 18, poor thereafter. Minor diversions above station for domestic use.

Cooperation.--Sixteen discharge measurements furnished by California Division of Beaches and Parks.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.    | DEC.  | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|------|---------|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 2.0  | 2.1     | 88    | 300    | 360    | 150    | 80    | 30    | 14    | 7.4   | 4.0   | 3.2   |
| 2     | 2.0  | 2.1     | 74    | 450    | 310    | 135    | 74    | 29    | 14    | 7.4   | 3.9   | 3.2   |
| 3     | 2.0  | 3.9     | 64    | 1,500  | 340    | 125    | 70    | 28    | 14    | 7.2   | 3.9   | 3.1   |
| 4     | 2.1  | 14      | 74    | 3,500  | 580    | 115    | 66    | 27    | 15    | 7.2   | 3.8   | 3.1   |
| 5     | 3.2  | 5.2     | 90    | 2,000  | 560    | 130    | 60    | 26    | 14    | 7.2   | 3.7   | 3.0   |
| 6     | 2.5  | 3.9     | 80    | 950    | 530    | 170    | 56    | 29    | 14    | 7.8   | 3.7   | 2.9   |
| 7     | 2.1  | 7.7     | 68    | 600    | 510    | 300    | 53    | 30    | 14    | 8.2   | 3.7   | 2.7   |
| 8     | 2.1  | 9.7     | 58    | 400    | 400    | 560    | 52    | 29    | 13    | 8.2   | 3.6   | 2.6   |
| 9     | 2.1  | 6.4     | 52    | 250    | 320    | 800    | 60    | 28    | 13    | 8.0   | 3.6   | 2.6   |
| 10    | 2.1  | 6.1     | 46    | 190    | 250    | 500    | 80    | 27    | 12    | 7.4   | 3.6   | 2.6   |
| 11    | 2.0  | 6.5     | 42    | 150    | 200    | 400    | 150   | 26    | 12    | 7.0   | 3.6   | 2.6   |
| 12    | 2.0  | 22      | 38    | 125    | 165    | 360    | 110   | 25    | 11    | 6.7   | 3.6   | 2.6   |
| 13    | 2.0  | 58      | 36    | 105    | 140    | 340    | 88    | 24    | 11    | 6.4   | 3.6   | 2.6   |
| 14    | 3.2  | 63      | 33    | 92     | 120    | 290    | 80    | 23    | 11    | 6.2   | 3.6   | 2.6   |
| 15    | 2.9  | 52      | 31    | 83     | 110    | 270    | 74    | 22    | 10    | 6.0   | 3.6   | 2.6   |
| 16    | 2.6  | 39      | 29    | 76     | 100    | 290    | 68    | 22    | 9.6   | 6.0   | 3.6   | 2.7   |
| 17    | 2.6  | 45      | 27    | 64     | 90     | 270    | 66    | 21    | 9.4   | 5.8   | 3.6   | 3.0   |
| 18    | 2.4  | 307     | 26    | 56     | 84     | 240    | 63    | 21    | 9.2   | 5.8   | 3.6   | 4.2   |
| 19    | 2.4  | 246     | 24    | 50     | 130    | 270    | 60    | 20    | 9.2   | 5.6   | 3.6   | 4.6   |
| 20    | 2.4  | 150     | 23    | 45     | 125    | 250    | 58    | 19    | 9.0   | 5.3   | 3.6   | 4.0   |
| 21    | 2.4  | 90      | 22    | 37     | 100    | 230    | 54    | 19    | 9.0   | 5.0   | 3.5   | 3.5   |
| 22    | 2.3  | 61      | 21    | 31     | 120    | 200    | 52    | 18    | 8.8   | 4.7   | 3.5   | 3.1   |
| 23    | 2.2  | 50      | 20    | 27     | 170    | 180    | 48    | 17    | 8.5   | 4.4   | 3.4   | 2.9   |
| 24    | 2.2  | 180     | 240   | 22     | 200    | 160    | 45    | 17    | 9.0   | 4.6   | 3.2   | 2.7   |
| 25    | 2.1  | 350     | 190   | 18     | 210    | 145    | 42    | 16    | 8.7   | 4.9   | 3.1   | 2.5   |
| 26    | 2.0  | 270     | 140   | 16     | 230    | 130    | 39    | 16    | 8.2   | 4.5   | 3.1   | 2.4   |
| 27    | 2.1  | 200     | 150   | 14     | 200    | 115    | 37    | 15    | 8.0   | 4.2   | 3.0   | 2.2   |
| 28    | 2.1  | 150     | 820   | 12     | 170    | 105    | 35    | 15    | 7.6   | 4.1   | 3.0   | 2.1   |
| 29    | 2.0  | 125     | 760   | 500    | -----  | 98     | 33    | 15    | 7.4   | 4.1   | 3.0   | 2.1   |
| 30    | 2.1  | 105     | 520   | 460    | -----  | 92     | 31    | 15    | 7.4   | 4.0   | 3.1   | 2.0   |
| 31    | 2.1  | -----   | 400   | 300    | -----  | 86     | ----- | 15    | ----- | 4.0   | 3.2   | ----- |
| TOTAL | 70.3 | 2,630.6 | 4,286 | 12,423 | 6,824  | 7,506  | 1,884 | 684   | 321.0 | 185.4 | 108.6 | 86.7  |
| MEAN  | 2.27 | 87.7    | 138   | 401    | 244    | 242    | 62.8  | 22.1  | 10.7  | 5.98  | 3.50  | 2.89  |
| AC-FT | 139  | 5,220   | 8,500 | 24,640 | 13,540 | 14,890 | 3,740 | 1,360 | 637   | 368   | 215   | 172   |

CALENDAR YEAR 1965 MAX 1,100 MIN 2.0 MEAN 81.4 AC-FT 58,960

WATER YEAR 1965-66 MAX 3,500 MIN 2.0 MEAN 101 AC-FT 73,420

Peak discharge (base, 1,000 cfs).--Dec. 28 (time unknown) 1,500 cfs; Jan. 4 (time unknown) 5,000 cfs.

Note.--No gage-height record Nov. 18 to Sept. 30.

11-4770. Eel River at Scotia, Calif.

Location.--Lat 40°29'30", long 124°05'55", in SW¼ sec.5, T.1 N., R.1 E., near center of span in left pier of bridge on U. S. Highway 101, 0.5 mile north of Scotia and 6 miles upstream from Van Duzen River.

Drainage area.--3,113 sq mi.

Records available.--October 1910 to September 1966. Monthly discharge only for some periods and yearly estimates for 1915-16, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 35.50 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to September 1934, staff gage, September 1934 to Dec. 12, 1940, wire-weight gage, and Dec. 12, 1940 to Oct. 14, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--56 years, 7,067 cfs (5,116,000 acre-ft per year).

Extremes.--Maximum discharge during year, 311,000 cfs Jan. 5 (gage height, 45.47 ft); minimum daily, 98 cfs Sept. 19.  
1910-66: Maximum discharge, 752,000 cfs Dec. 23, 1964 (gage height, 72.0 ft, from floodmarks), from rating curve extended above 220,000 cfs on basis of maximum flow at upstream stations; minimum observed, 10 cfs Aug. 12-14, 1924.

Remarks.--Records good except those for period of no gage-height record. Flow slightly regulated by Lake Pillsbury (see sta 11-4700) and by diversion through Potter Valley powerhouse (see sta 11-4710). Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE   | JULY   | AUG.  | SEPT. |
|-------|-------|---------|---------|---------|---------|---------|---------|---------|--------|--------|-------|-------|
| 1     | 116   | 136     | 4,120   | 19,000  | 15,200  | 9,040   | 7,130   | 3,000   | 1,000  | 330    | 159   | 117   |
| 2     | 115   | 130     | 3,570   | 13,800  | 15,800  | 8,730   | 7,110   | 2,500   | 920    | 325    | 156   | 119   |
| 3     | 115   | 140     | 3,190   | 47,400  | 12,500  | 8,520   | 7,050   | 1,800   | 840    | 320    | 155   | 119   |
| 4     | 117   | 186     | 3,090   | 197,000 | 22,600  | 7,850   | 6,780   | 1,800   | 800    | 315    | 150   | 119   |
| 5     | 119   | 208     | 3,150   | 261,000 | 32,500  | 8,360   | 6,530   | 3,100   | 770    | 305    | 145   | 119   |
| 6     | 125   | 238     | 3,030   | 135,000 | 28,500  | 11,300  | 6,320   | 3,000   | 740    | 302    | 144   | 119   |
| 7     | 131   | 250     | 3,090   | 81,800  | 23,200  | 14,300  | 6,130   | 2,800   | 740    | 295    | 140   | 119   |
| 8     | 136   | 290     | 2,750   | 50,800  | 17,300  | 23,200  | 5,970   | 2,550   | 740    | 290    | 138   | 119   |
| 9     | 136   | 428     | 2,450   | 34,900  | 13,600  | 42,600  | 5,830   | 2,550   | 710    | 285    | 135   | 113   |
| 10    | 135   | 668     | 2,190   | 24,100  | 11,400  | 46,200  | 5,900   | 2,550   | 670    | 280    | 135   | 111   |
| 11    | 132   | 738     | 1,930   | 18,500  | 9,850   | 33,300  | 10,300  | 2,500   | 640    | 280    | 130   | 111   |
| 12    | 131   | 607     | 1,750   | 14,600  | 8,560   | 22,900  | 15,500  | 2,400   | 610    | 280    | 130   | 107   |
| 13    | 133   | 1,120   | 1,620   | 12,100  | 7,670   | 20,000  | 13,500  | 2,310   | 580    | 280    | 130   | 107   |
| 14    | 138   | 4,300   | 1,520   | 10,100  | 7,070   | 18,400  | 9,660   | 2,180   | 555    | 281    | 125   | 107   |
| 15    | 140   | 6,660   | 1,400   | 9,010   | 6,680   | 16,900  | 7,860   | 2,000   | 530    | 282    | 125   | 111   |
| 16    | 142   | 4,960   | 1,290   | 8,000   | 6,020   | 18,100  | 7,160   | 1,920   | 500    | 264    | 125   | 113   |
| 17    | 145   | 3,030   | 1,190   | 7,220   | 5,490   | 16,800  | 7,070   | 1,830   | 475    | 243    | 125   | 113   |
| 18    | 145   | 6,720   | 1,100   | 6,650   | 4,900   | 14,000  | 6,980   | 1,800   | 450    | 243    | 123   | 105   |
| 19    | 146   | 16,600  | 1,050   | 5,990   | 6,950   | 15,000  | 6,380   | 1,800   | 425    | 234    | 121   | 98    |
| 20    | 149   | 8,570   | 1,010   | 5,520   | 9,640   | 14,200  | 5,500   | 1,800   | 405    | 229    | 115   | 123   |
| 21    | 146   | 4,720   | 980     | 4,900   | 8,090   | 12,400  | 4,730   | 1,740   | 390    | 221    | 115   | 162   |
| 22    | 145   | 3,260   | 941     | 4,790   | 7,130   | 11,400  | 4,280   | 1,620   | 380    | 213    | 115   | 158   |
| 23    | 145   | 2,580   | 914     | 4,770   | 7,970   | 10,400  | 4,050   | 1,500   | 375    | 204    | 113   | 151   |
| 24    | 143   | 9,650   | 1,920   | 4,450   | 10,100  | 9,540   | 3,960   | 1,420   | 370    | 195    | 113   | 145   |
| 25    | 142   | 21,200  | 8,270   | 3,970   | 11,800  | 8,800   | 3,920   | 1,400   | 370    | 191    | 111   | 142   |
| 26    | 155   | 15,000  | 8,180   | 3,700   | 13,000  | 8,270   | 3,980   | 1,370   | 360    | 183    | 111   | 136   |
| 27    | 161   | 11,700  | 5,800   | 3,510   | 11,500  | 7,850   | 3,940   | 1,310   | 355    | 178    | 111   | 133   |
| 28    | 152   | 8,660   | 26,400  | 3,350   | 9,960   | 7,490   | 3,680   | 1,270   | 350    | 176    | 111   | 126   |
| 29    | 147   | 6,210   | 51,100  | 11,200  | -----   | 7,340   | 3,410   | 1,180   | 345    | 173    | 111   | 125   |
| 30    | 140   | 4,940   | 29,200  | 25,500  | -----   | 7,250   | 3,270   | 1,110   | 340    | 167    | 111   | 124   |
| 31    | 137   | -----   | 25,700  | 18,000  | -----   | 7,190   | -----   | 1,060   | -----  | 164    | 115   | ----- |
| TOTAL | 4,259 | 143,899 | 203,895 | 1,051M  | 344,980 | 467,630 | 193,680 | 61,170  | 16,735 | 7,728  | 3,943 | 3,671 |
| MEAN  | 137   | 4,797   | 6,577   | 33,890  | 12,320  | 15,080  | 6,456   | 1,973   | 558    | 249    | 127   | 122   |
| AC-FT | 8,450 | 285,400 | 404,400 | 2,084M  | 684,300 | 927,500 | 384,200 | 121,300 | 33,190 | 15,330 | 7,820 | 7,280 |

CALENDAR YEAR 1965 MAX 140,000 MIN 115 MEAN 6,047 AC-FT 4,377M  
WATER YEAR 1965-66 MAX 261,000 MIN 98 MEAN 6,855 AC-FT 4,963M

Peak discharge (base, 72,000 cfs).--Jan. 5 (0515) 311,000 cfs (45.47 ft).

Note.--No gage-height record May 1 to July 10.



11-4775. Van Duzen River near Dinsmores, Calif.

Location.--Lat 40°29'05", long 123°39'25", in NW¼ sec.7, T.1 N., R.5 E., on right bank 10 ft upstream from private road bridge, 0.3 mile upstream from South Fork, and 2.8 miles west of Dinsmores.

Drainage area.--85.1 sq mi.

Records available.--August 1953 to September 1958, October 1963 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,996.88 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Aug. 19, 1953 to Sept. 30, 1958, graphic water-stage recorder at site 1.7 miles upstream at different datum. Oct. 1, 1963 to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 381 cfs (275,800 acre-ft per year).

Extremes.--Maximum discharge during year, 15,500 cfs Jan. 4 (gage height, 14.29 ft); minimum daily, 2.5 cfs Oct. 8, Sept. 12, 13. 1953-58, 1963-66: Maximum discharge, 27,000 cfs Dec. 22, 1964 (gage height, 22.5 ft, from floodmarks), from rating curve extended above 10,000 cfs on basis of slope-area measurement of maximum flow; minimum, 1.8 cfs Aug. 29, 1958.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1965 Report: 1964(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|---------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1     | 2.8   | 8.5     | 228    | 351    | 487    | 303    | 609    | 152   | 52    | 20    | 7.2   | 4.0   |
| 2     | 2.8   | 8.5     | 225    | 333    | 425    | 284    | 539    | 153   | 49    | 20    | 7.0   | 3.8   |
| 3     | 2.8   | 8.9     | 263    | 1,230  | 436    | 257    | 486    | 158   | 48    | 19    | 6.6   | 3.7   |
| 4     | 2.8   | 11      | 363    | 11,000 | 1,880  | 246    | 466    | 179   | 45    | 19    | 6.4   | 3.5   |
| 5     | 2.8   | 18      | 535    | 9,130  | 1,630  | 283    | 454    | 185   | 43    | 19    | 6.2   | 3.5   |
| 6     | 2.8   | 15      | 473    | 5,210  | 1,230  | 1,100  | 445    | 162   | 43    | 18    | 6.0   | 3.3   |
| 7     | 2.7   | 15      | 360    | 2,520  | 773    | 1,490  | 421    | 152   | 43    | 18    | 5.8   | 3.1   |
| 8     | 2.5   | 67      | 303    | 2,490  | 535    | 2,480  | 379    | 152   | 41    | 17    | 5.6   | 3.1   |
| 9     | 2.8   | 35      | 255    | 1,840  | 421    | 3,110  | 386    | 149   | 39    | 17    | 5.4   | 3.1   |
| 10    | 2.8   | 22      | 213    | 1,270  | 367    | 2,750  | 723    | 147   | 38    | 16    | 5.2   | 3.1   |
| 11    | 3.1   | 19      | 181    | 846    | 312    | 1,800  | 956    | 136   | 36    | 16    | 5.0   | 3.1   |
| 12    | 3.1   | 96      | 155    | 573    | 283    | 1,310  | 998    | 127   | 34    | 15    | 4.7   | 2.9   |
| 13    | 3.4   | 589     | 134    | 450    | 253    | 1,540  | 575    | 122   | 32    | 15    | 4.5   | 2.9   |
| 14    | 4.2   | 578     | 118    | 400    | 232    | 1,290  | 429    | 114   | 31    | 14    | 4.3   | 3.1   |
| 15    | 4.9   | 389     | 101    | 393    | 211    | 1,260  | 392    | 107   | 30    | 14    | 4.2   | 3.1   |
| 16    | 5.1   | 213     | 90     | 389    | 193    | 1,070  | 403    | 100   | 29    | 13    | 4.0   | 3.1   |
| 17    | 5.5   | 245     | 83     | 348    | 182    | 742    | 391    | 96    | 28    | 13    | 3.8   | 3.1   |
| 18    | 5.5   | 1,630   | 76     | 318    | 178    | 668    | 339    | 92    | 28    | 12    | 3.8   | 5.1   |
| 19    | 5.9   | 1,520   | 71     | 288    | 300    | 1,040  | 292    | 92    | 27    | 11    | 3.1   | 5.1   |
| 20    | 5.9   | 446     | 65     | 260    | 432    | 656    | 261    | 93    | 27    | 11    | 3.1   | 5.1   |
| 21    | 5.9   | 297     | 64     | 240    | 341    | 605    | 241    | 91    | 26    | 11    | 3.1   | 5.1   |
| 22    | 6.4   | 223     | 62     | 238    | 345    | 484    | 225    | 86    | 25    | 10    | 3.1   | 5.1   |
| 23    | 6.4   | 223     | 56     | 220    | 553    | 418    | 220    | 80    | 25    | 10    | 3.1   | 5.1   |
| 24    | 6.8   | 681     | 510    | 204    | 502    | 406    | 226    | 74    | 24    | 9.6   | 3.1   | 5.1   |
| 25    | 6.8   | 468     | 348    | 191    | 455    | 428    | 231    | 72    | 24    | 9.2   | 3.1   | 5.1   |
| 26    | 7.2   | 330     | 233    | 179    | 390    | 468    | 222    | 71    | 23    | 9.0   | 3.1   | 5.1   |
| 27    | 7.2   | 333     | 327    | 168    | 353    | 504    | 195    | 67    | 22    | 8.6   | 3.1   | 5.1   |
| 28    | 7.7   | 270     | 2,880  | 157    | 325    | 523    | 178    | 62    | 22    | 8.3   | 3.1   | 4.4   |
| 29    | 7.7   | 253     | 1,510  | 840    | -----  | 532    | 169    | 59    | 21    | 8.0   | 3.1   | 3.8   |
| 30    | 8.1   | 238     | 746    | 964    | -----  | 539    | 160    | 58    | 21    | 7.8   | 3.4   | 3.8   |
| 31    | 8.1   | -----   | 491    | 561    | -----  | 560    | -----  | 56    | ----- | 7.5   | 3.7   | ----- |
| TOTAL | 152.5 | 9,249.9 | 11,519 | 43,601 | 14,024 | 29,146 | 12,011 | 3,444 | 976   | 416.0 | 136.9 | 117.7 |
| MEAN  | 4.92  | 308     | 372    | 1,406  | 501    | 940    | 400    | 111   | 32.5  | 13.4  | 4.42  | 3.92  |
| AC-FT | 302   | 18,350  | 22,850 | 86,480 | 27,820 | 57,810 | 23,820 | 6,830 | 1,940 | 825   | 272   | 233   |

CALENDAR YEAR 1965 MAX 6,400 MIN 2.5 MEAN 319 AC-FT 230,600  
 WATER YEAR 1965-66 MAX 11,000 MIN 2.5 MEAN 342 AC-FT 247,500

Peak discharge (base, 3,400 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1015 | 9.09        | 4,640     | 3-10 | 0200 | 8.78        | 3,960     |
| 1- 4  | 2015 | 14.29       | 15,500    |      |      |             |           |

Note.---No gage-height record June 15 to July 18.

11-4777. South Fork Van Duzen River near Bridgeville, Calif.

Location.--Lat 40°26'40", long 123°39'15", in SE¼ sec.19,T.1 N., R.5 E., on right bank 0.2 mile upstream from Butte Creek, 3 miles upstream from mouth, and 7.8 miles east of Bridgeville.

Drainage area.--36.2 sq mi.

Records available.--Occasional low-flow measurements, water years 1951-58 and annual maximum, water years 1954-57. September 1958 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 2,283.02 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Sept. 25, 1953, to Aug. 31, 1957, crest-stage gage only, at site 0.1 mile upstream at different datum.

Average discharge.--8 years, 162 cfs (117,300 acre-ft per year).

Extremes.--Maximum discharge during year, 7,190 cfs Jan. 4 (gage height, 13.99 ft); minimum, 3.6 cfs Oct. 8-13. 1953-57, 1958-66: Maximum discharge, 13,600 cfs Dec. 22, 1964 (gage height, 18.70 ft), from rating curve extended above 3,000 cfs on basis of slope-area measurement at gage height 11.91 ft, crest stage gage. 1958-66: Minimum discharge, 2.0 cfs Sept. 24, 25, 1962.

Remarks.--Records excellent. No regulation or large diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1     | 3.8   | 4.1     | 97     | 278    | 239    | 146    | 242    | 77    | 28    | 13    | 5.7   | 4.9   |
| 2     | 3.8   | 3.8     | 94     | 366    | 182    | 136    | 221    | 74    | 27    | 12    | 5.5   | 4.7   |
| 3     | 3.8   | 6.6     | 134    | 2,020  | 188    | 124    | 209    | 75    | 27    | 12    | 5.5   | 4.4   |
| 4     | 4.1   | 21      | 165    | 5,010  | 719    | 118    | 209    | 86    | 25    | 12    | 5.2   | 4.1   |
| 5     | 4.6   | 12      | 206    | 4,340  | 690    | 150    | 200    | 81    | 24    | 11    | 5.2   | 4.1   |
| 6     | 4.4   | 9.7     | 150    | 2,750  | 540    | 416    | 188    | 65    | 25    | 11    | 5.2   | 4.1   |
| 7     | 3.8   | 18      | 118    | 1,180  | 428    | 560    | 168    | 69    | 25    | 11    | 4.9   | 3.8   |
| 8     | 3.6   | 35      | 100    | 1,180  | 344    | 1,440  | 138    | 68    | 23    | 10    | 4.9   | 3.8   |
| 9     | 3.6   | 17      | 84     | 685    | 263    | 1,990  | 160    | 66    | 22    | 10    | 4.9   | 3.8   |
| 10    | 3.6   | 14      | 72     | 492    | 215    | 1,500  | 411    | 64    | 22    | 10    | 4.9   | 3.8   |
| 11    | 3.6   | 15      | 63     | 364    | 168    | 830    | 592    | 61    | 21    | 10    | 4.9   | 4.1   |
| 12    | 3.6   | 36      | 60     | 284    | 150    | 588    | 552    | 57    | 20    | 10    | 4.7   | 4.1   |
| 13    | 3.6   | 209     | 54     | 230    | 128    | 665    | 404    | 55    | 19    | 9.7   | 4.7   | 4.1   |
| 14    | 5.2   | 125     | 50     | 195    | 114    | 548    | 305    | 51    | 18    | 9.4   | 4.7   | 4.4   |
| 15    | 6.0   | 65      | 45     | 178    | 105    | 528    | 272    | 49    | 18    | 8.7   | 4.4   | 4.4   |
| 16    | 5.2   | 36      | 43     | 162    | 96     | 424    | 269    | 47    | 17    | 8.4   | 4.4   | 4.1   |
| 17    | 4.9   | 168     | 41     | 138    | 92     | 320    | 242    | 44    | 17    | 8.4   | 4.4   | 4.1   |
| 18    | 5.7   | 679     | 39     | 126    | 89     | 352    | 200    | 44    | 16    | 7.8   | 4.4   | 8.1   |
| 19    | 5.2   | 448     | 37     | 110    | 268    | 592    | 163    | 44    | 16    | 7.5   | 4.1   | 6.6   |
| 20    | 4.7   | 180     | 36     | 97     | 254    | 388    | 136    | 43    | 16    | 6.9   | 4.1   | 6.0   |
| 21    | 4.4   | 105     | 35     | 88     | 175    | 376    | 122    | 42    | 16    | 6.9   | 4.1   | 5.5   |
| 22    | 4.4   | 75      | 34     | 88     | 193    | 305    | 116    | 40    | 15    | 6.6   | 3.8   | 5.2   |
| 23    | 4.1   | 125     | 33     | 78     | 224    | 245    | 114    | 37    | 15    | 6.6   | 3.8   | 4.9   |
| 24    | 4.1   | 380     | 459    | 74     | 209    | 227    | 118    | 36    | 15    | 6.6   | 3.8   | 4.9   |
| 25    | 4.1   | 182     | 230    | 70     | 195    | 227    | 116    | 35    | 14    | 6.3   | 4.1   | 4.7   |
| 26    | 3.8   | 200     | 152    | 65     | 175    | 233    | 105    | 35    | 14    | 6.3   | 4.4   | 4.7   |
| 27    | 4.1   | 180     | 299    | 62     | 165    | 236    | 94     | 34    | 14    | 6.3   | 4.4   | 4.7   |
| 28    | 4.4   | 122     | 1,930  | 59     | 153    | 230    | 88     | 33    | 13    | 6.0   | 4.4   | 4.4   |
| 29    | 4.4   | 116     | 898    | 439    | -----  | 227    | 84     | 31    | 13    | 6.0   | 4.4   | 4.1   |
| 30    | 4.4   | 105     | 532    | 464    | -----  | 227    | 80     | 30    | 13    | 6.0   | 5.7   | 3.8   |
| 31    | 4.1   | -----   | 388    | 278    | -----  | 236    | -----  | 29    | ----- | 5.7   | 5.5   | ----- |
| Total | 133.1 | 3,692.2 | 6,678  | 22,950 | 5,761  | 14,584 | 6,318  | 1,602 | 568   | 268.1 | 145.1 | 138.4 |
| Mean  | 4.29  | 123     | 215    | 740    | 241    | 470    | 211    | 51.7  | 18.9  | 8.65  | 4.68  | 4.61  |
| Ac-ft | 264   | 7,320   | 13,250 | 45,520 | 13,410 | 29,930 | 12,530 | 3,180 | 1,130 | 532   | 288   | 274   |

Calendar year 1965 Max 2,430 Min 3.6 Mean 170 Ac-ft 123,300

Water year 1965-66 Max 5,010 Min 3.6 Mean 175 Ac-ft 126,600

Peak discharge (base, 2,800 cfs).--Dec. 28 (0900) 3,620 cfs (11.10 ft); Jan. 4 (1600) 7,190 cfs (13.99 ft).

11-4785. Van Duzen River near Bridgeville, Calif.

Location.--Lat 40°28'50", long 123°53'23", in NE¼SE¼ sec.12, T.1 N., R.2 E., on left bank at downstream side of bridge on State Highway 36, 0.9 mile upstream from Grizzly Creek, and 5 miles west of Bridgeville. Prior to Oct. 1, 1965, at site 2.4 miles upstream.

Drainage area.--222 sq mi.

Records available.--October 1950 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 358.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Oct. 1, 1965, graphic water-stage recorder at site 2.4 miles upstream at different datum.

Average discharge.--16 years, 889 cfs (643,600 acre-ft per year).

Extremes.--Maximum discharge during year, 30,300 cfs Jan. 4 (gage height, 18.2 ft, from floodmarks), from rating curve extended above 6,000 cfs on basis of slope-area measurement at former site; minimum daily, 10 cfs Oct. 1-13.

1950-66: Maximum discharge, 48,700 cfs Dec. 22, 1964 (gage height, 22.6 ft, site and datum then in use, from floodmarks), from rating curve extended above 20,000 cfs on basis of slope-area measurement at gage height 21.3 ft, former datum; minimum, 5.0 cfs Sept. 13, 1959.

Remarks.--Records good. No storage or large diversion above station. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT. | NOV.   | DEC.   | JAN.    | FEB.   | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG. | SEPT. |
|-------|------|--------|--------|---------|--------|---------|--------|--------|-------|-------|------|-------|
| 1     | 10   | 13     | 575    | 654     | 1,640  | 930     | 1,010  | 299    | 104   | 36    | 17   | 14    |
| 2     | 10   | 13     | 510    | 950     | 1,340  | 930     | 1,020  | 288    | 101   | 36    | 17   | 13    |
| 3     | 10   | 14     | 582    | 7,150   | 1,140  | 867     | 951    | 286    | 103   | 36    | 17   | 13    |
| 4     | 10   | 33     | 761    | 22,000  | 3,600  | 840     | 809    | 305    | 95    | 34    | 17   | 12    |
| 5     | 10   | 57     | 995    | 17,200  | 3,700  | 1,050   | 772    | 334    | 90    | 33    | 16   | 12    |
| 6     | 10   | 48     | 903    | 10,900  | 3,140  | 2,010   | 755    | 303    | 90    | 32    | 15   | 11    |
| 7     | 10   | 41     | 696    | 5,400   | 2,080  | 2,690   | 726    | 280    | 91    | 31    | 14   | 11    |
| 8     | 10   | 140    | 575    | 3,030   | 1,550  | 6,030   | 672    | 270    | 86    | 31    | 14   | 11    |
| 9     | 10   | 124    | 476    | 1,970   | 1,240  | 7,760   | 664    | 261    | 81    | 30    | 14   | 11    |
| 10    | 10   | 74     | 394    | 1,620   | 1,170  | 6,430   | 1,120  | 265    | 78    | 29    | 13   | 11    |
| 11    | 10   | 63     | 331    | 1,370   | 980    | 3,470   | 1,690  | 254    | 75    | 29    | 13   | 11    |
| 12    | 10   | 119    | 287    | 1,190   | 930    | 2,140   | 1,750  | 231    | 71    | 31    | 13   | 11    |
| 13    | 10   | 728    | 251    | 1,000   | 750    | 2,290   | 1,200  | 221    | 67    | 31    | 13   | 11    |
| 14    | 13   | 1,190  | 220    | 876     | 670    | 1,940   | 943    | 214    | 64    | 31    | 13   | 11    |
| 15    | 15   | 766    | 196    | 849     | 622    | 2,010   | 823    | 209    | 60    | 30    | 13   | 11    |
| 16    | 14   | 709    | 170    | 795     | 569    | 2,050   | 826    | 194    | 57    | 29    | 13   | 11    |
| 17    | 15   | 681    | 154    | 694     | 548    | 1,660   | 810    | 178    | 55    | 27    | 13   | 11    |
| 18    | 15   | 1,700  | 145    | 630     | 492    | 1,520   | 711    | 175    | 53    | 25    | 13   | 16    |
| 19    | 15   | 3,200  | 132    | 569     | 1,050  | 2,460   | 598    | 170    | 50    | 24    | 12   | 16    |
| 20    | 15   | 1,150  | 123    | 506     | 1,370  | 1,800   | 528    | 170    | 48    | 24    | 12   | 16    |
| 21    | 15   | 743    | 115    | 457     | 1,050  | 1,870   | 475    | 167    | 47    | 23    | 12   | 15    |
| 22    | 15   | 705    | 110    | 485     | 1,090  | 1,570   | 435    | 163    | 47    | 23    | 12   | 15    |
| 23    | 15   | 682    | 104    | 464     | 1,370  | 1,340   | 411    | 150    | 46    | 22    | 12   | 14    |
| 24    | 15   | 1,350  | 1,350  | 426     | 1,410  | 1,140   | 415    | 142    | 44    | 20    | 12   | 13    |
| 25    | 15   | 890    | 988    | 402     | 1,350  | 1,140   | 421    | 135    | 43    | 20    | 12   | 13    |
| 26    | 14   | 771    | 930    | 378     | 1,280  | 1,140   | 409    | 132    | 42    | 20    | 12   | 13    |
| 27    | 14   | 756    | 999    | 348     | 1,150  | 1,140   | 373    | 129    | 40    | 19    | 12   | 13    |
| 28    | 14   | 723    | 6,900  | 325     | 990    | 1,140   | 340    | 123    | 39    | 19    | 12   | 13    |
| 29    | 14   | 694    | 3,700  | 3,110   | -----  | 1,060   | 328    | 116    | 38    | 19    | 12   | 13    |
| 30    | 14   | 641    | 1,610  | 3,180   | -----  | 976     | 309    | 114    | 37    | 18    | 13   | 12    |
| 31    | 13   | -----  | 1,110  | 1,870   | -----  | 942     | -----  | 112    | ----- | 18    | 15   | ----- |
| TOTAL | 390  | 18,818 | 26,392 | 90,798  | 38,271 | 64,335  | 22,294 | 6,390  | 1,942 | 830   | 418  | 378   |
| MEAN  | 12.6 | 627    | 851    | 2,929   | 1,367  | 2,075   | 743    | 206    | 64.7  | 26.8  | 13.5 | 12.6  |
| AC-FT | 774  | 37,320 | 52,350 | 180,100 | 75,910 | 127,600 | 44,220 | 12,670 | 3,850 | 1,650 | 829  | 750   |

CALENDAR YEAR 1965 MAX 8,500 MIN 9.8 MEAN 685 AC-FT 495,800  
 WATER YEAR 1965-66 MAX 22,000 MIN 10 MEAN 743 AC-FT 538,000

Peak discharge (base, 15,000 cfs, revised).--Dec. 28 (time unknown) 17,700 cfs (13.6 ft); Jan. 4 (time unknown) 30,300 cfs (18.2 ft).

Note.--No gage-height record Dec. 28, Jan. 4.

## EEL RIVER BASIN

11-4790. Yager Creek near Carlotta, Calif.

Location.--Lat 40°34'15", long 124°02'55", in SW 1/4 sec.10, T.2 N., R.1 E., on right bank 0.8 mile upstream from Cooper Mill Creek, and 2.4 miles north of Carlotta.

Drainage area.--127 sq mi.

Records available.--August 1953 to October 1955, August 1956 to September 1960, August 1965 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 200 ft, revised, (from topographic map). Aug. 18, 1953 to Dec. 22, 1955, at same site at different datum. Aug. 14, 1956 to Sept. 30, 1960, at site 0.2 mile downstream at different datum.

Average discharge.--7 years, 363 cfs (262,800 acre-ft per year).

Extremes.--1965: Maximum discharge during period August to September, 8.3 cfs Aug. 7, 8, (gage height, 2.23 ft); minimum daily, 4.8 cfs Sept. 30.

1965-66: Maximum discharge during water year, 9,300 cfs Jan. 4; minimum daily, 3.8 cfs Sept. 14.

1953-60, 1964-66: Maximum discharge, 30,000 cfs Dec. 22, 1964 (gage height, 19.9 ft, from floodmarks), from rating curve extended above 250 cfs on basis of field estimate of maximum flow; minimum, 3.8 cfs Sept. 14, 1966.

Remarks.--Records poor. No regulation or diversion above station.

Discharge, in cubic feet per second, 1965

| Day        | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. |
|------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| 1          | -    | 6.5   | 7   | 8.3  | 5.7   | 13  | 7.1  | 5.5   | 19  | 6.9  | 4.9   | 25  | 7.5  | 5.4   |
| 2          | -    | 6.5   | 8   | 8.3  | 5.5   | 14  | 7.1  | 5.4   | 20  | 6.9  | 4.9   | 26  | 7.5  | 5.4   |
| 3          | -    | 6.5   | 9   | 7.5  | 5.5   | 15  | 6.9  | 5.4   | 21  | 6.7  | 5.1   | 27  | 7.5  | 5.2   |
| 4          | -    | 6.1   | 10  | 7.3  | 5.5   | 16  | 6.9  | 5.2   | 22  | 6.7  | 5.2   | 28  | 7.5  | 5.2   |
| 5          | -    | 5.9   | 11  | 6.9  | 5.5   | 17  | 6.9  | 5.1   | 23  | 6.5  | 5.2   | 29  | 7.1  | 5.1   |
| 6          | -    | 5.9   | 12  | 7.1  | 5.5   | 18  | 6.9  | 5.1   | 24  | 6.5  | 5.4   | 30  | 6.5  | 4.8   |
|            |      |       |     |      |       |     |      |       |     |      |       | 31  | 6.5  | -     |
| Total----- |      |       |     |      |       |     |      |       |     |      |       |     | -    | 164.1 |
| Mean-----  |      |       |     |      |       |     |      |       |     |      |       |     | -    | 5.47  |
| Ac-ft----- |      |       |     |      |       |     |      |       |     |      |       |     | -    | 325   |

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.   | Jan.   | Feb.   | Mar.   | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 4.6   | 5.2     | 200    | 830    | 1,100  | 290    | 180   | 58    | 28    | 14    | 6.6   | 6.2   |
| 2     | 4.4   | 5.4     | 158    | 680    | 760    | 450    | 164   | 58    | 27    | 14    | 6.5   | 5.8   |
| 3     | 4.4   | 5.5     | 124    | 5,600  | 490    | 670    | 150   | 57    | 26    | 13    | 6.4   | 5.4   |
| 4     | 4.4   | 9.5     | 97     | 7,700  | 800    | 595    | 137   | 56    | 26    | 13    | 6.4   | 5.3   |
| 5     | 4.4   | 12      | 118    | 4,150  | 1,390  | 550    | 123   | 55    | 25    | 13    | 6.4   | 5.2   |
| 6     | 4.6   | 11      | 109    | 2,300  | 2,290  | 760    | 113   | 54    | 26    | 13    | 6.3   | 5.0   |
| 7     | 4.6   | 10      | 96     | 1,270  | 1,180  | 1,000  | 107   | 54    | 30    | 13    | 6.2   | 4.9   |
| 8     | 4.6   | 14      | 86     | 1,400  | 760    | 1,180  | 100   | 53    | 25    | 12    | 6.1   | 4.8   |
| 9     | 4.6   | 15      | 73     | 1,070  | 465    | 1,590  | 123   | 53    | 28    | 13    | 6.1   | 4.7   |
| 10    | 4.4   | 13      | 64     | 825    | 560    | 2,200  | 215   | 52    | 32    | 13    | 6.1   | 4.6   |
| 11    | 4.4   | 12      | 57     | 610    | 485    | 1,540  | 435   | 51    | 27    | 12    | 6.1   | 4.5   |
| 12    | 4.4   | 20      | 50     | 455    | 405    | 1,080  | 600   | 50    | 25    | 12    | 6.1   | 4.2   |
| 13    | 4.4   | 75      | 44     | 390    | 340    | 870    | 415   | 48    | 24    | 13    | 6.0   | 4.0   |
| 14    | 5.9   | 169     | 36     | 250    | 290    | 670    | 280   | 47    | 22    | 13    | 6.0   | 3.8   |
| 15    | 7.1   | 88      | 32     | 190    | 248    | 610    | 225   | 46    | 22    | 14    | 5.9   | 3.9   |
| 16    | 7.8   | 46      | 28     | 163    | 222    | 700    | 170   | 44    | 21    | 13    | 5.7   | 4.2   |
| 17    | 7.1   | 39      | 25     | 141    | 200    | 840    | 129   | 42    | 20    | 12    | 5.5   | 4.3   |
| 18    | 6.7   | 653     | 23     | 121    | 190    | 660    | 95    | 41    | 19    | 11    | 5.2   | 15    |
| 19    | 6.7   | 670     | 21     | 108    | 175    | 820    | 83    | 40    | 18    | 10    | 5.0   | 12    |
| 20    | 6.5   | 314     | 20     | 95     | 163    | 1,100  | 80    | 38    | 18    | 9.7   | 4.9   | 9.8   |
| 21    | 6.3   | 220     | 18     | 85     | 154    | 1,000  | 74    | 37    | 17    | 9.2   | 4.8   | 8.0   |
| 22    | 6.1   | 130     | 18     | 108    | 148    | 1,150  | 72    | 36    | 17    | 9.0   | 4.7   | 6.9   |
| 23    | 5.7   | 108     | 17     | 117    | 320    | 840    | 70    | 35    | 17    | 8.7   | 4.7   | 6.3   |
| 24    | 5.7   | 1,270   | 120    | 103    | 540    | 650    | 68    | 34    | 16    | 8.4   | 4.9   | 6.3   |
| 25    | 5.5   | 1,380   | 590    | 89     | 355    | 550    | 66    | 33    | 16    | 8.1   | 5.0   | 5.9   |
| 26    | 5.5   | 988     | 435    | 77     | 675    | 460    | 64    | 32    | 16    | 7.9   | 5.2   | 5.7   |
| 27    | 5.5   | 660     | 300    | 68     | 515    | 380    | 62    | 31    | 15    | 7.6   | 5.4   | 5.5   |
| 28    | 5.5   | 388     | 2,700  | 525    | 382    | 320    | 61    | 31    | 15    | 7.3   | 5.8   | 5.7   |
| 29    | 5.5   | 283     | 2,250  | 4,000  | -----  | 265    | 60    | 30    | 15    | 7.1   | 6.4   | 5.9   |
| 30    | 5.4   | 248     | 1,200  | 2,650  | -----  | 229    | 59    | 29    | 14    | 7.0   | 7.1   | 5.7   |
| 31    | 5.2   | -----   | 990    | 1,730  | -----  | 200    | ----- | 28    | ----- | 6.8   | 6.8   | ----- |
| Total | 167.9 | 7,861.6 | 10,099 | 37,900 | 15,602 | 24,219 | 4,580 | 1,353 | 647   | 337.8 | 180.3 | 179.5 |
| Mean  | 5.42  | 262     | 326    | 1,223  | 557    | 781    | 153   | 43.6  | 21.6  | 10.9  | 5.82  | 5.98  |
| Ac-ft | 333   | 15,590  | 20,030 | 75,170 | 30,950 | 48,040 | 9,080 | 2,680 | 1,280 | 670   | 358   | 356   |

Calendar year 1965 Max - Min - Mean - Ac-ft -  
 Water year 1965-66 Max 7,700 Min 3.8 Mean 283 Ac-ft 204,500

Peak discharge (base, 4,000 cfs).--Jan. 4 (time unknown) 9,300 cfs; Jan. 29 (time unknown) 5,000 cfs.

Note.--No gage-height record Dec. 1 to Sept. 12.

11-4797. Elk River near Falk, Calif.

Location.--Lat 40°42'10", long 124°09'20", in NW¼ sec.26, T.4 N., R.1 W., on left bank 500 ft downstream from Clapp Gulch, 1,300 ft downstream from confluence of North and South Forks, 2 miles northwest of Falk, and 5 miles south of Eureka.

Drainage area.--44.2 sq mi.

Records available.--October 1957 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 29.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Apr. 24, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 83.2 cfs (60,230 acre-ft per year).

Extremes.--Maximum discharge during year, 3,270 cfs Jan. 4 (gage height, 27.43 ft); minimum daily, 0.40 cfs Aug. 12.

1957-66: Maximum discharge, 3,430 cfs Dec. 22, 1964 (gage height, 28.09 ft); minimum daily, 0.40 cfs Oct. 6-9, 1961, July 24-31, Sept. 14-23, 26, 27, 1962, Aug. 12, 1966.

Remarks.--Records good. No storage or large diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.     | DEC.    | JAN.   | FEB.  | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|----------|---------|--------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 0.80  | 0.90     | 17      | 266    | 256   | 43     | 30    | 13    | 4.1   | 2.2   | 0.90  | 1.3   |
| 2     | .80   | .90      | 14      | 202    | 191   | 122    | 29    | 12    | 4.1   | 2.4   | .90   | 1.2   |
| 3     | 1.0   | 1.0      | 12      | 1,550  | 142   | 220    | 27    | 12    | 4.0   | 2.3   | 1.0   | .80   |
| 4     | 1.3   | 1.7      | 12      | 2,560  | 158   | 188    | 25    | 12    | 3.9   | 1.9   | 1.0   | .80   |
| 5     | 2.1   | 1.6      | 13      | 941    | 234   | 187    | 23    | 11    | 3.7   | 1.9   | 1.0   | .90   |
| 6     | 1.8   | 1.5      | 12      | 548    | 704   | 217    | 22    | 11    | 3.9   | 1.8   | .90   | .80   |
| 7     | 1.6   | 1.4      | 11      | 292    | 399   | 340    | 22    | 11    | 4.2   | 1.8   | .90   | .70   |
| 8     | 1.5   | 1.9      | 11      | 316    | 214   | 361    | 20    | 10    | 3.9   | 1.9   | 1.0   | .60   |
| 9     | 1.5   | 2.0      | 11      | 214    | 150   | 522    | 22    | 11    | 3.7   | 2.1   | 1.1   | .70   |
| 10    | 1.5   | 1.9      | 9.5     | 142    | 191   | 683    | 32    | 10    | 4.2   | 2.3   | 1.1   | .80   |
| 11    | 1.5   | 2.1      | 8.5     | 106    | 172   | 347    | 62    | 9.9   | 4.0   | 2.2   | .90   | .90   |
| 12    | 1.4   | 3.6      | 7.9     | 80     | 140   | 203    | 134   | 9.4   | 3.4   | 2.2   | .40   | 1.3   |
| 13    | 2.1   | 5.5      | 7.4     | 65     | 113   | 161    | 115   | 8.7   | 3.2   | 2.4   | .60   | 1.6   |
| 14    | 1.5   | 18       | 7.0     | 52     | 93    | 138    | 68    | 8.3   | 3.1   | 2.4   | 1.0   | 1.6   |
| 15    | 1.5   | 32       | 6.6     | 45     | 80    | 117    | 50    | 8.0   | 2.9   | 2.1   | 1.0   | 1.5   |
| 16    | 1.5   | 18       | 6.1     | 40     | 71    | 174    | 43    | 7.7   | 2.8   | 1.8   | .80   | 1.2   |
| 17    | 1.4   | 13       | 5.7     | 34     | 63    | 220    | 36    | 7.4   | 2.7   | 1.6   | .80   | 1.8   |
| 18    | 1.4   | 56       | 5.5     | 31     | 57    | 169    | 32    | 6.9   | 2.6   | 1.7   | .80   | 9.5   |
| 19    | 1.3   | 61       | 5.3     | 28     | 53    | 227    | 29    | 6.6   | 2.6   | 1.5   | .70   | 5.7   |
| 20    | 1.2   | 35       | 5.0     | 25     | 52    | 313    | 26    | 6.0   | 2.4   | 1.4   | .70   | 3.8   |
| 21    | 1.2   | 32       | 5.3     | 23     | 48    | 270    | 24    | 5.4   | 2.4   | 1.2   | .60   | 3.0   |
| 22    | 1.2   | 18       | 5.2     | 26     | 50    | 316    | 22    | 5.4   | 2.4   | 1.2   | .60   | 2.3   |
| 23    | 1.1   | 16       | 5.0     | 29     | 126   | 199    | 20    | 5.2   | 2.4   | 1.2   | .70   | 1.9   |
| 24    | 1.1   | 145      | 91      | 26     | 129   | 123    | 18    | 4.9   | 2.3   | 1.3   | .80   | 1.7   |
| 25    | 1.0   | 301      | 167     | 24     | 120   | 87     | 18    | 5.0   | 2.2   | 1.2   | .90   | 1.5   |
| 26    | 1.0   | 129      | 121     | 22     | 191   | 71     | 17    | 5.0   | 2.1   | 1.0   | 1.1   | 1.3   |
| 27    | .80   | 630      | 78      | 20     | 140   | 59     | 16    | 5.0   | 2.1   | 1.0   | 1.2   | 1.2   |
| 28    | 1.0   | 390      | 829     | 18     | 107   | 48     | 15    | 4.8   | 2.2   | 1.1   | 1.3   | 1.2   |
| 29    | 1.0   | 280      | 531     | 1,180  | ----- | 44     | 14    | 4.5   | 2.2   | .90   | 1.4   | 1.1   |
| 30    | .90   | 210      | 339     | 617    | ----- | 38     | 14    | 4.4   | 2.1   | .90   | 1.8   | 1.1   |
| 31    | .90   | -----    | 313     | 453    | ----- | 32     | ----- | 4.4   | ----- | 1.0   | 1.7   | ----- |
| TOTAL | 39.90 | 2,410.00 | 2,772.0 | 9,975  | 4,444 | 6,240  | 1,025 | 245.9 | 91.8  | 51.90 | 29.60 | 53.80 |
| MEAN  | 1.29  | 80.3     | 89.4    | 322    | 159   | 201    | 34.2  | 7.93  | 3.06  | 1.67  | .96   | 1.79  |
| AC-FT | 79    | 4,780    | 5,500   | 19,790 | 8,810 | 12,380 | 2,030 | 488   | 182   | 103   | 59    | 107   |

CALENDAR YEAR 1965 MAX 1,270 MIN .70 MEAN 60.4 AC-FT 43,720  
 WATER YEAR 1965-66 MAX 2,560 MIN .40 MEAN 75.0 AC-FT 54,310

Peak discharge (base, 1,500 cfs, revised)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1430 | 19.84       | 1,750     | 1-29 | 1030 | 22.40       | 2,220     |
| 1-4   | 0830 | 27.43       | 3,270     |      |      |             |           |

11-4805. Mad River near Forest Glen, Calif.

Location.--Lat 40°27'30", long 123°30'35", in SW¼ sec.16, T.1 N., R.6 E., on right bank 0.7 mile downstream from Lamb Creek and 7.0 miles northwest of Forest Glen.

Drainage area.--143 sq mi.

Records available.--June 1953 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 2,408.18 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Dec. 22, 1955, graphic water-stage recorder at site 0.7 mile upstream at different datum. Jan. 13 to June 18, 1956, wire-weight gage at former site at datum 4.17 ft lower than former datum. June 18, 1956 to Sept. 6, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--13 years, 366 cfs (265,000 acre-ft per year).

Extremes.--Maximum discharge during year, 9,490 cfs Jan. 4 (gage height, 10.94 ft, from recorded range in stage); minimum daily, 58 cfs July 18-27.

1953-66: Maximum discharge, 39,200 cfs Dec. 22, 1955 (gage height, 24.5 ft, from floodmarks, present datum), from rating curve extended above 8,100 cfs on basis of slope-area measurement of maximum flow; minimum daily, 0.60 cfs Sept. 15, 1961.

Remarks.--Records excellent except those for period of no gage-height record, which are good. Flow regulated by Ruth Reservoir beginning in July 1961 (total capacity, 51,800 acre-ft). No diversion above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1964 Report: 1963.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 1     | 69    | 73     | 163    | 660    | 470    | 455    | 435    | 155   | 92    | 59    | 83    | 87    |
| 2     | 69    | 73     | 148    | 900    | 455    | 450    | 425    | 140   | 92    | 59    | 83    | 85    |
| 3     | 69    | 75     | 184    | 1,000  | 490    | 440    | 410    | 121   | 92    | 59    | 83    | 83    |
| 4     | 69    | 75     | 187    | 8,000  | 855    | 425    | 400    | 121   | 84    | 59    | 83    | 83    |
| 5     | 71    | 73     | 243    | 7,800  | 1,120  | 450    | 395    | 121   | 67    | 59    | 83    | 83    |
| 6     | 77    | 73     | 194    | 7,510  | 1,160  | 685    | 395    | 121   | 68    | 59    | 83    | 83    |
| 7     | 79    | 79     | 180    | 4,480  | 990    | 1,050  | 395    | 119   | 67    | 59    | 83    | 83    |
| 8     | 79    | 79     | 227    | 3,200  | 835    | 1,990  | 395    | 119   | 67    | 59    | 83    | 83    |
| 9     | 79    | 75     | 243    | 2,220  | 720    | 3,060  | 370    | 119   | 65    | 59    | 83    | 83    |
| 10    | 79    | 75     | 163    | 1,490  | 625    | 2,740  | 390    | 119   | 65    | 59    | 83    | 83    |
| 11    | 79    | 81     | 223    | 1,040  | 550    | 1,880  | 440    | 119   | 64    | 61    | 83    | 80    |
| 12    | 79    | 108    | 243    | 820    | 485    | 1,370  | 480    | 117   | 62    | 59    | 83    | 80    |
| 13    | 79    | 174    | 243    | 675    | 435    | 1,230  | 530    | 117   | 62    | 59    | 83    | 81    |
| 14    | 79    | 159    | 204    | 590    | 410    | 1,090  | 515    | 117   | 62    | 59    | 97    | 80    |
| 15    | 79    | 159    | 171    | 545    | 395    | 1,030  | 480    | 117   | 61    | 59    | 111   | 80    |
| 16    | 77    | 165    | 156    | 540    | 395    | 990    | 450    | 115   | 61    | 59    | 111   | 80    |
| 17    | 77    | 190    | 135    | 525    | 390    | 885    | 435    | 110   | 61    | 59    | 111   | 80    |
| 18    | 77    | 353    | 135    | 495    | 395    | 825    | 420    | 105   | 61    | 58    | 99    | 84    |
| 19    | 77    | 371    | 135    | 450    | 475    | 860    | 420    | 101   | 59    | 58    | 87    | 80    |
| 20    | 77    | 331    | 135    | 420    | 450    | 820    | 405    | 97    | 59    | 58    | 87    | 80    |
| 21    | 77    | 323    | 135    | 390    | 430    | 770    | 356    | 95    | 59    | 58    | 87    | 80    |
| 22    | 75    | 323    | 135    | 385    | 450    | 685    | 277    | 93    | 59    | 58    | 87    | 80    |
| 23    | 75    | 348    | 135    | 380    | 480    | 620    | 211    | 92    | 59    | 58    | 85    | 92    |
| 24    | 75    | 425    | 350    | 375    | 475    | 560    | 208    | 90    | 59    | 58    | 85    | 131   |
| 25    | 75    | 380    | 370    | 370    | 475    | 525    | 208    | 87    | 59    | 58    | 85    | 155   |
| 26    | 75    | 376    | 310    | 370    | 485    | 500    | 205    | 90    | 59    | 58    | 80    | 158   |
| 27    | 75    | 376    | 400    | 370    | 465    | 490    | 157    | 92    | 59    | 58    | 85    | 143   |
| 28    | 75    | 358    | 1,800  | 360    | 460    | 475    | 103    | 92    | 59    | 65    | 85    | 93    |
| 29    | 75    | 353    | 1,400  | 560    | -----  | 465    | 135    | 92    | 59    | 83    | 85    | 76    |
| 30    | 75    | 282    | 860    | 530    | -----  | 450    | 155    | 92    | 59    | 83    | 87    | 76    |
| 31    | 73    | -----  | 840    | 460    | -----  | 440    | -----  | 92    | ----- | 83    | 85    | ----- |
| TOTAL | 2,345 | 6,385  | 10,447 | 47,910 | 15,820 | 28,705 | 10,600 | 3,377 | 1,961 | 1,899 | 2,718 | 2,725 |
| MEAN  | 75.6  | 213    | 337    | 1,545  | 565    | 926    | 353    | 109   | 65.4  | 61.3  | 87.7  | 90.8  |
| AC-FT | 4,650 | 12,660 | 20,720 | 95,030 | 31,380 | 56,940 | 21,020 | 6,700 | 3,890 | 3,770 | 5,390 | 5,400 |

CALENDAR YEAR 1965 MAX 6,170 MIN 65 MEAN 354 AC-FT 256,600  
 WATER YEAR 1965-66 MAX 8,000 MIN 58 MEAN 370 AC-FT 267,600

Note.--No gage-height record Dec. 21 to Jan. 5.

11-4807.5. Mad River near Kneeland, Calif.

Location.--Lat 40°45'50", long 123°53'20", in NW¼NW¼ sec.6, T.4 N., R.3 E., on left bank at mouth of Maple Creek, 30 ft upstream from bridge, and 5.4 miles east of Kneeland.

Drainage area.--352 sq mi.

Records available.--October 1965 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 329.66 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum discharge during year, 24,600 cfs Jan. 4 (gage height, 17.59 ft); minimum daily, 67 cfs July 29. Flood of Dec. 22, 1964, reached a stage of 37.99 ft, from floodmarks (discharge, 55,000 cfs).

Remarks.--Records fair. Flow regulated by Ruth Reservoir (total capacity, 51,800 acre-ft). No diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.    | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|---------|---------|--------|--------|-------|-------|-------|-------|
| 1     | 73    | 82     | 362    | 1,610   | 1,990   | 1,200   | 1,490  | 440    | 179   | 89    | 95    | 98    |
| 2     | 73    | 85     | 286    | 1,940   | 1,800   | 1,250   | 1,350  | 410    | 171   | 89    | 95    | 100   |
| 3     | 73    | 88     | 347    | 5,330   | 1,680   | 1,140   | 1,260  | 370    | 175   | 89    | 95    | 98    |
| 4     | 73    | 92     | 712    | 17,900  | 4,050   | 1,090   | 1,200  | 350    | 169   | 89    | 95    | 96    |
| 5     | 74    | 90     | 1,070  | 18,500  | 4,850   | 1,370   | 1,140  | 340    | 152   | 87    | 95    | 96    |
| 6     | 72    | 87     | 1,040  | 13,700  | 4,920   | 2,640   | 1,070  | 340    | 138   | 83    | 95    | 96    |
| 7     | 70    | 80     | 765    | 6,780   | 3,940   | 4,120   | 1,020  | 315    | 145   | 83    | 95    | 96    |
| 8     | 90    | 300    | 664    | 5,640   | 3,020   | 7,180   | 980    | 304    | 142   | 83    | 95    | 96    |
| 9     | 85    | 107    | 531    | 3,920   | 2,180   | 8,780   | 1,130  | 304    | 134   | 83    | 95    | 96    |
| 10    | 81    | 92     | 433    | 3,020   | 2,260   | 6,680   | 1,570  | 293    | 130   | 83    | 95    | 96    |
| 11    | 83    | 116    | 279    | 2,650   | 1,880   | 3,090   | 2,460  | 271    | 127   | 87    | 94    | 96    |
| 12    | 84    | 350    | 326    | 2,040   | 1,680   | 3,310   | 2,740  | 271    | 120   | 103   | 94    | 92    |
| 13    | 84    | 443    | 319    | 1,590   | 1,350   | 3,370   | 2,300  | 260    | 115   | 98    | 94    | 93    |
| 14    | 84    | 482    | 315    | 1,380   | 1,260   | 3,240   | 2,060  | 250    | 112   | 90    | 94    | 94    |
| 15    | 84    | 230    | 233    | 1,330   | 1,190   | 2,280   | 1,920  | 255    | 108   | 83    | 108   | 92    |
| 16    | 80    | 123    | 191    | 1,460   | 1,180   | 3,370   | 1,840  | 245    | 106   | 82    | 128   | 92    |
| 17    | 80    | 123    | 147    | 1,370   | 980     | 2,890   | 1,680  | 235    | 104   | 80    | 129   | 92    |
| 18    | 81    | 1,010  | 117    | 1,340   | 930     | 2,740   | 1,500  | 230    | 104   | 80    | 130   | 92    |
| 19    | 81    | 1,250  | 107    | 1,260   | 1,430   | 3,700   | 1,350  | 215    | 102   | 79    | 116   | 97    |
| 20    | 82    | 360    | 95     | 1,190   | 1,810   | 3,090   | 1,270  | 211    | 101   | 77    | 100   | 92    |
| 21    | 82    | 197    | 116    | 1,210   | 1,370   | 3,410   | 1,140  | 206    | 99    | 76    | 100   | 92    |
| 22    | 83    | 120    | 136    | 1,210   | 1,330   | 2,930   | 980    | 202    | 99    | 77    | 100   | 92    |
| 23    | 78    | 207    | 128    | 1,100   | 1,700   | 2,440   | 740    | 193    | 99    | 76    | 100   | 92    |
| 24    | 79    | 1,320  | 849    | 1,000   | 1,550   | 2,290   | 660    | 193    | 97    | 74    | 98    | 119   |
| 25    | 80    | 1,530  | 1,020  | 980     | 1,570   | 2,080   | 610    | 188    | 94    | 74    | 98    | 150   |
| 26    | 81    | 962    | 698    | 960     | 1,450   | 2,020   | 590    | 179    | 91    | 74    | 98    | 170   |
| 27    | 82    | 710    | 925    | 1,030   | 1,270   | 1,810   | 570    | 175    | 89    | 73    | 98    | 181   |
| 28    | 84    | 638    | 6,330  | 1,060   | 1,260   | 1,710   | 440    | 175    | 89    | 68    | 98    | 168   |
| 29    | 85    | 558    | 3,510  | 4,790   | -----   | 1,480   | 410    | 175    | 89    | 67    | 98    | 110   |
| 30    | 86    | 521    | 2,110  | 2,680   | -----   | 1,460   | 440    | 175    | 89    | 91    | 98    | 91    |
| 31    | 84    | -----  | 2,090  | 2,250   | -----   | 1,540   | -----  | 184    | ----- | 94    | 100   | ----- |
| TOTAL | 2,491 | 12,353 | 26,251 | 112,220 | 55,880  | 89,700  | 37,910 | 7,954  | 3,569 | 2,561 | 3,123 | 3,165 |
| MEAN  | 80.4  | 412    | 847    | 3,620   | 1,996   | 2,894   | 1,264  | 257    | 119   | 82.6  | 101   | 106   |
| AC-FT | 4,940 | 24,500 | 52,070 | 222,600 | 110,800 | 177,900 | 75,190 | 15,780 | 7,080 | 5,080 | 6,190 | 6,280 |

|               |         |     |        |     |    |      |     |       |         |
|---------------|---------|-----|--------|-----|----|------|-----|-------|---------|
| CALENDAR YEAR | 1965    | MAX | -      | MIN | -  | MEAN | -   | AC-FT | -       |
| WATER YEAR    | 1965-66 | MAX | 18,500 | MIN | 67 | MEAN | 979 | AC-FT | 708,400 |

Peak discharge (base, 12,000 cfs).--Jan. 4 (1730) 24,600 cfs (17.59 ft).

Note.--No gage-height record Oct. 1 to Nov. 8, Aug. 6 to Sept. 30.

## MAD RIVER BASIN

11-4810. Mad River near Arcata, Calif.

Location.--Lat 40°54'35", long 124°03'35", in NW¼ sec.15, T.6 N., R.1 E., on right bank 100 ft upstream from bridge on U. S. Highway 299, 1.0 mile downstream from Warren Creek, and 2.8 miles northeast of Arcata.

Drainage area.--485 sq mi.

Records available.--October 1910 to September 1913, August 1950 to September 1966. Monthly discharge only for some periods published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 12.79 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. December 1910 to September 1913, staff gage at site 0.1 mile upstream at different datum. Aug. 15, 1950 to July 23, 1956, graphic water-stage recorder at site 0.6 mile upstream at datum 11.00 ft higher. July 24, 1956 to Apr. 9, 1965, graphic water-stage recorder at datum 5.00 ft higher. Apr. 10 to Sept. 9, 1965, graphic water-stage recorder at same site and datum. Aug. 29 to Oct. 26, 1961, auxiliary graphic water-stage recorder at site 0.5 mile downstream at different datum.

Average discharge.--19 years, 1,523 cfs (1,103,000 acre-ft per year).

Extremes.--Maximum discharge during year, 35,800 cfs Jan. 4 (gage height, 19.40 ft); minimum daily, 41 cfs Oct. 1, 3. 1910-13, 1950-66: Maximum discharge, 77,800 cfs Dec. 22, 1955 (gage height, 29.75 ft, present site and datum); minimum, 16 cfs Sept. 8, 9, 1951, Sept. 11, 1959.

Remarks.--Records good except those for period of no gage-height record, which are poor. Flow regulated by Ruth Reservoir beginning in July 1961 (total capacity, 51,800 acre-ft). Since 1938, approximately 5.4 cfs diverted daily above station for municipal supply of City of Eureka. Records of chemical analyses, water temperatures, and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Revisions (water years).--1964 Report: 1963. 1965 Report: 1964(M).

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.    | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|---------|---------|--------|--------|-------|-------|-------|-------|
| 1     | 41    | 54     | 790    | 2,230   | 2,870   | 1,650   | 1,680  | 523    | 179   | 62    | 65    | 93    |
| 2     | 42    | 53     | 666    | 2,040   | 2,360   | 1,820   | 1,570  | 460    | 181   | 58    | 65    | 93    |
| 3     | 41    | 54     | 675    | 8,820   | 1,990   | 1,810   | 1,480  | 435    | 182   | 56    | 65    | 92    |
| 4     | 44    | 67     | 849    | 29,700  | 2,790   | 1,730   | 1,400  | 408    | 155   | 76    | 65    | 92    |
| 5     | 43    | 97     | 1,150  | 25,900  | 3,660   | 1,820   | 1,350  | 399    | 149   | 68    | 65    | 92    |
| 6     | 43    | 82     | 1,130  | 21,100  | 4,640   | 3,160   | 1,280  | 373    | 134   | 65    | 65    | 92    |
| 7     | 44    | 77     | 895    | 11,300  | 3,830   | 4,470   | 1,230  | 377    | 136   | 68    | 65    | 92    |
| 8     | 51    | 98     | 816    | 8,450   | 3,040   | 6,100   | 1,160  | 374    | 137   | 52    | 65    | 92    |
| 9     | 55    | 114    | 741    | 6,000   | 2,470   | 7,820   | 1,140  | 347    | 132   | 51    | 65    | 92    |
| 10    | 58    | 97     | 676    | 4,390   | 2,570   | 8,450   | 1,580  | 353    | 131   | 57    | 65    | 92    |
| 11    | 59    | 93     | 630    | 3,420   | 2,170   | 5,370   | 2,530  | 314    | 129   | 63    | 65    | 92    |
| 12    | 59    | 171    | 580    | 2,640   | 1,920   | 4,160   | 3,140  | 303    | 129   | 70    | 65    | 90    |
| 13    | 58    | 443    | 548    | 2,220   | 1,680   | 3,950   | 2,390  | 297    | 129   | 57    | 65    | 90    |
| 14    | 71    | 749    | 536    | 1,980   | 1,530   | 3,650   | 1,940  | 297    | 126   | 56    | 65    | 90    |
| 15    | 97    | 552    | 490    | 1,840   | 1,410   | 3,590   | 1,590  | 286    | 127   | 55    | 80    | 90    |
| 16    | 110   | 444    | 447    | 1,790   | 1,320   | 4,140   | 1,350  | 259    | 120   | 54    | 105   | 90    |
| 17    | 98    | 401    | 421    | 1,230   | 1,270   | 3,590   | 1,240  | 251    | 112   | 54    | 105   | 90    |
| 18    | 89    | 1,040  | 379    | 1,550   | 1,240   | 3,100   | 1,110  | 245    | 106   | 54    | 105   | 90    |
| 19    | 79    | 1,760  | 363    | 1,450   | 1,350   | 4,650   | 1,020  | 223    | 101   | 53    | 96    | 90    |
| 20    | 79    | 1,010  | 349    | 1,280   | 1,720   | 3,740   | 955    | 222    | 97    | 53    | 96    | 90    |
| 21    | 77    | 860    | 344    | 1,210   | 1,500   | 4,930   | 905    | 211    | 95    | 53    | 96    | 90    |
| 22    | 69    | 698    | 378    | 1,450   | 1,450   | 3,710   | 830    | 216    | 83    | 53    | 96    | 90    |
| 23    | 71    | 644    | 373    | 1,480   | 1,890   | 2,820   | 716    | 194    | 73    | 53    | 96    | 90    |
| 24    | 70    | 1,790  | 905    | 1,260   | 1,830   | 2,420   | 660    | 187    | 59    | 53    | 93    | 115   |
| 25    | 66    | 2,790  | 1,480  | 1,200   | 1,810   | 2,200   | 640    | 180    | 50    | 53    | 93    | 150   |
| 26    | 61    | 2,030  | 1,120  | 1,130   | 1,920   | 2,060   | 616    | 174    | 56    | 53    | 93    | 155   |
| 27    | 58    | 1,750  | 935    | 1,090   | 1,800   | 1,960   | 576    | 183    | 56    | 53    | 93    | 160   |
| 28    | 55    | 1,190  | 6,870  | 1,050   | 1,670   | 1,870   | 520    | 164    | 66    | 53    | 93    | 120   |
| 29    | 68    | 1,010  | 5,280  | 4,040   | -----   | 1,790   | 476    | 154    | 78    | 51    | 93    | 92    |
| 30    | 83    | 906    | 3,530  | 4,860   | -----   | 1,750   | 487    | 179    | 68    | 56    | 93    | 88    |
| 31    | 64    | -----  | 3,280  | 3,950   | -----   | 1,680   | -----  | 216    | ----- | 65    | 93    | ----- |
| TOTAL | 2,003 | 21,124 | 37,626 | 162,050 | 59,900  | 105,960 | 37,561 | 8,814  | 3,376 | 1,778 | 2,529 | 2,974 |
| MEAN  | 64.6  | 704    | 1,214  | 5,227   | 2,139   | 3,418   | 1,252  | 284    | 113   | 57.4  | 81.6  | 99.1  |
| AC-FT | 3,970 | 41,900 | 74,600 | 321,400 | 118,800 | 210,200 | 74,500 | 17,480 | 6,700 | 3,530 | 5,020 | 5,900 |

Calendar year 1965 Max 15,100 Min 40 Mean 1,073 Ac-ft 776,500  
 Water year 1965-66 Max 29,700 Min 41 Mean 1,221 Ac-ft 884,000

Peak discharge (base, 15,000 cfs, revised).--Jan. 4 (1015) 35,800 cfs (19.40 ft).

Note.--No gage-height record July 14 to Sept. 30.



## 11-4812. Little River at Crannell, Calif.

Location.--Lat 41°00'40", long 124°04'50", in NE¼ sec.8, T.7 N., R.1 E., on right bank at Crannell, 0.5 mile upstream from Coon Creek and 9.1 miles north of Arcata.

Drainage area.--44.4 sq mi.

Records available.--October 1955 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 17.62 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 24, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--11 years, 141 cfs (102,100 acre-ft per year).

Extremes.--Maximum discharge during year, 8,330 cfs Jan. 4 (gage height, 11.12 ft), from rating curve extended above 3,100 cfs on basis of slope-area measurement at gage height 11.06 ft; minimum daily, 3.0 cfs Oct. 27.

1955-66: Maximum discharge, that of Jan. 4, 1966; minimum daily, 2.8 cfs Oct. 20-22, 1964.

Flood of Jan. 17, 18, 1953, reached a stage of 15.7 ft, observed by an employee of Hammond Lumber Co.

Remarks.--Records excellent. No storage or diversion above station.

Revisions (water years).--1964 Report: 1956-63.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.  | JAN.   | FEB.  | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|---------|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 3.5   | 3.5     | 28    | 312    | 255   | 129    | 84    | 37    | 16    | 8.3   | 6.2   | 6.0   |
| 2     | 3.5   | 3.5     | 24    | 426    | 200   | 163    | 79    | 36    | 18    | 9.4   | 6.2   | 5.3   |
| 3     | 3.5   | 5.9     | 22    | 2,990  | 167   | 197    | 75    | 35    | 17    | 8.7   | 6.2   | 5.0   |
| 4     | 4.2   | 16      | 26    | 4,540  | 162   | 176    | 69    | 34    | 15    | 8.2   | 6.2   | 4.6   |
| 5     | 7.1   | 10      | 37    | 1,850  | 174   | 175    | 65    | 33    | 15    | 7.9   | 6.2   | 4.6   |
| 6     | 6.2   | 7.2     | 35    | 2,820  | 270   | 575    | 61    | 33    | 16    | 7.6   | 6.2   | 4.6   |
| 7     | 4.9   | 7.5     | 41    | 807    | 253   | 600    | 59    | 31    | 16    | 7.6   | 5.8   | 4.2   |
| 8     | 4.2   | 18      | 50    | 664    | 202   | 731    | 56    | 30    | 15    | 8.0   | 5.8   | 4.2   |
| 9     | 4.2   | 12      | 40    | 443    | 174   | 955    | 57    | 31    | 14    | 8.0   | 5.8   | 4.2   |
| 10    | 4.5   | 9.1     | 34    | 310    | 208   | 941    | 118   | 30    | 17    | 11    | 5.4   | 4.2   |
| 11    | 4.8   | 14      | 29    | 241    | 171   | 460    | 208   | 28    | 15    | 9.7   | 5.4   | 4.2   |
| 12    | 4.5   | 42      | 26    | 199    | 158   | 308    | 346   | 27    | 13    | 9.8   | 5.0   | 4.2   |
| 13    | 4.5   | 30      | 23    | 172    | 137   | 325    | 200   | 26    | 12    | 9.7   | 5.0   | 4.2   |
| 14    | 9.9   | 29      | 22    | 154    | 122   | 282    | 142   | 25    | 12    | 9.6   | 5.0   | 4.2   |
| 15    | 17    | 38      | 20    | 137    | 110   | 258    | 113   | 25    | 11    | 8.7   | 5.0   | 4.2   |
| 16    | 14    | 21      | 19    | 120    | 100   | 303    | 97    | 24    | 11    | 8.3   | 4.6   | 4.2   |
| 17    | 7.9   | 21      | 18    | 106    | 93    | 284    | 85    | 23    | 11    | 8.2   | 5.0   | 4.8   |
| 18    | 6.3   | 59      | 17    | 97     | 87    | 259    | 76    | 22    | 11    | 8.2   | 5.0   | 25    |
| 19    | 5.7   | 70      | 16    | 88     | 87    | 510    | 67    | 21    | 10    | 7.6   | 5.0   | 15    |
| 20    | 5.5   | 41      | 15    | 79     | 81    | 353    | 61    | 21    | 10    | 7.6   | 5.0   | 8.8   |
| 21    | 4.9   | 36      | 16    | 74     | 74    | 711    | 57    | 21    | 9.8   | 7.0   | 5.0   | 7.2   |
| 22    | 4.2   | 25      | 15    | 183    | 80    | 391    | 53    | 20    | 9.5   | 7.0   | 5.0   | 6.4   |
| 23    | 3.9   | 23      | 14    | 171    | 145   | 267    | 50    | 20    | 10    | 6.6   | 5.0   | 5.8   |
| 24    | 3.5   | 194     | 112   | 130    | 120   | 210    | 47    | 19    | 9.7   | 6.6   | 5.0   | 5.7   |
| 25    | 3.3   | 298     | 192   | 111    | 143   | 176    | 45    | 18    | 9.1   | 6.6   | 5.0   | 5.4   |
| 26    | 3.2   | 145     | 143   | 97     | 191   | 153    | 43    | 18    | 8.8   | 6.6   | 5.0   | 5.4   |
| 27    | 3.0   | 127     | 93    | 83     | 156   | 135    | 41    | 19    | 8.5   | 6.6   | 5.0   | 5.3   |
| 28    | 4.2   | 68      | 838   | 75     | 133   | 121    | 40    | 18    | 8.2   | 6.6   | 5.0   | 5.0   |
| 29    | 4.1   | 45      | 444   | 320    | ----- | 109    | 40    | 17    | 8.2   | 6.6   | 5.0   | 4.9   |
| 30    | 3.6   | 35      | 530   | 390    | ----- | 100    | 39    | 18    | 8.0   | 6.6   | 6.1   | 4.6   |
| 31    | 3.5   | -----   | 493   | 349    | ----- | 92     | ----- | 18    | ----- | 6.6   | 6.9   | ----- |
| TOTAL | 167.3 | 1,453.7 | 3,432 | 18,538 | 4,253 | 10,449 | 2,573 | 778   | 364.8 | 245.5 | 168.0 | 181.4 |
| MEAN  | 5.40  | 48.5    | 111   | 598    | 152   | 337    | 85.8  | 25.1  | 12.2  | 7.92  | 5.42  | 6.05  |
| AC-FT | 332   | 2,880   | 6,810 | 36,770 | 8,440 | 20,730 | 5,100 | 1,540 | 724   | 487   | 333   | 360   |

CALENDAR YEAR 1965 MAX 1,390 MIN 3.0 MEAN 81.2 AC-FT 58,750  
 WATER YEAR 1965-66 MAX 4,540 MIN 3.0 MEAN 117 AC-FT 84,510

Peak discharge (base, 3,000 cfs, revised).--Jan. 4 (0645) 8,330 cfs (11.12 ft).

## REDWOOD CREEK BASIN

11-4825, Redwood Creek at Orick, Calif.

Location.--Lat 41°17'20", long 124°03'30", in NE¼ sec.4, T.10 N., R.1 E., on downstream side of left pier of bridge on U. S. Highway 101 at Orick, 0.9 mile downstream from Prairie Creek.

Drainage area.--278 sq mi.

Records available.--September 1911 to September 1913, October 1953 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 5.16 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Sept. 10, 1911 to Aug. 28, 1912, chain gage and Aug. 29, 1912 to Aug. 9, 1913, staff gage, at same site at different datum. Oct. 1, 1953 to Feb. 1, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--15 years, 1,073 cfs (776,800 acre-ft per year).

Extremes.--Maximum discharge during year, 39,600 cfs Jan. 4 (gage height, 21.82 ft, from high-water marks); minimum daily, 13 cfs Oct. 3, 1911-13, 1953-66: Maximum discharge, 50,500 cfs Dec. 22 (gage height, 24.0 ft, from outside high-water marks); minimum, 10 cfs Sept. 22-24, 1911.

Flood of Jan. 18, 1953, reached a stage of 23.95 ft, from floodmarks (discharge, 50,000 cfs).

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.   | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|--------|---------|--------|--------|-------|-------|-------|-------|
| 1     | 14    | 22     | 366    | 1,500   | 2,070  | 988     | 1,170  | 410    | 138   | 89    | 34    | 25    |
| 2     | 14    | 22     | 342    | 4,300   | 1,680  | 1,100   | 1,090  | 397    | 154   | 91    | 33    | 23    |
| 3     | 13    | 29     | 311    | 10,200  | 1,400  | 1,120   | 1,020  | 379    | 125   | 91    | 32    | 22    |
| 4     | 14    | 83     | 347    | 34,000  | 1,510  | 1,080   | 946    | 365    | 128   | 84    | 30    | 21    |
| 5     | 21    | 71     | 552    | 16,000  | 1,870  | 1,130   | 890    | 365    | 138   | 82    | 28    | 20    |
| 6     | 24    | 51     | 508    | 14,200  | 2,510  | 2,250   | 834    | 356    | 145   | 80    | 26    | 20    |
| 7     | 23    | 45     | 475    | 8,240   | 2,420  | 3,150   | 790    | 334    | 145   | 78    | 24    | 19    |
| 8     | 21    | 97     | 446    | 5,740   | 2,030  | 4,050   | 748    | 325    | 143   | 71    | 23    | 19    |
| 9     | 20    | 86     | 379    | 3,930   | 1,780  | 5,000   | 730    | 325    | 135   | 60    | 22    | 18    |
| 10    | 20    | 85     | 334    | 3,070   | 1,960  | 3,500   | 1,200  | 320    | 138   | 104   | 21    | 18    |
| 11    | 19    | 119    | 304    | 2,670   | 1,690  | 2,950   | 1,810  | 300    | 135   | 102   | 21    | 18    |
| 12    | 18    | 300    | 280    | 2,210   | 1,580  | 2,280   | 1,990  | 284    | 130   | 77    | 20    | 18    |
| 13    | 18    | 266    | 256    | 1,900   | 1,410  | 2,490   | 1,570  | 272    | 123   | 61    | 20    | 19    |
| 14    | 34    | 242    | 237    | 1,660   | 1,270  | 2,000   | 1,280  | 195    | 123   | 69    | 20    | 20    |
| 15    | 82    | 248    | 223    | 1,490   | 1,180  | 2,020   | 1,090  | 202    | 120   | 61    | 20    | 22    |
| 16    | 87    | 155    | 205    | 1,310   | 1,080  | 2,330   | 981    | 211    | 114   | 54    | 20    | 25    |
| 17    | 57    | 129    | 196    | 1,160   | 981    | 2,020   | 904    | 181    | 114   | 53    | 20    | 42    |
| 18    | 42    | 378    | 187    | 1,020   | 925    | 3,630   | 834    | 205    | 112   | 48    | 20    | 140   |
| 19    | 37    | 710    | 178    | 904     | 939    | 3,000   | 766    | 212    | 110   | 44    | 20    | 80    |
| 20    | 33    | 403    | 172    | 796     | 960    | 4,600   | 695    | 184    | 102   | 39    | 20    | 53    |
| 21    | 30    | 326    | 169    | 742     | 848    | 3,500   | 640    | 196    | 108   | 39    | 20    | 46    |
| 22    | 27    | 237    | 160    | 960     | 855    | 3,000   | 600    | 151    | 108   | 40    | 20    | 41    |
| 23    | 25    | 200    | 157    | 778     | 1,120  | 2,600   | 965    | 141    | 106   | 41    | 20    | 37    |
| 24    | 24    | 759    | 532    | 673     | 1,040  | 2,300   | 540    | 154    | 106   | 41    | 20    | 34    |
| 25    | 22    | 1,260  | 890    | 625     | 1,020  | 2,000   | 514    | 172    | 98    | 39    | 20    | 32    |
| 26    | 21    | 1,050  | 736    | 585     | 1,090  | 1,800   | 496    | 166    | 98    | 38    | 20    | 31    |
| 27    | 21    | 964    | 660    | 541     | 1,040  | 1,650   | 473    | 166    | 95    | 37    | 20    | 30    |
| 28    | 22    | 649    | 8,000  | 426     | 974    | 1,500   | 455    | 138    | 95    | 36    | 20    | 29    |
| 29    | 23    | 511    | 5,000  | 1,650   | -----  | 1,380   | 437    | 160    | 93    | 36    | 23    | 28    |
| 30    | 23    | 430    | 3,000  | 2,660   | -----  | 1,290   | 419    | 154    | 89    | 35    | 27    | 27    |
| 31    | 22    | -----  | 1,800  | 2,560   | -----  | 1,220   | -----  | 154    | ----- | 35    | 31    | ----- |
| TOTAL | 871   | 9,927  | 27,402 | 128,570 | 39,232 | 73,128  | 26,477 | 7,574  | 3,568 | 1,855 | 715   | 977   |
| MEAN  | 28.1  | 331    | 884    | 4,147   | 1,401  | 2,359   | 883    | 244    | 119   | 59.8  | 23.1  | 32.6  |
| AC-FT | 1,730 | 19,690 | 54,350 | 255,000 | 77,820 | 145,000 | 52,520 | 15,020 | 7,080 | 3,680 | 1,420 | 1,940 |

CALENDAR YEAR 1965 MAX 12,300 MIN 13 MEAN 705 AC-FT 510,500  
 WATER YEAR 1965-66 MAX 34,000 MIN 13 MEAN 878 AC-FT 635,300

Peak discharge (base, 9,000 cfs, revised).--Jan. 4 (0800) 39,600 cfs (21.82 ft).

Note.--No gage-height record Dec. 27 to Jan. 4, July 26 to Sept. 30.

11-4887. Dry Lake tributary at Perez, Calif.

Location.--Lat 41°40'20", long 121°15'25", in NE $\frac{1}{4}$  sec. 10, T.44 N., R.6 E., at culvert on State Highway 139, 0.35 mile southwest of Perez.

Drainage area.--1.74 sq mi.

Records available.--October 1962 to September 1966, discontinued as a continuous-record station; converted to a crest-stage partial record station.

Gage.--Water-stage recorder, crest-stage gage, and float-operated recording rain gage. Altitude of gage is 4,150 ft (from topographic map). Prior to Oct. 31, 1962, crest-stage gage only, at same site and datum.

Extremes.--Maximum discharge during year, 34 cfs Mar. 10 (gage height, 3.37 ft), from rating curve extended above 2.3 cfs on basis of computations of flow through culvert at 2.50, 3.30, 3.80, 5.40, 6.44 ft; no flow for several months.  
1962-66: Maximum discharge 128 cfs Oct. 12, 1962 (gage height, 6.44 ft), by computation of maximum flow through culvert; no flow for several months each year.

Remarks.--Records fair. No storage or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.  | Apr. | May  | June | July | Aug. | Sept. |
|-------|------|------|------|------|------|-------|------|------|------|------|------|-------|
| 1     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 2     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 3     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 4     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 5     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 6     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 7     |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 8     |      |      |      |      |      | 1.4   |      |      |      |      |      |       |
| 9     |      |      |      |      |      | 1.2   |      |      |      |      |      |       |
| 10    |      |      |      |      |      | 2.1   |      |      |      |      |      |       |
| 11    |      |      |      |      |      | 1.5   |      |      |      |      |      |       |
| 12    |      |      |      |      |      | 7.2   |      |      |      |      |      |       |
| 13    |      |      |      |      |      | 7.3   |      |      |      |      |      |       |
| 14    |      |      |      |      |      | 4.4   |      |      |      |      |      |       |
| 15    |      |      |      |      |      | 1.0   |      |      |      |      |      |       |
| 16    |      |      |      |      |      | .30   |      |      |      |      |      |       |
| 17    |      |      |      |      |      | .10   |      |      |      |      |      |       |
| 18    |      |      |      |      |      | .70   |      |      |      |      |      |       |
| 19    |      |      |      |      |      | .60   |      |      |      |      |      |       |
| 20    |      |      |      |      |      | .10   |      |      |      |      |      |       |
| 21    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 22    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 23    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 24    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 25    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 26    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 27    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 28    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 29    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 30    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| 31    |      |      |      |      |      | 0     |      |      |      |      |      |       |
| Total | 0    | 0    | 0    | 0    | 0    | 71.10 | 0    | 0    | 0    | 0    | 0    | 0     |
| Mean  | 0    | 0    | 0    | 0    | 0    | 2.29  | 0    | 0    | 0    | 0    | 0    | 0     |
| Ac-ft | 0    | 0    | 0    | 0    | 0    | 1.41  | 0    | 0    | 0    | 0    | 0    | 0     |
| (†)   | 0    | 2.35 | 0.55 | 0.70 | 0.90 | 0.70  | 0.30 | 0.60 | 0.80 | 0    | 0    | 0     |

Calendar year 1965 Max 6.3 Min 0 Mean 0.791 Ac-ft 57.2  
Water year 1965-66 Max 2.1 Min 0 Mean 0.195 Ac-ft 14.1

† Precipitation, in inches.

## BUTTE VALLEY BASIN

11-4895. Antelope Creek near Tennant, Calif.

Location.--Lat 41°32'45", long 121°55'05", in NW¼ sec.25, T.43 N., R.1 W., on right bank 2.5 miles south of Tennant, 4 miles downstream from Frog Lake, and 17 miles southeast of town of Mount Hebron.

Drainage area.--18.6 sq mi.

Records available.--May 1952 to September 1966.

Gage.--Digital water-stage recorder and concrete control. Altitude of gage is 5,080 ft (from topographic map). Prior to May 26, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--14 years, 36.3 cfs (26,280 acre-ft per year).

Extremes.--Maximum discharge, 177 cfs Nov. 17 (gage height, 2.67 ft); maximum gage-height, 4.17 ft Jan. 7 (backwater from ice); minimum daily discharge, 11 cfs many days in October and September.

1952-66: Maximum discharge, 638 cfs Dec. 22, 1964 (gage height, 4.00 ft), from rating curve extended above 200 cfs on basis of slope area measurement of maximum flow; maximum gage height, 4.31 ft Oct. 12, 1962; minimum daily discharge, 3.6 cfs Jan. 5, 1960.

Remarks.--Records good. No storage or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug. | Sept. |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1     | 12   | 12    | 21    | 15    | 16    | 15    | 40    | 81    | 76    | 30    | 16   | 12    |
| 2     | 12   | 12    | 20    | 15    | 16    | 15    | 38    | 85    | 70    | 29    | 15   | 12    |
| 3     | 12   | 12    | 21    | 17    | 16    | 15    | 39    | 87    | 63    | 28    | 15   | 12    |
| 4     | 12   | 13    | 21    | 25    | 16    | 15    | 41    | 101   | 54    | 27    | 15   | 12    |
| 5     | 12   | 12    | 21    | 45    | 16    | 15    | 46    | 115   | 52    | 26    | 15   | 11    |
| 6     | 12   | 12    | 20    | 70    | 16    | 15    | 53    | 122   | 52    | 25    | 15   | 11    |
| 7     | 12   | 17    | 20    | 78    | 15    | 15    | 61    | 115   | 53    | 24    | 15   | 11    |
| 8     | 11   | 36    | 20    | 74    | 16    | 15    | 63    | 120   | 53    | 24    | 14   | 11    |
| 9     | 11   | 17    | 20    | 70    | 16    | 18    | 68    | 134   | 56    | 25    | 14   | 11    |
| 10    | 11   | 16    | 20    | 53    | 15    | 20    | 73    | 132   | 56    | 24    | 14   | 11    |
| 11    | 11   | 16    | 20    | 45    | 15    | 18    | 63    | 122   | 54    | 23    | 14   | 11    |
| 12    | 11   | 22    | 20    | 40    | 15    | 19    | 60    | 115   | 51    | 22    | 14   | 12    |
| 13    | 11   | 29    | 20    | 38    | 17    | 22    | 60    | 115   | 52    | 22    | 14   | 12    |
| 14    | 11   | 53    | 20    | 32    | 17    | 23    | 61    | 103   | 54    | 21    | 14   | 12    |
| 15    | 12   | 41    | 19    | 28    | 15    | 23    | 65    | 99    | 56    | 21    | 14   | 12    |
| 16    | 12   | 28    | 17    | 24    | 15    | 28    | 73    | 94    | 56    | 20    | 13   | 11    |
| 17    | 12   | 63    | 16    | 22    | 16    | 20    | 77    | 92    | 54    | 20    | 14   | 11    |
| 18    | 12   | 63    | 14    | 21    | 15    | 19    | 76    | 90    | 51    | 19    | 13   | 15    |
| 19    | 12   | 41    | 13    | 19    | 16    | 19    | 70    | 96    | 48    | 19    | 17   | 13    |
| 20    | 12   | 33    | 12    | 18    | 16    | 19    | 65    | 104   | 45    | 19    | 15   | 12    |
| 21    | 12   | 30    | 12    | 18    | 16    | 19    | 65    | 115   | 41    | 18    | 14   | 12    |
| 22    | 12   | 27    | 12    | 18    | 16    | 20    | 68    | 111   | 39    | 18    | 14   | 11    |
| 23    | 12   | 26    | 12    | 17    | 16    | 22    | 71    | 101   | 40    | 18    | 14   | 11    |
| 24    | 12   | 22    | 12    | 17    | 16    | 24    | 76    | 99    | 37    | 17    | 13   | 11    |
| 25    | 12   | 23    | 12    | 16    | 15    | 26    | 81    | 102   | 34    | 17    | 14   | 11    |
| 26    | 12   | 22    | 12    | 16    | 15    | 30    | 79    | 103   | 33    | 17    | 15   | 11    |
| 27    | 12   | 21    | 12    | 16    | 15    | 36    | 76    | 107   | 33    | 17    | 14   | 11    |
| 28    | 12   | 22    | 24    | 16    | 15    | 31    | 76    | 101   | 32    | 17    | 14   | 11    |
| 29    | 12   | 22    | 20    | 16    | ----- | 36    | 76    | 95    | 32    | 16    | 15   | 11    |
| 30    | 12   | 22    | 15    | 16    | ----- | 38    | 76    | 90    | 31    | 16    | 13   | 11    |
| 31    | 12   | ----- | 15    | 16    | ----- | 39    | ----- | 82    | ----- | 16    | 13   | ----- |
| Total | 365  | 784   | 533   | 931   | 439   | 688   | 1,936 | 3,233 | 1,458 | 655   | 448  | 346   |
| Mean  | 11.8 | 26.1  | 17.2  | 30.0  | 15.7  | 22.2  | 64.5  | 104   | 48.6  | 21.1  | 14.5 | 11.5  |
| Ac-ft | 724  | 1,560 | 1,060 | 1,850 | 871   | 1,360 | 3,840 | 6,420 | 2,890 | 1,300 | 889  | 686   |

Calendar year 1965 Max 146 Min 11 Mean 32.8 Ac-ft 23,750  
 Water year 1965-66 Max 134 Min 11 Mean 32.4 Ac-ft 23,450

Peak discharge (base, 100 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 2300 | 2.67        | 177       | 5-8  | 2300 | 2.55        | 156       |
| 1-7   | 0300 | 4.19        | unknown   | 5-21 | 2300 | 2.38        | 122       |

11-5107. Klamath River below John C. Boyle powerplant, near Keno, Oreg.

Location.--Lat 42°05'05", long 121°04'20", in SE¼SE¼ sec.14, T.40 S., R.6 E., on right bank 0.7 mile downstream from John C. Boyle powerplant, 8 miles downstream from Spencer Creek, and 8.5 miles southwest of Keno.

Drainage area.--4,080 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

Records available.--January 1959 to September 1966. Prior to Oct. 1, 1961, published as "below Big Bend powerplant."

Gage.--Digital water-stage recorder. Datum of gage is 3,274.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1956 (Levels by Pacific Power & Light Co.). Prior to June 10, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--7 years, 1,767 cfs (1,279,000 acre-ft per year).

Extremes.--Maximum discharge during year, 4,330 cfs Nov. 5 (gage height, 6.67 ft); minimum, 329 cfs Sept. 24; minimum daily, 373 cfs July 31.

1959-66: Maximum discharge, 8,830 cfs Feb. 1, 1965 (gage height, 8.55 ft); minimum, 311 cfs Sept. 7, 1964; minimum daily, 326 cfs Aug. 15, 30, 1964.

Remarks.--Records excellent. Flow regulated by Upper Klamath Lake (capacity, 584,000 acre-ft). Large diurnal fluctuation caused by John C. Boyle powerplant and 2 powerplants below Upper Klamath Lake. Large diversions for irrigation above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.   | Mar.   | Apr.    | May    | June   | July   | Aug.   | Sept.  |
|-------|---------|---------|---------|---------|--------|--------|---------|--------|--------|--------|--------|--------|
| 1     | 2,170   | 3,340   | 3,750   | 2,280   | 1,330  | 1,270  | 1,680   | 435    | 695    | 588    | 1,070  | 1,120  |
| 2     | 2,180   | 3,740   | 2,830   | 2,270   | 1,330  | 1,290  | 1,540   | 570    | 669    | 427    | 1,050  | 1,380  |
| 3     | 2,090   | 3,880   | 2,940   | 2,310   | 1,320  | 1,380  | 1,630   | 602    | 684    | 388    | 1,030  | 1,080  |
| 4     | 2,160   | 3,930   | 2,900   | 2,300   | 1,200  | 1,280  | 1,330   | 631    | 445    | 494    | 882    | 1,090  |
| 5     | 2,120   | 4,220   | 2,910   | 2,350   | 1,030  | 882    | 1,790   | 695    | 444    | 582    | 953    | 961    |
| 6     | 2,340   | 4,180   | 2,920   | 2,320   | 974    | 864    | 1,760   | 684    | 819    | 595    | 702    | 1,370  |
| 7     | 2,570   | 4,090   | 2,960   | 2,330   | 1,390  | 1,300  | 2,010   | 441    | 682    | 508    | 559    | 1,270  |
| 8     | 2,550   | 4,080   | 2,930   | 2,550   | 1,320  | 1,260  | 2,340   | 441    | 675    | 637    | 949    | 1,270  |
| 9     | 2,510   | 4,090   | 2,870   | 1,960   | 1,330  | 1,260  | 2,210   | 700    | 677    | 461    | 959    | 1,300  |
| 10    | 2,490   | 4,110   | 2,940   | 2,360   | 1,320  | 1,060  | 1,890   | 723    | 587    | 393    | 1,120  | 1,090  |
| 11    | 2,480   | 4,040   | 2,910   | 2,330   | 1,320  | 1,200  | 2,020   | 657    | 440    | 493    | 1,150  | 1,000  |
| 12    | 2,530   | 4,130   | 2,860   | 2,180   | 1,010  | 928    | 1,920   | 680    | 441    | 647    | 1,090  | 1,450  |
| 13    | 2,600   | 4,140   | 2,820   | 2,250   | 1,010  | 909    | 2,480   | 701    | 628    | 652    | 903    | 1,070  |
| 14    | 2,580   | 4,090   | 2,760   | 2,260   | 1,340  | 1,280  | 2,160   | 456    | 563    | 692    | 644    | 1,210  |
| 15    | 2,590   | 3,990   | 2,650   | 2,130   | 1,390  | 1,330  | 2,360   | 441    | 603    | 579    | 1,170  | 1,160  |
| 16    | 2,600   | 3,980   | 2,640   | 2,100   | 1,320  | 1,360  | 2,060   | 694    | 628    | 399    | 1,140  | 1,180  |
| 17    | 2,390   | 4,020   | 2,640   | 2,300   | 1,380  | 1,330  | 2,060   | 953    | 628    | 392    | 1,110  | 996    |
| 18    | 2,630   | 4,040   | 2,630   | 2,230   | 1,110  | 1,250  | 2,350   | 636    | 450    | 638    | 1,060  | 953    |
| 19    | 2,600   | 3,950   | 2,580   | 2,040   | 1,140  | 1,040  | 2,330   | 573    | 441    | 616    | 1,040  | 1,320  |
| 20    | 2,580   | 3,960   | 2,550   | 1,630   | 1,040  | 998    | 2,270   | 585    | 586    | 614    | 993    | 1,360  |
| 21    | 2,600   | 3,980   | 2,570   | 1,650   | 1,350  | 1,610  | 2,360   | 440    | 608    | 630    | 997    | 1,270  |
| 22    | 2,630   | 3,980   | 2,590   | 1,630   | 1,270  | 1,730  | 1,900   | 458    | 579    | 764    | 1,310  | 1,290  |
| 23    | 2,650   | 3,990   | 2,590   | 1,630   | 1,330  | 1,730  | 1,470   | 684    | 585    | 413    | 1,230  | 1,570  |
| 24    | 2,680   | 3,980   | 2,590   | 1,700   | 1,320  | 1,680  | 1,480   | 670    | 593    | 376    | 1,170  | 894    |
| 25    | 2,690   | 3,970   | 2,580   | 1,480   | 1,370  | 1,700  | 1,540   | 518    | 444    | 686    | 1,120  | 808    |
| 26    | 2,660   | 3,970   | 2,580   | 1,280   | 953    | 1,510  | 1,220   | 526    | 441    | 966    | 1,110  | 1,280  |
| 27    | 2,690   | 3,920   | 2,460   | 1,330   | 923    | 1,350  | 975     | 547    | 583    | 937    | 916    | 1,210  |
| 28    | 2,740   | 3,970   | 2,080   | 1,220   | 1,280  | 1,680  | 709     | 455    | 600    | 870    | 795    | 881    |
| 29    | 2,740   | 3,960   | 2,170   | 1,160   | -----  | 1,680  | 619     | 471    | 595    | 826    | 1,380  | 850    |
| 30    | 2,880   | 3,960   | 2,450   | 1,040   | -----  | 1,770  | 483     | 579    | 589    | 742    | 1,250  | 827    |
| 31    | 3,140   | -----   | 2,280   | 1,330   | -----  | 1,700  | -----   | 680    | -----  | 373    | 1,190  | -----  |
| Total | 78,860  | 119,680 | 83,930  | 59,930  | 34,400 | 41,611 | 52,946  | 18,326 | 17,402 | 18,378 | 32,042 | 34,510 |
| Mean  | 2,544   | 3,989   | 2,707   | 1,933   | 1,229  | 1,342  | 1,765   | 591    | 580    | 593    | 1,034  | 1,150  |
| Ac-ft | 156,400 | 237,400 | 166,500 | 119,900 | 69,230 | 82,530 | 105,000 | 36,350 | 34,520 | 36,450 | 63,550 | 68,450 |

Calendar year 1965 Max 3,730 Min 340 Mean 3,123 Ac-ft 2,261M  
 Water year 1965-66 Max 4,220 Min 373 Mean 1,622 Ac-ft 1,174M

## KLAMATH RIVER BASIN

11-5165.3. Klamath River below Iron Gate Dam, Calif.

Location.--Lat 41°55'40", long 122°26'35", in ~~Section~~ sec.17, T.47 N., R.5 W., on left bank 0.1 mile downstream from Bogus Creek, 0.6 mile downstream from Iron Gate Dam, and 5.9 miles northeast of Hornbrook.

Records available.--October 1960 to September 1966.

Gage.--Water-stage recorder. Datum of gage is 2,162.44 ft above mean sea level (levels by Pacific Power & Light Co.).

Average discharge.--6 years, 2,148 cfs (1,555,000 acre-ft per year).

Extremes.--Maximum discharge during year, 4,940 cfs Nov. 16 (gage height, 6.18 ft); minimum daily, 656 cfs June 30.

1960-66: Maximum discharge, 29,400 cfs Dec. 22, 1964 (gage height, 13.63 ft), from rating curve extended above 12,000 cfs on basis of slope-area measurement of maximum flow; minimum daily, 647 cfs Nov. 6, 1960, Sept. 24, Oct. 1, 1961.

Remarks.--Records good. Complete regulation by Upper Klamath Lake (capacity, 584,000 acre-ft) and other smaller reservoirs; diversions above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.   | Mar.    | Apr.    | May    | June   | July   | Aug.   | Sept.  |
|-------|---------|---------|---------|---------|--------|---------|---------|--------|--------|--------|--------|--------|
| 1     | 2,510   | 3,000   | 4,130   | 2,720   | 1,740  | 1,500   | 3,210   | 1,140  | 841    | 662    | 1,030  | 1,350  |
| 2     | 2,530   | 3,010   | 3,470   | 2,450   | 1,740  | 1,500   | 2,220   | 1,140  | 736    | 674    | 1,030  | 1,340  |
| 3     | 2,530   | 3,030   | 3,460   | 2,830   | 1,760  | 1,410   | 1,920   | 1,120  | 722    | 680    | 1,030  | 1,320  |
| 4     | 2,530   | 3,040   | 3,470   | 3,420   | 1,750  | 1,380   | 2,100   | 1,100  | 708    | 687    | 1,040  | 1,310  |
| 5     | 2,530   | 3,170   | 3,440   | 3,540   | 1,660  | 1,350   | 2,560   | 1,040  | 708    | 703    | 1,040  | 1,310  |
| 6     | 2,460   | 3,520   | 3,460   | 3,720   | 1,590  | 1,320   | 2,700   | 1,040  | 773    | 722    | 1,040  | 1,300  |
| 7     | 2,860   | 4,290   | 3,460   | 3,460   | 1,600  | 1,320   | 2,720   | 1,040  | 736    | 729    | 1,050  | 1,320  |
| 8     | 2,840   | 4,290   | 3,440   | 3,500   | 1,620  | 1,350   | 3,030   | 1,040  | 715    | 729    | 1,040  | 1,310  |
| 9     | 2,910   | 4,450   | 3,360   | 2,860   | 1,600  | 1,500   | 2,480   | 1,030  | 715    | 736    | 1,040  | 1,310  |
| 10    | 2,970   | 4,490   | 3,360   | 2,940   | 1,620  | 1,760   | 1,960   | 1,030  | 703    | 743    | 1,040  | 1,310  |
| 11    | 2,960   | 4,540   | 3,350   | 3,030   | 1,640  | 1,790   | 2,460   | 1,020  | 715    | 743    | 1,040  | 1,310  |
| 12    | 2,940   | 4,530   | 3,320   | 2,620   | 1,650  | 1,790   | 3,000   | 1,010  | 708    | 729    | 1,100  | 1,300  |
| 13    | 2,940   | 4,450   | 3,360   | 2,760   | 1,630  | 1,800   | 3,220   | 1,010  | 715    | 729    | 1,060  | 1,310  |
| 14    | 2,940   | 4,450   | 3,110   | 2,450   | 1,600  | 1,800   | 3,400   | 1,020  | 708    | 722    | 1,040  | 1,310  |
| 15    | 2,930   | 4,510   | 2,970   | 2,710   | 1,530  | 1,800   | 3,420   | 1,010  | 701    | 722    | 1,030  | 1,310  |
| 16    | 2,930   | 4,780   | 2,500   | 2,510   | 1,490  | 1,790   | 2,960   | 1,010  | 694    | 729    | 1,040  | 1,310  |
| 17    | 2,930   | 4,690   | 2,900   | 2,770   | 1,380  | 1,780   | 2,550   | 1,010  | 715    | 743    | 1,050  | 1,310  |
| 18    | 2,930   | 4,710   | 2,760   | 2,790   | 1,380  | 1,790   | 2,770   | 1,010  | 715    | 743    | 1,060  | 1,320  |
| 19    | 2,580   | 4,540   | 2,630   | 2,750   | 1,380  | 1,790   | 3,210   | 1,010  | 715    | 736    | 1,060  | 1,310  |
| 20    | 2,940   | 4,350   | 2,890   | 2,400   | 1,380  | 1,780   | 3,500   | 1,010  | 708    | 729    | 1,060  | 1,310  |
| 21    | 2,940   | 4,350   | 2,960   | 2,070   | 1,370  | 1,760   | 3,340   | 1,020  | 708    | 729    | 1,050  | 1,310  |
| 22    | 2,970   | 4,340   | 2,720   | 2,200   | 1,380  | 1,760   | 2,670   | 1,020  | 715    | 743    | 1,040  | 1,310  |
| 23    | 2,980   | 4,350   | 2,600   | 2,190   | 1,350  | 1,770   | 2,130   | 1,020  | 736    | 757    | 1,060  | 1,310  |
| 24    | 2,980   | 4,420   | 2,680   | 2,200   | 1,430  | 1,780   | 1,830   | 1,020  | 701    | 750    | 1,060  | 1,310  |
| 25    | 2,980   | 4,420   | 2,580   | 1,800   | 1,510  | 1,780   | 1,820   | 1,020  | 687    | 750    | 1,070  | 1,310  |
| 26    | 2,980   | 4,400   | 2,480   | 1,750   | 1,510  | 1,790   | 1,820   | 1,020  | 687    | 743    | 1,080  | 1,320  |
| 27    | 2,970   | 4,380   | 2,540   | 1,750   | 1,500  | 1,790   | 1,510   | 1,020  | 680    | 736    | 1,060  | 1,320  |
| 28    | 2,570   | 4,350   | 2,680   | 1,750   | 1,500  | 2,150   | 1,320   | 1,020  | 668    | 729    | 1,060  | 1,320  |
| 29    | 1,760   | 4,400   | 2,700   | 1,750   | -----  | 2,600   | 1,320   | 1,020  | 682    | 722    | 1,060  | 1,310  |
| 30    | 2,920   | 4,380   | 2,710   | 1,750   | -----  | 2,630   | 1,320   | 1,030  | 656    | 715    | 1,060  | 1,300  |
| 31    | 3,010   | -----   | 2,750   | 1,740   | -----  | 2,960   | -----   | 1,020  | -----  | 841    | 1,090  | -----  |
| Total | 86,750  | 125,630 | 94,240  | 79,180  | 43,290 | 55,070  | 74,470  | 32,070 | 21,361 | 22,610 | 32,610 | 39,400 |
| Mean  | 2,798   | 4,188   | 3,040   | 2,554   | 1,546  | 1,776   | 2,482   | 1,035  | 712    | 729    | 1,052  | 1,313  |
| Ac-ft | 172,100 | 249,200 | 186,900 | 157,100 | 85,860 | 109,200 | 147,700 | 63,610 | 42,370 | 44,850 | 64,680 | 79,150 |

Calendar year 1965 Max 11,900 Min 694 Mean 3,527 Ac-ft 2,626,000  
 Water year 1965-66 Max 4,780 Min 656 Mean 1,936 Ac-ft 1,402,000

11-5166. Cottonwood Creek at Hornbrook, Calif.

Location.--Lat 41°55'00", long 122°33'45", SW  $\frac{1}{4}$  Sec. 17, T. 47 N., R. 6 W., on right bank 0.5 mile upstream from Rancheria Gulch, and 0.6 mile northwest of Hornbrook.

Drainage area.--89.8 sq mi.

Records available.--October 1964 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 2,160 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,440 cfs Jan. 6 (gage-height, 5.97 ft); minimum daily, 0.1 cfs on many days in August and September.  
1964-66: Maximum discharge, 5,480 cfs Dec. 22, 1964 (gage height, 10.94 ft in gage well, 11.3 ft outside, from floodmarks), from rating curve extended above 1,500 cfs on basis of slope-area measurement of maximum flow; minimum daily, that of August and September 1966.

Remarks.--Records good above 5.0 cfs and fair below. Some diversion above station for irrigation. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June   | July  | Aug. | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|-------|
| 1     | 2.0   | 5.2   | 13    | 15    | 40    | 73    | 190   | 34    | 15     | 0.90  | 0.20 | 0.10  |
| 2     | 1.8   | 5.4   | 13    | 17    | 39    | 61    | 174   | 36    | 18     | 1.4   | 1.0  | .20   |
| 3     | 2.0   | 5.6   | 13    | 42    | 39    | 50    | 143   | 33    | 17     | 1.4   | .20  | .20   |
| 4     | 2.0   | 9.9   | 14    | 174   | 65    | 47    | 130   | 31    | 15     | .90   | .10  | .20   |
| 5     | 2.6   | 3.8   | 17    | 163   | 82    | 47    | 126   | 31    | 14     | 1.0   | .10  | .20   |
| 6     | 3.3   | 7.8   | 16    | 742   | 80    | 90    | 126   | 30    | 13     | 1.0   | .10  | .10   |
| 7     | 5.3   | 8.1   | 15    | 186   | 58    | 120   | 126   | 23    | 22     | 1.0   | .10  | .10   |
| 8     | 4.9   | 11    | 15    | 144   | 47    | 136   | 120   | 25    | 17     | 1.4   | .10  | .10   |
| 9     | 4.6   | 9.2   | 13    | 99    | 45    | 291   | 126   | 24    | 16     | 2.2   | .10  | .20   |
| 10    | 4.3   | 8.5   | 13    | 69    | 54    | 362   | 123   | 22    | 11     | 3.6   | .10  | .20   |
| 11    | 4.3   | 10    | 12    | 54    | 44    | 194   | 116   | 21    | 9.9    | 4.0   | .10  | .20   |
| 12    | 4.0   | 18    | 11    | 47    | 44    | 202   | 108   | 18    | 9.2    | 2.9   | .10  | .20   |
| 13    | 3.6   | 15    | 11    | 40    | 37    | 260   | 99    | 18    | 8.1    | 2.4   | .10  | .20   |
| 14    | 3.6   | 13    | 10    | 39    | 36    | 240   | 92    | 18    | 6.6    | 2.4   | .10  | .20   |
| 15    | 4.0   | 11    | 3.5   | 60    | 34    | 198   | 92    | 15    | 6.2    | 1.4   | .10  | .20   |
| 16    | 4.3   | 10    | 8.8   | 73    | 34    | 151   | 92    | 15    | 4.2    | .90   | .10  | .20   |
| 17    | 4.3   | 12    | 8.8   | 56    | 37    | 113   | 86    | 13    | 3.4    | .90   | .10  | .20   |
| 18    | 4.6   | 26    | 9.6   | 47    | 42    | 108   | 80    | 11    | 3.4    | .80   | .20  | .90   |
| 19    | 4.9   | 20    | 9.6   | 37    | 52    | 108   | 69    | 10    | 3.4    | .90   | .10  | .50   |
| 20    | 5.2   | 15    | 9.9   | 34    | 53    | 99    | 67    | 9.6   | 3.4    | .80   | .10  | .50   |
| 21    | 5.6   | 14    | 12    | 34    | 65    | 90    | 65    | 9.6   | 2.9    | .50   | .10  | .60   |
| 22    | 5.6   | 13    | 11    | 34    | 77    | 84    | 63    | 11    | 2.4    | .70   | .10  | .60   |
| 23    | 5.6   | 14    | 9.2   | 31    | 97    | 84    | 61    | 9.2   | 2.4    | .60   | .10  | .50   |
| 24    | 5.6   | 16    | 11    | 30    | 90    | 95    | 53    | 7.2   | 1.6    | .60   | .10  | .40   |
| 25    | 5.9   | 20    | 12    | 30    | 82    | 108   | 54    | 7.2   | 1.3    | .60   | .10  | .40   |
| 26    | 5.9   | 19    | 14    | 29    | 73    | 128   | 48    | 6.9   | .80    | .40   | .20  | .40   |
| 27    | 6.2   | 17    | 14    | 26    | 77    | 154   | 42    | 6.4   | .60    | .30   | .20  | .40   |
| 28    | 6.2   | 13    | 36    | 26    | 82    | 174   | 40    | 9.6   | .50    | .30   | .20  | .40   |
| 29    | 6.2   | 12    | 30    | 40    | ----- | 190   | 40    | 9.9   | .50    | .30   | .20  | .40   |
| 30    | 6.4   | 13    | 21    | 56    | ----- | 194   | 37    | 15    | .60    | .40   | .20  | .40   |
| 31    | 6.2   | ----- | 18    | 48    | ----- | 194   | ----- | 16    | -----  | .40   | .20  | ----- |
| Total | 141.0 | 383.5 | 429.4 | 2522  | 1,610 | 4,450 | 2,793 | 550.6 | 229.40 | 37.30 | 4.00 | 9.40  |
| Mean  | 4.55  | 12.8  | 13.9  | 81.4  | 57.5  | 144   | 93.3  | 17.8  | 7.65   | 1.20  | 0.13 | .31   |
| Ac-ft | 280   | 761   | 352   | 5,000 | 3,190 | 8,330 | 5,550 | 1,090 | 455    | 74    | 7.9  | 19    |

Calendar year 1965 Max 926 Min 1.3 Mean 65.0 Ac-ft 47,020  
Water year 1965-66 Max 742 Min 0.10 Mean 36.1 Ac-ft 26,110

Peak discharge (base, 400 cfs).--Jan. 6 (0430) 1,440 cfs (5.97 ft); Mar. 9 (2400) 720 cfs (5.43 ft).

11-5169. Little Shasta River near Montague, Calif.

Location.--Lat 41°45'11", long 122°17'58", in NW $\frac{1}{4}$  sec.15, T.45 N., R.4 W., on right bank 0.5 mile downstream from Dry Creek and 12 miles east of Montague.

Drainage area.--48.2 sq mi.

Records available.--October 1957 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 3,360 ft (from topographic map). Prior to May 27, 1965, water-stage recorder at site 0.25 mile downstream at different datum.

Average discharge.--9 years, 16.5 cfs (11,950 acre-ft per year).

Extremes.--Maximum discharge during year, 97 cfs Apr. 1 (gage height, 2.73 ft); minimum daily, 0.6 cfs Jan. 4.

1957-66: Maximum discharge, 5,910 cfs Dec. 22, 1964 (gage height, 12.2 ft, present site and datum), from slope-area measurement of maximum flow; minimum daily, that of Jan. 4, 1966.

Remarks.--No known diversion or regulation above station.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.  | Nov.  | Dec.  | Jan.   | Feb.  | Mar.  | Apr.  | May    | June  | July  | Aug. | Sept. |
|--------------------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|------|-------|
| 1                  | 4.6   | 4.5   | 5.4   | 2.0    | 3.8   | 8.1   | 7.3   | 2.4    | 9.8   | 5.2   | 2.9  | 2.9   |
| 2                  | 4.5   | 4.5   | 5.9   | 1.8    | 3.9   | 7.0   | 6.8   | 2.3    | 9.7   | 5.2   | 2.9  | 2.9   |
| 3                  | 4.7   | 4.7   | 6.6   | 1.6    | 4.0   | 7.2   | 5.8   | 2.3    | 11    | 5.2   | 2.9  | 2.6   |
| 4                  | 4.7   | 6.3   | 8.4   | 6.0    | 4.9   | 10    | 5.3   | 2.3    | 8.8   | 5.1   | 2.9  | 2.6   |
| 5                  | 4.9   | 5.1   | 1.0   | 2.4    | 5.2   | 7.8   | 5.3   | 2.3    | 8.4   | 4.8   | 2.9  | 2.3   |
| 6                  | 4.6   | 5.1   | 9.0   | 1.4    | 5.4   | 1.3   | 5.2   | 2.1    | 8.5   | 4.7   | 2.9  | 2.3   |
| 7                  | 4.4   | 5.4   | 7.7   | 9.5    | 5.4   | 1.5   | 5.1   | 2.0    | 10    | 4.7   | 2.9  | 2.3   |
| 8                  | 4.4   | 5.9   | 7.4   | 1.3    | 5.4   | 1.6   | 4.8   | 2.0    | 9.6   | 4.4   | 2.9  | 2.3   |
| 9                  | 4.4   | 4.8   | 6.8   | 8.5    | 5.3   | 3.3   | 5.0   | 2.3    | 9.6   | 4.4   | 3.3  | 2.3   |
| 10                 | 4.3   | 4.6   | 6.7   | 6.3    | 5.3   | 5.1   | 4.9   | 2.0    | 7.5   | 4.4   | 3.3  | 2.3   |
| 11                 | 4.4   | 6.5   | 6.4   | 4.5    | 5.3   | 3.1   | 4.5   | 1.8    | 6.5   | 4.4   | 3.3  | 2.6   |
| 12                 | 4.6   | 1.1   | 6.2   | 5.1    | 5.5   | 3.8   | 3.8   | 1.8    | 6.5   | 4.4   | 3.3  | 2.6   |
| 13                 | 4.9   | 6.9   | 5.7   | 2.9    | 5.2   | 5.4   | 3.6   | 1.7    | 6.3   | 4.4   | 3.3  | 2.6   |
| 14                 | 5.4   | 5.5   | 5.5   | 5.4    | 4.3   | 4.9   | 3.7   | 1.6    | 6.3   | 4.4   | 3.3  | 2.9   |
| 15                 | 5.7   | 4.6   | 5.2   | 1.6    | 4.3   | 3.7   | 4.2   | 1.5    | 5.4   | 4.4   | 3.3  | 2.9   |
| 16                 | 5.5   | 4.4   | 4.8   | 1.1    | 4.4   | 2.4   | 4.4   | 1.5    | 5.7   | 4.4   | 2.9  | 2.9   |
| 17                 | 5.3   | 1.3   | 4.6   | 9.0    | 4.5   | 1.8   | 4.2   | 1.4    | 6.2   | 4.0   | 3.3  | 2.9   |
| 18                 | 5.4   | 8.4   | 4.4   | 7.8    | 5.2   | 1.8   | 3.6   | 1.2    | 5.8   | 4.0   | 3.6  | 5.2   |
| 19                 | 5.2   | 6.2   | 4.2   | 7.4    | 6.5   | 1.8   | 3.1   | 1.2    | 5.8   | 3.6   | 4.0  | 3.3   |
| 20                 | 5.2   | 6.8   | 4.0   | 6.8    | 8.3   | 1.6   | 3.0   | 1.1    | 5.6   | 3.6   | 2.9  | 2.9   |
| 21                 | 4.9   | 6.5   | 3.8   | 6.0    | 9.2   | 1.4   | 2.9   | 1.1    | 5.6   | 3.6   | 2.6  | 2.9   |
| 22                 | 4.9   | 5.3   | 3.7   | 5.2    | 1.1   | 1.2   | 3.0   | 1.1    | 5.6   | 3.6   | 2.6  | 2.6   |
| 23                 | 4.8   | 5.5   | 3.6   | 4.8    | 1.2   | 1.4   | 3.0   | 1.0    | 7.4   | 3.6   | 2.9  | 2.6   |
| 24                 | 4.8   | 6.5   | 4.5   | 4.0    | 1.1   | 1.9   | 3.1   | 1.1    | 6.6   | 3.6   | 2.6  | 2.9   |
| 25                 | 4.9   | 6.0   | 4.0   | 3.8    | 9.3   | 3.4   | 3.1   | 1.0    | 6.4   | 3.6   | 2.6  | 2.9   |
| 26                 | 5.0   | 5.7   | 3.3   | 4.1    | 8.3   | 4.4   | 2.7   | 1.0    | 5.4   | 3.6   | 3.6  | 2.9   |
| 27                 | 4.4   | 4.7   | 3.1   | 3.6    | 9.0   | 4.9   | 2.6   | 9.5    | 5.2   | 3.3   | 3.3  | 2.9   |
| 28                 | 4.5   | 4.5   | 3.5   | 4.0    | 9.4   | 5.6   | 2.6   | 9.2    | 5.6   | 3.3   | 2.9  | 2.9   |
| 29                 | 4.4   | 4.5   | 2.7   | 4.0    | ----- | 6.3   | 2.5   | 9.4    | 5.6   | 3.3   | 2.9  | 2.9   |
| 30                 | 4.5   | 4.9   | 2.3   | 3.8    | ----- | 6.4   | 2.4   | 1.1    | 5.5   | 3.3   | 2.9  | 2.9   |
| 31                 | 4.5   | ----- | 2.1   | 4.0    | ----- | 6.8   | ----- | 1.2    | ----- | 3.3   | 3.3  | ----- |
| Total              | 148.7 | 178.3 | 161.5 | 182.90 | 181.3 | 908.1 | 1215  | 482.1  | 211.9 | 127.8 | 95.2 | 84.0  |
| Mean               | 4.80  | 5.94  | 5.21  | 5.90   | 6.48  | 29.3  | 40.5  | 15.6   | 7.06  | 4.12  | 3.07 | 2.80  |
| Ac-ft              | 295   | 354   | 320   | 363    | 360   | 1800  | 2,410 | 956    | 420   | 253   | 189  | 167   |
| Calendar year 1965 | Max   | 122   | Min   | 2.1    | Mean  | 22.0  | Ac-ft | 15,950 |       |       |      |       |
| Water year 1965-66 | Max   | 73    | Min   | 0.6    | Mean  | 10.9  | Ac-ft | 7,890  |       |       |      |       |



11-5175. Shasta River near Yreka, Calif.

Location.--Lat 41°49'30", long 122°35'40", in E½ sec.24, T.46 N., R.7 W., on right bank 0.5 mile upstream from mouth and 7 miles north of Yreka.

Drainage area.--793 sq mi.

Records available.--October 1933 to December 1941, December 1944 to September 1966.

Gage.--Digital water-stage recorder. Altitude of gage is 2,000 ft (from topographic map). Prior to Nov. 2, 1933, staff gage at same site and datum. Nov. 2, 1933, to Oct. 6, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--29 years (1933-41, 1945-66), 180 cfs (130,300 acre-ft per year); median of yearly mean discharges, 153 cfs (110,800 acre-ft per year).

Extremes.--Maximum discharge during year, 1,310 cfs Jan. 5 (gage height, 5.56 ft); minimum daily, 6.4 cfs July 26.

1933-41, 1944-66: Maximum discharge, 21,500 cfs Dec. 22, 1964 (gage height, 12.92 ft in gage well, 13.85 ft, from floodmarks), from rating curve extended above 4,100 cfs on basis of slope-area measurement of maximum flow; minimum, 3.4 cfs Aug. 13, 1939, when about 2 cfs was being diverted around gage.

Remarks.--Records excellent. Flow partly regulated by Lake Drinnell beginning in 1928; storage limited to 50,000 acre-ft. Many diversions above station for irrigation. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.  | MAY   | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 147   | 182    | 237    | 299    | 240    | 211    | 158   | 71    | 99    | 22    | 8.0   | 18    |
| 2     | 136   | 182    | 249    | 270    | 227    | 212    | 132   | 72    | 134   | 24    | 10    | 16    |
| 3     | 138   | 196    | 249    | 288    | 221    | 210    | 108   | 68    | 173   | 20    | 12    | 24    |
| 4     | 144   | 195    | 249    | 755    | 213    | 207    | 96    | 66    | 155   | 13    | 11    | 23    |
| 5     | 138   | 192    | 252    | 1,050  | 220    | 204    | 88    | 73    | 135   | 13    | 11    | 18    |
| 6     | 151   | 199    | 252    | 971    | 231    | 202    | 104   | 67    | 86    | 13    | 8.6   | 16    |
| 7     | 163   | 208    | 252    | 615    | 246    | 208    | 98    | 73    | 61    | 9.2   | 11    | 16    |
| 8     | 149   | 206    | 249    | 580    | 242    | 213    | 120   | 80    | 62    | 13    | 9.5   | 12    |
| 9     | 122   | 220    | 249    | 506    | 231    | 218    | 111   | 83    | 71    | 10    | 19    | 15    |
| 10    | 133   | 222    | 249    | 438    | 232    | 286    | 152   | 75    | 88    | 12    | 16    | 18    |
| 11    | 138   | 220    | 242    | 380    | 224    | 294    | 160   | 68    | 80    | 8.8   | 9.0   | 24    |
| 12    | 135   | 240    | 242    | 353    | 222    | 268    | 153   | 66    | 82    | 11    | 12    | 36    |
| 13    | 140   | 245    | 242    | 331    | 217    | 272    | 131   | 66    | 67    | 11    | 13    | 42    |
| 14    | 138   | 236    | 238    | 315    | 215    | 281    | 117   | 71    | 68    | 21    | 14    | 48    |
| 15    | 140   | 255    | 231    | 311    | 212    | 267    | 114   | 77    | 65    | 34    | 13    | 45    |
| 16    | 158   | 272    | 224    | 311    | 208    | 259    | 114   | 74    | 77    | 22    | 15    | 44    |
| 17    | 188   | 266    | 214    | 299    | 207    | 237    | 114   | 70    | 61    | 19    | 15    | 45    |
| 18    | 194   | 289    | 214    | 287    | 208    | 235    | 117   | 71    | 31    | 16    | 14    | 65    |
| 19    | 188   | 333    | 211    | 283    | 204    | 236    | 143   | 63    | 31    | 17    | 17    | 114   |
| 20    | 185   | 283    | 211    | 271    | 198    | 225    | 141   | 59    | 32    | 16    | 21    | 109   |
| 21    | 182   | 245    | 214    | 259    | 198    | 215    | 134   | 53    | 44    | 14    | 19    | 120   |
| 22    | 175   | 232    | 214    | 247    | 201    | 202    | 122   | 51    | 24    | 14    | 17    | 127   |
| 23    | 178   | 228    | 211    | 251    | 196    | 189    | 121   | 55    | 18    | 20    | 14    | 122   |
| 24    | 185   | 235    | 218    | 251    | 203    | 192    | 109   | 45    | 26    | 12    | 23    | 120   |
| 25    | 188   | 267    | 221    | 251    | 211    | 167    | 95    | 45    | 22    | 9.0   | 14    | 120   |
| 26    | 198   | 280    | 221    | 243    | 212    | 172    | 74    | 46    | 22    | 6.4   | 12    | 124   |
| 27    | 169   | 262    | 221    | 227    | 210    | 171    | 73    | 46    | 23    | 10    | 16    | 124   |
| 28    | 178   | 245    | 453    | 228    | 209    | 175    | 67    | 57    | 17    | 15    | 11    | 120   |
| 29    | 178   | 235    | 575    | 232    | -----  | 200    | 74    | 63    | 22    | 15    | 12    | 83    |
| 30    | 178   | 236    | 470    | 256    | -----  | 205    | 72    | 77    | 21    | 13    | 16    | 54    |
| 31    | 182   | -----  | 344    | 279    | -----  | 182    | ----- | 22    | ----- | 11    | 17    | ----- |
| TOTAL | 5,016 | 7,106  | 8,118  | 11,637 | 6,058  | 6,815  | 3,412 | 2,043 | 1,897 | 464.4 | 430.1 | 1,865 |
| MEAN  | 162   | 237    | 262    | 375    | 216    | 220    | 114   | 65.9  | 63.2  | 15.0  | 13.9  | 62.2  |
| AC-FT | 9,950 | 14,090 | 16,100 | 23,080 | 12,020 | 13,520 | 6,770 | 4,050 | 3,760 | 921   | 853   | 3,700 |

Calendar year 1965 Max 1,800  
 Water year 1965-66 Max 1,050

Min 31  
 Min 6.4

Mean 239  
 Mean 150

Ac-ft 173,300  
 Ac-ft 108,800

Peak discharge (base, 400 cfs)--Dec. 28 (1930) 700 cfs (4.68 ft); Jan. 5 (0530) 1,310 cfs (5.56 ft)

## KLAMATH RIVER BASIN

11-5180.5. East Fork Scott River at Callahan, Calif.

Location.--Lat 41°18'15", long 122°46'35", in SE 1/4 sec. 22, T. 40 N., R. 8 W., on right bank 1.0 mile downstream from Big Mill Creek and 1.4 miles east of Callahan.

Drainage area.--110 sq mi.

Records available.--October 1959 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 3,200 ft (from topographic map). Prior to July 26, 1961, at site 1.6 miles downstream at different datum.

Average discharge.--7 years, 94.6 cfs (68,490 acre-ft per year).

Extremes.--Maximum discharge during year, 825 cfs Jan. 6 (gage height, unknown); minimum daily, 1.0 cfs many days.

1959-66: Maximum discharge, 7,480 cfs Dec. 22, 1964 (gage height, 9.93 ft in gage well, 9.73 ft from floodmarks), from rating curve extended above 3,000 cfs on basis of slope-area measurements at gage heights 9.05 and 9.93 ft; minimum daily, 0.90 cfs Sept. 20, 21, 1962, Sept. 10-17, 1964.

Remarks.--Records good except those for period of no gage-height record, and those for July to September, which are fair. Small diversions above station for irrigation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.  | Jan.  | Feb.    | Mar.  | Apr.   | May    | June  | July  | Aug. | Sept. |
|-------|-------|---------|-------|-------|---------|-------|--------|--------|-------|-------|------|-------|
| 1     | 4.2   | 4.5     | 4.9   | 30    | 57      | 56    | 442    | 232    | 106   | 22    | 3.7  | 1.6   |
| 2     | 3.9   | 4.6     | 4.8   | 23    | 52      | 54    | 410    | 273    | 92    | 21    | 3.5  | 1.6   |
| 3     | 3.7   | 4.6     | 51    | 90    | 57      | 43    | 357    | 309    | 80    | 13    | 3.3  | 1.5   |
| 4     | 3.5   | 4.7     | 57    | 210   | 159     | 47    | 333    | 374    | 70    | 13    | 3.3  | 1.2   |
| 5     | 3.2   | 4.8     | 67    | 190   | 121     | 49    | 357    | 445    | 67    | 13    | 3.3  | 1.1   |
| 6     | 3.3   | 4.9     | 72    | 600   | 100     | 54    | 401    | 374    | 68    | 17    | 3.3  | 1.1   |
| 7     | 3.3   | 5.0     | 68    | 310   | 86      | 60    | 410    | 317    | 71    | 16    | 3.3  | 1.0   |
| 8     | 3.3   | 6.5     | 65    | 295   | 75      | 81    | 406    | 309    | 97    | 15    | 3.2  | 1.0   |
| 9     | 3.4   | 10      | 60    | 174   | 71      | 150   | 410    | 321    | 91    | 15    | 3.1  | 1.0   |
| 10    | 3.4   | 9.5     | 55    | 123   | 67      | 195   | 353    | 317    | 86    | 13    | 3.1  | 1.0   |
| 11    | 3.4   | 9.0     | 51    | 107   | 61      | 148   | 282    | 285    | 77    | 13    | 3.1  | 1.0   |
| 12    | 3.5   | 25      | 49    | 94    | 53      | 150   | 236    | 257    | 68    | 13    | 3.1  | 1.0   |
| 13    | 3.5   | 60      | 45    | 86    | 54      | 222   | 203    | 250    | 67    | 11    | 3.1  | 1.1   |
| 14    | 3.6   | 210     | 43    | 80    | 52      | 207   | 200    | 229    | 68    | 11    | 3.1  | 1.3   |
| 15    | 3.6   | 180     | 38    | 80    | 50      | 192   | 229    | 194    | 71    | 10    | 3.1  | 1.3   |
| 16    | 3.6   | 130     | 37    | 80    | 49      | 143   | 301    | 178    | 68    | 9.4   | 3.2  | 1.3   |
| 17    | 3.6   | 200     | 36    | 75    | 43      | 119   | 325    | 172    | 60    | 9.4   | 3.6  | 1.2   |
| 18    | 3.7   | 350     | 38    | 71    | 49      | 109   | 289    | 173    | 53    | 9.1   | 3.0  | 3.4   |
| 19    | 3.7   | 270     | 36    | 65    | 51      | 100   | 236    | 203    | 54    | 3.8   | 3.1  | 2.8   |
| 20    | 3.8   | 170     | 34    | 60    | 49      | 93    | 194    | 229    | 43    | 8.5   | 3.1  | 2.6   |
| 21    | 3.8   | 140     | 34    | 58    | 49      | 88    | 173    | 243    | 40    | 3.0   | 3.1  | 2.6   |
| 22    | 3.9   | 120     | 32    | 58    | 60      | 82    | 182    | 209    | 33    | 7.6   | 3.0  | 2.4   |
| 23    | 3.9   | 100     | 27    | 55    | 70      | 82    | 203    | 163    | 33    | 7.2   | 3.1  | 2.4   |
| 24    | 4.0   | 82      | 26    | 52    | 67      | 90    | 243    | 162    | 33    | 6.7   | 2.8  | 2.2   |
| 25    | 4.0   | 75      | 27    | 51    | 62      | 105   | 273    | 173    | 29    | 6.2   | 1.0  | 2.0   |
| 26    | 4.1   | 67      | 26    | 49    | 60      | 135   | 271    | 182    | 26    | 5.8   | 1.2  | 2.0   |
| 27    | 4.1   | 58      | 27    | 47    | 57      | 180   | 236    | 170    | 23    | 5.5   | 1.6  | 2.2   |
| 28    | 4.2   | 52      | 104   | 46    | 57      | 238   | 222    | 173    | 26    | 5.2   | 1.9  | 2.4   |
| 29    | 4.3   | 52      | 60    | 70    | -----   | 286   | 209    | 143    | 26    | 4.8   | 1.9  | 2.5   |
| 30    | 4.4   | 51      | 44    | 71    | -----   | 330   | 212    | 150    | 24    | 4.3   | 1.8  | 2.5   |
| 31    | 4.4   | -----   | 38    | 62    | -----   | 382   | -----  | 125    | ----- | 4.0   | 1.8  | ----- |
| Total | 116.3 | 2,460.1 | 1,444 | 3,472 | 1,843   | 4,280 | 8,608  | 7,364  | 1,765 | 3,415 | 87.8 | 52.3  |
| Mean  | 3.75  | 82.0    | 44.6  | 112   | 66.0    | 138   | 287    | 233    | 53.8  | 11.0  | 2.83 | 1.74  |
| Ac-ft | 231   | 4,880   | 2,860 | 6,890 | 3,670.0 | 8,490 | 17,070 | 14,610 | 3,500 | 677   | 174  | 104   |

Calendar year 1965 Max 923 Min 3.2 Mean 110 Ac-ft 79,430

Water year 1965-66 Max 600 Min 1.0 Mean 87.2 Ac-ft 63,150

Peak discharge (base, 550 cfs).--Nov. 17 (time unknown) 580 cfs (gage height unknown); Jan. 6 (time unknown) 825 cfs (gage height unknown).

Note.--No gage-height record Oct. 1 to Nov. 24.

11-5183.1. Cedar Gulch near Callahan, Calif.

Location.--Lat 41°20'40", long 122°49'45", near center of sec. 1, T.40 N., R.9 W., on left bank at culvert on county road 2.9 miles northwest of Callahan.

Drainage area.--0.99 sq mi.

Records available.--Water years 1961-66 (annual maximum), February to September 1966.

Gage.--Water-stage recorder, crest-stage gages, and float-operated rain gage. Altitude of gage is 3,040 ft (from topographic map). Prior to Feb. 11, 1966, crest-stage gages only at same site and datum.

Extremes.--Maximum discharge during year, 8.6 cfs Jan. 6 (gage height, 6.07 ft from floodmarks); no flow for several months.

1960-65: Maximum discharge, 144 cfs Dec. 22, 1964 (gage height, 10.18 ft from floodmarks); from rating curve extended above 7 cfs on basis of computations of flow through culvert at gage heights 6.15 ft, 8.25 ft, and 10.18 ft.

Remarks.--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar.  | Apr.  | May  | June  | July | Aug. | Sept. |
|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|
| 1     |      |      |      |      | 0.10  | 0.10  | 0     | 0    | 0     |      |      |       |
| 2     |      |      |      |      | .10   | .10   | 0     | 0    | 0     |      |      |       |
| 3     |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 4     |      |      |      |      | .30   | 0     | 0     | .10  | 0     |      |      |       |
| 5     |      |      |      |      | .20   | 0     | 0     | .10  | 0     |      |      |       |
| 6     |      |      |      |      | .20   | 0     | 0     | 0    | 0     |      |      |       |
| 7     |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 8     |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 9     |      |      |      |      | .20   | .10   | .10   | 0    | 0     |      |      |       |
| 10    |      |      |      |      | .20   | .20   | .10   | 0    | 0     |      |      |       |
| 11    |      |      |      |      | .20   | .10   | .10   | 0    | 0     |      |      |       |
| 12    |      |      |      |      | .20   | .10   | 0     | 0    | 0     |      |      |       |
| 13    |      |      |      |      | .10   | .10   | 0     | 0    | 0     |      |      |       |
| 14    |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 15    |      |      |      |      | .20   | 0     | 0     | 0    | 0     |      |      |       |
| 16    |      |      |      |      | .20   | 0     | 0     | 0    | .10   |      |      |       |
| 17    |      |      |      |      | .20   | 0     | 0     | 0    | .10   |      |      |       |
| 18    |      |      |      |      | .20   | 0     | 0     | 0    | 0     |      |      |       |
| 19    |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 20    |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 21    |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 22    |      |      |      |      | 0     | 0     | 0     | 0    | 0     |      |      |       |
| 23    |      |      |      |      | 0     | 0     | 0     | 0    | 0     |      |      |       |
| 24    |      |      |      |      | 0     | 0     | 0     | 0    | 0     |      |      |       |
| 25    |      |      |      |      | 0     | 0     | 0     | 0    | 0     |      |      |       |
| 26    |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 27    |      |      |      |      | .10   | 0     | 0     | 0    | 0     |      |      |       |
| 28    |      |      |      |      | .10   | 0     | 0     | .10  | 0     |      |      |       |
| 29    |      |      |      |      | ----- | 0     | 0     | 0    | 0     |      |      |       |
| 30    |      |      |      |      | ----- | 0     | 0     | .10  | 0     |      |      |       |
| 31    |      |      |      |      | ----- | ----- | ----- | 0    | ----- |      |      |       |
| Total |      |      |      |      | 3.60  | 0.80  | 0.30  | 0.40 | 0.20  | 0    | 0    | 0     |
| Mean  |      |      |      |      | 0.13  | 0.03  | 0.01  | 0.01 | 0.007 | 0    | 0    | 0     |
| Ac-ft |      |      |      |      | 7.1   | 1.6   | 0.6   | 0.8  | 0.4   | 0    | 0    | 0     |
| (†)   |      |      |      |      | ----- | 0.45  | 0.60  | 0.20 | 0.10  | 0    | 0    | 0.04  |

Calendar year 1965 Max - - - Min - - - Mean - - - Ac-ft - - -  
 Water year 1965-66 Max - - - Min - - - Mean - - - Ac-ft - - -

† Precipitation, in inches.

## KLAMATH RIVER BASIN

11-5186. Moffett Creek near Fort Jones, Calif.

Location.--Lat 41°38'02", long 122°44'50", in SE 1/4 sec. 27, T.44 N., R.8 W., on right bank 180 ft upstream from bridge, 590 ft upstream from Soap Creek, and 5.1 miles east of Fort Jones.

Drainage area.--69.8 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 2,940 ft (from topographic map). Prior to May 30, 1963, 90 ft downstream at datum 1.15 ft lower.

Average discharge.--8 years, 13.4 cfs (9,700 acre-ft per year).

Extremes.--Maximum discharge during year, 164 cfs Jan. 6 (gage height, 4.07 ft); minimum daily, 0.1 cfs Sept. 2-7.  
1958-66: Maximum discharge, 680 cfs Dec. 23, 1964 (gage height, 5.59 ft), from rating curve extended above 120 cfs on basis of slope-area measurement of maximum flow; no flow for several days in 1964.  
Flood of Jan. 29, 1958, reached a stage of 5.54 ft present datum (discharge not determined).

Remarks.--Minor diversions upstream for irrigation.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct. | Nov.  | Dec. | Jan.  | Feb.  | Mar.  | Apr.  | May    | June  | July  | Aug.  | Sept. |
|--------------------|------|-------|------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1                  | 1.2  | 1.3   | 1.6  | 3.4   | 13    | 14    | 52    | 8.5    | 4.2   | 0.70  | 0.30  | 0.20  |
| 2                  | 1.3  | 1.3   | 1.6  | 3.4   | 13    | 14    | 52    | 8.2    | 4.6   | .60   | .50   | .10   |
| 3                  | 1.3  | 1.3   | 1.8  | 6.8   | 13    | 14    | 47    | 8.5    | 4.6   | .70   | .50   | .10   |
| 4                  | 1.2  | 1.4   | 1.8  | 22    | 14    | 13    | 43    | 8.4    | 3.8   | .50   | .50   | .10   |
| 5                  | 1.3  | 1.3   | 1.7  | 38    | 16    | 13    | 39    | 8.6    | 3.8   | .50   | .50   | .10   |
| 6                  | 1.7  | 1.5   | 1.9  | 126   | 16    | 14    | 37    | 8.4    | 3.9   | .50   | .30   | .10   |
| 7                  | 1.5  | 1.4   | 2.0  | 75    | 16    | 15    | 36    | 8.1    | 3.7   | .50   | .30   | .10   |
| 8                  | 1.6  | 1.5   | 2.0  | 87    | 14    | 17    | 36    | 7.9    | 4.2   | .40   | .30   | .30   |
| 9                  | 1.6  | 1.8   | 2.0  | 59    | 14    | 23    | 36    | 7.7    | 3.9   | .50   | .30   | .40   |
| 10                 | 1.7  | 1.3   | 2.0  | 41    | 14    | 43    | 37    | 7.0    | 4.0   | .50   | .30   | .60   |
| 11                 | 1.5  | 1.4   | 2.0  | 32    | 13    | 41    | 35    | 5.9    | 3.7   | .40   | .30   | .50   |
| 12                 | 1.5  | 1.5   | 2.0  | 26    | 13    | 39    | 33    | 5.5    | 3.7   | .40   | .40   | .40   |
| 13                 | 1.6  | 1.8   | 2.1  | 22    | 13    | 45    | 30    | 5.3    | 3.2   | .40   | .50   | .20   |
| 14                 | 1.6  | 2.6   | 1.8  | 20    | 13    | 45    | 26    | 5.4    | 2.9   | .50   | .50   | .20   |
| 15                 | 1.4  | 2.4   | 1.6  | 20    | 12    | 44    | 24    | 5.3    | 2.6   | .40   | .30   | .20   |
| 16                 | 1.3  | 2.3   | 1.4  | 22    | 12    | 39    | 22    | 4.9    | 2.5   | .50   | .20   | .20   |
| 17                 | 1.2  | 2.7   | 1.3  | 20    | 12    | 34    | 22    | 4.7    | 2.3   | .50   | .20   | .20   |
| 18                 | 1.5  | 2.7   | 1.2  | 20    | 11    | 30    | 22    | 5.0    | 2.3   | .60   | .40   | .40   |
| 19                 | 1.1  | 2.9   | 1.1  | 18    | 11    | 29    | 20    | 5.2    | 2.2   | .50   | .30   | .20   |
| 20                 | 1.1  | 2.3   | 1.1  | 17    | 12    | 27    | 20    | 4.6    | 2.4   | .40   | .20   | .20   |
| 21                 | 1.2  | 2.0   | 1.0  | 16    | 12    | 25    | 17    | 4.1    | 2.4   | .30   | .20   | .20   |
| 22                 | 1.2  | 2.0   | 1.0  | 16    | 13    | 24    | 15    | 4.1    | 2.2   | .30   | .20   | .40   |
| 23                 | 1.1  | 1.9   | 1.0  | 15    | 13    | 23    | 14    | 3.8    | 2.0   | .30   | .20   | .70   |
| 24                 | 1.2  | 2.1   | 1.0  | 14    | 13    | 23    | 13    | 3.7    | 1.4   | .30   | .20   | .70   |
| 25                 | 1.2  | 2.1   | 1.0  | 14    | 14    | 24    | 13    | 3.5    | 1.2   | .30   | .40   | .80   |
| 26                 | 1.3  | 1.9   | 1.1  | 14    | 14    | 25    | 12    | 3.4    | 1.2   | .20   | .50   | .50   |
| 27                 | 1.4  | 1.8   | 1.4  | 13    | 13    | 29    | 12    | 3.3    | .90   | .20   | .40   | .40   |
| 28                 | 1.5  | 1.9   | 5.5  | 13    | 14    | 35    | 11    | 3.4    | .90   | .20   | .30   | .60   |
| 29                 | 1.4  | 1.8   | 4.8  | 14    | ----- | 41    | 11    | 3.6    | 1.3   | .20   | .20   | .40   |
| 30                 | 1.4  | 1.6   | 4.1  | 15    | ----- | 47    | 9.8   | 4.1    | .90   | .20   | .20   | .30   |
| 31                 | 1.4  | ----- | 3.7  | 13    | ----- | 49    | ----- | 4.7    | ----- | .20   | .20   | ----- |
| Total              | 42.5 | 55.8  | 59.6 | 835.6 | 371   | 898   | 796.8 | 174.8  | 82.90 | 127.0 | 101.0 | 98.0  |
| Mean               | 1.37 | 1.86  | 1.92 | 27.0  | 13.3  | 29.0  | 26.6  | 5.64   | 2.76  | 0.41  | 0.33  | 0.33  |
| Ac-ft              | 84   | 111   | 118  | 1,660 | 736   | 1,780 | 1,580 | 347    | 164   | 25    | 20    | 19    |
| Calendar year 1965 | Max  | 276   | Min  | 0.9   | Mean  | 27.0  | Ac-ft | 19,560 |       |       |       |       |
| Water year 1965-66 | Max  | 126   | Min  | 0.1   | Mean  | 9.18  | Ac-ft | 6,640  |       |       |       |       |

11-5195. Scott River near Fort Jones, Calif.

Location.--Lat 41°38'28", long 123°00'54", in NE 1/4 sec. 29, T. 44 N., R. 10 W., on right bank 1.7 miles upstream from Snow Creek and 10.8 miles downstream from Fort Jones.

Drainage area.--653 sq mi.

Records available.--December 1941 to September 1966. Monthly discharge only October to December 1941, published in WSP 1315-B.

Gage.--Water-stage recorder. Datum of gage is 2,625.80 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--25 years, 646 cfs (467,700 acre-ft per year); median of yearly mean discharges, 560 cfs (405,000 acre-ft per year).

Extremes.--Maximum discharge during year, 4,580 cfs Jan. 6 (gage height, 8.86 ft); minimum daily, 25 cfs Oct. 10. 1941-66: Maximum discharge, 54,600 cfs Dec. 22, 1964 (gage height, 25.34 ft from floodmarks), from rating curve extended above 15,000 cfs on basis of slope-area measurement at 21.40 ft; minimum, 20 cfs Sept. 14, 15, 1955.

Remarks.--Records excellent. Diversions for irrigation of about 30,000 acres above station. Records of chemical analyses for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July  | Aug.  | Sept. |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 77    | 76     | 203    | 237    | 409    | 367    | 2,110  | 895    | 335    | 147   | 65    | 43    |
| 2     | 77    | 74     | 197    | 235    | 394    | 364    | 2,290  | 1,000  | 736    | 161   | 53    | 42    |
| 3     | 74    | 76     | 196    | 303    | 385    | 349    | 1,970  | 1,160  | 680    | 161   | 60    | 42    |
| 4     | 74    | 80     | 203    | 1,200  | 412    | 340    | 1,790  | 1,420  | 624    | 149   | 56    | 41    |
| 5     | 74    | 77     | 264    | 1,110  | 492    | 340    | 1,780  | 1,810  | 584    | 138   | 52    | 40    |
| 6     | 74    | 77     | 306    | 3,390  | 482    | 406    | 1,940  | 1,350  | 562    | 125   | 43    | 34    |
| 7     | 70    | 80     | 290    | 2,640  | 454    | 517    | 2,010  | 1,530  | 570    | 118   | 50    | 34    |
| 8     | 63    | 82     | 273    | 1,690  | 427    | 531    | 2,020  | 1,430  | 584    | 109   | 49    | 34    |
| 9     | 44    | 93     | 261    | 1,290  | 406    | 724    | 1,970  | 1,500  | 620    | 113   | 50    | 34    |
| 10    | 25    | 112    | 245    | 1,000  | 403    | 1,200  | 2,000  | 1,640  | 592    | 113   | 50    | 34    |
| 11    | 34    | 110    | 230    | 830    | 385    | 1,080  | 1,790  | 1,440  | 552    | 125   | 52    | 36    |
| 12    | 63    | 116    | 222    | 724    | 376    | 935    | 1,500  | 1,270  | 514    | 119   | 51    | 45    |
| 13    | 105   | 165    | 209    | 656    | 353    | 995    | 1,280  | 1,230  | 473    | 112   | 50    | 64    |
| 14    | 80    | 303    | 201    | 596    | 349    | 1,110  | 1,180  | 1,130  | 482    | 114   | 50    | 53    |
| 15    | 76    | 516    | 192    | 570    | 340    | 1,110  | 1,160  | 1,000  | 472    | 82    | 45    | 49    |
| 16    | 76    | 403    | 179    | 562    | 334    | 1,000  | 1,370  | 930    | 492    | 52    | 34    | 43    |
| 17    | 74    | 311    | 167    | 534    | 331    | 870    | 1,610  | 870    | 506    | 64    | 34    | 46    |
| 18    | 72    | 609    | 162    | 510    | 337    | 780    | 1,530  | 850    | 466    | 72    | 36    | 50    |
| 19    | 73    | 590    | 162    | 486    | 343    | 723    | 1,310  | 905    | 421    | 79    | 39    | 50    |
| 20    | 77    | 420    | 162    | 443    | 343    | 663    | 1,140  | 1,020  | 403    | 100   | 43    | 50    |
| 21    | 74    | 333    | 163    | 436    | 343    | 640    | 1,010  | 1,130  | 376    | 96    | 40    | 50    |
| 22    | 74    | 290    | 162    | 439    | 352    | 604    | 970    | 1,070  | 352    | 85    | 59    | 50    |
| 23    | 74    | 261    | 152    | 421    | 379    | 580    | 955    | 900    | 315    | 79    | 53    | 49    |
| 24    | 74    | 259    | 159    | 406    | 391    | 573    | 985    | 850    | 295    | 79    | 43    | 51    |
| 25    | 74    | 263    | 163    | 394    | 385    | 604    | 1,130  | 885    | 259    | 73    | 44    | 54    |
| 26    | 76    | 257    | 157    | 385    | 379    | 684    | 1,180  | 975    | 243    | 76    | 45    | 55    |
| 27    | 76    | 245    | 162    | 367    | 367    | 845    | 1,070  | 960    | 216    | 76    | 44    | 56    |
| 28    | 77    | 226    | 283    | 355    | 364    | 1,050  | 965    | 1,050  | 183    | 73    | 43    | 57    |
| 29    | 76    | 214    | 441    | 385    | -----  | 1,310  | 905    | 1,000  | 165    | 72    | 42    | 57    |
| 30    | 77    | 209    | 324    | 463    | -----  | 1,600  | 380    | 1,010  | 153    | 71    | 42    | 53    |
| 31    | 76    | -----  | 263    | 433    | -----  | 1,780  | -----  | 1,000  | -----  | 67    | 43    | ----- |
| Total | 2,215 | 6,952  | 6,763  | 23,500 | 10,720 | 24,684 | 43,800 | 35,710 | 13,731 | 3,120 | 1,480 | 1,406 |
| Mean  | 71.5  | 232    | 213    | 753    | 383    | 796    | 1,460  | 1,152  | 453    | 101   | 47.7  | 46.9  |
| Ac-ft | 4,390 | 13,790 | 13,420 | 46,610 | 21,260 | 48,960 | 86,880 | 70,830 | 27,240 | 6,190 | 2,940 | 2,790 |

Calendar year 1965 Max 4,690 Min 25 Mean 534 Ac-ft 495,000  
 Water year 1965-66 Max 3,390 Min 25 Mean 477 Ac-ft 345,300

Peak discharge (base, 2,000 cfs)

| Date | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|------|------|-------------|-----------|------|------|-------------|-----------|
| 1-6  | 1600 | 8.86        | 4,580     | 5-6  | 0600 | 6.63        | 2,020     |
| 4-2  | 0900 | 7.06        | 2,420     |      |      |             |           |

## KLAMATH RIVER BASIN

11-5205, Klamath River near Seiad Valley, Calif.

Location.--Lat 41°51'20", long 123°13'50", in SW 1/4 sec. 3, T.46 N., R.12 W., on left bank 0.4 mile upstream from Bittenbender Creek, 1.4 miles downstream from Grider Creek, and 2.2 miles west of Seiad Valley.

Drainage area.--6,980 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

Records available.--October 1912 to September 1925, July 1951 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Water-stage recorder. Altitude of gage is 1,320 ft (from river-profile map). November 1912 to June 1925, staff gage at site 3 1/2 miles upstream at different datum.

Average discharge.--28 years, 4,103 cfs (2,970,000 acre-ft per year).

Extremes.--Maximum discharge during year, 15,000 cfs Jan. 6 (gage height, 11.00 ft); minimum daily, 929 cfs July 31.  
1912-25, 1951-66: Maximum discharge, 165,000 cfs Dec. 23, 1964 (gage height, 33.75 ft, from floodmarks), from rating curve extended above 25,000 cfs on basis of slope-area measurements at gage heights 20.1 and 29.2 ft; minimum daily, 320 cfs Nov. 25, 1917.

Remarks.--Records good. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of chemical analyses and water temperatures for the 1966 water year are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July   | Aug.   | Sept.  |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 1     | 2,770   | 3,500   | 5,020   | 3,260   | 3,110   | 2,920   | 8,370   | 3,670   | 3,060   | 1,190  | 1,080  | 1,230  |
| 2     | 2,770   | 3,510   | 4,390   | 3,020   | 3,100   | 2,860   | 8,190   | 3,540   | 2,620   | 1,210  | 1,260  | 1,430  |
| 3     | 2,770   | 3,550   | 4,180   | 3,600   | 3,120   | 2,750   | 6,780   | 3,830   | 2,450   | 1,250  | 1,250  | 1,420  |
| 4     | 2,770   | 3,670   | 4,200   | 5,180   | 3,180   | 2,560   | 6,170   | 4,200   | 2,350   | 1,200  | 1,230  | 1,420  |
| 5     | 2,770   | 3,640   | 4,280   | 5,250   | 3,360   | 2,550   | 6,500   | 4,790   | 2,250   | 1,190  | 1,230  | 1,390  |
| 6     | 2,770   | 3,930   | 4,270   | 13,200  | 3,360   | 2,700   | 6,960   | 4,900   | 2,180   | 1,180  | 1,220  | 1,360  |
| 7     | 3,000   | 4,370   | 4,280   | 10,770  | 3,260   | 3,150   | 7,100   | 4,450   | 2,200   | 1,180  | 1,220  | 1,370  |
| 8     | 3,220   | 4,830   | 4,240   | 8,330   | 3,210   | 3,330   | 7,240   | 4,340   | 2,160   | 1,170  | 1,210  | 1,410  |
| 9     | 3,200   | 4,800   | 4,100   | 7,060   | 3,100   | 4,430   | 7,200   | 4,450   | 2,180   | 1,160  | 1,210  | 1,380  |
| 10    | 3,240   | 4,940   | 4,070   | 5,570   | 3,120   | 6,300   | 6,700   | 4,650   | 2,180   | 1,160  | 1,200  | 1,380  |
| 11    | 3,300   | 5,020   | 4,020   | 5,400   | 3,080   | 5,490   | 6,210   | 4,280   | 2,120   | 1,160  | 1,190  | 1,370  |
| 12    | 3,380   | 5,150   | 4,000   | 4,750   | 3,050   | 4,880   | 6,510   | 4,000   | 2,030   | 1,150  | 1,190  | 1,400  |
| 13    | 3,380   | 5,220   | 4,020   | 4,820   | 2,990   | 5,010   | 6,150   | 3,880   | 1,940   | 1,140  | 1,250  | 1,440  |
| 14    | 3,380   | 5,250   | 3,780   | 4,380   | 2,930   | 5,230   | 6,050   | 3,710   | 1,910   | 1,150  | 1,190  | 1,460  |
| 15    | 3,360   | 5,200   | 3,560   | 4,500   | 2,850   | 5,220   | 6,170   | 3,470   | 1,930   | 1,130  | 1,150  | 1,460  |
| 16    | 3,360   | 5,180   | 3,070   | 4,320   | 2,790   | 4,930   | 6,500   | 3,330   | 1,950   | 1,080  | 1,140  | 1,430  |
| 17    | 3,380   | 5,340   | 3,420   | 4,580   | 2,670   | 4,510   | 6,230   | 3,210   | 1,920   | 1,050  | 1,130  | 1,440  |
| 18    | 3,400   | 5,700   | 3,300   | 4,250   | 2,620   | 4,320   | 5,900   | 3,180   | 1,850   | 1,040  | 1,150  | 1,500  |
| 19    | 3,240   | 5,820   | 3,170   | 4,580   | 2,660   | 4,240   | 6,080   | 3,230   | 1,820   | 1,060  | 1,150  | 1,590  |
| 20    | 3,190   | 5,440   | 3,400   | 4,020   | 2,670   | 4,090   | 5,960   | 3,460   | 1,680   | 1,040  | 1,150  | 1,560  |
| 21    | 3,400   | 5,220   | 3,540   | 3,550   | 2,690   | 3,960   | 5,820   | 3,620   | 1,510   | 1,060  | 1,150  | 1,550  |
| 22    | 3,380   | 5,120   | 3,250   | 3,700   | 2,730   | 3,760   | 5,380   | 3,530   | 1,570   | 1,030  | 1,140  | 1,580  |
| 23    | 3,440   | 5,100   | 3,110   | 3,650   | 2,880   | 3,650   | 4,880   | 3,260   | 1,520   | 1,030  | 1,150  | 1,570  |
| 24    | 3,460   | 5,150   | 3,190   | 3,680   | 2,380   | 3,640   | 4,490   | 3,150   | 1,480   | 1,010  | 1,150  | 1,560  |
| 25    | 3,460   | 5,220   | 3,080   | 3,080   | 3,020   | 3,760   | 4,550   | 3,180   | 1,410   | 1,010  | 1,150  | 1,580  |
| 26    | 3,440   | 5,200   | 3,000   | 3,030   | 3,020   | 4,070   | 4,660   | 3,340   | 1,350   | 999    | 1,150  | 1,580  |
| 27    | 3,410   | 5,140   | 3,040   | 3,000   | 2,970   | 4,510   | 4,480   | 3,280   | 1,350   | 978    | 1,160  | 1,590  |
| 28    | 3,410   | 5,090   | 3,320   | 2,990   | 2,940   | 5,020   | 3,890   | 3,350   | 1,310   | 978    | 1,150  | 1,580  |
| 29    | 2,620   | 5,060   | 3,530   | 3,030   | -----   | 6,230   | 3,710   | 3,350   | 1,260   | 957    | 1,120  | 1,570  |
| 30    | 2,670   | 5,040   | 3,400   | 3,120   | -----   | 7,000   | 3,680   | 3,340   | 1,230   | 943    | 1,140  | 1,500  |
| 31    | 3,500   | -----   | 3,380   | 3,140   | -----   | 7,460   | -----   | 3,330   | -----   | 929    | 1,150  | -----  |
| Total | 98,840  | 145,400 | 114,510 | 146,940 | 83,360  | 134,530 | 178,510 | 115,410 | 56,870  | 33,314 | 36,410 | 44,200 |
| Mean  | 3,183   | 4,347   | 3,697   | 4,740   | 2,977   | 4,340   | 5,950   | 3,723   | 1,896   | 1,091  | 1,175  | 1,473  |
| Ac-ft | 196,000 | 283,400 | 227,300 | 291,500 | 165,300 | 266,800 | 354,100 | 228,900 | 112,800 | 67,070 | 72,220 | 87,670 |

Calendar year 1965 Max 31,000 Min 1,010 Mean 5,956 Ac-ft 4,312,000

Water year 1965-66 Max 13,200 Min 929 Mean 3,257 Ac-ft 2,358,000

Note.--No gage-height record Dec. 9 to Jan. 6.

11-5215. Indian Creek near Happy Camp, Calif.

Location.--Lat 41°50'50", long 123°23'10", in SE $\frac{1}{4}$  sec.22, T.17 N., R.7 E., on left bank 1.5 miles upstream from Slater Creek, 3.8 miles north of Happy Camp, and 4.5 miles upstream from mouth.

Drainage area.--118 sq mi.

Records available.--September 1911 to September 1921 (fragmentary), December 1956 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Altitude of gage is 1,300 ft (from topographic map). Prior to December 1956, staff gages at sites 0.25 mile upstream at different datums. December 1956 to Oct. 7, 1964 and Dec. 31, 1964, to Feb. 24, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--12 years (1911-14, 1957-66), 433 cfs (313,500 acre-ft per year).

Extremes.--Maximum discharge during year, 7,020 cfs Jan. 6 (gage height, 16.69 ft, from floodmark in gage well); minimum daily, 42 cfs Oct. 11-12.

1911-21, 1956-66: Maximum discharge, 39,000 cfs Dec. 22, 1964 (gage height, 36.59 ft, from floodmark in gage well), from rating curve extended above 4,800 cfs on basis of slope-area measurement at gage height 29.0 ft; minimum observed, 20 cfs Aug. 19 to Sept. 6, 1914.

Flood of Dec. 21, 1955, reached a stage of 29.0 ft, from floodmarks (discharge, 23,000 cfs on basis of slope-area measurement of peak flow).

Remarks.--Records good except those for period of no gage-height record, which are fair. Small diversions above station for irrigation.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE   | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 45    | 51     | 132    | 370    | 418    | 363    | 2,120  | 956    | 442    | 180   | 90    | 58    |
| 2     | 45    | 51     | 130    | 320    | 375    | 342    | 1,950  | 1,010  | 418    | 184   | 27    | 56    |
| 3     | 44    | 68     | 127    | 310    | 357    | 312    | 1,730  | 1,090  | 392    | 172   | 84    | 55    |
| 4     | 46    | 165    | 140    | 350    | 455    | 300    | 1,640  | 1,250  | 375    | 165   | 81    | 54    |
| 5     | 64    | 85     | 250    | 500    | 620    | 303    | 1,730  | 1,320  | 372    | 161   | 80    | 52    |
| 6     | 47    | 71     | 340    | 4,000  | 585    | 445    | 1,810  | 1,170  | 390    | 160   | 76    | 54    |
| 7     | 46    | 74     | 320    | 3,000  | 502    | 650    | 1,830  | 1,070  | 390    | 155   | 73    | 54    |
| 8     | 49    | 111    | 290    | 2,000  | 430    | 1,060  | 1,700  | 1,100  | 388    | 152   | 75    | 54    |
| 9     | 49    | 102    | 260    | 1,300  | 387    | 2,650  | 1,530  | 1,190  | 388    | 160   | 73    | 54    |
| 10    | 48    | 113    | 240    | 950    | 373    | 2,330  | 1,790  | 1,120  | 382    | 153   | 70    | 54    |
| 11    | 42    | 160    | 220    | 700    | 352    | 1,310  | 1,630  | 960    | 355    | 148   | 70    | 54    |
| 12    | 42    | 424    | 205    | 592    | 337    | 1,060  | 1,420  | 884    | 328    | 148   | 67    | 54    |
| 13    | 43    | 252    | 190    | 535    | 318    | 1,210  | 1,260  | 867    | 326    | 145   | 64    | 54    |
| 14    | 58    | 235    | 175    | 485    | 308    | 1,290  | 1,180  | 790    | 338    | 145   | 63    | 55    |
| 15    | 79    | 176    | 160    | 478    | 293    | 1,240  | 1,270  | 690    | 332    | 137   | 62    | 54    |
| 16    | 64    | 143    | 145    | 508    | 283    | 1,080  | 1,470  | 636    | 314    | 129   | 62    | 53    |
| 17    | 57    | 138    | 132    | 472    | 279    | 915    | 1,410  | 628    | 284    | 126   | 59    | 54    |
| 18    | 57    | 302    | 122    | 435    | 278    | 844    | 1,250  | 662    | 266    | 122   | 58    | 102   |
| 19    | 54    | 407    | 112    | 391    | 310    | 814    | 1,140  | 768    | 256    | 119   | 58    | 66    |
| 20    | 50    | 421    | 103    | 373    | 333    | 777    | 1,060  | 801    | 240    | 116   | 58    | 58    |
| 21    | 51    | 352    | 98     | 349    | 345    | 754    | 1,010  | 801    | 229    | 114   | 56    | 56    |
| 22    | 51    | 243    | 95     | 343    | 366    | 715    | 995    | 685    | 222    | 111   | 56    | 54    |
| 23    | 51    | 206    | 91     | 309    | 430    | 696    | 1,020  | 596    | 214    | 108   | 57    | 54    |
| 24    | 51    | 227    | 91     | 287    | 448    | 711    | 1,080  | 624    | 206    | 107   | 56    | 54    |
| 25    | 48    | 212    | 95     | 265    | 420    | 787    | 1,150  | 685    | 198    | 106   | 56    | 54    |
| 26    | 50    | 203    | 97     | 255    | 391    | 914    | 1,120  | 644    | 192    | 102   | 60    | 52    |
| 27    | 52    | 185    | 104    | 246    | 373    | 1,090  | 1,020  | 596    | 189    | 100   | 58    | 52    |
| 28    | 54    | 163    | 250    | 242    | 368    | 1,280  | 974    | 584    | 188    | 98    | 57    | 51    |
| 29    | 54    | 154    | 1,000  | 415    | -----  | 1,530  | 941    | 608    | 184    | 97    | 56    | 50    |
| 30    | 52    | 141    | 600    | 532    | -----  | 1,650  | 937    | 553    | 180    | 95    | 58    | 50    |
| 31    | 50    | -----  | 470    | 478    | -----  | 1,740  | -----  | 487    | -----  | 93    | 60    | ----- |
| TOTAL | 1,593 | 5,645  | 6,784  | 21,790 | 10,734 | 31,162 | 41,167 | 25,825 | 8,978  | 4,108 | 2,050 | 1,676 |
| MEAN  | 51.4  | 188    | 219    | 703    | 383    | 1,005  | 1,372  | 833    | 299    | 133   | 66.1  | 55.9  |
| AC-FT | 3,160 | 11,200 | 13,460 | 43,220 | 21,290 | 61,810 | 81,650 | 51,220 | 17,610 | 8,150 | 4,070 | 3,320 |

CALENDAR YEAR 1965 MAX 3,750 MIN 42 MEAN 399 AC-FT 289,100  
 WATER YEAR 1965-66 MAX 4,000 MIN 42 MEAN 442 AC-FT 320,400

Peak discharge (base, 2,000 cfs)

| Date | Time    | Gage height | Discharge | Date | Time | Gage height | Discharge |
|------|---------|-------------|-----------|------|------|-------------|-----------|
| 1-6  | unknown | 16.69       | 7,020     | 4-1  | 2315 | 10.78       | 2,280     |
| 3-9  | 2300    | 12.85       | 3,780     |      |      |             |           |

Note.--No gage-height record Dec. 1 to Jan. 11.

## KLAMATH RIVER BASIN

11-5225. Salmon River at Somesbar, Calif.

Location.--41°22'40", long 123°28'35", in NE¼ sec.3 T.11 N., R.6 E., on left bank at Somesbar, 1.0 mile upstream from mouth.Drainage area.--751 sq mi.Records available.--September 1911 to September 1915, October 1927 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.Gage.--Water-stage recorder. Datum of gage is 482.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Prior to October 1927, staff gage, at different datum, and Oct. 1927 to Dec. 22, 1964, water-stage recorder at site 0.5 mile upstream at datum 6.54 ft higher.

Average discharge.--43 years, 1,744 cfs (1,263,000 acre-ft per year).Extremes.--Maximum discharge during year, 23,600 cfs Jan. 6 (gage height, 13.73 ft); minimum daily, 161 cfs Sept. 30.

1911-15, 1927-66: Maximum discharge, 133,000 cfs Dec. 22, 1964 (gage height, 46.6 ft, present site and datum, from floodmarks), from rating curve extended above 33,000 cfs; minimum, 70 cfs Aug. 25, Sept. 4, 5, 1931.

Remarks.--Records good. No storage or large diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.   | Nov.   | Dec.   | Jan.    | Feb.   | Mar.    | Apr.    | May     | June   | July   | Aug.   | Sept.  |
|-------|--------|--------|--------|---------|--------|---------|---------|---------|--------|--------|--------|--------|
| 1     | 171    | 178    | 390    | 600     | 1,520  | 1,140   | 7,000   | 2,790   | 1,800  | 742    | 298    | 203    |
| 2     | 168    | 177    | 390    | 620     | 1,410  | 1,150   | 6,760   | 3,200   | 1,630  | 754    | 290    | 194    |
| 3     | 167    | 189    | 430    | 1,760   | 1,340  | 1,050   | 5,720   | 3,850   | 1,500  | 682    | 280    | 185    |
| 4     | 167    | 360    | 660    | 7,190   | 1,410  | 1,010   | 5,480   | 5,020   | 1,410  | 630    | 273    | 176    |
| 5     | 196    | 338    | 1,250  | 7,300   | 1,550  | 1,010   | 5,660   | 5,640   | 1,400  | 615    | 270    | 170    |
| 6     | 192    | 253    | 960    | 18,500  | 1,670  | 1,440   | 5,940   | 4,730   | 1,450  | 610    | 262    | 167    |
| 7     | 180    | 253    | 720    | 10,000  | 1,580  | 2,240   | 5,860   | 3,970   | 1,540  | 585    | 256    | 164    |
| 8     | 175    | 405    | 660    | 7,180   | 1,460  | 2,600   | 5,660   | 4,010   | 1,640  | 566    | 245    | 164    |
| 9     | 171    | 370    | 600    | 5,160   | 1,370  | 4,030   | 5,260   | 4,440   | 1,710  | 548    | 239    | 164    |
| 10    | 168    | 318    | 560    | 3,480   | 1,280  | 5,880   | 5,480   | 4,580   | 1,690  | 538    | 233    | 164    |
| 11    | 168    | 411    | 527    | 2,610   | 1,190  | 4,260   | 4,840   | 3,840   | 1,560  | 525    | 227    | 164    |
| 12    | 168    | 824    | 485    | 2,160   | 1,130  | 3,450   | 4,170   | 3,390   | 1,410  | 507    | 224    | 164    |
| 13    | 167    | 748    | 445    | 1,900   | 1,030  | 3,840   | 3,600   | 3,370   | 1,450  | 502    | 218    | 170    |
| 14    | 193    | 908    | 410    | 1,790   | 1,010  | 3,850   | 3,280   | 3,070   | 1,610  | 498    | 215    | 179    |
| 15    | 263    | 653    | 375    | 1,750   | 995    | 3,630   | 3,550   | 2,650   | 1,650  | 489    | 212    | 179    |
| 16    | 228    | 540    | 355    | 1,730   | 950    | 3,210   | 4,710   | 2,490   | 1,570  | 471    | 206    | 173    |
| 17    | 205    | 480    | 350    | 1,700   | 942    | 2,680   | 5,120   | 2,500   | 1,400  | 453    | 200    | 170    |
| 18    | 201    | 600    | 450    | 1,630   | 958    | 2,460   | 4,330   | 2,720   | 1,260  | 440    | 200    | 285    |
| 19    | 201    | 1,020  | 370    | 1,520   | 1,030  | 2,480   | 3,580   | 3,160   | 1,220  | 427    | 200    | 294    |
| 20    | 197    | 850    | 340    | 1,440   | 1,060  | 2,320   | 3,160   | 3,630   | 1,120  | 411    | 194    | 221    |
| 21    | 193    | 700    | 380    | 1,340   | 1,030  | 2,250   | 2,880   | 3,640   | 973    | 399    | 194    | 206    |
| 22    | 189    | 620    | 450    | 1,340   | 1,070  | 2,120   | 2,820   | 3,180   | 940    | 383    | 191    | 197    |
| 23    | 186    | 560    | 340    | 1,220   | 1,260  | 2,010   | 2,950   | 2,540   | 910    | 375    | 185    | 188    |
| 24    | 182    | 700    | 370    | 1,140   | 1,300  | 2,010   | 3,200   | 2,740   | 892    | 367    | 185    | 185    |
| 25    | 180    | 650    | 470    | 1,080   | 1,280  | 2,250   | 3,630   | 3,120   | 838    | 363    | 182    | 179    |
| 26    | 179    | 600    | 360    | 1,050   | 1,200  | 2,790   | 3,680   | 3,160   | 808    | 347    | 203    | 176    |
| 27    | 180    | 550    | 360    | 1,020   | 1,170  | 3,370   | 3,100   | 2,820   | 802    | 339    | 206    | 176    |
| 28    | 191    | 500    | 1,600  | 990     | 1,160  | 4,030   | 2,830   | 2,930   | 814    | 327    | 200    | 170    |
| 29    | 189    | 460    | 1,320  | 1,320   | -----  | 4,800   | 2,690   | 2,680   | 796    | 319    | 194    | 167    |
| 30    | 184    | 410    | 900    | 1,730   | -----  | 5,560   | 2,680   | 2,650   | 748    | 312    | 200    | 161    |
| 31    | 180    | -----  | 700    | 1,640   | -----  | 5,980   | -----   | 2,230   | -----  | 304    | 239    | -----  |
| Total | 5,779  | 15,625 | 17,977 | 93,890  | 34,355 | 90,900  | 129,620 | 104,740 | 38,541 | 14,828 | 6,921  | 5,555  |
| Mean  | 186    | 521    | 580    | 3,029   | 1,227  | 2,932   | 4,321   | 3,379   | 1,285  | 478    | 223    | 185    |
| Ac-ft | 11,460 | 30,990 | 35,660 | 186,200 | 68,140 | 180,600 | 257,100 | 207,700 | 76,440 | 29,410 | 13,730 | 11,020 |

Calendar year 1965 Max 15,000 Min 167 Mean 1,722 Ac-ft 1,246,000

Water year 1965-66 Max 18,500 Min 161 Mean 1,531 Ac-ft 1,108,000

Peak discharge (base, 10,000 cfs, revised).--Jan. 6 (0700) 23,600 cfs (13.73).



11-5230. Klamath River at Orleans, Calif.  
(Formerly published as Klamath River at Somesbar)

Location.--Lat 41°18'13", long 123°32'00" in SW¼NE¼ sec.31, T.11 N., R.6 E., on right bank, at Orleans, 25 ft upstream from highway bridge, and 0.2 mile downstream from Cheenitch Creek. Prior to Oct. 1, 1965, at site 6.7 miles upstream.

Drainage area.--8,500 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

Records available.--October 1927 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1965, published as "at Somesbar."

Gage.--Digital water-stage recorder. Datum of gage is 355.98 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Oct. 1, 1965, graphic water-stage recorder at site 6.7 miles upstream datum, 90.68 ft higher.

Average discharge.--39 years, 7,782 cfs (5,634,000 acre-ft per year).

Extremes.--Maximum discharge during year, 96,200 cfs Jan. 6 (gage height, 23.65 ft); minimum daily, 1,760 cfs Aug. 25, 29, 30.

1927-66: Maximum discharge, 307,000 cfs Dec. 22, 1964 (gage height, 76.5 ft, site and datum then in use, from floodmarks), from rating curve extended above 80,000 cfs by slope-conveyance study; minimum daily, 320 cfs Aug. 25, Sept. 1, 1951.

Remarks.--Records good except those for period of no gage height record, which are fair. Flow considerably regulated by reservoirs and powerplants above station. Large diversions above station for irrigation. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.    | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE    | JULY    | AUG.    | SEPT.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 3,100   | 4,060   | 6,600   | 7,000   | 7,500   | 5,820   | 28,700  | 11,300  | 6,880   | 2,870   | 1,830   | 1,770   |
| 2     | 3,100   | 4,060   | 6,340   | 7,100   | 7,300   | 5,700   | 25,000  | 12,000  | 6,300   | 2,880   | 1,950   | 1,850   |
| 3     | 3,100   | 4,180   | 5,800   | 12,800  | 7,000   | 5,400   | 23,000  | 13,200  | 5,740   | 2,840   | 1,920   | 1,920   |
| 4     | 3,300   | 4,970   | 6,360   | 30,700  | 7,700   | 5,120   | 21,500  | 15,800  | 5,420   | 2,760   | 1,970   | 1,900   |
| 5     | 3,500   | 4,650   | 8,380   | 29,200  | 8,600   | 5,250   | 23,000  | 17,500  | 5,230   | 2,680   | 1,950   | 1,890   |
| 6     | 3,400   | 4,460   | 8,050   | 78,600  | 9,200   | 6,560   | 24,500  | 16,700  | 5,230   | 2,630   | 1,940   | 1,860   |
| 7     | 3,400   | 4,870   | 7,460   | 46,100  | 8,900   | 10,400  | 24,800  | 14,600  | 5,360   | 2,580   | 1,920   | 1,850   |
| 8     | 3,300   | 6,000   | 7,260   | 29,300  | 8,400   | 13,300  | 24,500  | 14,200  | 5,400   | 2,530   | 1,910   | 1,850   |
| 9     | 3,300   | 5,960   | 6,820   | 22,700  | 8,000   | 24,100  | 23,400  | 14,900  | 5,520   | 2,490   | 1,900   | 1,860   |
| 10    | 3,300   | 6,060   | 6,380   | 16,700  | 7,400   | 31,700  | 24,700  | 15,500  | 5,500   | 2,480   | 1,890   | 1,850   |
| 11    | 3,300   | 6,600   | 6,120   | 13,500  | 7,000   | 23,800  | 23,500  | 13,200  | 5,250   | 2,430   | 1,880   | 1,840   |
| 12    | 3,300   | 8,910   | 5,930   | 11,600  | 6,600   | 19,000  | 21,500  | 11,700  | 4,920   | 2,400   | 1,870   | 1,840   |
| 13    | 3,300   | 8,190   | 5,770   | 9,620   | 6,300   | 18,800  | 19,200  | 11,300  | 4,840   | 2,370   | 1,860   | 1,860   |
| 14    | 3,650   | 7,920   | 5,680   | 8,920   | 6,100   | 20,100  | 17,600  | 10,600  | 5,030   | 2,330   | 1,890   | 1,910   |
| 15    | 4,000   | 7,460   | 5,330   | 8,370   | 5,800   | 19,700  | 17,900  | 9,510   | 5,120   | 2,310   | 1,850   | 1,910   |
| 16    | 3,800   | 7,300   | 5,030   | 8,860   | 5,600   | 18,300  | 20,700  | 8,700   | 4,960   | 2,270   | 1,830   | 1,900   |
| 17    | 3,600   | 6,820   | 4,500   | 8,640   | 5,200   | 15,700  | 21,300  | 8,560   | 4,720   | 2,210   | 1,810   | 1,890   |
| 18    | 3,500   | 7,940   | 4,760   | 8,580   | 5,200   | 14,200  | 19,300  | 8,670   | 4,410   | 2,170   | 1,800   | 2,150   |
| 19    | 3,500   | 9,850   | 4,610   | 8,240   | 5,300   | 14,100  | 17,300  | 9,650   | 4,260   | 2,150   | 1,800   | 2,200   |
| 20    | 3,500   | 8,650   | 4,420   | 7,800   | 5,500   | 13,500  | 16,100  | 10,600  | 4,050   | 2,120   | 1,800   | 2,060   |
| 21    | 3,980   | 8,170   | 4,580   | 7,070   | 5,600   | 12,700  | 15,300  | 10,800  | 3,830   | 2,090   | 1,800   | 2,010   |
| 22    | 3,970   | 7,400   | 4,700   | 6,900   | 5,700   | 11,800  | 14,600  | 10,000  | 3,690   | 2,080   | 1,790   | 2,020   |
| 23    | 3,980   | 6,800   | 4,450   | 6,650   | 5,900   | 11,000  | 14,000  | 8,640   | 3,580   | 2,030   | 1,790   | 2,040   |
| 24    | 4,030   | 7,400   | 4,960   | 6,320   | 6,200   | 11,300  | 14,200  | 8,530   | 3,490   | 2,020   | 1,780   | 2,030   |
| 25    | 4,050   | 8,400   | 5,140   | 6,000   | 6,400   | 12,000  | 15,000  | 9,060   | 3,360   | 1,980   | 1,760   | 2,020   |
| 26    | 4,030   | 8,200   | 4,740   | 5,600   | 6,000   | 13,500  | 15,300  | 9,420   | 3,230   | 1,970   | 1,780   | 2,040   |
| 27    | 4,030   | 7,800   | 4,760   | 5,300   | 5,800   | 15,900  | 13,700  | 8,670   | 3,170   | 1,940   | 1,790   | 2,030   |
| 28    | 4,050   | 7,400   | 12,100  | 5,200   | 5,760   | 18,100  | 12,500  | 8,640   | 3,130   | 1,920   | 1,780   | 2,030   |
| 29    | 3,810   | 7,200   | 11,200  | 6,400   | -----   | 20,700  | 11,500  | 8,560   | 3,060   | 1,900   | 1,760   | 2,020   |
| 30    | 3,000   | 6,800   | 9,030   | 8,200   | -----   | 24,400  | 11,300  | 8,470   | 2,970   | 1,870   | 1,760   | 1,990   |
| 31    | 3,680   | -----   | 8,140   | 7,800   | -----   | 25,200  | -----   | 7,650   | -----   | 1,850   | 1,780   | -----   |
| TOTAL | 110,860 | 204,480 | 195,400 | 445,770 | 185,960 | 467,150 | 574,900 | 346,630 | 137,680 | 71,150  | 57,210  | 58,390  |
| MEAN  | 3,576   | 6,816   | 6,303   | 14,380  | 6,641   | 15,070  | 19,160  | 11,180  | 4,589   | 2,295   | 1,845   | 1,946   |
| AC-FT | 219,900 | 405,600 | 387,600 | 884,200 | 368,800 | 926,600 | 1,140M  | 687,500 | 273,100 | 141,100 | 113,500 | 115,800 |

|                    |     |        |     |       |      |       |       |        |
|--------------------|-----|--------|-----|-------|------|-------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 60,000 | MIN | 1,910 | MEAN | 9,834 | AC-FT | 7,119M |
| WATER YEAR 1965-66 | MAX | 78,600 | MIN | 1,760 | MEAN | 7,824 | AC-FT | 5,664M |

Peak discharge (base, 40,000 cfs, revised).--Jan. 6 (1100) 96,200 cfs (23.65 ft).

Note.--No gage-height record Jan. 25 to Feb. 27.

## KIAMATH RIVER BASIN

11-5232. Trinity River above Coffee Creek, near Trinity Center, Calif.

Location--Lat 41°06'26", long 122°42'23", on line between secs. 31 and 32, T.38 N., R.7 W., on right bank 250 ft downstream from Chinquapin Gulch, 1.8 miles upstream from Coffee Creek, and 8.5 miles north of Trinity Center.

Drainage area--149 sq mi.

Records available--September 1957 to September 1966.

Gage--Digital water-stage recorder. Datum of gage is 2,533.36 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. September 1957 to May 6, 1965, graphic water-stage recorder at present site and datum.

Average discharge--9 years, 404 cfs (292,500 acre-ft per year).

Extremes--Maximum discharge during year, 2,780 cfs Apr. 1 (gage height, 5.98 ft); minimum daily, 30 cfs Oct. 13, Sept. 11, 30. 1957-66: Maximum discharge, 20,800 cfs Dec. 22, 1964 (gage height, 12.30 ft in gage well, 13.4 ft from floodmarks), from rating curve extended above 5,000 cfs on basis of slope-area measurement at gage height 9.91 ft; minimum daily, 28 cfs Sept. 27, Oct. 5, 6, 1964.  
Flood of Dec. 22, 1955, reached a stage of 10.5 ft, from floodmarks (discharge, 11,400 cfs).

Remarks--Records good. No regulation or diversion above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| DAY                | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY     | JUNE   | JULY  | AUG.  | SEPT. |
|--------------------|-------|--------|--------|--------|--------|--------|--------|---------|--------|-------|-------|-------|
| 1                  | 33    | 21     | 180    | 136    | 220    | 278    | 2,050  | 1,230   | 373    | 103   | 53    | 38    |
| 2                  | 31    | 33     | 177    | 133    | 190    | 258    | 1,930  | 1,390   | 337    | 103   | 52    | 35    |
| 3                  | 31    | 35     | 185    | 143    | 202    | 246    | 1,800  | 1,520   | 293    | 101   | 50    | 34    |
| 4                  | 31    | 50     | 197    | 197    | 370    | 245    | 1,750  | 1,800   | 271    | 97    | 48    | 34    |
| 5                  | 34    | 44     | 264    | 232    | 340    | 250    | 1,830  | 2,000   | 264    | 91    | 47    | 33    |
| 6                  | 35    | 40     | 341    | 317    | 300    | 268    | 1,930  | 1,670   | 285    | 89    | 47    | 31    |
| 7                  | 33    | 89     | 321    | 333    | 266    | 305    | 2,020  | 1,430   | 274    | 87    | 46    | 31    |
| 8                  | 31    | 169    | 293    | 317    | 240    | 390    | 2,020  | 1,390   | 329    | 86    | 44    | 31    |
| 9                  | 31    | 68     | 268    | 297    | 225    | 730    | 2,040  | 1,500   | 313    | 84    | 44    | 31    |
| 10                 | 31    | 54     | 236    | 264    | 209    | 937    | 1,820  | 1,410   | 289    | 84    | 42    | 31    |
| 11                 | 31    | 61     | 218    | 236    | 203    | 782    | 1,500  | 1,200   | 260    | 82    | 42    | 30    |
| 12                 | 31    | 191    | 200    | 215    | 194    | 810    | 1,210  | 1,100   | 240    | 78    | 42    | 31    |
| 13                 | 30    | 530    | 185    | 203    | 185    | 1,050  | 1,070  | 1,080   | 243    | 78    | 41    | 37    |
| 14                 | 33    | 979    | 169    | 194    | 182    | 1,040  | 1,090  | 986     | 204    | 77    | 41    | 37    |
| 15                 | 35    | 979    | 150    | 218    | 182    | 950    | 1,240  | 860     | 243    | 75    | 40    | 35    |
| 16                 | 34    | 472    | 146    | 274    | 185    | 730    | 1,720  | 818     | 222    | 73    | 40    | 34    |
| 17                 | 34    | 993    | 140    | 271    | 194    | 605    | 1,860  | 806     | 200    | 73    | 38    | 34    |
| 18                 | 34    | 1,260  | 138    | 264    | 206    | 550    | 1,380  | 836     | 185    | 71    | 40    | 50    |
| 19                 | 34    | 824    | 131    | 250    | 236    | 505    | 1,200  | 916     | 174    | 70    | 40    | 47    |
| 20                 | 34    | 522    | 129    | 236    | 226    | 470    | 1,080  | 993     | 163    | 66    | 37    | 40    |
| 21                 | 33    | 385    | 126    | 222    | 222    | 450    | 1,030  | 979     | 150    | 64    | 37    | 38    |
| 22                 | 31    | 313    | 120    | 213    | 243    | 430    | 1,080  | 806     | 146    | 61    | 35    | 35    |
| 23                 | 31    | 282    | 115    | 202    | 274    | 435    | 1,210  | 670     | 138    | 59    | 35    | 34    |
| 24                 | 33    | 301    | 138    | 190    | 325    | 485    | 1,420  | 675     | 131    | 59    | 35    | 34    |
| 25                 | 31    | 274    | 118    | 183    | 300    | 620    | 1,620  | 704     | 124    | 58    | 35    | 33    |
| 26                 | 31    | 236    | 111    | 173    | 287    | 765    | 1,500  | 698     | 120    | 56    | 35    | 34    |
| 27                 | 31    | 209    | 133    | 170    | 285    | 1,000  | 1,230  | 655     | 115    | 54    | 37    | 34    |
| 28                 | 33    | 194    | 285    | 170    | 282    | 1,260  | 1,140  | 660     | 111    | 54    | 35    | 31    |
| 29                 | 33    | 188    | 215    | 260    | -----  | 1,450  | 1,100  | 540     | 111    | 53    | 35    | 31    |
| 30                 | 31    | 182    | 172    | 272    | -----  | 1,670  | 1,130  | 512     | 107    | 53    | 38    | 30    |
| 31                 | 31    | -----  | 150    | 246    | -----  | 1,930  | -----  | 441     | -----  | 53    | 41    | ----- |
| TOTAL              | 1,000 | 9,988  | 5,751  | 7,031  | 6,773  | 21,894 | 45,000 | 32,275  | 6,465  | 2,292 | 1,272 | 1,038 |
| MEAN               | 32.3  | 333    | 186    | 227    | 242    | 706    | 1,500  | 1,041   | 216    | 73.9  | 41.0  | 34.6  |
| AC-FT              | 1,980 | 19,810 | 11,410 | 13,950 | 13,430 | 43,430 | 89,260 | 64,020  | 12,820 | 4,550 | 2,520 | 2,060 |
| CALENDAR YEAR 1965 | MAX   | 2,000  | MIN    | 30     | MEAN   | 359    | AC-FT  | 260,000 |        |       |       |       |
| WATER YEAR 1965-66 | MAX   | 2,050  | MIN    | 30     | MEAN   | 386    | AC-FT  | 279,200 |        |       |       |       |

Peak discharge (base, 1,900 cfs)

| Date  | Time    | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|---------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 1930    | 5.61        | 2,350     | 5-5  | 1930 | 5.43        | 2,160     |
| 4-1   | unknown | 5.98        | 2,780     |      |      |             |           |

Note--No gage-height record Feb. 24 to Apr. 7.

11-5237. Coffee Creek near Trinity Center, Calif.

Location.--Lat 41°05'35", long 122°45'10", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.2, T.37 N., R.8 W., on left bank 0.75 mile upstream from Little Boulder Creek, 3.2 miles upstream from mouth, and 8 miles northwest of new location of Trinity Center.

Drainage area.--107 sq mi.

Records available.--September 1957 to September 1966 (discontinued).

Gage.--Digital water-stage recorder. Altitude of gage is 2,750 ft (from topographic map). Prior to Apr. 30, 1965 graphic water-stage recorder at site 75 ft upstream at datum 4.00 ft higher.

Average discharge.--9 years, 291 cfs (210,700 acre-ft per year).

Extremes.--Maximum discharge during year, 1,500 cfs May 4 (gage height, 8.28 ft); minimum daily, 26 cfs Jan. 28.

1957-66: Maximum discharge 17,700 cfs Dec. 22, 1964 (gage height, 10.90 ft from floodmarks), from rating curve extended above 2,000 cfs on basis of slope-area measurement of maximum flow; minimum, 23 cfs Jan. 13, Oct. 2, 1960.

Remarks.--Records poor. Slight regulation at low flow.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.  | JAN.  | FEB.  | MAR.   | APR.   | MAY    | JUNE   | JULY  | AUG.  | SEPT. |
|-------|-------|--------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 38    | 40     | 112   | 201   | 139   | 142    | 837    | 814    | 466    | 147   | 69    | 43    |
| 2     | 38    | 40     | 106   | 167   | 128   | 128    | 816    | 895    | 382    | 145   | 67    | 43    |
| 3     | 38    | 40     | 102   | 149   | 120   | 110    | 784    | 971    | 344    | 136   | 65    | 43    |
| 4     | 37    | 41     | 101   | 211   | 142   | 90     | 766    | 1,220  | 308    | 131   | 63    | 43    |
| 5     | 37    | 43     | 128   | 311   | 156   | 75     | 842    | 1,200  | 308    | 126   | 61    | 43    |
| 6     | 37    | 43     | 149   | 343   | 153   | 77     | 923    | 1,060  | 312    | 123   | 59    | 41    |
| 7     | 37    | 57     | 146   | 346   | 145   | 94     | 985    | 983    | 312    | 118   | 58    | 41    |
| 8     | 25    | 103    | 141   | 333   | 148   | 147    | 982    | 1,010  | 336    | 118   | 57    | 41    |
| 9     | 35    | 68     | 132   | 322   | 118   | 186    | 970    | 1,100  | 375    | 116   | 55    | 41    |
| 10    | 35    | 54     | 122   | 316   | 100   | 189    | 892    | 1,080  | 361    | 110   | 55    | 41    |
| 11    | 35    | 50     | 113   | 291   | 94    | 186    | 770    | 969    | 319    | 108   | 54    | 41    |
| 12    | 36    | 67     | 106   | 240   | 92    | 186    | 675    | 927    | 280    | 106   | 54    | 39    |
| 13    | 39    | 291    | 99    | 177   | 92    | 189    | 631    | 941    | 208    | 106   | 51    | 39    |
| 14    | 41    | 487    | 93    | 103   | 92    | 201    | 636    | 871    | 326    | 100   | 51    | 39    |
| 15    | 43    | 447    | 83    | 90    | 100   | 201    | 747    | 820    | 319    | 98    | 51    | 39    |
| 16    | 45    | 277    | 79    | 85    | 96    | 186    | 951    | 796    | 294    | 96    | 50    | 39    |
| 17    | 47    | 529    | 77    | 77    | 92    | 159    | 985    | 796    | 264    | 93    | 50    | 39    |
| 18    | 46    | 532    | 78    | 74    | 92    | 134    | 910    | 832    | 240    | 92    | 50    | 39    |
| 19    | 51    | 385    | 75    | 68    | 110   | 118    | 792    | 920    | 234    | 90    | 48    | 41    |
| 20    | 52    | 317    | 72    | 65    | 136   | 98     | 712    | 990    | 219    | 88    | 48    | 42    |
| 21    | 55    | 256    | 72    | 59    | 159   | 85     | 686    | 948    | 207    | 85    | 48    | 41    |
| 22    | 54    | 202    | 70    | 55    | 162   | 77     | 702    | 848    | 198    | 83    | 48    | 41    |
| 23    | 50    | 167    | 68    | 50    | 171   | 72     | 756    | 754    | 192    | 81    | 47    | 41    |
| 24    | 47    | 173    | 68    | 43    | 177   | 72     | 849    | 784    | 186    | 79    | 47    | 40    |
| 25    | 46    | 161    | 70    | 39    | 180   | 88     | 933    | 826    | 177    | 78    | 45    | 40    |
| 26    | 43    | 159    | 67    | 33    | 177   | 159    | 894    | 832    | 171    | 76    | 45    | 39    |
| 27    | 42    | 152    | 69    | 30    | 168   | 302    | 794    | 796    | 165    | 75    | 45    | 39    |
| 28    | 42    | 138    | 204   | 26    | 159   | 422    | 765    | 832    | 162    | 73    | 45    | 39    |
| 29    | 41    | 129    | 309   | 43    | ----- | 490    | 753    | 690    | 159    | 72    | 45    | 38    |
| 30    | 41    | 121    | 284   | 96    | ----- | 585    | 765    | 665    | 123    | 70    | 45    | 38    |
| 31    | 41    | -----  | 242   | 145   | ----- | 702    | -----  | 570    | -----  | 70    | 43    | ----- |
| TOTAL | 1,304 | 5,599  | 3,637 | 4,588 | 3,678 | 5,948  | 24,523 | 27,740 | 8,057  | 3,089 | 1,619 | 1,213 |
| MEAN  | 42.1  | 187    | 117   | 148   | 131   | 192    | 817    | 895    | 269    | 99.6  | 52.2  | 40.4  |
| AC-FT | 2,590 | 11,110 | 7,210 | 9,100 | 7,300 | 11,800 | 48,640 | 55,020 | 15,980 | 6,130 | 3,210 | 2,410 |

CALENDAR YEAR 1965 MAX 1,500 MIN 35 MEAN 316 AC-FT 228,700  
 WATER YEAR 1965-66 MAX 1,220 MIN 26 MEAN 249 AC-FT 180,500

## Peak discharge (base, 1,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 11-17 | 1800 | 8.20        | 1,420     | 5-4  | 1900 | 8.28        | 1,500     |
| 4-16  | 2015 | 7.86        | 1,120     | 5-20 | 1845 | 7.92        | 1,160     |

## KLAMATH RIVER BASIN

11-5254. Clair Engle Lake near Lewiston, Calif.

Location.--Lat 40°48'05", long 122°45'44", sec.15, T.34 N., R.8 W., on side of intake structure of Trinity Dam on Trinity River, 9 miles north of Lewiston.

Drainage area.--692 sq mi.

Records available.--November 1960 to September 1966. Prior to October 1963 published as Trinity Lake near Lewiston.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Jan. 4, 1962, staff gage at same site and datum.

Extremes.--Maximum contents during year, 2,475,400 acre-ft May 13 (elevation, 2,371.67 ft); minimum, 1,880,200 acre-ft Sept. 30 (elevation, 2,332.51 ft).

1961-66: Maximum contents, 2,548,600 acre-ft Apr. 15, 1963 (elevation, 2,376.02 ft); minimum, 971,900 acre-ft Nov. 21, 22, 1961 (elevation, 2,251.93 ft).

Remarks.--The lake is formed by an earthfill dam completed in November 1960. Storage began Nov. 23, 1960. Usable capacity, 2,437,700 acre-ft between elevations 1,995.5 ft (elevation of invert of river outlets) and 2,370.0 ft (gross pool elevation) above mean sea level. Dead storage, 10,000 acre-ft. Records including extremes represent total contents at 2400 hrs.

Cooperation.--Records furnished by Bureau of Reclamation.

Contents, in thousands of acre-feet, at 2400 hours, water year October 1965 to September 1966

| Day  | Oct.    | Nov.    | Dec.    | Jan.    | Feb.    | Mar.    | Apr.    | May     | June    | July    | Aug.    | Sept.   |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1    | 1994.7  | 1915.8  | 1960.8  | 1970.3  | 2010.0  | 2052.6  | 2240.1  | 2434.8  | 2455.4  | 2348.4  | 2188.0  | 2006.8  |
| 2    | 1991.9  | 1913.2  | 1961.2  | 1971.1  | 2010.5  | 2053.5  | 2254.3  | 2438.6  | 2452.3  | 2344.0  | 2182.3  | 2000.9  |
| 3    | 1988.7  | 1910.8  | 1960.9  | 1973.4  | 2012.8  | 2054.8  | 2266.2  | 2443.4  | 2449.3  | 2339.2  | 2176.7  | 1995.1  |
| 4    | 1985.4  | 1908.9  | 1961.4  | 1979.8  | 2016.4  | 2056.5  | 2377.6  | 2450.5  | 2446.2  | 2334.4  | 2170.9  | 1989.1  |
| 5    | 1982.9  | 1907.2  | 1962.2  | 1982.4  | 2019.8  | 2057.5  | 2389.7  | 2453.1  | 2443.0  | 2329.5  | 2165.3  | 1983.1  |
| 6    | 1980.1  | 1905.5  | 1963.5  | 1988.1  | 2022.7  | 2059.0  | 2302.7  | 2462.9  | 2440.2  | 2324.4  | 2159.6  | 1979.5  |
| 7    | 1977.2  | 1906.3  | 1964.4  | 1992.0  | 2025.2  | 2061.2  | 2316.1  | 2465.9  | 2437.3  | 2319.7  | 2154.0  | 1975.9  |
| 8    | 1974.3  | 1906.9  | 1965.5  | 1995.4  | 2026.2  | 2066.9  | 2327.1  | 2468.6  | 2434.5  | 2314.8  | 2148.1  | 1972.4  |
| 9    | 1971.8  | 1906.2  | 1966.1  | 1998.0  | 2027.4  | 2079.5  | 2339.5  | 2471.6  | 2431.8  | 2309.5  | 2142.5  | 1968.7  |
| 10   | 1969.1  | 1905.6  | 1966.8  | 1999.6  | 2028.9  | 2090.4  | 2343.7  | 2474.1  | 2429.2  | 2304.7  | 2136.8  | 1965.1  |
| 11   | 1965.8  | 1906.2  | 1967.4  | 2000.7  | 2029.7  | 2098.1  | 2357.2  | 2475.1  | 2426.1  | 2299.6  | 2131.0  | 1961.4  |
| 12   | 1964.1  | 1907.9  | 1967.5  | 2001.8  | 2030.5  | 2104.2  | 2363.5  | 2475.1  | 2423.0  | 2294.6  | 2125.3  | 1957.8  |
| 13   | 1961.7  | 1912.7  | 1967.7  | 2002.5  | 2031.3  | 2112.7  | 2368.4  | 2475.4  | 2420.0  | 2289.6  | 2119.6  | 1954.5  |
| 14   | 1959.2  | 1920.6  | 1967.8  | 2003.1  | 2031.8  | 2121.4  | 2372.9  | 2474.7  | 2417.6  | 2284.6  | 2114.1  | 1951.1  |
| 15   | 1955.5  | 1927.8  | 1967.4  | 2003.9  | 2032.7  | 2129.8  | 2379.4  | 2473.6  | 2414.8  | 2279.4  | 2108.1  | 1947.8  |
| 16   | 1954.2  | 1929.7  | 1967.1  | 2005.0  | 2033.4  | 2136.0  | 2386.8  | 2472.2  | 2411.7  | 2274.2  | 2102.1  | 1944.5  |
| 17   | 1951.8  | 1933.1  | 1967.0  | 2005.5  | 2034.1  | 2141.1  | 2394.1  | 2471.2  | 2408.4  | 2269.2  | 2096.5  | 1941.2  |
| 18   | 1949.5  | 1947.8  | 1966.7  | 2006.3  | 2035.0  | 2145.1  | 2399.0  | 2470.2  | 2405.0  | 2263.8  | 2090.7  | 1938.5  |
| 19   | 1947.2  | 1952.9  | 1966.1  | 2006.8  | 2037.1  | 2148.5  | 2402.2  | 2470.1  | 2401.1  | 2258.5  | 2084.9  | 1935.7  |
| 20   | 1944.7  | 1955.5  | 1965.8  | 2007.9  | 2038.1  | 2151.7  | 2404.0  | 2470.7  | 2397.3  | 2253.2  | 2079.1  | 1932.4  |
| 21   | 1942.4  | 1956.8  | 1965.5  | 2008.4  | 2039.3  | 2154.6  | 2405.8  | 2471.4  | 2393.1  | 2248.0  | 2073.0  | 1929.5  |
| 22   | 1940.0  | 1957.2  | 1964.7  | 2009.5  | 2040.7  | 2157.6  | 2407.6  | 2470.7  | 2388.8  | 2242.7  | 2066.9  | 1926.1  |
| 23   | 1937.6  | 1957.8  | 1964.2  | 2009.6  | 2043.1  | 2160.3  | 2410.2  | 2463.7  | 2384.7  | 2237.2  | 2060.9  | 1922.5  |
| 24   | 1935.0  | 1959.9  | 1965.1  | 2009.6  | 2045.3  | 2164.1  | 2413.8  | 2467.6  | 2380.5  | 2231.8  | 2054.7  | 1916.2  |
| 25   | 1932.4  | 1960.6  | 1965.0  | 2009.6  | 2047.5  | 2163.7  | 2419.0  | 2466.6  | 2375.7  | 2226.2  | 2048.5  | 1910.3  |
| 26   | 1930.2  | 1961.5  | 1964.4  | 2006.3  | 2049.1  | 2174.6  | 2423.5  | 2465.9  | 2371.3  | 2220.9  | 2042.6  | 1904.2  |
| 27   | 1927.6  | 1961.5  | 1965.0  | 2004.4  | 2050.4  | 2181.9  | 2426.1  | 2465.1  | 2366.8  | 2215.5  | 2036.8  | 1898.2  |
| 28   | 1925.4  | 1961.8  | 1968.1  | 2003.1  | 2051.5  | 2190.7  | 2428.2  | 2464.6  | 2362.5  | 2210.0  | 2030.5  | 1892.3  |
| 29   | 1923.1  | 1961.5  | 1969.1  | 2004.8  | -----   | 2200.9  | 2430.0  | 2462.9  | 2358.0  | 2204.5  | 2024.5  | 1886.2  |
| 30   | 1920.3  | 1960.8  | 1969.8  | 2006.1  | -----   | 2212.7  | 2432.2  | 2460.9  | 2353.4  | 2199.0  | 2013.8  | 1880.2  |
| 31   | 1917.9  | -----   | 1970.1  | 2007.4  | -----   | 2225.8  | -----   | 2453.6  | -----   | 2193.5  | 2012.7  | -----   |
| (†)  | 2335.20 | 2338.22 | 2338.87 | 2341.45 | 2344.46 | 2356.04 | 2369.06 | 2370.66 | 2364.20 | 2353.93 | 2341.81 | 2332.51 |
| (‡)  | -79.4   | 42.9    | 9.3     | 37.3    | 44.1    | 174.3   | 206.4   | 26.4    | -105.2  | -159.9  | -180.8  | -132.5  |
| (††) | 2530    | 550     | 100     | -----   | -----   | 1750    | 5460    | 7940    | 7990    | 9450    | 8770    | 5250    |

Calendar Year 1965..... † +30.8

Water Year 1965-66..... ‡ -117.1

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

†† Evaporation, in acre-feet, furnished by Bureau of Reclamation. No record Dec. 19 to Mar. 10.

11-5254.3. Judge Francis Carr powerplant near French Gulch, Calif.

Location.--Lat 40°38'49", long 122°37'34", at powerplant 1.6 miles downstream from Mill Creek and 3.8 miles south of French Gulch.

Records available.--April 1963 to September 1966.

Gage.--Recorded powerplant output.

Extremes.--1963-66: Maximum daily discharge, 3,280 cfs for several days in May, August, September 1964; no flow May 6-9, 1963.

Remarks.--Water is diverted from Trinity River at NW 1/4 Sec. 8, T.33 N., R.8 W., through a tunnel to powerplant and then into Whiskeytown Lake (see sta. no. 11-3717). See schematic diagram for Pit and McCloud River basins.

Cooperation.--Records furnished by Bureau of Reclamation.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.    | May       | June    | July    | Aug.    | Sept.   |
|--------------------|--------|--------|--------|--------|--------|--------|---------|-----------|---------|---------|---------|---------|
| 1                  | 1,399  | 953    | 553    | 525    | 543    | 539    | 622     | 2,974     | 3,257   | 2,996   | 2,993   | 3,266   |
| 2                  | 1,433  | 904    | 557    | 641    | 564    | 548    | 621     | 2,219     | 3,257   | 2,917   | 2,982   | 3,107   |
| 3                  | 1,377  | 1,242  | 546    | 719    | 542    | 547    | 507     | 2,927     | 3,021   | 2,901   | 2,989   | 3,044   |
| 4                  | 1,480  | 1,037  | 553    | 715    | 545    | 491    | 576     | 2,926     | 3,034   | 2,993   | 3,066   | 3,074   |
| 5                  | 1,461  | 863    | 745    | 652    | 546    | 487    | 571     | 3,019     | 2,324   | 3,003   | 2,991   | 3,095   |
| 6                  | 1,364  | 953    | 748    | 656    | 651    | 501    | 571     | 3,257     | 2,765   | 2,931   | 2,943   | 1,723   |
| 7                  | 1,431  | 575    | 723    | 659    | 553    | 486    | 501     | 3,257     | 2,820   | 2,945   | 2,937   | 1,879   |
| 8                  | 1,440  | 488    | 553    | 721    | 566    | 491    | 1,422   | 3,257     | 2,765   | 2,943   | 3,023   | 1,865   |
| 9                  | 1,205  | 101    | 551    | 690    | 790    | 491    | 1,364   | 3,257     | 3,257   | 2,940   | 3,022   | 1,791   |
| 10                 | 1,203  | 525    | 547    | 735    | 619    | 493    | 1,383   | 3,257     | 3,095   | 2,984   | 3,022   | 1,793   |
| 11                 | 1,295  | 248    | 550    | 775    | 610    | 492    | 1,410   | 3,257     | 2,907   | 2,989   | 3,022   | 1,714   |
| 12                 | 1,275  | 793    | 560    | 741    | 552    | 491    | 1,404   | 3,257     | 2,899   | 2,989   | 3,019   | 1,675   |
| 13                 | 1,275  | 907    | 546    | 817    | 514    | 488    | 1,414   | 3,257     | 2,910   | 2,868   | 2,882   | 1,744   |
| 14                 | 1,276  | 920    | 500    | 768    | 522    | 488    | 1,402   | 3,257     | 2,916   | 2,916   | 3,015   | 1,818   |
| 15                 | 1,264  | 771    | 501    | 705    | 520    | 491    | 1,502   | 3,257     | 2,838   | 2,930   | 3,029   | 1,763   |
| 16                 | 1,186  | 830    | 554    | 701    | 524    | 488    | 2,485   | 3,257     | 3,060   | 2,945   | 3,035   | 1,622   |
| 17                 | 1,171  | 638    | 552    | 707    | 519    | 488    | 2,799   | 3,257     | 2,989   | 2,942   | 3,033   | 1,662   |
| 18                 | 1,180  | 560    | 517    | 663    | 527    | 506    | 2,783   | 3,257     | 2,987   | 2,942   | 3,032   | 1,659   |
| 19                 | 1,188  | 765    | 530    | 677    | 521    | 507    | 2,777   | 3,257     | 2,989   | 2,996   | 3,019   | 1,593   |
| 20                 | 1,183  | 770    | 524    | 693    | 519    | 508    | 2,858   | 3,257     | 2,899   | 3,004   | 3,019   | 1,500   |
| 21                 | 1,184  | 767    | 514    | 697    | 516    | 506    | 2,944   | 3,257     | 2,901   | 2,927   | 3,026   | 1,595   |
| 22                 | 1,146  | 767    | 528    | 699    | 617    | 507    | 2,956   | 3,257     | 2,889   | 2,991   | 3,013   | 1,577   |
| 23                 | 1,157  | 763    | 510    | 687    | 600    | 502    | 2,977   | 3,257     | 2,999   | 3,061   | 3,022   | 1,965   |
| 24                 | 1,135  | 760    | 516    | 877    | 625    | 500    | 3,068   | 3,257     | 2,957   | 2,989   | 3,106   | 3,091   |
| 25                 | 1,231  | 762    | 513    | 1,543  | 589    | 569    | 2,934   | 3,257     | 2,904   | 2,993   | 3,018   | 3,095   |
| 26                 | 1,141  | 761    | 510    | 1,410  | 601    | 621    | 2,952   | 3,257     | 2,947   | 2,986   | 3,025   | 3,143   |
| 27                 | 1,140  | 762    | 498    | 1,824  | 602    | 638    | 2,957   | 3,257     | 2,936   | 2,992   | 3,029   | 3,138   |
| 28                 | 1,150  | 748    | 525    | 1,634  | 606    | 619    | 2,806   | 3,257     | 2,954   | 2,979   | 3,110   | 3,144   |
| 29                 | 1,271  | 746    | 509    | 522    | -----  | 609    | 2,819   | 3,257     | 2,947   | 2,992   | 3,112   | 3,118   |
| 30                 | 1,263  | 750    | 520    | 654    | -----  | 630    | 2,922   | 3,257     | 2,993   | 2,836   | 3,046   | 3,115   |
| 31                 | 1,179  | -----  | 518    | 568    | -----  | 631    | -----   | 3,257     | -----   | 2,912   | 2,725   | -----   |
| Total              | 39,083 | 22,329 | 17,071 | 25,075 | 16,003 | 16,353 | 58,407  | 99,447    | 88,917  | 91,737  | 93,360  | 68,368  |
| Mean               | 1,261  | 744    | 551    | 809    | 572    | 528    | 1,947   | 3,208     | 2,964   | 2,959   | 3,012   | 2,279   |
| Ac-ft              | 77,620 | 44,290 | 33,860 | 49,740 | 31,740 | 32,440 | 115,590 | 197,250   | 176,360 | 181,960 | 185,180 | 135,610 |
| Calendar year 1965 | Max    | 3,257  | Min    | 445    | Mean   | 1,469  | Ac-ft   | 1,063,830 |         |         |         |         |
| Water year 1965-66 | Max    | 3,266  | Min    | 101    | Mean   | 1,743  | Ac-ft   | 1,261,640 |         |         |         |         |

## KLAMATH RIVER BASIN

11-5255. Trinity River at Lewiston, Calif.

Location.--Lat 40°43'10", long 122°48'09", in SW 1/4 sec. 17, T.33 N., R.8 W., on right bank 400 ft upstream from Deadwood Creek and 0.8 mile northeast of Lewiston.

Drainage area.--728 sq mi.

Records available.--August 1911 to September 1966.

Gage.--Altitude of gage is 1,810 ft (from topographic map). Prior to Oct. 16, 1930, staff gage and Oct. 16, 1930 to Sept. 30, 1958, water-stage recorder, at site 1.1 miles downstream at different datum. Oct. 1, 1958, to July 6, 1964, water-stage recorder at site 0.8 mile downstream at different datum.

Average discharge.--55 years, 1,655 cfs (1,198,000 acre-ft per year) adjusted for storage, evaporation and diversion.

Extremes.--Maximum discharge during year, 1,030 cfs May 9, 10 (gage height, 4.66 ft); minimum daily, 144 cfs Sept. 10. 1911-60 (prior to regulation by Trinity Lake); maximum discharge, 71,600 cfs Dec. 22, 1955 (gage height, 27.3 ft, from flood-marks, site and datum then in use); minimum, 23 cfs July 30, 1924. 1961-66: Maximum discharge, 12,700 cfs Apr. 20, 1963 (gage height, 12.38 ft); minimum daily, 131 cfs May 4, 1963.

Remarks.--Records good. Flow regulated by Clair Engle Lake (see sta. no. 11-5254) beginning in November 1960. Diversion to Judge Francis Carr Powerplant (see sta. no. 11-5254.3), began in April 1963. Small diversions above head of Trinity Lake for irrigation, power and placer mining. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day                | Oct.   | Nov.    | Dec.   | Jan.   | Feb.   | Mar.    | Apr.    | May     | June   | July   | Aug.   | Sept.     |
|--------------------|--------|---------|--------|--------|--------|---------|---------|---------|--------|--------|--------|-----------|
| 1                  | 210    | 224     | 239    | 210    | 163    | 161     | 157     | 164     | 150    | 157    | 153    | 150       |
| 2                  | 209    | 239     | 210    | 210    | 164    | 161     | 157     | 164     | 143    | 159    | 155    | 148       |
| 3                  | 210    | 239     | 210    | 183    | 163    | 161     | 157     | 164     | 143    | 159    | 153    | 148       |
| 4                  | 210    | 239     | 210    | 172    | 170    | 161     | 157     | 164     | 146    | 159    | 153    | 148       |
| 5                  | 210    | 239     | 210    | 172    | 163    | 161     | 159     | 164     | 145    | 159    | 153    | 150       |
| 6                  | 203    | 239     | 210    | 166    | 170    | 164     | 159     | 164     | 143    | 159    | 150    | 150       |
| 7                  | 203    | 242     | 210    | 166    | 163    | 164     | 157     | 166     | 153    | 159    | 153    | 150       |
| 8                  | 203    | 242     | 210    | 163    | 166    | 164     | 159     | 170     | 153    | 159    | 153    | 148       |
| 9                  | 210    | 239     | 210    | 166    | 165    | 161     | 161     | 423     | 153    | 159    | 155    | 148       |
| 10                 | 210    | 242     | 210    | 163    | 164    | 164     | 164     | 1,020   | 150    | 159    | 153    | 144       |
| 11                 | 203    | 242     | 210    | 164    | 154    | 161     | 164     | 1,020   | 153    | 159    | 153    | 148       |
| 12                 | 205    | 243     | 210    | 166    | 161    | 161     | 161     | 1,010   | 155    | 159    | 153    | 148       |
| 13                 | 205    | 251     | 203    | 166    | 161    | 161     | 161     | 1,010   | 155    | 159    | 150    | 153       |
| 14                 | 205    | 251     | 203    | 164    | 164    | 161     | 159     | 1,010   | 157    | 159    | 153    | 153       |
| 15                 | 205    | 245     | 210    | 164    | 161    | 161     | 161     | 1,010   | 159    | 159    | 153    | 150       |
| 16                 | 205    | 243     | 210    | 151    | 161    | 161     | 159     | 993     | 157    | 159    | 153    | 143       |
| 17                 | 200    | 251     | 210    | 164    | 159    | 161     | 159     | 964     | 155    | 159    | 153    | 143       |
| 18                 | 200    | 251     | 203    | 164    | 159    | 161     | 161     | 920     | 155    | 161    | 153    | 143       |
| 19                 | 200    | 254     | 203    | 177    | 159    | 161     | 161     | 693     | 155    | 161    | 150    | 143       |
| 20                 | 200    | 251     | 203    | 170    | 159    | 159     | 164     | 633     | 155    | 161    | 150    | 143       |
| 21                 | 200    | 251     | 203    | 164    | 159    | 159     | 164     | 633     | 157    | 159    | 150    | 150       |
| 22                 | 193    | 254     | 210    | 161    | 161    | 159     | 161     | 644     | 157    | 161    | 153    | 150       |
| 23                 | 193    | 254     | 210    | 159    | 161    | 159     | 161     | 644     | 157    | 159    | 153    | 150       |
| 24                 | 193    | 254     | 210    | 159    | 159    | 159     | 159     | 644     | 157    | 159    | 143    | 153       |
| 25                 | 193    | 257     | 210    | 161    | 159    | 159     | 161     | 610     | 157    | 159    | 143    | 153       |
| 26                 | 200    | 260     | 210    | 161    | 159    | 157     | 161     | 522     | 157    | 159    | 143    | 150       |
| 27                 | 200    | 250     | 210    | 166    | 159    | 159     | 159     | 440     | 157    | 159    | 143    | 153       |
| 28                 | 193    | 257     | 212    | 164    | 159    | 157     | 161     | 371     | 159    | 157    | 143    | 150       |
| 29                 | 193    | 257     | 210    | 163    | -----  | 159     | 164     | 367     | 159    | 160    | 150    | 150       |
| 30                 | 195    | 260     | 210    | 163    | -----  | 159     | 164     | 356     | 159    | 294    | 143    | 172       |
| 31                 | 195    | -----   | 210    | 163    | -----  | 159     | -----   | 221     | -----  | 202    | 150    | -----     |
| Total              | 6,303  | 7,440   | 6,529  | 5,240  | 4,556  | 4,375   | 4,312   | 17,303  | 4,627  | 5,112  | 4,896  | 4,507     |
| Mean               | 203    | 243     | 211    | 169    | 153    | 160     | 160     | 553     | 154    | 165    | 151    | 150       |
| Ac-ft              | 12,500 | 14,760  | 12,950 | 10,390 | 9,040  | 9,370   | 9,540   | 34,320  | 9,180  | 10,140 | 9,310  | 8,940     |
| Mean†              | 215    | 1,723   | 914    | 1,585  | 1,523  | 3,552   | 5,663   | 4,325   | 1,484  | 677    | 365    | 291       |
| Ac-ft†             | 13,250 | 102,500 | 56,210 | 97,430 | 84,380 | 213,400 | 337,000 | 264,900 | 83,330 | 41,650 | 22,460 | 17,300    |
| Calendar year 1965 | Max    | 254     | Min    | 143    | Mean   | 177     | Ac-ft   | 128,400 | Mean†  | 1,750  | Ac-ft† | 1,267,000 |
| Water year 1965-66 | Max    | 1,020   | Min    | 144    | Mean   | 203     | Ac-ft   | 150,900 | Mean†  | 1,353  | Ac-ft† | 1,345,000 |

† Adjusted for change in contents, diversion, and evaporation from Clair Engle Lake. Data furnished by U. S. Bureau of Reclamation.

11-5258. Weaver Creek near Douglas City, Calif.

Location.--Lat 40°40'15", long 122°56'30", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.36, T.33 N., R.10 W., on left bank 0.2 mile downstream from highway bridge and 1.3 miles north of Douglas City.

Drainage area.--48.4 sq mi.

Records available.--October 1958 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 1,680 ft (from topographic map).

Average discharge.--8 years, 54.9 cfs (39,750 acre-ft per year).

Extremes.--Maximum discharge during year, 474 cfs Jan. 5 (gage height, 8.58 ft); 0.3 cfs Sept. 7.  
1958-66: Maximum discharge, 3,980 cfs Dec. 22, 1964 (gage height, 12.72 ft), from rating curve extended above 260 cfs on basis of slope-area measurement of maximum flow; no flow Aug. 26, 1964.

Remarks.--No diversion or regulation above station. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Revisions (water years).--1965 Report: 1959 (M), 1960 (M), 1961, 1962, 1963, 1964.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June   | July  | Aug. | Sept. |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|-------|
| 1     | 1.6   | 4.9   | 19    | 27    | 120   | 81    | 156   | 71    | 27     | 8.0   | 2.6  | 1.9   |
| 2     | 1.6   | 5.1   | 18    | 27    | 105   | 74    | 152   | 74    | 27     | 8.1   | 2.2  | 1.2   |
| 3     | 1.6   | 5.4   | 18    | 80    | 143   | 65    | 140   | 77    | 25     | 8.0   | 1.9  | 0.9   |
| 4     | 1.7   | 6.5   | 19    | 315   | 356   | 60    | 135   | 91    | 23     | 7.2   | 1.6  | 0.7   |
| 5     | 2.0   | 5.9   | 22    | 392   | 284   | 62    | 133   | 90    | 22     | 5.7   | 1.9  | 0.6   |
| 6     | 2.5   | 6.0   | 19    | 297   | 223   | 63    | 137   | 80    | 24     | 5.5   | 1.9  | 0.4   |
| 7     | 2.5   | 12    | 21    | 204   | 166   | 84    | 136   | 74    | 25     | 5.6   | 1.3  | 0.3   |
| 8     | 2.3   | 14    | 19    | 187   | 127   | 215   | 131   | 72    | 22     | 6.3   | 1.2  | 0.4   |
| 9     | 2.3   | 3.1   | 17    | 136   | 105   | 316   | 133   | 73    | 20     | 6.4   | 1.3  | 0.4   |
| 10    | 2.4   | 7.0   | 15    | 94    | 91    | 342   | 134   | 71    | 19     | 6.4   | 1.3  | 0.8   |
| 11    | 2.4   | 7.7   | 14    | 72    | 80    | 224   | 134   | 63    | 17     | 6.1   | 1.5  | 0.9   |
| 12    | 2.6   | 34    | 14    | 59    | 71    | 181   | 124   | 66    | 17     | 5.3   | 1.5  | 1.1   |
| 13    | 2.8   | 36    | 13    | 54    | 63    | 204   | 104   | 64    | 16     | 6.3   | 1.3  | 1.3   |
| 14    | 3.0   | 43    | 11    | 54    | 59    | 183   | 97    | 60    | 16     | 6.0   | 1.0  | 1.5   |
| 15    | 3.6   | 22    | 10    | 61    | 56    | 163   | 100   | 56    | 16     | 5.3   | 0.9  | 1.3   |
| 16    | 3.7   | 16    | 9.3   | 69    | 53    | 143   | 111   | 54    | 15     | 5.0   | 0.9  | 1.1   |
| 17    | 4.0   | 13    | 3.7   | 63    | 52    | 117   | 114   | 53    | 14     | 5.5   | 1.0  | 0.9   |
| 18    | 4.1   | 31    | 3.3   | 63    | 54    | 102   | 107   | 51    | 12     | 4.7   | 1.1  | 1.3   |
| 19    | 4.0   | 33    | 3.1   | 59    | 99    | 99    | 95    | 51    | 12     | 4.5   | 0.6  | 1.5   |
| 20    | 4.1   | 21    | 9.1   | 52    | 105   | 86    | 83    | 54    | 12     | 4.9   | 0.6  | 1.3   |
| 21    | 4.1   | 17    | 3.7   | 49    | 98    | 80    | 83    | 50    | 12     | 4.1   | 0.6  | 1.3   |
| 22    | 4.0   | 15    | 9.3   | 49    | 105   | 74    | 81    | 47    | 12     | 3.6   | 0.7  | 1.1   |
| 23    | 3.8   | 19    | 9.6   | 47    | 128   | 72    | 83    | 42    | 12     | 2.8   | 0.7  | 1.0   |
| 24    | 4.0   | 40    | 9.7   | 43    | 132   | 75    | 83    | 40    | 11     | 2.5   | 0.6  | 0.9   |
| 25    | 3.9   | 44    | 3.7   | 43    | 126   | 83    | 89    | 37    | 9.5    | 2.6   | 0.4  | 0.8   |
| 26    | 4.0   | 39    | 10    | 43    | 113   | 96    | 85    | 35    | 3.5    | 2.5   | 0.6  | 0.9   |
| 27    | 4.3   | 31    | 9.8   | 42    | 99    | 107   | 78    | 36    | 3.9    | 2.3   | 1.1  | 0.9   |
| 28    | 4.7   | 26    | 125   | 41    | 83    | 113   | 74    | 36    | 3.3    | 1.8   | 1.0  | 0.8   |
| 29    | 4.9   | 22    | 80    | 180   | ----- | 128   | 73    | 33    | 7.9    | 2.1   | 1.1  | 0.7   |
| 30    | 4.9   | 20    | 47    | 201   | ----- | 139   | 72    | 32    | 8.3    | 2.2   | 1.7  | 0.5   |
| 31    | 4.7   | ----- | 38    | 141   | ----- | 147   | ----- | 30    | -----  | 3.1   | 2.2  | ----- |
| Total | 102.1 | 609.6 | 647.3 | 3,255 | 3,305 | 3,993 | 3,262 | 1,768 | 4,79.4 | 150.4 | 38.3 | 23.7  |
| Mean  | 3.29  | 20.3  | 20.9  | 105   | 113   | 129   | 109   | 57.0  | 16.0   | 4.85  | 1.24 | 0.96  |
| Ac-ft | 203   | 1,210 | 1,280 | 6,460 | 6,560 | 7,920 | 6,470 | 3,510 | 951    | 298   | 76   | 57    |

Calendar year 1965 Max 1,010 Min 1.2 Mean 52.2 Ac-ft 45,030  
Water year 1965-66 Max 393 Min 0.3 Mean 43.3 Ac-ft 34,990

## KLAMATH RIVER BASIN

11-5259. Browns Creek near Douglas City, Calif.

Location.--Lat 40°38'35", long 122°58'45", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.10, T.32 N., R.10 W., on right bank 2 miles upstream from mouth and 2.1 miles west of Douglas City.

Drainage area.--71.6 sq mi.

Records available.--January 1957 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 1,640 ft (from topographic map).

Average discharge.--9 years, 84.8 cfs (61,390 acre-ft per year).

Extremes.--Maximum discharge during year, 443 cfs Mar. 10 (gage height, 10.81 ft); minimum daily, 2.8 cfs Aug. 14.  
1957-66: Maximum discharge, 3,950 cfs Feb. 18, 1958 (gage height, 16.60 ft), from rating curve extended above 1,400 cfs;  
minimum, 0.3 cfs July 31, Aug. 1, 1962.

Remarks.--Small diversion for irrigation above station.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.    | Dec.  | Jan.  | Feb.  | Mar.   | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|-------|---------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1     | 7.4   | 3.9     | 57    | 58    | 127   | 134    | 316   | 66    | 27    | 15    | 7.6   | 7.3   |
| 2     | 7.1   | 9.1     | 55    | 55    | 114   | 130    | 276   | 63    | 23    | 15    | 7.1   | 6.5   |
| 3     | 7.3   | 9.1     | 55    | 67    | 123   | 122    | 231   | 62    | 23    | 14    | 6.6   | 6.3   |
| 4     | 7.5   | 11      | 57    | 161   | 332   | 120    | 197   | 62    | 26    | 14    | 6.5   | 6.0   |
| 5     | 7.5   | 10      | 59    | 219   | 397   | 119    | 173   | 59    | 25    | 13    | 6.0   | 5.5   |
| 6     | 7.9   | 10      | 59    | 293   | 333   | 125    | 170   | 56    | 29    | 12    | 5.6   | 5.3   |
| 7     | 9.2   | 16      | 56    | 321   | 261   | 137    | 163   | 55    | 31    | 12    | 5.4   | 5.3   |
| 8     | 9.1   | 26      | 52    | 317   | 200   | 171    | 153   | 54    | 23    | 13    | 4.9   | 5.0   |
| 9     | 7.7   | 14      | 50    | 276   | 167   | 292    | 144   | 53    | 26    | 13    | 5.2   | 5.7   |
| 10    | 8.0   | 12      | 46    | 201   | 149   | 430    | 133   | 50    | 23    | 12    | 5.2   | 6.8   |
| 11    | 8.4   | 13      | 43    | 160   | 137   | 384    | 130   | 49    | 24    | 11    | 4.9   | 5.7   |
| 12    | 8.0   | 30      | 40    | 137   | 123   | 337    | 127   | 45    | 22    | 11    | 4.5   | 6.3   |
| 13    | 8.0   | 79      | 37    | 124   | 118   | 373    | 120   | 42    | 21    | 22    | 3.9   | 7.3   |
| 14    | 9.2   | 169     | 35    | 120   | 117   | 394    | 115   | 40    | 20    | 13    | 2.8   | 3.1   |
| 15    | 9.8   | 112     | 33    | 130   | 112   | 387    | 111   | 39    | 19    | 13    | 3.1   | 7.3   |
| 16    | 9.0   | 78      | 31    | 140   | 103   | 334    | 111   | 39    | 19    | 12    | 3.6   | 7.3   |
| 17    | 9.1   | 77      | 27    | 136   | 107   | 264    | 110   | 36    | 18    | 12    | 5.0   | 7.0   |
| 18    | 10    | 172     | 27    | 123   | 109   | 225    | 103   | 35    | 17    | 12    | 5.7   | 7.8   |
| 19    | 11    | 186     | 26    | 118   | 123   | 203    | 96    | 35    | 17    | 11    | 5.3   | 3.1   |
| 20    | 10    | 113     | 27    | 108   | 125   | 183    | 91    | 34    | 17    | 10    | 4.8   | 7.8   |
| 21    | 8.6   | 85      | 29    | 101   | 126   | 171    | 83    | 33    | 17    | 10    | 4.8   | 7.0   |
| 22    | 8.3   | 66      | 25    | 93    | 133   | 163    | 85    | 31    | 17    | 9.5   | 5.0   | 7.0   |
| 23    | 7.8   | 66      | 24    | 92    | 143   | 160    | 82    | 29    | 17    | 3.7   | 4.8   | 7.0   |
| 24    | 8.1   | 103     | 27    | 89    | 164   | 162    | 80    | 29    | 17    | 9.5   | 5.5   | 6.8   |
| 25    | 8.5   | 107     | 30    | 87    | 164   | 182    | 77    | 23    | 17    | 9.3   | 5.7   | 6.8   |
| 26    | 8.8   | 94      | 25    | 83    | 153   | 215    | 76    | 23    | 16    | 3.4   | 5.5   | 6.3   |
| 27    | 8.9   | 81      | 27    | 81    | 142   | 263    | 75    | 29    | 15    | 3.4   | 5.0   | 7.0   |
| 28    | 9.4   | 71      | 107   | 76    | 136   | 306    | 73    | 30    | 16    | 7.7   | 5.0   | 6.8   |
| 29    | 9.2   | 67      | 93    | 115   | ----- | 327    | 70    | 29    | 15    | 3.0   | 5.3   | 6.3   |
| 30    | 9.4   | 62      | 73    | 147   | ----- | 337    | 67    | 30    | 15    | 3.3   | 5.0   | 6.0   |
| 31    | 9.3   | -----   | 70    | 132   | ----- | 323    | ----- | 30    | ----- | 7.5   | 7.3   | ----- |
| Total | 263.5 | 1,962.1 | 1,412 | 4,370 | 4,553 | 7,473  | 3,353 | 1,300 | 627   | 353.3 | 1,636 | 199.4 |
| Mean  | 8.50  | 65.4    | 45.5  | 141   | 163   | 241    | 123   | 41.9  | 20.9  | 11.6  | 5.23  | 5.65  |
| Ac-ft | 523   | 3,390   | 2,300 | 8,670 | 9,030 | 14,330 | 7,640 | 2,580 | 1,240 | 711   | 324   | 396   |

Calendar year 1965 Max 955 Min 6.5 Mean 99.9 Ac-ft 72,350  
Water year 1965-66 Max 430 Min 2.8 Mean 72.7 Ac-ft 52,640



11-5265. North Fork Trinity River at Helena, Calif.

Location.--Lat 40°46'55", long 123°07'40", in SW 1/4 sec. 21, T. 34 N., R. 11 W., on right bank 500 ft downstream from East Fork of North Fork, Trinity River, 0.6 mile north of Helena, 1.0 mile upstream from mouth, and 6 miles northwest of Junction City.

Drainage area.--151 sq mi.

Records available.--August 1911 to September 1913, January 1957 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 1,380 ft (from topographic map). August 1911 to September 1913 at site three-quarters of a mile downstream at different datum.

Average discharge.--11 years, 420 cfs (304,100 acre-ft per year).

Extremes.--Maximum discharge during year, 2,040 cfs Mar. 10 (gage height, 11.90 ft); minimum daily, 18 cfs Sept. 6, 7.

1911-13, 1957-66: Maximum discharge, 35,800 cfs Dec. 22, 1964 (gage height, 27.93 ft from floodmarks); from rating curve extended above 1800 cfs on basis of slope-area measurement of maximum flow; minimum daily, 7.5 cfs Sept. 26, 1964.

Remarks.--No known regulation or diversion above station.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct.  | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July  | Aug.  | Sept. |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1     | 24    | 23     | 160    | 227    | 431    | 392    | 1,750  | 547    | 273    | 139   | 59    | 23    |
| 2     | 23    | 23     | 163    | 210    | 369    | 383    | 1,720  | 607    | 239    | 130   | 56    | 21    |
| 3     | 24    | 24     | 180    | 277    | 342    | 344    | 1,560  | 674    | 214    | 116   | 54    | 21    |
| 4     | 24    | 73     | 227    | 511    | 522    | 321    | 1,540  | 845    | 200    | 111   | 54    | 21    |
| 5     | 25    | 49     | 506    | 687    | 723    | 303    | 1,580  | 938    | 205    | 114   | 52    | 20    |
| 6     | 25    | 42     | 534    | 1,540  | 706    | 318    | 1,590  | 759    | 213    | 114   | 49    | 13    |
| 7     | 24    | 53     | 441    | 1,300  | 586    | 392    | 1,570  | 645    | 223    | 107   | 47    | 19    |
| 8     | 24    | 127    | 352    | 1,080  | 482    | 753    | 1,450  | 622    | 248    | 99    | 44    | 19    |
| 9     | 23    | 72     | 293    | 904    | 411    | 1,450  | 1,350  | 648    | 286    | 94    | 44    | 20    |
| 10    | 24    | 62     | 243    | 691    | 368    | 1,300  | 1,330  | 677    | 293    | 91    | 42    | 21    |
| 11    | 24    | 73     | 208    | 536    | 344    | 1,370  | 1,210  | 606    | 269    | 88    | 41    | 21    |
| 12    | 24    | 255    | 182    | 443    | 324    | 1,090  | 1,080  | 536    | 241    | 85    | 39    | 22    |
| 13    | 23    | 250    | 160    | 388    | 293    | 1,440  | 946    | 527    | 270    | 84    | 38    | 22    |
| 14    | 26    | 390    | 147    | 366    | 289    | 1,510  | 855    | 476    | 320    | 84    | 37    | 25    |
| 15    | 33    | 309    | 135    | 444    | 282    | 1,350  | 945    | 419    | 328    | 83    | 35    | 25    |
| 16    | 29    | 173    | 123    | 540    | 273    | 1,130  | 1,200  | 402    | 296    | 82    | 33    | 25    |
| 17    | 29    | 180    | 116    | 530    | 284    | 925    | 1,200  | 403    | 269    | 82    | 32    | 25    |
| 18    | 28    | 390    | 111    | 482    | 299    | 811    | 1,020  | 433    | 248    | 78    | 32    | 31    |
| 19    | 23    | 446    | 105    | 443    | 343    | 746    | 833    | 493    | 243    | 73    | 31    | 33    |
| 20    | 23    | 285    | 103    | 394    | 369    | 677    | 724    | 561    | 209    | 75    | 30    | 29    |
| 21    | 27    | 219    | 101    | 349    | 363    | 623    | 650    | 550    | 177    | 71    | 30    | 29    |
| 22    | 25    | 181    | 93     | 329    | 387    | 574    | 641    | 475    | 161    | 71    | 29    | 29    |
| 23    | 24    | 172    | 94     | 293    | 482    | 563    | 669    | 390    | 155    | 71    | 28    | 23    |
| 24    | 24    | 352    | 100    | 286    | 510    | 610    | 725    | 423    | 153    | 69    | 28    | 27    |
| 25    | 24    | 264    | 100    | 268    | 484    | 754    | 787    | 472    | 144    | 65    | 27    | 26    |
| 26    | 24    | 248    | 95     | 259    | 431    | 924    | 772    | 487    | 148    | 62    | 26    | 26    |
| 27    | 24    | 213    | 102    | 251    | 405    | 1,140  | 635    | 452    | 156    | 60    | 26    | 26    |
| 28    | 24    | 186    | 570    | 244    | 395    | 1,290  | 581    | 453    | 165    | 63    | 26    | 26    |
| 29    | 24    | 177    | 450    | 396    | -----  | 1,420  | 545    | 405    | 167    | 59    | 25    | 25    |
| 30    | 23    | 167    | 312    | 609    | -----  | 1,570  | 531    | 397    | 147    | 53    | 26    | 24    |
| 31    | 23    | -----  | 271    | 509    | -----  | 1,620  | -----  | 343    | -----  | 60    | 27    | ----- |
| Total | 773   | 5,383  | 6,782  | 15,796 | 11,522 | 28,608 | 31,989 | 16,670 | 6,665  | 2,643 | 1,147 | 725   |
| Mean  | 25.1  | 179    | 219    | 510    | 412    | 923    | 1,066  | 538    | 222    | 85.3  | 37.0  | 24.2  |
| Ac-ft | 1,540 | 10,680 | 13,450 | 31,330 | 22,850 | 56,740 | 63,450 | 33,060 | 13,220 | 5,240 | 2,280 | 1,440 |

Calendar year 1965 Max 2,940 Min 23 Mean 290 Ac-ft 210,000  
 Water year 1965-66 Max 1,300 Min 13 Mean 353 Ac-ft 255,300

11-5270. Trinity River near Burnt Ranch, Calif.

Location.--Lat 40°47'20", long 123°26'20", in S½ sec.19, T.5 N., R.7 E., on left bank 500 ft upstream from Cedar Flat Creek, 700 ft upstream from highway bridge at Cedar Flat, and 2.3 miles southeast of town of Burnt Ranch.

Drainage area.--1,439 sq mi.

Records available.--October 1931 to September 1940, October 1956 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 944.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Oct. 1, 1931 to Jan. 19, 1940, graphic water-stage recorder, at site 2 miles upstream at different datum. Oct. 1, 1956 to Aug. 30, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 2,399 cfs (1,737,000 acre-ft per year) unadjusted.

Extremes.--Maximum discharge during year, 5,360 cfs Jan. 6 (gage height, 8.56 ft); minimum daily, 165 cfs Aug. 24, 25. 1931-40, 1956-66: Maximum discharge, 81,500 cfs Feb. 25, 1958 (gage height, 30.50 ft), from rating curve extended above 40,000 cfs on basis of slope-area measurement at gage height 43.2 ft; minimum, 82 cfs Aug. 31, 1939. Flood of Dec. 22, 1955, reached a stage of 43.2 ft, from floodmarks (discharge, 172,000 cfs, on basis of slope-area measurement of maximum flow).

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Clair Engle Lake beginning in November 1960 (see sta 11-5254). Small diversions above station for mining and irrigation. Records of chemical analysis for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.   | DEC.   | JAN.    | FEB.   | MAR.    | APR.    | MAY     | JUNE   | JULY   | AUG.   | SEPT.  |
|-------|--------|--------|--------|---------|--------|---------|---------|---------|--------|--------|--------|--------|
| 1     | 255    | 310    | 852    | 984     | 1,750  | 1,460   | 4,340   | 1,580   | 926    | 566    | 365    | 248    |
| 2     | 288    | 325    | 815    | 918     | 1,590  | 1,420   | 4,370   | 1,680   | 846    | 542    | 310    | 243    |
| 3     | 294    | 360    | 805    | 1,100   | 1,510  | 1,330   | 3,890   | 1,810   | 795    | 514    | 280    | 238    |
| 4     | 291    | 438    | 858    | 2,640   | 2,170  | 1,280   | 3,620   | 2,080   | 750    | 494    | 270    | 233    |
| 5     | 300    | 458    | 1,180  | 4,120   | 3,020  | 1,270   | 3,520   | 2,430   | 735    | 498    | 265    | 228    |
| 6     | 303    | 416    | 1,400  | 4,680   | 2,840  | 1,260   | 3,590   | 2,020   | 750    | 502    | 260    | 225    |
| 7     | 303    | 430    | 1,230  | 4,860   | 2,440  | 1,420   | 3,590   | 1,750   | 785    | 494    | 253    | 223    |
| 8     | 301    | 670    | 1,120  | 4,100   | 2,110  | 1,850   | 3,490   | 1,680   | 805    | 474    | 245    | 228    |
| 9     | 298    | 566    | 1,010  | 3,540   | 1,850  | 3,120   | 3,250   | 1,730   | 882    | 462    | 240    | 225    |
| 10    | 298    | 486    | 912    | 2,740   | 1,680  | 4,490   | 3,220   | 2,190   | 912    | 454    | 238    | 225    |
| 11    | 298    | 498    | 846    | 2,170   | 1,540  | 3,850   | 3,030   | 2,480   | 858    | 442    | 230    | 223    |
| 12    | 298    | 873    | 810    | 1,880   | 1,450  | 3,200   | 2,780   | 2,290   | 800    | 430    | 220    | 223    |
| 13    | 295    | 1,180  | 760    | 1,640   | 1,350  | 3,620   | 2,400   | 2,270   | 825    | 423    | 215    | 230    |
| 14    | 307    | 2,190  | 725    | 1,530   | 1,300  | 3,770   | 2,230   | 2,200   | 930    | 415    | 205    | 240    |
| 15    | 332    | 1,740  | 690    | 1,560   | 1,260  | 3,590   | 2,280   | 2,070   | 984    | 420    | 200    | 240    |
| 16    | 316    | 1,280  | 660    | 1,740   | 1,220  | 3,200   | 2,720   | 2,020   | 948    | 405    | 195    | 238    |
| 17    | 316    | 1,000  | 635    | 1,770   | 1,210  | 2,690   | 2,940   | 1,970   | 858    | 390    | 190    | 233    |
| 18    | 316    | 1,830  | 615    | 1,710   | 1,210  | 2,360   | 2,650   | 1,890   | 790    | 375    | 190    | 248    |
| 19    | 319    | 1,990  | 600    | 1,600   | 1,370  | 2,240   | 2,250   | 1,950   | 795    | 365    | 190    | 260    |
| 20    | 319    | 1,510  | 578    | 1,500   | 1,470  | 2,050   | 2,010   | 1,940   | 745    | 355    | 180    | 250    |
| 21    | 319    | 1,200  | 574    | 1,400   | 1,450  | 1,950   | 1,860   | 1,970   | 660    | 350    | 175    | 250    |
| 22    | 313    | 1,030  | 578    | 1,350   | 1,450  | 1,840   | 1,800   | 1,820   | 615    | 340    | 170    | 245    |
| 23    | 310    | 942    | 554    | 1,280   | 1,660  | 1,800   | 1,830   | 1,630   | 600    | 330    | 167    | 243    |
| 24    | 310    | 1,210  | 600    | 1,200   | 1,760  | 1,840   | 1,900   | 1,630   | 600    | 320    | 165    | 243    |
| 25    | 310    | 1,300  | 610    | 1,150   | 1,740  | 2,030   | 2,040   | 1,720   | 578    | 315    | 165    | 240    |
| 26    | 310    | 1,210  | 578    | 1,110   | 1,670  | 2,350   | 2,090   | 1,740   | 574    | 310    | 170    | 240    |
| 27    | 310    | 1,090  | 582    | 1,080   | 1,540  | 2,780   | 1,840   | 1,620   | 590    | 305    | 175    | 243    |
| 28    | 310    | 978    | 1,270  | 1,060   | 1,490  | 3,190   | 1,690   | 1,540   | 615    | 300    | 175    | 240    |
| 29    | 313    | 918    | 1,700  | 1,260   | -----  | 3,520   | 1,600   | 1,420   | 625    | 295    | 175    | 240    |
| 30    | 313    | 842    | 1,260  | 2,180   | -----  | 3,880   | 1,580   | 1,340   | 582    | 290    | 200    | 238    |
| 31    | 313    | -----  | 1,130  | 1,940   | -----  | 4,040   | -----   | 1,260   | -----  | 310    | 250    | -----  |
| TOTAL | 9,478  | 29,270 | 26,537 | 61,792  | 47,170 | 78,690  | 80,400  | 57,720  | 22,828 | 12,485 | 6,728  | 7,123  |
| MEAN  | 306    | 976    | 856    | 1,993   | 1,685  | 2,538   | 2,680   | 1,862   | 761    | 403    | 217    | 237    |
| AC-FT | 18,800 | 58,060 | 52,640 | 122,600 | 93,560 | 156,100 | 159,500 | 114,500 | 45,280 | 24,760 | 13,340 | 14,130 |

|               |         |     |        |     |     |      |       |       |         |
|---------------|---------|-----|--------|-----|-----|------|-------|-------|---------|
| CALENDAR YEAR | 1965    | MAX | 10,300 | MIN | 243 | MEAN | 1,370 | AC-FT | 991,800 |
| WATER YEAR    | 1965-66 | MAX | 4,860  | MIN | 165 | MEAN | 1,206 | AC-FT | 873,300 |

Note.--No gage-height record July 14 to Aug. 30.

11-5274. New River at Denny, Calif.

Location.--Lat 40°56'45", long 123°22' 55", in NE¼ sec.33 T.7 N., R.7 E., on left bank at upstream side of private road bridge, 0.3 mile northeast of Denny, and 0.5 mile downstream from Quinby Creek.

Drainage area.--173 sq mi.

Records available.--October 1927 to December 1928 (published as "near Denny"), June 1959 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,349.34 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Oct. 1, 1927 to Dec. 23, 1928, at site 2.6 miles downstream at different datum. June 1, 1959 to July 23, 1965, graphic water-stage recorder on downstream side of bridge at same datum. July 24 to Nov. 4, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 435 cfs (314,900 acre-ft per year).

Extremes.--Maximum discharge during year, 5,700 cfs Jan. 6 (gage height, 15.5 ft, from floodmarks); minimum, 26 cfs Oct. 1-4.

1927-28, 1959-66: Maximum discharge, 60,000 cfs Dec. 22, 1964 (gage height, 38.7 ft, from floodmarks), by field estimate of maximum flow; minimum daily, 18 cfs Oct. 5-7, 1961.

Remarks.--Records excellent. No regulation or diversion above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.  | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1     | 26    | 32    | 128    | 218    | 540    | 433    | 1,690  | 526    | 232   | 91    | 42    | 34    |
| 2     | 26    | 32    | 131    | 204    | 495    | 421    | 1,600  | 558    | 222   | 91    | 43    | 32    |
| 3     | 26    | 34    | 184    | 383    | 467    | 382    | 1,460  | 602    | 212   | 91    | 42    | 31    |
| 4     | 26    | 77    | 316    | 1,000  | 532    | 367    | 1,370  | 690    | 198   | 83    | 42    | 30    |
| 5     | 33    | 47    | 514    | 1,380  | 625    | 358    | 1,370  | 702    | 190   | 81    | 40    | 29    |
| 6     | 32    | 39    | 434    | 4,500  | 643    | 425    | 1,340  | 622    | 194   | 77    | 40    | 28    |
| 7     | 31    | 47    | 344    | 2,200  | 589    | 580    | 1,330  | 570    | 201   | 77    | 39    | 28    |
| 8     | 30    | 88    | 296    | 1,650  | 538    | 793    | 1,260  | 550    | 201   | 75    | 37    | 28    |
| 9     | 27    | 51    | 243    | 1,300  | 488    | 1,090  | 1,140  | 566    | 198   | 73    | 36    | 28    |
| 10    | 27    | 45    | 201    | 977    | 451    | 1,330  | 1,180  | 566    | 187   | 73    | 36    | 28    |
| 11    | 27    | 77    | 173    | 793    | 415    | 1,080  | 1,140  | 510    | 177   | 71    | 36    | 28    |
| 12    | 27    | 285   | 156    | 684    | 391    | 948    | 1,100  | 462    | 166   | 69    | 35    | 28    |
| 13    | 27    | 232   | 142    | 626    | 372    | 1,090  | 995    | 446    | 159   | 69    | 35    | 29    |
| 14    | 38    | 306   | 128    | 596    | 357    | 1,130  | 925    | 406    | 166   | 69    | 34    | 30    |
| 15    | 51    | 201   | 114    | 597    | 344    | 1,090  | 945    | 380    | 163   | 65    | 34    | 31    |
| 16    | 42    | 128   | 105    | 650    | 336    | 974    | 1,060  | 369    | 155   | 63    | 34    | 30    |
| 17    | 36    | 128   | 96     | 636    | 336    | 818    | 1,060  | 362    | 145   | 61    | 34    | 29    |
| 18    | 35    | 288   | 94     | 627    | 344    | 760    | 975    | 362    | 138   | 60    | 34    | 54    |
| 19    | 35    | 341   | 88     | 575    | 386    | 772    | 855    | 387    | 131   | 58    | 32    | 44    |
| 20    | 34    | 222   | 83     | 537    | 410    | 727    | 738    | 410    | 128   | 57    | 32    | 36    |
| 21    | 33    | 170   | 83     | 509    | 411    | 718    | 682    | 394    | 124   | 55    | 32    | 35    |
| 22    | 32    | 138   | 81     | 494    | 451    | 693    | 650    | 359    | 120   | 54    | 31    | 33    |
| 23    | 32    | 124   | 75     | 458    | 534    | 684    | 662    | 327    | 117   | 52    | 31    | 32    |
| 24    | 31    | 218   | 96     | 437    | 537    | 712    | 686    | 324    | 110   | 51    | 31    | 31    |
| 25    | 31    | 204   | 94     | 417    | 516    | 793    | 710    | 331    | 107   | 51    | 31    | 31    |
| 26    | 31    | 176   | 83     | 398    | 480    | 922    | 686    | 324    | 102   | 51    | 32    | 31    |
| 27    | 31    | 152   | 91     | 382    | 458    | 1,080  | 622    | 310    | 99    | 50    | 33    | 31    |
| 28    | 32    | 134   | 610    | 373    | 447    | 1,280  | 578    | 299    | 97    | 49    | 32    | 31    |
| 29    | 32    | 131   | 478    | 519    | -----  | 1,430  | 550    | 285    | 97    | 48    | 32    | 30    |
| 30    | 32    | 131   | 327    | 652    | -----  | 1,520  | 530    | 292    | 94    | 47    | 34    | 29    |
| 31    | 32    | ----- | 278    | 603    | -----  | 1,570  | -----  | 261    | ----- | 45    | 35    | ----- |
| TOTAL | 985   | 4,278 | 6,266  | 25,375 | 12,893 | 26,970 | 29,889 | 13,552 | 4,630 | 2,007 | 1,094 | 949   |
| MEAN  | 31.8  | 143   | 202    | 819    | 460    | 870    | 996    | 437    | 154   | 64.7  | 35.3  | 31.6  |
| AC-FT | 1,950 | 8,490 | 12,430 | 50,330 | 25,570 | 53,490 | 59,280 | 26,880 | 9,180 | 3,980 | 2,170 | 1,880 |

|               |         |     |       |     |    |      |     |       |         |
|---------------|---------|-----|-------|-----|----|------|-----|-------|---------|
| CALENDAR YEAR | 1965    | MAX | 6,000 | MIN | 26 | MEAN | 429 | AC-FT | 310,700 |
| WATER YEAR    | 1965-66 | MAX | 4,500 | MIN | 26 | MEAN | 353 | AC-FT | 255,600 |

Peak discharge (base, 2,500 cfs).--Jan. 6 (time unknown) 5,700 cfs (15.5 ft).

Note.--No gage-height record Jan. 6, 7.

## KLAMATH RIVER BASIN

11-5284.4. Big Creek near Hayfork, Calif.

Location.--Lat 40°33'11", long 123°08'33", in NE¼SE¼ sec.7, T.31 N., R.11 W., on right bank 30 ft upstream from bridge on Hayfork-Douglas City road and 2 miles east of Hayfork.

Drainage area.--27.1 sq mi.

Records available.--October 1960 to September 1961, October 1962 to September 1966.

Gage.--Water-stage recorder. Altitude of gage is 2,385 ft (from topographic map).

Extremes.--Maximum discharge during year, 242 cfs Jan. 6 (gage height, 7.32 ft); minimum daily, 0.10 cfs for several days.  
1960-61, 1962-66: Maximum discharge, 1,610 cfs Dec. 22, 1964 (gage height, 11.75 ft), from rating curve extended above 230 cfs on basis of slope-area measurement of maximum flow; no flow at times in each year except 1965-66.

Remarks.--City of Hayfork and large irrigators can divert up to 15 cfs daily above station for municipal supply, domestic use, and irrigation.

Cooperation.--Records furnished by California Department of Water Resources and reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1     | 0.40 | 0.40   | 19    | 31    | 48    | 53    | 190   | 26    | 9.7   | 6.1   | 0.30  | 1.1   |
| 2     | .40  | .20    | 20    | 31    | 42    | 51    | 185   | 22    | 9.7   | 5.6   | .40   | .30   |
| 3     | .20  | 1.4    | 22    | 64    | 44    | 47    | 176   | 23    | 9.2   | 3.8   | .30   | .80   |
| 4     | .20  | 3.2    | 25    | 183   | 68    | 44    | 168   | 23    | 9.2   | 5.3   | .30   | .80   |
| 5     | .20  | 2.9    | 32    | 159   | 81    | 43    | 162   | 23    | 8.8   | 6.0   | .30   | .40   |
| 6     | .90  | 2.6    | 42    | 161   | 82    | 45    | 157   | 30    | 8.8   | 5.8   | .90   | .50   |
| 7     | .90  | 4.9    | 36    | 138   | 69    | 50    | 150   | 33    | 8.3   | 5.8   | 1.1   | .60   |
| 8     | .60  | 6.0    | 33    | 129   | 61    | 69    | 138   | 32    | 9.7   | 6.1   | .90   | .50   |
| 9     | .40  | 4.2    | 28    | 107   | 54    | 102   | 136   | 23    | 6.3   | 5.8   | .40   | .50   |
| 10    | .20  | 4.4    | 25    | 84    | 51    | 150   | 136   | 21    | 6.0   | 5.8   | .30   | .80   |
| 11    | .10  | 5.1    | 25    | 68    | 44    | 136   | 136   | 19    | 6.0   | 6.0   | .40   | .80   |
| 12    | .10  | 13     | 22    | 58    | 42    | 132   | 131   | 18    | 4.9   | 5.0   | .50   | .80   |
| 13    | .10  | 19     | 21    | 51    | 39    | 160   | 120   | 16    | 4.6   | 3.9   | .50   | .80   |
| 14    | .10  | 26     | 21    | 47    | 36    | 162   | 112   | 16    | 4.6   | 2.2   | .50   | .80   |
| 15    | .10  | 15     | 19    | 49    | 35    | 158   | 109   | 16    | 4.0   | 1.4   | .40   | 1.1   |
| 16    | .40  | 13     | 20    | 54    | 33    | 147   | 108   | 15    | 3.8   | .30   | .20   | .60   |
| 17    | .30  | 13     | 20    | 53    | 34    | 125   | 101   | 16    | 3.5   | .80   | .10   | .40   |
| 18    | .20  | 27     | 20    | 52    | 36    | 109   | 92    | 15    | 3.2   | .90   | .20   | 1.2   |
| 19    | .10  | 35     | 19    | 49    | 45    | 106   | 83    | 13    | 2.8   | .50   | .10   | 1.0   |
| 20    | .10  | 25     | 19    | 46    | 45    | 98    | 76    | 12    | 2.3   | .50   | .50   | .80   |
| 21    | .20  | 21     | 19    | 42    | 45    | 91    | 72    | 12    | 1.9   | .50   | .50   | .80   |
| 22    | .10  | 20     | 18    | 42    | 51    | 87    | 68    | 11    | 1.8   | .50   | .40   | .50   |
| 23    | .10  | 23     | 18    | 38    | 63    | 84    | 64    | 11    | 2.0   | .30   | .40   | .70   |
| 24    | .10  | 35     | 18    | 36    | 66    | 92    | 62    | 11    | 1.8   | .50   | .40   | 1.0   |
| 25    | .10  | 30     | 18    | 34    | 64    | 110   | 60    | 11    | 1.5   | 1.2   | .50   | .80   |
| 26    | .50  | 25     | 18    | 31    | 60    | 137   | 58    | 9.7   | 1.4   | .40   | .70   | .80   |
| 27    | .30  | 24     | 17    | 31    | 55    | 170   | 49    | 9.7   | 1.5   | .30   | .80   | .80   |
| 28    | .20  | 21     | 49    | 30    | 53    | 181   | 43    | 9.2   | 2.9   | .30   | .60   | .80   |
| 29    | .20  | 21     | 45    | 51    | ----- | 187   | 34    | 9.7   | 5.6   | .10   | .90   | .60   |
| 30    | .20  | 21     | 36    | 54    | ----- | 191   | 30    | 9.7   | 5.6   | .30   | 1.1   | .60   |
| 31    | 1.0  | -----  | 33    | 50    | ----- | 191   | ----- | 10    | ----- | .30   | 1.3   | ----- |
| Total | 9.00 | 462.30 | 777   | 2,053 | 1,446 | 3,508 | 3,206 | 526.0 | 151.4 | 82.30 | 16.20 | 22.00 |
| Mean  | .29  | 15.4   | 25.1  | 66.2  | 51.6  | 113   | 107   | 17.0  | 5.05  | 2.65  | .52   | .73   |
| Ac-ft | 18   | 917    | 1,540 | 4,070 | 2,870 | 6,960 | 6,360 | 1,040 | 300   | 163   | 32    | 44    |

Calendar year 1965 Max 451 Min .10 Mean 41.8 Ac-ft 30,250  
Water year 1965-66 Max 191 Min .10 Mean 33.6 Ac-ft 24,320

11-5285. Hayfork Creek near Hyampom, Calif.

Location.--Lat 40°37'35", long 123°26'00", in NW¼ sec.19, T.3 N., R.7 E., on right bank 1.2 miles upstream from mouth and 1.3 miles northeast of Hyampom.

Drainage area.--378 sq mi.

Records available.--August 1953 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,270.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Sept. 7, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--13 years, 503 cfs (364,200 acre-ft per year).

Extremes.--Maximum discharge during year, 8,930 cfs Jan. 4 (gage height, 11.75 ft); minimum daily, 24 cfs Aug. 19, 20, 22-25.

1953-66: Maximum discharge, 28,800 cfs Dec. 22, 1964 (gage height, 19.14 ft), from rating curve extended above 6,700 cfs on basis of slope-area measurement at gage height 18.00 ft; minimum daily, 16 cfs Aug. 26, Sept. 27, Oct. 4, 5, 1964.

Remarks.--Records excellent. No regulation; diversions for irrigation of about 700 acres above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.   | FEB.   | MAR.   | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1     | 35    | 36     | 230    | 390    | 664    | 658    | 1,680  | 302    | 135   | 66    | 37    | 31    |
| 2     | 35    | 36     | 214    | 362    | 598    | 634    | 1,660  | 286    | 133   | 70    | 35    | 29    |
| 3     | 32    | 38     | 214    | 729    | 574    | 586    | 1,380  | 274    | 135   | 68    | 32    | 28    |
| 4     | 32    | 46     | 238    | 5,890  | 1,080  | 550    | 1,250  | 270    | 128   | 65    | 32    | 28    |
| 5     | 34    | 46     | 302    | 5,970  | 1,340  | 550    | 1,160  | 270    | 125   | 63    | 31    | 26    |
| 6     | 35    | 47     | 425    | 4,450  | 1,320  | 616    | 1,150  | 258    | 130   | 61    | 31    | 26    |
| 7     | 34    | 55     | 420    | 3,090  | 1,080  | 819    | 1,110  | 258    | 145   | 60    | 31    | 25    |
| 8     | 34    | 120    | 380    | 2,590  | 917    | 1,200  | 1,040  | 242    | 138   | 60    | 31    | 25    |
| 9     | 34    | 102    | 334    | 2,060  | 819    | 1,840  | 966    | 234    | 128   | 63    | 29    | 25    |
| 10    | 32    | 75     | 286    | 1,580  | 756    | 2,320  | 988    | 226    | 120   | 72    | 28    | 25    |
| 11    | 32    | 72     | 246    | 1,240  | 682    | 1,920  | 1,040  | 210    | 115   | 68    | 28    | 25    |
| 12    | 32    | 105    | 222    | 973    | 634    | 1,640  | 966    | 201    | 110   | 68    | 26    | 25    |
| 13    | 34    | 186    | 198    | 840    | 580    | 1,890  | 840    | 195    | 105   | 65    | 26    | 26    |
| 14    | 34    | 489    | 186    | 749    | 550    | 1,880  | 749    | 189    | 100   | 63    | 26    | 28    |
| 15    | 42    | 390    | 171    | 742    | 520    | 1,880  | 714    | 186    | 96    | 63    | 26    | 27    |
| 16    | 41    | 258    | 150    | 749    | 495    | 1,680  | 735    | 180    | 108   | 58    | 26    | 27    |
| 17    | 41    | 189    | 142    | 735    | 485    | 1,380  | 735    | 174    | 96    | 52    | 25    | 27    |
| 18    | 40    | 536    | 140    | 688    | 495    | 1,200  | 664    | 168    | 92    | 50    | 25    | 34    |
| 19    | 41    | 980    | 132    | 646    | 652    | 1,190  | 580    | 165    | 88    | 49    | 24    | 35    |
| 20    | 41    | 500    | 132    | 586    | 700    | 1,060  | 520    | 159    | 86    | 47    | 24    | 34    |
| 21    | 41    | 322    | 132    | 538    | 688    | 988    | 480    | 150    | 84    | 47    | 25    | 34    |
| 22    | 42    | 242    | 125    | 520    | 707    | 924    | 460    | 150    | 82    | 46    | 24    | 33    |
| 23    | 41    | 210    | 120    | 485    | 826    | 889    | 445    | 145    | 82    | 44    | 24    | 32    |
| 24    | 42    | 678    | 140    | 455    | 854    | 903    | 430    | 143    | 82    | 43    | 24    | 31    |
| 25    | 42    | 568    | 142    | 430    | 819    | 1,000  | 425    | 138    | 78    | 41    | 24    | 30    |
| 26    | 38    | 470    | 128    | 460    | 770    | 1,180  | 410    | 135    | 72    | 40    | 25    | 30    |
| 27    | 35    | 385    | 135    | 395    | 714    | 1,400  | 380    | 130    | 70    | 40    | 25    | 30    |
| 28    | 38    | 322    | 755    | 370    | 670    | 1,550  | 354    | 130    | 68    | 40    | 25    | 29    |
| 29    | 38    | 278    | 1,030  | 626    | -----  | 1,610  | 330    | 133    | 68    | 38    | 26    | 28    |
| 30    | 40    | 254    | 628    | 875    | -----  | 1,670  | 306    | 140    | 68    | 38    | 29    | 27    |
| 31    | 38    | -----  | 500    | 707    | -----  | 1,640  | -----  | 145    | ----- | 37    | 32    | ----- |
| TOTAL | 1,150 | 8,035  | 8,597  | 40,920 | 20,989 | 39,247 | 23,947 | 5,986  | 3,067 | 1,685 | 856   | 860   |
| MEAN  | 37.1  | 268    | 277    | 1,320  | 750    | 1,266  | 798    | 193    | 102   | 54.4  | 27.6  | 28.7  |
| AC-FT | 2,280 | 15,940 | 17,050 | 81,160 | 41,630 | 77,850 | 47,500 | 11,870 | 6,080 | 3,340 | 1,700 | 1,710 |

|                    |     |       |     |    |      |     |       |         |
|--------------------|-----|-------|-----|----|------|-----|-------|---------|
| CALENDAR YEAR 1965 | MAX | 6,880 | MIN | 29 | MEAN | 546 | AC-FT | 395,100 |
| WATER YEAR 1965-66 | MAX | 5,970 | MIN | 24 | MEAN | 426 | AC-FT | 308,100 |

Peak discharge (base, 4,000 cfs).--Jan. 4 (2100) 8,930 cfs (11.75 ft).

## KLAMATH RIVER BASIN

11-5287. South Fork Trinity River below Hyampom, Calif.

Location.--Lat 40°39'00", long 123°29'35", in NW¼SW¼ sec.10, T.3 N., R.6 E., on left bank 0.3 mile downstream from Big Creek, 3.0 miles northeast of Hyampom, and 3.5 miles downstream from Hayfork Creek.

Drainage area.--764 sq mi.

Records available.--October 1965 to September 1966.

Gage.--Digital water-stage recorder. Datum of gage is 1,211.37 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum discharge during year, 30,800 cfs Jan. 4 (gage height, 18.43 ft), from rating curve extended above 3,300 cfs on basis of flood-routing study at gage-height 30.45 ft; minimum daily, 69 cfs Sept. 9-13.  
Flood of Dec. 22, 1964, reached a stage of 30.45 ft, from floodmarks (discharge, 88,000 cfs on basis of flood-routing study).

Remarks.--Record good except those for period of no gage-height record, which are fair. No regulation or diversion above station.  
Records of water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.    | MAR.    | APR.    | MAY    | JUNE   | JULY   | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|---------|---------|---------|--------|--------|--------|-------|-------|
| 1     | 73    | 81     | 700    | 910     | 1,580   | 1,640   | 4,480   | 1,110  | 544    | 215    | 114   | 89    |
| 2     | 73    | 81     | 610    | 838     | 1,430   | 1,610   | 4,200   | 1,080  | 518    | 215    | 111   | 90    |
| 3     | 73    | 79     | 530    | 2,020   | 1,380   | 1,420   | 3,630   | 1,100  | 512    | 215    | 107   | 83    |
| 4     | 72    | 118    | 730    | 20,300  | 2,520   | 1,330   | 3,400   | 1,110  | 490    | 210    | 100   | 81    |
| 5     | 72    | 115    | 1,000  | 21,500  | 3,470   | 1,370   | 3,270   | 1,110  | 466    | 206    | 100   | 78    |
| 6     | 72    | 107    | 1,430  | 15,500  | 3,320   | 1,770   | 3,220   | 1,070  | 470    | 202    | 100   | 75    |
| 7     | 74    | 120    | 1,370  | 10,100  | 2,680   | 2,730   | 3,130   | 1,060  | 500    | 197    | 96    | 75    |
| 8     | 76    | 215    | 1,200  | 8,130   | 2,390   | 4,200   | 3,090   | 1,030  | 468    | 192    | 93    | 72    |
| 9     | 74    | 260    | 1,010  | 6,200   | 2,160   | 6,600   | 2,990   | 1,020  | 445    | 202    | 93    | 69    |
| 10    | 74    | 175    | 832    | 4,700   | 1,980   | 7,520   | 3,160   | 1,000  | 415    | 201    | 93    | 69    |
| 11    | 74    | 150    | 700    | 3,680   | 1,770   | 5,290   | 3,440   | 960    | 389    | 203    | 93    | 69    |
| 12    | 74    | 250    | 614    | 3,120   | 1,640   | 4,430   | 3,330   | 926    | 373    | 220    | 90    | 69    |
| 13    | 74    | 520    | 561    | 2,740   | 1,480   | 5,280   | 2,900   | 910    | 360    | 200    | 87    | 69    |
| 14    | 75    | 940    | 515    | 2,480   | 1,390   | 5,310   | 2,560   | 878    | 348    | 191    | 84    | 72    |
| 15    | 86    | 880    | 472    | 2,360   | 1,290   | 5,020   | 2,450   | 854    | 329    | 184    | 84    | 75    |
| 16    | 92    | 680    | 426    | 2,350   | 1,200   | 4,430   | 2,500   | 830    | 330    | 174    | 84    | 75    |
| 17    | 88    | 470    | 388    | 2,250   | 1,140   | 3,510   | 2,460   | 798    | 320    | 166    | 84    | 75    |
| 18    | 87    | 900    | 366    | 2,130   | 1,140   | 3,150   | 2,260   | 782    | 300    | 159    | 84    | 90    |
| 19    | 86    | 2,100  | 350    | 1,980   | 1,640   | 3,260   | 2,020   | 766    | 293    | 152    | 84    | 100   |
| 20    | 86    | 1,510  | 317    | 1,800   | 1,890   | 2,980   | 1,810   | 750    | 281    | 148    | 81    | 100   |
| 21    | 86    | 1,110  | 320    | 1,630   | 1,830   | 2,850   | 1,680   | 742    | 273    | 144    | 78    | 93    |
| 22    | 86    | 760    | 327    | 1,550   | 1,870   | 2,660   | 1,560   | 718    | 272    | 140    | 78    | 90    |
| 23    | 86    | 510    | 281    | 1,420   | 2,320   | 2,540   | 1,500   | 702    | 267    | 137    | 75    | 84    |
| 24    | 86    | 1,320  | 460    | 1,280   | 2,380   | 2,600   | 1,490   | 686    | 267    | 129    | 75    | 84    |
| 25    | 84    | 1,560  | 548    | 1,180   | 2,210   | 2,800   | 1,460   | 662    | 255    | 129    | 75    | 81    |
| 26    | 84    | 1,400  | 436    | 1,100   | 2,050   | 3,110   | 1,400   | 629    | 241    | 129    | 75    | 78    |
| 27    | 80    | 1,200  | 451    | 1,020   | 1,820   | 3,580   | 1,320   | 611    | 235    | 126    | 75    | 76    |
| 28    | 80    | 1,050  | 3,510  | 941     | 1,710   | 3,950   | 1,220   | 228    | 228    | 122    | 75    | 75    |
| 29    | 80    | 920    | 3,160  | 1,390   | -----   | 4,120   | 1,160   | 228    | 228    | 122    | 78    | 75    |
| 30    | 80    | 800    | 1,570  | 2,110   | -----   | 4,290   | 1,130   | 224    | 224    | 118    | 81    | 74    |
| 31    | 80    | -----  | 1,250  | 1,730   | -----   | 4,260   | -----   | 579    | -----  | 118    | 87    | ----- |
| TOTAL | 2,467 | 20,381 | 26,434 | 130,439 | 53,680  | 109,610 | 74,220  | 25,153 | 10,638 | 5,266  | 2,714 | 2,367 |
| MEAN  | 79.6  | 679    | 853    | 4,208   | 1,917   | 3,536   | 2,474   | 811    | 355    | 170    | 87.5  | 79.6  |
| AC-FT | 4,890 | 40,430 | 52,430 | 258,700 | 106,500 | 217,400 | 147,200 | 49,890 | 21,100 | 10,440 | 5,380 | 4,730 |

CALENDAR 1965  
WATER YEAR 1965-66 MAX 21,500 MIN 69 MEAN 1,270 AC-FT 919,100

Peak discharge (base, 8,600 cfs).--Jan. 4 (2245) 30,800 cfs (18.43 ft).

Note.--No gage-height record Oct. 1 to Dec. 4.

11-5290. South Fork Trinity River near Salyer, Calif.

Location.--Lat 40°50'30", long 123°34'00", in SE¼ sec.1, T.5 N., R.5 E., on left bank 4 miles south of Salyer and 8 miles upstream from mouth.

Drainage area.--898 sq mi.

Records available.--October 1911 to September 1913, October 1950 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near China Flat" 1911-13.

Gage.--Digital water-stage recorder. Datum of gage is 559.99 ft (corrected) above mean sea level, datum of 1929, supplementary adjustment of 1956. Oct. 12, 1911 to Aug. 10, 1913, staff gage at site 7.7 miles downstream at different datum. Nov. 12, 1950 to July 26, 1965, graphic water-stage recorder at same site at datum 12.55 ft lower.

Average discharge.--18 years, 1,753 cfs (1,269,000 acre-ft per year).

Extremes.--Maximum discharge during year, 39,700 cfs Jan. 5 (gage height, 22.5 ft, from high-water marks); minimum daily, 88 cfs Sept. 7-11.

1911-13, 1950-66: Maximum discharge, 95,400 cfs Dec. 22, 1964 (gage height, 47.6 ft, from floodmarks), from rating curve extended above 21,000 cfs by slope-conveyance study); minimum, 54 cfs Sept. 10, 1955.

Remarks.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.    | MAR.    | APR.    | MAY    | JUNE   | JULY   | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|---------|---------|---------|--------|--------|--------|-------|-------|
| 1     | 97    | 108    | 876    | 1,810   | 2,370   | 2,080   | 4,920   | 1,450  | 661    | 255    | 132   | 106   |
| 2     | 97    | 104    | 759    | 1,560   | 2,190   | 2,030   | 4,860   | 1,420  | 640    | 255    | 129   | 104   |
| 3     | 97    | 107    | 692    | 3,380   | 2,120   | 1,920   | 4,460   | 1,430  | 612    | 250    | 126   | 98    |
| 4     | 96    | 157    | 765    | 25,000  | 2,750   | 1,810   | 4,280   | 1,420  | 555    | 243    | 123   | 97    |
| 5     | 96    | 154    | 1,020  | 27,000  | 3,470   | 1,810   | 4,160   | 1,400  | 539    | 230    | 120   | 93    |
| 6     | 97    | 141    | 1,440  | 19,000  | 3,640   | 2,110   | 4,050   | 1,320  | 549    | 227    | 118   | 91    |
| 7     | 100   | 147    | 1,350  | 13,000  | 3,280   | 3,110   | 4,000   | 1,270  | 580    | 222    | 116   | 88    |
| 8     | 100   | 280    | 1,210  | 9,400   | 2,880   | 4,960   | 3,850   | 1,220  | 533    | 214    | 114   | 88    |
| 9     | 99    | 349    | 1,110  | 7,700   | 2,620   | 7,120   | 3,740   | 1,210  | 523    | 220    | 114   | 88    |
| 10    | 99    | 218    | 932    | 6,300   | 2,380   | 9,020   | 3,920   | 1,180  | 490    | 235    | 110   | 88    |
| 11    | 99    | 189    | 730    | 5,200   | 2,300   | 6,240   | 4,280   | 1,110  | 465    | 229    | 110   | 88    |
| 12    | 99    | 372    | 630    | 4,300   | 2,140   | 5,960   | 4,280   | 1,050  | 444    | 265    | 108   | 91    |
| 13    | 99    | 676    | 590    | 3,400   | 1,980   | 5,400   | 3,830   | 1,040  | 426    | 239    | 106   | 94    |
| 14    | 100   | 1,160  | 550    | 3,060   | 1,850   | 5,500   | 3,440   | 990    | 408    | 219    | 104   | 94    |
| 15    | 117   | 1,140  | 510    | 2,860   | 1,740   | 5,360   | 3,240   | 976    | 394    | 215    | 104   | 94    |
| 16    | 123   | 944    | 470    | 2,780   | 1,650   | 5,060   | 3,230   | 971    | 388    | 206    | 100   | 94    |
| 17    | 117   | 642    | 450    | 2,620   | 1,510   | 4,360   | 3,200   | 942    | 376    | 196    | 99    | 93    |
| 18    | 115   | 1,350  | 410    | 2,400   | 1,510   | 4,000   | 2,690   | 870    | 358    | 185    | 97    | 108   |
| 19    | 114   | 2,510  | 380    | 2,290   | 1,820   | 4,100   | 2,700   | 846    | 352    | 178    | 97    | 120   |
| 20    | 114   | 1,780  | 360    | 2,060   | 2,180   | 3,780   | 2,400   | 849    | 334    | 174    | 96    | 120   |
| 21    | 114   | 1,330  | 340    | 1,920   | 2,180   | 3,640   | 2,200   | 813    | 328    | 169    | 95    | 116   |
| 22    | 114   | 908    | 360    | 1,880   | 2,400   | 3,370   | 2,050   | 800    | 321    | 166    | 94    | 108   |
| 23    | 113   | 685    | 330    | 1,740   | 2,960   | 3,200   | 1,980   | 771    | 316    | 158    | 94    | 100   |
| 24    | 111   | 1,570  | 472    | 1,510   | 3,100   | 3,110   | 1,920   | 768    | 315    | 154    | 93    | 99    |
| 25    | 110   | 1,750  | 557    | 1,390   | 2,830   | 3,260   | 1,880   | 755    | 298    | 150    | 93    | 97    |
| 26    | 110   | 1,510  | 507    | 1,250   | 2,580   | 3,620   | 1,820   | 748    | 291    | 147    | 93    | 95    |
| 27    | 107   | 1,370  | 469    | 1,210   | 2,210   | 4,050   | 1,730   | 721    | 284    | 144    | 93    | 95    |
| 28    | 106   | 1,170  | 4,190  | 1,150   | 2,010   | 4,360   | 1,600   | 717    | 265    | 144    | 93    | 95    |
| 29    | 106   | 1,040  | 4,610  | 1,640   | -----   | 4,390   | 1,550   | 724    | 260    | 141    | 93    | 94    |
| 30    | 106   | 1,020  | 2,950  | 2,860   | -----   | 4,640   | 1,470   | 730    | 255    | 138    | 98    | 93    |
| 31    | 108   | -----  | 2,370  | 2,580   | -----   | 4,700   | -----   | 693    | -----  | 135    | 105   | ----- |
| TOTAL | 3,280 | 24,881 | 32,389 | 164,250 | 66,650  | 128,070 | 93,730  | 31,204 | 12,580 | 6,103  | 3,267 | 2,929 |
| MEAN  | 106   | 829    | 1,045  | 5,298   | 2,380   | 4,131   | 3,124   | 1,007  | 419    | 197    | 105   | 97.6  |
| AC-FT | 6,510 | 49,350 | 64,240 | 325,800 | 132,200 | 254,000 | 185,900 | 61,890 | 24,950 | 12,110 | 6,480 | 5,810 |

CALENDAR YEAR 1965 MAX 12,000 MIN 95 MEAN 1,702 AC-FT 1,232M  
WATER YEAR 1965-66 MAX 27,000 MIN 88 MEAN 1,560 AC-FT 1,129M

Peak discharge (base, 10,000 cfs, revised).--Jan. 5 (time unknown) 39,700 cfs (22.5 ft); Mar. 10 (0945) 10,200 cfs (12.09 ft).

Note.--No gage-height record Jan. 4-12.

## KLAMATH RIVER BASIN

11-5298. Willow Creek near Willow Creek, Calif.

Location.--Lat 40°56'50", long 123°39'25", in SE¼SW¼ sec.30, T.7 N., R.5 E., on right bank 0.1 mile upstream from Boise Creek, 1.5 miles northwest of town of Willow Creek, and 1.8 mile upstream from mouth.

Drainage area.--41.0 sq mi.

Records available.--August 1959 to September 1966. Prior to October 1964, published as "at Willow Creek."

Average discharge.--7 years, 164 cfs (118,700 acre-ft per year).

Gage.--Digital water-stage recorder. Datum of gage is 585.54 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Aug. 13, 1959 to Dec. 22, 1964, graphic water-stage recorder at site 1.4 miles downstream at datum 85.55 ft lower.

Extremes.--Maximum discharge during year, 3,100 cfs Jan. 4 (gage height, 10.0 ft, from high-water marks; minimum daily, 8.0 cfs Oct. 1, 1959-66: Maximum discharge, 17,000 cfs Dec. 22, 1964 (gage height, 20.6 ft, present datum, from floodmarks); minimum daily, 6.8 cfs Sept. 28, 29, 1965.

Remarks.--Records fair. No regulation; small diversion for irrigation of about 40 acres above station.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.    | DEC.  | JAN.   | FEB.   | MAR.   | APR.   | MAY   | JUNE  | JULY | AUG.  | SEPT. |
|-------|-------|---------|-------|--------|--------|--------|--------|-------|-------|------|-------|-------|
| 1     | 8.0   | 9.2     | 33    | 140    | 226    | 171    | 340    | 75    | 32    | 15   | 13    | 9.6   |
| 2     | 8.2   | 10      | 36    | 130    | 197    | 173    | 324    | 71    | 31    | 16   | 12    | 11    |
| 3     | 8.6   | 12      | 43    | 500    | 210    | 158    | 316    | 68    | 30    | 16   | 12    | 10    |
| 4     | 9.8   | 19      | 92    | 2,500  | 254    | 158    | 309    | 64    | 29    | 15   | 12    | 10    |
| 5     | 12    | 15      | 148   | 2,050  | 281    | 158    | 302    | 62    | 29    | 15   | 12    | 10    |
| 6     | 11    | 14      | 137   | 1,860  | 296    | 281    | 290    | 60    | 30    | 14   | 12    | 10    |
| 7     | 10    | 15      | 95    | 1,240  | 296    | 407    | 280    | 60    | 33    | 14   | 12    | 9.7   |
| 8     | 9.6   | 22      | 93    | 1,090  | 265    | 454    | 270    | 57    | 32    | 14   | 11    | 9.3   |
| 9     | 8.8   | 18      | 91    | 710    | 246    | 490    | 250    | 54    | 31    | 15   | 11    | 10    |
| 10    | 8.6   | 16      | 88    | 495    | 250    | 511    | 260    | 52    | 29    | 17   | 11    | 11    |
| 11    | 8.5   | 25      | 78    | 399    | 226    | 433    | 270    | 50    | 27    | 16   | 11    | 14    |
| 12    | 8.6   | 90      | 71    | 309    | 197    | 338    | 250    | 47    | 26    | 18   | 11    | 11    |
| 13    | 8.8   | 80      | 64    | 265    | 180    | 349    | 230    | 45    | 24    | 18   | 11    | 10    |
| 14    | 11    | 98      | 66    | 252    | 180    | 331    | 200    | 44    | 23    | 18   | 11    | 15    |
| 15    | 15    | 64      | 59    | 239    | 171    | 356    | 180    | 43    | 22    | 17   | 11    | 13    |
| 16    | 12    | 42      | 54    | 235    | 158    | 378    | 185    | 42    | 25    | 16   | 11    | 9.3   |
| 17    | 10    | 33      | 39    | 208    | 158    | 318    | 185    | 40    | 24    | 16   | 11    | 9.8   |
| 18    | 9.7   | 100     | 38    | 173    | 162    | 309    | 170    | 39    | 22    | 16   | 10    | 12    |
| 19    | 9.3   | 125     | 36    | 147    | 175    | 407    | 155    | 37    | 21    | 15   | 10    | 16    |
| 20    | 8.9   | 70      | 33    | 116    | 173    | 365    | 140    | 36    | 20    | 16   | 10    | 18    |
| 21    | 8.8   | 43      | 32    | 105    | 164    | 422    | 125    | 35    | 20    | 15   | 10    | 15    |
| 22    | 9.0   | 37      | 32    | 120    | 169    | 381    | 117    | 34    | 19    | 14   | 9.9   | 8.6   |
| 23    | 9.1   | 33      | 31    | 98     | 195    | 345    | 111    | 33    | 19    | 14   | 10    | 10    |
| 24    | 9.3   | 62      | 64    | 84     | 186    | 336    | 109    | 32    | 19    | 14   | 9.3   | 18    |
| 25    | 9.4   | 56      | 55    | 75     | 186    | 334    | 106    | 32    | 18    | 14   | 9.2   | 21    |
| 26    | 9.6   | 48      | 47    | 71     | 175    | 338    | 102    | 31    | 17    | 13   | 9.9   | 17    |
| 27    | 10    | 41      | 56    | 68     | 177    | 338    | 96     | 30    | 16    | 13   | 9.9   | 13    |
| 28    | 12    | 36      | 371   | 61     | 175    | 338    | 90     | 30    | 16    | 13   | 9.4   | 17    |
| 29    | 11    | 34      | 301   | 356    | -----  | 338    | 84     | 31    | 16    | 13   | 9.2   | 12    |
| 30    | 10    | 33      | 221   | 281    | -----  | 338    | 80     | 32    | 16    | 13   | 11    | 11    |
| 31    | 9.6   | -----   | 175   | 243    | -----  | 325    | -----  | 33    | ----- | 13   | 11    | ----- |
| TOTAL | 304.2 | 1,300.2 | 2,779 | 14,620 | 5,728  | 10,378 | 5,926  | 1,399 | 716   | 466  | 333.8 | 371.3 |
| MEAN  | 9.81  | 43.3    | 89.6  | 472    | 205    | 335    | 198    | 45.1  | 23.9  | 15.0 | 10.8  | 12.4  |
| AC-FT | 603   | 2,580   | 5,510 | 29,000 | 11,360 | 20,580 | 11,750 | 2,770 | 1,420 | 924  | 662   | 736   |

CALENDAR YEAR 1965 MAX 2,500 MIN 7.1 MEAN 164 AC-FT 118,700  
 WATER YEAR 1965-66 MAX 2,500 MIN 8.0 MEAN 121 AC-FT 87,900

Peak discharge (base, 1,200 cfs).--Jan. 4 (time unknown) 3,100 cfs (10.0 ft).

Note.--No gage-height record Oct. 1 to Dec. 2, Jan. 1-5, Apr. 6 to July 12.



11-5300. Trinity River at Hoopa, Calif.

Location.--Lat 41°03'00", long 123°40'15", SE¼NW¼ sec.25, T.8 N., R.4 E., in Hoopa Indian Reservation, on left bank at Hoopa 0.4 mile upstream from Supply Creek.

Drainage area.--2,865 sq mi.

Records available.--October 1911 to January 1914, October 1916 to September 1918, October 1931 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B. Published as "near Hoopa" 1931-64.

Gage.--Digital water-stage recorder. Datum of gage is 274.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to October 1931, staff gage at site 0.4 mile upstream at different datum. October 1931 to Dec. 22, 1964, graphic water-stage recorder at site 2.5 miles upstream at datum 31.67 ft higher.

Average discharge.--39 years (1911-13, 1916-18, 1931-66), 5,433 cfs (3,933,000 acre-ft per year) unadjusted.

Extremes.--Maximum discharge during year, 46,500 cfs Jan. 5 (gage height, 31.33 ft); minimum, 349 cfs Aug. 25.

1911-14, 1916-18, 1931-66: Maximum discharge, 231,000 cfs Dec. 22, 1964 (gage height, 40.3 ft, from floodmarks); minimum, 162 cfs Oct. 4, 1931.

Remarks.--Records good. Flow regulated by Clair Engle Lake beginning in November 1960 (see sta 11-5254). Small diversions above station for mining and irrigation. Records of chemical analyses, water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.   | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE    | JULY   | AUG.   | SEPT.  |
|-------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 1     | 458    | 562     | 2,000   | 3,700   | 5,900   | 5,020   | 13,800  | 4,180   | 2,420   | 1,160  | 803    | 570    |
| 2     | 482    | 558     | 1,940   | 3,370   | 5,380   | 4,990   | 13,800  | 4,310   | 2,150   | 1,160  | 689    | 562    |
| 3     | 506    | 585     | 1,920   | 8,220   | 4,910   | 4,620   | 12,400  | 4,550   | 2,050   | 1,120  | 608    | 530    |
| 4     | 506    | 741     | 2,160   | 32,200  | 6,460   | 4,360   | 11,400  | 4,930   | 1,930   | 1,060  | 587    | 498    |
| 5     | 522    | 830     | 3,000   | 40,500  | 9,320   | 4,380   | 11,000  | 5,540   | 1,860   | 1,010  | 575    | 474    |
| 6     | 547    | 749     | 3,510   | 37,700  | 9,780   | 5,220   | 10,800  | 5,010   | 1,890   | 1,010  | 570    | 442    |
| 7     | 548    | 736     | 3,360   | 29,300  | 8,620   | 7,360   | 10,500  | 4,350   | 2,030   | 996    | 551    | 426    |
| 8     | 546    | 994     | 3,020   | 24,400  | 7,520   | 10,600  | 10,200  | 4,160   | 1,980   | 976    | 528    | 426    |
| 9     | 546    | 1,210   | 2,690   | 20,600  | 6,640   | 15,900  | 9,740   | 4,210   | 2,010   | 957    | 520    | 426    |
| 10    | 530    | 1,000   | 2,370   | 15,800  | 6,100   | 19,400  | 10,200  | 4,580   | 2,050   | 1,010  | 522    | 426    |
| 11    | 530    | 986     | 2,130   | 12,000  | 5,490   | 17,400  | 10,900  | 5,040   | 1,970   | 937    | 500    | 426    |
| 12    | 530    | 1,530   | 1,960   | 9,320   | 5,040   | 14,700  | 10,400  | 4,690   | 1,850   | 943    | 480    | 418    |
| 13    | 530    | 2,180   | 1,840   | 7,540   | 4,630   | 14,700  | 8,840   | 4,520   | 1,800   | 929    | 466    | 434    |
| 14    | 558    | 3,590   | 1,730   | 6,610   | 4,330   | 15,300  | 7,670   | 4,320   | 1,890   | 885    | 442    | 474    |
| 15    | 674    | 3,430   | 1,640   | 6,210   | 4,130   | 14,500  | 7,250   | 4,120   | 1,950   | 906    | 426    | 466    |
| 16    | 668    | 2,660   | 1,540   | 6,300   | 3,920   | 13,400  | 7,900   | 3,990   | 1,950   | 875    | 418    | 466    |
| 17    | 617    | 2,010   | 1,450   | 6,230   | 3,810   | 11,100  | 8,370   | 3,920   | 1,810   | 843    | 402    | 450    |
| 18    | 602    | 3,080   | 1,390   | 5,780   | 3,780   | 9,730   | 7,640   | 3,800   | 1,670   | 820    | 410    | 578    |
| 19    | 602    | 5,470   | 1,360   | 5,290   | 4,360   | 9,970   | 6,620   | 3,850   | 1,630   | 799    | 410    | 666    |
| 20    | 586    | 3,840   | 1,300   | 4,900   | 5,040   | 9,200   | 5,970   | 3,890   | 1,570   | 786    | 386    | 626    |
| 21    | 578    | 2,820   | 1,290   | 4,550   | 4,880   | 8,640   | 5,580   | 3,880   | 1,460   | 763    | 378    | 570    |
| 22    | 583    | 2,260   | 1,290   | 4,390   | 4,950   | 7,960   | 5,340   | 3,680   | 1,360   | 739    | 370    | 538    |
| 23    | 583    | 1,990   | 1,260   | 4,050   | 5,850   | 7,620   | 5,280   | 3,400   | 1,320   | 720    | 363    | 506    |
| 24    | 578    | 3,050   | 1,510   | 3,770   | 6,170   | 7,460   | 5,390   | 3,330   | 1,290   | 702    | 356    | 490    |
| 25    | 572    | 3,690   | 1,810   | 3,580   | 6,120   | 7,900   | 5,540   | 3,380   | 1,270   | 686    | 356    | 474    |
| 26    | 570    | 3,320   | 1,640   | 3,420   | 5,890   | 8,820   | 5,540   | 3,410   | 1,220   | 670    | 370    | 458    |
| 27    | 570    | 2,870   | 1,550   | 3,300   | 5,400   | 10,100  | 5,050   | 3,260   | 1,210   | 668    | 378    | 458    |
| 28    | 566    | 2,520   | 5,170   | 3,170   | 5,090   | 11,100  | 4,590   | 3,130   | 1,230   | 650    | 378    | 458    |
| 29    | 554    | 2,260   | 8,060   | 4,380   | -----   | 12,000  | 4,390   | 3,020   | 1,240   | 646    | 370    | 442    |
| 30    | 560    | 2,120   | 5,470   | 7,980   | -----   | 12,800  | 4,230   | 2,930   | 1,220   | 634    | 450    | 426    |
| 31    | 562    | -----   | 4,660   | 6,710   | -----   | 13,100  | -----   | 2,810   | -----   | 662    | 562    | -----  |
| TOTAL | 17,364 | 63,641  | 76,020  | 335,270 | 159,510 | 319,350 | 246,330 | 124,190 | 51,280  | 26,722 | 14,624 | 14,604 |
| MEAN  | 560    | 2,121   | 2,452   | 10,820  | 5,697   | 10,300  | 8,211   | 4,006   | 1,709   | 862    | 472    | 487    |
| AC-FT | 34,440 | 126,200 | 150,800 | 665,000 | 316,400 | 633,400 | 488,600 | 246,300 | 101,700 | 53,000 | 29,010 | 28,970 |

|                    |     |        |     |     |      |       |       |        |
|--------------------|-----|--------|-----|-----|------|-------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 32,000 | MIN | 458 | MEAN | 3,777 | AC-FT | 2,734M |
| WATER YEAR 1965-66 | MAX | 40,500 | MIN | 356 | MEAN | 3,970 | AC-FT | 2,874M |

Peak discharge (base, 22,000 cfs).--Jan. 5 (0430) 46,500 cfs (31.33 ft).

## KLAMATH RIVER BASIN

11-5303. Blue Creek near Klamath, Calif.

Location.--Lat 41°27'00", long 123°53'40", in NE 1/4 sec. 12, T.12 N., R.2 E., on left bank 600 ft downstream from West Fork, 3.0 miles upstream from mouth, and 9.2 miles southeast of Klamath.

Drainage area.--120 sq mi.

Records available.--September 1965 to September 1966.

Gage.--Digital water-stage recorder. Elevation of gage 140.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1956.

Extremes.--Maximum discharge during period, 25,100 cfs (gage height, 15.97 ft, from highwater marks), from rating curve extended above 1,600 cfs on basis of step-backwater computation at 21.55 ft; minimum daily, 43 cfs Nov. 1.  
Flood of Dec. 22, 1964, reached a stage of 21.55 ft, from floodmarks (discharge, 48,000 cfs, by step-backwater computation).

Remarks.--Records good except those for period of no gage-height record which are fair. No regulation or diversion above station. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet, per second, 1965

| Day        | Discharge | Day     | Discharge | Day      | Discharge | Day      | Discharge |
|------------|-----------|---------|-----------|----------|-----------|----------|-----------|
| Sept. 1    | 74        | Sept. 9 | 67        | Sept. 17 | 61        | Sept. 25 | 56        |
| 2          | 73        | 10      | 65        | 18       | 60        | 26       | 56        |
| 3          | 71        | 11      | 64        | 19       | 58        | 27       | 56        |
| 4          | 70        | 12      | 64        | 20       | 58        | 28       | 55        |
| 5          | 70        | 13      | 64        | 21       | 57        | 29       | 53        |
| 6          | 70        | 14      | 62        | 22       | 56        | 30       | 52        |
| 7          | 68        | 15      | 62        | 23       | 56        |          |           |
| 8          | 67        | 16      | 62        | 24       | 56        |          |           |
| Total----- |           |         |           |          |           | 1,863    |           |
| Mean-----  |           |         |           |          |           | 62.1     |           |
| Ac-ft----- |           |         |           |          |           | 3,700    |           |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.  | NOV.   | DEC.   | JAN.    | FEB.   | MAR.    | APR.   | MAY    | JUNE  | JULY  | AUG.  | SEPT. |
|-------|-------|--------|--------|---------|--------|---------|--------|--------|-------|-------|-------|-------|
| 1     | 51    | 43     | 241    | 900     | 1,000  | 696     | 1,680  | 604    | 221   | 112   | 76    | 63    |
| 2     | 51    | 45     | 225    | 3,110   | 906    | 682     | 1,600  | 622    | 242   | 118   | 74    | 61    |
| 3     | 50    | 70     | 249    | 10,000  | 864    | 622     | 1,500  | 647    | 220   | 113   | 72    | 62    |
| 4     | 56    | 276    | 546    | 9,200   | 878    | 592     | 1,490  | 724    | 200   | 108   | 69    | 59    |
| 5     | 120   | 117    | 894    | 7,300   | 1,090  | 654     | 1,510  | 710    | 193   | 104   | 67    | 58    |
| 6     | 78    | 81     | 651    | 18,000  | 1,110  | 1,410   | 1,480  | 629    | 194   | 103   | 64    | 56    |
| 7     | 64    | 73     | 558    | 6,300   | 1,080  | 2,130   | 1,450  | 583    | 193   | 103   | 65    | 56    |
| 8     | 59    | 125    | 509    | 4,800   | 976    | 2,980   | 1,300  | 579    | 185   | 101   | 64    | 56    |
| 9     | 56    | 121    | 424    | 2,500   | 944    | 4,350   | 1,200  | 613    | 187   | 104   | 64    | 53    |
| 10    | 55    | 196    | 364    | 1,750   | 944    | 4,290   | 2,030  | 582    | 193   | 110   | 64    | 53    |
| 11    | 54    | 305    | 318    | 1,520   | 906    | 2,730   | 2,560  | 525    | 181   | 104   | 63    | 53    |
| 12    | 53    | 981    | 279    | 1,340   | 899    | 2,390   | 2,520  | 492    | 167   | 103   | 61    | 57    |
| 13    | 53    | 492    | 243    | 1,200   | 808    | 2,210   | 2,030  | 485    | 163   | 101   | 60    | 56    |
| 14    | 121   | 290    | 219    | 1,100   | 759    | 2,200   | 1,510  | 454    | 161   | 101   | 59    | 55    |
| 15    | 152   | 195    | 199    | 1,030   | 717    | 2,250   | 1,380  | 419    | 157   | 99    | 58    | 53    |
| 16    | 101   | 149    | 182    | 1,010   | 675    | 2,000   | 1,460  | 391    | 149   | 99    | 57    | 52    |
| 17    | 78    | 147    | 170    | 990     | 616    | 1,540   | 1,500  | 379    | 142   | 98    | 54    | 64    |
| 18    | 70    | 334    | 160    | 980     | 592    | 1,380   | 1,220  | 397    | 135   | 96    | 53    | 184   |
| 19    | 65    | 695    | 151    | 976     | 622    | 1,660   | 1,060  | 413    | 133   | 94    | 53    | 110   |
| 20    | 63    | 440    | 143    | 976     | 634    | 1,620   | 928    | 420    | 129   | 95    | 53    | 80    |
| 21    | 60    | 376    | 141    | 964     | 604    | 2,170   | 864    | 406    | 125   | 93    | 52    | 73    |
| 22    | 58    | 284    | 134    | 984     | 634    | 1,800   | 794    | 372    | 124   | 89    | 50    | 67    |
| 23    | 57    | 238    | 129    | 899     | 224    | 1,520   | 794    | 331    | 124   | 86    | 50    | 63    |
| 24    | 55    | 406    | 357    | 871     | 696    | 1,450   | 857    | 336    | 121   | 85    | 50    | 62    |
| 25    | 54    | 528    | 379    | 836     | 710    | 1,460   | 878    | 335    | 116   | 86    | 54    | 64    |
| 26    | 53    | 587    | 322    | 822     | 675    | 1,490   | 850    | 322    | 114   | 83    | 73    | 63    |
| 27    | 49    | 563    | 503    | 780     | 689    | 1,500   | 724    | 300    | 110   | 82    | 66    | 62    |
| 28    | 56    | 394    | 6,000  | 745     | 689    | 1,600   | 668    | 293    | 110   | 79    | 62    | 60    |
| 29    | 51    | 320    | 1,600  | 936     | -----  | 1,650   | 640    | 284    | 110   | 79    | 59    | 59    |
| 30    | 47    | 269    | 1,350  | 1,060   | -----  | 1,640   | 616    | 270    | 108   | 77    | 67    | 57    |
| 31    | 44    | -----  | 1,100  | 1,020   | -----  | 1,640   | -----  | 242    | ----- | 77    | 68    | ----- |
| TOTAL | 2,034 | 9,140  | 18,740 | 84,899  | 21,941 | 56,306  | 39,093 | 14,159 | 4,707 | 2,982 | 1,901 | 1,971 |
| MEAN  | 65.6  | 305    | 605    | 2,739   | 784    | 1,816   | 1,303  | 457    | 157   | 96.2  | 61.3  | 65.7  |
| AC-FT | 4,030 | 18,130 | 37,170 | 168,400 | 43,520 | 111,700 | 77,540 | 28,080 | 9,340 | 5,910 | 3,770 | 3,910 |

CALENDAR YEAR 1965 MAX - MIN - MEAN - AC-FT -  
 WATER YEAR 1965-66 MAX 18,000 MIN 43 MEAN 707 AC-FT 511,500

Peak discharge (base, 5,000 cfs)

| Date  | Time    | Gage height | Discharge | Date | Time    | Gage height | Discharge |
|-------|---------|-------------|-----------|------|---------|-------------|-----------|
| 12-28 | Unknown | -           | 8,600     | 1- 6 | Unknown | 15.97       | 25,100    |
| 1- 3  | Unknown | -           | 19,000    | 3-10 | 0015    | 9.61        | 5,690     |

Note.--No gage-height record Dec. 28 to Jan. 18.

11-5305. Klamath River near Klamath, Calif.

Location.--Lat 41°30'45", long 123°58'30", in SW¼ sec.17, T.13 N., R.2 E., on right bank 2.8 miles upstream from Turwar Creek and 3.3 miles east of Klamath.

Drainage area.--12,100 sq mi, approximately (not including Lost River or Lower Klamath Lake basins).

Records available.--October 1910 to December 1926 (published as "near Requa"), October 1950 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 5.60 ft above mean sea level (levels by Corps of Engineers). Prior to June 1926 staff gage at same site at different datum. Nov. 4, 1950 to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--32 years, 17,080 cfs (12,370,000 acre-ft per year).

Extremes.--Maximum discharge during year, 152,000 cfs Jan. 6 (gage height, 26.14 ft); minimum daily, 2,550 cfs Aug. 30 to Sept. 4. 1910-26, 1950-66: Maximum discharge, 557,000 cfs Dec. 23, 1964 (gage height, 55.3 ft, from floodmarks), from rating curve extended above 230,000 cfs on basis of flood-routing study; minimum observed, 1,340 cfs July 31, Aug. 1, 1924.

Remarks.--Records excellent. Flow considerably regulated by reservoirs and powerplants above station. Large diversions for irrigation above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

## DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

| DAY   | OCT.    | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE    | JULY    | AUG.    | SEPT.   |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1     | 3,600   | 4,140   | 9,250   | 15,800  | 20,200  | 14,800  | 40,700  | 17,500  | 12,100  | 4,870   | 2,590   | 2,550   |
| 2     | 3,720   | 4,470   | 8,900   | 15,500  | 18,400  | 14,900  | 42,600  | 17,800  | 11,100  | 4,770   | 2,580   | 2,550   |
| 3     | 3,800   | 4,560   | 8,500   | 35,200  | 17,000  | 14,700  | 39,800  | 18,500  | 10,100  | 4,700   | 2,590   | 2,550   |
| 4     | 3,850   | 5,410   | 8,300   | 87,000  | 17,000  | 14,000  | 37,400  | 20,000  | 9,220   | 4,620   | 2,610   | 2,550   |
| 5     | 3,940   | 5,850   | 11,000  | 95,200  | 22,200  | 13,500  | 36,900  | 22,900  | 8,610   | 4,520   | 2,610   | 2,560   |
| 6     | 4,080   | 5,360   | 13,500  | 135,000 | 24,200  | 14,900  | 36,900  | 23,300  | 8,240   | 4,410   | 2,610   | 2,560   |
| 7     | 4,090   | 5,470   | 12,800  | 105,000 | 22,900  | 27,000  | 37,200  | 21,600  | 8,180   | 4,300   | 2,600   | 2,560   |
| 8     | 4,020   | 6,400   | 12,100  | 64,800  | 20,700  | 33,600  | 36,800  | 20,200  | 8,290   | 4,180   | 2,590   | 2,560   |
| 9     | 3,800   | 7,440   | 11,200  | 50,900  | 18,900  | 48,700  | 35,100  | 20,000  | 8,340   | 4,080   | 2,570   | 2,560   |
| 10    | 3,860   | 7,160   | 9,980   | 38,400  | 18,000  | 59,200  | 36,600  | 20,800  | 8,450   | 4,000   | 2,570   | 2,560   |
| 11    | 4,060   | 7,660   | 9,270   | 31,200  | 16,800  | 50,600  | 38,800  | 20,700  | 8,480   | 3,920   | 2,570   | 2,560   |
| 12    | 4,340   | 10,300  | 8,720   | 26,200  | 16,000  | 41,200  | 37,300  | 19,300  | 8,230   | 3,840   | 2,570   | 2,560   |
| 13    | 4,360   | 12,100  | 8,290   | 23,100  | 15,100  | 37,800  | 34,200  | 18,200  | 7,850   | 3,760   | 2,570   | 2,560   |
| 14    | 4,460   | 11,700  | 7,910   | 21,300  | 14,400  | 39,000  | 30,900  | 17,700  | 7,640   | 3,720   | 2,570   | 2,560   |
| 15    | 4,660   | 12,200  | 7,600   | 20,300  | 13,800  | 38,300  | 30,000  | 16,800  | 7,690   | 3,640   | 2,570   | 2,560   |
| 16    | 4,900   | 10,800  | 7,190   | 20,300  | 13,200  | 37,600  | 31,900  | 15,900  | 7,810   | 3,680   | 2,570   | 2,570   |
| 17    | 4,940   | 9,230   | 6,740   | 20,200  | 12,800  | 32,700  | 32,800  | 15,200  | 7,700   | 3,520   | 2,570   | 2,570   |
| 18    | 4,880   | 10,300  | 6,230   | 19,400  | 12,500  | 29,100  | 31,500  | 14,900  | 7,420   | 3,450   | 2,570   | 2,640   |
| 19    | 4,840   | 16,400  | 6,160   | 18,700  | 12,500  | 30,200  | 28,800  | 15,000  | 7,100   | 3,360   | 2,570   | 3,180   |
| 20    | 4,820   | 15,000  | 6,060   | 17,600  | 13,400  | 28,400  | 26,600  | 15,800  | 6,840   | 3,280   | 2,570   | 3,000   |
| 21    | 4,680   | 12,800  | 5,920   | 16,400  | 13,900  | 30,000  | 24,400  | 16,400  | 6,550   | 3,140   | 2,570   | 2,830   |
| 22    | 4,640   | 10,800  | 5,890   | 16,400  | 13,800  | 27,700  | 23,500  | 16,400  | 6,190   | 2,990   | 2,570   | 2,770   |
| 23    | 4,590   | 9,700   | 5,900   | 15,600  | 14,500  | 26,000  | 22,800  | 15,400  | 5,900   | 2,930   | 2,560   | 2,760   |
| 24    | 4,640   | 11,100  | 6,070   | 14,900  | 15,800  | 24,800  | 22,600  | 14,300  | 5,670   | 2,860   | 2,560   | 2,740   |
| 25    | 4,640   | 13,600  | 7,860   | 14,300  | 16,200  | 24,900  | 23,000  | 13,900  | 5,480   | 2,830   | 2,560   | 2,730   |
| 26    | 4,630   | 13,600  | 8,450   | 13,800  | 16,300  | 26,300  | 23,600  | 14,200  | 5,320   | 2,780   | 2,560   | 2,720   |
| 27    | 4,630   | 13,000  | 7,710   | 13,000  | 15,800  | 28,700  | 22,700  | 14,300  | 5,220   | 2,720   | 2,560   | 2,710   |
| 28    | 4,640   | 11,400  | 19,000  | 12,500  | 15,100  | 31,300  | 20,700  | 13,800  | 5,120   | 2,690   | 2,560   | 2,700   |
| 29    | 4,640   | 10,300  | 28,100  | 15,500  | -----   | 34,200  | 19,100  | 13,600  | 5,050   | 2,670   | 2,560   | 2,700   |
| 30    | 4,030   | 9,700   | 21,200  | 22,700  | -----   | 37,600  | 18,000  | 13,300  | 4,960   | 2,640   | 2,550   | 2,690   |
| 31    | 3,580   | -----   | 18,700  | 22,700  | -----   | 38,600  | -----   | 12,900  | -----   | 2,610   | 2,550   | -----   |
| TOTAL | 134,360 | 287,950 | 314,500 | 1,039M  | 461,700 | 950,300 | 923,200 | 530,600 | 224,850 | 111,500 | 79,780  | 79,670  |
| MEAN  | 4,334   | 9,598   | 10,150  | 33,510  | 16,490  | 30,650  | 30,770  | 17,120  | 7,495   | 3,597   | 2,574   | 2,656   |
| AC-FT | 266,500 | 571,100 | 623,800 | 2,061M  | 915,800 | 1,885M  | 1,831M  | 1,052M  | 446,000 | 221,200 | 158,200 | 158,000 |

CALENDAR YEAR 1965 MAX 107,000 MIN 2,610 MEAN 15,920 AC-FT 11,530M  
 WATER YEAR 1965-66 MAX 135,000 MIN 2,550 MEAN 14,070 AC-FT 10,190M

Peak discharge (base, 90,000 cfs, revised).--Jan. 6 (1545) 152,000 cfs (26.14 ft).

## SMITH RIVER BASIN

11-5325. Smith River near Crescent City, Calif.

Location.--Lat 41°47'20", long 124°03'20", in SW¼ sec.10, T.16 N., R.1 E., on left bank 0.5 mile downstream from South Fork and 8 miles east of Crescent City.

Drainage area.--609 sq mi.

Records available.--October 1931 to September 1966. Monthly discharge only for some periods, published in WSP 1315-B.

Gage.--Digital water-stage recorder. Datum of gage is 89.61 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. Prior to Feb. 10, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--35 years, 3,755 cfs (2,719,000 acre-ft per year).

Extremes.--Maximum discharge during year, 145,000 cfs Jan. 6 (gage height, 38.53 ft), from rating curve extended above 69,000 cfs as explained below; minimum daily, 216 cfs Oct. 3.  
1931-66: Maximum discharge, 228,000 cfs Dec. 22, 1964 (gage height, 48.5 ft, from floodmarks), from rating curve extended above 69,000 cfs on basis of slope-area measurement at gage height 39.51 ft; minimum daily, 160 cfs Oct. 24, 25, 1964.

Remarks.--Records good. No regulation or diversion above station. Records of chemical analyses and water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| DAY   | OCT.   | NOV.    | DEC.    | JAN.    | FEB.    | MAR.    | APR.    | MAY     | JUNE   | JULY   | AUG.   | SEPT.  |
|-------|--------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 1     | 220    | 256     | 1,660   | 5,610   | 5,420   | 3,410   | 5,700   | 1,980   | 906    | 479    | 310    | 252    |
| 2     | 218    | 252     | 1,550   | 15,300  | 4,500   | 3,300   | 4,980   | 2,060   | 970    | 530    | 294    | 243    |
| 3     | 216    | 447     | 1,630   | 68,500  | 3,960   | 3,070   | 4,560   | 2,130   | 954    | 488    | 280    | 238    |
| 4     | 233    | 2,460   | 2,250   | 79,300  | 5,410   | 2,850   | 4,540   | 2,390   | 838    | 467    | 276    | 236    |
| 5     | 433    | 1,930   | 3,460   | 45,400  | 9,700   | 3,170   | 4,530   | 2,570   | 810    | 449    | 274    | 232    |
| 6     | 319    | 2,020   | 2,810   | 110,000 | 8,900   | 8,150   | 4,340   | 2,370   | 810    | 422    | 270    | 230    |
| 7     | 265    | 1,130   | 2,740   | 35,700  | 6,980   | 12,100  | 4,150   | 2,090   | 814    | 422    | 268    | 227    |
| 8     | 248    | 781     | 2,910   | 24,800  | 5,610   | 23,000  | 3,820   | 2,040   | 794    | 416    | 266    | 229    |
| 9     | 240    | 993     | 2,430   | 16,200  | 4,770   | 32,900  | 3,450   | 2,130   | 766    | 410    | 264    | 230    |
| 10    | 236    | 1,130   | 2,020   | 11,300  | 5,190   | 27,000  | 7,820   | 2,140   | 810    | 410    | 262    | 231    |
| 11    | 240    | 1,890   | 1,740   | 8,700   | 4,590   | 14,000  | 11,000  | 1,860   | 770    | 404    | 258    | 234    |
| 12    | 242    | 4,570   | 1,520   | 6,970   | 4,440   | 9,300   | 11,200  | 1,730   | 702    | 398    | 256    | 244    |
| 13    | 242    | 2,910   | 1,350   | 6,050   | 3,970   | 9,700   | 7,980   | 1,690   | 686    | 392    | 252    | 243    |
| 14    | 358    | 2,000   | 1,240   | 5,780   | 3,570   | 10,200  | 5,940   | 1,640   | 686    | 392    | 252    | 240    |
| 15    | 644    | 1,760   | 1,170   | 5,540   | 3,240   | 10,200  | 4,980   | 1,500   | 678    | 380    | 250    | 236    |
| 16    | 438    | 1,350   | 1,100   | 5,330   | 2,950   | 9,460   | 5,050   | 1,400   | 666    | 374    | 248    | 232    |
| 17    | 330    | 1,180   | 1,010   | 4,860   | 2,760   | 7,320   | 4,650   | 1,360   | 641    | 368    | 246    | 230    |
| 18    | 304    | 2,310   | 980     | 4,220   | 2,620   | 6,480   | 3,900   | 1,360   | 605    | 362    | 242    | 300    |
| 19    | 296    | 5,400   | 930     | 3,780   | 2,710   | 9,700   | 3,350   | 1,490   | 590    | 356    | 240    | 430    |
| 20    | 284    | 5,690   | 885     | 3,410   | 3,090   | 8,920   | 2,890   | 1,510   | 566    | 350    | 240    | 370    |
| 21    | 273    | 4,950   | 845     | 3,160   | 2,880   | 14,300  | 2,650   | 1,430   | 551    | 346    | 237    | 290    |
| 22    | 267    | 2,960   | 805     | 3,470   | 2,910   | 8,880   | 2,550   | 1,340   | 545    | 338    | 236    | 270    |
| 23    | 259    | 2,260   | 786     | 3,320   | 3,470   | 6,870   | 2,550   | 1,210   | 545    | 334    | 237    | 260    |
| 24    | 256    | 3,950   | 2,620   | 3,180   | 3,410   | 6,310   | 2,660   | 1,260   | 530    | 334    | 240    | 265    |
| 25    | 250    | 4,190   | 2,940   | 3,100   | 3,440   | 6,400   | 2,810   | 1,220   | 515    | 330    | 252    | 270    |
| 26    | 248    | 4,210   | 2,450   | 2,940   | 3,440   | 6,370   | 2,770   | 1,220   | 491    | 326    | 290    | 260    |
| 27    | 256    | 4,280   | 6,140   | 2,780   | 3,460   | 6,230   | 2,460   | 1,150   | 485    | 326    | 269    | 255    |
| 28    | 305    | 2,970   | 42,900  | 2,640   | 3,440   | 6,040   | 2,270   | 1,090   | 479    | 322    | 258    | 250    |
| 29    | 292    | 2,310   | 17,600  | 4,020   | -----   | 5,990   | 2,110   | 1,070   | 473    | 318    | 256    | 245    |
| 30    | 272    | 1,910   | 11,200  | 7,280   | -----   | 5,840   | 2,040   | 1,080   | 467    | 314    | 262    | 240    |
| 31    | 262    | -----   | 8,150   | 7,080   | -----   | 5,370   | -----   | 975     | -----  | 314    | 260    | -----  |
| TOTAL | 8,946  | 74,449  | 131,821 | 509,720 | 120,830 | 299,830 | 133,700 | 50,485  | 20,143 | 11,871 | 8,045  | 7,712  |
| MEAN  | 289    | 2,482   | 4,252   | 16,440  | 4,315   | 9,672   | 4,457   | 1,629   | 671    | 383    | 260    | 257    |
| AC-FT | 17,740 | 147,700 | 261,500 | 1,011M  | 239,700 | 594,700 | 265,200 | 100,100 | 39,950 | 23,550 | 15,960 | 15,300 |

|                    |     |         |     |     |      |       |       |        |
|--------------------|-----|---------|-----|-----|------|-------|-------|--------|
| CALENDAR YEAR 1965 | MAX | 42,900  | MIN | 216 | MEAN | 2,290 | AC-FT | 1,658M |
| WATER YEAR 1965-66 | MAX | 110,000 | MIN | 216 | MEAN | 3,774 | AC-FT | 2,732M |

Peak discharge (base, 36,000 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 1215 | 25.97       | 61,300    | 1-6  | 0730 | 38.53       | 145,000   |
| 1-4   | 0315 | 34.38       | 115,000   | 3-9  | 0245 | 23.64       | 48,000    |

11-5330. Lopez Creek near Smith River, Calif.

Location.--Lat 41°57'36", long 124°12'08", in SE¼ sec.8, T.18 N., R.1 W., on right bank at culvert on U.S. Highway No. 101, 3.7 miles northwest of town of Smith River.

Drainage area.--0.93 sq mi.

Records available.--October 1961 to September 1966, discontinued as a continuous-record station; converted to a crest-stage partial-record station.

Gage.--Water-stage recorder with rain-gage attachment and crest-stage gage. Datum of gage is 38.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--5 years, 5.33 cfs (3,860 acre-ft per year).

Extremes.--Maximum discharge during year, 149 cfs Jan. 6 (gage height, 2.82 ft); no flow at times.

1961-66: Maximum discharge, 330 cfs May 6, 1963 (gage height, 3.68 ft); no flow at times in each year.

Remarks.--Records good above 5 cfs and poor below. No regulation or diversion above station.

Revisions (water years).--1965 Report: 1962-63.

Discharge, in cubic feet per second, water year October 1965 to September 1966

| Day   | Oct. | Nov.   | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July | Aug. | Sept. |
|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1     | 0    | 0.20   | 4.8   | 19    | 11    | 5.6   | 5.9   | 1.9   | 0     | 0    | 0    | 0.10  |
| 2     | 0    | .30    | 4.4   | 33    | 9.4   | 6.2   | 3.1   | 1.9   | 1.7   | 1.0  | 0    | .10   |
| 3     | 0    | 4.0    | 3.8   | 66    | 7.8   | 5.9   | 2.9   | 1.9   | .90   | 0    | 0    | .10   |
| 4     | 0    | 2.4    | 5.9   | 74    | 8.6   | 5.9   | 2.6   | 1.5   | .90   | 0    | 0    | 0     |
| 5     | 0    | 1.3    | 5.1   | 47    | 9.8   | 5.6   | 2.6   | 1.5   | .60   | 0    | 0    | 0     |
| 6     | 0    | .70    | 4.6   | 82    | 12    | 12    | 2.4   | 1.5   | .40   | 0    | 0    | 0     |
| 7     | 0    | 1.8    | 4.8   | 44    | 12    | 15    | 2.2   | 1.5   | .20   | 0    | 0    | 0     |
| 8     | 0    | 3.1    | 4.6   | 32    | 11    | 31    | 2.2   | 1.5   | .40   | 0    | 0    | 0     |
| 9     | 0    | 2.6    | 4.4   | 22    | 9.8   | 64    | 2.5   | 1.5   | .40   | 0    | 0    | 0     |
| 10    | 0    | 3.8    | 3.8   | 17    | 9.4   | 46    | 7.5   | 1.3   | .90   | 0    | 0    | 0     |
| 11    | 0    | 4.4    | 3.6   | 14    | 8.7   | 30    | 7.3   | 1.3   | .60   | 0    | 0    | 0     |
| 12    | 0    | 5.1    | 3.4   | 11    | 10    | 23    | 7.5   | 1.1   | .40   | 0    | 0    | 0     |
| 13    | 0    | 4.6    | 3.4   | 8.6   | 9.4   | 22    | 6.7   | 1.1   | .40   | 0    | 0    | 0     |
| 14    | .50  | 4.4    | 3.1   | 7.8   | 8.2   | 19    | 6.2   | .90   | .30   | 0    | 0    | 0     |
| 15    | .40  | 3.8    | 2.8   | 7.3   | 7.5   | 17    | 5.6   | .90   | .20   | 0    | 0    | 0     |
| 16    | .30  | 3.1    | 2.6   | 6.4   | 6.7   | 17    | 5.1   | .90   | .20   | 0    | 0    | 0     |
| 17    | .20  | 3.4    | 2.4   | 5.6   | 6.2   | 15    | 4.6   | .90   | .20   | 0    | 0    | .30   |
| 18    | .20  | 3.4    | 2.2   | 5.1   | 5.6   | 16    | 3.9   | .70   | .20   | 0    | 0    | 1.0   |
| 19    | .30  | 11     | 2.2   | 4.6   | 5.6   | 19    | 3.4   | .60   | .20   | 0    | 0    | .50   |
| 20    | .20  | 13     | 2.0   | 3.8   | 4.6   | 20    | 3.1   | .60   | .20   | 0    | 0    | .40   |
| 21    | .20  | 10     | 2.0   | 3.8   | 3.8   | 24    | 2.9   | .50   | .20   | 0    | 0    | .30   |
| 22    | .20  | 7.5    | 1.8   | 5.1   | 3.8   | 22    | 2.6   | .50   | .20   | 0    | 0    | .20   |
| 23    | .20  | 7.8    | 1.8   | 4.6   | 4.9   | 18    | 2.6   | .50   | .30   | 0    | 0    | .20   |
| 24    | .10  | 14     | 3.6   | 4.6   | 3.9   | 15    | 2.4   | .60   | .20   | 0    | 0    | .30   |
| 25    | .10  | 14     | 3.6   | 3.8   | 5.1   | 11    | 2.2   | .70   | .20   | 0    | 0    | .60   |
| 26    | .10  | 14     | 3.8   | 3.8   | 5.1   | 8.2   | 2.2   | .40   | .20   | 0    | .30  | .40   |
| 27    | .30  | 11     | 19    | 3.6   | 5.1   | 7.3   | 2.0   | .20   | .10   | 0    | .20  | .30   |
| 28    | .40  | 9.0    | 8.1   | 3.6   | 5.1   | 5.9   | 2.0   | .20   | .10   | 0    | .20  | .20   |
| 29    | .30  | 7.3    | 50    | 4.8   | ----- | 5.1   | 2.0   | .10   | 0     | 0    | .10  | .20   |
| 30    | .20  | 5.9    | 32    | 8.6   | ----- | 4.1   | 1.9   | .10   | 0     | 0    | .10  | .10   |
| 31    | .20  | -----  | 24    | 12    | ----- | 3.6   | ----- | 0     | ----- | 0    | .20  | ----- |
| Total | 4.40 | 176.90 | 296.5 | 568.5 | 210.1 | 519.4 | 110.1 | 28.80 | 10.80 | 0.10 | 1.10 | 8.00  |
| Mean  | .14  | 5.90   | 9.56  | 18.3  | 7.50  | 16.8  | 3.67  | .93   | .36   | .003 | .04  | .27   |
| Ac-ft | 8.7  | 351    | 588   | 1,130 | 417   | 1,030 | 218   | 57    | 21    | .20  | 2.2  | 16    |
| (+)   | 2.0  | 16.0   | 14.2  | 14.8  | 6.6   | 12.9  | 2.9   | .1    | 1.9   | .3   | -    | -     |

Calendar year 1965 Max 81 Min 0 Mean 4.50 Ac-ft 3,250  
 Water year 1965-66 Max 82 Min 0 Mean 5.30 Ac-ft 3,840

Peak discharge (base, 55 cfs)

| Date  | Time | Gage height | Discharge | Date | Time | Gage height | Discharge |
|-------|------|-------------|-----------|------|------|-------------|-----------|
| 12-28 | 0345 | 2.70        | 125       | 1-6  | 1030 | 2.82        | 149       |
| 1-4   | 0100 | 2.52        | 97        | 3-9  | 1530 | 2.40        | 82        |

+ Precipitation, in inches.

Note.--No gage-height record Aug. 19 to Sept. 30.

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Crest-stage partial-record stations

As explained on page 9 the California District publishes annual maxima on small streams at about 310 sites in a separate publication Floods From Small Drainage Areas. In addition discharge measurements are generally made in times of drought or flood to give better coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

The following table contains annual maximum discharges for crest-stage stations not included in above-mentioned report. A crest-stage gage is a device which will register the peak stage occurring between inspection 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 data 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 each water year is given. Information on some lower floods may have been obtained but is not published herein. 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 in Part 11 during water year 1966

| Station No.         | Station name                                 | Location  | Drainage area (sq mi) | Period of record                | Annual maximum |                    |                 |
|---------------------|--|---|-----------------------|---------------------------------|----------------|--------------------|-----------------|
|                     |  |   |                       |                                 | Date           | Gage height (feet) | Discharge (cfs) |
| Jacoby Creek basin  |  |   |                       |                                 |                |                    |                 |
| 11-4800.            | Jacoby Creek near Freshwater                 | Lat 40°47'30", long 124°00'10", in NW¼ sec.30, T.5 N., R.2 E., 3.7 miles northeast of Freshwater.   | 6.07                  | 1954-64#<br>1965                | 1-4-66         | 3.68               | 464             |
| Klamath River basin |  |   |                       |                                 |                |                    |                 |
| 11-5223.            | South Fork Salmon River near Forks of Salmon | Lat 41°13'20", long 123°15'00" in SE¼ sec.30, T.39 N., R.12 W., on left bank 100 ft downstream from Methodist Creek and 4.5 miles southeast of town of Forks of Salmon. | 252                   | 1958-65#                        | 1-4-66         | 10.75              | 7,590           |
| 11-5284.            | Hayfork Creek near Hayfork                   | Lat 40°31'10", long 123°05'05", in SW¼ sec.23, T.31 N., R.11 W., 5.8 miles southwest of Hayfork.  | 86.7                  | 1956-65#                        | 1-4-66         | 10.79              | 3,440           |
| Smith River basin   |  |   |                       |                                 |                |                    |                 |
| 11-5320.            | South Fork Smith River near Crescent City    | Lat 41°47'30", long 124°01'30", in SE¼ sec.11, T.16 N., R.1 E., 9.5 miles east of Crescent City.  | 295                   | 1911-13#<br>1954-61#<br>1962-65 | 1-6-66         | 33.53              | 83,900          |

## Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites

| Discharge measurements made at miscellaneous sites |                  |  |                       |                                   |  |                           |
|--|------------------|--|-----------------------|-----------------------------------|--|---------------------------|
| Stream   | Tributary to     | Location   | Drainage area (sq mi) | Measured previously (water years) | Measurements                                 |                           |
|  |                  |  |                       |                                   | Date   | Discharge (cfs)           |
| Salton Sea basin                                   |                  |  |                       |                                   |  |                           |
| San Gorgonio River                                 | Whitewater River | Lat 33°55'14", long 116°41'43", in SW¼ sec.8, T.3 S., R.3 E., 3.0 miles northwest of Palm Springs Station and 5.0 miles east of Cabazon.                         | 154                   | -                                 | 11-23-65                                     | †4,500                    |
| Whitewater River                                   | Salton Sea       | Lat 33°44'06", long 116°14'35", in SW¼ sec.15, T.5 S., R.7 E., just upstream from Interstate Highway 10 bridge, 2 miles northwest of Indio.                      | -                     | -                                 | 11-23-65                                     | †15,000                   |
| Mojave River basin                                 |                  |  |                       |                                   |  |                           |
| Mojave River                                       | Death Valley     | Lat 34°40'32", long 117°19'37", in NW¼ sec.32, T.8 N., R.4 W., 0.5 mile southwest of Helendale.  | -                     | -                                 | 11-23-65<br>11-25-65<br>11-29-65<br>12- 3-65 | †6,300<br>625<br>9.2<br>0 |
| Atascadero Creek basin                             |                  |  |                       |                                   |  |                           |
| Maria Ygnacio Creek                                | Atascadero Creek | Lat 34°25'57", long 119°48'22", in La Goleta Grant, at Hollister Avenue bridge 0.8 mile upstream from mouth, and 1.2 miles east of Goleta, Santa Barbara County. | -                     | -                                 | 11-16-65<br>12-29-65                         | †3,700<br>248             |

† Maximum discharge during year.

# Operated as a continuous-record gaging station.

## Measurements at miscellaneous sites--Continued

| Measurements at miscellaneous sites--continued |               |   |                       |                                    |  |  |
|--|---------------|---|-----------------------|------------------------------------|--|--|
| Stream   | Tributary to  | Location  | Drainage area (sq mi) | Measured previously (water years)? | Measurements   |  |
|  |               |   |                       |                                    | Date   | Discharge (cfs)  |
| Klamath River basin                            |               |   |                       |                                    |  |  |
| Fall Creek                                     | Klamath River | NE¼ sec.36, T.48 N., R.5 W., 1,500 ft above mouth and 0.8 mile south of Fall Creek powerplant and Copco Post Office.                  | 14.6(revised)         | 1928-59†<br><br>1964               | 9-16-65<br><br>9- 1-66   | a40.6<br><br>*43   |
| Bogus Creek                                    | Klamath River | NE¼ sec.17, T.47 N., R.3 W., 0.5 mile downstream from Iron Gate Dam, and 6.0 miles northeast of Hornbrook.                            | -                     | -                                  | 6-14-65<br>7- 1-65<br>8- 3-65<br>8-31-65   | a25.1<br>a24.9<br>a15.7<br>a17.0                                     |
| Etna Creek                                     | Scott River   | SE¼SW¼ sec.6, T.41 N., R.9 W., 0.1 mile below the mouth of Alder Creek and 2.7 miles southwest of Etna.                               | 19.5                  | -                                  | 9- 8-66  | *2.20  |
| Thompson Creek                                 | Klamath River | SE¼ sec.17, T.17 N., R.5 W., 50 ft above highway bridge, 0.1 mile above mouth, and 6.0 miles northeast of Happy Camp.                 | -                     | -                                  | 10- 6-65   | *14.2  |
| South Fork Scott River                         | Scott River   | SW¼SE¼ sec.20, T.40 N., R.8 W., opposite unnamed tributary 1.1 miles southwest of Callahan and 1.5 miles above East Fork Scott River. | 42.5                  | 1958-60†                           | 9-15-65  | a11.0  |
| Deadwood Creek                                 | Trinity River | SW¼NW¼ sec.17, T.33 N., R.8 W., 400 ft above mouth and 0.8 mile northeast of Lewiston   | -                     | -                                  | 3- 4-65<br>4-12-65<br>5- 8-65<br>6- 3-65<br>7- 8-65<br>2- 1-66<br>5- 5-66<br>9- 1-66 | a4.37<br>a10.2<br>a5.85<br>a3.40<br>a0.96<br>*12.0<br>*2.85<br>*0.38 |

\* Base flow.

a Not published previously.

† Operated as a continuous-record station.

## SANTA ANA RIVER ABSORPTION STUDIES

These measurements were made by the Orange County Flood Control District to determine the rate of absorption along the streambed of the Santa Ana River, covering that portion of the river from Yorba Bridge to the Geological Survey gaging station, Santa Ana River at Santa Ana. The measurements are listed in downstream order. Flow includes release to river at Horseshoe Bend, 3 miles upstream from Yorba Bridge, by Metropolitan Water District of Southern California from Oct. 1 to Oct. 20, Apr. 6 to June 30, Aug. 2 to Sept. 30.

Santa Ana River, lat 33°51'30", long 117°47'12", in Canon de Santa Ana Grant, about 1,000 ft above Yorba Bridge and 2.7 miles southeast of Atwood, water year 1966  
(Measured previously 1938-65)

| Date    | Discharge | Date    | Discharge | Date    | Discharge | Date    | Discharge | Date    | Discharge |
|---------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Oct. 1  | 149       | Nov. 26 | 1,010     | Feb. 11 | 97.2      | Apr. 29 | 241       | Aug. 5  | 36.0      |
| 5       | 135       | Dec. 6  | 180       | 18      | 65.1      | May 6   | 293       | 9       | 13.9      |
| 8       | 134       | 8       | 117       | 25      | 47.7      | 13      | 242       | 12      | 36.8      |
| 12      | 31.2      | 17      | 116       | Mar. 4  | 49.3      | 20      | 207       | 16      | 9.66      |
| 15      | 32.0      | 23      | 104       | 11      | 44.7      | 27      | 267       | 19      | 4.53      |
| 19      | 38.9      | Jan. 4  | 724       | 18      | 42.4      | June 3  | 247       | 22      | 5.98      |
| 22      | .91       | 7       | 141       | 25      | 74.8      | 10      | 124       | 26      | 4.51      |
| 26      | 0         | 14      | 88.0      | Apr. 1  | 24.0      | 17      | 33.1      | Sept. 2 | 2.09      |
| Nov. 18 | 151       | 21      | 69.2      | 8       | 77.6      | July 1  | 3.03      | 8       | 6.40      |
| 23      | 627       | 28      | 57.5      | 15      | 118       | 8       | .16       | 16      | 74.5      |
| 25      | 1,130     | Feb. 4  | 60.5      | 22      | 210       |         |           |         |           |

Santa Ana River, lat 33°50'55", long 117°50'05", in SW $\frac{1}{4}$  sec. 4, T. 4 S., R. 9 W., at Jefferson Street Bridge, 1 mile north of Olive, water year 1966  
(Measured previously 1938-65)

|         |      |         |      |        |      |         |     |          |      |
|---------|------|---------|------|--------|------|---------|-----|----------|------|
| Oct. 1  | 62.6 | Jan. 14 | 45.9 | Mar. 4 | 41.8 | Apr. 22 | 109 | June 3   | 172  |
| 8       | 46.7 | 21      | 12.1 | 11     | 33.2 | 29      | 173 | 10       | 115  |
| 12      | 0    | 28      | 33.4 | 18     | 30.1 | May 6   | 183 | 17       | 20.1 |
| 22      | 0    | Feb. 4  | 38.7 | 25     | 31.5 | 13      | 163 | July 1   | 0    |
| Nov. 23 | 401  | 11      | 94.0 | Apr. 1 | 0    | 20      | 141 | Sept. 23 | 0    |
| Dec. 17 | 75.8 | 18      | 41.3 | 8      | 40.2 | 27      | 174 | 30       | 58.0 |
| Jan. 7  | 83.1 | 25      | 34.0 | 15     | 12.7 |         |     |          |      |

Santa Ana River, lat 33°50'08", long 117°51'49", in San Juan Cajon de Santa Ana Grant, at Anaheim-Olive Bridge, 1.1 miles west of Olive, water year 1966  
(Measured previously 1938-65)

|        |      |         |      |         |     |         |      |          |      |
|--------|------|---------|------|---------|-----|---------|------|----------|------|
| Oct. 1 | 28.6 | Oct. 22 | 0    | Feb. 18 | 0   | Apr. 22 | 0    | May 27   | 57.2 |
| 5      | 23.0 | Nov. 30 | 626  | 25      | 0   | 29      | 58.9 | June 3   | 78.7 |
| 8      | 20.4 | Dec. 17 | 0    | Mar. 4  | .3  | May 6   | 86.5 | 10       | 0    |
| 12     | 20.4 | Feb. 4  | 0    | 11      | 3.8 | 13      | 41.9 | Sept. 21 | 0    |
| 19     | 25.6 | 11      | 31.0 | 25      | 0   | 20      | 24.9 | 30       | 2.33 |

Santa Ana River, lat 33°47'17", long 117°52'54", in Santiago de Santa Ana Grant, at Chapman Ave. Bridge, 1.7 miles west of Orange, Orange County, water year 1966  
(Measured previously 1938-47, 50, 52, 54, 56, 58, 62-65)

Note.--During the year for each date listed above a no flow observation was made at this site.



|   | Page |  | Page |
|---|------|--|------|
| Agua Caliente Creek near Warner Springs-----              | 117  | Colorado River, below Imperial Dam, schematic diagram-----       | 36   |
| Alameda Creek, at Union City-----                         | 357  | below Palo Verde Dam, Ariz.-Nev-----                             | 22   |
| near Niles-----   | 354  | below Parker Dam, Ariz.-Calif-----                               | 19   |
| Alamitos Creek near New Almaden-----                      | 339  | near Topock, Ariz-----   | 14   |
| Alamo Creek near Nipono-----                              | 270  | Convict Creek near Mammoth Lakes-----                            | 80   |
| Alamo River near Niland-----                              | 46   | Cooperation, record of-----                                      | 2    |
| Albion River near Comptche-----                           | 400  | Corn Springs Wash near Desert Center-----                        | 43   |
| Alisal Creek near Solvang-----                            | 258  | Corralitos Creek, at Freedom-----                                | 316  |
| Aliso Canyon Creek near New Cuyama-----                   | 268  | near Corralitos-----   | 315  |
| Aliso Creek at El Toro-----                               | 142  | Corte Madera Creek at Ross-----                                  | 373  |
| All-American Canal, below Pilot Knob wasteway-----        | 29   | Cottonwood Creek (tributary to Klamath River) at Hornbrook-----  | 445  |
| near Imperial Dam, Ariz.-Calif-----                       | 27   | Cottonwood Creek (Koehn Lake basin) near Cantil-----             | 77   |
| Almaden Reservoir, contents of-----                       | 344  | Cottonwood Creek (Owens Lake basin) near Olancho-----            | 89   |
| Amargosa River at Tecopa-----                             | 39   | Cottonwood Creek (Tia Juana River basin), above Tecate           |      |
| Anderson Lake, contents of-----                           | 348  | Creek, near Dulzura-----   | 95   |
| Andreas Creek near Palm Springs-----                      | 59   | at Barrett Dam, near Dulzura-----                                | 94   |
| Antelope Creek near Tennant-----                          | 442  | at Morena Dam-----   | 93   |
| Aptos Creek at Aptos-----                                 | 319  | Cottonwood Wash near Cottonwood Spring-----                      | 63   |
| Arch Creek near Earp-----                                 | 20   | Coyote Creek basin, reservoirs in-----                           | 348  |
| Arroyo Corte Madera del Presidio at Mill Valley-----      | 374  | Coyote Creek (tributary to Salton Sea) near Borrego Springs----- | 49   |
| Arroyo de la Cruz near San Simeon-----                    | 281  | Coyote Creek (tributary to San Francisco Bay), near Gilroy-----  | 345  |
| Arroyo del Hambre at Martinez-----                        | 362  | near Madrone-----  | 346  |
| Arroyo Grande, at Arroyo Grande-----                      | 279  | Coyote Creek (tributary to San Gabriel River) at Los             |      |
| near Arroyo Grande-----                                   | 278  | Alamitos-----  | 207  |
| Arroyo Mocho, near Livermore-----                         | 349  | Coyote Creek (tributary to Ventura River) near Oak View-----     | 242  |
| near Pleasanton-----                                      | 350  | Coyote Lake, contents of-----                                    | 348  |
| Arroyo Seco (Los Angeles River basin) near Pasadena-----  | 215  | Cristianitos Creek near San Clemente-----                        | 137  |
| Arroyo Seco (Salinas River basin), near Greenfield-----   | 299  | Cubic foot per second, definition of-----                        | 3    |
| near Soledad-----   | 300  | Cucamonga Creek near Upland-----                                 | 184  |
| Arroyo Trabuco near San Juan Capistrano-----              | 141  | Cushenbury Creek near Lucerne Valley-----                        | 64   |
| Arroyo Valle, above Lañg Canyon, near Livermore-----      | 351  | Cuyama River, below Buckhorn Canyon, near Santa Maria-----       | 269  |
| at Pleasanton-----  | 353  | below Twitchell Dam-----   | 271  |
| near Livermore-----                                       | 352  | Cuyamaca Reservoir, contents of-----                             | 106  |
| Atascadero Creek near Goleta-----                         | 247  | Darwin Creek near Darwin-----                                    | 38   |
| Austin Creek near Cazadero-----                           | 394  | Data, accuracy of-----   | 8    |
| Ballona Creek near Culver City-----                       | 225  | explanation of-----  | 5    |
| Barrett Reservoir, contents of-----                       | 94   | other data available-----  | 9    |
| Bautista Creek near Hemet-----                            | 177  | Day Creek near Etiwanda-----                                     | 170  |
| Beacon Creek at Helendale-----                            | 68   | De Luz Creek near Fallbrook-----                                 | 131  |
| Big Bear Lake near Big Bear Lake-----                     | 145  | Deep Creek (Mojave River basin) near Hesperia-----               | 65   |
| Big Creek near Hayfork-----                               | 466  | Deep Creek (Salton Sea basin) near Palm Desert-----              | 60   |
| Big Dip Creek near Stovepipe Wells-----                   | 38   | Definition of terms and abbreviations-----                       | 3    |
| Big Pine Creek near Big Pine-----                         | 84   | Devil Canyon Creek near San Bernardino-----                      | 165  |
| Big River, South Fork, near Comptche-----                 | 401  | Dry Creek (tributary to Alameda Creek) at Union City-----        | 355  |
| Big Rock Creek near Valyermo-----                         | 71   | Dry Creek (tributary to Napa River) near Napa-----               | 368  |
| Big Sulphur Creek near Cloverdale-----                    | 385  | Dry Creek (tributary to Russian River), near Cloverdale-----     | 389  |
| Big Sur River near Big Sur-----                           | 282  | near Geyserville-----  | 390  |
| Black Butte River near Covelo-----                        | 413  | Dry Lake tributary at Perez-----                                 | 441  |
| Blue Creek near Klamath-----                              | 472  | Eagle Creek at Eagle Mountain-----                               | 43   |
| Bodfish Creek near Gilroy-----                            | 308  | East Twin Creek near Arrowhead Springs-----                      | 156  |
| Borrego Palm Creek near Borrego Springs-----              | 50   | Eaton Creek near Pasadena-----                                   | 218  |
| Boulder Creek at Cuyamaca Reservoir, near Julian-----     | 106  | Eel River, at Fort Seward-----                                   | 423  |
| Branciforte Creek at Santa Cruz-----                      | 324  | at Scotia-----   | 430  |
| Brea Creek, at Fullerton-----                             | 204  | at Van Arsdale Dam, near Potter Valley-----                      | 409  |
| below Brea Dam, near Fullerton-----                       | 203  | below Dos Rios-----  | 421  |
| Browns Creek near Douglas City-----                       | 462  | below Scott Dam, near Potter Valley-----                         | 407  |
| Buckhorn Creek near Valyermo-----                         | 72   | East Branch, South Fork, near Garberville-----                   | 427  |
| Bull Creek near Weott-----                                | 429  | Middle Fork, below Black Butte River, near Covelo-----           | 414  |
| Butano Creek near Pescadero-----                          | 327  | Middle Fork, near Dos Rios-----                                  | 419  |
| Cache Creek near Mojave-----                              | 76   | North Fork, near Mina-----                                       | 422  |
| Cajon Creek near Keenbrook-----                           | 163  | South Fork, at Leggett-----                                      | 426  |
| Calero Reservoir, contents of-----                        | 344  | South Fork, near Branscomb-----                                  | 424  |
| Campo Creek near Campo-----                               | 96   | near Miranda-----  | 428  |
| Carbon Creek below Carbon Canyon Dam-----                 | 186  | El Capitan Reservoir, contents of-----                           | 107  |
| Carmel River at Robles del Rio-----                       | 283  | El Toro Creek near Spreckels-----                                | 302  |
| Carmel River near Carmel-----                             | 284  | Elk Creek near Hearst-----                                       | 418  |
| Carpinteria Creek near Carpinteria-----                   | 246  | Elk River near Falk-----   | 435  |
| Caruthers Creek near Ivanpah-----                         | 41   | Elsinore Lake at Elsinore-----                                   | 179  |
| Cedar Creek near Bell Station-----                        | 303  | Estrella River near Estrella-----                                | 293  |
| Cedar Gulch near Callahan-----                            | 449  | Feliz Creek near Hopland-----                                    | 383  |
| Chemehuevi Wash tributary near Needles-----               | 15   | Fish Creek near Duarte-----                                      | 195  |
| Chesbro Reservoir, contents of-----                       | 318  | Fortynine Palms Creek near Twentynine Palms-----                 | 274  |
| China Spring Creek near Mountain Pass-----                | 40   | Foxen Creek near Sisquoc-----                                    | 42   |
| Cholame Creek, near Shandon-----                          | 292  | Franz Creek near Kellogg-----                                    | 387  |
| City Creek near Highland-----                             | 152  | Fullerton Creek, at Richmond Avenue, near Fullerton-----         | 206  |
| Clair Engle Lake near Lewiston-----                       | 458  | below Fullerton Dam, near Brea-----                              | 205  |
| Coffee Creek near Trinity Center-----                     | 457  | Garcia River near Point Arena-----                               | 396  |
| Colma Creek at South San Francisco-----                   | 330  | Gibraltar Reservoir, contents of-----                            | 251  |
| Colorado River aqueduct near Parker Dam, Ariz.-Calif----- | 16   | Gila Gravity Main Canal at Imperial Dam, Ariz.-Calif-----        | 26   |
| Colorado River, at Imperial Dam, Ariz.-Calif-----         | 23   | Goforth Creek at Dos Rios-----                                   | 420  |
| at Needles-----   | 13   | Goler Gulch near Randsburg-----                                  | 76   |
| at northerly international boundary above Morelos Dam,    |      | Green Valley Creek near Corralitos-----                          | 317  |
| near Andrade-----   | 25   | Guadalupe Reservoir, contents of-----                            | 344  |
| below Yuma Main Canal wasteway,                           |      | Guadalupe River at San Jose-----                                 | 342  |
| at Yuma, Ariz-----  | 24   | Guadalupe River basin, reservoirs in-----                        | 344  |
| below Davis Dam, Ariz.-Nev-----                           | 12   | Gualala River, South Fork, near Annapolis-----                   | 395  |

|   | Page |  | Page |
|---|------|--|------|
| Guejito Creek near San Pasqual-----                           | 113  | Matilija Creek, above reservoir, near Matilija Hot Springs--     | 237  |
| Hayfork Creek near Hyampom-----                               | 467  | at Matilija Hot Springs-----                                     | 238  |
| Hopper Creek near Piru-----                                   | 232  | North Fork, at Matilija Hot Springs-----                         | 239  |
| Horse Thief Creek near Tecopa-----                            | 40   | Mattole River near Petrolia-----                                 | 405  |
| Huasna River near Arroyo Grande-----                          | 270  | Mazourka Creek near Independence-----                            | 88   |
| Huerfuer Creek near Creston-----                              | 291  | Meeks and Daley Canal near Colton-----                           | 160  |
| Hydrologic conditions-----                                    | 10   | Mill Creek (Eel River basin) near Covelo-----                    | 417  |
| Independence Creek below Pinyon Creek, near Independence----- | 87   | Mill Creek (Santa Ana River basin) near Yucaipa-----             | 148  |
| Indian Creek near Happy Camp-----                             | 453  | Mission Creek, below Whittier Narrows Dam-----                   | 222  |
| Jack Creek near Templeton-----                                | 289  | near Montebello-----   | 221  |
| Jalama Creek near Lompoc-----                                 | 249  | Moffet Creek near Fort Jones-----                                | 450  |
| Jameson Lake, contents of-----                                | 250  | Mojave River, at Afton-----                                      | 70   |
| Jamul Creek near Jamul-----                                   | 100  | at Barstow-----  | 69   |
| Japacha Creek near Descanso-----                              | 101  | at lower narrows, near Victorville-----                          | 67   |
| Judge Francis Carr powerplant near French Gulch-----          | 459  | at Wild Crossing, near Helendale-----                            | 68   |
| Klamath River, at Orleans-----                                | 455  | West Fork, near Hesperia-----                                    | 66   |
| below John C. Boyle powerplant, near Keno, Oreg-----          | 443  | Mono Lake near Mono Lake-----                                    | 90   |
| below Iron Gate Dam-----                                      | 444  | Morena Reservoir, contents of-----                               | 93   |
| near Klamath-----   | 473  | Murrieta Creek at Temecula-----                                  | 128  |
| near Seiad Valley-----  | 452  | Nacimiento River, below Nacimiento Dam, near Bradley-----        | 295  |
| La Brea Creek near Sisquoc-----                               | 273  | near Bryson-----   | 294  |
| Laguna de Santa Rosa near Graton-----                         | 392  | Napa River, near Napa-----                                       | 369  |
| Lakes and reservoirs:   |      | near St. Helena-----   | 367  |
| Almaden Reservoir-----  | 344  | Navarro River near Navarro-----                                  | 399  |
| Anderson Lake-----  | 348  | New River (Klamath River basin) at Denny-----                    | 465  |
| Barrett Reservoir-----  | 94   | New River (Salton Sea basin) near Westmoreland-----              | 47   |
| Big Bear Lake near Big Bear Lake-----                         | 145  | Ninemile Creek near Brown-----                                   | 79   |
| Cachuma, Lake, near Santa Ynez-----                           | 255  | Novato Creek near Novato-----                                    | 372  |
| Calero Reservoir-----   | 344  | Noyo River near Fort Bragg-----                                  | 402  |
| Chesbro Reservoir-----  | 318  | Oak Creek near Mojave-----                                       | 75   |
| Clair Engle Lake near Lewiston-----                           | 458  | Outlet Creek near Longvale-----                                  | 412  |
| Coyote Lake-----  | 348  | Owens River, at Keeler Bridge, near Lone Pine-----               | 88   |
| Cuyamaca Reservoir-----                                       | 106  | near Big Pine-----   | 86   |
| El Capitan Reservoir-----                                     | 107  | Pacheco Creek near Dunneville-----                               | 304  |
| Elsinore Lake-----  | 179  | Pacoima Creek near San Fernando-----                             | 209  |
| Elsmar, Lake-----   | 344  | Pajaro River, at Chittenden-----                                 | 314  |
| Gibraltar Reservoir-----                                      | 251  | near Gilroy-----   | 306  |
| Guadalupe Reservoir-----                                      | 344  | Pajaro River basin, reservoirs in-----                           | 318  |
| Havas, Lake, near Parker Dam, Ariz.-Calif-----                | 17   | Palm Canyon Creek near Palm Springs-----                         | 58   |
| Hemet, Lake, near Idyllwild-----                              | 173  | Palo Verde Canal near Blythe-----                                | 21   |
| Henshaw, Lake-----  | 119  | Partial-record stations, discharge at-----                       | 476  |
| Hodges, Lake-----   | 116  | Patterson Creek at Union City-----                               | 356  |
| Jameson Lake-----   | 250  | Pauma Creek near Pauma Valley-----                               | 120  |
| Lexington Reservoir-----                                      | 344  | Pescadero Creek (tributary to San Benito River) near             |      |
| Loveland, Lake-----   | 104  | Paicines-----  | 311  |
| Mendocino Lake near Ukiah-----                                | 380  | Pescadero Creek (tributary to Pacific Ocean) near Pescadero----- | 326  |
| Mono Lake near Mono Lake-----                                 | 90   | Pilot Knob powerplant and wasteway near Pilot Knob-----          | 28   |
| Morena Reservoir-----   | 93   | Pine Creek at division box, near Bishop-----                     | 82   |
| Pillsbury, Lake, near Potter Valley-----                      | 406  | Pine Tree Creek near Mojave-----                                 | 77   |
| Piru, Lake, near Piru-----                                    | 230  | Pinole Creek at Pinole-----                                      | 361  |
| Rodriguez Reservoir at Rodriguez Dam, Baja California,        |      | Pipes Creek near Yucca Valley-----                               | 64   |
| Mex-----  | 98   | Piru Creek, above Lake Piru-----                                 | 229  |
| Salinas Reservoir near Pozo-----                              | 287  | below Santa Felicia Dam-----                                     | 231  |
| Stevens Creek Reservoir near Monte Vista-----                 | 338  | Plunge Creek near East Highlands-----                            | 150  |
| Sutherland Reservoir-----                                     | 110  | Potter Valley powerhouse tailrace near Potter Valley-----        | 408  |
| Sweetwater Reservoir-----                                     | 105  | Precipitation:   |      |
| Uvas Reservoir-----   | 318  | Amargosa River at Tecopa-----                                    | 39   |
| Vail Lake-----  | 127  | Aliso Canyon Creek near New Cuyama-----                          | 268  |
| Las Flores Creek near Oceanside-----                          | 133  | Arch Creek near Earp-----  | 20   |
| Lee Vining Creek near Lee Vining-----                         | 92   | Beacon Creek at Helendale-----                                   | 68   |
| Lexington Reservoir, contents of-----                         | 344  | Cache Creek near Mojave-----                                     | 76   |
| Little Dalton Creek near Glendora-----                        | 198  | Cedar Gulch near Callahan-----                                   | 449  |
| Little Lake Creek near Little Lake-----                       | 78   | China Spring Creek near Mountain Pass-----                       | 40   |
| Little River at Crannell-----                                 | 439  | Colma Creek at South San Francisco-----                          | 330  |
| Little Rock Creek near Little Rock-----                       | 73   | Corn Springs Wash near Desert Center-----                        | 43   |
| Little San Geronio Creek near Beaumont-----                   | 155  | Cottonwood Wash near Cottonwood Spring-----                      | 63   |
| Little Shasta River near Montague-----                        | 446  | Darwin Creek near Darwin-----                                    | 38   |
| Little Tujunga Creek near San Fernando-----                   | 212  | Dry Lake tributary at Perez-----                                 | 441  |
| Llagas Creek near Morgan Hill-----                            | 305  | Eagle Creek at Eagle Mountain-----                               | 43   |
| Lone Pine Creek near Keenbrook-----                           | 164  | Fortynine Palms Creek near Twentynine Palms-----                 | 42   |
| Long Creek near Desert Hot Springs-----                       | 56   | Green Valley Creek near Corralitos-----                          | 317  |
| Lopez Creek near Smith River-----                             | 475  | Horse Thief Creek near Tecopa-----                               | 40   |
| Los Angeles River, at Long Beach-----                         | 224  | Japacha Creek near Descanso-----                                 | 101  |
| at Los Angeles-----   | 214  | Little Lake Creek near Little Lake-----                          | 78   |
| at Sepulveda Dam-----   | 208  | Lopez Creek near Smith River-----                                | 475  |
| near Downey-----  | 216  | Pine Tree Creek near Mojave-----                                 | 77   |
| Los Gatos Creek (Guadalupe River basin) at Los Gatos-----     | 341  | San Antonio Creek tributary near Casmalia-----                   | 268  |
| Los Penasquitos Creek near Poway-----                         | 109  | San Jacinto, South Fork tributary, near Valle Vista-----         | 174  |
| Los Trancos Creek tributary near Stanford University-----     | 335  | San Luis Rey River tributary near Pala-----                      | 122  |
| Lytle Creek, at Colton-----                                   | 166  | San Mateo Creek near San Clemente-----                           | 136  |
| near Fontana-----   | 161  | San Ramon Creek at San Ramon-----                                | 363  |
| Maacama Creek near Kellogg-----                               | 386  | Santa Rita Creek near Templeton-----                             | 290  |
| Mad River, near Arcata-----                                   | 438  | Soda Creek tributary near Boonville-----                         | 398  |
| near Forest Glen-----   | 436  | Sulphur Creek near St. Helena-----                               | 366  |
| near Kneeland-----  | 437  | Sunflower Wash near Essex-----                                   | 42   |
| Malibu Creek at Crater Camp, near Calabasas-----              | 227  | Temecula Creek at Vail Dam-----                                  | 127  |
| Matadero Creek at Palo Alto-----                              | 337  | Uvas Creek above Uvas Reservoir, near Morgan Hill-----           | 307  |

|   | Page |   | Page |
|---|------|---|------|
| Precipitation--Continued  |      | San Mateo Creek, at San Onofre-----                             | 138  |
| Vallecito Creek near Julian-----                                | 51   | near San Clemente-----  | 136  |
| Wildrose Creek near Wildrose station-----                       | 37   | San Onofre Creek, at San Onofre-----                            | 135  |
| Pudding Creek near Fort Bragg-----                              | 403  | near San Onofre-----  | 134  |
| Purissima Creek near Half Moon Bay-----                         | 329  | San Ramon Creek, at San Ramon-----                              | 363  |
| Quail Wash near Joshua Tree-----                                | 42   | at Walnut Creek-----  | 364  |
| Rancheria Creek near Boonville-----                             | 397  | San Timoteo Creek, near Redlands-----                           | 155  |
| Redwood Creek (tributary to Napa Creek) near Napa-----          | 370  | Santa Agueda Creek near Santa Ynez-----                         | 257  |
| Redwood Creek (tributary to Pacific Ocean) at Orick-----        | 440  | Santa Ana Creek near Oak View-----                              | 243  |
| Redwood Creek (tributary to San Francisco Bay) at               |      | Santa Ana River, absorption studies-----                        | 478  |
| Redwood City-----   | 332  | at Auburndale Bridge, near Corona-----                          | 172  |
| Return surface flows from Yuma project, Ariz.-Calif-----        | 30   | at Colton-----  | 167  |
| Rheem Creek at San Pablo-----                                   | 360  | at Riverside Narrows, near Arlington-----                       | 168  |
| Rio Hondo, above Whittier Narrows Dam-----                      | 219  | at Santa Ana-----   | 190  |
| near Downey-----  | 223  | at Waterman Avenue, at San Bernardino-----                      | 154  |
| near Montebello-----  | 220  | below Prado Dam-----  | 185  |
| Rock Creek at Little Round Valley, near Bishop-----             | 81   | near Mentone-----   | 146  |
| Rodriguez Reservoir at Rodriguez Dam, Baja California,          |      | schematic diagram of-----                                       | 144  |
| Mex-----  | 98   | Santa Anita Creek near Sierra Madre-----                        | 217  |
| Ross Creek at San Jose-----                                     | 340  | Santa Clara River at Los Angeles-Ventura County line-----       | 228  |
| Rush Creek above Grant Lake, near June Lake-----                | 91   | Santa Cruz Creek near Santa Ynez-----                           | 254  |
| Russian River, East Fork, near Calpella-----                    | 379  | Santa Margarita River, at Ysidora-----                          | 132  |
| East Fork, near Ukiah-----                                      | 381  | near Fallbrook-----   | 130  |
| near Cloverdale-----  | 384  | near Temecula-----  | 129  |
| near Guerneville-----   | 393  | Santa Maria Creek near Ramona-----                              | 114  |
| near Healdsburg-----  | 388  | Santa Maria River at Guadalupe-----                             | 277  |
| near Hopland-----   | 382  | Santa Paula Creek near Santa Paula-----                         | 236  |
| near Redwood Valley-----  | 377  | Santa Rita Creek near Tempton-----                              | 290  |
| near Ukiah-----   | 378  | Santa Rosa Creek (Russian River basin) near Santa Rosa-----     | 391  |
| Salinas Reservoir near Pozo-----                                | 287  | Santa Rosa Creek (tributary to Pacific Ocean) near Cambria----- | 280  |
| Salinas River, above Pilitas Creek, near Santa Margarita-----   | 288  | Santa Ynez River, above Gibraltar Dam, near Santa Barbara-----  | 251  |
| near Bradley-----   | 297  | at Cooper's Reef, near Lompoc-----                              | 262  |
| near Pozo-----  | 285  | at Jameson Lake, near Montecito-----                            | 250  |
| near Spreckels-----   | 301  | at narrows, near Lompoc-----                                    | 264  |
| Salmon Creek at Bodega-----                                     | 376  | at Pine Canyon, near Lompoc-----                                | 266  |
| Salmon River, at Somesbar-----                                  | 454  | at Solvang-----   | 259  |
| Salsipuedes Creek near Lompoc-----                              | 263  | at 13th Street, near Lompoc-----                                | 265  |
| Salt Creek near Mecca-----                                      | 45   | below Gibraltar Dam, near Santa Barbara-----                    | 252  |
| Salton Sea, near Westmoreland-----                              | 44   | below Los Laureles Canyon, near Santa Ynez-----                 | 253  |
| inflow to-----  | 44   | near Buellton-----  | 261  |
| San Antonio Creek (Santa Ana River basin), below                |      | near Santa Ynez-----  | 256  |
| San Antonio Dam-----  | 183  | Santa Ysabel Creek, at Sutherland Dam-----                      | 110  |
| near Claremont-----   | 181  | near Ramona-----  | 111  |
| San Antonio Creek (tributary to Pacific Ocean) near             |      | near San Pasqual-----   | 112  |
| Casmalia-----   | 267  | Santiago Creek, at Modjeska-----                                | 187  |
| San Antonio Creek (Ventura River basin) at Casitas Springs----- | 241  | at Santa Ana-----   | 189  |
| San Antonio Creek tributary near Casmalia-----                  | 268  | at Santiago Dam, near Villa Park-----                           | 188  |
| San Antonio River near Lockwood-----                            | 296  | Saratoga Creek at Saratoga-----                                 | 343  |
| San Benito River, near Hollister-----                           | 313  | Scott Creek above Little Creek, near Davenport-----             | 325  |
| near Willow Creek School-----                                   | 310  | Scott River, near Fort Jones-----                               | 451  |
| San Diego Creek near Irvine-----                                | 143  | East Fork, at Callahan-----                                     | 448  |
| San Diego River, at El Capitan Dam-----                         | 107  | Sespe Creek, near Fillmore-----                                 | 234  |
| near Santee-----  | 108  | near Wheeler Springs-----                                       | 233  |
| San Dieguito River, at Lake Hodges-----                         | 116  | Sharon Creek near Menlo Park-----                               | 333  |
| near San Pasqual-----   | 115  | Shasta River near Yreka-----                                    | 447  |
| San Dimas Creek below San Dimas Dam-----                        | 197  | Sheehan ditch at Riverside Narrows, near Arlington-----         | 169  |
| San Felipe Creek, near Julian-----                              | 48   | Short Creek near Covelo-----                                    | 416  |
| near Westmoreland-----  | 52   | Silver Canyon Creek near Laws-----                              | 83   |
| San Francisco Creek, at Stanford University-----                | 336  | Sisquoc River, near Garey-----                                  | 276  |
| below Ladera damsite, near Stanford University-----             | 334  | near Sisquoc-----   | 272  |
| San Gabriel River, above Whittier Narrows Dam-----              | 200  | Smith River near Crescent City-----                             | 474  |
| at Pico-----  | 201  | Snow Creek near White Water-----                                | 55   |
| at Spring Street, near Los Alamitos-----                        | 202  | Soda Creek tributary near Boonville-----                        | 398  |
| below Santa Fe Dam, near Baldwin Park-----                      | 196  | Sonoma Creek at Boyes Hot Springs-----                          | 371  |
| East Fork, near Camp Bonita-----                                | 192  | Soquel Creek, at Soquel-----                                    | 321  |
| near Azusa-----   | 194  | West Branch, near Soquel-----                                   | 320  |
| Schematic diagram of-----                                       | 191  | Spencer Canyon Creek near Fairmont-----                         | 74   |
| West Fork, at Camp Rincon-----                                  | 193  | Spruce Branch at South San Francisco-----                       | 331  |
| San Geronimo River near White Water-----                        | 54   | Stevens Creek Reservoir near Monte Vista-----                   | 338  |
| San Jacinto River, near Elsinore-----                           | 178  | Sulphur Creek near St. Helena-----                              | 366  |
| near San Jacinto-----   | 175  | Sunflower Wash near Essex-----                                  | 42   |
| South Fork tributary, near Valle Vista-----                     | 174  | Sutherland Reservoir, contents of-----                          | 110  |
| San Jose Creek (tributary to Pacific Ocean) near Goleta-----    | 248  | Sweetwater Reservoir, contents of-----                          | 105  |
| San Jose Creek (tributary to San Gabriel River) near            |      | Sweetwater River, at Loveland Dam, near Alpine-----             | 104  |
| El Monte-----   | 199  | at Sweetwater Dam-----  | 105  |
| San Juan Creek near San Juan Capistrano-----                    | 139  | near Descanso-----  | 102  |
| San Lorenzo Creek (Salinas River basin) below                   |      | Tahquitz Creek near Palm Springs-----                           | 57   |
| Bitterwater Creek, near King City-----                          | 298  | Temescal Creek near Corona-----                                 | 180  |
| San Lorenzo Creek (tributary to San Francisco Bay) at           |      | Temecula Creek, at Vail Dam-----                                | 127  |
| Hayward-----  | 358  | near Aguanga-----   | 126  |
| San Lorenzo River at Big Trees-----                             | 323  | Tenmile Creek near Laytonville-----                             | 425  |
| San Luis Rey River, at Lake Henshaw, near Mesa Grande-----      | 119  | Temile River, Middle Fork, near Fort Bragg-----                 | 404  |
| at Monserate Narrows, near Pala-----                            | 123  | Tepusquet Creek near Sisquoc-----                               | 275  |
| at Oceanside-----   | 125  | Terms and abbreviations, definition of-----                     | 3    |
| near Bonsall-----   | 124  | Tia Juana River, near Dulzura-----                              | 97   |
| West Fork, near Warner Springs-----                             | 118  | near Nestor-----  | 99   |
| San Luis Rey River tributary near Pala-----                     | 122  | Tomki Creek near Willits-----                                   | 411  |

|   | Page |  | Page |
|---|------|--|------|
| Topanga Creek near Topanga Beach-----                       | 226  | Ventura River, near Meiners Oaks-----                      | 240  |
| Toro Creek near Pozo-----                                   | 286  | near Ventura-----  | 244  |
| Tres Pinos Creek near Tres Pinos-----                       | 312  | Walker Creek near Tomales-----                             | 375  |
| Trinity River, above Coffee Creek, near Trinity Center----- | 456  | Walnut Creek (Pacheco Creek basin) at Walnut Creek-----    | 365  |
| at Hoopa-----   | 471  | Warm Creek, near San Bernardino-----                       | 159  |
| at Lewiston-----  | 460  | Floodway at San Bernardino-----                            | 158  |
| near Burnt Ranch-----                                       | 464  | Wasteway No. 1 near Mecca-----                             | 63   |
| North Fork, at Helena-----                                  | 463  | Waterman Canyon Creek near Arrowhead Springs-----          | 157  |
| South Fork, below Hyampom-----                              | 468  | Weaver Creek near Douglas City-----                        | 461  |
| near Salyer-----  | 469  | Wheaton Wash near Mountain Pass-----                       | 40   |
| Tujunga Creek, below Hansen Dam-----                        | 213  | Whitewater River, at Indio-----                            | 61   |
| below Mill Creek, near Colby Ranch-----                     | 210  | at White Water-----  | 53   |
| near Sunland-----   | 211  | near Mecca-----  | 62   |
| Upper Penitencia Creek at San Jose-----                     | 347  | Wildcat Creek at Richmond-----                             | 359  |
| Uvas Creek, above Uvas Reservoir, near Morgan Hill-----     | 307  | Wildrose Creek near Wildrose Station-----                  | 37   |
| near Gilroy-----  | 309  | Williams Creek near Covelo-----                            | 415  |
| Uvas Reservoir, contents of-----                            | 318  | Willow Creek near Willow Creek-----                        | 470  |
| Vail Lake, contents of-----                                 | 127  | Yager Creek near Carlotta-----                             | 434  |
| Vallecito Creek near Julian-----                            | 51   | Yaqui Pass Wash near Borrego-----                          | 51   |
| Van Duzen River, near Bridgeville-----                      | 433  | Yuma project, Ariz.-Calif., return surface flows from----- | 30   |
| near Dinsmores-----   | 431  | Zaca Creek near Buellton-----                              | 260  |
| South Fork, near Bridgeville-----                           | 432  | Zayante Creek at Zayante-----                              | 322  |







