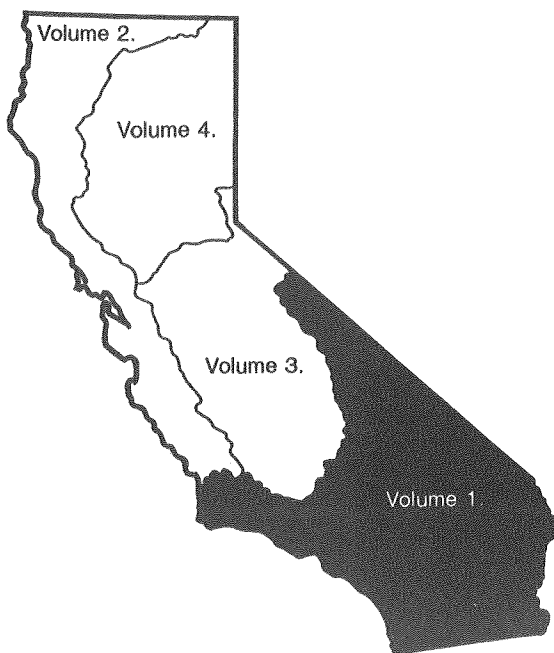


Water Resources Data California Water Year 1997

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-97-1
Prepared in cooperation with the California Department
of Water Resources and with other agencies



CALENDAR FOR WATER YEAR 1997

1995

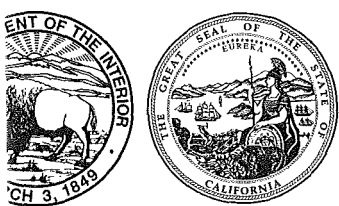
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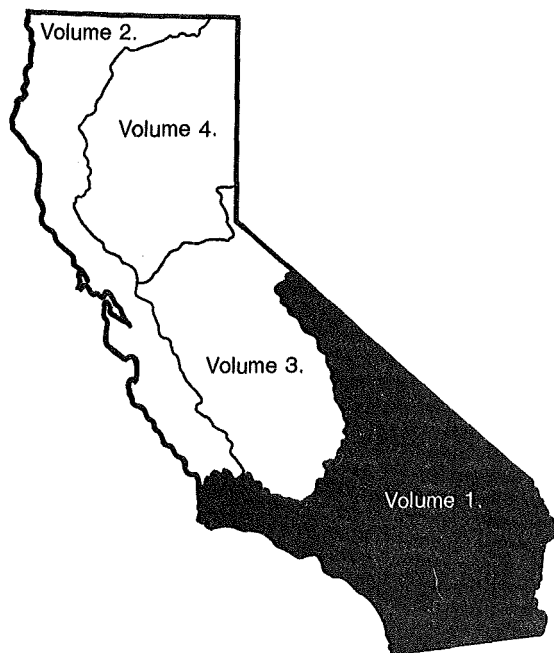
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Water Resources Data California Water Year 1997

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

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CA-97-1
Prepared in cooperation with the California Department
of Water Resources and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

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PREFACE

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

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

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

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

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CONTENTS

	Page
Preface.....	iii
Surface-Water and Water-Quality Stations, in Downstream Order, for which Records are Published in this Volume.....	viii
Discontinued Gaging Stations.....	xii
Discontinued Lakes and Reservoirs.....	xviii
Discontinued Water-Quality Stations.....	xviii
Introduction.....	1
Cooperation.....	1
Special Networks and Programs.....	2
Explanation of the Records.....	3
Station Identification Numbers.....	3
Downstream-Order System.....	3
Latitude-Longitude System.....	3
Records of Stage and Water Discharge.....	4
Data Collection and Computation.....	4
Data Presentation.....	5
Station Manuscript.....	5
Data Table of Daily Mean Values.....	6
Statistics of Monthly Mean Data.....	6
Summary Statistics.....	7
Identifying Estimated Daily Discharge.....	8
Accuracy of the Records.....	8
Other Records Available.....	8
Records of Surface-Water Quality.....	8
Classification of Records.....	8
Arrangement of Records.....	8
Onsite Measurements and Sample Collection.....	9
Water Temperature.....	9
Sediment.....	9
Cross-Sectional Data.....	10
Laboratory Measurements.....	10
Water Quality-Control Data.....	10
Data Presentation.....	11
Access to USGS Water Data.....	11
Definition of Terms.....	12
Publications on Techniques of Water-Resources Investigations.....	19
Surface-Water-Discharge and Surface-Water-Quality Records.....	35
Remark Codes.....	35
Discharge at Partial-Record Stations and Miscellaneous Sites.....	394
Crest-Stage Partial-Record Stations.....	394
Analyses of Samples Collected at Water-Quality Miscellaneous Sites.....	397
Analyses of Samples Collected at Water-Quality Partial-Record Stations.....	405
Index.....	407

ILLUSTRATIONS

Figure 1.	Diagram showing system for numbering miscellaneous sites (latitude and longitude).....	4
2-12.	Maps showing location of discharge and water-quality stations:	
2.	Imperial County.....	23
3.	Inyo County.....	24
4.	Kern County.....	25
5.	Los Angeles County.....	26
6.	Mono County.....	27
7.	Orange County.....	28
8.	Riverside County.....	29
9.	San Bernardino County.....	30
10.	San Diego County.....	31
11.	Santa Barbara County.....	32
12.	Ventura County.....	33
13-20.	Schematic diagrams showing diversions and storage:	
13.	Salton Sea Basin.....	39
14.	Mojave River Basin.....	83
15.	Bishop Creek Basin.....	116
16.	Santa Margarita River Basin.....	170
17.	Santa Ana River Basin.....	215
18.	San Gabriel and Los Angeles River Basins.....	281
19.	Santa Clara River Basin.....	297
20.	Santa Ynez River Basin.....	341

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

[Letters after station name designate type of data collected: (d), discharge;
(l), elevation, gage heights, or contents; (c), chemical; (b), biological; (p), precipitation;
(g), gage height; (t), water temperature; and (s), sediment]

	Station No.	Page
THE GREAT BASIN		
BRISTOL LAKE BASIN		
Caruthers Creek near Ivanpah (d).....	10252550	37
SALTON SEA BASIN		
Salton Sea near Westmorland (l)	10254005	40
Salt Creek near Mecca (d)	10254050	42
Alamo River at Drop No. 3, near Calipatria (d)	10254670	44
Alamo River near Niland (d)	10254730	46
New River at International Boundary, at Calexico (d)	10254970	47
New River near Westmorland (d)	10255550	49
San Felipe Creek:		
Borrego Sink Wash (Borrego Sink):		
Coyote Creek:		
Borrego Palm Creek near Borrego Springs (d)	10255810	50
Whitewater River at White Water (c)	10256000	52
Whitewater River at White Water Cutoff, at White Water (d)	10256060	53
San Gorgonio River:		
Snow Creek near White Water (dc)	10256500	54
Falls Creek near White Water (d)	10257500	58
Whitewater River at Windy Point, near White Water (d)	10257550	61
Mission Creek near Desert Hot Springs (d)	10257600	63
Chino Canyon Creek below Tramway, near Palm Springs (dc)	10257720	65
Palm Canyon Wash:		
Tahquitz Creek near Palm Springs (d)	10258000	68
Palm Canyon Creek near Palm Springs (d)	10258500	70
Andreas Creek near Palm Springs (d)	10259000	72
Palm Canyon Wash near Cathedral City (d)	10259050	74
Whitewater River at Rancho Mirage (d)	10259100	75
Deep Creek near Palm Desert (d)	10259200	77
Whitewater River at Indio (d)	10259300	79
Whitewater River near Mecca (d)	10259540	81
MOJAVE RIVER BASIN		
Deep Creek (head of Mojave River) near Hesperia (d)	10260500	84
West Fork Mojave River above Silverwood Lake, near Hesperia (d)	10260550	86
East Fork of West Fork Mojave River above Silverwood Lake, near Hesperia (d)	10260700	88
Silverwood Lake near Hesperia (l)	10260790	90
West Fork Mojave River below Silverwood Lake, near Hesperia (d)	10260820	91
West Fork Mojave River above Mojave River Forks Reservoir, near Hesperia (d)	10260950	93
Mojave River below Mojave River Forks Reservoir, near Hesperia (d)	10261100	95
Mojave River at Lower Narrows, near Victorville (d)	10261500	97
Mojave River at Barstow (d)	10262500	99
Mojave River at Afton (d)	10263000	100
ANTELOPE VALLEY		
Big Rock Creek near Valyermo (d)	10263500	102
Sled Track Canal at Lancaster Boulevard, near Rogers Lake (dp)	10264636	104
Buckhorn Creek at East 120th Avenue, near Rogers Lake (d)	10264640	107
South Drainage Rosamond/Bissell Hills near Edwards Air Force Base (p)	10264646	108
Mojave Creek at Forbes Avenue, at Edwards Air Force Base (dp)	10264658	109
Rogers Lake Tributary at Edwards Air Force Base (dp)	10264675	111
OWENS LAKE BASIN		
Owens River:		
Hot Creek at flume, near Mammoth (d)	10265150	114
BISHOP CREEK BASIN		
Horton Creek:		
McGee Creek:		
McGee Creek Diversion near Bishop (d)	10268225	117
Birch Creek below Diversion, near Bishop (d)	10268282	118
South Fork Bishop Creek:		
South Lake:		
Green Creek Conduit outlet near Bishop (d)	10270680	119
South Lake near Bishop (l)	10270700	120
South Fork Bishop Creek below South Lake, near Bishop (d)	10270800	121
South Fork Bishop Creek below South Fork Diversion Dam, near Bishop (d)	10270830	122
Middle Fork Bishop Creek:		
Lake Sabrina near Bishop (l)	10270870	123

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

ix

	Station No.	Page
<u>THE GREAT BASIN—Continued</u>		
<u>BISHOP CREEK BASIN—Continued</u>		
Middle Fork Bishop Creek—Continued:		
Middle Fork Bishop Creek below Lake Sabrina, near Bishop (d)	10270872	124
Intake No. 2 Reservoir near Bishop (l)	10270875	126
Middle Fork Bishop Creek below Intake No. 2 Reservoir, near Bishop (d)	10270877	127
Bishop Creek below Intake No. 3 Diversion Dam, near Bishop (d)	10270885	128
Bishop Creek Powerhouse No. 2 Diversion (from Intake No. 2 Reservoir):		
Birch-McGee Diversion to Bishop Creek Powerplant No. 2, near Bishop (d)	10270900	129
Bishop Creek below Intake No. 4 Diversion Dam, near Bishop (d)	10270940	130
Bishop Creek below Intake No. 5 Diversion Dam, near Bishop (d)	10270970	131
Bishop Creek Powerhouse No. 6 Penstock:		
Abelour Ditch near Bishop (d)	10270985	132
Bishop Creek above Powerplant No. 6, near Bishop (d)	10271200	133
<u>MONO LAKE BASIN</u>		
Mill Creek:		
Lundy Lake near Lee Vining (l)	10287060	135
Mill Creek Flume below Lundy Lake, near Lee Vining (d)	10287069	136
Rush Creek:		
Waugh Lake near June Lake (l)	10287260	138
Gem Lake near June Lake (l)	10287280	139
Agnew Lake near June Lake (l)	10287285	140
Rush Creek Flume below Agnew Lake, near June Lake (d)	10287289	141
Lee Vining Creek:		
Saddlebag Lake near Lee Vining (l)	10287650	143
Tioga Lake near Lee Vining (l)	10287700	144
Ellery Lake near Lee Vining (l)	10287760	145
Lee Vining Creek below Rhinedollar Dam, near Lee Vining (d)	10287770	146
<u>PACIFIC SLOPE BASINS IN CALIFORNIA</u>		
<u>TIJUANA RIVER BASIN</u>		
Cottonwood Creek (head of Tijuana River):		
Cottonwood Creek above Tecate Creek, near Dulzura (d)	11012000	148
Tecate Creek:		
Campo Creek near Campo (d)	11012500	150
<u>OTAY RIVER BASIN</u>		
Jamul Creek near Jamul (d)	11014000	151
<u>SWEETWATER RIVER BASIN</u>		
Sweetwater River near Descanso (d)	11015000	153
<u>SAN DIEGO RIVER BASIN</u>		
San Diego River:		
San Vicente Creek:		
San Vicente Reservoir near Lakeside (l)	11022100	155
Los Coches Creek near Lakeside (d)	11022200	156
San Diego River at Mast Road, near Santee (d)	11022480	158
San Diego River at Fashion Valley, at San Diego (d)	11023000	160
<u>LOS PENASQUITOS CREEK BASIN</u>		
Los Penasquitos Creek near Poway (d)	11023340	162
<u>SAN DIEGUI TO RIVER BASIN</u>		
Santa Ysabel Creek (head of San Dieguito River):		
Santa Ysabel Creek near Ramona (d)	11025500	164
Santa Maria Creek near Ramona (d)	11028500	166
<u>SAN LUIS REY RIVER BASIN</u>		
San Luis Rey River at Oceanside (d)	11042000	168
<u>SANTA MARGARITA RIVER BASIN</u>		
Temecula Creek (head of Santa Margarita River):		
Temecula Creek near Aguanga (d)	11042400	171
Vail Lake:		
Vail Lake near Temecula (l)	11042510	173
Pechanga Creek near Temecula (d)	11042631	174
Murrieta Creek:		
Warm Springs Creek near Murrieta (d)	11042800	176
Santa Gertrudis Creek near Temecula (d)	11042900	178
Murrieta Creek at Temecula (d)	11043000	179
Santa Margarita River near Temecula (d)	11044000	181
Rainbow Creek near Fallbrook (d)	11044250	183

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

	Station No.	Page
<u>PACIFIC SLOPE BASINS IN CALIFORNIA—Continued</u>		
SANTA MARGARITA RIVER BASIN—Continued		
Santa Margarita River at Fallbrook Public Utility District sump, near Fallbrook (d)	11044300	185
Sandia Creek near Fallbrook (d)	11044350	186
De Luz Creek near De Luz (d)	11044800	188
Fallbrook Creek near Fallbrook (d)	11045300	190
Santa Margarita River at Ysidora (d)	11046000	192
Santa Margarita River at mouth, near Oceanside (gct)	11046050	194
Santa Margarita River Estuary near Oceanside (ct)	331346117243401	200
LAS FLORES CREEK BASIN		
Las Flores Creek near Oceanside (d)	11046100	205
SAN MATEO CREEK BASIN		
San Mateo Creek near San Clemente (d)	11046300	207
Cristianitos Creek above San Mateo Creek, near San Clemente (d)	11046360	209
SAN JUAN CREEK BASIN		
San Juan Creek at La Novia Street Bridge, at San Juan Capistrano (d)	11046530	211
Arroyo Trabuco at San Juan Capistrano (d)	11047300	213
SANTA ANA RIVER BASIN		
Santa Ana River:		
Bear Creek:		
Big Bear Lake near Big Bear Lake (l)	11049000	216
Santa Ana River near Mentone (d)	11051500	217
Mill Creek:		
Mill Creek Power Canals Nos. 2 and 3 near Yucaipa (d)	11052500	220
Plunge Creek near East Highlands (d)	11055500	222
City Creek near Highland (d)	11055800	225
San Timoteo Creek near Loma Linda (d)	11057500	228
Warm Creek Floodway:		
East Twin Creek near Arrowhead Springs (d)	11058500	230
Santa Ana River at E Street, near San Bernardino (ds)	11059300	232
Warm Creek near San Bernardino (d)	11060400	235
Lytle Creek near Fontana (d)	11062000	237
Cajon Creek:		
Lone Pine Creek near Keenbrook (d)	11063500	240
Cajon Creek below Lone Pine Creek, near Keenbrook (d)	11063510	242
Devil Canyon Creek near San Bernardino (d)	11063680	244
Lytle Creek at Colton (d)	11065000	246
Santa Ana River at MWD Crossing, near Arlington (dc)	11066460	247
Prado Flood Control Basin:		
San Jacinto River (infrequent tributary to Santa Ana River via Lake Elsinore and Temescal Creek):		
San Jacinto River near San Jacinto (d)	11069500	250
Bautista Creek at head of flood control channel, near Hemet (d)	11070020	252
San Jacinto River above State Street, near San Jacinto (d)	11070150	254
Perris Valley storm drain at Nuevo Road, near Perris (dp)	11070270	256
San Jacinto River near Elsinore (d)	11070500	259
Temescal Creek (continuation of San Jacinto River from Lake Elsinore):		
Temescal Creek above Main Street, at Corona (d)	11072100	260
Chino Creek at Schaefer Avenue, near Chino (d)	11073360	262
West Branch Cucamonga Channel above Ely Percolation Basins, at Ontario (d)	11073493	264
Cucamonga Creek near Mira Loma (d)	11073495	266
Santa Ana River below Prado Dam (dct)	11074000	268
Carbon Creek below Carbon Canyon Dam (d)	11075720	273
Santiago Creek at Modjeska (d)	11075800	274
Santiago Creek at Santa Ana (d)	11077500	276
Santa Ana River at Santa Ana (ds)	11078000	278
SAN GABRIEL RIVER BASIN		
San Gabriel River below Santa Fe Dam, near Baldwin Park (d)	11085000	282
San Gabriel River above Whittier Narrows Dam (d)	11087020	284
Coyote Creek:		
Brea Creek below Brea Dam, near Fullerton (d)	11088500	286
Fullerton Creek below Fullerton Dam, near Brea (d)	11089500	288
LOS ANGELES RIVER BASIN		
Los Angeles River:		
Big Tujunga Creek below Hansen Dam (d)	11097000	290
Arroyo Seco near Pasadena (d)	11098000	292
Rio Hondo above Whittier Narrows Dam (d)	11101250	294
Rio Hondo below Whittier Narrows Dam (d)	11102300	295

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

xi

	Station No.	Page
PACIFIC SLOPE BASINS IN CALIFORNIA—Continued		
SANTA CLARA RIVER BASIN		
Santa Clara River:		
Castaic Creek:		
Elderberry Forebay near Castaic (l)	11108092	298
Castaic Lake near Castaic (l)	11108133	299
Castaic Creek Release Flow below Castaic Lake, near Castaic (d)	11108134	300
Santa Clara River near Piru (d)	11109000	302
Piru Creek below Buck Creek, near Pyramid Lake (d)	11109375	304
Pyramid Lake:		
Canada de Los Alamos above Pyramid Lake (d)	11109395	306
North Portal Tehachapi Tunnel near Gorman (d)	11109396	308
Pyramid Lake near Gorman (l)	11109520	310
Piru Creek below Pyramid Lake, near Gorman (d)	11109525	311
Piru Creek above Lake Piru (d)	11109600	313
Lake Piru near Piru (l)	11109700	315
Piru Creek below Santa Felicia Dam (d)	11109800	316
Sespe Creek near Wheeler Springs (d)	11111500	318
Sespe Creek near Fillmore (d)	11113000	320
Santa Paula Creek near Santa Paula (d)	11113500	322
Santa Clara River at Montalvo (d)	11114000	324
VENTURA RIVER BASIN		
Ventura River near Ventura (ds)	11118500	326
CARPINTERIA CREEK BASIN		
Carpinteria Creek near Carpinteria (d)	11119500	331
MISSION CREEK BASIN		
Mission Creek near Mission Street, at Santa Barbara (d)	11119750	333
ATASCADERO CREEK BASIN		
Atascadero Creek:		
Maria Ygnacio Creek at University Drive, near Goleta (d)	11119940	335
Atascadero Creek near Goleta (d)	11120000	337
SAN JOSE CREEK BASIN		
San Jose Creek near Goleta (d)	11120500	339
SANTA YNEZ RIVER BASIN		
Santa Ynez River at Jameson Lake, near Montecito (d)	11121000	342
Santa Ynez River above Gibraltar Dam, near Santa Barbara (d)	11122000	343
Santa Ynez River below Gibraltar Dam, near Santa Barbara (d)	11123000	344
Santa Ynez River below Los Laureles Canyon, near Santa Ynez (dc)	11123500	346
Lake Cachuma:		
Santa Cruz Creek near Santa Ynez (dc)	11124500	348
Lake Cachuma near Santa Ynez (l)	11125500	351
Santa Ynez River near Santa Ynez (dct)	11126000	352
Alamo Pintado Creek near Solvang (dc)	11128250	357
Alisal Creek:		
Alisal Reservoir near Solvang (l)	11128300	360
Santa Ynez River at Solvang (dct)	11128500	361
Zaca Creek near Buellton (dc)	11129800	366
Salsipuedes Creek near Lompoc (dc)	11132500	369
Santa Ynez River at Narrows, near Lompoc (dc)	11133000	373
Miguelito Creek at Lompoc (dc)	11134800	376
SAN ANTONIO CREEK BASIN		
San Antonio Creek near Casmalia (dc)	11136100	379
SANTA MARIA RIVER BASIN		
Cuyama River (head of Santa Maria River):		
Cuyama River below Buckhorn Canyon, near Santa Maria (dc)	11136800	383
Sisquoc River near Sisquoc (dc)	11138500	386
Sisquoc River near Garey (d)	11140000	389
Santa Maria River (continuation of Cuyama River):		
Orcutt Creek near Orcutt (dc)	11141050	391

DISCONTINUED GAGING STATIONS

The following continuous-record streamflow stations in California have been discontinued or converted to partial-record stations. Daily records were collected and are stored in NWIS for the period of record shown for each station.

Station No.	Station name	Drainage area (mi ²)	Period of record
09424050	Chemehuevi Wash Tributary near Needles	2.04	1960–62, 1966–68
09428530	Arch Creek near Earp	1.52	1961–71
10250600	Wildrose Creek near Wildrose Station	23.7	1961–73, 1975
10250800	Darwin Creek near Darwin	173	1963–89
10251000	Big Dip Creek near Stovepipe Wells	.95	1963–69
10251100	Salt Creek near Stovepipe Wells	—	1974–88
10251300	Amargosa River at Tecopa	3,090	1962–72, 1974–83
10251350	Horsethief Creek near Tecopa	3.06	1961–70
10252300	China Spring Creek near Mountain Pass	.94	1961–72
10252330	Wheaton Wash near Mountain Pass	10.2	1965–68
10253080	Sunflower Wash near Essex	3.04	1963–70
10253320	Quail Wash near Joshua Tree	100	1964–71
10253350	Fortynine Palms Creek near Twentynine Palms	8.55	1963–71
10253540	Corn Springs Wash near Desert Center	24.1	1964–71
10253600	Eagle Creek at Eagle Mountain	7.74	1961–66
10255200	Myer Creek Tributary near Jacumba	.11	1966–70
10255700	San Felipe Creek near Julian	89.2	1958–83
10255800	Coyote Creek near Borrego Springs	144	1951–83
10255805	Coyote Creek below Box Canyon, near Borrego Springs	154	1984–94
10255820	Yaqui Pass Wash near Borrego	.041	1965–69
10255850	Vallecito Creek near Julian	39.7	1964–83
10255885	San Felipe Creek near Westmorland	1,693	1961–91
10256000	Whitewater River at White Water	57.5	1949–79
10256050	Whitewater Municipal West Company Diversion at White Water	—	1966–70, 1971–73, 1975–81
10256060	Whitewater River at White Water Cutoff at White Water	59.1	1985–93
10256200	San Gorgonio River near Banning	14.8	1976–81
10256300	San Gorgonio River at Banning	44.2	1981
10256400	San Gorgonio River near White Water	154	1966–73, 1975–78
10257710	Chino Canyon Creek near Palm Springs	3.88	1975–85
10257800	Long Creek near Desert Hot Springs	19.6	1963–71
10258030	Tahquitz Creek at Palm Springs	—	1983
10258100	Palm Canyon Creek Tributary near Anza	.47	1967–73
10259600	Cottonwood Wash near Cottonwood Spring	.71	1960–72
10259920	Wasteway No. 1 near Mecca	—	1966–81
10260200	Pipes Creek near Yucca Valley	15.1	1958–71
10260400	Cushenbury Creek near Lucerne Valley	6.36	1957–71
10260620	Houston Creek above Lake Gregory, at Crestline	.35	1979–93
10260630	Abondigas Creek above Lake Gregory, at Crestline	1.15	1979–93
10260650	Houston Creek below Lake Gregory, at Crestline	2.68	1979–93
10260820	West Fork Mojave River below Silverwood Lake	34.0	1981–83
10261000	West Fork Mojave River near Hesperia	70.3	1905–22, 1930–71
10261100	Mojave River below Mojave River Fork Reservoir, near Hesperia	211	1972–74, 1981–97
10261900	Mojave River at Wild Crossing, near Helendale	957	1966–70
10262000	Mojave River near Hodge	1,091	1930–32, 1970–93
10263675	Big Rock Creek Wash at Highway 138, near Llano	53.1	1989–92
10264500	Little Rock Creek near Palmdale	78.0	1968
10264502	Peach Tree Creek near Littlerock	.04	1989–94
10264508	Somerset Creek at Palmdale	.50	1989–94
10264510	Inn Creek at Palmdale	.03	1989–94
10264530	Pine Creek near Palmdale	1.78	1989–94
10264550	City Ranch Creek near Palmdale	.39	1989–94
10264555	Estates Creek near Quartz Hill	.11	1989–94
10264590	Cottonwood Creek near Rosamond	35.7	1965–72
10264600	Oak Creek, near Mojave	15.8	1957–86
10264605	Joshua Creek near Mojave	3.83	1989–94
10264710	Goler Gulch near Randsburg	41.3	1966–72
10264740	Cache Creek near Mojave	96.5	1965–72
10264750	Pine Tree Creek near Mojave	33.5	1958–79
10264770	Cottonwood Creek near Cantil	163	1966–72
10264870	Little Lake Creek near Little Lake	8.60	1964–68

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
10264878	Ninemile Creek near Brown	10.4	1962–71
10265160	Little Hot Creek below Hot Springs, near Mammoth Lakes	6.37	1990–95
10265200	Convict Creek near Mammoth Lakes	18.2	1925–78
10265500	Owens River near Round Valley	425	1909–23, 1928–40
10265700	Rock Creek at Little Round Valley, near Bishop	35.8	1925–78
10267000	Pine Creek at Division Box, near Bishop	36.4	1922–79
10268000	Owens River at Pleasant Valley, near Bishop	583	1918–40
10268700	Silver Canyon Creek near Laws	19.7	1930–78
10270960	Coyote Creek near Bishop	25.8	1991–96
10271210	Bishop Creek below Powerplant No. 6, near Bishop	104	1936–90
10276000	Big Pine Creek near Big Pine	39.0	1921–78
10276002	Giroux Ditch lower below Big Pine	—	1975–78
10276500	Tinemaha Creek near Big Pine	27.3	1907–11
10277000	Birch Creek near Big Pine	11.7	1907–11
10277400	Owens River below Tinemaha Reservoir, near Big Pine	1,964	1975–84
10277500	Owens River near Big Pine	1,976	1912–74
10278000	Taboose Creek near Aberdeen	11.2	1906–11
10278500	Goodale Creek near Aberdeen	11.2	1906–11
10281500	Oak Creek near Independence	24.1	1906–11
10281800	Independence Creek below Pi Canyon Creek, near Independence	18.1	1923–78
10282000	Independence Creek near Independence	18.8	1907–11
10282480	Mazourka Creek near Independence	15.6	1961–72
10284800	Inyo Creek near Lone Pine	1.54	1968–73
10285500	Tuttle Creek near Lone Pine	14.0	1909–11
10285700	Owens River at Keeler Bridge, near Lone Pine	2,604	1961–79
10286000	Cottonwood Creek near Olancha	40.1	1906–11, 1914–18, 1920–38, 1960–78
10286001	Cottonwood Creek Penstock weir, near Lone Pine	—	1906–11, 1914–18, 1919–78
10286002	Cottonwood Creek Diversion to powerhouse	—	1939–50, 1974, 1975–78
10287070	Mill Creek below Lundy Lake, near Mono Lake	18.1	1942–90
10287290	Rush Creek below Agnew Lake, near June Lake	23.3	1960–66, 1986–90
10287400	Rush Creek above Grant Lake, near June Lake	51.3	1937–79
10287900	Lee Vining Creek near Lee Vining	34.9	1935–79
10290000	Summers Creek near Bridgeport	8.26	1954–59
11010900	Wilson Creek Tributary near Dulzura	.61	1968–73
11011900	Potrero Creek Tributary near Barrett Junction	.78	1966–69
11012100	Miller Creek near Live Oak Springs	1.00	1962–64
11013000	Tijuana River near Dulzura	481	1937–90
11013500	Tijuana River near Nestor	1,695	1937–82
11013600	Jamul Creek at Lee Valley, near Jamul	2.26	1984–85, 1987–88
11013700	Jamul Creek Tributary near Jamul	2.47	1973
11014700	Telegraph Canyon Creek at Chula Vista	6.23	1973
11014850	Japacha Creek near Descanso	2.40	1965–67
11016000	Sweetwater River near Dehesa	112	1913–16
11021500	San Vicente Creek near Foster	66.0	1942
11022000	San Vicente Creek at San Vicente dam, at Foster	74.2	1937–41
11022350	Forester Creek at El Cajon	21.3	1983–93
11023200	San Clemente Canyon Creek at Miramar Naval Air Station	5.60	1973
11023250	Poway Creek near Poway	7.92	1978–87
11023310	Rattlesnake Creek at Poway	8.13	1978–89
11023315	Poway Creek Tributary at Oak Knoll Road, near Poway	.93	1972–75
11023318	Pomerado Creek at Glenoak Road, near Poway	2.43	1970–75
11023320	Pomerado Creek at Poway Road, near Poway	4.14	1971–75
11023330	Los Penasquitos Creek below Poway Creek, near Poway	31.2	1970–93
11023325	Beeler Creek at Pomerado Road, near Poway	5.46	1978–89
11023400	Carroll Creek near La Jolla	15.8	1985–86
11023450	Carmel Creek near Del Mar	1.11	1985–86
11023500	Santa Ysabel Creek near Santa Ysabel	12.5	1914
11024500	Black Canyon Creek near Mesa Grande	15.3	1914, 1923–24
11026000	Santa Ysabel Creek near San Pasqual	128	1957–80
11027000	Guejito Creek near San Pasqual	22.5	1947–82
11027500	Guejito Creek at San Pasqual	27.7	1915, 1917, 1947–56

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11029000	San Dieguito River near San Pasqual	249	1956–65
11029500	San Dieguito River at Bernardo	269	1912–15
11030500	San Dieguito River near Del Mar	338	1984–89
11030730	Escondido Creek near Olivenhain	64.6	1973
11031000	San Luis Rey River near Warner Springs	33.6	1913–15
11031500	Agua Caliente Creek near Warner Springs	19.0	1961–87
11033000	West Fork San Luis Rey River near Warner Springs	25.5	1913–15, 1957–86
11035000	San Luis Rey River at Lake Henshaw, near Mesa Grande	206	1912–22
11037650	Pauma Valley Water Company diversion near Pauma Valley	—	1966–70, 1972–81
11037700	Pauma Creek near Pauma Valley	11.0	1965–81
11037701	Pauma Creek and Diversion near Pauma Valley	11.0	1965–81
11038500	San Luis Rey River near Pala	317	1909–11, 1913–15
11039100	San Luis Rey River Tributary near Pala	1.01	1966–73
11039600	Bubble-Up Creek near Pala	4.11	1991
11039800	San Luis Rey River at Couser Canyon Bridge, near Pala	364	1986–93
11040000	San Luis Rey River at Monserate Narrows, near Pala	373	1938–81, 1947–86
11040200	Keys Creek Tributary at Valley Center	7.65	1970–83, 1991
11040500	San Luis Rey River at Bonsall	456	1912–15
11040700	San Luis Rey River below Moosa Canyon, near Bonsall	499	1984–85
11041000	San Luis Rey River near Bonsall	513	1930–79
11042490	Wilson Creek above Vail Lake, near Radec	122	1990–94
11042520	Temecula Creek at Nigger Canyon, near Temecula	320	1923–48
11042600	Temecula Creek below Vail Dam	320	1978
11044500	Santa Margarita River near Fallbrook	644	1925–80
11044600	Santa Margarita River Tributary near Fallbrook	.52	1962–65
11045000	Santa Margarita River near De Luz Station	705	1925–26
11046200	San Onofre Creek near San Onofre	34.6	1951–67
11046250	San Onofre Creek at San Onofre	42.2	1947–67, 1989
11046310	San Mateo Creek near San Onofre	91.9	1951–52
11046350	Cristianitos Creek near San Clemente	29.0	1951–67
11046370	San Mateo Creek at San Onofre	132	1947–67, 1984–85
11046500	San Juan Creek near San Juan Capistrano	106	1929–71
11046501	San Juan Creek near San Juan Capistrano plus canal	117	1955–71
11047200	Oso Creek at Crown Valley Parkway, near Mission Viejo	14.0	1970–81
11047500	Aliso Creek at El Toro	7.92	1931–80
11047700	Aliso Creek at South Laguna	34.4	1983–87
11048000	Irvine Ranch Drainage Canal, near Tustin	92.0	1931–40
11048555	San Diego Creek at Campus Drive, near Irvine	—	1978–79, 1983–85
11049600	Greenspot Pipeline near Mentone	—	1972–73
11051600	Santa Ana River spreading diversion near Mentone	213	1952–77
11054000	Mill Creek near Yucaipa (REVISED RECORDS IN WDR CA-92-1)	42.4	1920–38, 1948–86
11054600	Crafton near Mentone	—	1972–79
11055000	Mill Creek near Mentone	50.5	1939–65
11056000	Santa Ana River near San Bernardino	306	1929–37, 1955–61
11056500	Little San Geronio River near Beaumont (REVISED RECORDS IN WDR CA-92-1)	1.74	1949–85
11057490	San Timoteo Creek at Loma Linda	125	1979–80
11058600	Waterman Canyon Creek near Arrowhead Springs	4.65	1912–14, 1920–85
11059000	Warm Creek Floodway at San Bernardino	75.1	1961–81
11059100	San Bernardino Water–Quality Control Plant at San Bernardino	—	1973–82
11060300	Lytle Creek at Channel, at San Bernardino	—	1929–30, 1932–57
11060500	Mecks and Daley Canal near Colton	—	1921–81
11062200	Fontana Union Water Co. Lytle Creek return flow channel near Fontana	—	1973–80
11062810	West San Bernardino County Water District Rialto Diversion near Fontana	—	1981
11063000	Cajon Creek near Keenbrook	40.6	1920–71, 1978–83
11064000	Lytle Creek (East Channel) at San Bernardino	—	1929–57
11065800	Warm Creek near Colton	198	1921–61
11065801	Warm Creek near Colton plus diversion	259	1920–61
11066050	Santa Ana River at Colton	740	1962–66
11066100	Lytle Creek West Channel at Colton	—	1929–45
11066440	Santa Ana River at Mission Boulevard, at Riverside	808	1971–82
11066478	Riverside Water–Quality Control Plant Weir No. 1	—	1973–81
11066479	Riverside Water–Quality Control Plant Weir No. 2	—	1973–81
11066480	Riverside Water–Quality Control Plant at Riverside Narrows, near Arlington	—	1966–81
11066500	Santa Ana River at Riverside Narrows, near Arlington	853	1929–73

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11066550	Sheehan Diversion at Riverside Narrows, near Arlington	—	1964–65, 1967–68
11066950	Day Creek Diversion near Etiwanda	—	1966–69, 1971
11067000	Day Creek near Etiwanda	4.56	1929–72
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	1961–68
11069300	South Fork San Jacinto River tributary near Valle Vista	2.20	1962–67
11069501	San Jacinto River near San Jacinto plus canals	141	1949–81, 1983–89
11070000	Bautista Creek near Hemet	39.6	1948–69
11070050	Bautista Creek at Valle Vista	48.5	1970–87
11070232	East Fork Pigeon Pass Creek at Heacock Street, near Sunnymead	.48	1970–75
11070240	Sunnymead Channel at Alessandro Boulevard, near Sunnymead	13.3	1970–75, 1990–93
11070256	Perris Valley Storm Drain at Nandino Avenue, near March Air Force Base	50.6	1970–75, 1990–93
11070262	Perris Valley Storm Drain Lateral "B" near March Air Force Base	10.6	1970–75, 1990–93
11070263	Unnamed creek tributary to Perris Reservoir near Moreno Valley	.46	1989–91
11070375	San Jacinto River at Railroad Canyon Weir, near Elsinore	562	1952–84
11070465	Salt Creek at Murrieta Road, near Sun City	—	1984
11070475	Salt Creek at Railroad Canyon Reservoir, near Elsinore	122	1970–78
11072000	Temescal Creek near Corona	164	1929–80
11072200	Temescal Creek at Corona	249	1968–74
11073000	San Antonio Creek near Claremont	16.5	1917–72
11073200	San Antonio Creek below San Antonio Dam	26.9	1963–80
11073440	Chino Creek near Chino	107	1968–69
11073470	Cucamonga Creek near Upland	9.68	1929–75
11073500	Chino Creek near Prado	218	1929–40
11074500	Santa Ana River at county line, below Prado Dam	1,510	1919–42, 1945–60
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	—	1974–86
11075730	Carbon Creek at Olinda	19.7	1931–38
11075740	Carbon Creek near Yorba Linda	20.1	1950–61
11077000	Santiago Creek near Villa Park	84.6	1921–63
11077001	Santiago Creek plus diversion near Villa Park	83.8	1921–31
11078100	Santa Ana River at Adams Avenue, near Costa Mesa	1,701	1975–77
11078110	Rubio Wash at Glendon Way	—	1973–75
11078120	Compton Creek at 120th Street	—	1974–75
11078130	Arcadia Wash at Grand Avenue	—	1974–75
11078140	Eaton Wash at Loftas Drive	—	1974–75
11078150	Limekiln Creek above Aliso Creek	—	1973–74
11078170	Puddingstone Creek below Puddingstone Dam	—	1974
11078190	Santa Fe Diversion Channel	—	1974
11078191	West Fork San Gabriel River below Cogswell Dam	—	1975
11080000	East Fork San Gabriel River at Camp Bonita	58.2	1928–32
11080500	East Fork San Gabriel River near Camp Bonita	84.6	1933–79
11081000	Bear Creek near Camp Rincon	28.2	1930–36
11081500	North Fork San Gabriel River at Camp Rincon	18.6	1930–36
11082000	West Fork San Gabriel River at Camp Rincon	104	1928–78
11083500	San Gabriel River near Azusa	214	1894, 1896–1959, 1961–66
11084000	Rogers Creek near Azusa	6.64	1918–62
11084500	Fish Creek near Duarte	6.36	1916–79
11085019	San Gabriel River below Valley Boulevard	—	1973–74
11086000	Dalton Creek near Glendora	7.24	1913–62
11086300	San Dimas Creek below San Dimas Dam	16.3	1957–78
11086400	San Dimas Creek near San Dimas	18.3	1917–56
11086500	Little Dalton Creek near Glendora	2.72	1939–68, 1970–71
11086990	San Jose Creek near El Monte	87.8	1965–78
11087100	Rio Hondo Flood Flow Channel at Whittier Narrows Dam	—	1966–70
11087195	San Jose Creek near Whittier	88.7	1929–64
11087500	San Gabriel River at Pico	447	1929–78
11088000	San Gabriel River at Spring Street, near Los Alamitos	472	1937–51, 1953–79
11089000	Brea Creek at Fullerton	23.6	1931–69
11090000	Fullerton Creek at Fullerton	7.50	1936–64
11090200	Fullerton Creek at Richman Avenue, at Fullerton	12.1	1960–77, 1979–81
11090500	Coyote Creek near Artesia	120	1930–63
11090700	Coyote Creek at Los Alamitos	150	1964–78
11092450	Los Angeles River at Sepulveda Dam	158	1932–79

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11093000	Pacoima Creek near San Fernando	28.3	1917–79
11093490	North Fork Mill Creek near La Canada	5.80	1966–73
11093500	Mill Creek near Colby Ranch	21.7	1931–34
11094000	Big Tujunga Creek below Mill Creek, near Colby Ranch (formerly Tujunga Creek)	64.9	1948–71
11094500	Big Tujunga Creek near Colby Ranch (formerly Tujunga Creek)	67.5	1931–50
11095000	Fox Creek near Colby Ranch	9.22	1931–37
11095500	Big Tujunga Creek near Sunland (formerly Tujunga Creek)	106	1917–77
11096000	Haines Creek near Tujunga	1.26	1917–34, 1936–61
11096500	Little Tujunga Creek near San Fernando	21.1	1929–73
11097500	Los Angeles River at Los Angeles	514	1930–79
11098500	Los Angeles River near Downey	599	1928–78
11099500	Sawpit Creek near Monrovia	5.21	1916–61
11100000	Santa Anita Creek near Sierra Madre (REVISED RECORDS IN WDR CA-92-1)	9.71	1917–70
11100500	Little Santa Anita Creek near Sierra Madre	1.84	1916–62
11101000	Eaton Creek near Pasadena	6.47	1918–66
11101380	Alhambra Wash at Klingerman Street, near Montebello	15.2	1976–79
11101500	Rio Hondo near Montebello	116	1929–78
11102000	Mission Creek near Montebello	4.16	1930–77
11102500	Rio Hondo near Downey	143	1928–79
11103500	Ballona Creek near Culver City	89.5	1928–78
11106000	Calleguas Creek at Camarillo	168	1929–31, 1955–58
11106400	Conejo Creek above Highway 101, near Camarillo	64	1973–83
11106500	Conejo Creek near Camarillo	69	1928–31
11107000	Honda Barranca near Somis	2.5	1955–63
11107500	Beardsley Wash near Somis	13	1954–58
11107745	Santa Clara River above railroad station, near Lang	157	1950–68, 1970–77
11107860	Bouquet Creek near Saugus	51.6	1971–73, 1975,
11107922	South Fork Santa Clara River at Saugus	43.4	1976–77
11108000	Santa Clara River near Saugus	411	1930–55
11108075	Castaic Creek above Fish Creek, near Castaic	37.0	1977–78, 1989–93
11108080	Fish Creek above Castaic Creek, near Castaic	27.2	1977–78, 1989–93
11108090	Elderberry Canyon Creek above Castaic Creek, near Castaic	2.50	1978, 1989–93
11108095	Necktie Canyon Creek above Castaic Creek, near Castaic	2.12	1977–78, 1989–93
11108130	Elizabeth Lake Canyon Creek above Castaic Lake, near Castaic	43.7	1977–78, 1989–93
11108135	Castaic Lagoon Parshall Flume near Castaic	138	1977–78, 1988–96
11108145	Castaic Creek near Saugus	184	1947–76
11108500	Santa Clara River at Los Angeles–Ventura County Line	625	1953–96
11109100	Piru Creek below Thorn Meadows, near Stauffer	22.5	1972–78
11109200	Middle Fork Lockwood Creek near Stauffer	5.50	1972–78
11109250	Lockwood Creek at gorge, near Stauffer	58.7	1972–81
11110000	Piru Creek near Piru	437	1912–13, 1928–56, 1969–74
11111500	Sespe Creek near Wheeler Springs	49.5	1948–97
11112500	Fillmore Irrigation Company Canal near Fillmore	—	1940–51, 1972–83
11113001	Sespe Creek and Fillmore Irrigation Company Canal	—	1927–85, 1990–93
11113900	Saticoy Diversion near Saticoy	—	1969–81, 1983–87
11114500	Matilija Creek above reservoir, near Matilija Hot Springs	50.7	1948–69
11115500	Matilija Creek at Matilija Hot Springs	54.6	1928–88
11116000	North Fork Matilija Creek at Matilija Hot Springs	15.6	1929–32, 1934–73, 1974–83
11116500	Ventura River near Ojai	70.7	1912–14, 1922–24, 1983–84
11116550	Ventura River near Meiners Oaks	76.4	1959–79, 1981–82, 1984–88
11117000	San Antonio Creek near Ojai	33.7	1928–32
11117600	Coyote Creek near Oak View	13.2	1959–88
11117800	Santa Ana Creek near Oak View	9.11	1959–88
11118000	Coyote Creek near Ventura	41.2	1928–32, 1934–58, 1970–82
11119660	San Ysidro Creek at Montecito	3.07	1980–83
11119700	Sycamore Creek at Santa Barbara	3.41	1971–72, 1980
11119760	Victoria Street drain at outlet, at Santa Barbara	0.625	1970–78

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11119780	Arroyo Burro at Santa Barbara	6.65	1970–93
11119900	Atascadero Creek at Puente Road, near Goleta	3.86	1971–72
11120510	San Jose Creek at Goleta	9.42	1970–92
11120520	San Pedro Creek at Goleta	3.21	1971–72
11120530	Tecolotito Creek near Goleta	4.42	1970–72, 1980–82, 1987–91
11120550	Gaviota Creek near Gaviota	18.8	1967–86
11120600	Jalama Creek near Lompoc	20.5	1966–82
11120700	Canada Honda Creek near Lompoc	3.09	1959–62
11120800	Canada Honda Creek near Point Arguello	8.47	1959–62
11124000	Santa Cruz Creek above Stuke Canyon	64.9	1947–52
11125000	Cachuma Creek near Santa Ynez	23.8	1951–62
11126500	Santa Agueda Creek near Santa Ynez	55.8	1941–71, 1977–78
11127000	San Lucas Creek near Santa Ynez	3.2	1953–54
11127500	Zanja de Cota Creek near Santa Ynez	13.8	1955–61
11128000	Santa Ynez River at Grand Avenue, near Santa Ynez	513	1955–65
11128400	Alisal Creek near Solvang	12.3	1955, 1957–72
11129000	Nojoqui Creek near Buellton	15.1	1953–54
11129500	Santa Ynez River at Buellton	611	1955–59
11130000	Zaca Creek at Buellton	39.4	1941–63
11130500	Santa Ynez River near Buellton	668	1952–74
11131000	Santa Ynez River at Santa Rosa Dam site, near Buellton	700	1955–64
11131500	Santa Ynez River at Coopers East Fork, near Lompoc	708	1955–76
11132000	Santa Ynez River below Santa Rita Creek, near Lompoc	733	1955–62
11134000	Santa Ynez River at H Street, near Lompoc	815	1947–62
11134500	Santa Ynez River at 13th Street, near Lompoc	820	1955–75
11135000	Santa Ynez River at Pine Canyon, near Lompoc	884	1941–46, 1964–83
11135500	Santa Ynez River at barrier, near Surf	895	1947–65
11135800	San Antonio Creek at Los Alamos	34.9	1970–92
11136000	San Antonio Creek at Harris	93.7	1941–55
11136050	San Antonio Creek above Barka slough, near Orcutt	114	1985–87
11136150	San Antonio Creek Tributary near Casmalia	.28	1947–70
11136400	Wagon Road Creek near Stauffer	17.9	1972–78
11136480	Reyes Creek near Ventucopa	4.62	1972–78
11136500	Cuyama River near Ventucopa	89.9	1945–58
11136650	Aliso Canyon Creek near New Cuyama	16.1	1964–72
11137000	Cuyama River near Santa Maria	904	1930–62
11137400	Alamo Creek near Nipomo	83.3	1959–77
11137500	Alamo Creek near Santa Maria	86.6	1944–62
11137900	Huasna River near Arroyo Grande	10.3	1959–86
11138000	Huasna River near Santa Maria	117	1930–62
11138100	Cuyama River below Twitchell Dam	1,132	1959–83
11139000	La Brea Creek near Sisquoc	93.6	1944–73
11139350	Foxen Creek near Sisquoc	16.8	1966–73
11139500	Tepusquet Creek near Sisquoc	28.7	1944–87
11140600	Bradley Ditch near Donovan Road, at Santa Maria	5.47	1970–92
11140800	Blosser Ditch near Donovan Road, at Santa Maria	—	1972–76
11141000	Santa Maria River at Guadalupe	1,741	1940–87
11160020	San Lorenzo River near Boulder Creek	6.17	1968–92

DISCONTINUED LAKES AND RESERVOIRS

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

Station No.	Station name	Drainage area (mi ²)	Period of record
10260640	Lake Gregory at Crestline	2.66	1978–93
10287000	Mono Lake near Mono Lake	785	1912–90
11013200	Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico	977	1937–90
11014550	Lower Otay Lake near Chula Vista	99.0	1945–59, 1972–93
11020600	El Capitan Lake near Lakeside	188	1936–66, 1972–93
11030020	Lake Hodges near Escondido	303	1945–68, 1972–93
11030700	Lake Wohlford near Escondido	7.96	1972–93
11011000	Barrett Lake near Dulzura	245	1960–66, 1986–93
11117900	Lake Casitas near Casitas Springs	38.6	1986–87

DISCONTINUED WATER-QUALITY STATIONS

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

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
10254670	Alamo River at Drop No. 3, near Calipatria	—	WQ,B,C, T,S	1969–70, 1975–77, 1979–94
10254970	New River at International Boundary, at Calexico	—	B,C,T,S	1969–71, 1973–85
10256060	Whitewater River at White Water Cutoff, at White Water	59.1	WQ	1972–76, 1978–96
10261500	Mojave River at Lower Narrows, near Victorville	513	C,T	1962–81
10263675	Big Rock Creek Wash at Highway 138, near Llano	53.1	P	1989–92
10264502	Peach Tree Creek near Littlerock	.04	P	1989–94
10264605	Joshua Creek near Mojave	3.83	P	1989–94
10265150	Hot Creek at flume, near Mammoth	68.3	C,T	1983–88
10277400	Owens River below Tinemaha Reservoir, near Big Pine	1,964	C,T	1975–81
11013500	Tijuana River near Nestor	1,695	T,S	1970–71, 1976, 1978
11022500	San Diego River near Santee	377	T,S	1970–78
11023000	San Diego River at Fashion Valley, at San Diego	429	S	1984
11030500	San Dieguito River near Del Mar	338	S	1984
11042000	San Luis Rey River at Oceanside	557	WQ,B,C,T,S	1969–93
11046000	Santa Margarita River at Ysidora	723	S	1969–71, 1973–74, 1978
11046250	San Onofre Creek at San Onofre	42.2	S	1982–83, 1988–89
11046370	San Mateo Creek at San Onofre	132	S	1984
11046500	San Juan Creek near San Juan Capistrano	106	T,S	1967–68, 1971, 1982
11046530	San Juan Creek at La Novia Street Bridge, at San Juan Capistrano	109	T,S	1986–93
11046550	San Juan Creek at San Juan Capistrano	117	T,S	1972–82, 1987
11047000	Arroyo Trabuco near San Juan Capistrano	35.7	T,S	1967, 1978
11047300	Arroyo Trabuco at San Juan Capistrano	54.1	S	1971–77, 1984–93
11048500	San Diego Creek at Culver Drive, near Irvine	41.8	T,S	1972–85
11048530	El Modena Irvine Channel near Irvine	—	T,S	1975–79
11048540	Peters Canyon Wash at Barranca Road, near Irvine	—	T,S	1975–79, 1983–85
11048550	San Diego Creek at Lane Road, near Irvine	—	T,S	1972–76
11048555	San Diego Creek at Campus Drive, near Irvine	—	T,S	1972–76, 1978–79, 1983–85
11051500	Santa Ana River near Mentone	210	T,S	1982–89
11056200	Santa Ana River at Waterman Avenue, at San Bernardino	339	T,S	1977, 1979
11057000	San Timoteo Creek near Redlands	118	T,S	1977–78
11057500	San Timoteo Creek near Loma Linda	125	T,S	1979–81, 1992–94
11059100	San Bernardino Water-Quality Control Plant at San Bernardino	—	C	1973–75, 1977–80
11059300	Santa Ana River at E Street, near San Bernardino	541	T	1982–83
11066480	Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington	—	C	1970–80, 1982
11066500	Santa Ana River at Riverside Narrows, near Arlington	853	C,T	1968–69
11067890	Santa Ana River at Prado Park, near Corona	1,010	T,S	1976–80
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	C,T	1968
11070240	Sunnymead Channel at Alessandro Boulevard near Sunnymead	13.3	P	1990–93

DISCONTINUED WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
11070262	Perris Valley Storm Drain Lateral "B" near March Air Force Base	10.6	P	1991
11070263	Unnamed creek tributary to Perris Reservoir near Moreno	.46	P	1990–91
11070270	Perris Valley Storm Drain at Nuevo Road, Near Perris	93.3	P	1990–97
11074000	Santa Ana River below Prado Dam	1,490	B,S	1974–94
11075600	Santa Ana River at Imperial Highway, near Anaheim	1,544	T,S	1973–77, 1979
11075620	Santa Ana River spreading diversion below Imperial Highway, near Anaheim	—	C,T	1974–85
11075755	Santa Ana River at Ball Road, at Anaheim	1,587	T,S	1977–80
11075760	Santa Ana River near Katella Avenue, at Orange	1,593	T,S	1974–76
11078000	Santa Ana River at Santa Ana	1,700	T	1968–69, 1971, 1973–80, 1982–87
11078100	Santa Ana River at Adams Avenue, near Costa Mesa	1,701	T,S	1974–76
11102250	Mission Creek below Whittier Narrows Dam	—	C	1956–70
11103000	Los Angeles River at Long Beach	827	WQ,C, T,S	1973–92
11103010	Los Angeles River at Willow Street Bridge, at Long Beach	831	C,T	1974–75, 1981
11104000	Topanga Creek at Topanga Beach	18.0	WQ,S	1982–88
11104400	Malibu Creek at Cornell	37.6	WQ,S	1983–88
11105410	Cold Creek at Piuma Road, near Monte Nido	7.73	WQ,S	1982–84, 1986, 1987, 1988
11105500	Malibu Creek at Crater Camp, near Calabasas	105	WQ,S	1982–88
11105850	Arroyo Simi near Simi	70.6	T,S	1970–71, 1974–78
11106550	Calleguas Creek at Camarillo State Hospital	248	T,S	1970–78
11108500	Santa Clara River at Los Angeles–Ventura County Line	625	WQ,B,T,S	1969–88
11109550	Piru Creek above Frenchmans Flat	308	C	1972–80
11109600	Piru Creek above Lake Piru	372	C	1972–80
11109800	Piru Creek below Santa Felicia Dam	425	C,T	1969, 1974–80
11110000	Piru Creek near Piru	437	C,T	1970–71
11110500	Hopper Creek near Piru	23.6	T,S	1977–78
11113000	Sespe Creek near Fillmore	251	C,S	1967–78
11113500	Santa Paula Creek near Santa Paula	38.4	C,T	1969–80
11113900	Saticoy Diversion near Saticoy	—	C,T	1969–71, 1982–87
11113910	Santa Clara River at diversion, near Saticoy	—	C	1971
11114000	Santa Clara River at Montalvo	1,612	T,S	1968–85, 1988–93
11117500	San Antonio Creek at Casitas Springs	51.2	T,S	1977–78
11118500	Ventura River near Ventura	188	WQ,T	1907–08, 1967–81, 1986
11120000	Atascadero Creek near Goleta	18.9	S	1982
11120510	San Jose Creek at Goleta	9.42	S	1982–85
11120530	Tecolotito Creek near Goleta	4.42	S	1982
11120600	Jalama Creek near Lompoc	20.5	T	1981–83
11120900	Canada Honda Creek at Pt. Arguello	—	T	1981–83
11133000	Santa Ynez River at Narrows, near Lompoc	789	WQ	1978–88
11141000	Santa Maria River at Guadalupe	1,741	T,S	1969–70

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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 1997
VOLUME 1—SOUTHERN GREAT BASIN FROM MEXICAN BORDER TO MONO LAKE BASIN,
AND PACIFIC SLOPE BASINS FROM TIJUANA RIVER TO SANTA MARIA RIVER

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

INTRODUCTION

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

This volume of the report includes records on surface water in the State. Specifically, it contains: (1) discharge records for 151 streamflow-gaging stations and 16 partial-record stations; (2) stage and content records for 21 lakes and reservoirs; (3) gage-height records for 1 station; (4) precipitation records for 5 stations; and (5) water-quality records for 23 streamflow-gaging stations and 10 water-quality partial-record stations. Records included for stream stages are only a small fraction of those obtained during the water year.

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

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

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-97-1." For archiving and general distribution, the reports for 1971–74 water years also are identified as water-data reports. These water-data reports are for sale, in paper copy or on microfiche, by the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. For further ordering information, the Customer Inquiries telephone number is (703) 487-4650, between 8:30 a.m. and 5:30 p.m. Eastern Standard Time.

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

COOPERATION

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

Antelope Valley-East Kern Water Agency, Wallace G. Spinarski, General Manager.
Borrego Water District, Linden Burzell, General Manager.
California Department of Water Resources, David N. Kennedy, Director.
Carpinteria County Water District, Charles Hamilton, General Manager/Secretary.
Casitas Municipal Water District, John J. Johnson, General Manager.

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

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

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

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

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

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) provide the mechanism to evaluate the effectiveness of the significant reduction in SO₂ emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; (3) provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO₂ and NO_x scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

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

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

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

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

Additional information about the NAWQA Program is available through the world wide web at:

http://www.wrvar.es.usgs.gov/nawqa/nawqa_home.html

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1997 water year that began October 1, 1996, and ended September 30, 1997. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and contents data for lakes and reservoirs, and water-quality data for surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station-Identification Numbers

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

Downstream-Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station such as 11119750, which appears just to the left of the station name, includes the two-digit part number "11" plus the six-digit downstream-order number "119750." The part number designates the major river basin; for example, part "11" is the Pacific Slope Basins in California.

Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven

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

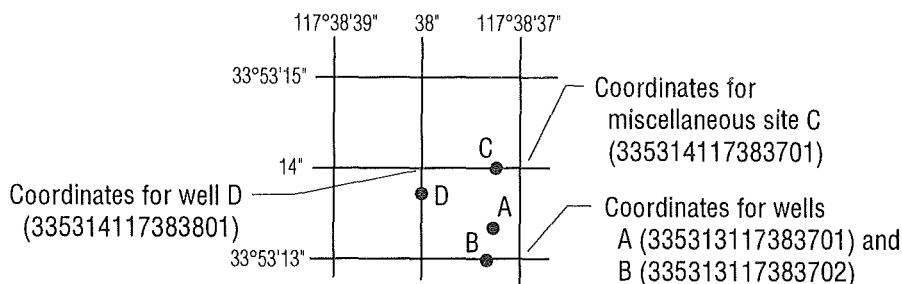


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

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

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

Data Collection and Computation

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

Continuous records of stage are obtained with digital recorders, data collection platforms, or data loggers that sample stage values at selected time intervals. Measurements of discharge are made with current meters using methods adapted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in U.S. Geological Survey Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chapters A1 through A19, and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the

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

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

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

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

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

Data Presentation

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

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

Station manuscript

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

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

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

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

REVISED RECORDS.—Published records, because of new information, occasionally are incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the

water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report is given in which the most recently revised figure was published.

GAGE.—The type of gage currently in use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

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

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

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

EXTREMES OUTSIDE PERIOD OF RECORD.—Included is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

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

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

Occasionally the records of a discontinued gaging station may need revision. Because for these stations there would be no current or, possible, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office to determine if the published records were revised after the station was discontinued. If the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream-gaging stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Data table of daily mean values

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

Statistics of monthly mean data

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

coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

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

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

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.—The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than $1 \text{ ft}^3/\text{s}$, to the nearest tenth between 1.0 and $10 \text{ ft}^3/\text{s}$, to whole numbers between 10 and $1,000 \text{ ft}^3/\text{s}$, and to three significant figures for more than $1,000 \text{ ft}^3/\text{s}$. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the measured discharge.

Other Records Available

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

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

Records of Surface-Water Quality

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

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape or stored electronically in a data logger. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 2 through 12.

Arrangement of Records

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

Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

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

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

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

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

Historical and current (1997) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter (ng/L). If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter ($\mu\text{g/L}$) and could reflect contamination introduced during some phase of the procedure.

Water Temperature

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

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

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with the ASTM standards and generally follow ISO standards.

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

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

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

Cross-Sectional Data

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

Laboratory Measurements

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

Water Quality-Control Data

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

Blank Samples

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

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

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

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

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

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

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

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

Reference Samples

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

Replicate Samples

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

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

Split sample—a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

ACCESS TO USGS WATER DATA

The U.S. Geological Survey provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

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

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

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

Benthic organisms (invertebrates) are the group of animals living in or on the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish.

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

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³) and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

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

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

Bottom material: See Bed material.

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

nearest geometric solid or combinations of simple solids (that is, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

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

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

Cells per volume (cells/volume) refers to the number of cells of any organism that are counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually in milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

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

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

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

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

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

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second, or 448.8 gallons per minute, or 0.02832 cubic meters per second.

Cubic foot per second per day (cfs/d) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, or 2,445 cubic meters.

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

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

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

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

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

Dissolved-solids concentration of water is determined either analytically or by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$= \sum_{i=1}^s \frac{n_i}{n} \log^2,$$

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

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

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

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap that is required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of approximately 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

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

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

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

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

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

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

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

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram (UG/G, $\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

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

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

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites; (2) provide the mechanism to evaluate the effectiveness of the significant reduction in SO_2 emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred; (3) provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO_2 and NO_x scheduled to begin in 2000.

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

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

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

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

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

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

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

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

Parameter code is a five-digit number used in the U.S. Geological Survey's data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency's data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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

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

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

Classification	Size (mm)	Method of analysis
Clay	0.00024–0.004	Sedimentation
Silt	0.004–0.062	Sedimentation
Sand	0.062–2.0	Sedimentation or sieve
Gravel.	2.0–64.0	Sieve

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

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

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

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants, respectively, are the two categories reported.

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

including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

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

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

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

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

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

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

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

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

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

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2/\text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3/\text{time})$ for phytoplankton] are the units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}_2/(\text{m}^2/\text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3/\text{time})$ for phytoplankton] are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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

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

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

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

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

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

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating dissolved-solids concentration in water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic-organism collection and plexiglass strips for periphyton collection.

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

Surficial bed material is the part (upper 0.1 to 0.2 ft or 0.03 to 0.06 m) of the bed material that is sampled by using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment; thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

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

KingdomAnimal
 Phylum Arthropoda
 Class Insecta
 Order Ephemeroptera
 Family Ephemeridae
 Genus *Hexagenia*
 Species..... *Hexagenia limbata*

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

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

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

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

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

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

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

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1997, is called the "1997 water year."

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS—TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS—TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS—TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS—TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS—TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS—TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS—TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS—TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by slope-area method*, by Tate Dalrymple and M.A. Benson: USGS—TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS—TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS—TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS—TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS—TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS—TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS—TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS—TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS—TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G.F. Smoot and C.E. Novak: USGS—TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS—TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS—TWRI Book 3, Chapter A13. 1983. 53 pages.

- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS—TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS—TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS—TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS—TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS—TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS—TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS—TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS—TWRI Book 3, Chapter A21. 1995. 56 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS—TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS—TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS—TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS—TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS—TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS—TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS—TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS—TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS—TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H.P. Guy and V.W. Norman: USGS—TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS—TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS—TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS—TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS—TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS—TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS—TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS—TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS—TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS—TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS—TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS—TWRI Book 5, Chapter A4. 1989. 363 pages.

- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS—TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS—TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS—TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS—TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS—TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS—TWRI Book 6 Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS—TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS—TWRI Book 6, Chapter A5. 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS—TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS—TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS—TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS—TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS—TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS—TWRI Book 8, Chapter B2. 1968. 15 pages.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D.N. Myers and F.D. Wilde: USGS—TWRI Book 9, Chapter A7. 1997. 49 pages.

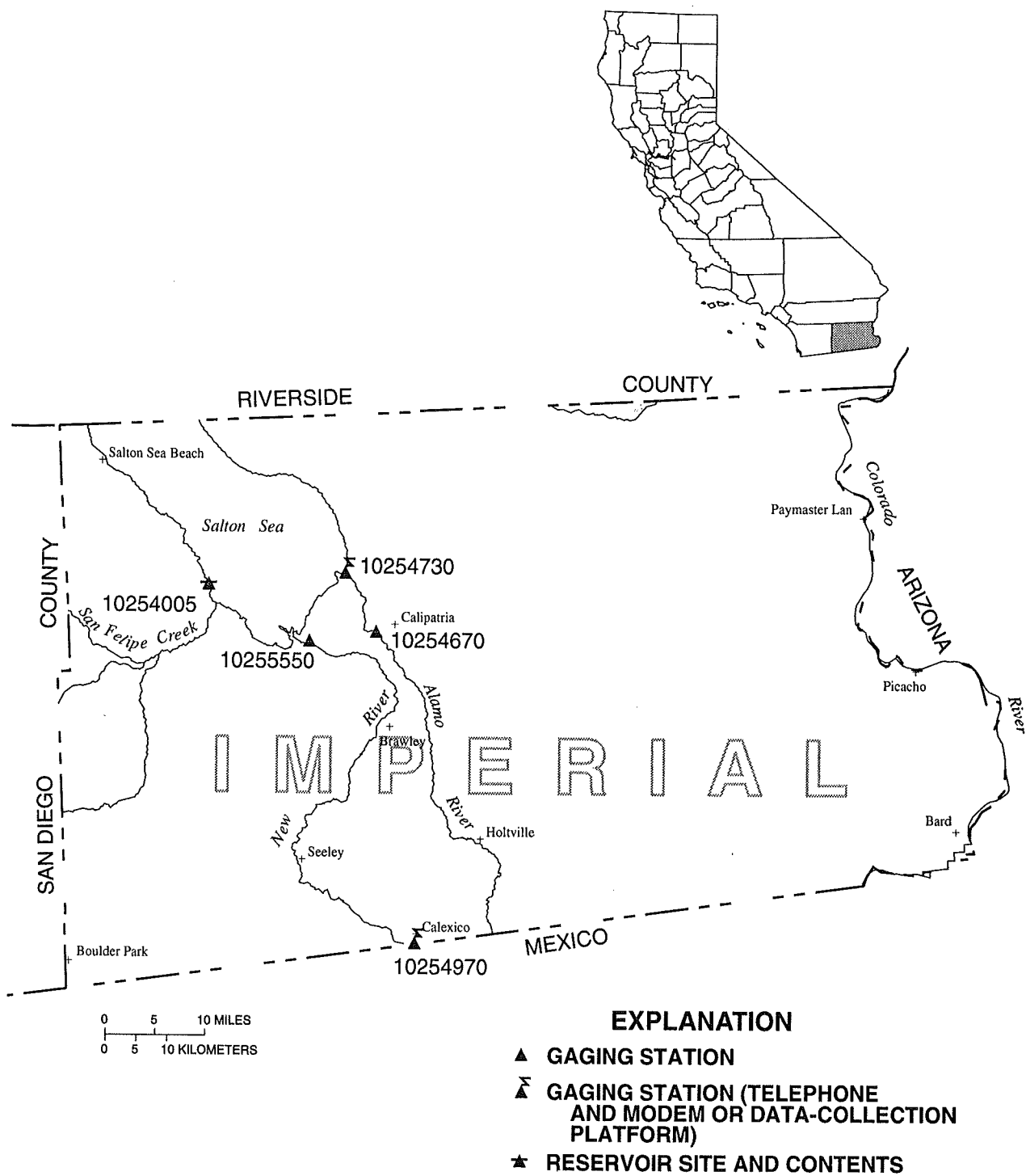


Figure 2. Location of discharge stations in Imperial County.

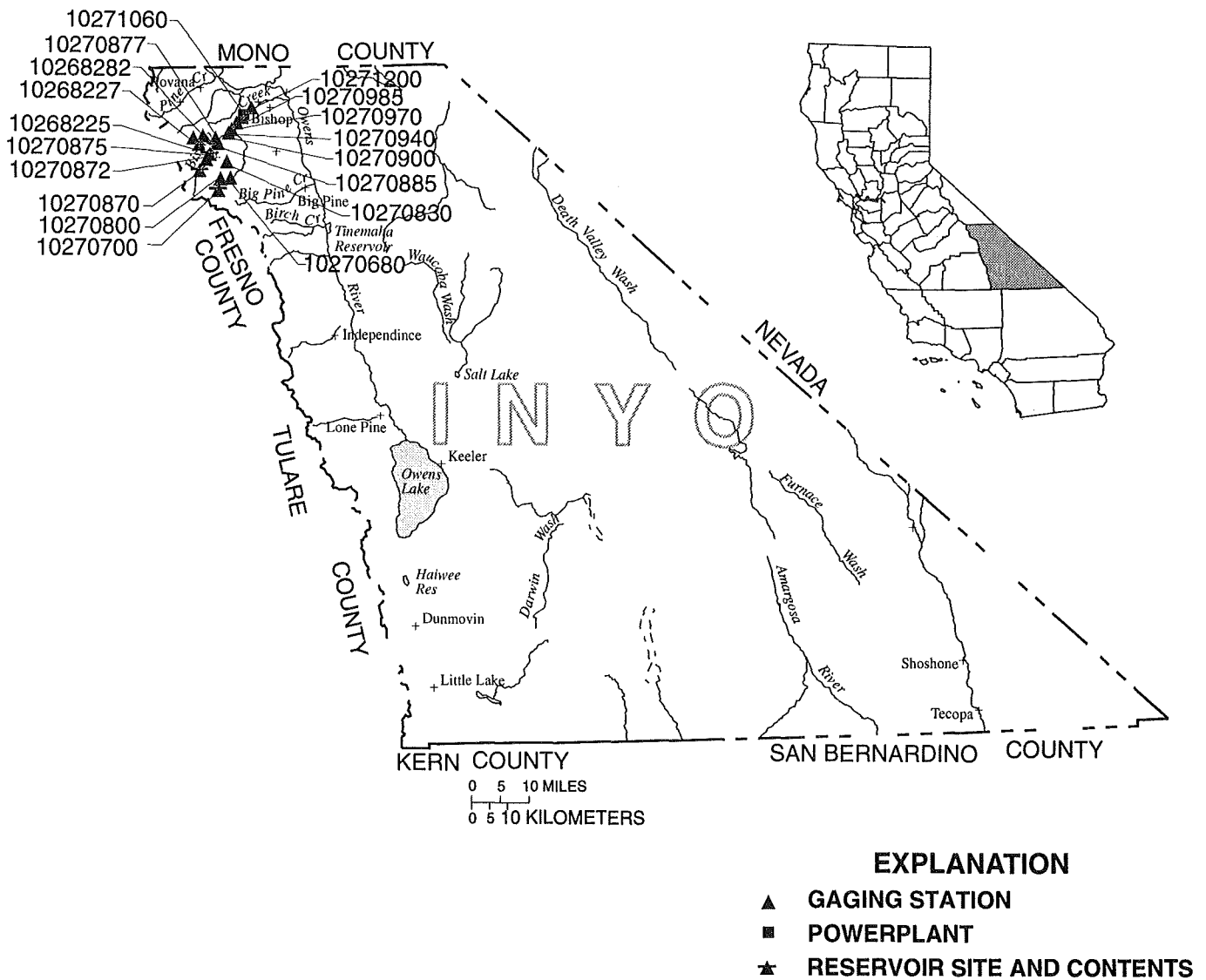


Figure 3. Location of discharge stations in Inyo County.

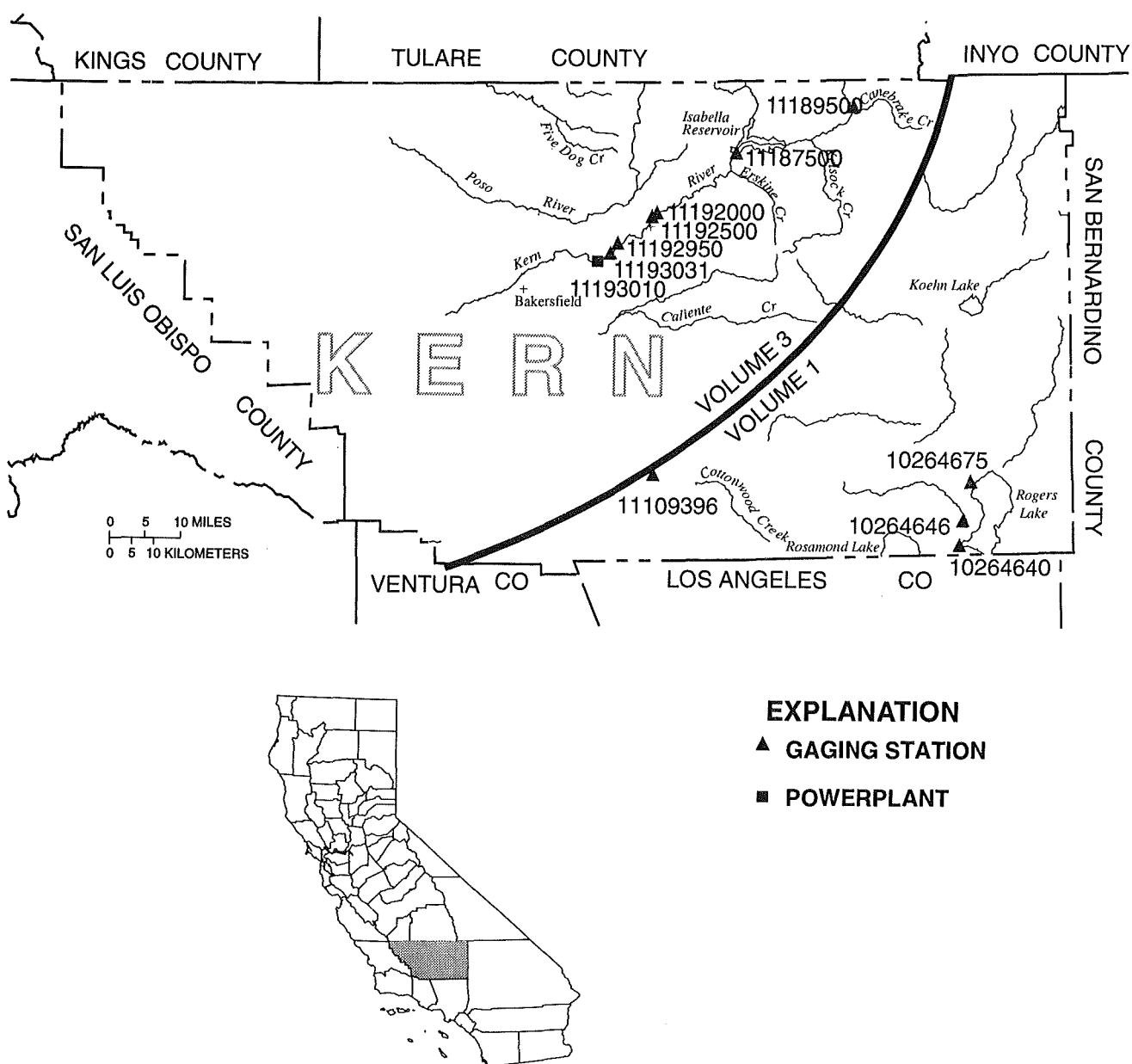
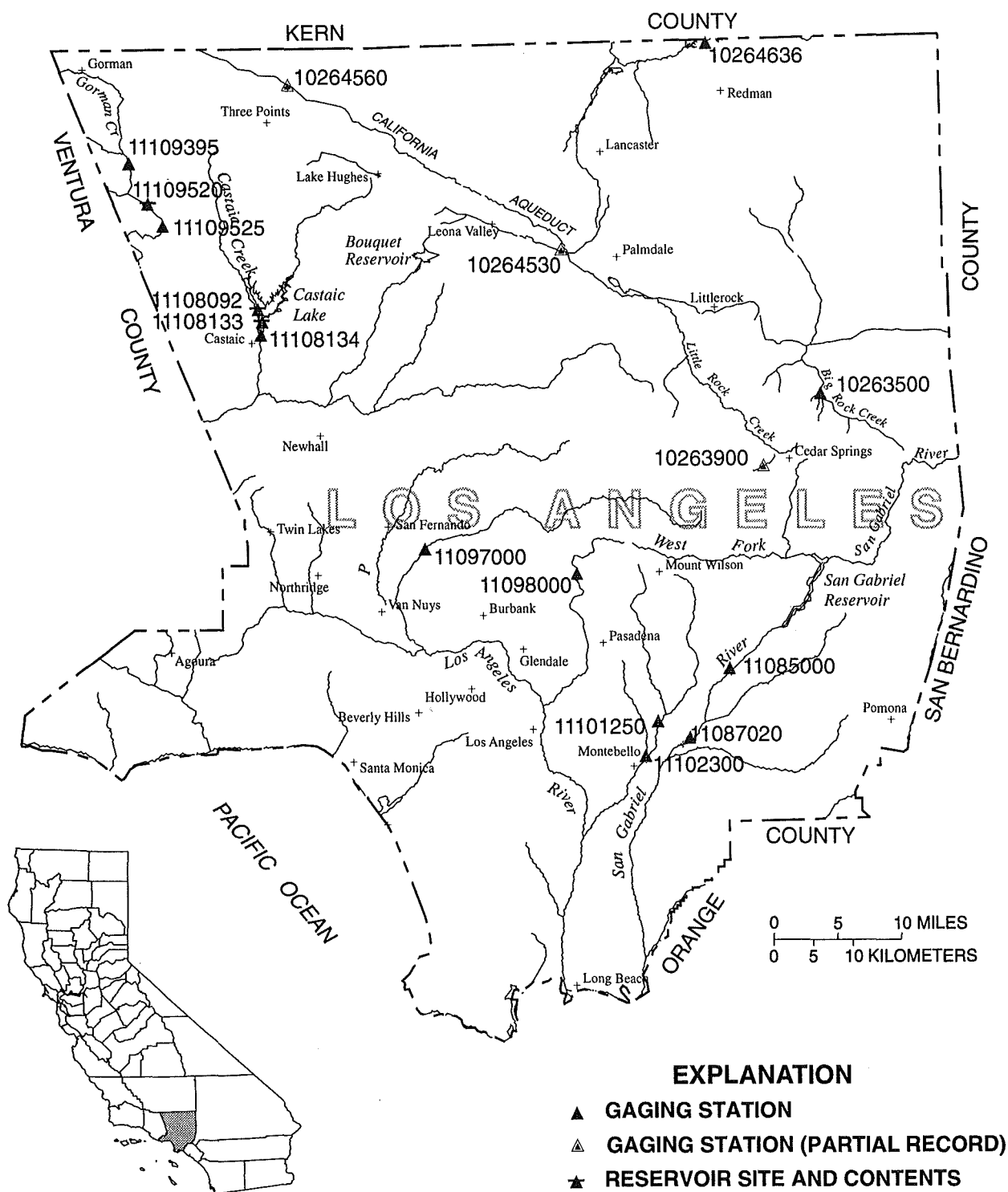


Figure 4. Location of discharge stations in Kern County.

(NOTE: Records for stations 11187500 through 11193031 published in volume 3.)



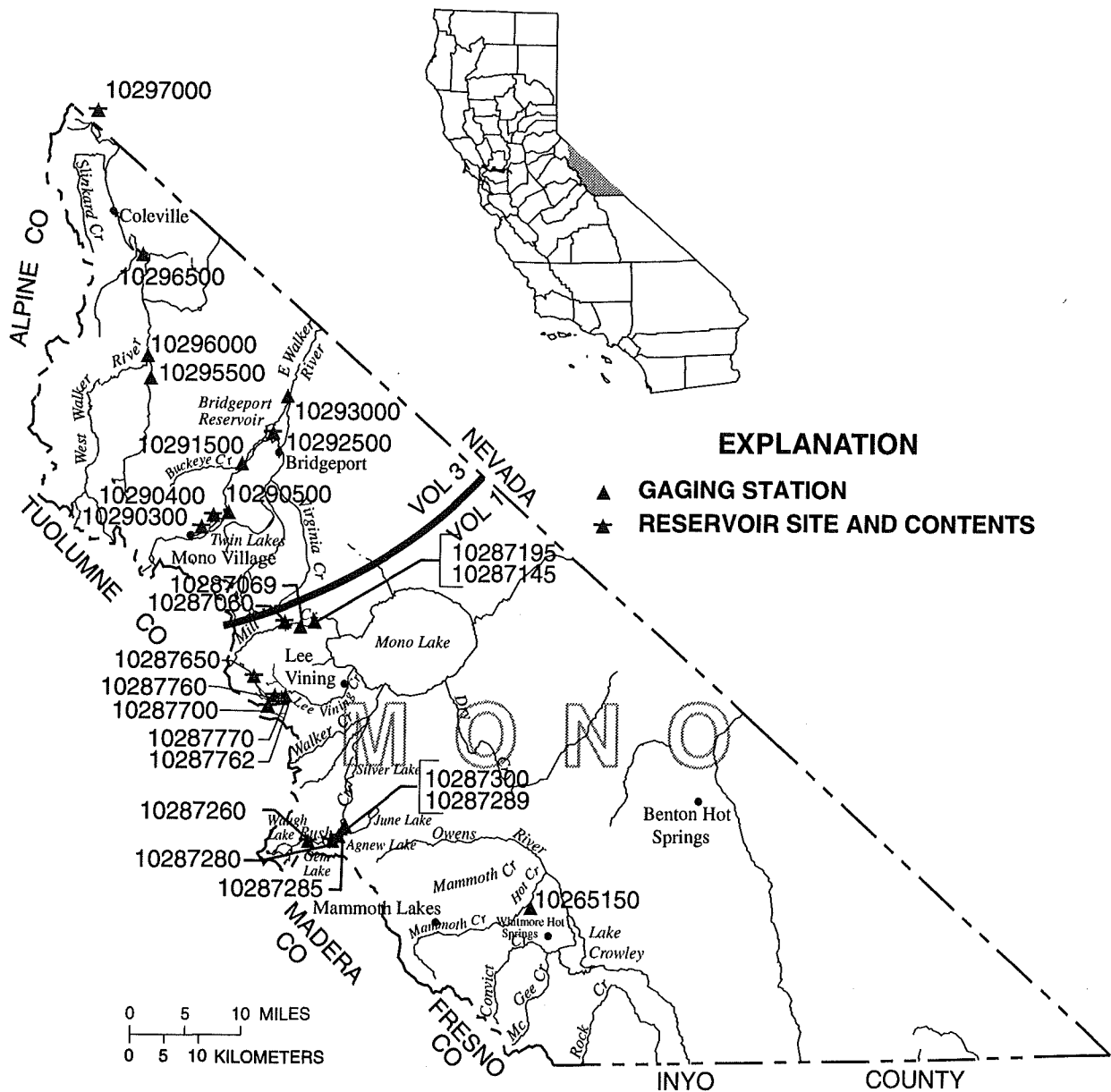


Figure 6. Location of discharge stations in Mono County.
(NOTE: Records for stations 10290300 through 10297000 published in volume 3.)

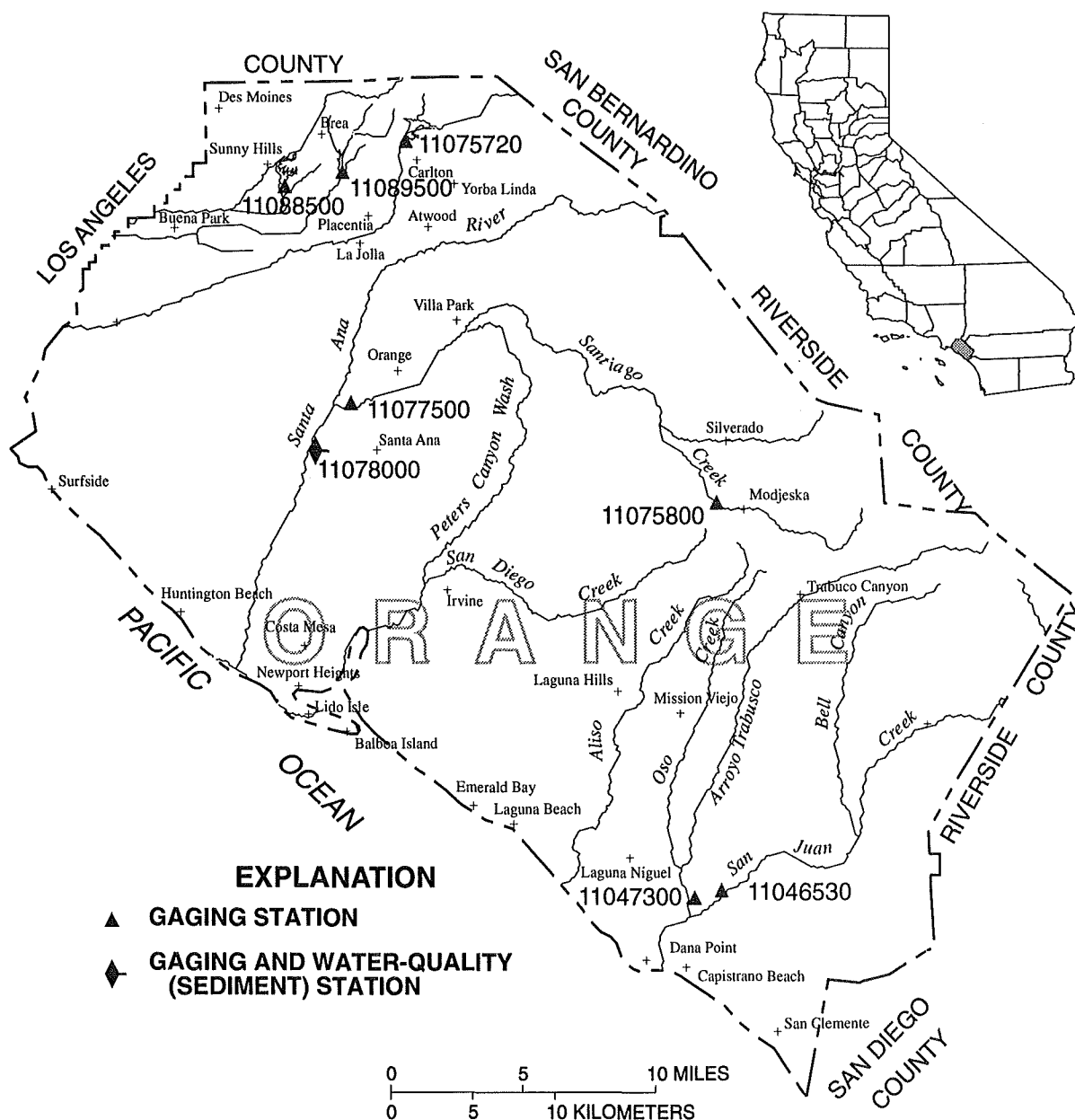


Figure 7. Location of discharge and water-quality stations in Orange County.



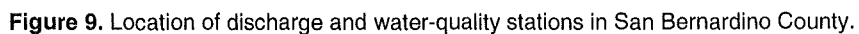


Figure 9. Location of discharge and water-quality stations in San Bernardino County.

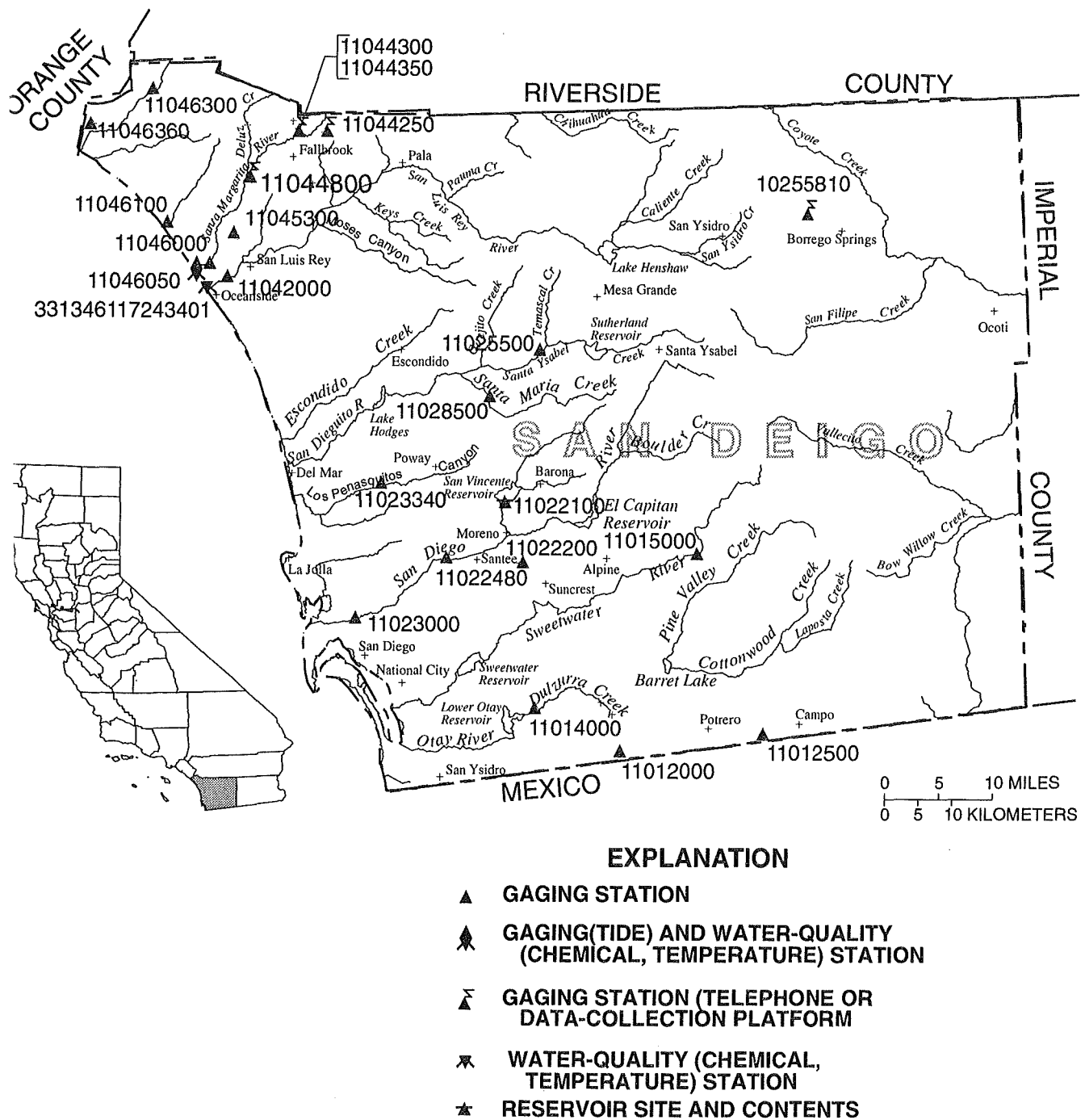


Figure 10. Location of discharge and water-quality stations in San Diego County.

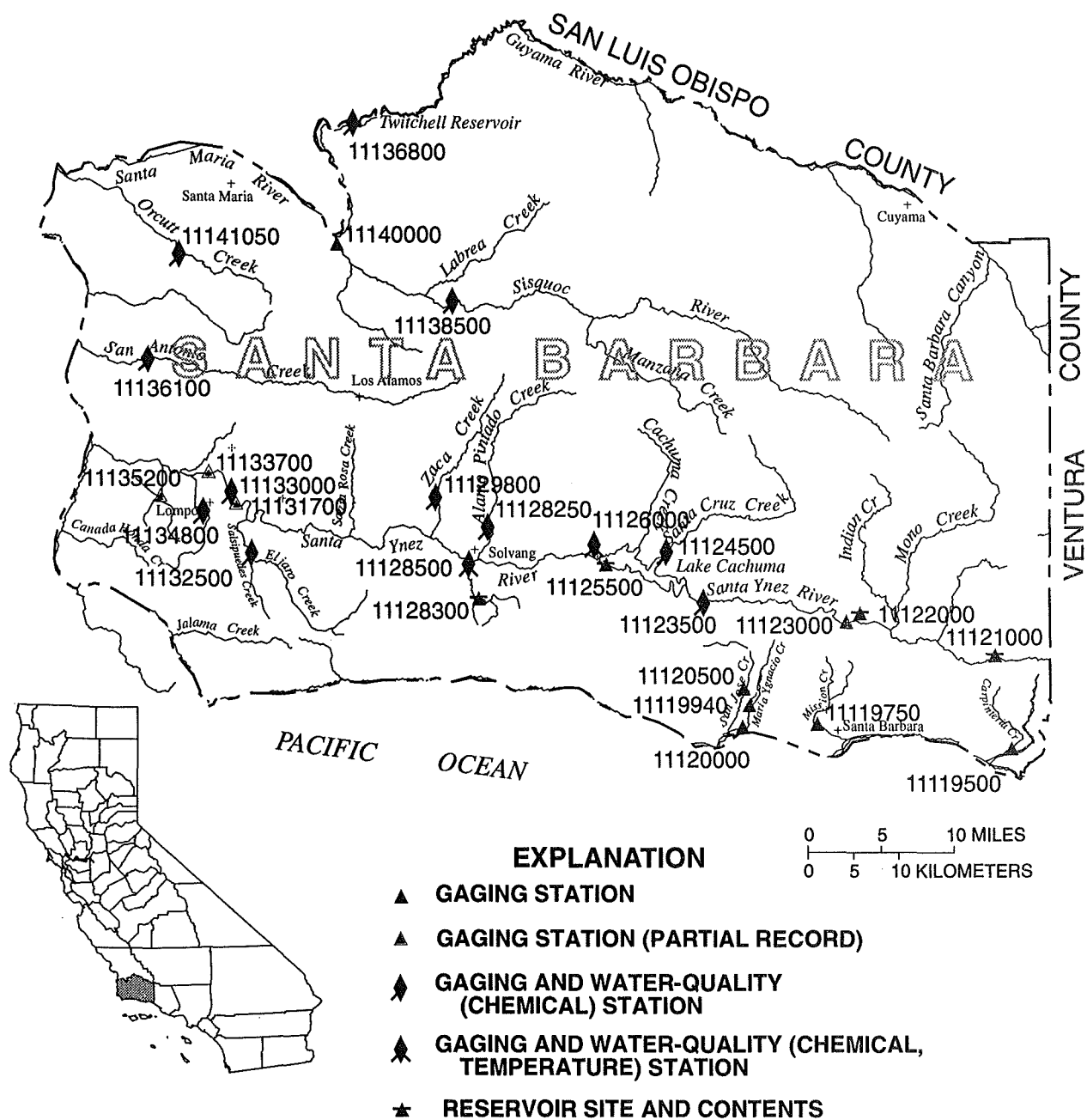


Figure 11. Location of discharge and water-quality stations in Santa Barbara County.

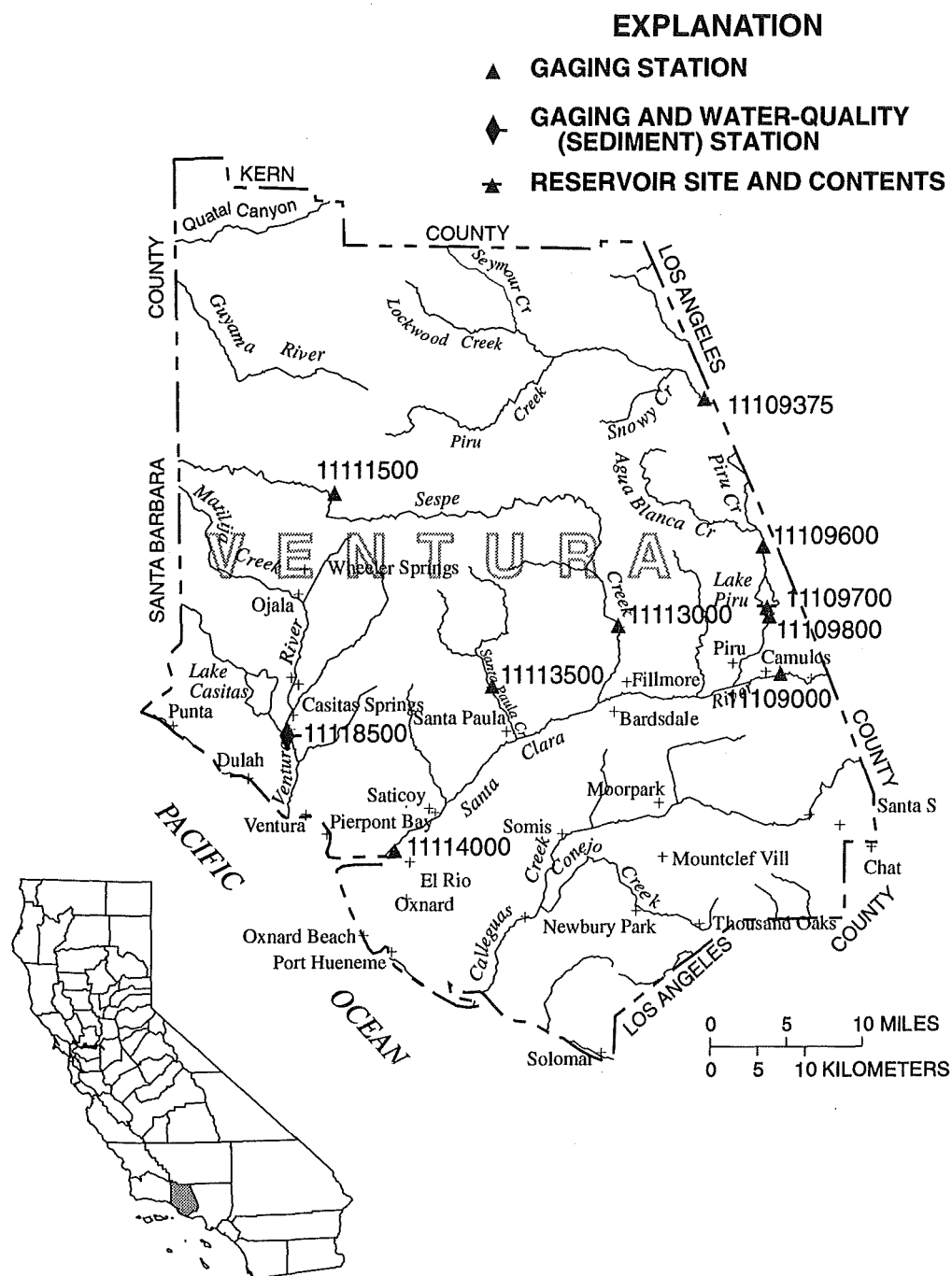


Figure 12. Location of discharge and water-quality stations in Ventura County.

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

Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
e	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptable range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
ND	Not detected.
&	Biological organism estimated as dominant.
*	Instantaneous streamflow at the time of cross-sectional measurements.
**	Partial sampled width.
1	Laboratory value.
2	Laboratory fixed-end point titration.
A	Samples collected by another agency.
N	Suspended-sediment concentration value determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.
V	Analyte was detected in both the environmental sample and the associated blanks.

Dissolved Trace-Element Concentrations

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

Change in National Trends Network procedures

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

THE GREAT BASIN

BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1997, BY WATER YEAR (WY)

MEAN	.090	.033	.12	.20	.19	.32	.063	.001	.002	.14	.27	.025
MAX	2.81	.67	1.27	2.22	1.44	2.23	.95	.010	.054	2.45	2.70	.34
(WY)	1977	1966	1966	1993	1980	1992	1965	1983	1972	1984	1979	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1964	1964	1964	1964	1967	1964	1965	1964	1964	1964	1964

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1964 - 1997

ANNUAL TOTAL	2.28	11.45	
ANNUAL MEAN	.006	.031	.12
HIGHEST ANNUAL MEAN			.36 1993
LOWEST ANNUAL MEAN			.001 1964
HIGHEST DAILY MEAN	1.0 Jul 15	2.6 Sep 25	80 Aug 12 1979
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
INSTANTANEOUS PEAK FLOW		16 Sep 25	814 Aug 12 1979
INSTANTANEOUS PEAK STAGE		1.35 Sep 25	9.75 Jul 15 1996
ANNUAL RUNOFF (AC-FT)	4.5	23	87
10 PERCENT EXCEEDS	.00	.00	.07
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

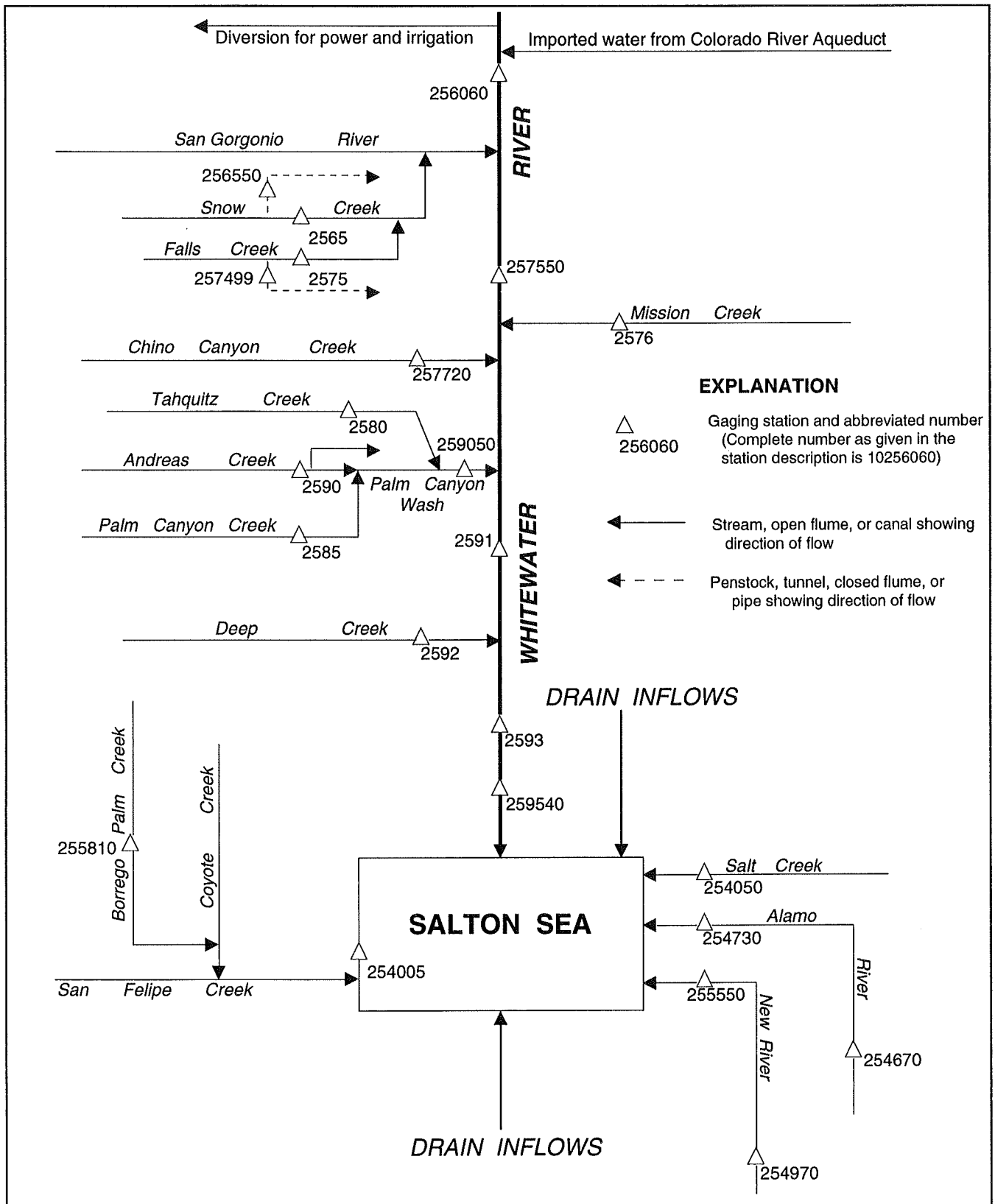


Figure 13. Diversions and storage in Salton Sea Basin.

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

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

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum daily elevation, 227.1 ft below sea level, May 17–20; minimum, 228.1 ft below sea level, Oct. 31 to Nov. 26, Dec. 1–13, 22–26.

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-227.8	-228.1	-228.1	-228.0	-227.8	-227.6	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8
2	-227.8	-228.1	-228.1	-228.0	-227.8	-227.6	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8
3	-227.8	-228.1	-228.1	-228.0	-227.8	-227.6	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8
4	-227.8	-228.1	-228.1	-228.0	-227.8	-227.6	-227.4	-227.2	-227.2	-227.5	-227.7	-227.8
5	-227.8	-228.1	-228.1	-228.0	-227.8	-227.6	-227.4	-227.2	-227.3	-227.6	-227.7	-227.8
6	-227.8	-228.1	-228.1	-228.0	-227.7	-227.6	-227.4	-227.2	-227.3	-227.6	-227.7	-227.8
7	-227.8	-228.1	-228.1	-228.0	-227.7	-227.6	-227.4	-227.2	-227.3	-227.6	-227.7	-227.9
8	-227.8	-228.1	-228.1	-228.0	-227.7	-227.6	-227.4	-227.2	-227.3	-227.6	-227.7	-227.9
9	-227.8	-228.1	-228.1	-228.0	-227.7	-227.5	-227.4	-227.2	-227.3	-227.6	-227.7	-227.9
10	-227.8	-228.1	-228.1	-228.0	-227.7	-227.5	-227.3	-227.2	-227.3	-227.6	-227.7	-227.9
11	-227.8	-228.1	-228.1	-228.0	-227.7	-227.5	-227.3	-227.2	-227.3	-227.6	-227.7	-227.9
12	-227.8	-228.1	-228.1	-228.0	-227.7	-227.5	-227.3	-227.2	-227.3	-227.6	-227.7	-227.9
13	-227.8	-228.1	-228.1	-228.0	-227.7	-227.5	-227.3	-227.2	-227.3	-227.6	-227.7	-227.9
14	-227.8	-228.1	-228.0	-228.0	-227.7	-227.5	-227.3	-227.2	-227.4	-227.6	-227.7	-227.9
15	-227.8	-228.1	-228.0	-228.0	-227.7	-227.5	-227.3	-227.2	-227.4	-227.6	-227.7	-227.9
16	-227.8	-228.1	-228.0	-228.0	-227.7	-227.5	-227.3	-227.2	-227.4	-227.6	-227.7	-227.9
17	-227.8	-228.1	-228.0	-228.0	-227.7	-227.4	-227.3	-227.1	-227.4	-227.6	-227.7	-227.9
18	-227.8	-228.1	-228.0	-228.0	-227.7	-227.4	-227.3	-227.1	-227.4	-227.6	-227.7	-227.9
19	-227.8	-228.1	-228.0	-228.0	-227.7	-227.4	-227.3	-227.1	-227.4	-227.6	-227.8	-227.9
20	-227.9	-228.1	-228.0	-228.0	-227.7	-227.4	-227.2	-227.1	-227.4	-227.6	-227.8	-227.9
21	-227.9	-228.1	-228.0	-228.0	-227.7	-227.4	-227.2	-227.2	-227.4	-227.6	-227.8	-228.0
22	-227.9	-228.1	-228.1	-228.0	-227.7	-227.4	-227.2	-227.2	-227.4	-227.6	-227.8	-228.0
23	-227.9	-228.1	-228.1	-227.9	-227.7	-227.4	-227.2	-227.2	-227.4	-227.6	-227.8	-228.0
24	-227.9	-228.1	-228.1	-227.9	-227.7	-227.4	-227.2	-227.2	-227.4	-227.6	-227.8	-228.0
25	-227.9	-228.1	-228.1	-227.9	-227.7	-227.4	-227.2	-227.2	-227.4	-227.6	-227.8	-228.0
26	-227.9	-228.1	-228.1	-227.9	-227.6	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8	-228.0
27	-227.9	-228.0	-228.0	-227.9	-227.6	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8	-227.9
28	-228.0	-228.0	-228.0	-227.9	-227.6	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8	-227.9
29	-228.0	-228.0	-228.0	-227.9	---	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8	-227.9
30	-228.0	-228.0	-228.0	-227.8	---	-227.4	-227.2	-227.2	-227.5	-227.6	-227.8	-227.9
31	-228.1	---	-228.0	-227.8	---	-227.4	---	-227.2	---	-227.6	-227.8	---
MAX	-227.80	-228.00	-228.00	-227.80	-227.60	-227.40	-227.20	-227.10	-227.20	-227.50	-227.60	-227.80
MIN	-228.10	-228.10	-228.10	-228.00	-227.80	-227.60	-227.40	-227.20	-227.50	-227.60	-227.80	-228.00
CAL YR 1996	MAX	-226.70	MIN	-228.10								
WTR YR 1997	MAX	-227.10	MIN	-228.10								

FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY

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

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Alamo River	167	214	216	123	111	123	116	295	106	123	143	119
New River	7730	6450	6860	11110	11070	15240	13950	12730	11030	10410	12110	15210
CAL YR 1996: Alamo River	1,080 acre-ft					WTR YR 1997:	1,860 acre-ft					
CAL YR 1996: New River	118,200 acre-ft					WTR YR 1997:	133,900 acre-ft					

SALTON SEA BASIN

10254050 SALT CREEK NEAR MECCA, CA

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

DRAINAGE AREA.—269 mi².

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

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

REMARKS.—Records fair above 1 ft³/s and poor below. No regulation or diversion upstream from station. No discharge records computed above 20 ft³/s since October 1990. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge (January 1961 to September 1990), 9,900 ft³/s, Sept. 24, 1976, gage height, 16.8 ft, present datum, from floodmarks, from rating curve extended above 20 ft³/s on basis of contracted-opening measurement of peak flow; maximum gage height, 19.4 ft, present datum, Mar. 2, 1983 (backwater from Salton Sea and channel vegetation); no flow for many days since 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.72	2.1	1.8	1.9	.75	.00	.00	.00	.00	.00
2	.00	.00	.86	2.1	2.0	1.8	.85	.00	.00	.00	.00	.00
3	.00	.00	1.2	2.2	2.2	1.8	.97	.00	.00	.00	.00	.00
4	.00	.00	1.1	2.2	2.2	2.0	.96	.00	.00	.00	.00	.00
5	.00	.10	.97	2.0	2.2	2.0	1.1	.00	.00	.00	.00	.00
6	.00	.25	.99	2.1	2.1	1.7	1.1	.00	.00	.00	.00	.00
7	.00	.26	1.1	2.0	1.9	1.6	.96	.00	.00	.00	.00	.00
8	.00	.10	1.1	1.6	1.7	1.8	.87	.00	.00	.00	.00	.00
9	.00	.09	1.2	1.3	1.9	1.8	1.1	.00	.00	.00	.00	.00
10	.00	.24	1.4	1.5	2.0	1.7	1.0	.00	.00	.00	.00	.00
11	.00	.33	1.5	1.7	2.1	1.7	.78	.00	.00	.00	.00	.00
12	.00	.37	1.3	2.0	2.1	1.6	.63	.00	.00	.00	.00	.00
13	.00	.41	1.3	2.3	1.9	1.6	.59	.00	.00	.00	.00	.00
14	.00	.51	1.4	3.0	1.7	1.6	.53	.00	.00	.00	.00	.00
15	.00	.58	1.2	2.5	1.5	1.6	.51	.00	.00	.00	.00	.00
16	.00	.64	.90	2.2	1.6	1.5	.50	.00	.00	.00	.00	.00
17	.00	.62	.73	2.5	1.9	1.5	.38	.00	.00	.00	.00	.00
18	.00	.65	1.1	2.4	2.0	1.6	.37	.00	.00	.00	.00	.00
19	.00	.74	1.1	2.3	1.9	1.4	.35	.00	.00	.00	.00	.00
20	.00	.79	1.3	2.3	1.8	1.3	.31	.00	.00	.00	.00	.00
21	.00	.71	1.6	2.3	1.7	1.2	.26	.00	.00	.00	.00	.00
22	.00	.71	1.8	2.2	1.6	1.1	.20	.00	.00	.00	.00	.00
23	.00	1.2	1.8	2.0	1.5	1.0	.13	.00	.00	.00	.00	.00
24	.00	.96	1.8	2.2	1.7	1.0	.06	.00	.00	.00	.00	.00
25	.00	.81	1.7	2.6	1.6	1.0	.01	.00	.00	.00	.00	---
26	.00	.94	1.8	2.2	1.4	.93	.00	.00	.00	.00	.00	e.26
27	.00	.91	1.8	2.3	1.6	.95	.00	.00	.00	.00	.00	.01
28	.00	.67	1.9	2.2	1.8	.90	.00	.00	.00	.00	.00	.00
29	.00	.63	1.9	2.3	---	.87	.00	.00	.00	.00	.00	.00
30	.00	.81	1.9	2.3	---	.87	.00	.00	.00	.00	.00	.02
31	.00	---	2.0	1.9	---	.80	---	.00	---	.00	.00	---
TOTAL	0.00	15.03	42.47	66.8	51.4	44.12	15.27	0.00	0.00	0.00	0.00	---
MEAN	.000	.50	1.37	2.15	1.84	1.42	.51	.000	.000	.000	.000	---
MAX	.00	1.2	2.0	3.0	2.2	2.0	1.1	.00	.00	.00	.00	---
MIN	.00	.00	.72	1.3	1.4	.80	.00	.00	.00	.00	.00	---
AC-FT	.00	30	84	132	102	88	30	.00	.00	.00	.00	---

e Estimated.

10254050 SALT CREEK NEAR MECCA, CA—Continued

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

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

SUMMARY STATISTICS

WATER YEARS 1962 - 1990

ANNUAL MEAN	6.97	
HIGHEST ANNUAL MEAN	23.7	
LOWEST ANNUAL MEAN	2.57	1989
HIGHEST DAILY MEAN	2830	Mar 2 1983
LOWEST DAILY MEAN	.06	Nov 1 1978
ANNUAL SEVEN-DAY MINIMUM	.07	Oct 30 1978
INSTANTANEOUS PEAK FLOW	9900	Sep 24 1976
INSTANTANEOUS PEAK STAGE	16.80	Sep 24 1976
ANNUAL RUNOFF (AC-FT)	5050	
10 PERCENT EXCEEDS	10	
50 PERCENT EXCEEDS	4.6	
90 PERCENT EXCEEDS	1.3	

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

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

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

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

BIOLOGICAL DATA: Water years 1979–81.

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

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

SEDIMENT DATA: Water years 1979–94.

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

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

REMARKS.—Records excellent except those for September 25–26, which are poor (affected by backwater). Flow is mainly return from irrigated areas. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,980 ft³/s, Mar. 27, 1992, gage height, 6.56 ft, from rating curve extended above 1,000 ft³/s; maximum gage height, 7.20 ft, Jan. 17, 1993 (affected by backwater); minimum daily, 259 ft³/s, Jan. 2, 1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	821	768	579	506	648	801	812	997	741	724	800	689
2	844	749	579	456	612	845	901	1030	708	754	837	710
3	835	687	569	510	585	801	945	994	695	757	812	744
4	830	675	563	527	644	766	1040	1000	695	760	796	717
5	858	620	598	513	688	731	1120	997	703	768	767	660
6	786	651	618	528	677	830	1000	973	783	795	787	740
7	750	646	615	547	724	943	862	922	860	735	817	804
8	756	655	592	539	721	868	872	935	794	747	774	733
9	786	663	599	565	628	855	859	887	743	757	775	712
10	775	661	596	610	589	846	928	858	651	752	731	744
11	803	629	577	605	603	834	1040	830	676	771	635	773
12	800	640	567	621	615	882	950	776	711	742	712	755
13	794	661	591	634	629	873	989	753	723	745	784	772
14	738	733	589	587	651	844	993	794	715	747	773	825
15	772	685	601	511	632	903	982	813	697	744	749	957
16	779	652	589	481	616	917	993	818	716	814	776	846
17	759	638	609	492	609	893	1100	828	697	800	756	754
18	739	663	604	492	649	860	1040	827	655	830	660	727
19	736	681	610	473	706	894	1040	827	699	829	710	758
20	695	671	624	417	760	916	1010	793	723	859	751	737
21	680	647	630	418	783	984	1040	789	734	839	754	729
22	646	646	654	438	822	1050	1020	798	766	824	731	766
23	694	621	628	474	787	990	982	844	712	822	730	777
24	763	619	637	543	758	865	944	738	696	884	727	799
25	732	578	543	591	754	883	939	711	718	815	670	1090
26	701	583	420	598	821	874	961	675	721	770	717	1290
27	727	608	447	591	759	872	941	724	753	741	706	782
28	694	606	526	587	722	928	929	702	736	746	722	680
29	665	582	569	596	---	967	948	744	706	744	734	564
30	679	551	573	590	---	966	933	748	705	819	762	565
31	738	---	547	600	---	819	---	771	---	834	764	---
TOTAL	23375	19469	18043	16640	19192	27300	29113	25896	21632	24268	23219	23199
MEAN	754	649	582	537	685	881	970	835	721	783	749	773
MAX	858	768	654	634	822	1050	1120	1030	860	884	837	1290
MIN	646	551	420	417	585	731	812	675	651	724	635	564
AC-FT	46360	38620	35790	33010	38070	54150	57750	51360	42910	48140	46050	46020

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	783	667	548	522	606	823	963	841	699	696	709	730
MAX	895	809	666	640	718	947	1208	1000	888	888	846	847
(WY)	1992	1991	1991	1993	1991	1995	1994	1994	1994	1994	1994	1994
MIN	655	569	379	392	445	697	812	706	515	556	593	632
(WY)	1982	1982	1986	1995	1980	1987	1986	1982	1982	1982	1982	1986

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR					FOR 1997 WATER YEAR			WATER YEARS 1980 - 1997			
ANNUAL TOTAL	263281					271346						
ANNUAL MEAN	719					743			716			
HIGHEST ANNUAL MEAN									833			
LOWEST ANNUAL MEAN									628			
HIGHEST DAILY MEAN	1050					1290			4670			
LOWEST DAILY MEAN	391					417			259			
ANNUAL SEVEN-DAY MINIMUM	518					458			277			
INSTANTANEOUS PEAK FLOW						1480			5980			
INSTANTANEOUS PEAK STAGE						(a) 3.82			(a) 7.20			
ANNUAL RUNOFF (AC-FT)	522200					538200			518600			
10 PERCENT EXCEEDS	896					940			932			
50 PERCENT EXCEEDS	701					741			703			
90 PERCENT EXCEEDS	599					581			507			

(a) Affected by backwater.

10254730 ALAMO RIVER NEAR NILAND, CA

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

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

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

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

COOPERATION.—Gage-height record provided by Imperial Irrigation District for the following dates: Sept. 25, 26.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,500 ft³/s, Aug. 17, 1977, estimated by Imperial Irrigation District; minimum daily, 288 ft³/s, Jan. 2, 1966, Dec. 15, 1984.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	967	877	684	636	826	968	1020	1150	932	857	968	872
2	986	894	704	572	774	1010	1130	1180	895	871	1020	874
3	1010	837	677	606	736	987	1180	1170	872	913	987	907
4	976	804	692	648	803	939	1210	1170	892	895	996	885
5	1010	759	717	614	870	884	1280	1080	859	901	940	839
6	939	792	758	630	882	968	1240	1130	925	929	959	878
7	864	789	753	648	921	1040	1040	1110	1010	927	996	959
8	889	783	710	624	926	1040	1050	1160	978	925	937	913
9	936	803	731	673	789	987	1070	1060	920	939	940	875
10	936	773	745	759	717	959	1110	1020	826	916	909	959
11	987	752	711	744	748	978	1180	987	840	927	805	996
12	978	770	734	763	777	1040	1150	909	873	926	865	940
13	940	796	770	800	789	1060	1150	914	904	935	934	919
14	909	863	767	711	792	1050	1180	959	914	922	949	987
15	940	853	757	627	764	1090	1180	996	886	949	949	1120
16	936	815	723	584	760	1080	1160	1020	880	978	949	1020
17	949	791	729	611	705	1060	1190	1030	841	968	926	911
18	892	796	803	584	742	1050	1210	1020	796	987	833	896
19	881	837	806	562	791	1060	1220	1020	847	996	854	922
20	857	839	807	502	797	1090	1210	978	870	1020	892	922
21	803	797	792	517	880	1160	1170	968	881	1010	916	920
22	756	786	815	560	886	1200	1140	987	905	996	940	969
23	798	761	773	594	882	1220	1160	1010	877	996	932	978
24	880	742	788	661	837	1070	1160	949	835	1070	949	1030
25	867	680	664	732	849	1080	1130	898	841	1030	839	1720
26	830	671	515	734	978	1060	1120	854	876	978	889	1600
27	848	730	548	724	959	1040	1100	917	903	907	865	998
28	817	710	656	763	916	1110	1090	904	903	918	890	795
29	792	698	681	747	---	1160	1110	890	866	897	883	675
30	834	659	703	761	---	1180	1130	879	863	968	940	661
31	877	---	683	753	---	1070	---	933	---	987	931	---
TOTAL	27884	23457	22396	20444	23096	32690	34470	31252	26510	29438	28582	28940
MEAN	899	782	722	659	825	1055	1149	1008	884	950	922	965
MAX	1010	894	815	800	978	1220	1280	1180	1010	1070	1020	1720
MIN	756	659	515	502	705	884	1020	854	796	857	805	661
AC-FT	55310	46530	44420	40550	45810	64840	68370	61990	52580	58390	56690	57400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	947	760	641	639	762	975	1090	959	822	827	845	903
MAX	1159	851	792	834	970	1144	1272	1182	981	1027	1278	1271
{WY}	1964	1991	1973	1972	1964	1963	1980	1975	1963	1963	1977	1962
MIN	742	616	416	396	495	734	797	684	646	636	656	667
{WY}	1986	1966	1986	1978	1993	1987	1965	1964	1964	1985	1986	1992

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1961 - 1997

ANNUAL TOTAL	312688	329159	
ANNUAL MEAN	854	902	848
HIGHEST ANNUAL MEAN			991
LOWEST ANNUAL MEAN			680
HIGHEST DAILY MEAN	1170	Apr 28	4500
LOWEST DAILY MEAN	454	Jan 2	288
ANNUAL SEVEN-DAY MINIMUM	607	Jan 1	323
ANNUAL RUNOFF (AC-FT)	620200		614100
10 PERCENT EXCEEDS	1080		1110
50 PERCENT EXCEEDS	847		840
90 PERCENT EXCEEDS	685		606

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA

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

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

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

BIOLOGICAL DATA: Water years 1973–81.

SPECIFIC CONDUCTANCE: Water years 1974–81.

WATER TEMPERATURE: Water years 1974–81.

SEDIMENT DATA: Water years 1975–85.

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

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

COOPERATION.—Gage height record provided by Imperial Irrigation District for the following dates: Nov. 19 to Dec. 4, Apr. 24–29.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 833 ft³/s, Dec. 9, 1982, Sept. 25, 1997, gage height, 14.73 ft; minimum daily, 98 ft³/s, Nov. 23, 28–29, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	120	100	108	248	250	216	216	179	157	174	200
2	146	115	104	111	231	256	215	215	179	166	175	220
3	143	114	105	114	222	272	204	215	182	154	174	222
4	143	116	110	115	208	278	209	216	193	147	175	215
5	140	118	112	123	208	292	218	212	195	147	186	212
6	135	116	115	121	201	290	234	229	195	145	191	213
7	128	113	112	121	191	289	255	239	208	156	185	208
8	127	109	110	121	176	288	271	229	218	152	179	192
9	132	109	107	125	164	285	269	224	217	148	177	199
10	135	105	107	131	171	277	265	226	225	150	189	208
11	133	111	106	128	170	279	261	212	221	146	195	203
12	129	113	108	131	171	290	261	194	208	144	199	198
13	131	109	113	151	177	280	260	192	187	141	205	192
14	134	111	110	159	182	256	253	197	189	146	212	206
15	138	112	106	181	176	242	244	206	191	143	218	233
16	128	114	108	197	173	229	234	216	187	147	220	279
17	115	117	116	213	179	219	233	214	189	150	217	313
18	113	114	112	214	201	217	256	207	202	148	209	311
19	111	111	108	213	215	219	249	199	199	143	203	286
20	109	105	110	213	207	222	239	197	195	140	207	251
21	112	104	112	208	201	234	247	197	189	161	206	224
22	118	99	119	222	194	234	249	188	171	212	195	216
23	120	98	115	234	195	219	245	194	155	209	193	211
24	116	100	115	228	195	215	219	197	152	191	192	221
25	111	102	117	213	201	245	203	197	155	207	201	560
26	109	101	117	211	232	247	185	193	160	212	207	426
27	111	99	127	224	248	234	190	197	160	216	211	356
28	116	98	123	252	244	216	213	196	153	238	212	332
29	122	98	117	278	---	209	216	204	151	234	210	292
30	119	100	111	276	---	199	222	203	155	209	196	271
31	123	---	109	263	---	200	---	195	---	188	193	---
TOTAL	3895	3251	3461	5599	5581	7682	7035	6416	5560	5247	6106	7670
MEAN	126	108	112	181	199	248	235	207	185	169	197	256
MAX	148	120	127	278	248	292	271	239	225	238	220	560
MIN	109	98	100	108	164	199	185	188	151	140	174	192
AC-FT	7730	6450	6860	11110	11070	15240	13950	12730	11030	10410	12110	15210

SALTON SEA BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	213	253	259	264	279	287	267	222	232	265	248
MAX	370	334	374	366	375	395	452	389	321	394	441	399
(WY)	1984	1985	1987	1987	1987	1986	1986	1984	1984	1984	1984	1983
MIN	126	108	112	162	179	190	188	177	154	139	139	152
(WY)	1997	1997	1997	1996	1991	1995	1996	1990	1992	1994	1996	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1980 - 1997			
ANNUAL TOTAL	59595				67503							
ANNUAL MEAN	163				185				251			
HIGHEST ANNUAL MEAN									362			
LOWEST ANNUAL MEAN									181			
HIGHEST DAILY MEAN	299				May 1				735			
LOWEST DAILY MEAN	98				Nov 23				98			
ANNUAL SEVEN-DAY MINIMUM	99				Nov 23				99			
INSTANTANEOUS PEAK FLOW					833				833			
INSTANTANEOUS PEAK STAGE					14.73				14.73			
ANNUAL RUNOFF (AC-FT)	118200				133900				181900			
10 PERCENT EXCEEDS	229				251				368			
50 PERCENT EXCEEDS	157				194				233			
90 PERCENT EXCEEDS	111				111				157			

10255550 NEW RIVER NEAR WESTMORLAND, CA

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,000 ft³/s, Aug. 17, 18, 1977, estimated by Imperial Irrigation District; minimum daily, 150 ft³/s, Mar. 7, 1945.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	611	574	450	422	640	744	775	740	678	619	672	671
2	602	574	436	378	640	716	756	751	660	636	667	655
3	610	560	428	424	648	697	791	765	622	628	700	667
4	622	541	463	445	658	731	779	747	611	597	710	736
5	602	546	459	475	608	715	763	748	642	626	733	732
6	594	543	468	419	608	734	758	767	674	637	765	725
7	574	525	463	403	605	760	742	737	697	595	724	720
8	578	519	460	410	630	779	817	752	694	603	703	655
9	603	512	461	447	633	811	839	751	711	596	667	628
10	592	512	473	449	593	806	827	756	704	615	663	650
11	601	490	463	477	559	807	832	758	721	625	649	663
12	603	503	440	528	557	793	852	730	750	597	672	655
13	586	504	448	521	571	817	797	727	700	633	685	633
14	606	516	463	510	580	834	804	732	654	619	720	643
15	584	524	469	484	581	847	817	734	642	642	732	678
16	591	499	451	476	568	798	828	712	641	675	717	767
17	625	521	456	491	572	788	825	716	675	680	705	685
18	586	538	474	507	589	814	829	715	674	686	700	677
19	572	525	482	505	628	771	845	706	671	659	724	714
20	562	499	473	502	663	774	848	721	673	633	720	713
21	572	477	468	524	670	786	835	695	658	619	693	733
22	553	478	449	527	685	778	786	716	642	643	703	715
23	566	455	452	531	668	761	765	697	626	703	698	697
24	560	448	471	527	696	749	771	659	611	756	667	706
25	585	435	421	565	698	762	759	648	606	748	631	853
26	568	434	389	581	698	787	764	651	606	704	627	998
27	543	456	413	558	718	829	756	651	631	744	671	1020
28	525	455	442	572	712	828	732	661	629	740	697	975
29	532	438	429	589	---	816	709	662	648	693	712	814
30	536	467	450	604	---	786	721	652	647	691	686	726
31	565	---	444	644	---	728	---	668	---	679	692	---
TOTAL	18009	15068	14008	15495	17676	24146	23722	22125	19798	20321	21505	21904
MEAN	581	502	452	500	631	779	791	714	660	656	694	730
MAX	625	574	482	644	718	847	852	767	750	756	765	1020
MIN	525	434	389	378	557	697	709	648	606	595	627	628
AC-FT	35720	29890	27780	30730	35060	47890	47050	43880	39270	40310	42660	43450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	641	562	545	561	597	675	724	659	589	593	611	620
MAX	837	760	707	795	789	810	953	853	763	808	913	807
(WY)	1953	1954	1963	1944	1944	1954	1993	1953	1953	1979	1977	1963
MIN	471	408	386	387	458	516	541	485	436	442	460	486
(WY)	1978	1965	1968	1978	1965	1965	1965	1964	1964	1964	1964	1970

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1943 - 1997			
ANNUAL TOTAL	224905				233777							
ANNUAL MEAN	614				640				614			
HIGHEST ANNUAL MEAN									741			
LOWEST ANNUAL MEAN									484			
HIGHEST DAILY MEAN	865				Apr 28				3000			
LOWEST DAILY MEAN	389				Dec 26				150			
ANNUAL SEVEN-DAY MINIMUM	427				Dec 25				284			
ANNUAL RUNOFF (AC-FT)	446100				463700				445100			
10 PERCENT EXCEEDS	767				786				760			
50 PERCENT EXCEEDS	606				651				604			
90 PERCENT EXCEEDS	466				463				481			

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA

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

DRAINAGE AREA.—21.8 mi².

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

REVISED RECORDS.—WSP 2128: Drainage area.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,640 ft³/s, Aug. 16, 1979, gage height, 9.8 ft, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	1730	7.6	2.66				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	.67	1.2	1.3	.50	.14	.00	.00	.00	.00
2	.00	.00	.10	.66	1.1	1.1	.62	.13	.00	.00	.00	.00
3	.00	.00	.15	.72	1.0	.93	.67	.13	.00	.00	.00	.00
4	.00	.00	.19	.95	1.0	.86	.69	.12	.00	.00	.00	.00
5	.00	.00	.23	.81	1.0	.87	.60	.14	.00	.00	.00	.00
6	.00	.00	.31	1.0	.97	.81	.56	.11	.00	.00	.00	.00
7	.00	.00	.39	.82	.95	.79	.50	.11	.00	.00	.00	.00
8	.00	.00	.37	.76	.95	.76	.44	.11	.00	.00	.00	.00
9	.00	.00	.43	.78	.93	.73	.46	.11	.00	.00	.00	.00
10	.00	.00	.79	.79	.92	.70	.47	.10	.00	.00	.00	.00
11	.00	.00	.52	.77	.95	.69	.43	.09	.00	.00	.00	.00
12	.00	.00	.54	1.1	.92	.67	.42	.08	.00	.00	.00	.00
13	.00	.00	.47	6.2	.90	.66	.39	.05	.00	.00	.00	.00
14	.00	.00	.43	4.1	.89	.65	.37	.03	.00	.00	.00	.00
15	.00	.00	.40	2.3	.86	.65	.34	.02	.00	.00	.00	.00
16	.00	.00	.40	2.5	.86	.66	.30	.00	.00	.00	.00	.00
17	.00	.00	.40	1.7	.90	.66	.27	.00	.00	.00	.00	.00
18	.00	.00	.39	1.4	1.1	.61	.25	.00	.00	.00	.00	.00
19	.00	.00	.44	1.1	.93	.58	.22	.00	.00	.00	.00	.00
20	.00	.00	.44	1.0	.79	.55	.22	.00	.00	.00	.00	.00
21	.00	.00	.44	.98	.76	.52	.20	.00	.00	.00	.00	.00
22	.00	.00	.52	.94	.77	.47	.20	.00	.00	.00	.00	.00
23	.00	.00	.95	1.3	.77	.53	.19	.00	.00	.00	.00	.00
24	.00	.00	.66	2.1	.79	.58	.18	.00	.00	.00	.00	.00
25	.00	.00	.64	1.2	.81	.48	.17	.00	.00	.00	.00	.00
26	.00	.00	.60	3.6	.79	.47	.17	.00	.00	.00	.00	.00
27	.00	.00	.56	3.2	.86	.47	.16	.00	.00	.00	.00	.00
28	.00	.00	.63	2.0	1.9	.49	.16	.00	.00	.00	.00	.00
29	.00	.00	.70	1.6	---	.47	.15	.00	.00	.00	.00	.00
30	.00	.00	.65	1.3	---	.47	.15	.00	.00	.00	.00	.00
31	.00	---	.65	1.2	---	.46	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	14.42	49.55	26.57	20.64	10.45	1.47	0.00	0.00	0.00	0.00
MEAN	.000	.000	.47	1.60	.95	.67	.35	.047	.000	.000	.000	.000
MAX	.00	.00	.95	6.2	1.9	1.3	.69	.14	.00	.00	.00	.00
MIN	.00	.00	.03	.66	.76	.46	.15	.00	.00	.00	.00	.00
AC-FT	.00	.00	29	98	53	41	21	2.9	.00	.00	.00	.00

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.18	.34	.80	1.77	2.85	3.14	1.57	.68	.23	.21	.49	.16
MAX	2.83	2.97	5.29	27.4	32.5	29.3	11.2	7.55	3.96	4.46	10.6	3.27
(WY)	1984	1984	1984	1993	1980	1983	1980	1980	1980	1979	1979	1983
MIN	.000	.000	.000	.000	.030	.073	.007	.000	.000	.000	.000	.000
(WY)	1951	1951	1963	1972	1972	1972	1972	1961	1954	1952	1951	1951

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1951 - 1997		
ANNUAL TOTAL	149.46			123.10					
ANNUAL MEAN	.41			.34			1.03		
HIGHEST ANNUAL MEAN							7.61		
LOWEST ANNUAL MEAN							.009		
HIGHEST DAILY MEAN	5.1 Feb 1			6.2 Jan 13			277 Aug 16 1979		
LOWEST DAILY MEAN	.00 May 16			.00 Oct 1			.00 Oct 1 1950		
ANNUAL SEVEN-DAY MINIMUM	.00 May 16			.00 Oct 1			.00 Oct 1 1950		
INSTANTANEOUS PEAK FLOW				7.6 Jan 13			2640 Aug 16 1979		
INSTANTANEOUS PEAK STAGE				2.66 Jan 13			9.80 Aug 16 1979		
ANNUAL RUNOFF (AC-FT)	296			244			744		
10 PERCENT EXCEEDS	1.1			.93			2.1		
50 PERCENT EXCEEDS	.00			.00			.10		
90 PERCENT EXCEEDS	.00			.00			.00		

10256000 WHITEWATER RIVER AT WHITE WATER, CA

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

DRAINAGE AREA.—57.5 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1967–1981, October 1996 to September 1997.

SEDIMENT DATA: Water year 1972.

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

Water discharge records were collected during water years 1949–1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

		DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	
NOV 12...	1245	10	371	8.6	20.5	160	3	46	11	13	15	
DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
NOV 12...	0.4	4.4	182	5	157	30	3.0	1.0	15	228	223	
DATE	TIME	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 12...	0.31	0.040	0.440	0.040	<0.20	0.010	0.020	<1	19	<3.0	3.0	

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

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

DRAINAGE AREA.—59.1 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD (1986–87 AND 1989–90).—Maximum discharge, 2,020 ft³/s, Feb. 15, 1986, gage height, 11.97 ft, from rating curve extended above 900 ft³/s; no flow for many days in some years.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Time	Discharge (ft ³ /s)
Oct. 8	0645	310
Nov. 12	1030	297
Dec. 4	1530	349
Jan. 8	1458	14.8
Feb. 6	0845	192
Mar. 5	1133	208
Apr. 2	1530	362
Apr. 28	1400	189
May 30	1100	0
June 4	0830	252
June 30	1208	190
Aug. 13	1132	247
Sept. 4	1342	325

10256500 SNOW CREEK NEAR WHITE WATER, CA

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

DRAINAGE AREA.—10.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to current year.

Yearly discharges for 1929–31, published in WSP 1314. Discharge records for Snow Creek Diversion (station 10256550) since October 1978, and those for creek only October 1978 through September 1988 available in files of the U.S. Geological Survey.

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

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

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

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

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion).—Maximum discharge, 9,900 ft³/s, Jan. 25, 1969, gage height, 13.8 ft, from floodmarks, site and datum then in use, from rating curve extended above 55 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft³/s, June 23–27, Sept. 5–11, 1961.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 14.9 ft³/s on basis of broad-crested weir computations:

Date	Time	Creek only Discharge (ft ³ /s)	Gage height (ft)	Combined creek and diversion Discharge (ft ³ /s)
Nov. 22	0330	239	4.13	239
Dec. 9	2030	194	3.95	194
Jan. 26	1100	146	3.75	146
Sept. 25	1230	148	3.76	148

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	e5.5	1.1	7.1	8.4	6.1	2.8	.93	.34	.11	.25	e2.3
2	.22	e5.2	.99	8.7	7.5	5.7	5.4	.92	.47	.09	.18	e4.3
3	.18	e5.1	.90	39	6.7	5.5	e6.7	.85	.32	.07	.23	e4.4
4	.14	1.7	.88	18	5.9	3.1	e6.1	.74	.50	.05	.19	e4.2
5	.14	.37	3.6	15	5.3	1.4	e5.6	.61	.76	.04	.12	e4.3
6	.15	.38	e5.4	11	4.8	1.1	e5.5	.45	1.5	.00	.10	e4.2
7	.12	.35	e5.3	7.3	4.4	.92	e5.4	.58	5.1	.03	.15	e4.1
8	.10	.31	e5.2	5.1	4.0	.96	2.5	.58	5.0	.04	.21	e4.2
9	.10	.26	34	4.5	3.7	.92	.85	1.7	2.2	.03	.29	e4.3
10	.13	.26	40	4.1	3.5	.87	.97	e5.2	.38	.03	.31	2.0
11	.28	.26	16	3.8	3.4	.91	.98	e5.2	.42	.04	.29	.71
12	.25	.23	13	5.1	3.2	.95	.92	2.2	.36	.04	.35	.07
13	.26	.24	9.5	e11	3.0	.94	.87	.41	.43	.05	.07	.07
14	.27	.18	8.0	e9.5	2.8	.87	.87	.35	.51	.06	.09	1.8
15	.28	.27	7.7	e10	2.8	.91	.76	.37	.48	.25	.11	4.3
16	.26	.31	6.7	e11	2.8	1.1	.74	.35	.31	.22	.28	4.1
17	.30	.32	3.8	e9.8	3.5	1.1	.64	.34	.25	.25	.23	3.5
18	.33	.35	2.1	e9.0	4.0	.92	.53	.35	.27	.29	.23	1.5
19	.36	.35	2.0	e8.2	2.4	.93	.69	2.8	.22	.35	.19	.62
20	.38	.31	1.9	7.5	2.0	.97	.81	5.6	.15	.34	.19	.72
21	.42	16	1.7	7.5	1.9	1.0	.88	2.2	.16	2.6	.11	.58
22	.42	45	9.1	7.5	1.9	1.0	1.3	.42	.13	3.7	.15	.50
23	.42	7.2	11	9.9	1.8	1.1	1.2	.35	.12	3.5	.11	.49
24	.34	7.9	7.2	11	1.8	1.2	1.1	.40	.19	3.2	.11	1.7
25	.19	7.4	6.4	14	1.7	1.1	1.0	.38	.17	1.9	.24	e45
26	.09	4.0	6.2	92	1.7	1.1	.91	.29	.15	1.0	.33	e12
27	1.2	1.8	6.1	38	4.4	1.1	.78	.21	.14	4.5	.34	e8.0
28	e4.2	1.4	9.8	25	6.8	1.2	.84	.17	.09	3.5	.35	e7.0
29	e4.2	1.2	9.3	19	---	1.1	.95	.15	.10	.56	.40	6.4
30	e6.0	1.1	7.6	16	---	1.0	1.0	.41	.12	.56	.38	3.6
31	e5.7	---	7.1	12	---	1.1	---	.44	---	.51	.42	---
TOTAL	27.62	115.25	249.57	456.6	106.1	48.17	59.59	35.95	21.34	27.91	7.00	140.96
MEAN	.89	3.84	8.05	14.7	3.79	1.55	1.99	1.16	.71	.90	.23	4.70
MAX	6.0	45	40	92	8.4	6.1	6.7	5.6	5.1	4.5	.42	45
MIN	.09	.18	.88	3.8	1.7	.87	.53	.15	.09	.00	.07	.07
AC-FT	55	229	495	906	210	96	118	71	42	55	14	280

e Estimated.

10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.41	3.69	5.84	16.1	23.3	18.2	11.5	11.2	6.41	3.83	3.10	2.37
MAX	6.55	13.3	24.0	131	173	71.5	28.6	40.8	31.7	14.4	18.0	7.55
(WY)	1993	1984	1984	1993	1980	1995	1983	1983	1983	1983	1983	1983
MIN	.008	.30	.000	.99	3.14	1.55	1.09	.29	.14	.000	.001	.17
(WY)	1985	1982	1982	1994	1984	1997	1984	1984	1984	1981	1981	1981

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1979 - 1997			
ANNUAL TOTAL	1319.84				1296.06							
ANNUAL MEAN	3.61				3.55				8.92			
HIGHEST ANNUAL MEAN									28.4			
LOWEST ANNUAL MEAN									2.21			
HIGHEST DAILY MEAN	76 Feb 21				92 Jan 26				909 Jan 7 1993			
LOWEST DAILY MEAN	.06 Aug 8				.00 Jul 6				.00 Nov 8 1978			
ANNUAL SEVEN-DAY MINIMUM	.09 Aug 5				.03 Jul 5				.00 Oct 5 1979			
INSTANTANEOUS PEAK FLOW					239 Nov 22				1910 Jan 7 1993			
INSTANTANEOUS PEAK STAGE					4.13 Nov 22				7.35 Jan 7 1993			
ANNUAL RUNOFF (AC-FT)	2620				2570				6460			
10 PERCENT EXCEEDS	7.9				8.0				19			
50 PERCENT EXCEEDS	1.3				.97				3.4			
90 PERCENT EXCEEDS	.19				.14				.20			

10256501 SNOW CREEK NEAR WHITE WATER, CA—Continued

SNOW CREEK AND SNOW CREEK DIVERSION NEAR WHITE WATER

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	e5.5	5.9	7.1	13	6.1	8.0	5.9	4.3	4.1	4.2	e4.3
2	4.3	e5.2	5.8	8.7	12	5.7	7.1	5.9	4.7	4.1	4.2	e4.3
3	4.3	e5.1	5.7	39	12	5.5	e6.7	5.8	4.3	4.1	4.1	e4.4
4	4.2	4.7	5.7	18	11	6.0	e6.1	5.8	4.5	4.1	4.1	e4.2
5	4.3	5.1	5.4	15	9.9	6.3	e5.6	5.7	4.8	4.0	4.0	e4.3
6	4.3	5.1	e5.4	11	9.4	6.0	e5.5	5.3	4.9	4.0	4.0	e4.2
7	4.3	5.0	e5.3	10	9.0	5.8	e5.4	5.5	5.1	4.0	4.2	e4.1
8	4.3	5.1	e5.2	9.5	8.6	5.9	5.2	5.4	5.0	4.0	4.2	e4.2
9	4.3	5.1	34	9.0	8.3	5.7	5.3	5.3	4.7	4.0	4.3	e4.3
10	4.3	5.0	40	8.5	8.1	5.7	5.9	e5.2	4.6	3.8	4.3	4.4
11	4.6	5.1	16	8.2	8.0	5.7	6.0	e5.2	4.6	3.7	4.5	4.3
12	4.4	5.0	13	9.6	7.9	5.4	5.8	5.1	4.5	3.9	4.3	3.8
13	4.3	5.0	9.5	e11	7.6	5.8	5.7	5.3	4.4	4.0	4.1	3.7
14	4.4	5.0	8.0	e9.5	7.4	5.8	5.8	5.3	4.5	3.9	4.1	3.8
15	4.5	5.1	7.7	e10	7.4	6.1	5.7	5.2	4.6	3.8	4.1	4.3
16	4.5	5.0	6.7	e11	7.4	6.2	5.5	5.2	4.4	3.9	4.3	4.1
17	4.4	5.0	5.6	e9.8	6.8	5.7	5.5	5.2	4.3	3.8	4.2	3.5
18	4.5	5.0	6.5	e9.0	6.6	5.7	5.4	5.2	4.3	3.9	4.2	3.7
19	4.6	5.0	6.5	e8.2	7.2	5.8	5.7	5.6	4.2	3.9	4.2	4.2
20	4.5	5.0	6.4	7.5	6.8	5.9	5.8	5.6	4.2	3.9	4.3	4.3
21	4.6	19	6.2	7.5	6.7	5.9	5.9	5.0	4.2	3.7	4.2	4.2
22	4.6	45	11	7.5	6.8	5.9	6.4	5.1	4.1	3.7	4.3	4.1
23	4.4	7.2	11	9.9	6.6	6.0	6.3	5.0	4.1	3.5	4.1	4.1
24	4.5	7.9	7.2	11	6.6	6.1	6.3	4.9	4.2	3.2	4.1	3.8
25	4.3	7.4	6.4	14	6.5	6.0	5.9	5.0	4.2	4.5	4.2	e45
26	4.3	6.9	6.2	92	6.6	6.0	5.9	4.9	4.2	5.0	4.3	e12
27	4.1	6.6	6.1	38	6.2	6.0	5.9	4.8	4.1	9.7	4.3	e8.0
28	e4.2	6.2	9.8	25	6.8	6.1	5.4	4.8	4.1	9.5	4.3	e7.0
29	e4.2	6.0	9.3	19	---	6.0	5.9	4.7	4.1	4.7	4.4	6.4
30	e6.0	5.9	7.6	16	---	5.9	6.1	4.5	4.1	4.6	4.4	5.7
31	e5.7	---	7.1	15	---	6.0	---	4.5	---	4.5	4.4	---
TOTAL	138.5	219.2	292.2	484.5	227.2	182.7	177.7	161.9	132.3	135.5	130.9	182.7
MEAN	4.47	7.31	9.43	15.6	8.11	5.89	5.92	5.22	4.41	4.37	4.22	6.09
MAX	6.0	45	40	92	13	6.3	8.0	5.9	5.1	9.7	4.5	45
MIN	4.1	4.7	5.2	7.1	6.2	5.4	5.2	4.5	4.1	3.2	4.0	3.5
AC-FT	275	435	580	961	451	362	352	321	262	269	260	362

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.82	7.45	10.7	15.4	16.5	14.5	12.7	12.6	9.13	6.25	5.35	5.38
MAX	10.7	82.5	76.7	178	173	72.0	36.7	45.7	37.6	20.2	20.7	32.5
(WY)	1984	1966	1967	1969	1980	1995	1969	1983	1983	1983	1983	1976
MIN	2.76	2.75	3.11	3.30	3.40	3.39	3.16	2.55	2.35	2.31	2.35	2.40
(WY)	1962	1963	1963	1961	1961	1961	1961	1961	1961	1961	1960	1961

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1921 - 1997

ANNUAL TOTAL	2365.2	2465.3	
ANNUAL MEAN	6.46	6.75	10.2
HIGHEST ANNUAL MEAN			33.0
LOWEST ANNUAL MEAN			2.96
HIGHEST DAILY MEAN	76	Feb 21	3490
LOWEST DAILY MEAN	2.6	Aug 17	2.1
ANNUAL SEVEN-DAY MINIMUM	2.8	Aug 14	2.1
INSTANTANEOUS PEAK FLOW			9900
INSTANTANEOUS PEAK STAGE			13.80
ANNUAL RUNOFF (AC-FT)	4690	4890	7390
10 PERCENT EXCEEDS	9.8	9.5	16
50 PERCENT EXCEEDS	5.1	5.3	5.8
90 PERCENT EXCEEDS	2.9	4.1	3.3

10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)		
		NOV 13...	0920	a4.1	110	8.2	12.5	34	0	12	0.96	9.6	37
		DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
NOV 13...	0.7	1.9	65	0	54	1.3	1.4	0.10	20	80	81		
DATE	TIME	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
NOV 13...	0.11	<0.010	<0.050	0.020	<0.20	<0.010	<0.010	<1	14	<3.0	1.0		

a Discharge represents total flow (creek plus diversion).

10257500 FALLS CREEK NEAR WHITE WATER, CA

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

DRAINAGE AREA.—4.14 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion).—Maximum discharge, 154 ft³/s, Jan. 10, 1995, gage height, 6.14 ft (creek gage; no diversion at peak), from rating curve extended above 4 ft³/s on basis of critical depth computations; minimum daily, 0.10 ft³/s, Sept. 11, 1997.

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

Date	Time	Creek only Discharge (ft ³ /s)	Creek only Gage height (ft)	Combined creek and diversion Discharge (ft ³ /s)
Nov. 22	0400	89	5.65	89
Dec. 9	2100	93	5.68	93
Sept. 25	1515	89	5.64	89

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.45	1.3	.86	.95	.89	.26	.00	.25	.20	.30	.34
2	.51	.37	1.2	.83	.80	.93	.67	.01	.31	.17	.26	.80
3	.50	.38	e1.3	1.8	.87	.89	.54	.00	.32	.15	.27	.84
4	.44	.40	e1.0	1.6	.84	.43	.54	.00	.34	.13	.27	.41
5	.42	.43	e.75	1.3	.57	.11	.46	.02	.38	.14	.17	.29
6	.39	.40	.71	1.1	.43	.15	.47	.12	.43	.12	.18	.26
7	.26	.28	.74	.58	.37	.12	.46	.02	.41	.15	.19	.20
8	.16	.30	.79	.28	.33	.10	.42	.02	.45	.18	.19	.17
9	.17	.27	11	.34	.31	.08	.18	.08	.44	.21	.24	.15
10	.19	.27	10	.28	.29	.06	.02	.32	.39	.23	.32	.14
11	.23	.25	3.4	.26	.50	.05	.02	.32	.36	.28	.31	.10
12	.24	.25	2.4	1.0	.59	.30	.02	.17	.34	.32	.32	.13
13	.25	.26	1.9	2.0	.20	.03	.01	.02	.32	.31	.28	.11
14	.28	.24	1.7	1.3	.18	.02	.01	.01	.45	.29	.23	.13
15	.25	.32	1.6	1.6	.22	.03	.01	.02	.42	.26	.22	.19
16	.29	.40	1.4	1.7	.21	.04	.00	.01	.33	.23	.29	.17
17	.33	.41	.74	1.4	.42	.02	.00	.01	.23	.22	.33	.17
18	.36	.44	.26	1.2	.58	.02	.00	.02	.20	.22	.31	.16
19	.45	.40	.28	1.2	.15	.01	.00	.65	.20	.26	.28	.16
20	.44	.39	.27	1.2	.12	.02	.01	.67	.17	.29	.26	.17
21	.43	3.4	.24	1.2	.16	.01	.01	.34	.16	.38	.23	.14
22	.46	24	.96	1.2	.16	.01	.03	.07	.16	.69	.20	.13
23	.45	4.4	1.1	1.3	.15	.02	.02	.08	.21	.83	.20	.11
24	.45	2.2	.95	1.3	.12	.03	.11	.04	.23	.75	.20	.12
25	.42	1.7	.89	1.7	.12	.01	.02	.05	.22	.52	.18	21
26	.45	1.5	.87	12	e.25	.02	.00	.04	.22	.46	.19	e2.6
27	.58	1.3	.95	5.3	.61	.02	.02	.05	.23	.41	.20	e1.7
28	.57	1.3	.93	3.0	1.1	.03	.12	.02	.23	.40	.20	e.90
29	.49	1.3	.86	2.3	---	.02	.00	.17	.20	.39	.21	e.70
30	1.2	1.3	.81	1.9	---	.02	.01	.26	.23	.39	.21	.57
31	.77	---	.81	1.4	---	.03	---	.28	---	.36	.22	---
TOTAL	12.95	49.31	52.11	54.43	11.60	4.52	4.44	3.89	8.83	9.94	7.46	33.06
MEAN	.42	1.64	1.68	1.76	.41	.15	.15	.13	.29	.32	.24	1.10
MAX	1.2	24	11	12	1.1	.93	.67	.67	.45	.83	.33	21
MIN	.16	.24	.24	.26	.12	.01	.00	.00	.16	.12	.17	.10
AC-FT	26	98	103	108	23	9.0	8.8	7.7	18	20	15	66

e Estimated.

10257500 FALLS CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.22	1.51	1.96	2.04	1.91	2.08	2.15	1.86	1.33	.96	.93	1.08
MAX	2.52	2.81	5.68	4.58	4.46	8.75	7.90	4.25	2.78	2.37	2.67	2.23
(WY)	1923	1923	1927	1995	1995	1995	1926	1926	1926	1926	1926	1926
MIN	.40	.76	.74	.89	.41	.15	.15	.13	.23	.30	.24	.53
(WY)	1995	1929	1995	1996	1997	1997	1997	1997	1996	1996	1997	1928

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1923 - 1997	
ANNUAL TOTAL	308.07		252.54			
ANNUAL MEAN	.84		.69		1.60	
HIGHEST ANNUAL MEAN					2.77	
LOWEST ANNUAL MEAN					.69	
HIGHEST DAILY MEAN	24	Nov 22	24	Nov 22	50	Mar 5 1995
LOWEST DAILY MEAN	.03	Jun 28	.00	Apr 16	.00	Apr 16 1997
ANNUAL SEVEN-DAY MINIMUM	.10	Jul 16	.00	Apr 13	.00	Apr 13 1997
INSTANTANEOUS PEAK FLOW			93	Dec 9	154	Jan 10 1995
INSTANTANEOUS PEAK STAGE			5.68	Dec 9	6.14	Jan 10 1995
ANNUAL RUNOFF (AC-FT)	611		501		1160	
10 PERCENT EXCEEDS	1.4		1.3		2.7	
50 PERCENT EXCEEDS	.47		.28		1.2	
90 PERCENT EXCEEDS	.20		.02		.41	

10257501 FALLS CREEK NEAR WHITE WATER, CA—Continued

FALLS CREEK AND FALLS CREEK DIVERSION NEAR WHITE WATER
 COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	.45	1.3	.86	1.2	.89	.26	.22	.25	.20	.30	.34
2	.51	.37	1.2	.83	1.0	.93	.67	.23	.31	.17	.26	.80
3	.50	.38	e1.3	1.8	1.0	.89	.54	.22	.32	.15	.27	.84
4	.44	.40	e1.0	1.6	1.1	.60	.54	.22	.34	.13	.27	.41
5	.42	.43	e.75	1.3	.79	.33	.46	.19	.38	.14	.17	.29
6	.39	.40	.71	1.1	.65	.36	.47	.25	.43	.12	.18	.26
7	.26	.28	.74	.71	.59	.34	.46	.24	.41	.15	.19	.20
8	.16	.30	.79	.50	.55	.32	.55	.24	.45	.18	.19	.17
9	.17	.27	11	.56	.53	.30	.40	.25	.44	.21	.24	.15
10	.19	.27	10	.50	.51	.28	.24	.32	.39	.23	.32	.14
11	.23	.25	3.4	.48	.72	.27	.24	.32	.36	.28	.31	.10
12	.24	.25	2.4	1.1	.73	.50	.24	.30	.34	.32	.32	.13
13	.25	.26	1.9	2.0	.42	.25	.23	.24	.32	.31	.28	.11
14	.28	.24	1.7	1.3	.40	.24	.23	.23	.45	.29	.23	.13
15	.25	.32	1.6	1.6	.44	.25	.23	.24	.42	.26	.22	.19
16	.29	.40	1.4	1.7	.43	.26	.22	.23	.33	.23	.29	.17
17	.33	.41	.83	1.4	.58	.24	.22	.23	.23	.22	.33	.17
18	.36	.44	.48	1.2	.80	.24	.22	.24	.20	.22	.31	.16
19	.45	.40	.50	1.2	.37	.23	.22	.75	.20	.26	.28	.16
20	.44	.39	.49	1.2	.34	.24	.23	.67	.17	.29	.26	.17
21	.43	3.4	.38	1.2	.38	.23	.23	.46	.16	.38	.23	.14
22	.46	24	.96	1.2	.38	.23	.25	.29	.16	.69	.20	.13
23	.45	4.4	1.1	1.3	.37	.24	.24	.29	.21	.83	.20	.11
24	.45	2.2	.95	1.3	.34	.25	.33	.26	.23	.75	.20	.12
25	.42	1.7	.89	1.7	.34	.23	.24	.27	.22	.52	.18	21
26	.45	1.5	.87	12	e.33	.24	.22	.26	.22	.46	.19	e2.6
27	.58	1.3	.95	5.3	.61	.24	.24	.27	.23	.41	.20	e1.7
28	.57	1.3	.93	3.0	1.1	.25	.34	.21	.23	.40	.20	e.90
29	.49	1.3	.86	2.3	---	.24	.22	.23	.20	.39	.21	e.70
30	1.2	1.3	.81	1.9	---	.24	.23	.26	.23	.39	.21	.57
31	.77	---	.81	1.5	---	.25	---	.28	---	.36	.22	---
TOTAL	12.95	49.31	53.00	55.64	17.00	10.60	9.41	8.91	8.83	9.94	7.46	33.06
MEAN	.42	1.64	1.71	1.79	.61	.34	.31	.29	.29	.32	.24	1.10
MAX	1.2	24	11	12	1.2	.93	.67	.75	.45	.83	.33	21
MIN	.16	.24	.38	.48	.33	.23	.22	.19	.16	.12	.17	.10
AC-FT	26	98	105	110	34	21	19	18	18	20	15	66

e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.83	1.34	1.30	2.56	2.57	3.49	1.44	1.72	1.33	1.05	.82	1.07
MAX	1.40	1.64	1.71	4.58	4.55	8.75	2.92	3.97	3.02	2.32	1.76	1.52
(WY)	1996	1997	1997	1995	1995	1995	1995	1995	1995	1995	1995	1995
MIN	.42	.90	.89	1.32	.61	.34	.31	.29	.29	.32	.24	.60
(WY)	1997	1995	1995	1996	1997	1997	1997	1997	1997	1997	1997	1996

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1995 - 1997

ANNUAL TOTAL	402.51	276.11	
ANNUAL MEAN	1.10	.76	1.62
HIGHEST ANNUAL MEAN			2.99
LOWEST ANNUAL MEAN			.76
HIGHEST DAILY MEAN	24	Nov 22	50
LOWEST DAILY MEAN	.16	Oct 8	.10
ANNUAL SEVEN-DAY MINIMUM	.21	Oct 7	.13
INSTANTANEOUS PEAK FLOW			93
ANNUAL RUNOFF (AC-FT)	798	548	154
10 PERCENT EXCEEDS	1.6	1.3	3.0
50 PERCENT EXCEEDS	.81	.33	.96
90 PERCENT EXCEEDS	.42	.19	.24

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

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

DRAINAGE AREA.—264 mi².

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

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

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

REMARKS.—Records good except for estimated daily discharges, which are poor. Imported water is released to the Whitewater River from the Colorado River Aqueduct at a point 2.75 mi upstream for ground-water recharge in the upper Coachella Valley. Water is diverted out of the basin 18.5 mi upstream to powerplants in the San Geronio River Basin and then to an area north of Banning for irrigation. See schematic diagram of Salton Sea Basin.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum computed discharge, 2,530 ft³/s, Jan. 10, 1995, gage height, 8.32 ft, main channel, from rating curve extended above 400 ft³/s on basis of critical-depth computation (flow in overflow channel at peak); maximum probably exceeded during flood of Jan. 16, 1993, but discharge is unknown; no flow for several days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	288	284	e9.3	e7.3	153	314	138	129	137	128	.00
2	256	290	282	e9.2	e6.3	145	328	136	129	136	122	159
3	256	e287	281	e9.1	e5.0	138	293	133	130	85	135	255
4	258	e285	282	e9.0	e24	135	319	126	129	.00	134	254
5	258	e284	282	e8.8	e137	130	318	122	128	.00	117	249
6	256	289	282	e8.7	194	125	325	120	129	.00	142	255
7	254	287	289	e8.6	198	122	246	120	131	147	139	252
8	253	284	295	e8.9	179	121	192	119	128	240	137	246
9	255	282	e364	e9.5	233	121	185	120	128	237	137	176
10	252	281	e268	e8.7	257	119	183	119	127	228	133	128
11	253	279	e11	e9.3	279	116	178	118	126	238	132	125
12	249	281	e11	e11	308	100	176	116	122	237	134	126
13	255	274	e9.5	e8.0	303	122	174	118	126	240	133	126
14	254	269	e9.2	e9.5	297	121	169	89	124	241	132	126
15	255	275	e10	e9.6	294	119	166	78	86	175	132	126
16	253	272	e10	e17	290	117	164	121	148	124	96	124
17	257	277	e9.6	e16	278	119	158	134	137	121	149	123
18	258	276	e9.2	e14	274	122	153	130	138	122	147	123
19	255	273	e9.0	e15	251	122	149	131	135	121	146	123
20	264	301	e8.6	e8.3	234	122	152	135	132	122	145	124
21	267	307	e8.2	e10	253	126	148	137	131	123	145	125
22	268	239	e12	e8.2	248	121	146	133	131	107	144	127
23	269	265	e11	e7.0	249	120	139	64	130	136	141	125
24	266	283	e10	e4.1	243	121	144	.00	132	137	140	126
25	264	276	e9.4	e4.0	238	122	113	.00	134	134	140	101
26	277	275	e8.8	e107	236	121	71	.00	135	131	140	29
27	276	286	e8.5	e26	188	54	177	82	133	132	140	17
28	270	288	e11	e14	164	.00	170	139	133	131	93	14
29	274	285	e10	e13	---	.00	153	136	133	131	.00	151
30	280	281	e9.6	e11	---	.00	141	135	134	131	.00	269
31	295	---	e9.4	e8.4	---	180	---	133	---	131	.00	---
TOTAL	8112	8419	3114.0	420.2	5867.6	3454.00	5744	3382.00	3888	4375.00	3753.00	4304.00
MEAN	262	281	100	13.6	210	111	191	109	130	141	121	143
MAX	295	307	364	107	308	180	328	139	148	241	149	269
MIN	249	239	8.2	4.0	5.0	.00	71	.00	86	.00	.00	.00
AC-FT	16090	16700	6180	833	11640	6850	11390	6710	7710	8680	7440	8540
a	18430	17870	5640	2	12220	9320	11750	9180	10310	11400	9590	10530
b	110	104	74	28	18	44	129	166	64	110	93	133

c Estimated.

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

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

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	144	145	105	134	136	133	132	88.8	110	98.9	104	131
MAX	596	499	477	598	595	445	316	314	423	417	378	463
(WY)	1987	1987	1987	1987	1987	1987	1986	1986	1986	1986	1986	1986
MIN	.025	.000	.000	.000	3.16	3.97	.026	.000	.000	.000	.000	.000
(WY)	1992	1992	1990	1992	1991	1989	1991	1987	1987	1989	1987	1991

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1985 - 1997	
ANNUAL TOTAL	60996.07		54832.80			
ANNUAL MEAN	167		150		131	
HIGHEST ANNUAL MEAN					308	1986
LOWEST ANNUAL MEAN					11.9	1991
HIGHEST DAILY MEAN	364	Dec 9	364	Dec 9	2600	Jan 7 1993
LOWEST DAILY MEAN	.00	May 26	.00	Mar 28	.00	Mar 4 1985
ANNUAL SEVEN-DAY MINIMUM	2.6	Feb 13	8.1	Jan 19	.00	Feb 16 1986
INSTANTANEOUS PEAK FLOW			(a)	Dec 9	2530	Jan 10 1995
INSTANTANEOUS PEAK STAGE			(a)	Dec 9	8.32	Jan 10 1995
ANNUAL RUNOFF (AC-FT)	121000		108800		94550	
10 PERCENT EXCEEDS	280		281		327	
50 PERCENT EXCEEDS	227		134		34	
90 PERCENT EXCEEDS	8.8		9.2		.00	

(a) Peak flow and stage are unknown but are known to have occurred on Dec. 9.

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA

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

DRAINAGE AREA.—35.7 mi².

PERIOD OF RECORD.—October 1967 to current year.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,750 ft³/s, Aug. 17, 1983, gage height, 3.33 ft on basis of slope-conveyance study of peak flow; maximum gage height, 6.40 ft, Jan. 25, 1969; maximum gage height since November 1988, 5.80 ft from crest-stage gage, Jan. 16, 1993, discharge not determined; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 36 ft³/s on basis of critical depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	0130	2.8	1.68				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.15	.27	.51	1.1	1.1	.68	.41	.13	.02	.00	.00
2	.18	.15	.28	.48	1.1	1.0	.78	.40	.13	.01	.00	.00
3	.15	.20	.28	.48	1.1	1.0	.90	.39	.12	.01	.00	.00
4	.13	.23	.29	.56	1.1	.98	.84	.37	.13	.00	.00	.00
5	.12	.23	.30	.56	1.1	.99	.77	.35	.15	.00	.00	.00
6	.12	.23	.29	.57	1.1	.97	.75	.33	.17	.00	.00	.00
7	.11	.22	.29	.54	1.1	.93	.69	.32	.17	.00	.00	.00
8	.09	.21	.29	.58	1.1	.92	.64	.33	.17	.00	.00	.00
9	.08	.21	.62	.66	1.1	.88	.69	.33	.15	.00	.00	.00
10	.08	.21	1.6	.66	1.1	.87	.73	.31	.13	.00	.00	.00
11	.08	.21	.88	.69	1.1	.85	.73	.28	.11	.00	.00	.00
12	.08	.20	.70	.85	1.1	.83	.66	.28	.12	.00	.00	.00
13	.08	.20	.60	1.0	1.1	.84	.64	.24	.15	.00	.00	.00
14	.08	.20	.56	.88	1.1	.85	.62	.23	.18	.00	.00	.00
15	.06	.21	.60	1.1	1.1	.84	.56	.22	.16	.00	.00	.00
16	.05	.21	.63	1.1	1.0	.86	.52	.21	.13	.00	.00	.00
17	.05	.21	.55	.99	1.1	.82	.50	.21	.08	.00	.00	.00
18	.04	.21	.56	.94	1.1	.79	.49	.21	.05	.00	.00	.00
19	.05	.21	.58	.91	1.0	.71	.57	.23	.04	.00	.00	.00
20	.05	.22	.55	.91	.95	.62	.52	.31	.03	.00	.00	.00
21	.05	.27	.54	.93	1.0	.62	.48	.28	.03	.00	.00	.00
22	.05	.32	.96	.93	1.0	.61	.46	.26	.03	.00	.00	.00
23	.05	.27	.58	.92	1.0	.66	.46	.26	.04	.00	.00	.00
24	.05	.27	.57	.91	1.0	.63	.52	.27	.03	.00	.00	.00
25	.06	.27	.55	.93	1.0	.61	.52	.27	.02	.00	.00	.00
26	.06	.26	.55	1.5	1.0	.63	.48	.23	.01	.00	.00	.59
27	.08	.27	.55	1.2	1.1	.62	.43	.21	.02	.00	.00	.45
28	.09	.27	.55	1.2	1.1	.62	.45	.16	.01	.00	.00	.32
29	.11	.27	.54	1.2	---	.58	.44	.13	.02	.00	.00	.28
30	.11	.27	.52	1.2	---	.60	.42	.13	.01	.00	.00	.25
31	.13	---	.50	1.2	---	.61	---	.12	---	.00	.00	---
TOTAL	2.69	6.86	17.13	27.09	29.85	24.44	17.94	8.28	2.72	0.04	0.00	1.89
MEAN	.087	.23	.55	.87	1.07	.79	.60	.27	.091	.001	.000	.063
MAX	.18	.32	1.6	1.5	1.1	1.1	.90	.41	.18	.02	.00	.59
MIN	.04	.15	.27	.48	.95	.58	.42	.12	.01	.00	.00	.00
AC-FT	5.3	14	34	54	59	48	36	16	5.4	.08	.00	3.7

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.89	1.14	1.21	3.70	9.13	7.14	5.78	4.69	3.01	2.02	1.55	.97
MAX	3.83	4.54	4.51	29.2	174	49.6	31.6	25.8	16.4	10.1	5.42	4.74
(WY)	1970	1984	1979	1980	1980	1980	1993	1993	1993	1980	1983	1993
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1968	1969	1969	1968	1968	1989	1968	1968	1968	1972	1968	1968

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1968 - 1997	
ANNUAL TOTAL	313.56		138.93			
ANNUAL MEAN	.86		.38		3.40	
HIGHEST ANNUAL MEAN					28.3	1980
LOWEST ANNUAL MEAN					.000	1990
HIGHEST DAILY MEAN	3.7	Feb 1	1.6	Dec 10	540	Feb 18 1980
LOWEST DAILY MEAN	.00	Aug 13	.00	Jul 4	.00	Oct 1 1967
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 22	.00	Jul 4	.00	Oct 1 1967
INSTANTANEOUS PEAK FLOW			2.8	Dec 10	1750	Aug 17 1983
INSTANTANEOUS PEAK STAGE			1.68	Dec 10	6.40	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	622		276		2470	
10 PERCENT EXCEEDS	2.3		1.0		6.9	
50 PERCENT EXCEEDS	.31		.26		.64	
90 PERCENT EXCEEDS	.08		.00		.00	

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

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

DRAINAGE AREA.—4.71 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1986 to current year.

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 153 ft³/s, Jan. 7, 1993, gage height, 10.18 ft, from rating curve extended above 35 ft³/s on basis of critical depth computation; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.72	.37	1.4	.80	.17	.00	.11	.08	.09	.08
2	.00	.00	.74	.30	1.4	.79	.40	.00	.11	.07	.06	.26
3	.00	.00	.72	.38	1.3	.74	.47	.00	.11	.06	.08	.69
4	.00	.00	.72	.45	1.3	.70	.57	.00	.10	.06	.07	2.0
5	.00	.00	.71	.57	1.3	.71	.39	.00	.12	.06	.06	1.1
6	.00	.00	.67	.68	1.2	.64	.00	.00	.12	.06	.07	.81
7	.00	.00	.66	.72	1.3	.61	.00	.00	.13	.07	.06	.64
8	.00	.00	.66	.72	1.3	.62	.00	.00	.12	.07	.06	.50
9	.00	.00	1.9	.87	1.3	.61	.00	.00	.11	.06	.07	.41
10	.00	.00	1.7	.80	1.2	.54	.01	.17	.10	.06	.07	.40
11	.00	.00	1.2	.80	1.1	.52	.02	.15	.10	.06	.08	.42
12	.00	.00	.93	1.1	1.1	.49	.03	.12	.10	.06	.09	.40
13	.00	.00	.81	1.5	1.0	.51	.03	.08	.14	.06	.08	.37
14	.00	.00	.73	1.1	1.0	.50	.20	.07	.16	.05	.08	.42
15	.00	.00	.70	1.2	1.0	.51	.39	.09	.14	.04	.08	.47
16	.00	.00	.68	1.2	.95	.65	.01	.08	.09	.04	.09	.35
17	.00	.00	.53	1.1	.90	.51	.19	.08	.09	.04	.08	.31
18	.00	.00	.31	1.0	.85	.03	.76	.08	.09	.05	.09	.30
19	.00	.00	.19	.95	.81	.00	.74	.17	.09	.05	.07	.30
20	.00	.00	.03	.93	.78	.03	.62	.25	.08	.05	.08	.29
21	.00	.36	.19	.89	.76	.04	.52	.19	.08	.05	.08	.32
22	.00	2.4	.48	.94	.79	.06	.46	.18	.08	.17	.07	.33
23	.00	1.3	.28	.90	.78	.08	.47	.14	.09	.28	.06	.29
24	.00	.96	.10	.90	.80	.08	.45	.12	.08	.26	.07	.24
25	.00	.81	.19	1.0	.77	.08	.23	.13	.08	.22	.07	3.7
26	.00	.80	.20	1.7	.77	.07	.00	.15	.08	.16	.07	1.7
27	.00	.76	.21	1.4	.82	.07	.00	.13	.08	.10	.07	.75
28	.00	.74	.21	1.4	.90	.00	.00	.14	.08	.10	.06	.61
29	.00	.71	.19	1.4	---	.00	.00	.15	.08	.12	.07	.59
30	.00	.71	.28	1.4	---	.00	.00	.14	.08	.09	.06	.56
31	.00	---	.36	1.4	---	.00	---	.12	---	.10	.05	---
TOTAL	0.00	9.55	18.00	30.07	28.88	10.99	7.13	2.93	3.02	2.80	2.24	19.61
MEAN	.000	.32	.58	.97	1.03	.35	.24	.095	.10	.090	.072	.65
MAX	.00	2.4	1.9	1.7	1.4	.80	.76	.25	.16	.28	.09	3.7
MIN	.00	.00	.03	.30	.76	.00	.00	.00	.08	.04	.05	.08
AC-FT	.00	19	36	60	57	22	14	5.8	6.0	5.6	4.4	39

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.32	.45	.51	2.21	2.83	2.29	1.36	.64	.24	.057	.11	.28
MAX	1.19	1.32	1.49	14.0	17.8	8.82	3.85	2.09	.77	.28	.65	1.38
(WY)	1994	1987	1994	1993	1993	1993	1993	1993	1995	1987	1993	1993
MIN	.000	.000	.000	.031	.096	.28	.11	.057	.000	.000	.000	.000
(WY)	1991	1991	1991	1991	1991	1989	1989	1989	1992	1989	1990	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1987 - 1997			
ANNUAL TOTAL	183.66				135.22							
ANNUAL MEAN	.50				.37				.93			
HIGHEST ANNUAL MEAN									4.02			
LOWEST ANNUAL MEAN									.19			
HIGHEST DAILY MEAN	3.2 Feb 21				3.7 Sep 25				49 Jan 17 1993			
LOWEST DAILY MEAN	.00 Apr 24				.00 Oct 1				.00 Jun 15 1989			
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 1				.00 Oct 1				.00 Jun 15 1989			
INSTANTANEOUS PEAK FLOW					20 Sep 4				153 Jan 7 1993			
INSTANTANEOUS PEAK STAGE					10.18 Sep 4				10.18 Jan 7 1993			
ANNUAL RUNOFF (AC-FT)	364				268				675			
10 PERCENT EXCEEDS	1.5				1.0				2.0			
50 PERCENT EXCEEDS	.01				.12				.28			
90 PERCENT EXCEEDS	.00				.00				.00			

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD) (UNITS) (00400)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
MAY 30...	0810	0.21	213	8.4	17.5	80	0	28	2.5	10	21
DATE	RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00931)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CAC03) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
MAY 30...	0.5	5.2	122	2	102	4.2	2.5	<0.10	20	133	134
DATE	PER (AC-FT) (70303)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAY 30...	0.18	<0.010	0.058	<0.015	<0.20	<0.010	<0.010	<1	16	5.1	<1.0

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.—16.9 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,900 ft³/s, Nov. 22, 1965, Jan. 25, 1969, gage height, 12.34 ft, from rating curve extended above 70 ft³/s on basis of slope-area measurements at gage heights 10.45 and 12.34 ft; maximum gage height, 15.78 ft, Sept. 7, 1981, from debris wave produced by thunderstorm following a brushfire; no flow for parts of most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 85 ft³/s, or maximum, from rating curve extended above 147 ft³/s on basis of slope-area measurements at gage heights 10.45 and 12.34 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	1500	41	5.37				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.55	.82	2.0	5.4	3.4	4.3	2.9	.67	.10	.00	.00
2	.00	.46	.84	2.5	5.2	3.4	4.4	2.8	.61	.08	.00	.00
3	.00	.44	.86	8.2	5.0	3.3	4.3	2.7	.57	.06	.00	.00
4	.00	.43	.86	8.5	4.8	3.3	4.3	2.7	.52	.02	.00	.00
5	.00	.43	.84	5.9	4.6	3.2	4.2	2.4	.48	.02	.00	.00
6	.00	.43	.89	4.7	4.4	3.2	4.2	2.3	.55	.03	.00	.00
7	.00	.43	.85	3.8	4.2	3.2	4.3	2.2	.70	.01	.00	.00
8	.00	.43	.85	3.6	4.1	3.3	4.2	2.2	.79	.01	.00	.00
9	.00	.42	1.4	3.3	4.0	3.4	4.2	2.1	.76	.00	.00	.00
10	.00	.41	4.2	3.1	3.9	3.5	4.1	2.3	.60	.00	.00	.00
11	.00	.41	2.8	3.0	3.8	3.7	4.0	2.1	.47	.00	.00	.00
12	.00	.40	3.0	3.6	3.7	3.8	3.9	2.0	.42	.00	.00	.00
13	.00	.41	2.5	4.6	3.6	4.0	3.9	1.9	.41	.00	.00	.00
14	.00	.44	2.0	2.9	3.5	4.3	3.8	1.8	.47	.00	.00	.00
15	.00	.44	1.7	4.1	3.5	4.4	3.7	1.6	.54	.00	.00	.00
16	.02	.44	1.6	3.9	3.6	4.5	3.6	1.5	.51	.00	.00	.00
17	.06	.47	1.5	3.3	3.6	4.3	3.6	1.5	.41	.00	.00	.00
18	.11	.51	1.4	3.0	3.6	4.3	3.6	1.5	.36	.00	.00	.00
19	.21	.52	1.4	2.8	3.5	4.3	3.6	1.6	.32	.00	.00	.00
20	.29	.49	1.3	2.8	3.7	4.6	3.7	2.3	.29	.00	.00	.00
21	.36	.56	1.3	2.7	3.7	4.8	3.7	1.9	.28	.00	.00	.00
22	.35	3.1	1.2	2.6	3.6	4.6	3.7	1.5	.25	.00	.00	.00
23	.38	1.6	1.5	3.5	3.6	4.5	3.6	1.4	.24	.00	.00	.00
24	.40	1.1	1.5	4.1	3.5	4.5	3.6	1.4	.22	.00	.00	.00
25	.40	1.0	1.4	3.7	3.4	4.4	3.5	1.4	.20	.00	.00	1.7
26	.40	.84	1.4	26	3.5	4.3	3.5	1.3	.19	.00	.00	4.0
27	.46	.72	1.3	15	3.6	4.3	3.3	1.2	.17	.00	.00	4.1
28	.63	.73	1.4	9.3	3.7	4.3	3.2	1.1	.15	.00	.00	1.2
29	.74	.75	2.2	7.5	---	4.1	3.1	1.0	.13	.00	.00	.94
30	.85	.74	1.8	6.5	---	4.0	3.0	.89	.12	.00	.00	.88
31	.84	---	1.8	5.7	---	4.0	---	.77	---	.00	.00	---
TOTAL	6.50	20.10	48.41	166.2	110.3	123.2	114.1	56.26	12.40	0.33	0.00	12.82
MEAN	.21	.67	1.56	5.36	3.94	3.97	3.80	1.81	.41	.011	.000	.43
MAX	.85	3.1	4.2	26	5.4	4.8	4.4	2.9	.79	.10	.00	4.1
MIN	.00	.40	.82	2.0	3.4	3.2	3.0	.77	.12	.00	.00	.00
AC-FT	13	40	96	330	219	244	226	112	25	.7	.00	25

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.57	1.79	3.55	6.40	7.70	8.72	11.2	14.1	6.96	2.21	.94	.72
MAX	8.64	43.1	72.5	81.3	117	72.0	57.3	78.3	58.0	24.9	6.36	4.88
(WY)	1984	1966	1967	1993	1980	1995	1969	1969	1980	1980	1980	1976
MIN	.000	.000	.000	.000	.21	.17	.063	.000	.000	.000	.000	.000
(WY)	1948	1948	1948	1948	1964	1961	1961	1961	1961	1956	1948	1948

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1948 - 1997	
ANNUAL TOTAL	680.37		670.62			
ANNUAL MEAN	1.86		1.84		5.39	
HIGHEST ANNUAL MEAN					32.9	1980
LOWEST ANNUAL MEAN					.088	1961
HIGHEST DAILY MEAN	10	Apr 12	26	Jan 26	1080	Jan 25 1969
LOWEST DAILY MEAN	.00	Aug 1	.00	Oct 1	.00	Oct 1 1947
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 1	.00	Oct 1	.00	Oct 1 1947
INSTANTANEOUS PEAK FLOW			41	Jan 26	2900	Nov 22 1965
INSTANTANEOUS PEAK STAGE			5.37	Jan 26	15.78	Sep 7 1981
ANNUAL RUNOFF (AC-FT)	1350		1330		3900	
10 PERCENT EXCEEDS	5.6		4.3		12	
50 PERCENT EXCEEDS	.88		.89		1.0	
90 PERCENT EXCEEDS	.00		.00		.00	

10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.—93.1 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,000 ft³/s, Feb. 21, 1980, gage height, 7.29 ft, from rating curve extended above 650 ft³/s on basis of slope-area measurements at gage height 6.38 ft and 6.81 ft; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 950 ft³/s on basis of slope-area measurement at gage height 6.81 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 22	2345	47	2.34				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.31	3.8	1.3	.04	.00	.00	.00	.00	.00
2	.00	.00	.00	.29	3.4	1.1	.31	.00	.00	.00	.00	.00
3	.00	.00	.00	1.3	3.1	1.1	.45	.00	.00	.00	.00	.00
4	.00	.00	.00	1.7	2.9	.87	.76	.00	.00	.00	.00	.00
5	.00	.00	.00	1.5	2.7	.74	.25	.00	.00	.00	.00	.61
6	.00	.00	.00	1.5	2.5	.70	.14	.00	.00	.00	.00	.06
7	.00	.00	.00	1.1	2.3	.59	.09	.00	.00	.00	.00	.00
8	.00	.00	.00	.93	2.2	.52	.05	.00	.00	.00	.00	.00
9	.00	.00	.04	.67	2.0	.43	.03	.00	.00	.00	.00	.00
10	.00	.00	.84	.53	1.9	.38	.03	.00	.00	.00	.00	.00
11	.00	.00	.31	.45	1.8	.29	.02	.00	.00	.00	.00	.00
12	.00	.00	.29	1.2	1.7	.18	.01	.00	.00	.00	.00	.00
13	.00	.00	.20	13	1.5	.15	.01	.00	.00	.00	.00	.00
14	.00	.00	.08	8.0	1.4	.12	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	4.6	1.4	.13	.00	.00	.00	.00	.00	.00
16	.00	.00	.04	10	1.3	.13	.00	.00	.00	.00	.00	.00
17	.00	.00	.04	4.8	1.3	.10	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	3.8	1.2	.06	.00	.00	.00	.00	.00	.00
19	.00	.00	.01	3.2	1.1	.03	.00	.00	.00	.00	.00	.00
20	.00	.00	.02	2.9	.99	.02	.00	.00	.00	.00	.00	.00
21	.00	.00	.05	2.7	.96	.01	.00	.00	.00	.00	.00	.00
22	.00	.00	.11	2.6	1.0	.01	.00	.00	.00	.68	.00	.00
23	.00	.00	.30	3.8	1.0	.01	.00	.00	.00	3.5	.00	.00
24	.00	.00	.20	5.2	1.0	.02	.00	.00	.00	.00	.00	.00
25	.00	.00	.19	4.9	1.0	.01	.00	.00	.00	.00	.00	.00
26	.00	.00	.17	18	1.0	.01	.00	.00	.00	.00	.00	.00
27	.00	.00	.17	13	1.1	.01	.00	.00	.00	.00	.00	.00
28	.00	.00	.28	8.0	1.7	.01	.00	.00	.00	.00	.00	.00
29	.00	.00	.39	6.2	---	.01	.00	.00	.00	.00	.00	.00
30	.00	.00	.37	5.0	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.32	4.3	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	4.42	135.48	49.25	9.04	2.19	0.00	0.00	4.18	0.00	0.67
MEAN	.000	.000	.14	4.37	1.76	.29	.073	.000	.000	.13	.000	.022
MAX	.00	.00	.84	18	3.8	1.3	.76	.00	.00	3.5	.00	.61
MIN	.00	.00	.00	.29	.96	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	8.8	269	98	18	4.3	.00	.00	8.3	.00	1.3

10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.36	.86	3.93	9.06	19.3	19.6	7.34	2.21	.68	.77	1.01	.88
MAX	5.95	20.6	39.6	203	318	188	80.8	24.1	9.87	15.1	33.0	19.5
(WY)	1984	1966	1983	1993	1980	1983	1958	1983	1980	1979	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1933	1950	1951	1951	1951	1934	1934	1931	1931	1932	1930

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1930 - 1997			
ANNUAL TOTAL	287.67				205.23							
ANNUAL MEAN	.79				.56				5.46			
HIGHEST ANNUAL MEAN									47.4			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	13 Feb 1				18 Jan 26				2040 Feb 21 1980			
LOWEST DAILY MEAN	.00 May 5				.00 Oct 1				.00 Jul 16 1930			
ANNUAL SEVEN-DAY MINIMUM	.00 May 5				.00 Oct 1				.00 Jul 16 1930			
INSTANTANEOUS PEAK FLOW					47 Jul 22				7000 Feb 21 1980			
INSTANTANEOUS PEAK STAGE					2.34 Jul 22				7.29 Feb 21 1980			
ANNUAL RUNOFF (AC-FT)	571				407				3950			
10 PERCENT EXCEEDS	3.0				1.5				6.4			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.—8.65 mi².

PERIOD OF RECORD.—October 1948 to current year.

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,960 ft³/s, Aug. 31, 1954, gage height, 7.11 ft, from rating curve extended above 80 ft³/s on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 98 ft³/s by theoretical computations of flow over weir:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	1045	27	2.92				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.86	1.4	1.7	2.4	4.0	2.8	2.4	1.7	1.0	.85	.72	.78
2	.90	1.3	1.7	2.5	3.9	2.7	2.4	1.6	.99	.82	.69	1.0
3	.89	1.3	1.7	4.4	3.7	2.7	2.7	1.5	1.0	.75	.68	1.0
4	.87	1.3	1.7	3.8	3.6	2.6	2.6	1.5	1.0	.73	.75	1.3
5	.87	1.3	1.7	3.2	3.4	2.6	2.5	1.4	1.0	.75	.69	2.8
6	.86	1.3	1.8	2.9	3.2	2.5	2.4	1.4	1.2	.68	.69	1.3
7	.84	1.3	1.8	2.7	3.2	2.6	2.3	1.4	1.2	.69	.70	.99
8	.82	1.2	1.8	2.5	3.2	2.5	2.2	1.4	1.3	.72	.70	.89
9	.84	1.2	2.8	2.5	3.1	2.5	2.2	1.4	1.2	.72	.75	.89
10	.85	1.2	6.1	2.4	3.0	2.4	2.2	1.4	1.1	.73	.83	.89
11	.85	1.2	3.1	2.5	3.0	2.4	2.1	1.4	1.0	.76	.70	.77
12	.87	1.2	2.7	3.1	3.0	2.4	2.1	1.3	1.0	.81	.74	.77
13	.89	1.3	2.4	5.1	2.9	2.4	2.1	1.3	1.1	.78	.72	.81
14	.93	1.3	2.2	3.6	2.8	2.4	2.1	1.3	1.2	.73	.65	.90
15	.97	1.3	2.1	3.5	2.8	2.4	2.0	1.2	1.2	.70	.65	1.2
16	.99	1.4	2.1	3.6	2.8	2.5	2.0	1.2	1.1	.67	.77	1.2
17	1.0	1.4	2.1	3.1	2.7	2.5	1.9	1.3	.97	.66	.85	.97
18	.95	1.6	2.1	3.0	2.7	2.4	1.8	1.3	.97	.66	.77	.87
19	.97	1.5	2.1	3.0	2.7	2.4	1.9	1.5	.98	.66	.70	.86
20	1.0	1.5	2.1	2.9	2.6	2.3	1.9	1.6	.91	.71	.67	.86
21	1.1	1.8	2.1	2.9	2.6	2.3	1.8	1.4	.91	.81	.63	.85
22	1.1	6.7	2.9	2.8	2.6	2.3	1.8	1.3	.88	1.7	.63	.83
23	1.1	3.1	2.9	3.4	2.6	2.4	1.8	1.3	1.0	1.3	.65	.82
24	1.1	2.2	2.4	3.5	2.6	2.3	1.8	1.3	.85	1.1	.68	.85
25	1.1	1.9	2.3	4.0	2.6	2.3	1.8	1.3	.87	.82	.68	7.2
26	1.1	1.8	2.3	20	2.6	2.3	1.7	1.3	.90	.78	.66	5.3
27	1.2	1.7	2.2	9.9	2.9	2.3	1.7	1.2	.88	.80	.71	2.4
28	1.3	1.7	2.6	6.6	3.2	2.3	1.7	1.1	.86	.81	.74	1.7
29	1.3	1.7	2.6	5.3	---	2.2	1.7	1.1	.86	.82	.75	1.4
30	1.7	1.7	2.4	4.8	---	2.2	1.7	1.0	.86	.84	.74	1.3
31	1.7	---	2.4	4.4	---	2.2	---	.99	---	.79	.68	---
TOTAL	31.82	50.8	72.9	130.3	84.0	75.1	61.3	41.39	30.29	25.15	21.97	43.70
MEAN	1.03	1.69	2.35	4.20	3.00	2.42	2.04	1.34	1.01	.81	.71	1.46
MAX	1.7	6.7	6.1	20	4.0	2.8	2.7	1.7	1.3	1.7	.85	7.2
MIN	.82	1.2	1.7	2.4	2.6	2.2	1.7	.99	.85	.66	.63	.77
AC-FT	63	101	145	258	167	149	122	82	60	50	44	87

10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.36	2.20	3.14	4.86	5.68	6.06	4.43	3.03	1.95	1.40	1.39	1.28
MAX	5.60	19.2	30.2	46.5	56.4	33.7	20.0	17.4	12.4	7.51	9.52	6.05
(WY)	1984	1966	1967	1993	1980	1980	1983	1983	1983	1983	1983	1983
MIN	.38	.60	.96	.95	1.02	.99	.68	.51	.23	.087	.14	.24
(WY)	1966	1963	1963	1976	1961	1961	1961	1961	1961	1961	1963	1964

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR					FOR 1997 WATER YEAR			WATER YEARS 1949 - 1997			
ANNUAL TOTAL	648.97					668.72						
ANNUAL MEAN	1.77					1.83			3.05			
HIGHEST ANNUAL MEAN									12.4			
LOWEST ANNUAL MEAN									.66			
HIGHEST DAILY MEAN	7.3 Feb 1					20 Jan 26			395 Dec 6 1966			
LOWEST DAILY MEAN	.66 Aug 21					.63 Aug 21			.00 Jun 27 1961			
ANNUAL SEVEN-DAY MINIMUM	.70 Aug 17					.66 Aug 20			.00 Jul 13 1963			
INSTANTANEOUS PEAK FLOW						27 Jan 26			1960 Aug 31 1954			
INSTANTANEOUS PEAK STAGE						2.92 Jan 26			7.11 Aug 31 1954			
ANNUAL RUNOFF (AC-FT)	1290					1330			2210			
10 PERCENT EXCEEDS	3.1					3.0			5.4			
50 PERCENT EXCEEDS	1.4					1.4			1.7			
90 PERCENT EXCEEDS	.81					.74			.59			

10259050 PALM CANYON WASH NEAR CATHEDRAL CITY, CA

LOCATION.—Lat 33°47'49", long 116°28'44", in SE 1/4 NE 1/4 sec.29, T.5 S., R.4 E., Riverside County, Hydrologic Unit 18100200, on right bank 500 ft downstream from Golf Club Drive, 0.4 mi upstream from Whitewater River, and 1.5 mi northeast of Cathedral City.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—January 1988 to current year.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,280 ft³/s, Jan. 16, 1993, gage height, 8.70 ft, from rating curve extended above 1,350 ft³/s; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	4.7	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	1.5	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	5.1	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.70	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.69	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	25
26	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00	.00	2.9
27	.00	.00	.00	1.7	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.69	4.87	10.79	0.01	0.00	0.00	0.00	0.00	0.05	0.00	27.90
MEAN	.000	.023	.16	.35	.000	.000	.000	.000	.000	.002	.000	.93
MAX	.00	.69	4.7	5.1	.01	.00	.00	.00	.00	.05	.00	25
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	1.4	9.7	21	.02	.00	.00	.00	.00	.1	.00	55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.002	.061	22.8	4.25	10.9	.38	.33	.000	.052	.50	.32
MAX	.000	.023	.45	202	35.3	93.3	3.81	2.26	.001	.52	1.77	2.23
(WY)	1988	1997	1993	1993	1993	1995	1993	1993	1993	1991	1989	1995
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1988	1988	1989	1988	1988	1988	1988	1988	1990	1988

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1988 - 1997

ANNUAL TOTAL	8.69	44.31	
ANNUAL MEAN	.024	.12	
HIGHEST ANNUAL MEAN			3.32
LOWEST ANNUAL MEAN			20.4
HIGHEST DAILY MEAN			.000
LOWEST DAILY MEAN	4.7	Dec 9	25
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW	.00	Jan 1	.00
INSTANTANEOUS PEAK STAGE			231
ANNUAL RUNOFF (AC-FT)	17		7.01
10 PERCENT EXCEEDS	.00		.00
50 PERCENT EXCEEDS	.00		.00
90 PERCENT EXCEEDS	.00		.00

10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA

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

DRAINAGE AREA.—588 mi².

PERIOD OF RECORD.—March 1989 to current year.

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

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

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation upstream from station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs. Water from the Colorado River basin is imported for ground-water recharge and irrigation. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,060 ft³/s, Jan. 7, 1993, gage height, 5.93 ft, from rating curve extended above 1,460 ft³/s on basis of critical depth computations; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
2	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
3	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
4	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
5	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
6	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
7	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
8	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
9	.00	.00	.17	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
10	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
11	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
12	.00	.00	.00	.18	.00	.00	.00	.00	e.00	e.00	e.00	e.00
13	.00	.00	.00	.69	.00	.00	.00	.00	e.00	e.00	e.00	e.00
14	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
15	.00	.00	.00	.38	.00	.00	.00	.00	e.00	e.00	e.00	e.00
16	.00	.00	.00	.01	.00	.00	.00	.00	e.00	e.00	e.00	e.00
17	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
20	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
21	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
22	.00	.20	.00	.00	.00	.00	.00	.00	e.00	e.50	e.00	e.00
23	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
24	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
25	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e8.0
26	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e3.0
27	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
28	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00
29	.00	.00	.00	.00	---	.00	.00	.00	e.00	e.00	e.00	e.00
30	.00	.00	.00	.00	---	.00	.00	.00	e.00	e.00	e.00	e.00
31	.00	---	.00	.00	---	.00	---	.00	---	e.00	e.00	---
TOTAL	0.00	0.20	0.17	1.26	0.00	0.00	0.00	0.00	0.00	0.50	0.00	11.00
MEAN	.000	.007	.005	.041	.000	.000	.000	.000	.000	.016	.000	.37
MAX	.00	.20	.17	.69	.00	.00	.00	.00	.00	.50	.00	8.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.4	.3	2.5	.00	.00	.00	.00	.00	1.0	.00	22

e Estimated.

10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.004	.004	.036	41.1	7.75	9.41	.046	.031	.005	.005	.13	.22
MAX	.016	.021	.18	310	52.3	66.0	.21	.27	.041	.026	.78	1.30
(WY)	1993	1990	1993	1993	1993	1995	1993	1993	1994	1991	1989	1995
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1990	1991	1994	1994	1997	1990	1989	1989	1989	1989	1990	1989

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1989 - 1997		
ANNUAL TOTAL	0.69			13.13					
ANNUAL MEAN	.002			.036			4.92		
HIGHEST ANNUAL MEAN							30.4		
LOWEST ANNUAL MEAN							.002		
HIGHEST DAILY MEAN	.30 Feb 1			8.0 Sep 25			2950 Jan 16 1993		
LOWEST DAILY MEAN	.00 Jan 1			.00 Oct 1			.00 Mar 30 1989		
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1			.00 Oct 1			.00 Mar 30 1989		
INSTANTANEOUS PEAK FLOW				(a) Sep 25			9060 Jan 7 1993		
INSTANTANEOUS PEAK STAGE				(a) Sep 25			5.93 Jan 7 1993		
ANNUAL RUNOFF (AC-FT)	1.4			26			3570		
10 PERCENT EXCEEDS	.00			.00			.00		
50 PERCENT EXCEEDS	.00			.00			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

(a) Peak occurred on Sept. 25, but peak discharge and stage are unknown.

10259200 DEEP CREEK NEAR PALM DESERT, CA

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

DRAINAGE AREA.—30.6 mi².

PERIOD OF RECORD.—May 1962 to current year.

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

REMARKS.—Records fair through June and poor thereafter. No regulation or diversion upstream from station. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,100 ft³/s, Sept. 10, 1976, gage height, 7.84 ft inside, 11.5 ft from floodmarks, from rating curve extended above 40 ft³/s on basis of slope-area measurement at gage heights 2.68, 5.15, and 7.84 ft; maximum gage height, 10.27 ft, Aug. 14, 1984; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 20 ft³/s, or maximum, from rating curve extended above 52 ft³/s on basis of slope-area measurement at gage heights 5.15 and 10.27 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 22	1830	1,930	6.11	Sept. 25	1700	22	2.26

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.48	.28	.10	.03	.00	.00	.00	.00
2	.00	.00	.00	.00	.45	.26	.08	.02	.00	.00	.00	.00
3	.00	.00	.00	.00	.44	.26	.10	.02	.00	.00	.00	.00
4	.00	.00	.00	.00	.43	.25	.09	.02	.00	.00	.00	.00
5	.00	.00	.00	.00	.42	.23	.08	.02	.00	.00	.00	.00
6	.00	.00	.00	.00	.40	.23	.13	.01	.00	.00	.00	.00
7	.00	.00	.00	.00	.40	.23	.15	.01	.00	.00	.01	.00
8	.00	.00	.00	.00	.38	.23	.16	.00	.00	.00	.02	.00
9	.00	.00	.00	.00	.37	.21	.17	.01	.00	.00	.01	.00
10	.00	.00	.00	.00	.36	.20	.15	.01	.00	.00	.01	.00
11	.00	.00	.00	.00	.36	.20	.15	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.34	.20	.15	.00	.00	.00	.00	.00
13	.00	.00	.00	.71	.34	.20	.15	.01	.00	.00	.00	.00
14	.00	.00	.00	.53	.33	.19	.15	.01	.00	.00	.00	.00
15	.00	.00	.00	.45	.31	.17	.15	.00	.00	.00	.00	.00
16	.00	.00	.00	.55	.31	.17	.14	.00	.00	.00	.00	.00
17	.00	.00	.00	.49	.31	.17	.14	.01	.00	.00	.00	.00
18	.00	.00	.00	.44	.30	.17	.13	.01	.00	.00	.00	.00
19	.00	.00	.00	.42	.29	.17	.13	.01	.00	.00	.00	.00
20	.00	.00	.00	.40	.29	.16	.13	.00	.00	.00	.00	.00
21	.00	.00	.00	.38	.28	.15	.12	.00	.00	.00	.00	.00
22	.00	.00	.00	.37	.26	.14	.10	.01	.00	e48	.00	.00
23	.00	.00	.00	.37	.26	.14	.08	.00	.00	e.10	.00	.00
24	.00	.00	.00	.37	.26	.14	.07	.00	.00	e.02	.00	.00
25	.00	.00	.00	.48	.26	.14	.06	.00	.00	.01	.00	3.1
26	.00	.00	.00	.69	.25	.12	.06	.01	.00	.02	.00	.41
27	.00	.00	.00	1.2	.25	.11	.06	.01	.00	.01	.00	.09
28	.00	.00	.00	.76	.31	.11	.04	.00	.00	.00	.00	.07
29	.00	.00	.00	.62	---	.10	.03	.00	.00	.00	.00	.06
30	.00	.00	.00	.55	---	.10	.03	.00	.00	.01	.00	.06
31	.00	---	.00	.50	---	.09	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	10.28	9.44	5.52	3.28	0.23	0.00	48.17	0.05	3.79
MEAN	.000	.000	.000	.33	.34	.18	.11	.007	.000	1.55	.002	.13
MAX	.00	.00	.00	1.2	.48	.28	.17	.03	.00	.48	.02	3.1
MIN	.00	.00	.00	.00	.25	.09	.03	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	20	19	11	6.5	.5	.00	96	.1	7.5

e Estimated.

SALTON SEA BASIN

10259200 DEEP CREEK NEAR PALM DESERT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.25	.93	2.05	4.85	8.16	6.44	2.11	.85	.35	.84	1.06	1.36
MAX	4.62	16.3	23.5	88.6	101	49.3	12.4	7.15	3.97	11.8	15.3	38.1
(WY)	1984	1966	1983	1993	1980	1983	1983	1983	1983	1979	1984	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1963	1963	1963	1963	1963	1963	1963	1962	1962	1962	1962	1962

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1962 - 1997

ANNUAL TOTAL	34.33	80.76	
ANNUAL MEAN	.094	.22	2.42
HIGHEST ANNUAL MEAN			15.1
LOWEST ANNUAL MEAN			.002
HIGHEST DAILY MEAN	.63 Feb 2	48 Jul 22	850 Sep 10 1976
LOWEST DAILY MEAN	.00 May 22	.00 Oct 1	.00 May 1 1962
ANNUAL SEVEN-DAY MINIMUM	.00 May 24	.00 Oct 1	.00 May 1 1962
INSTANTANEOUS PEAK FLOW		1930 Jul 22	7100 Sep 10 1976
INSTANTANEOUS PEAK STAGE		6.11 Jul 22	10.27 Aug 14 1984
ANNUAL RUNOFF (AC-FT)	68	160	1750
10 PERCENT EXCEEDS	.36	.32	3.0
50 PERCENT EXCEEDS	.00	.00	.05
90 PERCENT EXCEEDS	.00	.00	.00

10259300 WHITEWATER RIVER AT INDIO, CA

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

DRAINAGE AREA.—1,073 mi².

PERIOD OF RECORD.—March 1966 to current year.

REVISED RECORDS.—WDR CA-72-1: 1971.

GAGE.—Water-stage recorder and crest-stage gage. Concrete control since Oct. 1, 1979. Elevation of gage is 0 ft sea level, from topographic map. Prior to Oct. 1, 1979, water-stage recorder at site 0.5 mi upstream at different datum. Oct. 1, 1979, to Feb. 17, 1983, and Feb. 18, 1983, to Nov. 18, 1991, at same site at different datums.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,400 ft³/s, Jan. 25, 1969, gage height, 14.41 ft, site and datum then in use, from rating curve extended above 1,300 ft³/s on basis of slope-area measurement at gage height 15.3 ft for flood of Nov. 22, 1965; no flow for all or most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2 or 3, 1938, reached a discharge of 29,000 ft³/s on basis of slope-area measurement, at site 5.0 mi upstream. Flood of Nov. 22, 1965, reached a stage of 15.3 ft, from floodmark, at site and datum used prior to Oct. 1, 1979, discharge 14,100 ft³/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum, from rating curve extended above 480 ft³/s on basis of critical-depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 26	0030	34	7.40				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.56
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.4
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.19	0.00	3.96
MEAN	.000	.000	.000	.009	.000	.000	.000	.000	.000	.006	.000	.13
MAX	.00	.00	.00	.20	.00	.00	.00	.00	.00	.19	.00	3.4
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.6	.00	.00	.00	.00	.00	.4	.00	7.9

SALTON SEA BASIN

10259300 WHITEWATER RIVER AT INDIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.009	.087	2.53	23.5	14.3	5.11	.021	.011	.009	1.20	1.19	2.79
MAX	.17	.88	61.3	513	278	56.2	.17	.35	.19	32.1	29.4	86.2
(WY)	1979	1979	1967	1993	1980	1978	1984	1972	1968	1979	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1967	1967	1968	1967	1967	1966	1966	1966	1966	1967	1966	1966

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1966 - 1997

ANNUAL TOTAL	0.03	4.43	
ANNUAL MEAN	.000	.012	4.21
HIGHEST ANNUAL MEAN			47.4
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	.03 Feb 1	3.4 Sep 26	5000 Jan 16 1993
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Mar 1 1966
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Mar 1 1966
INSTANTANEOUS PEAK FLOW		34 Sep 26	11400 Jan 25 1969
INSTANTANEOUS PEAK STAGE		7.40 Sep 26	14.41 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	.06	8.8	3050
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10259540 WHITEWATER RIVER NEAR MECCA, CA

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

DRAINAGE AREA.—1,495 mi².

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

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

REMARKS.—Records fair except for estimated daily discharges, which are poor. Most flow represents seepage and return flow from irrigated areas. No discharge records computed above 200 ft³/s since October 1992. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,500 ft³/s (estimated), Jan. 25, 1969; minimum daily, 37 ft³/s, Nov. 25–29, 1960.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	77	68	73	75	89	75	73	53	56	74	61
2	61	74	69	72	81	85	88	74	55	55	67	68
3	65	99	68	71	78	82	93	71	50	54	71	74
4	73	111	71	69	81	80	91	70	53	58	69	87
5	70	87	72	76	80	80	89	75	60	57	65	87
6	67	70	77	67	84	78	94	74	60	58	63	93
7	66	74	77	59	82	83	91	72	64	56	64	84
8	66	77	72	72	86	88	89	69	63	55	68	79
9	63	82	89	73	83	84	88	62	57	57	73	84
10	61	87	65	76	82	82	81	63	58	63	72	85
11	62	78	61	82	83	84	76	69	56	59	71	92
12	70	67	69	85	76	84	80	73	58	62	71	87
13	64	79	74	103	71	83	79	67	57	64	73	82
14	71	81	83	109	71	85	77	72	59	71	72	78
15	61	88	82	81	70	91	73	71	62	73	79	91
16	62	85	86	73	80	91	73	73	54	72	81	83
17	71	80	79	71	74	84	68	64	56	81	86	76
18	63	76	77	73	70	77	73	63	e62	69	93	69
19	59	65	91	77	59	73	76	73	67	78	90	73
20	62	75	88	73	69	80	75	64	66	80	84	72
21	69	79	79	69	73	81	84	68	64	74	81	70
22	69	70	82	66	80	92	83	71	57	111	73	59
23	73	82	77	64	83	88	76	67	54	136	72	57
24	72	79	74	68	73	90	76	64	49	96	70	53
25	69	79	82	70	75	88	76	63	52	85	61	---
26	67	75	84	70	93	86	65	64	56	62	66	---
27	63	72	83	69	99	93	72	64	59	72	67	---
28	69	75	77	68	99	95	72	74	59	70	66	---
29	71	70	82	77	---	90	66	68	63	65	69	177
30	77	70	80	76	---	89	66	62	55	62	68	86
31	70	---	73	77	---	85	---	55	---	70	58	---
TOTAL	2077	2363	2391	2309	2210	2640	2365	2112	1738	2181	2237	---
MEAN	67.0	78.8	77.1	74.5	78.9	85.2	78.8	68.1	57.9	70.4	72.2	---
MAX	77	111	91	109	99	95	94	75	67	136	93	---
MIN	59	65	61	59	59	73	65	55	49	54	58	---
AC-FT	4120	4690	4740	4580	4380	5240	4690	4190	3450	4330	4440	---

e Estimated.

SALTON SEA BASIN

10259540 WHITEWATER RIVER NEAR MECCA, CA—Continued

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

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

SUMMARY STATISTICS

WATER YEARS 1961 - 1992

ANNUAL MEAN	111	
HIGHEST ANNUAL MEAN	156	1976
LOWEST ANNUAL MEAN	68.4	1961
HIGHEST DAILY MEAN	2500	Jan 25 1969
LOWEST DAILY MEAN	37	Nov 25 1960
ANNUAL SEVEN-DAY MINIMUM	37	Nov 24 1960
ANNUAL RUNOFF (AC-FT)	80380	
10 PERCENT EXCEEDS	140	
50 PERCENT EXCEEDS	108	
90 PERCENT EXCEEDS	76	

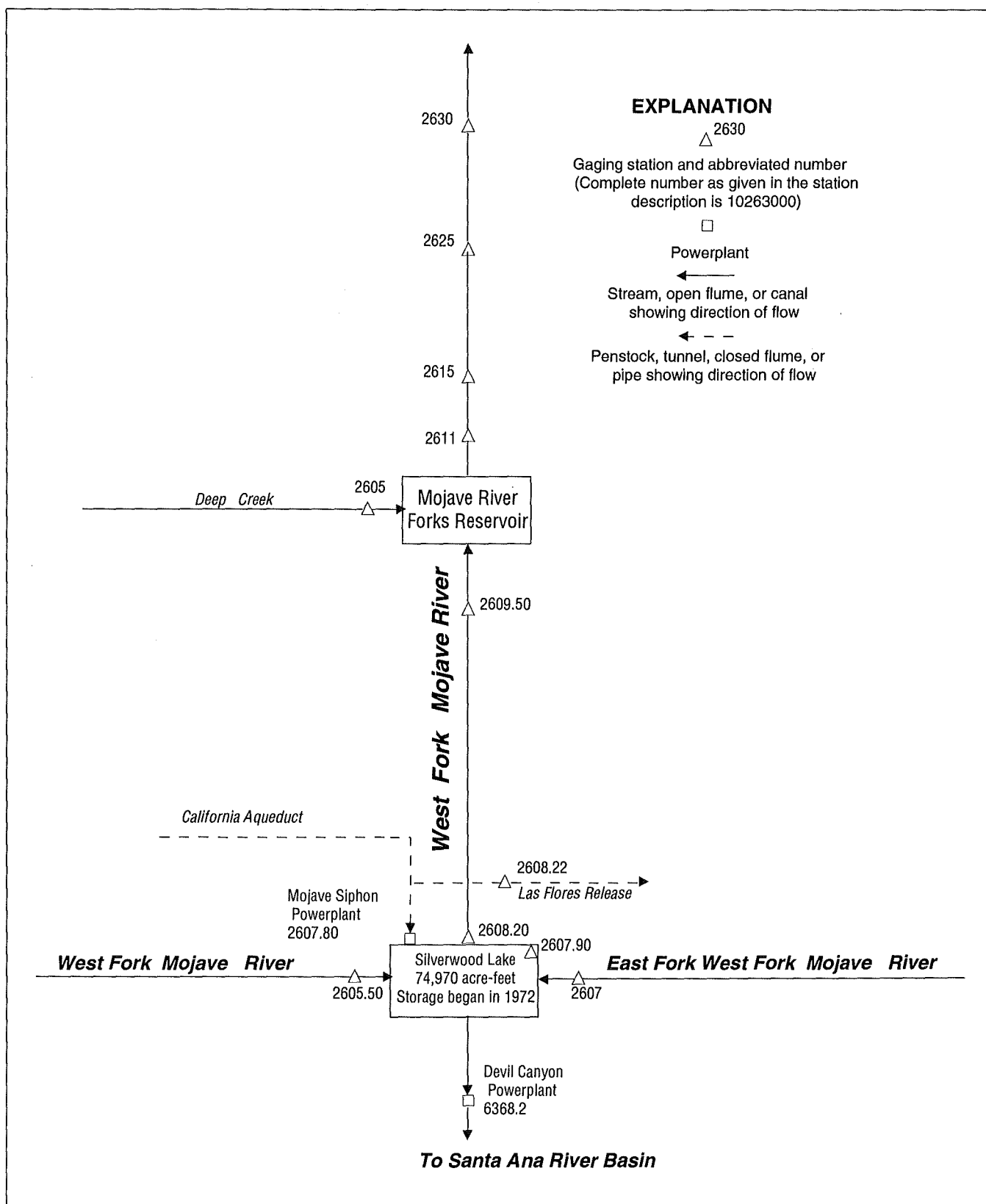


Figure 14. Diversions and storage in Mojave River Basin.

10260500 DEEP CREEK NEAR HESPERIA, CA

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

DRAINAGE AREA.—134 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,600 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; maximum gage height, 23.81 ft, Feb. 10, 1978 (backwater from Mojave River Forks Reservoir); no flow July 17, 18, 1961.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	1000	498	3.34	Jan. 3	1045	433	2.96
Dec. 10	0215	2,410	4.59	Jan. 26	0945	5,000	6.23

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.5	12	11	37	94	36	21	8.4	e3.2	e1.4	e.70	e.56
2	e1.5	8.2	10	39	85	32	20	8.3	e3.1	e1.4	e.66	e.56
3	e1.5	7.5	9.7	227	76	32	20	8.7	e3.1	e1.4	e.64	e.62
4	e1.5	6.9	9.6	148	70	31	22	9.2	e3.1	e1.4	e.62	e.72
5	e1.5	6.4	9.4	73	66	30	21	8.9	e3.1	e1.4	e.60	e.94
6	e1.4	6.0	9.3	58	61	29	21	e8.6	e3.1	e1.4	e.59	e.94
7	e1.4	5.8	9.3	43	55	29	19	e8.2	e3.1	e1.4	e.58	e.94
8	e1.4	5.7	9.2	37	51	28	18	e7.8	e3.1	e1.4	e.57	e.95
9	e1.4	6.0	11	34	48	28	18	e7.4	e3.1	e1.4	e.57	e.95
10	e1.4	6.1	566	31	46	29	18	e7.1	e3.1	e1.3	e.56	e.95
11	e1.4	6.2	145	30	44	30	17	e6.8	e3.1	e1.3	e.56	e.95
12	e1.4	6.2	82	29	42	30	16	e6.5	e3.1	e1.3	e.55	e.96
13	e1.5	6.2	52	36	40	30	15	e6.2	e3.1	e1.3	e.55	e.96
14	e1.5	6.0	37	35	38	30	15	e5.9	e3.1	e1.3	e.54	e.97
15	e1.6	6.0	30	36	37	29	14	e5.7	3.1	e1.2	e.54	e.98
16	e1.6	6.1	26	48	36	29	13	e5.4	3.0	e1.2	e.54	e.99
17	e1.6	6.4	24	40	38	29	11	e5.2	3.0	e1.2	e.54	e1.0
18	e1.7	6.4	22	40	40	28	9.9	e5.0	2.9	e1.2	e.54	e1.0
19	e1.8	6.4	20	41	39	28	9.3	e4.8	2.8	e1.1	e.54	e1.0
20	e1.9	6.4	19	48	38	27	9.3	e4.6	2.6	e1.1	e.54	e1.1
21	e2.0	6.9	18	59	38	26	9.0	e4.5	2.4	e1.1	e.55	e1.1
22	e2.1	209	58	52	36	26	8.7	e4.3	2.2	e1.0	e.55	e1.1
23	e2.2	105	114	98	34	25	8.5	e4.1	2.1	e1.0	e.55	e1.1
24	e2.3	42	47	141	32	25	8.4	e4.0	1.9	e.98	e.55	e1.1
25	e2.4	28	34	97	30	24	8.3	e3.9	1.8	e.95	e.55	2.0
26	e2.5	22	29	2480	29	23	8.2	e3.7	1.7	e.92	e.55	2.8
27	e2.6	18	27	689	30	23	8.3	e3.6	e1.6	e.88	e.55	2.8
28	e3.4	16	60	244	44	23	8.5	e3.5	e1.5	e.84	e.55	3.2
29	4.8	13	55	161	---	22	8.6	e3.4	e1.5	e.80	e.56	2.7
30	4.9	12	39	128	---	21	8.4	e3.3	e1.5	e.76	e.56	2.3
31	22	---	36	106	---	21	---	e3.2	---	e.73	e.56	---
TOTAL	81.7	604.8	1628.5	5365	1317	853	412.4	180.2	79.1	36.06	17.61	38.24
MEAN	2.64	20.2	52.5	173	47.0	27.5	13.7	5.81	2.64	1.16	.57	1.27
MAX	22	209	566	2480	94	36	22	9.2	3.2	1.4	.70	3.2
MIN	1.4	5.7	9.2	29	29	21	8.2	3.2	1.5	.73	.54	.56
AC-FT	162	1200	3230	10640	2610	1690	818	357	157	72	35	76

e Estimated.

10260500 DEEP CREEK NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.25	19.7	57.0	137	209	218	144	61.8	17.3	5.61	3.19	3.58
MAX	42.0	606	843	2062	2028	1539	747	248	67.0	25.9	29.2	54.3
(WY)	1984	1966	1922	1993	1993	1978	1958	1915	1922	1969	1983	1976
MIN	.23	1.14	2.53	4.56	6.07	4.87	3.20	2.37	1.14	.14	.13	.10
(WY)	1934	1957	1905	1951	1951	1956	1951	1934	1956	1961	1933	1933

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1905 - 1997	
ANNUAL TOTAL	15077.25		10613.61			
ANNUAL MEAN	41.2		29.1		72.7	
HIGHEST ANNUAL MEAN					411	
LOWEST ANNUAL MEAN					3.06	
HIGHEST DAILY MEAN	3910	Feb 21	2480	Jan 26	14700	Jan 25 1969
LOWEST DAILY MEAN	.83	Sep 1	.54	Aug 14	.00	Jul 17 1961
ANNUAL SEVEN-DAY MINIMUM	.83	Aug 29	.54	Aug 14	.07	Jul 12 1961
INSTANTANEOUS PEAK FLOW			5000	Jan 26	46600	Mar 2 1938
INSTANTANEOUS PEAK STAGE			6.23	Jan 26	23.81	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	29910		21050		52690	
10 PERCENT EXCEEDS	60		47		141	
50 PERCENT EXCEEDS	9.8		6.4		10	
90 PERCENT EXCEEDS	1.0		.75		.98	

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

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

DRAINAGE AREA.—3.22 mi².

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

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

REMARKS.—No regulation or diversion upstream from station.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 360 ft³/s, Feb. 20, 1996, gage height, 3.47 ft; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.06	.23	2.2	9.7	3.5	1.1	.87	.17	.00	.00	.00
2	.00	.06	.23	2.4	9.0	3.4	1.1	.85	.19	.00	.00	.00
3	.00	.04	.23	11	8.6	3.3	1.1	.80	.17	.00	.00	.00
4	.00	.03	.23	6.9	8.0	3.2	1.1	.78	.18	.00	.00	.00
5	.00	.04	.23	5.7	7.7	2.9	1.2	.75	.23	.00	.00	.00
6	.00	.04	.23	4.8	7.1	2.8	1.1	.72	.22	.00	.00	.00
7	.00	.04	.23	4.2	6.7	2.7	1.1	.64	.21	.00	.00	.00
8	.00	.04	.22	3.8	6.6	2.7	1.1	.63	.20	.00	.00	.00
9	.00	.03	2.7	3.5	6.1	2.5	1.1	.60	.18	.00	.00	.00
10	.00	.03	11	3.2	5.8	2.4	1.1	.57	.16	.00	.00	.00
11	.00	.03	11	3.0	5.5	2.3	1.1	.56	.12	.00	.00	.00
12	.00	.03	4.3	5.2	5.3	2.1	1.1	.53	.16	.00	.00	.00
13	.00	.03	2.3	9.2	5.0	2.1	1.1	.50	.36	.00	.00	.00
14	.00	.04	1.7	7.5	4.8	2.1	1.1	.49	.27	.00	.00	.00
15	.00	.04	1.3	7.7	4.5	1.9	1.0	.46	.24	.00	.00	.00
16	.00	.04	1.1	6.8	4.5	1.8	1.0	.44	.20	.00	.00	.00
17	.00	.05	.98	6.3	4.5	1.8	.97	.45	.16	.00	.00	.00
18	.00	.05	.88	6.3	4.3	1.8	.96	.38	.12	.00	.00	.00
19	.00	.05	.81	6.0	4.1	1.6	1.0	.36	.10	.00	.00	.00
20	.00	.05	.78	11	4.0	1.6	1.1	.35	.08	.00	.00	.00
21	.00	1.5	.73	11	3.9	1.5	1.0	.34	.06	.00	.00	.00
22	.00	.96	57	12	3.8	1.5	.97	.33	.06	.00	.00	.00
23	.00	.45	12	32	3.6	1.4	.96	.34	.06	.00	.00	.00
24	.00	.35	5.2	20	3.5	1.4	.94	.37	.05	.00	.00	.00
25	.00	.30	3.5	35	3.4	1.4	.90	.37	.03	.00	.00	.00
26	.00	.27	2.7	78	3.4	1.3	.90	.33	.02	.00	.00	.00
27	.00	.25	3.0	30	4.1	1.2	.89	.30	.02	.00	.00	.00
28	.00	.25	5.2	21	3.8	1.2	.89	.27	.01	.00	.00	.00
29	.02	.25	3.7	16	---	1.2	.90	.22	.00	.00	.00	.00
30	.19	.23	3.0	13	---	1.1	.90	.20	.00	.00	.00	.00
31	.08	---	2.5	11	---	1.1	---	.18	---	.00	.00	---
TOTAL	0.29	5.63	139.21	395.7	151.3	62.8	30.78	14.98	4.03	0.00	0.00	0.00
MEAN	.009	.19	4.49	12.8	5.40	2.03	1.03	.48	.13	.000	.000	.000
MAX	.19	1.5	57	78	9.7	3.5	1.2	.87	.36	.00	.00	.00
MIN	.00	.03	.22	2.2	3.4	1.1	.89	.18	.00	.00	.00	.00
AC-FT	.6	11	276	785	300	125	61	30	8.0	.00	.00	.00

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.037	.16	2.40	6.71	7.23	4.23	1.59	.68	.21	.005	.000	.000
MAX	.065	.19	4.49	12.8	9.00	6.44	2.15	.89	.28	.009	.000	.000
(WY)	1996	1997	1997	1997	1996	1996	1996	1996	1996	1996	1996	1996
MIN	.009	.12	.31	.66	5.40	2.03	1.03	.48	.13	.000	.000	.000
(WY)	1997	1996	1996	1996	1997	1997	1997	1997	1997	1997	1996	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1996 - 1997	
ANNUAL TOTAL	726.67		804.72			
ANNUAL MEAN	1.99		2.20		1.92	
HIGHEST ANNUAL MEAN					2.20	
LOWEST ANNUAL MEAN					1.63	
HIGHEST DAILY MEAN	112	Feb 20	78	Jan 26	112	Feb 20 1996
LOWEST DAILY MEAN	.00	Jul 7	.00	Oct 1	.00	Jul 7 1996
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 7	.00	Oct 1	.00	Jul 7 1996
INSTANTANEOUS PEAK FLOW			215	Dec 22	360	Feb 20 1996
INSTANTANEOUS PEAK STAGE			3.11	Dec 22	3.47	Feb 20 1996
ANNUAL RUNOFF (AC-FT)	1440		1600		1390	
10 PERCENT EXCEEDS	4.0		5.6		4.5	
50 PERCENT EXCEEDS	.34		.24		.25	
90 PERCENT EXCEEDS	.00		.00		.00	

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

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

DRAINAGE AREA.—11.2 mi².

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

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

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

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 706 ft³/s, Feb. 20, 1996, gage height, 5.81 ft; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.60	5.7	21	e8.7	3.1	1.2	.21	.01	.00	.00
2	.00	.00	.59	6.1	19	e8.0	2.6	1.2	.22	.01	.00	.00
3	.00	.00	.61	51	18	7.5	2.5	1.1	.21	.00	.00	.00
4	.00	.00	.56	22	16	6.9	2.5	1.1	.19	.00	.00	.00
5	.00	.00	.58	15	15	6.5	2.4	1.0	.24	.00	.00	.00
6	.00	.00	.80	12	14	6.3	2.3	.99	.32	.00	.00	.00
7	.00	.00	.66	10	13	6.0	2.3	.97	.33	.00	.00	.00
8	.00	.04	.54	8.8	12	5.5	2.2	.92	.26	.00	.00	.00
9	.00	.06	15	7.8	11	5.3	2.3	.86	.21	.00	.00	.00
10	.00	.08	38	7.2	11	5.1	2.2	.77	.17	.00	.00	.00
11	.00	.09	22	6.7	10	5.1	2.2	.74	.15	.00	.00	.00
12	.00	.08	13	11	9.8	4.8	2.1	.71	.16	.00	.00	.00
13	.00	.09	8.4	17	9.1	4.5	2.1	.68	.62	.00	.00	.00
14	.00	.10	5.8	16	8.8	4.4	2.0	.63	.48	.00	.00	.00
15	.00	.11	4.1	19	8.5	4.4	1.9	.58	.35	.00	.00	.00
16	.00	.12	3.4	19	8.3	4.5	1.9	.55	.24	.00	.00	.00
17	.00	.13	2.8	15	8.3	4.1	1.7	.52	.17	.00	.00	.00
18	.00	.14	2.3	14	8.0	4.0	1.7	.50	.13	.00	.00	.00
19	.00	.15	2.1	13	7.7	3.9	1.7	.47	.10	.00	.00	.00
20	.00	.15	2.2	17	7.4	4.0	1.6	.47	.08	.00	.00	.00
21	.00	5.5	2.9	19	7.3	3.9	1.5	.47	.07	.00	.00	.00
22	.00	27	60	20	7.0	3.8	1.4	.44	.07	.00	.00	.00
23	.00	14	25	48	6.7	3.8	1.4	.44	.06	.00	.00	.00
24	.00	5.9	13	35	6.5	3.6	1.4	.48	.05	.00	.00	.00
25	.00	3.2	9.5	62	6.2	3.4	1.4	.47	.04	.00	.00	.00
26	.00	2.1	7.6	231	6.0	3.4	1.3	.42	.03	.00	.00	.00
27	.00	1.4	9.3	82	e12	3.5	1.3	.36	.03	.00	.00	.00
28	.00	1.0	15	45	e10	3.4	1.3	.32	.02	.00	.00	.00
29	.00	.77	9.5	30	---	3.1	1.3	.27	.02	.00	.00	.00
30	1.7	.64	7.7	25	---	2.9	1.2	.24	.02	.00	.00	.00
31	.22	---	6.6	23	---	3.4	---	.21	---	.00	.00	---
TOTAL	1.92	62.85	290.14	913.3	297.6	147.7	56.8	20.08	5.25	0.02	0.00	0.00
MEAN	.062	2.10	9.36	29.5	10.6	4.76	1.89	.65	.17	.001	.000	.000
MAX	1.7	27	60	231	21	8.7	3.1	1.2	.62	.01	.00	.00
MIN	.00	.00	.54	5.7	6.0	2.9	1.2	.21	.02	.00	.00	.00
AC-FT	3.8	125	575	1810	590	293	113	40	10	.04	.00	.00

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.097	1.23	4.98	15.4	18.4	12.0	2.96	.98	.29	.007	.000	.000
MAX	.13	2.10	9.36	29.5	26.0	19.3	4.03	1.31	.41	.014	.000	.000
(WY)	1996	1997	1997	1997	1996	1996	1996	1996	1996	1996	1996	1996
MIN	.062	.36	.61	1.27	10.6	4.76	1.89	.65	.17	.001	.000	.000
(WY)	1997	1996	1996	1996	1997	1997	1997	1997	1997	1997	1996	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1996 - 1997	
ANNUAL TOTAL	1919.82		1795.66			
ANNUAL MEAN	5.25		4.92		4.64	
HIGHEST ANNUAL MEAN					4.92	
LOWEST ANNUAL MEAN					4.37	
HIGHEST DAILY MEAN	266	Feb 20	231	Jan 26	266	Feb 20 1996
LOWEST DAILY MEAN	.00	Jul 12	.00	Oct 1	.00	Jul 12 1996
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 12	.00	Oct 1	.00	Jul 12 1996
INSTANTANEOUS PEAK FLOW			366	Jan 26	706	Feb 20 1996
INSTANTANEOUS PEAK STAGE			5.02	Jan 26	5.81	Feb 20 1996
ANNUAL RUNOFF (AC-FT)	3810		3560		3360	
10 PERCENT EXCEEDS	11		13		11	
50 PERCENT EXCEEDS	.64		.48		.47	
90 PERCENT EXCEEDS	.00		.00		.00	

10260790 SILVERWOOD LAKE NEAR HESPERIA, CA

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

DRAINAGE AREA.—34.0 mi².

PERIOD OF RECORD.—October 1995 to current year. Unpublished records for water years 1972–95 available in files of the California Department of Water Resources.

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

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

COOPERATION.—Records were collected by California Department of Water Resources under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 53,612 acre-ft, Oct. 1, 1995, elevation, 3331.14 ft; minimum, 38,006 acre-ft, Mar. 22, 1996, elevation, 3310.24 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 71,511 acre-feet, Sept. 30, elevation, 3,351.41 ft; minimum, 10,613 acre-ft, Feb. 16, elevation, 3,210.24.

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

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

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38956	35513	23854	14425	12419	10958	34785	56458	58593	57749	64309	69182
2	39682	34902	23630	13931	12419	10991	35129	56383	58670	56433	64641	69791
3	39418	34611	23213	13774	12323	11005	35971	57284	58730	56308	65310	68968
4	39529	34296	22779	13513	12277	11082	36738	58747	58773	56963	65065	68094
5	39675	33772	22505	13385	12090	11082	37694	58893	58636	57512	64093	67374
6	39682	33214	22212	13278	11905	11167	39731	58936	58858	57885	63735	66951
7	39613	32723	21911	13183	11668	11196	40964	58961	59167	57580	62729	67089
8	39717	32204	21622	13112	11485	11973	41148	57809	59167	57351	61758	67493
9	39391	31882	21758	13097	11233	12659	41482	56929	59228	56971	61153	66905
10	39543	31438	21718	12857	11115	12639	41332	56635	59150	56593	61153	66210
11	39738	30979	21652	12539	11980	12717	41425	56887	59073	56199	60882	65827
12	39849	30493	21758	12224	10867	13729	40802	56668	59064	57622	60152	65065
13	39814	30070	21809	12304	10827	14856	41099	56677	58876	59866	60812	63959
14	39863	29568	21769	12385	10700	16128	42031	56568	58781	60664	61276	66082
15	39717	29123	21521	12312	10642	17975	43762	56257	58927	60447	61784	66703
16	39694	28757	21265	12163	10613	20277	45596	55973	58704	60186	62694	66447
17	39460	28400	20892	11916	10657	21622	47135	56140	59328	59987	65246	67153
18	39349	28278	20576	11399	10722	23056	48184	57470	57258	59650	66128	66841
19	39142	27704	20155	11075	10754	24331	49448	58021	57056	60525	65582	66740
20	39039	26881	19672	11203	10819	25526	50571	57098	56467	61486	65827	67696
21	38908	26092	18987	11200	10878	26400	51875	56862	57631	61996	66264	68791
22	38695	25964	18584	11211	10921	27251	52687	55940	59021	62084	66584	69763
23	38401	25769	18403	11370	10969	28699	53514	55881	58833	61952	66749	70045
24	38449	25614	19615	11266	11005	29211	54004	55881	58456	61468	68233	70233
25	38387	25465	19576	11362	11038	28816	54323	57360	57877	61249	69024	70158
26	38408	25146	19096	11396	11082	28418	55440	58644	57758	62561	68893	70186
27	38346	24971	18172	11448	11020	27993	56484	58260	58439	64219	68363	70007
28	38128	24633	17411	11660	10969	28126	57199	58824	58413	65301	67660	70970
29	37398	24433	16596	11780	---	29300	57199	58653	58670	65636	66657	71216
30	36917	24169	15886	12147	---	31678	56820	58243	58277	65618	66046	71511
31	36525	---	14977	12293	---	33683	---	57894	---	65129	67153	---
MAX	39863	35513	23854	14425	12419	33683	57199	58961	59328	65636	69024	71511
MIN	36525	24169	14977	11075	10613	10958	34785	55881	56467	56199	60152	63959
a	3308.04	3287.45	3268.14	3261.44	3257.90	3303.66	3335.01	3336.28	3336.73	3344.53	3346.75	3351.41
b	-3199	-12356	-9192	-2684	-1324	22714	23137	1074	383	6852	2024	4358

CAL YR 1998 MAX 39863 MIN 14977 b -24000

WTR YR 1997 MAX 71511 MIN 10613 b 31787

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

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

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

DRAINAGE AREA.—34.0 mi².

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

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

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

COOPERATION.—Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,290 ft³/s, Mar. 2, 1983, gage height, 7.51 ft, site and datum then in use; no flow for most of every year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	23	.00	.00	.00	.00	24	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	127	54	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	239	105	.00	.00	.00	.00	.00	48	.00
5	.00	.00	.00	102	123	.00	.00	.00	.00	.00	49	.00
6	.00	.00	.00	102	150	.00	.00	.00	.00	.00	50	.00
7	.00	.00	.00	102	150	.00	.00	.00	.00	.00	51	.00
8	.00	.00	.00	40	150	.00	.00	.00	.00	.00	51	.00
9	.00	.00	.00	.00	150	.00	.00	.00	.00	.00	52	.00
10	.00	.00	29	.00	123	.00	.00	.00	.00	.00	52	.00
11	.00	.00	47	.00	104	.00	.00	.00	.00	.00	53	.00
12	.00	.00	22	.00	98	.00	.00	.00	.00	.00	24	.00
13	.00	.00	.00	.00	75	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	75	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	67	75	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	100	30	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	100	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	94	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	49	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	20	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	22	27	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	1.0	82	63	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	68	101	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	38	150	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	68	651	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	100	185	53	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	97	.00	87	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	96	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	54	.00	---	.00	.00	.00	.00	33	.00	.00
31	.00	---	12	.00	---	.00	---	.00	---	49	.00	---
TOTAL	0.00	23.00	740.00	2292.00	1602.00	23.00	0.00	0.00	0.00	82.00	454.00	0.00
MEAN	.0000	.77	23.9	73.9	57.2	.74	.0000	.0000	.0000	2.65	14.6	.0000
MAX	.00	22	100	651	150	23	.00	.00	.00	49	53	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	46	1470	4550	3180	46	.00	.00	.00	163	901	.00
a	9450	0	0	0	0	0	14790	54560	52720	71330	58220	50570
b	1440	12530	10780	5090	254	6270	51100	69940	60110	70450	64520	52340
c	8	0	15	646	0	291	804	871	611	605	511	348

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

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

c Flow, in acre-feet, through Las Flores Release, provided by California Department of Water Resources.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.071	1.07	15.0	29.5	106	167	27.5	18.1	1.98	.60	3.00	.25
MAX	.19	4.03	50.8	73.9	403	739	84.1	75.5	9.84	2.65	14.6	1.18
(WY)	1983	1983	1983	1997	1983	1983	1983	1983	1983	1997	1997	1983
MIN	.000	.000	.000	.081	.72	.74	.000	.000	.000	.000	.000	.000
(WY)	1996	1996	1996	1996	1981	1997	1997	1997	1981	1996	1996	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1981 - 1997	
ANNUAL TOTAL	3540.60		5216.00			
ANNUAL MEAN	9.67		14.3		30.5	
HIGHEST ANNUAL MEAN					118	
LOWEST ANNUAL MEAN					1.14	
HIGHEST DAILY MEAN	730	Feb 20	651	Jan 26	1990	Mar 3 1983
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1980
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1980
INSTANTANEOUS PEAK FLOW					2290	Mar 2 1983
INSTANTANEOUS PEAK STAGE					7.51	Mar 2 1983
ANNUAL RUNOFF (AC-FT)	7020		10350		22130	
TOTAL FLOW (AC-FT) a	311600					
TOTAL FLOW (AC-FT) b	417400					
TOTAL FLOW (AC-FT) c	4710					
10 PERCENT EXCEEDS	22		53		51	
50 PERCENT EXCEEDS	.00		.00		.05	
90 PERCENT EXCEEDS	.00		.00		.00	

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

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

c Flow, in acre-feet, through Las Flores Release, provided by California Department of Water Resources.

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

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

DRAINAGE AREA.—70.3 mi².

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

REVISED RECORDS.—WDR CA-84: 1983.

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

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

EXTREMES FOR THE PERIOD OF RECORD.—Maximum discharge, 11,300 ft³/s, Feb. 10, 1978, gage height unknown, on basis of slope-area measurement of peak flow; maximum gage height, 23.2 ft, Feb. 10, 1978, backwater from Mojave River Forks Reservoir; no flow for several months in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 26,100 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow for station 10261000 at site 1.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	19	16	5.2	6.6	2.4	.00	16	.00
2	.00	.00	.00	.00	19	4.5	4.9	6.2	2.6	.00	12	.00
3	.00	.00	.00	69	36	2.4	5.2	5.5	1.1	.00	.00	.00
4	.00	.00	.00	230	84	.59	4.9	5.2	1.7	.00	19	.00
5	.00	.00	.00	101	94	.18	4.9	5.2	3.9	.00	37	.00
6	.00	.00	.00	71	125	.09	5.1	4.8	4.0	.00	38	.00
7	.00	.00	.00	74	125	.00	5.4	4.6	4.2	.00	40	.00
8	.00	.00	.00	46	126	.00	6.6	4.8	3.8	.00	39	.00
9	.00	.00	5.7	12	124	.00	6.8	4.7	3.8	.00	39	.00
10	.00	.00	25	11	95	.00	6.6	4.3	4.6	.00	39	.00
11	.00	.00	7.1	11	64	.01	5.8	4.5	3.8	.00	40	.00
12	.00	.00	1.3	11	60	.00	5.7	6.1	2.0	.00	32	.00
13	.00	.00	.00	15	33	.00	5.2	6.7	4.0	.00	1.4	.00
14	.00	.00	.00	14	32	.00	6.3	5.7	5.6	.00	.00	.00
15	.00	.00	.00	56	32	.00	6.2	5.4	4.6	.00	.00	.00
16	.00	.00	.00	104	22	.00	6.1	5.1	2.0	.00	.00	.00
17	.00	.00	.00	102	4.1	.00	6.3	5.3	1.9	.00	.00	.00
18	.00	.00	.00	100	3.0	.00	7.2	4.9	3.6	.00	.00	.00
19	.00	.00	.00	52	.65	.00	7.2	4.1	3.1	.00	.00	.00
20	.00	.00	.00	40	.43	.00	7.3	3.7	2.0	.00	.00	.00
21	.00	.00	.00	20	.39	.00	7.2	3.7	1.6	.00	.00	.00
22	.00	3.8	48	14	.23	.00	7.0	3.9	1.1	.00	.00	.00
23	.00	.48	58	63	.12	.00	7.1	4.2	1.9	.00	.00	.00
24	.00	.00	43	111	.09	.00	7.2	4.3	.00	.00	.00	.00
25	.00	.00	2.1	160	.12	.00	7.2	3.9	.00	.00	.00	.00
26	.00	.00	27	951	.18	2.7	6.9	3.8	.00	.00	.00	.00
27	.00	.00	66	354	15	4.4	7.4	3.5	.00	.00	.00	.00
28	.00	.00	70	34	55	4.5	7.3	3.6	.00	.00	.00	.00
29	.00	.00	68	27	---	4.9	7.4	3.1	.00	.00	.00	.00
30	.00	.00	36	24	---	4.7	7.2	3.2	.00	3.4	.00	.00
31	.00	---	2.3	21	---	5.4	---	2.4	---	34	.00	---
TOTAL	0.00	4.28	459.50	2898.00	1169.31	50.37	190.8	143.0	69.30	37.40	352.40	0.00
MEAN	.000	.14	14.8	93.5	41.8	1.62	6.36	4.61	2.31	1.21	11.4	.000
MAX	.00	3.8	70	951	126	16	7.4	6.7	5.6	34	40	.00
MIN	.00	.00	.00	.00	.09	.00	4.9	2.4	.00	.00	.00	.00
AC-FT	.00	8.5	911	5750	2320	100	378	284	137	74	699	.00

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.92	5.37	15.5	80.2	160	163	54.4	30.1	13.9	1.15	.57	.61
MAX	41.8	50.4	68.6	810	883	948	253	296	169	9.23	11.4	8.29
(WY)	1994	1993	1984	1993	1993	1983	1980	1978	1978	1993	1987	1993
MIN	.000	.000	.000	.000	.61	.24	.000	.000	.000	.000	.000	.000
(WY)	1975	1975	1976	1975	1991	1977	1987	1984	1975	1975	1975	1975

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1975 - 1997	
ANNUAL TOTAL	4416.34		5374.36			
ANNUAL MEAN	12.1		14.7		43.4	
HIGHEST ANNUAL MEAN					183	
LOWEST ANNUAL MEAN					.94	
HIGHEST DAILY MEAN	729	Feb 20	951	Jan 26	4900	Feb 10 1978
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1974
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1974
INSTANTANEOUS PEAK FLOW			1470	Jan 26	11300	Feb 10 1978
INSTANTANEOUS PEAK STAGE			4.61	Jan 26	23.20	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	8760		10660		31410	
10 PERCENT EXCEEDS	23		39		68	
50 PERCENT EXCEEDS	.00		.09		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

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

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

DRAINAGE AREA.—211 mi².

PERIOD OF RECORD.—October 1971 to September 1974, October 1980 to September 1997 (discontinued). Prior to 1990, published as "below Forks Reservoir" and "below Mojave Forks Reservoir."

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,300 ft³/s, Feb. 8, 1993, maximum gage height, 12.61 ft, Jan. 7, 1993; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e1.4	e7.2	38	94	e56	e22	e14	e2.8	.00	.00	.00
2	.00	e1.0	e6.9	38	88	e36	e22	e13	e2.7	.00	.00	.00
3	.00	e.50	e6.7	171	84	e35	e22	e13	e2.6	.00	.00	.00
4	.00	.00	7.0	366	155	e34	e22	e12	e2.5	.00	.00	.00
5	.00	.00	e6.6	187	160	e31	e22	e12	e2.4	.00	e32	.00
6	.00	.00	e6.4	119	199	e30	e22	e11	e2.3	.00	e32	.00
7	.00	.00	e6.4	111	187	e28	e22	e11	e2.2	.00	e32	.00
8	.00	.00	e6.4	91	181	e27	e22	e10	e2.2	.00	e32	.00
9	.00	.00	e12	43	170	e27	e21	e9.6	e2.1	.00	e32	.00
10	.00	.00	350	e41	155	e26	e21	e9.1	e2.0	.00	e32	.00
11	.00	.00	170	e41	127	e26	e21	e8.7	e1.9	.00	e32	.00
12	.00	.00	111	e41	123	e25	e20	e8.3	e1.9	.00	.00	.00
13	.00	.00	50	e47	e82	e25	e19	e7.9	e1.8	.00	.00	.00
14	.00	.00	40	e60	e72	e25	e19	e7.5	e1.8	.00	.00	.00
15	.00	.00	e30	140	e72	e24	e18	e7.1	e1.7	.00	.00	.00
16	.00	.00	e25	155	e68	e24	e17	e6.8	e1.7	.00	.00	.00
17	.00	.00	e21	145	e46	e24	e17	e6.4	e1.6	.00	.00	.00
18	.00	.00	e18	145	e47	e24	e16	e6.0	e1.6	.00	.00	.00
19	.00	.00	e16	115	e45	e23	e16	e5.6	e1.4	.00	.00	.00
20	.00	2.4	e14	101	e43	e23	e15	e5.3	e1.3	.00	.00	.00
21	.00	e2.4	15	77	e41	e23	e15	e4.8	e1.1	.00	.00	.00
22	.00	171	e78	56	e40	e23	e15	e4.6	e1.0	.00	.00	.00
23	.00	127	170	126	e39	e22	e15	e4.3	e.90	.00	.00	.00
24	.00	34	110	231	e36	e22	e15	e4.1	e.60	.00	.00	.00
25	.00	e22	56	192	e34	e22	e15	e3.9	e.00	.00	.00	.00
26	.00	e16	50	2200	e33	e22	e15	e3.7	.00	.00	.00	.00
27	.00	12	97	824	e45	e22	e15	e3.5	.00	.00	.00	.00
28	.00	e10	123	278	e100	e22	e15	e3.3	.00	.00	.00	.00
29	.00	e9.0	119	170	---	e22	e15	e3.2	.00	.00	.00	.00
30	.00	e7.8	92	136	---	e22	e14	e3.0	.00	.00	.00	.00
31	e2.0	---	56	115	---	e22	---	e2.9	---	.00	.00	---
TOTAL	2.00	416.50	1876.6	6600	2566	817	545	225.6	44.10	0.00	224.00	0.00
MEAN	.065	13.9	60.5	213	91.6	26.4	18.2	7.28	1.47	.000	7.23	.000
MAX	2.0	171	350	2200	199	56	22	14	2.8	.00	32	.00
MIN	.00	.00	6.4	38	33	22	14	2.9	.00	.00	.00	.00
AC-FT	4.0	826	3720	13090	5090	1620	1080	447	87	.00	444	.00

e Estimated.

MOJAVE RIVER BASIN

10261100 MOJAVE RIVER BELOW MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.24	19.4	55.1	237	321	306	138	52.0	16.7	3.62	2.20	1.44
MAX	57.8	73.9	263	2873	2910	2004	544	333	109	17.1	22.7	12.0
(WY)	1984	1983	1972	1993	1993	1983	1983	1983	1993	1983	1983	1993
MIN	.000	.000	.000	.000	11.1	15.0	10.6	.20	.000	.000	.000	.000
(WY)	1986	1989	1990	1991	1987	1972	1972	1990	1989	1985	1985	1984

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1972 - 1997	
ANNUAL TOTAL	19450.80		13316.80			
ANNUAL MEAN	53.1		36.5		95.6	
HIGHEST ANNUAL MEAN					592	1993
LOWEST ANNUAL MEAN					7.34	1990
HIGHEST DAILY MEAN	4500	Feb 21	2200	Jan 26	15000	Feb 19 1993
LOWEST DAILY MEAN	.00	Jun 11	.00	Oct 1	.00	Jul 4 1981
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 11	.00	Oct 1	.00	Jul 4 1981
INSTANTANEOUS PEAK FLOW			4160	Jan 26	21300	Feb 8 1993
INSTANTANEOUS PEAK STAGE			8.55	Jan 26	12.61	Jan 7 1993
ANNUAL RUNOFF (AC-FT)	38580		26410		69240	
10 PERCENT EXCEEDS	102		110		151	
50 PERCENT EXCEEDS	4.8		6.4		8.0	
90 PERCENT EXCEEDS	.00		.00		.00	

10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA

LOCATION.—Lat 34°34'23", long 117°19'11", in SW 1/4 SE 1/4 sec.29, T.6 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 650 ft upstream from bridge on county road (formerly U.S. Highway 66), 0.6 mi downstream from Atchison, Topeka, & Santa Fe Railway bridge, and 3 mi northwest of Victorville.

DRAINAGE AREA.—513 mi².

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

CHEMICAL DATA: Specific conductance 1975–81.

WATER TEMPERATURE: Water years 1962–80.

REVISED RECORDS.—WSP 1927: Drainage area.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 70,600 ft³/s, Mar. 2, 1938, gage height, 23.7 ft, present datum, from rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow; no flow Sept. 21–23, 1995.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	8.1	14	19	24	21	15	9.1	4.2	2.3	1.6	1.7
2	1.6	8.6	14	20	22	20	15	8.8	4.6	2.3	1.5	1.7
3	1.6	9.0	15	19	20	20	16	8.7	4.2	2.2	1.5	1.7
4	1.7	9.0	14	17	20	20	16	8.5	4.3	2.2	1.5	1.6
5	1.9	9.1	15	18	20	20	16	8.7	4.3	2.0	1.6	1.6
6	1.8	8.8	16	18	20	20	17	8.4	4.5	1.9	1.6	1.5
7	1.8	9.2	17	16	20	20	17	8.3	4.4	2.0	1.6	1.5
8	1.8	9.1	16	15	19	17	16	7.8	4.2	2.0	1.6	1.4
9	1.8	10	24	16	19	16	15	7.7	3.9	1.9	1.7	1.4
10	1.9	11	26	16	19	16	15	7.4	3.8	2.0	1.7	1.5
11	2.1	12	16	17	19	16	14	7.3	3.9	1.9	1.7	1.6
12	2.1	11	16	17	20	15	15	6.9	3.8	2.0	1.7	1.6
13	2.2	11	16	18	19	15	12	6.5	4.1	1.9	1.7	1.6
14	2.2	11	17	17	18	18	11	5.9	4.8	1.9	1.7	1.6
15	2.6	11	16	17	19	16	11	6.1	5.0	2.0	1.7	1.8
16	2.6	11	16	20	19	17	11	6.1	4.9	1.9	1.7	1.8
17	2.9	11	16	18	18	16	11	6.3	4.2	1.7	1.6	1.8
18	3.1	12	14	16	17	16	11	6.2	3.5	1.7	1.6	1.8
19	3.4	12	15	16	14	15	11	6.8	3.2	1.9	1.5	1.8
20	3.7	12	15	16	15	15	10	6.3	3.1	2.3	1.4	1.8
21	4.1	14	14	17	15	14	11	8.1	3.0	2.3	1.4	2.0
22	4.3	18	14	20	15	14	11	6.4	3.0	2.1	1.5	2.1
23	4.5	14	14	18	17	15	11	6.1	2.8	1.8	1.5	2.1
24	4.6	13	15	19	17	15	9.7	6.1	2.7	1.6	1.5	2.1
25	4.6	13	14	21	18	16	10	5.8	2.6	1.6	1.6	2.5
26	4.9	13	15	183	19	14	9.9	5.4	2.4	1.5	1.5	11
27	5.7	13	15	485	20	14	9.7	5.2	2.5	1.6	1.6	2.4
28	6.5	13	16	90	21	15	9.4	5.3	2.4	1.6	1.6	2.2
29	6.8	14	16	37	---	15	9.2	5.0	2.6	1.6	1.6	2.2
30	7.4	14	17	30	---	15	8.9	4.7	2.3	1.6	1.8	2.2
31	9.4	---	17	27	---	14	---	4.4	---	1.5	1.8	---
TOTAL	107.3	344.9	495	1293	523	510	374.8	210.3	109.2	58.8	49.6	63.6
MEAN	3.46	11.5	16.0	41.7	18.7	16.5	12.5	6.78	3.64	1.90	1.60	2.12
MAX	9.4	18	26	485	24	21	17	9.1	5.0	2.3	1.8	11
MIN	1.6	8.1	14	15	14	14	8.9	4.4	2.3	1.5	1.4	1.4
AC-FT	213	684	982	2560	1040	1010	743	417	217	117	98	126

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.5	36.2	52.2	101	210	228	127	45.6	21.9	15.1	15.3	17.2
MAX	58.2	222	376	1487	2334	2229	1015	261	157	32.5	29.3	41.7
(WY)	1977	1966	1967	1993	1993	1938	1958	1978	1978	1969	1969	1976
MIN	3.46	10.7	13.5	19.3	18.2	12.6	11.6	6.78	3.64	1.90	1.60	1.63
(WY)	1997	1995	1995	1990	1991	1990	1990	1997	1997	1997	1997	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1931 - 1997	
ANNUAL TOTAL	5515.6		4139.5			
ANNUAL MEAN	15.1		11.3		73.8	
HIGHEST ANNUAL MEAN					402	
LOWEST ANNUAL MEAN					11.3	
HIGHEST DAILY MEAN	916	Feb 21	485	Jan 27	21000	Feb 25 1969
LOWEST DAILY MEAN	1.1	Aug 5	1.4	Aug 20	.00	Sep 21 1995
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 5	1.5	Aug 18	.37	Sep 20 1995
INSTANTANEOUS PEAK FLOW			1140	Jan 27	70600	Mar 2 1938
INSTANTANEOUS PEAK STAGE			3.91	Jan 27	23.70	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	10940		8210		53460	
10 PERCENT EXCEEDS	25		19		54	
50 PERCENT EXCEEDS	9.1		8.8		27	
90 PERCENT EXCEEDS	1.6		1.6		11	

10262500 MOJAVE RIVER AT BARSTOW, CA

LOCATION.—Lat 34°54'25", long 117°01'19", in SW 1/4 SE 1/4 sec.31, T.10 N., R.1 W., San Bernardino County, Hydrologic Unit 18090208, on left bank 75 ft upstream from bridge on U.S. Highway 91 at Barstow.

DRAINAGE AREA.—1,291 mi².

PERIOD OF RECORD.—October 1930 to current year.

REVISED RECORDS.—WSP 1564: 1932.

GAGE.—Water-stage recorder. Datum of gage is 2,089.34 ft above sea level.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 64,300 ft³/s, Mar. 3, 1938, gage height, 8.60 ft on basis of slope-area measurement of peak flow; no flow for all or most of each year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931–1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.001	.37	3.51	25.8	97.3	116	42.4	5.41	.001	.004	.022	.017
MAX	.061	20.2	116	747	1640	1962	547	93.5	.080	.090	1.31	.71
(WY)	1959	1966	1967	1969	1993	1938	1941	1941	1972	1958	1979	1984
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1931 - 1997		
ANNUAL MEAN							23.8		
HIGHEST ANNUAL MEAN							202		1969
LOWEST ANNUAL MEAN							.000		1931
HIGHEST DAILY MEAN							18100	Mar 3	1938
LOWEST DAILY MEAN				.00 Jan 1		.00 Oct 1	.00	Oct 1	1930
ANNUAL SEVEN-DAY MINIMUM				.00 Jan 1		.00 Oct 1	.00	Oct 1	1930
INSTANTANEOUS PEAK FLOW							64300	Mar 3	1938
INSTANTANEOUS PEAK STAGE							8.60	Mar 3	1938
ANNUAL RUNOFF (AC-FT)							17270		
10 PERCENT EXCEEDS				.00		.00	.00		
50 PERCENT EXCEEDS				.00		.00	.00		
90 PERCENT EXCEEDS				.00		.00	.00		

10263000 MOJAVE RIVER AT AFTON, CA

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

DRAINAGE AREA.—2,121 mi².

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

REVISED RECORDS.—WSP 1564: 1931.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,000 ft³/s, Jan. 26, 1969, gage height, 12.40 ft (present datum), from rating curve extended above 3,200 ft³/s on basis of slope-area measurement of peak flow; no flow at times during many years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 23	1430	1,020	4.47				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.64	.92	1.0	1.1	.96	.93	.51	.06	.02	.00	.18
2	.40	.66	.94	1.1	1.1	.86	.96	.47	.06	.04	.00	.20
3	.42	.64	.92	1.1	1.1	.84	1.0	.47	.07	.03	.00	.28
4	.42	.65	.96	.96	1.1	.84	1.1	.41	.06	.02	.00	.32
5	.43	.65	1.0	1.1	1.1	.84	1.0	.38	.07	.01	.00	.30
6	.44	.64	.97	1.3	1.1	.88	.97	.34	.08	.00	.00	.27
7	.44	.67	.96	1.1	1.1	.84	.96	.33	.09	.00	.00	.23
8	.44	.67	.96	1.1	1.1	.84	.96	.32	.08	.00	.00	.22
9	.45	.68	1.0	1.1	1.1	.84	.94	.31	.09	.00	.00	.23
10	.44	.70	1.1	1.1	1.1	.85	.94	.30	.09	.00	.00	.21
11	.44	.73	1.1	1.1	1.1	.86	.96	.29	.07	.00	.00	.19
12	.45	.71	1.1	1.2	.98	.84	.95	.29	.06	.00	.00	.20
13	.45	.74	1.0	1.3	.96	.84	.93	.22	.07	.00	.00	.23
14	.46	.74	1.0	1.1	.96	.82	.94	.17	.09	.00	.00	.21
15	.48	.74	.97	1.1	1.0	.93	.94	.16	.10	.00	.02	.31
16	.46	.74	1.0	1.2	.97	.96	.88	.17	.10	.00	.02	.30
17	.48	.74	1.1	1.1	1.0	.94	.75	.17	.09	.00	.04	.30
18	.51	.74	1.0	1.2	1.1	.92	.69	.14	.07	.00	.04	.25
19	.52	.76	1.0	1.2	1.1	.92	.67	.14	.05	.00	.05	.26
20	.51	.76	1.1	1.2	1.1	.94	.63	.18	.03	.00	.05	.27
21	.53	1.0	1.1	1.2	.94	.93	.61	.16	.01	.00	.06	.28
22	.54	1.1	1.1	1.2	.93	.96	.59	.13	.01	.04	.06	.28
23	.58	.92	1.0	1.2	.96	.96	.57	.11	.01	105	.06	.30
24	.59	.87	.93	1.1	.96	.94	.59	.12	.02	13	.05	.31
25	.58	.91	.96	1.1	.96	.86	.63	.12	.03	.00	.06	3.2
26	.58	.91	.96	1.1	.96	.89	.64	.12	.01	.00	.07	1.4
27	.58	.89	.96	1.1	.96	.89	.62	.11	.01	.00	.07	.51
28	.60	.92	.96	1.0	1.0	.84	.59	.12	.00	.00	.08	.50
29	.62	.94	.97	1.1	---	.84	.58	.11	.00	.00	.09	.44
30	.66	.89	1.0	1.0	---	.84	.56	.09	.01	.00	.11	.44
31	.67	---	1.0	1.1	---	.84	---	.08	---	.00	.13	---
TOTAL	15.56	23.35	31.04	34.86	28.94	27.35	24.08	7.04	1.59	118.16	1.06	12.62
MEAN	.50	.78	1.00	1.12	1.03	.88	.80	.23	.053	3.81	.034	.42
MAX	.67	1.1	1.1	1.3	1.1	.96	1.1	.51	.10	105	.13	3.2
MIN	.39	.64	.92	.96	.93	.82	.56	.08	.00	.00	.00	.18
AC-FT	31	46	62	69	57	54	48	14	3.2	234	2.1	25

MOJAVE RIVER BASIN

101

10263000 MOJAVE RIVER AT AFTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.77	.97	2.85	14.2	45.9	18.6	2.97	.68	.42	.63	1.40	.80
MAX	2.97	2.29	63.9	347	876	415	56.4	1.80	1.58	3.81	18.0	4.30
(WY)	1993	1981	1966	1969	1993	1978	1969	1931	1981	1997	1984	1988
MIN	.000	.000	.21	.34	.59	.22	.20	.099	.000	.000	.000	.000
(WY)	1967	1969	1978	1976	1975	1975	1977	1977	1976	1966	1966	1966

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1930 - 1997			
ANNUAL TOTAL	329.61				325.65							
ANNUAL MEAN	.90				.89				7.29			
HIGHEST ANNUAL MEAN									100			
LOWEST ANNUAL MEAN									.22			
HIGHEST DAILY MEAN	49				105				10000			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					1020				18000			
INSTANTANEOUS PEAK STAGE					4.47				12.40			
ANNUAL RUNOFF (AC-FT)	654				646				5280			
10 PERCENT EXCEEDS	1.0				1.1				1.6			
50 PERCENT EXCEEDS	.55				.60				.80			
90 PERCENT EXCEEDS	.05				.00				.05			

10263500 BIG ROCK CREEK NEAR VALYERMO, CA

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

DRAINAGE AREA.—22.9 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,300 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; minimum daily, 0.70 ft³/s, Nov. 5, 1951.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 22	1300	53	2.35	Jan. 26	0530	120	2.73

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	3.4	14	26	9.9	8.8	6.8	e4.1	e3.4	e2.2	e1.7
2	1.7	2.1	3.4	21	24	9.9	8.8	6.7	e4.0	e3.3	e2.2	e1.7
3	1.8	2.1	3.4	35	22	9.8	9.0	6.6	e4.0	e3.3	e2.1	e1.6
4	1.7	2.1	3.6	25	20	9.9	8.8	6.4	e3.9	e3.3	e2.1	e1.6
5	1.7	2.1	3.6	19	19	10	8.7	6.3	e3.9	e3.3	e2.1	e1.6
6	1.7	2.2	3.6	17	17	9.9	8.6	6.2	e3.9	e3.2	e2.0	e1.6
7	1.7	2.3	3.6	15	17	9.9	8.4	6.2	e3.9	e3.2	e2.0	e1.6
8	1.6	2.3	3.6	13	16	9.6	8.3	6.1	e3.9	e3.2	e2.0	e1.6
9	1.6	2.2	10	12	16	9.2	8.3	5.9	e3.9	e3.1	e2.0	e1.5
10	1.6	2.2	23	12	15	8.6	8.2	5.9	e3.9	e3.1	e2.0	e1.5
11	1.7	2.2	22	11	13	8.6	8.0	5.8	e3.9	e3.1	e1.9	e1.5
12	1.8	2.2	19	11	13	8.6	7.9	5.7	e3.9	e3.0	e1.9	e1.5
13	1.8	2.2	12	12	12	8.9	7.8	5.6	e3.9	e3.0	e1.9	e1.5
14	1.8	2.1	9.2	10	12	9.0	7.8	5.6	e3.9	e2.9	e1.9	e1.5
15	1.8	2.1	8.0	11	13	8.9	7.7	5.3	e3.9	e2.9	e1.9	e1.5
16	1.8	2.2	7.6	11	12	8.9	7.5	e5.2	e3.9	e2.8	e1.9	e1.5
17	1.8	2.2	7.3	10	13	9.0	7.4	e5.2	e3.9	e2.8	e1.9	e1.5
18	1.8	2.3	6.9	10	13	8.9	7.4	e5.2	e3.9	e2.8	e1.9	e1.5
19	1.9	2.3	6.6	10	12	8.7	8.0	e5.2	e3.9	e2.7	e1.9	e1.5
20	1.9	2.3	6.6	11	12	8.6	8.3	e5.1	e3.8	e2.7	e1.8	e1.5
21	1.9	2.5	6.6	11	11	8.6	8.1	e5.0	e3.8	e2.7	e1.8	e1.5
22	1.9	5.8	28	11	10	8.6	8.0	e4.9	e3.7	e2.6	e1.8	e1.5
23	1.9	5.2	22	14	10	8.6	7.9	e4.8	e3.7	e2.6	e1.8	e1.5
24	1.9	4.3	14	15	10	8.6	7.3	e4.7	e3.7	e2.6	e1.8	e1.5
25	2.0	4.0	10	21	10	8.6	7.2	e4.6	e3.6	e2.5	e1.8	e1.5
26	2.1	3.9	9.6	69	10	8.6	7.1	e4.6	e3.6	e2.5	e1.8	e1.5
27	2.1	3.7	9.2	57	10	8.5	7.1	e4.5	e3.5	e2.4	e1.7	e1.5
28	2.1	3.6	12	38	10	8.5	7.0	e4.4	e3.5	e2.4	e1.7	e1.5
29	2.1	3.6	12	35	---	8.4	7.0	e4.4	e3.4	e2.3	e1.7	e1.5
30	2.7	3.5	11	33	---	8.3	6.8	e4.3	e3.4	e2.3	e1.7	e1.5
31	2.2	---	13	29	---	8.6	---	e4.2	---	e2.3	e1.7	---
TOTAL	57.9	84.0	313.8	623	398	278.7	237.2	167.4	114.2	88.3	58.9	46.0
MEAN	1.87	2.80	10.1	20.1	14.2	8.99	7.91	5.40	3.81	2.85	1.90	1.53
MAX	2.7	5.8	28	69	26	10	9.0	6.8	4.1	3.4	2.2	1.7
MIN	1.6	2.1	3.4	10	10	8.3	6.8	4.2	3.4	2.3	1.7	1.5
AC-FT	115	167	622	1240	789	553	470	332	227	175	117	91

e Estimated.

10263500 BIG ROCK CREEK NEAR VALYERMO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.16	7.48	10.5	19.0	31.1	38.3	31.1	27.5	18.7	10.9	7.85	6.27
MAX	19.0	116	67.0	245	303	432	144	120	91.4	42.2	26.5	19.7
(WY)	1984	1966	1947	1969	1980	1978	1978	1941	1978	1983	1983	1983
MIN	1.05	1.09	1.80	2.10	2.39	2.40	2.67	2.35	1.61	1.15	1.09	1.01
(WY)	1952	1952	1991	1951	1951	1951	1951	1951	1961	1961	1961	1961

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1923 - 1997			
ANNUAL TOTAL	3267.8				2467.4							
ANNUAL MEAN	8.93				6.76				17.8			
HIGHEST ANNUAL MEAN									90.9			
LOWEST ANNUAL MEAN									1.91			
HIGHEST DAILY MEAN	268				69				3300			
LOWEST DAILY MEAN	1.6				1.5				.70			
ANNUAL SEVEN-DAY MINIMUM	1.7				1.5				.87			
INSTANTANEOUS PEAK FLOW					120				8300			
INSTANTANEOUS PEAK STAGE					2.73				2.73			
ANNUAL RUNOFF (AC-FT)	6480				4890				12910			
10 PERCENT EXCEEDS	18				13				37			
50 PERCENT EXCEEDS	5.3				3.9				7.4			
90 PERCENT EXCEEDS	2.1				1.7				2.6			

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

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

DRAINAGE AREA.—Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—April 1996 to current year.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7.72 ft³/s, Nov. 21, 1996, gage-height, 1.74 ft; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	1.8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	2.4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	4.20	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.14	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	2.4	.17	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	8.3	.5	.00	.00	.00	.00	.00	.00	.00	.00	.00

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.14	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.000	.14	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996
MIN	.000	.14	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	4.45	
ANNUAL MEAN	.012	.012
HIGHEST ANNUAL MEAN		.012 1997
LOWEST ANNUAL MEAN		.012 1997
HIGHEST DAILY MEAN	2.4 Nov 22	2.4 Nov 22 1996
LOWEST DAILY MEAN	.00 Oct 1	.00 Apr 11 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1	.00 Apr 11 1996
INSTANTANEOUS PEAK FLOW	7.7 Nov 21	7.7 Nov 21 1996
INSTANTANEOUS PEAK STAGE	1.74 Nov 21	1.74 Nov 21 1996
ANNUAL RUNOFF (AC-FT)	8.8	8.8
10 PERCENT EXCEEDS	.00	.00
50 PERCENT EXCEEDS	.00	.00
90 PERCENT EXCEEDS	.00	.00

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

PRECIPITATION RECORDS

PERIOD OF RECORD.—July 1996 to current year.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily rainfall, 1.38 in., Sept. 25, 1997; no rainfall for many days in most years.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 1.38 in., Sept. 25; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	---	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
3	---	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
4	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	---	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.46	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	---	.11	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	---	.09	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	---	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	---	.14	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.07
19	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.55	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	1.38
26	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.52	.00	.06	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	---	0.55	---	0.52	0.00	0.00	---	0.00	0.00	0.00	0.00	1.45

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

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

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—May 1996 to current year.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22 ft³/s, Sept. 25, 1997, gage-height 1.69 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.91	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	1.2	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	1.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.31	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.2
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.5
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.72
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.08	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.08	1.51	2.15	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.44
MEAN	.003	.050	.069	.014	.000	.000	.000	.000	.000	.000	.000	.28
MAX	.08	1.2	1.2	.38	.00	.00	.00	.00	.00	.00	.00	4.2
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.2	3.0	4.3	.9	.00	.00	.00	.00	.00	.00	.00	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.003	.050	.069	.014	.000	.000	.000	.000	.000	.000	.000	.14
MAX	.003	.050	.069	.014	.000	.000	.000	.000	.000	.000	.000	.28
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1997
MIN	.003	.050	.069	.014	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	12.61	
ANNUAL MEAN	.035	
HIGHEST ANNUAL MEAN		.035
LOWEST ANNUAL MEAN		.035
HIGHEST DAILY MEAN	4.2	Sep 25
LOWEST DAILY MEAN	.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1
INSTANTANEOUS PEAK FLOW	22	Sep 25
INSTANTANEOUS PEAK STAGE	1.69	Sep 25
ANNUAL RUNOFF (AC-FT)	25	
10 PERCENT EXCEEDS	.00	.00
50 PERCENT EXCEEDS	.00	.00
90 PERCENT EXCEEDS	.00	.00

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

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

DRAINAGE AREA.—9.25 mi².

PERIOD OF RECORD.—June 1996 to current year

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily rainfall, 1.47 in., Sept. 25, 1997; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 1.47 in., Sept. 25; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.01	.00	.00	.08	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.66	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.18	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.17	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.24	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.85	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.23	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	1.47
26	.00	.00	.01	.14	.00	.00	.00	.00	.00	.00	.00	.00
27	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.43	.00	.07	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.45	0.86	1.15	0.84	0.00	0.00	---	0.00	0.00	0.00	0.00	1.52

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

LOCATION.—Lat 34°56'20", long 117°56'25", in NW 1/4 NE 1/4 sec.28, T.10 N., R.10 W., Kern County, Hydrologic Unit 18090206, 38 ft north of intersection of Forbes Ave. and Mojave Blvd., at Edwards Air Force Base.

DRAINAGE AREA.—168 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1996 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,358 ft above sea level, from topographic map.

REMARKS.—No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—No flow for the 1997 water year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996	1996
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

HIGHEST ANNUAL MEAN	.000	1997
LOWEST ANNUAL MEAN	.000	1997
HIGHEST DAILY MEAN	.00	Mar 16 1996
LOWEST DAILY MEAN	.00	Mar 16 1996
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 16 1996
10 PERCENT EXCEEDS	.00	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

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

PRECIPITATION RECORDS

PERIOD OF RECORD.—June 1996 to current year.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily rainfall, 1.16 in., Sept. 25, 1997; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 1.16 in., Sept. 25; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.01	.00	.00	.02	.00	.00	.18	.00	.01	.00	.00	.00
3	.00	.00	.00	.00	.00	.06	.01	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
5	.00	.00	.00	.01	.00	.00	.00	.00	.01	.00	.00	.00
6	.00	.00	.00	.50	.00	.00	---	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.56	.00	.00	.00	.00	.00	.00	.00	.01	.00
10	.00	.00	.13	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00
12	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.01	.00	.16	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.03
19	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
20	.00	.00	.00	.01	.00	.00	.01	.00	.02	.00	.00	.00
21	.00	.51	.00	.00	.00	.00	.01	.00	.01	.00	.00	.00
22	.00	.00	.31	.00	.00	.00	.00	.00	.02	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.14	.00	.00	.00	.01	.00
24	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.11	.00	.00	.01	.00	.00	.00	.00	1.16
26	.01	.00	.01	.19	.00	.00	.00	.00	.00	.00	.00	.00
27	.01	.04	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00
28	.03	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.02	---	.00	.02	.00	.00	.00	.00	.00
30	.35	.00	.03	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	---	0.62	1.04	1.17	0.05	0.07	---	0.00	0.10	0.03	0.02	1.19

10264675 ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE, CA

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

DRAINAGE AREA.—1.73 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1988 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 2,340 ft above sea level, from topographic map.

REMARKS.—Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Inflow can occur from artificial ditch 10 ft upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11 ft³/s, Apr. 14, 1989, and Feb. 12, 1992, gage height, 4.82 ft, from rating curve on basis of culvert computations; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
22	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	e.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.30
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	e.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	e.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30
MEAN	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.010
MAX	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.30
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00	.6

e Estimated.

ANTELOPE VALLEY

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.004	.008	.011	.005	.002	.000	.000	.000	.000	.001
MAX	.003	.000	.028	.052	.072	.029	.018	.004	.001	.000	.002	.010
(WY)	1993	1989	1993	1993	1992	1991	1989	1991	1991	1989	1995	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1989	1989	1989	1990	1990	1989	1989	1989	1989	1989

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1989 - 1997	
ANNUAL TOTAL	0.16		0.32			
ANNUAL MEAN	.000		.001		.003	
HIGHEST ANNUAL MEAN					.009	1993
LOWEST ANNUAL MEAN					.000	1990
HIGHEST DAILY MEAN	.12	Feb 21	.30	Sep 25	1.0	Feb 12 1992
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1988
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1988
INSTANTANEOUS PEAK FLOW			.75	Sep 25	11	Apr 14 1989
INSTANTANEOUS PEAK STAGE			3.81	Sep 25	4.82	Apr 14 1989
ANNUAL RUNOFF (AC-FT)	.3		.6		2.0	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

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

PRECIPITATION RECORDS

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

INSTRUMENTATION.--Recording tipping-bucket rain gage since Feb. 21, 1989.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall, 0.34 in., Oct. 30; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	---	---	---	---
2	.00	.00	.00	.00	.00	.00	.05	.00	---	---	---	---
3	.00	.00	.00	.00	.00	.00	.00	.00	---	---	---	---
4	.00	.00	.00	.00	.00	.00	.00	.00	---	---	---	---
5	.00	.00	.00	.01	.00	.00	.00	---	---	---	---	---
6	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
7	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
8	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
9	.00	.00	.19	.00	.00	.00	.00	---	---	---	---	---
10	.00	.00	.09	.00	.00	.00	.00	---	---	---	---	---
11	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
12	.00	.00	.00	.04	.00	.00	.00	---	---	---	---	---
13	.00	.00	.00	.03	.00	.00	.00	---	---	---	---	---
14	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
15	.00	.00	.00	.14	.00	.00	.00	---	---	---	---	---
16	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
17	.00	.00	.00	.01	.00	.00	.00	---	---	---	---	---
18	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
19	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
20	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
21	.00	.32	.00	.00	.00	.00	.00	---	---	---	---	---
22	.00	.00	.07	.00	.00	.00	.00	---	---	---	---	---
23	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
24	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---
25	.00	.00	.00	.02	.00	.00	.00	---	---	---	---	---
26	.00	.00	.00	.04	.00	.00	.00	---	---	---	---	---
27	.02	.00	.00	.00	.00	.00	.00	---	---	---	---	---
28	.02	.00	.00	.00	.00	.00	.00	---	---	---	---	---
29	.00	.00	.00	.00	---	.00	.00	---	---	---	---	---
30	.34	.00	.03	.00	---	.00	.00	---	---	---	---	---
31	.00	---	.00	.00	---	.00	---	---	---	---	---	---
TOTAL	0.38	0.32	0.38	0.29	0.00	0.00	0.05	---	---	---	---	---
MAX	.34	.32	.19	.14	.00	.00	.05	---	---	---	---	---
MIN	.00	.00	.00	.00	.00	.00	.00	---	---	---	---	---

10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA

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

DRAINAGE AREA.—68.3 mi².

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

SPECIFIC CONDUCTANCE: Water years 1983–88.

WATER TEMPERATURE: Water years 1983–88.

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0200	104	1.87	June 2	0745	182	2.62
Jan. 2	2315	433	4.38				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	53	57	122	64	54	59	71	171	93	77	58
2	55	53	53	266	62	56	57	73	176	90	73	59
3	54	54	52	309	61	53	59	80	145	87	70	60
4	54	54	53	194	61	54	57	82	125	86	70	60
5	54	53	58	145	60	55	56	81	139	83	71	60
6	53	52	58	106	58	56	56	82	144	83	71	60
7	53	53	56	91	59	56	55	85	130	81	67	60
8	53	54	56	90	59	56	55	87	120	81	66	60
9	53	53	56	87	57	56	55	86	126	81	66	60
10	53	53	57	82	58	55	54	95	124	82	66	60
11	53	53	60	77	58	55	55	103	115	83	65	59
12	52	52	72	74	58	54	55	105	110	84	66	59
13	52	51	67	68	57	53	54	112	112	86	65	58
14	52	51	58	65	58	53	54	116	130	85	66	58
15	52	51	51	67	58	54	55	119	123	81	65	58
16	52	50	55	68	58	54	55	125	109	78	64	58
17	52	61	54	68	58	54	56	138	106	78	63	59
18	52	73	52	68	57	53	57	139	113	80	63	60
19	53	67	52	67	59	53	59	135	119	79	63	60
20	52	66	51	67	59	54	61	125	117	79	63	60
21	52	67	51	67	58	55	63	113	119	78	63	60
22	53	86	45	66	58	54	65	116	117	79	61	59
23	53	70	42	64	57	55	67	122	110	83	60	58
24	53	65	43	75	53	56	68	121	103	80	60	58
25	52	61	44	72	54	56	67	110	95	79	59	58
26	52	59	45	72	57	57	65	97	88	78	58	59
27	52	55	47	71	57	58	66	93	95	78	58	57
28	51	56	46	69	56	58	68	99	96	77	59	56
29	52	57	49	69	---	58	68	112	96	78	60	56
30	51	53	54	66	---	58	70	128	94	80	59	56
31	53	---	57	65	---	59	---	149	---	79	59	---
TOTAL	1632	1736	1651	2937	1629	1712	1791	3299	3567	2529	1996	1763
MEAN	52.6	57.9	53.3	94.7	58.2	55.2	59.7	106	119	81.6	64.4	58.8
MAX	55	86	72	309	64	59	70	149	176	93	77	60
MIN	51	50	42	64	53	53	54	71	88	77	58	56
AC-FT	3240	3440	3270	5830	3230	3400	3550	6540	7080	5020	3960	3500

115

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1990 - 1997	
ANNUAL TOTAL	26576		26242			
ANNUAL MEAN	72.6		71.9		54.9	
HIGHEST ANNUAL MEAN					79.1 1995	
LOWEST ANNUAL MEAN					37.5 1992	
HIGHEST DAILY MEAN	230	May 17	309	Jan 3	309	Jan 3 1997
LOWEST DAILY MEAN	42	Mar 5	42	Dec 23	29	Nov 23 1992
ANNUAL SEVEN-DAY MINIMUM	45	Dec 22	45	Dec 22	29	Dec 8 1992
INSTANTANEOUS PEAK FLOW			433	Jan 2	433	Jan 2 1997
INSTANTANEOUS PEAK STAGE			4.38	Jan 2	4.38	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	52710		52050		39780	
10 PERCENT EXCEEDS	116		112		93	
50 PERCENT EXCEEDS	59		60		42	
90 PERCENT EXCEEDS	51		53		33	

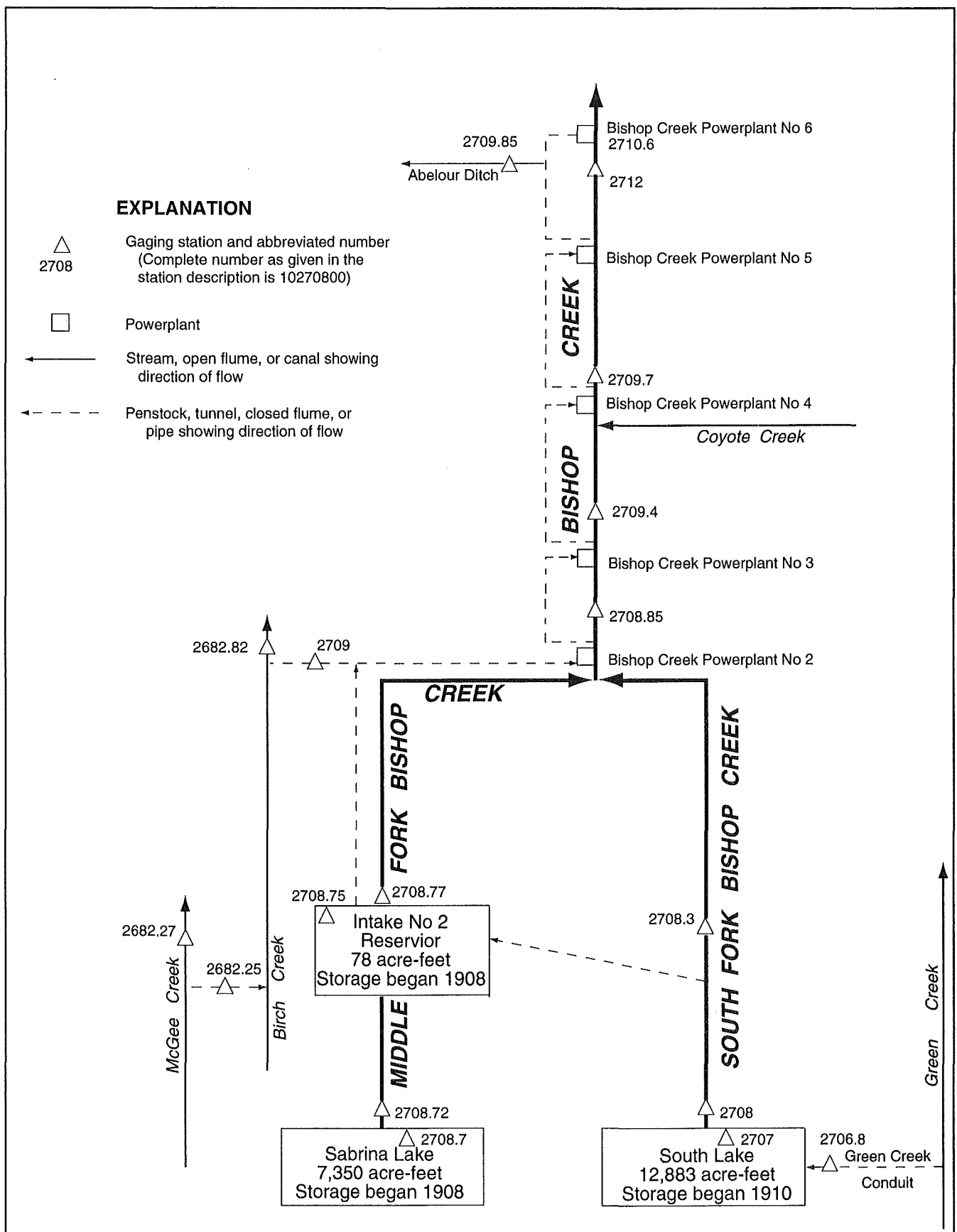


Figure 15. Diversions and storage in Bishop Creek Basin.

10268225 MCGEE CREEK DIVERSION NEAR BISHOP, CA

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

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

GAGE.—Water-stage recorder and Cipolletti weir. Elevation of gage is 8,630 ft above sea level, from topographic map.

REMARKS.—Records not computed for the winter months. Flow limited by size of diversion pipe from McGee Creek. Water flows down Birch Creek and then is diverted to Bishop Creek Powerplant No. 2 Conduit via Birch-McGee Creek Diversion (station 10270900). See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	---	---	---	---	---	---	2.3	10	13	9.2	5.6
2	3.0	---	---	---	---	---	---	2.4	10	11	9.2	5.7
3	3.0	---	---	---	---	---	---	2.6	10	11	9.4	5.5
4	2.9	---	---	---	---	---	---	2.7	11	11	10	5.4
5	2.8	---	---	---	---	---	---	2.9	11	12	11	5.3
6	2.8	---	---	---	---	---	---	3.1	11	13	11	5.2
7	1.5	---	---	---	---	---	---	3.3	11	13	12	5.2
8	.26	---	---	---	---	---	---	3.6	10	13	12	5.2
9	.26	---	---	---	---	---	---	3.9	10	14	11	5.2
10	.26	---	---	---	---	---	---	4.3	10	15	11	5.0
11	.26	---	---	---	---	---	---	4.9	10	15	9.8	5.0
12	.26	---	---	---	---	---	---	5.5	10	15	9.2	5.0
13	.26	---	---	---	---	---	---	6.3	10	15	8.9	5.0
14	.26	---	---	---	---	---	---	7.0	11	14	8.6	4.9
15	.26	---	---	---	---	---	---	7.8	10	15	8.4	4.9
16	.22	---	---	---	---	---	---	8.3	10	15	8.2	4.9
17	.19	---	---	---	---	---	---	8.8	10	14	7.9	4.8
18	.19	---	---	---	---	---	e.74	9.0	12	13	7.8	5.0
19	.19	---	---	---	---	---	e.84	8.9	16	13	7.7	4.8
20	.19	---	---	---	---	---	e.95	9.0	18	13	7.1	4.7
21	.19	---	---	---	---	---	e1.1	8.8	19	13	7.1	4.5
22	.19	---	---	---	---	---	e1.2	8.7	19	13	6.9	4.4
23	.19	---	---	---	---	---	e1.3	8.4	18	15	6.9	4.3
24	1.2	---	---	---	---	---	1.4	8.1	17	15	6.6	6.0
25	2.3	---	---	---	---	---	1.5	7.7	17	13	6.6	8.2
26	3.0	---	---	---	---	---	1.7	7.4	16	12	6.5	7.9
27	3.1	---	---	---	---	---	2.0	7.3	16	11	6.3	7.7
28	2.9	---	---	---	---	---	2.1	7.5	16	11	6.1	7.3
29	2.8	---	---	---	---	---	2.1	8.0	15	10	5.9	7.0
30	2.8	---	---	---	---	---	2.2	8.9	14	9.7	5.8	6.5
31	2.6	---	---	---	---	---	---	9.8	---	9.4	5.7	---
TOTAL	43.33	---	---	---	---	---	---	197.2	388	400.1	259.8	166.1
MEAN	1.40	---	---	---	---	---	---	6.36	12.9	12.9	8.38	5.54
MAX	3.1	---	---	---	---	---	---	9.8	19	15	12	8.2
MIN	.19	---	---	---	---	---	---	2.3	10	9.4	5.7	4.3
AC-FT	86	---	---	---	---	---	---	391	770	794	515	329

e Estimated.

10268282 BIRCH CREEK BELOW DIVERSION DAM, NEAR BISHOP, CA

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

PERIOD OF RECORD.—October 1995 to current year.

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

REMARKS.—No records computed above 2.5 ft³/s. Water from McGee Creek enters Birch Creek via McGee Creek Diversion (station 10268225) 0.5 mi upstream from Birch Creek Diversion Dam. Most of the water is diverted 15 ft upstream at Birch Creek Diversion Dam to Bishop Creek Powerplant No. 2 for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.39	.44	---	.44	.39	.38	.38	---	---	.44	.45
2	.39	.38	.40	---	.46	.40	.38	.38	---	---	.45	.45
3	.38	.38	.38	.47	.45	.40	.38	.39	1.0	.41	.44	.44
4	.38	1.2	.38	.45	.52	.40	.38	.39	---	.51	.43	.44
5	.38	1.9	.38	.44	.52	.41	.38	.39	---	1.7	.45	.45
6	.38	---	.39	.44	.52	.41	.38	.38	---	---	.67	.44
7	.42	---	.40	.44	.52	.42	.38	.38	---	---	1.6	.43
8	.89	---	.40	.44	.51	.42	.38	.38	---	---	1.7	.43
9	2.0	---	.40	.44	.51	.42	.38	.38	---	---	.42	.44
10	---	---	.40	.44	.50	.43	.38	.38	.48	1.7	.42	1.4
11	---	---	.40	.44	.47	.43	.38	.39	.51	---	.60	---
12	---	---	.41	.44	.40	.42	.38	.41	.53	---	.71	---
13	---	---	.41	.44	.38	.42	.38	.41	.54	---	.65	---
14	---	---	.40	.44	.38	.42	.38	.42	.55	---	.61	---
15	---	---	.40	.44	.38	.43	.39	.42	.56	---	.60	---
16	---	---	.40	.44	.38	.44	.39	.54	.57	---	.59	---
17	---	---	.40	.42	.38	.46	.40	.58	1.1	---	.58	---
18	---	---	.40	.43	.38	.46	.38	.52	---	---	.56	---
19	---	2.5	.40	.42	.38	.46	.38	.49	---	---	.50	---
20	---	2.4	.41	.42	.39	.45	.38	.47	---	---	.55	---
21	---	2.4	.45	.43	.40	.42	.38	.43	---	---	.52	---
22	---	2.2	.93	.47	.40	.40	.38	.43	---	---	.47	.39
23	---	2.2	1.3	.45	.40	.40	.38	.44	---	---	.45	.38
24	---	2.1	.39	.45	.40	.40	.38	.44	---	---	.44	.39
25	.76	2.0	.39	.46	.40	.40	.38	.44	---	---	.44	.38
26	.44	2.0	.38	.48	.39	.40	.38	.44	---	.47	.45	.37
27	.45	.95	.43	.46	.40	.40	.38	.42	---	.44	.44	.37
28	.46	.46	.48	.46	.39	.40	.38	.40	.75	.44	.45	.38
29	.43	.44	.46	.46	---	.38	.38	.40	1.8	.44	.44	.37
30	.39	.44	.46	.46	---	.38	.39	.46	---	.50	.44	.37
31	.40	---	.46	.45	---	.38	---	2.2	---	.50	.44	---
TOTAL	---	---	14.13	---	12.05	12.85	11.45	14.98	---	---	17.95	---
MEAN	---	---	.46	---	.43	.41	.38	.48	---	---	.58	---
MAX	---	---	1.3	---	.52	.46	.40	2.2	---	---	1.7	---
MIN	---	---	.38	---	.38	.38	.38	.38	---	---	.42	---
AC-FT	---	---	28	---	24	25	23	30	---	---	36	---

10270680 GREEN CREEK CONDUIT OUTLET NEAR BISHOP, CA

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

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 6.9 ft³/s, June 9, 1996, no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.17	.18	.00	.00	.00	.00	.56	5.9	2.5	1.6	.66
2	.33	.21	.21	.00	.00	.00	.00	1.3	5.5	2.4	1.5	.80
3	.33	.20	.09	.00	.00	.00	.00	1.3	5.4	2.3	1.5	1.1
4	.33	.16	.00	.00	.00	.00	.00	1.4	5.6	2.3	1.5	1.1
5	.33	.16	.00	.00	.00	.00	.00	1.6	5.6	2.3	1.9	1.0
6	.33	.16	.00	.00	.00	.00	.00	1.8	5.3	2.4	2.0	.95
7	.33	.16	.00	.00	.00	.00	.00	1.8	4.7	2.4	2.0	.85
8	.33	.16	.00	.00	.00	.00	.00	1.9	4.5	2.4	1.9	.80
9	.32	.16	.00	.00	.00	.00	.00	2.1	4.5	2.5	1.7	.75
10	.30	.16	.00	.00	.00	.00	.00	2.3	4.2	2.5	1.6	.65
11	.28	.16	.00	.00	.00	.00	.00	2.3	4.0	2.6	1.5	.57
12	.25	.14	.00	.00	.00	.00	.00	2.4	4.0	2.6	1.4	.57
13	.23	.12	.00	.00	.00	.00	.00	2.8	3.9	2.6	1.4	.56
14	.23	.10	.00	.00	.00	.00	.00	3.1	4.1	2.5	1.3	.49
15	.23	.14	.00	.00	.00	.00	.00	3.5	4.0	2.4	1.2	.45
16	.23	.17	.00	.00	.00	.00	.00	3.6	3.6	2.4	1.2	.45
17	.23	.37	.00	.00	.00	.00	.00	3.7	3.4	2.2	1.2	.42
18	.21	.15	.00	.00	.00	.00	.00	4.0	3.6	2.2	1.1	.52
19	.19	.25	.00	.00	.00	.00	.00	4.0	3.8	2.1	1.1	.65
20	.21	.40	.00	.00	.00	.00	.00	3.9	3.9	2.1	.95	.63
21	.21	.37	.00	.00	.00	.00	.00	3.8	3.8	2.0	.92	.62
22	.21	.41	.00	.00	.00	.00	.00	3.7	3.6	2.1	.88	.60
23	.21	.49	.00	.00	.00	.00	.00	3.5	3.5	2.5	.86	.54
24	.21	.49	.00	.00	.00	.00	.00	3.5	3.3	2.7	.82	.51
25	.13	.41	.00	.00	.00	.00	.00	3.3	3.2	2.5	.82	.54
26	.01	.33	.00	.00	.00	.00	.00	3.2	3.2	2.2	.80	.62
27	.03	.28	.00	.00	.00	.00	.00	3.3	3.1	2.0	.74	.62
28	.04	.23	.00	.00	.00	.00	.00	3.7	3.0	2.0	.70	.62
29	.06	.23	.00	.00	---	.00	.00	4.4	2.9	2.0	.67	.59
30	.12	.23	.00	.00	---	.00	.00	5.0	2.7	1.9	.66	.55
31	.11	---	.00	.00	---	.00	---	5.6	---	1.7	.66	---
TOTAL	6.92	7.17	0.48	0.00	0.00	0.00	0.00	92.36	121.8	71.3	38.08	19.78
MEAN	.22	.24	.015	.000	.000	.000	.000	2.98	4.06	2.30	1.23	.66
MAX	.36	.49	.21	.00	.00	.00	.00	5.6	5.9	2.7	2.0	1.1
MIN	.01	.10	.00	.00	.00	.00	.00	.56	2.7	1.7	.66	.42
AC-FT	14	14	1.0	.00	.00	.00	.00	183	242	141	76	39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

MEAN	.032	.034	.002	.000	.000	.000	.002	.91	2.35	1.74	.66	.24
MAX	.22	.24	.015	.000	.000	.000	.015	2.98	4.46	4.04	1.39	.66
(WY)	1997	1997	1997	1991	1991	1991	1992	1997	1996	1993	1993	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.96	.45	.083	.083	.000
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1992	1995	1995

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1991 - 1997		
ANNUAL TOTAL	312.27			357.89					
ANNUAL MEAN	.85			.98					
HIGHEST ANNUAL MEAN							.98		
LOWEST ANNUAL MEAN							.18		
HIGHEST DAILY MEAN	6.9	Jun	9	5.9	Jun	1	6.9	Jun	9 1996
LOWEST DAILY MEAN	.00	Jan	1	.00	Dec	4	.00	Oct	1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jan	1	.00	Dec	4	.00	Oct	1 1990
ANNUAL RUNOFF (AC-FT)	619			710			362		
10 PERCENT EXCEEDS	3.1			3.4			1.7		
50 PERCENT EXCEEDS	.21			.23			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

10270700 SOUTH LAKE NEAR BISHOP, CA

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

DRAINAGE AREA.—12.9 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 13,007 acre-ft, July 11, elevation, 9,752.03 ft; minimum, 1,089 acre-ft, Apr. 13, elevation, 9,642.93 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 5, 1981)

9,621.2	0	9,690	4,533
9,630	417	9,710	6,654
9,650	1,493	9,730	9,392
9,670	2,820	9,756	13,704

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11204	10237	9536	8956	7498	4788	1396	1905	6918	12310	12742	12553
2	11109	10210	9502	9102	7407	4667	1328	1966	7169	12392	12696	12556
3	11043	10190	9465	9152	7315	4552	1268	2026	7407	12484	12663	12573
4	11032	10154	9448	9187	7228	4412	1222	2095	7655	12580	12659	12560
5	11019	10117	9415	9189	7143	4280	1186	2173	7862	12687	12680	12530
6	11007	10095	9387	9170	7057	4144	1159	2258	8051	12801	12684	12513
7	10998	10076	9367	9144	6975	4012	1139	2357	8229	12919	12678	12494
8	10988	10051	9341	9126	6884	3879	1125	2464	8423	12979	12680	12482
9	10978	10024	9312	9080	6806	3750	1110	2591	8618	12993	12713	12467
10	10965	9994	9310	9033	6724	3620	1103	2726	8781	13004	12739	12441
11	10954	9969	9306	8978	6639	3490	1100	2875	8950	13007	12723	12436
12	10936	9933	9295	8916	6532	3361	1091	3047	9106	12999	12710	12434
13	10926	9892	9281	8838	6439	3230	1089	3251	9239	12999	12706	12431
14	10901	9850	9247	8795	6339	3111	1091	3466	9378	13000	12706	12433
15	10879	9801	9227	8714	6246	2987	1102	3698	9499	12990	12706	12405
16	10866	9784	9212	8641	6144	2857	1122	3913	9626	12974	12708	12393
17	10856	9795	9181	8564	6037	2741	1147	4125	9774	12966	12713	12364
18	10822	9790	9157	8487	5933	2630	1177	4342	9972	12966	12711	12371
19	10799	9773	9125	8406	5831	2522	1213	4530	10240	12966	12710	12374
20	10776	9766	9089	8321	5725	2416	1258	4715	10515	12957	12697	12368
21	10767	9766	9080	8246	5621	2318	1319	4883	10765	12948	12694	12356
22	10757	9759	9079	8181	5520	2221	1386	5037	10975	12941	12689	12332
23	10746	9759	9071	8116	5415	2128	1443	5182	11171	12969	12673	12293
24	10712	9754	9057	8053	5322	2036	1484	5306	11338	12966	12675	12257
25	10686	9729	9039	8011	5225	1954	1530	5410	11514	12943	12680	12219
26	10655	9698	9016	7954	5116	1866	1585	5511	11682	12917	12677	12204
27	10632	9671	8998	7897	5001	1786	1655	5639	11845	12896	12672	12184
28	10468	9630	8980	7826	4877	1708	1716	5813	11994	12864	12661	12141
29	10339	9595	8963	7745	---	1635	1778	6036	12112	12845	12644	12104
30	10310	9574	8944	7666	---	1554	1838	6309	12206	12808	12611	12067
31	10270	---	8922	7582	---	1477	---	6630	---	12770	12584	---
MAX	11204	10237	9536	9189	7498	4788	1838	6630	12206	13007	12742	12573
MIN	10270	9574	8922	7582	4877	1477	1089	1905	6918	12310	12584	12067
a	9735.60	9731.18	9726.93	9717.59	9693.47	9649.72	9655.66	9709.79	9747.37	9750.66	9749.58	9746.55
b	-1043	-696	-652	-1340	-2705	-3400	+361	+4792	+5576	+564	-186	-517

CAL YR 1996 MAX 12971 MIN 2445 b -2563
WTR YR 1997 MAX 13007 MIN 1089 b +754

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA

LOCATION.—Lat 37°10'38", long 118°33'44", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank near weir on Weir Lake, 0.3 mi downstream from South Lake, and 15.7 mi southwest of Bishop.

DRAINAGE AREA.—13.4 mi².

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

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 9,580 ft above sea level, from topographic map.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 142 ft³/s, July 31, 1995, gage height, 1.44 ft; minimum daily, 6.7 ft³/s, Apr. 4, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	25	24	24	44	59	52	18	19	18	64	34
2	60	22	25	28	47	58	52	19	16	17	62	35
3	43	22	25	22	48	63	46	19	14	17	59	35
4	16	22	26	15	47	71	37	19	14	16	53	42
5	16	22	22	18	46	70	31	19	14	16	52	42
6	16	22	25	29	46	70	26	19	14	16	56	42
7	16	22	24	33	46	69	22	19	14	16	58	38
8	15	21	22	32	45	69	19	20	14	41	55	31
9	15	21	23	33	45	68	19	20	14	67	47	28
10	14	21	22	33	45	67	16	20	14	76	49	27
11	14	21	22	36	50	66	14	17	15	82	53	27
12	14	23	22	37	53	66	14	16	15	86	48	23
13	15	26	21	37	53	65	14	17	15	82	42	19
14	17	22	21	43	53	65	14	17	16	81	40	19
15	15	22	22	28	53	64	14	18	16	83	37	24
16	15	22	22	26	55	63	14	18	16	79	34	27
17	15	19	22	27	57	63	14	18	15	72	35	22
18	15	18	22	27	56	62	15	19	15	69	35	19
19	16	16	23	27	56	61	15	19	15	68	35	19
20	16	16	28	27	56	60	15	19	15	69	35	24
21	17	17	23	26	56	59	16	19	15	66	35	27
22	14	17	23	28	54	59	16	19	15	66	35	31
23	15	17	23	26	52	58	16	18	16	85	34	34
24	18	16	23	27	52	57	17	18	16	102	27	34
25	19	16	23	23	57	56	17	18	16	90	27	31
26	19	20	23	27	59	55	16	19	16	76	27	27
27	23	25	23	26	59	55	17	19	16	69	27	29
28	89	25	23	30	59	54	17	19	16	68	29	33
29	78	25	22	35	---	53	17	19	16	68	34	34
30	32	25	22	43	---	53	17	19	17	67	34	34
31	31	---	22	43	---	52	---	19	---	67	34	---
TOTAL	777	628	713	916	1449	1910	629	576	459	1895	1292	891
MEAN	25.1	20.9	23.0	29.5	51.8	61.6	21.0	18.6	15.3	61.1	41.7	29.7
MAX	89	26	28	43	59	71	52	20	19	102	64	42
MIN	14	16	21	15	44	52	14	16	14	16	27	19
AC-FT	1540	1250	1410	1820	2870	3790	1250	1140	910	3760	2560	1770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.8	17.6	19.9	23.5	32.4	31.2	25.2	23.1	18.4	35.0	42.7	32.9
MAX	41.0	24.0	32.6	35.8	54.2	61.6	57.4	36.7	28.8	61.4	87.7	41.6
(WY)	1992	1994	1994	1993	1993	1997	1996	1996	1996	1995	1995	1996
MIN	10.8	10.6	9.98	7.59	7.45	7.75	7.74	10.6	7.70	9.45	20.5	26.4
(WY)	1991	1991	1991	1991	1991	1991	1992	1994	1991	1991	1991	1991

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1991 - 1997

ANNUAL TOTAL	14078	12135	
ANNUAL MEAN	38.5	33.2	
HIGHEST ANNUAL MEAN			27.0
LOWEST ANNUAL MEAN			38.7
HIGHEST DAILY MEAN	97	Jul 28	102
LOWEST DAILY MEAN	14	Oct 10	14
ANNUAL SEVEN-DAY MINIMUM	15	Oct 7	14
INSTANTANEOUS PEAK FLOW			106
INSTANTANEOUS PEAK STAGE			1.19
ANNUAL RUNOFF (AC-FT)	27920	24070	19600
10 PERCENT EXCEEDS	60	64	55
50 PERCENT EXCEEDS	38	25	22
90 PERCENT EXCEEDS	18	15	8.7

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

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

DRAINAGE AREA.—27.8 mi².

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

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

REMARKS.—No records computed above 25 ft³/s. Flow regulated by South Lake (station 10270700). Most of the water is diverted by South Fork Diversion Dam to Intake No. 2 Reservoir (station 10270875) for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	11	e7.6	7.8	7.2	7.6	7.7	11	11	10	11	10
2	13	8.5	e7.6	7.5	7.6	7.5	7.7	10	11	10	11	10
3	12	8.5	e7.3	7.4	7.7	7.5	7.7	11	11	10	11	10
4	12	8.4	e7.8	7.2	7.6	7.4	7.8	11	11	10	10	10
5	14	8.4	8.4	7.2	7.3	7.6	7.9	11	11	10	10	10
6	14	8.1	8.4	7.3	7.4	7.8	7.9	11	11	10	10	11
7	14	8.0	8.5	7.6	7.5	7.7	7.6	11	10	11	10	11
8	14	7.8	8.4	7.4	7.4	7.7	7.6	11	11	14	10	---
9	14	e7.5	8.6	7.4	7.3	7.7	7.5	11	11	19	11	---
10	14	e8.5	8.4	7.4	7.4	7.6	7.4	11	11	19	11	e25
11	14	11	8.4	7.4	7.8	7.7	7.5	11	11	19	11	11
12	14	11	8.4	8.2	7.5	7.7	7.4	11	11	19	11	11
13	14	8.7	8.5	7.8	7.3	7.7	7.4	11	11	19	11	10
14	14	8.3	8.5	7.8	7.3	7.7	7.4	11	11	18	11	11
15	14	8.3	8.4	7.7	7.5	7.7	7.4	11	11	18	11	e25
16	14	8.3	8.4	7.7	7.9	7.7	7.4	11	11	18	11	---
17	14	8.1	8.4	7.6	7.9	7.7	7.4	11	11	18	11	---
18	14	8.1	8.4	7.6	7.9	7.7	7.4	11	11	18	11	10
19	14	8.1	8.4	7.6	7.6	7.7	7.5	11	11	18	11	11
20	14	8.0	8.5	7.6	7.3	7.7	7.5	11	11	18	11	11
21	13	8.3	8.4	7.7	8.0	7.7	7.5	11	10	18	11	10
22	13	8.0	8.3	7.9	7.9	7.7	7.6	11	10	19	11	10
23	13	8.0	8.5	7.8	7.9	7.6	8.6	11	10	19	11	11
24	14	7.8	8.4	7.8	7.9	7.7	9.7	11	10	19	11	11
25	14	e7.5	8.4	7.9	7.9	7.8	11	11	10	19	11	10
26	14	7.5	8.4	7.9	8.0	7.8	11	11	10	19	11	11
27	---	7.3	8.4	7.8	7.9	7.8	11	11	10	19	11	10
28	---	7.8	8.4	7.3	7.7	7.8	11	11	10	19	11	11
29	---	7.9	8.4	7.8	---	7.8	11	11	10	19	11	11
30	---	7.8	e7.5	7.3	---	7.8	11	11	10	16	10	11
31	e20	---	e7.5	7.2	---	7.7	---	11	---	13	10	---
TOTAL	---	250.5	255.9	235.6	213.6	238.3	250.5	340	319	505	334	---
MEAN	---	8.35	8.25	7.60	7.63	7.69	8.35	11.0	10.6	16.3	10.8	---
MAX	---	11	8.6	8.2	8.0	7.8	11	11	11	19	11	---
MIN	---	7.3	7.3	7.2	7.2	7.4	7.4	10	10	10	10	---
AC-FT	---	497	508	467	424	473	497	674	633	1000	662	---

e Estimated.

10270870 LAKE SABRINA NEAR BISHOP, CA

LOCATION.—Lat 38°12'44", long 118°36'42", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in valve house at base of dam on Middle Fork Bishop Creek and 15.8 mi southwest of Bishop.

DRAINAGE AREA.—16.5 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 7,526 acre-ft, June 21, elevation, 9,132.52; minimum, 756 acre-ft, Apr. 14, elevation, 9091.65 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 12, 1981)

9,068.42	0	9,100	1,926
9,070	1	9,110	3,501
9,080	15	9,120	5,196
9,090	558	9,135	7,912

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5390	4863	4368	4091	3935	2000	813	1457	6031	7241	7134	7063
2	5386	4849	4346	4349	3860	1930	796	1505	6234	7210	7109	7071
3	5370	4830	4322	4501	3787	1869	789	1556	6426	7217	7094	7080
4	5356	4809	4305	4569	3712	1830	785	1620	6666	7243	7092	7090
5	5342	4783	4282	4617	3634	1785	781	1691	6857	7274	7111	7090
6	5333	4754	4263	4627	3560	1739	777	1779	6934	7291	7136	7078
7	5326	4732	4243	4617	3483	1695	775	1872	7005	7297	7161	7059
8	5321	4713	4227	4598	3405	1650	773	1970	7076	7295	7179	7038
9	5315	4686	4209	4574	3329	1607	767	2088	7142	7293	7182	7051
10	5312	4658	4211	4545	3253	1565	764	2219	7198	7301	7175	7059
11	5301	4632	4206	4509	3177	1526	762	2360	7252	7313	7157	7057
12	5294	4600	4199	4465	3109	1485	764	2513	7291	7320	7148	7048
13	5285	4574	4187	4424	3039	1444	758	2702	7320	7332	7142	7015
14	5278	4543	4172	4368	2970	1404	756	2909	7361	7336	7138	6988
15	5275	4504	4157	4341	2901	1364	777	3149	7373	7336	7138	6986
16	5259	4482	4140	4316	2834	1319	798	3381	7373	7336	7140	6984
17	5248	4503	4121	4287	2772	1272	819	3604	7391	7314	7142	6965
18	5236	4492	4103	4260	2710	1229	849	3837	7430	7307	7142	6949
19	5226	4482	4084	4232	2646	1189	881	4037	7467	7305	7140	6907
20	5215	4460	4067	4217	2585	1151	924	4216	7508	7307	7126	6861
21	5205	4473	4064	4189	2523	1118	978	4382	7526	7307	7124	6811
22	5192	4477	4072	4164	2460	1083	1036	4531	7516	7320	7121	6760
23	5180	4472	4066	4150	2393	1047	1088	4667	7498	7355	7117	6708
24	5182	4463	4066	4125	2324	1010	1115	4780	7481	7389	7109	6670
25	5149	4451	4064	4147	2260	977	1142	4851	7471	7371	7111	6640
26	5135	4436	4062	4145	2194	951	1186	4890	7457	7342	7111	6600
27	5103	4419	4066	4148	2125	926	1251	4942	7424	7313	7105	6560
28	4987	4412	4061	4140	2062	902	1310	5046	7381	7281	7099	6526
29	4902	4397	4054	4106	---	879	1351	5229	7338	7246	7090	6500
30	4887	4387	4046	4056	---	859	1404	5481	7295	7204	7078	6473
31	4876	---	4031	3997	---	835	---	5771	---	7159	7069	---
MAX	5390	4863	4368	4627	3935	2000	1404	5771	7526	7389	7182	7090
MIN	4876	4387	4031	3997	2062	835	756	1457	6031	7159	7069	6473
a	9118.16	9115.30	9113.19	9112.99	9100.91	9092.25	9096.42	9123.24	9131.34	9130.64	9130.17	9127.05
b	-517	-489	-356	-34	-1935	-1227	+569	+4367	+1524	-136	-90	-596
CAL YR 1996	MAX 7498	MIN 376	b -1842									
WTR YR 1997	MAX 7526	MIN 756	b +1080									

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA

LOCATION.—Lat 37°12'50", long 118°36'34", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank 800 ft downstream from Lake Sabrina Dam and 15.6 mi southwest of Bishop.

DRAINAGE AREA.—16.7 mi².

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

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 9,050 ft above sea level, from topographic map.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 270 ft³/s, July 10, 1995, gage height, 2.15 ft; minimum daily, 6.5 ft³/s, Mar. 19–27, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	18	19	47	42	30	21	32	96	65	28
2	17	18	21	15	50	41	25	21	41	76	61	29
3	21	20	22	15	52	40	19	21	45	57	57	35
4	19	20	22	15	51	29	17	21	46	58	53	35
5	19	20	21	18	51	31	16	21	53	62	51	35
6	17	22	22	29	51	30	14	21	70	72	54	37
7	15	23	22	33	51	31	14	22	74	83	58	39
8	14	24	21	33	50	31	14	22	77	88	62	38
9	14	24	21	34	50	31	14	22	78	88	64	15
10	14	24	21	34	50	31	14	22	78	89	64	21
11	14	24	22	37	49	31	14	22	79	89	62	24
12	14	24	22	39	45	30	14	23	79	89	53	28
13	14	24	21	39	45	30	14	23	79	89	48	40
14	14	23	21	45	45	30	14	23	79	89	46	32
15	14	26	21	29	45	31	14	18	80	88	44	21
16	13	25	21	27	45	33	14	18	80	88	43	20
17	13	18	22	27	44	33	14	18	82	88	43	27
18	14	18	22	27	42	33	14	18	94	81	43	32
19	13	18	22	27	42	33	15	18	124	78	43	41
20	13	18	21	27	42	32	16	19	136	77	42	45
21	13	18	21	27	41	32	16	19	140	74	38	44
22	13	17	24	29	42	32	16	22	140	75	37	44
23	14	19	21	28	44	32	18	27	131	79	37	44
24	17	19	17	29	44	32	20	27	122	90	37	39
25	17	19	17	24	44	32	20	36	115	94	33	35
26	18	21	16	28	44	32	20	51	119	88	32	37
27	22	20	16	27	43	31	20	50	124	83	32	37
28	71	16	18	32	43	31	20	43	121	83	32	34
29	62	18	18	37	---	31	20	31	113	83	32	30
30	27	18	18	46	---	31	21	26	103	81	32	30
31	18	---	19	46	---	31	---	30	---	77	31	---
TOTAL	593	616	631	922	1292	1000	511	776	2734	2532	1429	996
MEAN	19.1	20.5	20.4	29.7	46.1	32.3	17.0	25.0	91.1	81.7	46.1	33.2
MAX	71	26	24	46	52	42	30	51	140	96	65	45
MIN	13	16	16	15	41	29	14	18	32	57	31	15
AC-FT	1180	1220	1250	1830	2560	1980	1010	1540	5420	5020	2830	1980

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.6	15.7	16.6	23.6	31.7	26.0	24.3	25.5	42.2	74.4	54.5	33.6
MAX	20.5	20.5	24.8	35.2	46.1	41.6	41.1	43.4	91.1	147	107	49.4
(WY)	1994	1997	1994	1994	1997	1995	1996	1996	1997	1995	1995	1995
MIN	11.8	8.56	10.2	7.63	7.11	6.91	10.4	9.28	9.14	30.6	33.8	22.7
(WY)	1991	1993	1993	1991	1991	1991	1993	1994	1994	1994	1992	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1991 - 1997	
ANNUAL TOTAL	15412		14032			
ANNUAL MEAN	42.1		38.4		32.2	
HIGHEST ANNUAL MEAN					47.8	
LOWEST ANNUAL MEAN					18.4	
HIGHEST DAILY MEAN	154	Jul 12	140	Jun 21	230	Jul 11 1995
LOWEST DAILY MEAN	13	Oct 16	13	Oct 16	6.5	Mar 19 1991
ANNUAL SEVEN-DAY MINIMUM	13	Oct 16	13	Oct 16	6.5	Mar 19 1991
INSTANTANEOUS PEAK FLOW			148	Jun 20	270	Jul 10 1995
INSTANTANEOUS PEAK STAGE			1.44	Jun 20	2.15	Jul 10 1995
ANNUAL RUNOFF (AC-FT)	30570		27830		23320	
10 PERCENT EXCEEDS	68		79		64	
50 PERCENT EXCEEDS	37		31		23	
90 PERCENT EXCEEDS	16		16		9.4	

10270875 INTAKE NO. 2 RESERVOIR NEAR BISHOP, CA

LOCATION.—Lat 38°14'53", long 118°34'53", in SE 1/4 SW 1/4 sec.16, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in outlet structure 50 ft upstream from Bishop Creek Dam on Middle Fork Bishop Creek and 13.0 mi southwest of Bishop.

DRAINAGE AREA.—31.6 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 92 acre-ft, June 21, elevation, 8,100.00 ft; minimum, 25 acre-ft, Oct. 1, elevation, 8,092.79 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 12, 1981)

8,077	0	8,094	32
8,082	1	8,098	68
8,086	5	8,102	120
8,090	12		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	70	69	81	66	69	e68	67	82	84	83	71
2	26	69	73	88	67	73	66	67	83	81	83	77
3	48	71	70	70	69	68	68	69	83	78	82	70
4	42	72	70	66	69	69	66	69	84	80	82	71
5	42	68	69	64	68	69	66	68	84	82	83	70
6	46	69	70	61	68	69	65	66	84	82	83	69
7	52	70	73	75	68	69	70	69	83	84	84	69
8	48	70	69	70	67	69	67	71	84	86	84	60
9	54	71	72	64	68	68	66	70	84	87	83	57
10	50	71	71	64	68	69	66	69	84	87	83	65
11	59	70	72	66	70	69	66	66	84	87	82	62
12	60	67	73	65	68	69	66	69	84	87	78	63
13	60	74	69	64	66	69	67	70	85	87	74	64
14	65	70	70	79	65	69	70	72	85	87	71	58
15	58	72	69	71	65	67	72	80	84	87	71	54
16	53	73	68	71	66	71	70	79	84	87	71	56
17	53	68	69	71	70	71	74	80	85	86	71	60
18	54	71	70	72	69	70	72	80	87	86	70	63
19	57	71	71	71	69	70	73	78	90	86	70	61
20	56	71	72	70	69	71	72	73	89	85	68	61
21	64	73	65	69	67	71	75	68	92	85	69	62
22	72	65	65	69	66	70	70	66	90	85	68	62
23	62	67	74	68	66	70	65	71	89	86	68	58
24	69	67	70	71	66	67	64	67	88	87	67	49
25	70	68	69	69	67	76	66	58	88	87	67	49
26	69	69	67	75	68	73	71	58	89	86	65	42
27	68	75	67	74	68	70	73	65	89	86	66	42
28	69	71	71	68	68	70	69	80	89	86	68	38
29	71	70	72	64	---	71	67	81	87	85	70	32
30	71	70	73	70	---	72	68	83	85	85	72	31
31	70	---	71	68	---	71	---	83	---	84	71	---
MAX	72	75	74	88	70	76	75	83	92	87	84	77
MIN	25	65	65	61	65	67	64	58	82	78	65	31
a	8098.18	8098.18	8098.28	8098.01	8097.97	8098.26	8097.99	8099.29	8099.45	8099.42	8098.29	8093.87
b	+48	0	+1	-3	0	+3	-3	+15	+2	-1	-13	-40

CAL YR 1996 MAX 92 MIN 22 b +1

WTR YR 1997 MAX 92 MIN 25 b -9

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10270877 MIDDLE FORK BISHOP CREEK BELOW INTAKE NO. 2 RESERVOIR, NEAR BISHOP, CA

LOCATION.—Lat 37°15'16", long 118°34'39", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank 0.1 mi upstream from bridge on South Lake road, 0.7 mi downstream from Bishop Creek Dam, 0.9 mi upstream from confluence with South Fork Bishop Creek, and 12.6 mi southwest of Bishop.

DRAINAGE AREA.—31.9 mi².

PERIOD OF RECORD.—October 1990 to current year (low-flow records only). Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 7,830 ft above sea level, from topographic map.

REMARKS.—No records computed above 30 ft³/s. Flow regulated by Intake No. 2 Reservoir (station 10270875), where most of the water is diverted to Bishop Creek Powerplant No. 2. Water is used for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	7.6	14	7.3	7.4	7.4	10	---	---	---	11
2	13	9.0	7.6	---	7.3	7.4	7.6	10	---	---	---	12
3	15	9.0	7.5	---	7.3	7.3	7.3	10	---	22	---	11
4	15	8.2	7.5	7.7	7.3	7.4	7.3	10	---	19	---	11
5	15	7.7	7.5	7.5	7.3	7.3	7.3	10	---	26	---	11
6	15	7.6	7.4	e7.6	e7.3	7.3	7.3	10	---	---	---	11
7	---	7.6	7.3	e7.7	7.3	7.3	7.3	10	---	---	---	11
8	---	7.6	7.3	e7.5	7.3	7.3	7.3	10	---	---	---	11
9	---	7.6	7.4	7.4	7.3	7.3	7.3	11	---	---	---	11
10	25	7.6	7.5	7.3	7.3	7.3	7.3	10	---	---	---	11
11	13	7.6	7.5	7.3	7.3	7.2	7.3	10	---	---	---	11
12	14	7.6	7.5	7.3	7.3	7.3	7.3	10	---	---	---	11
13	14	7.6	7.5	e7.3	7.3	7.2	7.3	10	---	---	11	11
14	14	7.6	7.4	e7.3	7.3	7.2	7.3	10	---	---	11	11
15	14	7.6	7.3	e7.3	7.3	7.3	7.3	12	---	---	11	11
16	13	7.6	7.3	7.3	7.3	7.3	7.3	20	---	---	11	11
17	13	8.3	7.3	7.3	7.3	7.3	7.3	16	---	---	12	11
18	13	7.8	7.3	7.3	7.3	7.3	7.3	25	---	---	13	11
19	13	7.8	7.3	7.3	7.3	7.3	7.3	17	---	---	13	11
20	13	7.8	7.3	7.3	7.3	7.2	7.3	11	---	---	13	11
21	13	8.0	e7.3	7.3	7.3	7.3	7.3	10	---	---	13	11
22	14	7.9	e7.3	7.3	7.3	7.3	7.3	10	---	---	12	11
23	14	7.7	e7.3	7.3	7.3	7.3	9.4	10	---	---	11	11
24	14	7.6	e7.3	7.3	e7.3	7.3	10	10	---	---	11	11
25	13	7.6	7.3	7.6	e7.3	10	10	10	---	---	11	11
26	12	7.6	7.3	7.5	7.3	7.5	10	10	---	---	11	10
27	12	7.6	7.3	7.5	7.3	7.5	10	10	---	---	11	10
28	12	7.6	7.3	7.5	e7.3	7.5	10	13	---	---	11	10
29	12	7.6	7.4	7.4	---	7.5	10	27	---	---	11	11
30	12	7.6	7.5	7.3	---	7.4	10	---	---	---	11	11
31	12	---	7.5	7.3	---	7.4	---	---	---	---	11	---
TOTAL	---	237.0	229.1	---	204.4	229.9	240.4	---	---	---	---	328
MEAN	---	7.90	7.39	---	7.30	7.42	8.01	---	---	---	---	10.9
MAX	---	11	7.6	---	7.3	10	10	---	---	---	---	12
MIN	---	7.6	7.3	---	7.3	7.2	7.3	---	---	---	---	10
AC-FT	---	470	454	---	405	456	477	---	---	---	---	651

e Estimated.

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

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

DRAINAGE AREA.—64.5 mi².

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

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

REMARKS.—No records computed above 20 ft³/s. Flow regulated by Intake No. 3 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 3. Water is used for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	15	17	15	15	15	14	19	---	---	15
2	15	16	15	---	15	15	15	14	15	---	---	15
3	15	15	15	---	---	15	15	14	20	17	---	15
4	15	15	15	14	---	15	15	14	---	14	17	15
5	---	15	15	15	---	15	14	14	---	14	19	15
6	---	15	15	15	---	15	14	14	---	14	---	15
7	---	15	15	15	15	15	15	14	---	18	---	15
8	---	15	15	15	15	15	14	14	---	---	---	15
9	---	15	15	15	15	15	15	14	---	---	---	15
10	---	15	15	15	15	15	15	14	---	---	---	15
11	e16	15	15	15	18	15	15	14	---	---	---	15
12	e16	15	15	15	18	15	15	14	---	---	15	15
13	e16	15	15	15	15	15	15	14	---	---	15	15
14	16	15	15	15	15	15	15	14	---	---	14	15
15	16	15	15	15	15	15	15	14	---	---	15	15
16	16	15	15	15	15	15	14	17	---	---	15	15
17	15	15	14	15	15	15	14	14	---	---	15	15
18	e16	15	14	15	15	15	14	14	---	---	15	15
19	e16	15	14	15	15	15	14	14	---	---	15	15
20	16	15	14	15	15	15	14	14	---	---	15	15
21	e16	15	14	15	15	15	14	14	---	---	15	15
22	e16	15	15	15	15	15	14	14	---	---	15	15
23	e16	15	15	15	15	15	14	14	---	---	15	15
24	e16	15	15	15	15	15	14	14	---	---	15	15
25	e16	15	15	15	15	15	14	14	---	---	15	15
26	e16	15	15	15	15	15	14	14	---	---	15	15
27	e16	15	15	15	15	15	14	14	---	---	15	15
28	---	15	15	15	15	15	14	14	---	---	15	15
29	---	15	15	20	---	15	14	14	---	---	15	15
30	---	15	15	16	---	15	14	14	---	---	15	15
31	e17	---	15	16	---	15	---	---	---	---	15	---
TOTAL	---	452	460	---	---	465	432	---	---	---	---	450
MEAN	---	15.1	14.8	---	---	15.0	14.4	---	---	---	---	15.0
MAX	---	16	15	---	---	15	15	---	---	---	---	15
MIN	---	15	14	---	---	15	14	---	---	---	---	15
AC-FT	---	897	912	---	---	922	857	---	---	---	---	893

e Estimated.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY INSTANTANEOUS VALUES

[illegible]

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

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

DRAINAGE AREA.—72.7 mi².

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

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

REMARKS.—No records computed above 20 ft³/s. Flow regulated by Intake No. 4 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 4. Water is used for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	7.5	6.0	7.6	5.5	5.7	7.0	5.8	---	---	---	5.4
2	7.0	7.5	6.0	---	5.6	5.9	7.0	5.8	---	---	---	5.7
3	7.1	7.6	6.3	---	5.7	---	7.1	5.7	---	---	---	5.7
4	7.2	7.0	6.0	5.8	5.6	---	6.5	5.7	---	---	---	5.7
5	7.0	6.0	6.0	5.7	5.5	---	5.7	5.7	---	---	---	5.7
6	7.2	6.0	6.1	6.3	5.7	---	5.7	5.7	---	---	---	5.7
7	7.0	6.0	6.1	6.0	5.5	---	5.8	5.7	---	---	---	5.7
8	7.0	5.9	6.1	5.5	5.5	5.8	5.7	5.7	---	---	---	5.6
9	7.0	6.0	6.1	5.5	5.6	5.8	5.6	5.7	---	---	---	5.5
10	7.2	6.0	6.1	5.5	5.7	---	5.7	5.7	---	---	---	5.7
11	6.9	6.0	6.1	5.5	5.7	---	5.7	5.7	---	---	---	5.7
12	6.9	6.1	6.1	5.5	5.8	---	5.7	5.7	---	---	---	5.7
13	6.9	6.2	6.0	5.5	5.8	---	5.7	11	---	---	18	5.7
14	6.9	6.1	5.6	6.3	5.8	18	5.6	17	---	---	12	5.7
15	8.5	6.1	5.6	5.7	5.8	5.7	5.7	18	---	---	7.9	5.7
16	---	6.0	5.6	5.5	5.8	5.7	5.7	---	---	---	5.5	5.7
17	---	6.0	5.6	5.5	5.8	5.7	5.8	20	---	---	5.5	5.7
18	---	5.9	5.5	5.5	5.8	5.7	5.7	---	---	---	6.4	5.9
19	---	6.0	5.6	5.5	12	5.7	5.7	---	---	---	5.6	5.7
20	---	6.0	5.6	5.5	14	5.7	5.7	14	---	---	5.5	5.6
21	---	7.3	5.8	5.5	11	5.7	5.7	11	---	---	5.5	5.4
22	---	6.0	5.7	5.6	5.8	5.8	5.7	7.9	---	---	5.5	5.4
23	---	6.0	5.7	5.7	5.8	6.4	5.8	8.8	---	---	5.5	5.4
24	---	6.0	5.7	5.7	13	7.1	5.9	9.7	---	---	5.5	5.4
25	12	5.9	5.7	5.7	18	10	5.8	11	---	---	5.5	5.4
26	12	5.8	5.7	5.7	16	7.1	5.8	15	---	---	5.5	5.4
27	12	5.9	5.7	5.7	5.8	7.1	5.8	13	---	---	5.5	5.4
28	---	6.0	5.7	5.7	5.7	7.0	5.7	13	---	---	5.5	5.4
29	---	6.0	5.8	7.2	---	7.1	5.7	---	---	---	5.6	5.4
30	---	6.0	5.7	6.1	---	7.1	5.7	---	---	---	5.7	5.4
31	8.6	---	5.7	8.9	---	7.1	---	---	---	---	5.5	---
TOTAL	---	186.8	181.0	---	209.3	---	176.4	---	---	---	---	167.5
MEAN	---	6.23	5.84	---	7.47	---	5.88	---	---	---	---	5.58
MAX	---	7.6	6.3	---	18	---	7.1	---	---	---	---	5.9
MIN	---	5.8	5.5	---	5.5	---	5.6	---	---	---	---	5.4
AC-FT	---	371	359	---	415	---	350	---	---	---	---	332

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

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

DRAINAGE AREA.—100 mi².

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

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

REMARKS.—No records computed above 30 ft³/s. Flow regulated by Intake No. 5 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 5. Water is used for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	22	18	19	18	19	19	18	---	---	---	19
2	20	22	19	---	19	19	22	18	---	---	---	19
3	19	22	19	---	19	19	21	19	---	---	---	19
4	19	20	19	18	19	19	20	18	---	---	---	19
5	20	19	19	18	19	19	20	19	---	---	---	19
6	20	19	19	18	19	19	20	19	---	---	---	19
7	20	19	19	19	19	19	20	19	---	---	---	19
8	19	18	19	19	19	19	20	19	---	---	---	19
9	20	18	19	19	19	18	20	19	---	---	---	19
10	19	18	18	18	19	18	20	19	---	---	---	19
11	19	18	18	20	19	18	20	19	---	---	---	19
12	19	18	18	18	19	18	20	19	---	---	---	19
13	19	18	18	18	19	18	20	19	---	---	---	19
14	19	18	18	18	19	19	20	---	---	---	---	19
15	20	18	18	19	19	18	20	19	---	---	---	19
16	19	18	18	19	19	18	20	29	---	---	---	19
17	19	18	18	19	19	---	20	19	---	---	---	19
18	19	18	18	19	19	---	20	22	---	---	29	---
19	20	18	18	18	19	---	20	21	---	---	23	19
20	19	18	18	18	19	---	20	19	---	---	23	19
21	20	19	18	18	19	18	20	19	---	---	23	19
22	19	18	18	18	19	18	20	---	---	---	21	20
23	19	18	18	18	19	18	20	19	---	---	19	27
24	20	18	18	18	19	---	20	18	---	---	19	26
25	20	18	18	19	19	---	20	18	---	---	19	22
26	19	18	18	20	19	---	20	18	---	---	19	20
27	20	18	18	20	19	19	20	19	---	---	19	19
28	---	18	18	20	19	19	19	19	---	---	19	20
29	---	18	18	19	---	19	19	19	---	---	19	22
30	23	18	19	18	---	18	19	22	---	---	19	20
31	22	---	19	18	---	18	---	---	---	---	19	---
TOTAL	---	558	568	---	531	---	599	---	---	---	---	---
MEAN	---	18.6	18.3	---	19.0	---	20.0	---	---	---	---	---
MAX	---	22	19	---	19	---	22	---	---	---	---	---
MIN	---	18	18	---	18	---	19	---	---	---	---	---
AC-FT	---	1110	1130	---	1050	---	1190	---	---	---	---	---

10270985 ABELOUR DITCH NEAR BISHOP, CA

LOCATION.—Lat 37°20'30", long 118°28'41", SE 1/4 NE 1/4 sec.17, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank 400 ft upstream from Highway 168 road crossing, 0.6 mi downstream from outlet in penstock to Bishop Creek Powerplant No. 6, and 4.8 mi west of Bishop.

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

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 4,750 ft above sea level, from topographic map.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3.3 ft³/s, May 7, 1995; minimum daily, 0.43 ft³/s, Nov. 22–25, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.9	1.8	1.7	2.0	2.2	2.0	2.1	2.2	1.8	2.1	2.1
2	2.3	1.9	1.8	1.9	2.0	2.2	2.0	2.2	2.2	1.8	2.0	1.9
3	2.3	1.9	1.8	2.2	2.0	2.2	2.2	2.2	2.2	1.9	2.0	1.4
4	2.3	1.9	1.9	2.5	2.0	2.2	2.1	2.2	2.2	2.0	2.0	1.8
5	2.3	1.9	2.0	2.5	2.0	2.2	2.0	2.1	2.2	2.0	2.0	2.3
6	2.1	1.4	2.0	2.9	2.0	2.2	2.0	2.1	2.2	2.0	2.0	2.3
7	1.9	.95	1.9	2.9	2.0	2.2	2.1	2.1	2.2	2.1	2.0	2.3
8	2.0	.78	1.9	2.5	2.0	2.2	2.1	2.0	2.2	2.1	2.0	2.0
9	2.0	.76	1.9	2.5	2.0	2.2	2.1	1.9	2.2	2.1	2.1	2.3
10	1.9	.76	1.9	2.5	2.0	2.2	2.1	1.8	2.2	2.0	2.1	2.2
11	2.0	.76	1.8	2.5	2.0	2.1	2.2	1.8	2.2	2.0	2.0	2.2
12	2.0	.75	1.9	2.5	1.9	2.1	2.3	1.9	2.2	2.1	2.0	2.2
13	2.0	.73	1.9	2.5	1.9	2.1	2.3	1.9	2.1	2.0	2.0	2.0
14	2.0	.70	2.0	2.5	2.1	2.1	2.3	2.1	2.2	1.9	2.0	2.0
15	1.9	.70	2.0	2.3	2.2	2.1	2.3	2.1	2.2	2.0	2.0	2.6
16	1.9	.68	2.0	1.7	2.2	2.1	2.3	2.0	2.2	2.2	2.1	2.0
17	1.9	.63	2.0	2.1	2.2	2.1	2.3	2.1	2.1	2.1	2.1	2.0
18	1.9	.54	2.0	2.3	2.2	2.0	2.2	2.1	2.1	2.1	2.0	1.7
19	1.9	.51	2.0	2.3	2.2	2.0	2.2	2.1	2.2	2.1	2.0	2.0
20	1.9	.47	2.0	2.3	2.2	2.0	2.1	2.0	2.2	2.1	2.1	2.3
21	1.9	.46	2.0	2.3	2.2	1.9	2.1	2.0	2.1	2.0	2.2	2.3
22	1.9	.43	2.0	2.3	2.2	1.9	2.0	2.1	2.0	1.9	2.3	2.1
23	1.9	.43	2.0	2.3	2.2	1.8	1.9	2.2	2.2	2.0	2.3	1.9
24	1.9	.43	2.0	2.2	2.3	1.8	2.0	2.2	2.1	2.1	2.4	1.9
25	1.8	.43	2.0	2.2	2.3	1.8	2.1	2.2	2.1	2.1	2.5	2.1
26	1.8	.90	2.0	2.3	2.2	1.9	2.1	2.2	2.1	2.1	2.5	2.1
27	1.8	1.9	2.0	2.2	2.3	2.1	2.2	2.2	2.1	2.1	2.2	2.2
28	1.8	2.0	2.0	2.1	2.3	2.1	2.2	2.2	2.1	2.1	2.1	2.1
29	1.7	1.8	2.0	2.1	---	2.0	2.1	2.2	2.0	2.1	2.0	2.1
30	1.7	1.8	2.0	2.1	---	2.0	2.1	2.2	1.9	2.1	2.0	2.2
31	1.8	---	2.0	2.0	---	2.0	---	2.2	---	2.1	2.0	---
TOTAL	60.8	31.20	60.5	71.2	59.1	64.0	64.0	64.7	64.4	63.1	65.1	62.6
MEAN	1.96	1.04	1.95	2.30	2.11	2.06	2.13	2.09	2.15	2.04	2.10	2.09
MAX	2.3	2.0	2.0	2.9	2.3	2.2	2.3	2.2	2.2	2.2	2.5	2.6
MIN	1.7	.43	1.8	1.7	1.9	1.8	1.9	1.8	1.9	1.8	2.0	1.4
AC-FT	121	62	120	141	117	127	127	128	128	125	129	124

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997
MEAN	1.99	1.79	1.86	1.94	1.92	1.94	2.02
MAX	2.19	2.20	1.95	2.30	2.11	2.06	2.41
(WY)	1994	1994	1997	1997	1997	1996	1995
MIN	1.87	1.04	1.77	1.75	1.70	1.70	1.86
(WY)	1991	1997	1993	1992	1991	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1991 - 1997

ANNUAL TOTAL	779.00	730.70	
ANNUAL MEAN	2.13	2.00	2.04
HIGHEST ANNUAL MEAN			2.19
LOWEST ANNUAL MEAN			1.85
HIGHEST DAILY MEAN	3.1 Apr 20	2.9 Jan 6	3.3 May 7 1995
LOWEST DAILY MEAN	.43 Nov 22	.43 Nov 22	.43 Nov 22 1996
ANNUAL SEVEN-DAY MINIMUM	.45 Nov 19	.45 Nov 19	.45 Nov 19 1996
ANNUAL RUNOFF (AC-FT)	1550	1450	1480
10 PERCENT EXCEEDS	2.6	2.3	2.5
50 PERCENT EXCEEDS	2.2	2.1	2.0
90 PERCENT EXCEEDS	1.8	1.8	1.8

10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA

LOCATION.—Lat 37°21'00", long 118°27'42", in SE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank adjacent to Powerplant No. 6 tailrace and 3.8 mi west of Bishop.

DRAINAGE AREA.—104 mi².

PERIOD OF RECORD.—October 1990 to current year. If records for Bishop Creek Powerplant No. 6 Conduit (station 10271060) are combined with this record, a record equivalent to that published since October 1936 as Bishop Creek below Powerplant No. 6, near Bishop, discontinued September 1990, can be obtained. Monthly and yearly mean discharge prior to October 1969, published in WSP 2127.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 4,510 ft above sea level, from topographic map.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 421 ft³/s, July 31, 1995, gage height, 3.71 ft; no flow on many days in July and August 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.61	1.7	1.5	1.7	2.1	.51	1.5	54	69	72	.68
2	1.5	.50	1.7	36	1.5	1.7	1.0	1.4	49	53	59	1.9
3	1.7	1.2	1.7	85	1.3	1.7	2.6	1.2	56	33	54	.78
4	4.0	2.7	1.7	1.0	1.1	1.9	2.7	1.2	63	26	46	.64
5	1.2	1.9	1.8	.55	1.1	1.7	2.6	1.2	65	30	41	.60
6	1.2	1.7	2.0	61	1.1	1.7	2.9	1.1	67	41	48	.60
7	1.1	1.7	2.0	105	1.0	3.3	2.9	1.1	59	49	59	.55
8	1.1	1.7	2.0	110	.89	1.7	2.6	1.1	62	66	64	.63
9	1.1	1.7	2.0	111	.89	1.7	2.4	1.0	70	107	55	1.6
10	1.1	1.7	2.0	111	.89	1.7	2.3	.89	68	125	48	.71
11	1.1	1.7	1.8	112	.89	1.5	2.3	.84	66	133	48	.61
12	1.1	1.7	1.7	114	.81	1.4	2.3	.75	65	136	38	.53
13	1.1	1.7	1.7	113	.74	1.2	2.3	5.9	65	132	21	.54
14	1.1	1.7	1.7	113	.74	2.7	2.3	24	74	126	15	.54
15	1.1	1.7	1.5	86	.74	1.2	2.3	21	67	125	4.5	53
16	1.1	1.7	1.5	.90	.74	1.1	2.3	29	60	122	2.3	1.0
17	.89	3.1	1.5	.62	.69	1.2	2.3	27	63	111	.94	.83
18	.86	2.0	1.5	.49	.61	.91	2.3	33	79	100	.95	10
19	.69	2.0	1.5	1.7	.61	.74	2.3	29	111	100	.52	.77
20	.69	2.0	1.5	2.8	.61	2.4	2.3	21	133	98	.45	.60
21	1.2	2.1	1.3	2.6	.74	1.1	2.3	16	138	89	1.0	.58
22	.75	2.2	1.3	2.6	.66	.72	2.2	17	161	87	1.9	.57
23	.66	2.0	1.1	2.7	.58	.56	2.0	18	134	107	1.3	.50
24	1.6	2.0	1.1	2.6	.47	.49	2.0	19	117	138	.92	.47
25	.85	2.0	1.1	3.0	.72	3.9	2.0	18	106	136	.89	.53
26	1.4	1.7	1.1	2.7	2.2	4.3	2.2	23	114	121	.84	.61
27	1.4	1.7	1.1	2.6	2.5	2.5	1.9	21	117	103	.74	.57
28	57	1.7	1.1	2.8	1.8	1.8	1.7	19	121	97	.74	.48
29	74	1.7	1.1	3.4	---	.97	1.5	31	108	95	.71	1.5
30	14	1.7	1.1	1.7	---	.58	1.6	38	90	90	.69	4.1
31	.62	---	1.1	2.5	---	.58	---	58	---	85	.69	---
TOTAL	179.31	53.51	47.0	1195.76	28.32	51.05	64.91	481.18	2602	2930	688.08	87.02
MEAN	5.78	1.78	1.52	38.6	1.01	1.65	2.16	15.5	86.7	94.5	22.2	2.90
MAX	74	3.1	2.0	114	2.5	4.3	2.9	58	161	138	72	53
MIN	.62	.50	1.1	.49	.47	.49	.51	.75	49	26	.45	.47
AC-FT	356	106	93	2370	56	101	129	954	5160	5810	1360	173
a	4500	4900	4950	5390	7970	8790	5720	8360	8510	8820	8320	6940

a Diversion, in acre-feet, to Bishop Creek Powerplant No. 6, provided by Southern California Edison Co.

10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.68	2.97	1.65	7.33	1.29	2.59	3.22	9.77	35.5	70.8	36.9	3.99
MAX	5.78	14.9	5.34	38.6	2.35	7.54	15.9	29.9	86.7	240	171	17.8
(WY)	1997	1994	1996	1997	1992	1994	1996	1996	1997	1995	1995	1995
MIN	.11	.19	.19	.17	.21	.19	.18	.12	.064	.035	.048	.082
(WY)	1993	1991	1993	1993	1993	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1991 - 1997	
ANNUAL TOTAL	7984.06		8408.14			
ANNUAL MEAN	21.8		23.0		14.9	
HIGHEST ANNUAL MEAN					43.2	1995
LOWEST ANNUAL MEAN					.34	1992
HIGHEST DAILY MEAN	159	Jul 29	161	Jun 22	407	Jul 31 1995
LOWEST DAILY MEAN	.50	Nov 2	.45	Aug 20	.00	Jul 27 1992
ANNUAL SEVEN-DAY MINIMUM	.82	Oct 17	.53	Sep 22	.00	Jul 27 1992
INSTANTANEOUS PEAK FLOW			250	Jan 3	421	Jul 31 1995
INSTANTANEOUS PEAK STAGE			2.73	Jan 3	3.71	Jul 31 1995
ANNUAL RUNOFF (AC-FT)	15840		16680		10830	
ANNUAL DIVERSION (AC-FT) a	88280		82720			
10 PERCENT EXCEEDS	84		97		49	
50 PERCENT EXCEEDS	2.0		1.8		1.5	
90 PERCENT EXCEEDS	1.1		.65		.14	

a Diversion, in acre-feet, to Bishop Creek Powerplant No. 6, provided by Southern California Edison Co.

10287060 LUNDY LAKE NEAR LEE VINING, CA

LOCATION.—Lat 38°01'56", long 119°13'11", in NW 1/4 SE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, near right abutment of spillway of Lundy Lake Dam on Mill Creek, and 7.6 mi northwest of Lee Vining.

DRAINAGE AREA.—16.3 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 4,164 acre-ft, Jan. 5, elevation, 7,808.20 ft; minimum, 904 acre-ft, Apr. 10, elevation, 7,778.61 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 17, 1981)

7,766.43	0	7,790	2,001
7,770	213	7,800	3,126
7,780	1,027	7,810	4,406

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2734	2612	2556	2625	2965	1616	1221	1560	3658	4092	3993	2822
2	2732	2608	2550	3410	2921	1574	1191	1527	3788	4063	3954	2811
3	2731	2602	2545	3921	2877	1514	1160	1495	3906	4048	3914	2796
4	2729	2597	2553	4149	2830	1464	1123	1472	4019	4042	3877	2783
5	2726	2590	2566	4164	2787	1410	1087	1460	4098	4049	3845	2766
6	2725	2576	2559	4154	2737	1361	1048	1459	4133	4059	3822	2752
7	2722	2564	2550	4133	2686	1337	1007	1467	4147	4081	3798	2736
8	2719	2551	2557	4097	2641	1332	964	1474	4155	4104	3779	2720
9	2714	2539	2548	4045	2593	1324	922	1493	4159	4129	3751	2703
10	2712	2527	2573	3983	2544	1318	904	1537	4154	4137	3720	2686
11	2708	2515	2569	3914	2491	1314	922	1611	4150	4139	3677	2669
12	2702	2503	2570	3849	2443	1312	938	1701	4139	4134	3629	2649
13	2693	2499	2560	3775	2395	1310	954	1822	4150	4130	3577	2631
14	2680	2488	2559	3695	2344	1310	971	1964	4145	4129	3523	2611
15	2681	2486	2554	3614	2294	1312	990	2100	4135	4133	3468	2589
16	2663	2489	2546	3549	2247	1319	1013	2248	4139	4133	3386	2580
17	2661	2539	2538	3509	2198	1317	1036	2375	4145	4125	3332	2581
18	2666	2533	2525	3467	2149	1321	1063	2501	4154	4114	3274	2582
19	2656	2541	2511	3426	2101	1328	1096	2628	4159	4105	3223	2580
20	2649	2537	2499	3395	2051	1337	1146	2745	4157	4096	3155	2577
21	2645	2553	2505	3360	2004	1347	1221	2836	4155	4089	3107	2573
22	2639	2563	2514	3328	1955	1357	1303	2906	4149	4098	3071	2570
23	2635	2563	2496	3284	1908	1370	1381	2958	4141	4142	3033	2565
24	2636	2564	2485	3248	1860	1383	1448	2985	4135	4142	2994	2561
25	2628	2564	2472	3248	1809	1370	1500	2988	4134	4130	2958	2562
26	2623	2565	2467	3208	1763	1345	1558	2986	4135	4122	2916	2557
27	2616	2565	2457	3173	1713	1322	1623	2981	4135	4108	2895	2553
28	2614	2566	2435	3134	1665	1303	1639	3021	4129	4096	2884	2546
29	2614	2563	2439	3094	---	1282	1613	3105	4122	4076	2873	2538
30	2619	2559	2438	3050	---	1261	1589	3254	4105	4051	2857	2529
31	2616	---	2429	3007	---	1246	---	3465	---	4018	2842	---
MAX	2734	2612	2573	4164	2965	1616	1639	3465	4159	4142	3993	2822
MIN	2614	2486	2429	2625	1665	1246	904	1459	3658	4018	2842	2529
a	7795.63	7795.12	7793.96	7799.00	7786.72	7782.39	7785.96	7802.77	7807.75	7807.09	7797.59	7794.86
b	-117	-57	-130	+578	-1342	-419	+343	+1876	+640	-87	-1176	-313
CAL YR 1996	MAX 4179	MIN 960	b -319									
WTR YR 1997	MAX 4164	MIN 904	b -204									

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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

LOCATION.—Lat 38°01'59", long 119°12'56", in SE 1/4 NE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 20 ft upstream from Deer Creek, 70 ft downstream from road culvert, 1,400 ft downstream from Lundy Lake Dam, and 7.5 mi northwest of Lee Vining.

DRAINAGE AREA.—18.1 mi².

PERIOD OF RECORD.—October 1990 to current year. If records for Upper Conway Ditch and Lundy Powerplant Tailrace (stations 10287145 and 10287195) are combined with this record, a record equivalent to that published since October 1942 as Mill Creek below Lundy Lake, near Mono Lake can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.—Water-stage recorder and 5-ft Cipolletti weir (since May 12, 1992) set in Parshall flume. Elevation of gage is 7,760 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Lundy Lake (station 10287060). Most of the water is diverted at Lundy Lake via Lundy Powerplant to Upper Conway Ditch and Lundy Powerplant Tailrace for power development and irrigation.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 152 ft³/s, July 29, 1995, gage height, 2.62 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.4	1.5	2.2	3.4	.51	.00	.13	4.5	10	7.8	3.2
2	2.9	2.2	1.5	3.9	3.3	.36	.00	.19	5.1	11	7.7	3.2
3	2.9	2.2	1.5	5.8	3.1	.27	.00	.19	5.5	8.0	7.5	3.2
4	2.9	2.2	1.5	8.1	2.9	.22	.00	.17	6.3	7.8	7.3	3.2
5	2.9	2.2	1.6	50	2.8	.15	.00	.14	6.9	8.1	7.2	3.2
6	2.9	2.2	1.6	36	2.6	.07	.00	.14	7.6	7.9	7.2	3.2
7	2.9	2.2	1.5	21	2.5	.02	.00	.11	24	7.9	7.1	3.2
8	2.9	2.1	1.5	9.5	2.4	.00	.00	.07	38	8.4	6.9	3.1
9	2.9	2.1	1.5	8.5	2.3	.00	.00	.08	51	17	6.9	3.0
10	2.9	2.1	1.5	8.2	2.1	.00	.00	.09	44	32	6.9	3.0
11	2.9	2.1	1.5	7.9	2.0	.00	.00	.14	36	37	6.7	2.9
12	2.8	2.0	1.5	7.6	1.9	.00	.00	.24	38	27	6.4	2.9
13	2.8	2.0	1.5	7.3	1.8	.00	.00	.36	21	21	6.3	2.8
14	2.8	1.9	1.5	6.9	1.7	.00	.00	.41	24	18	6.1	2.8
15	2.8	1.9	1.5	6.6	1.6	.00	.00	.48	15	24	5.9	2.7
16	2.6	1.8	1.5	6.2	1.5	.00	.00	.65	13	28	5.6	2.6
17	2.6	1.8	1.5	5.9	1.4	.00	.00	.85	33	24	5.4	2.6
18	2.6	2.0	1.5	5.7	1.4	.00	.00	1.0	60	11	5.3	2.5
19	2.5	1.8	1.5	5.5	1.3	.00	.00	1.2	86	8.7	5.0	2.5
20	2.5	1.7	1.4	5.3	1.2	.00	.00	1.4	91	8.2	4.7	2.5
21	2.5	1.8	1.4	5.1	1.1	.00	.00	1.7	87	8.8	4.5	2.5
22	2.5	1.7	1.4	4.9	1.1	.00	.00	2.0	73	8.1	4.4	2.5
23	2.5	1.7	1.4	4.7	1.0	.00	.00	2.3	52	12	4.2	2.5
24	2.5	1.7	1.4	4.5	.91	.00	.00	2.6	39	33	4.0	2.5
25	2.5	1.7	1.4	4.5	.85	.00	.00	2.8	37	20	3.9	2.5
26	2.5	1.7	1.4	4.4	.77	.00	.00	2.8	40	13	3.7	2.5
27	2.5	1.7	1.4	4.2	.69	.00	.00	2.8	42	9.4	3.6	2.4
28	2.4	1.7	1.3	4.1	.61	.00	.00	2.9	35	8.4	3.5	2.4
29	2.4	1.6	1.3	3.9	---	.00	.00	3.1	31	8.1	3.4	2.4
30	2.4	1.6	1.3	3.8	---	.00	.03	3.3	27	8.0	3.4	2.4
31	2.4	---	1.3	3.6	---	.00	---	3.7	---	7.8	3.3	---
TOTAL	83.0	57.8	45.1	265.8	50.23	1.60	0.03	38.04	1072.9	461.6	171.8	82.9
MEAN	2.68	1.93	1.45	8.57	1.79	.052	.001	1.23	35.8	14.9	5.54	2.76
MAX	2.9	2.4	1.6	50	3.4	.51	.03	3.7	91	37	7.8	3.2
MIN	2.4	1.6	1.3	2.2	.61	.00	.00	.07	4.5	7.8	3.3	2.4
AC-FT	165	115	89	527	100	3.2	.06	75	2130	916	341	164
a	0	0	0	0	0	0	0	0	106	499	494	3.2
b	578	716	974	2640	2190	1800	1630	3830	3870	3640	3100	1330

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

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

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.51	.85	.60	1.48	.49	.11	.007	.28	13.8	23.5	7.66	3.14
MAX	3.48	2.66	2.17	8.57	1.79	.70	.044	1.23	35.8	98.2	31.4	5.74
(WY)	1996	1996	1996	1997	1997	1996	1994	1997	1997	1995	1995	1995
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.61	1.72	.17	.000
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1993	1994	1994	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1991 - 1997	
ANNUAL TOTAL	2232.75		2330.80			
ANNUAL MEAN	6.10		6.39		4.48	
HIGHEST ANNUAL MEAN					14.1	
LOWEST ANNUAL MEAN					.69	
HIGHEST DAILY MEAN	89	Jul 12	91	Jun 20	130	Jul 30 1995
LOWEST DAILY MEAN	.00	Mar 29	.00	Mar 8	.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 29	.00	Mar 8	.00	Oct 1 1990
INSTANTANEOUS PEAK FLOW			102		152	
INSTANTANEOUS PEAK STAGE			2.06		2.62	
ANNUAL RUNOFF (AC-FT)	4430		4620		3250	
ANNUAL DIVERSION (AC-FT) a	1540		1100			
ANNUAL DIVERSION (AC-FT) b	21000		26290			
10 PERCENT EXCEEDS	8.8		16		7.1	
50 PERCENT EXCEEDS	1.7		2.5		.19	
90 PERCENT EXCEEDS	.00		.00		.00	

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

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

10287260 WAUGH LAKE NEAR JUNE LAKE, CA

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

DRAINAGE AREA.—15.3 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed by concrete dam completed in 1925. Total capacity, 5,277 acre-ft between elevations 9,368.60 ft, invert of outlet, and 9,415.61 ft, crest of spillway, all of which are available for release. Figures given represent total contents. Water is used for power development downstream.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 5,696 acre-ft, July 8, 1995, elevation, 9,417.84 ft; minimum, no storage in each year.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 5,552 acre-ft, May 30, elevation, 9,417.08 ft; minimum, no storage for many days.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

9,375	0	9,400	2,670
9,380	148	9,405	3,447
9,385	681	9,410	4,277
9,390	1,283	9,418	5,727
9,395	1,948		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	285	.00	.00	.00	2.5	5482	5306	5325	5184
2	.00	.00	.00	958	.00	.00	.00	12	5482	5303	5319	5206
3	.00	.00	.00	1155	.00	.00	.00	93	5465	5319	5317	5238
4	.00	.00	.00	1057	.00	.00	.00	179	5463	5347	5327	5256
5	.00	.00	.00	832	.00	.00	.00	234	5416	5347	5330	5264
6	.00	.00	.00	525	.00	.00	.00	303	5441	5353	5334	5267
7	.00	.00	.00	.00	.00	.00	.00	356	5484	5379	5340	5267
8	.00	.00	.00	.00	.00	.00	.00	395	5499	5392	5342	5258
9	.00	.00	.00	.00	.00	.00	.00	514	5473	5465	5336	5251
10	.00	.00	.00	.00	.00	.00	.00	692	5446	5431	5329	5238
11	.00	.00	.00	.00	.00	.00	.00	812	5437	5405	5317	5228
12	.00	.00	.00	.00	.00	.00	.00	974	5415	5392	5308	5217
13	.00	.00	.00	.00	.00	.00	.00	1368	5385	5388	5301	5203
14	.00	.00	.00	.00	.00	.00	.00	1856	5386	5398	5293	5190
15	.00	.00	.00	.00	.00	.00	.00	2359	5370	5403	5291	5168
16	.00	.00	.00	.00	.00	.00	.00	2774	5445	5381	5290	5112
17	.00	.00	.00	.00	.00	.00	.00	3149	5503	5366	5290	4914
18	.00	.00	.00	.00	.00	.00	.00	3495	5543	5353	5284	4624
19	.00	.00	.00	.00	.00	.00	.00	3737	5535	5353	5275	4192
20	.00	.00	.00	.00	.00	.00	1.0	4008	5522	5358	5265	3666
21	.00	.00	.00	.00	.00	.00	3.4	4262	5494	5392	5269	3163
22	.00	.00	.00	.00	.00	.00	1.6	4465	5441	5390	5265	2688
23	.00	.00	.00	.00	.00	.00	.00	4610	5409	5433	5258	2237
24	.00	.00	.00	.00	.00	.00	.00	4694	5405	5405	5251	1813
25	.00	.00	.00	.00	.00	.00	.00	4758	5409	5386	5247	1429
26	.00	.00	.00	.00	.00	.00	89	4842	5403	5370	5243	1065
27	.00	.00	.00	.00	.00	.00	125	5079	5394	5362	5240	733
28	.00	.00	.00	.00	.00	.00	34	5394	5375	5364	5232	432
29	.00	.00	.00	.00	---	.00	1.0	5511	5355	5355	5223	151
30	.00	.00	.00	.00	---	.00	15	5552	5329	5342	5210	.00
31	.00	---	.00	.00	---	.00	---	5539	---	5334	5197	---
MAX	.00	.00	.00	1155	.00	.00	125	5552	5543	5465	5342	5267
MIN	.00	.00	.00	.00	.00	.00	.00	2.5	5329	5303	5197	.00
a	9370.58	9370.73	9370.70	9370.80	9370.35	9371.45	9378.09	9417.01	9415.89	9415.92	9415.18	9370.50
b	0	0	0	0	0	0	+15	+5524	-210	+5	-137	-5197

CAL YR 1996 MAX 5469 MIN .00 b 0
WTR YR 1997 MAX 5552 MIN .00 b 0

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287280 GEM LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37°45'07", long 119°08'25", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house 100 ft downstream from left abutment of dam on Rush Creek and 4.0 mi southwest of town of June Lake.

DRAINAGE AREA.—22.0 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 17,309 acre-ft, July 15, 16, elevation, 9,051.92 ft; minimum, 1,253 acre-ft, Apr. 13, elevation, 8,984.50 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Sept. 1, 1981)

8,980	441	9,010	6,547
8,985	1,348	9,025	10,121
8,990	2,300	9,040	14,023
9,000	4,345	9,055	18,187

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14521	10369	7745	6019	5360	2503	1390	4041	10392	16968	16892	13169
2	14327	10216	7656	6533	5200	2450	1402	4152	10797	16940	16797	13034
3	14149	10051	7565	7236	5033	2413	1311	4304	11195	16898	16704	12883
4	13958	9942	7500	7707	4873	2370	1274	4502	11710	16915	16612	12740
5	13760	9857	7479	8141	4709	2349	1340	4737	12058	16954	16528	12598
6	13565	9758	7362	8406	4547	2300	1417	4963	12215	16982	16455	12438
7	13379	9663	7292	8542	4383	2294	1421	5231	12446	16999	16388	12267
8	13248	9557	7232	8454	4235	2282	1397	5490	12724	17050	16319	12115
9	13155	9466	7133	8342	4062	2276	1390	5769	13005	17126	16243	12050
10	13060	9373	7105	8237	3899	2276	1395	6080	13240	17247	16157	11868
11	12965	9280	7022	8113	3738	2290	1371	6410	13429	17301	16063	11712
12	12878	9190	6953	7978	3575	2306	1319	6744	13586	17307	15957	11552
13	12766	9126	6877	7858	3407	4676	1253	7025	13792	17301	15838	11400
14	12672	9015	6795	7721	3323	4446	1272	7165	13999	17304	15714	11233
15	12577	8938	6719	7581	3253	4255	1364	7325	14165	17309	15604	11079
16	12472	8846	6649	7469	3194	4116	1415	7483	14370	17309	15466	10957
17	12380	8824	6565	7369	3112	4009	1544	7628	14684	17270	15337	10919
18	12288	8720	6490	7220	3063	3816	1685	7764	15091	17219	15211	11008
19	12183	8682	6406	7075	3015	3643	1825	7872	15543	17163	15069	11228
20	12089	8612	6356	6962	2977	3428	1990	7976	15855	17106	14937	11573
21	11988	8566	6331	6831	2900	3148	2212	8075	16163	17070	14804	11891
22	11889	8511	6331	6719	2851	2879	2419	8160	16402	17086	14665	12186
23	11839	8435	6297	6585	2810	2729	2586	8215	16539	17120	14540	12456
24	11679	8358	6226	6454	2749	2657	2680	8265	16643	17177	14386	12706
25	11483	8275	6163	6365	2696	2556	2772	8310	16755	17205	14249	12938
26	11284	8196	6112	6250	2641	2359	2958	8353	16853	17182	14071	13142
27	11090	8101	6051	6109	2588	2135	3233	8437	16932	17165	13929	13315
28	10939	8009	5977	5965	2546	1942	3504	8569	16996	17129	13779	13448
29	10804	7919	5947	5820	---	1776	3695	8788	17030	17100	13624	13552
30	10672	7832	5883	5668	---	1647	3871	9241	17024	17044	13477	13571
31	10520	---	5849	5516	---	1504	---	9879	---	16968	13323	---
MAX	14521	10369	7745	8542	5360	4676	3871	9879	17030	17309	16892	13571
MIN	10520	7832	5849	5516	2546	1504	1253	4041	10392	16898	13323	10919
a	9026.59	9015.56	9006.90	9005.40	8991.27	8985.84	8997.76	9024.03	9050.91	9050.71	9037.38	9038.31
b	-4194	-2688	-1983	-333	-2970	-1042	+2367	+6008	+7145	-56	-3645	+248

CAL YR 1996 MAX 16648 MIN 868 b -2874
WTR YR 1997 MAX 17309 MIN 1253 b -1143

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287285 AGNEW LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37°45'30", long 119°07'52", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in boat house at left abutment of dam on Rush Creek and 3.3 mi southwest of town of June Lake.

DRAINAGE AREA.—23.3 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 822 acre-ft, May 30, elevation, 8,496.17 ft; minimum, 29 acre-ft, Nov. 27, 29, 30, and Dec. 23, elevation, 8,471.26 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)			
(Based on survey by Southern California Edison Co., dated Aug. 25, 1981)			
8,470	0	8,485	415
8,475	122	8,490	587
8,480	260	8,498	896

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	811	30	30	51	30	30	33	99	820	810	803	758
2	813	30	30	e102	30	30	31	105	819	811	800	756
3	813	30	30	124	30	30	30	111	819	813	798	755
4	813	30	30	119	30	30	30	118	819	813	796	752
5	813	30	30	111	30	30	30	126	819	812	795	750
6	814	30	30	98	30	30	30	137	819	813	792	748
7	814	30	30	85	30	30	30	151	817	813	790	745
8	778	30	30	72	30	30	30	164	818	813	788	741
9	692	30	30	59	30	30	30	178	819	811	785	739
10	606	30	30	46	30	30	30	196	818	808	782	758
11	541	30	30	35	30	31	30	213	818	812	781	755
12	485	30	30	33	30	31	30	231	812	816	779	753
13	430	30	30	30	30	32	30	254	818	815	777	750
14	376	30	30	30	30	33	30	278	818	815	775	746
15	343	30	30	30	30	34	31	304	818	817	773	743
16	319	30	30	30	30	34	33	330	818	816	770	741
17	296	30	30	30	30	34	33	352	818	812	768	773
18	273	30	30	30	30	34	35	374	819	811	765	772
19	248	30	30	30	30	35	37	392	819	811	762	770
20	222	30	30	30	30	35	41	410	817	809	759	769
21	197	30	30	30	30	35	46	428	817	808	757	767
22	172	30	30	30	30	35	52	444	816	808	754	766
23	147	30	29	30	30	35	57	457	817	809	751	764
24	127	30	30	30	30	35	61	470	817	807	748	762
25	110	30	31	30	30	35	64	481	816	807	746	761
26	92	30	31	30	30	35	68	492	813	806	776	760
27	75	29	31	30	30	35	74	507	811	806	773	759
28	60	30	31	30	30	35	82	526	813	807	769	757
29	46	29	31	30	---	35	87	717	813	807	766	755
30	30	29	31	30	---	35	94	822	808	806	764	753
31	30	---	31	30	---	34	---	821	---	804	761	---
MAX	814	30	31	124	30	35	94	822	820	817	803	773
MIN	30	29	29	30	30	30	30	99	808	804	746	739
a	8471.28	8471.27	8471.34	8471.29	8471.28	8471.45	8473.90	8496.15	8495.83	8495.72	8494.64	8494.45
b	-781	-1	+2	-1	0	+4	+60	+727	-13	-4	-43	-8

CAL YR 1996 MAX 847 MIN 29 b +1
WTR YR 1997 MAX 822 MIN 29 b -58

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA

LOCATION.—Lat 37°45'33", long 119°07'47", in NE 1/4 SW 1/4 sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 600 ft downstream from Agnew Lake Dam, and 3.4 mi southwest of town of June Lake.

DRAINAGE AREA.—23.3 mi².

PERIOD OF RECORD.—October 1990 to current year. If records for Rush Creek Powerplant Tailrace (station 10287300) are combined with this record, a record equivalent to that published since October 1951 as Rush Creek below Agnew Lake (station 10287290) can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.—Water-stage recorder and Parshall flume. A 4-ft Cipolletti weir is set in the Parshall flume at times. Elevation of gage is 8,440 ft above sea level, from topographic map.

REMARKS.—Flow regulated for power development by Waugh, Gem, and Agnew Lakes (stations 10287260, 10287280, and 10287285). Most of the water is diverted at either Gem or Agnew Lakes to Rush Creek Powerplant Tailrace via Rush Creek Powerplant.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 441 ft³/s, July 30, 1995, gage height, 4.90 ft; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.59	6.9	.64	12	1.1	.93	2.7	2.4	15	2.8	e2.1	e2.2
2	e.54	2.0	.56	11	1.8	.87	2.2	2.4	14	2.5	e2.1	e2.2
3	e.54	1.3	.55	10	2.3	.91	1.8	2.4	12	2.2	e2.1	e2.2
4	e.63	.98	.56	10	2.4	.84	1.8	2.5	12	2.8	e2.2	e2.1
5	e.63	.85	.75	10	1.6	.81	1.6	2.5	10	3.5	e2.2	e1.9
6	e.62	.84	.26	10	3.0	.79	1.6	1.7	9.2	2.4	e2.2	e1.9
7	e.54	.84	.67	9.9	1.9	.82	1.6	1.1	11	2.8	e2.2	e1.9
8	e.30	.80	1.0	9.8	1.7	.84	1.5	1.1	9.4	2.9	e2.2	e1.9
9	e.30	.86	1.1	9.5	5.2	.85	1.4	1.1	10	3.4	e2.4	e1.9
10	e.31	.85	.93	9.3	1.1	.94	1.4	1.1	9.9	3.9	e2.2	e1.9
11	e.32	.71	2.1	6.7	1.9	1.1	1.6	1.2	9.6	2.8	e2.2	e1.9
12	e.33	.68	1.9	3.4	1.0	1.2	1.5	1.2	11	5.3	e2.2	e1.9
13	e.34	.62	1.3	2.7	1.8	1.3	1.5	1.2	6.1	6.0	e2.2	e1.9
14	e.34	.59	1.0	2.1	1.2	1.4	1.4	1.2	9.9	6.1	e2.2	e2.0
15	e.35	.48	1.3	1.9	1.1	1.5	1.5	1.2	8.0	8.7	e2.2	e2.0
16	e.32	.61	.77	1.6	.95	1.6	2.0	1.2	8.0	11	e2.2	e1.9
17	e.35	2.0	.75	1.5	1.0	1.6	2.3	1.2	9.8	8.4	e2.2	e1.9
18	e.34	2.7	.74	1.4	1.1	1.7	2.3	1.2	10	e2.9	e2.2	e1.8
19	e.35	1.6	.69	1.3	.95	1.7	2.4	1.3	11	e2.2	e2.2	e1.6
20	e.36	1.3	.65	1.8	.92	1.9	2.4	1.2	11	e2.3	e2.2	e1.6
21	e.37	1.3	4.2	1.2	.92	2.1	2.5	1.3	9.5	e2.3	e2.2	e1.6
22	e.36	2.3	3.7	2.5	1.0	2.1	2.5	1.3	8.0	e2.0	e2.2	e1.6
23	e.37	1.8	1.5	2.7	1.4	2.0	2.4	1.3	6.5	e2.2	e2.2	e1.6
24	5.4	1.4	.96	2.0	3.7	2.0	2.3	1.3	6.2	e2.2	e2.2	e1.6
25	10	1.2	.81	2.7	.89	2.2	2.3	1.3	6.1	e1.9	e2.2	e1.6
26	9.5	1.0	1.1	2.6	.86	2.5	2.3	1.3	6.2	e1.9	e2.2	e1.6
27	9.3	.87	1.3	2.0	.91	2.8	2.3	1.3	5.7	e2.0	e2.2	e1.6
28	9.5	.75	.90	1.5	.92	2.9	2.4	1.3	3.2	e2.2	e2.2	e1.6
29	9.9	.72	1.3	1.2	---	3.1	2.4	1.4	4.4	e2.0	e2.2	e1.6
30	9.9	.69	1.2	1.1	---	3.3	2.4	23	5.6	e2.1	e2.2	e1.6
31	9.9	---	3.6	1.0	---	3.5	---	18	---	e2.3	e2.2	---
TOTAL	82.90	39.54	38.79	146.4	44.62	52.10	60.3	83.2	268.3	108.0	68.1	54.6
MEAN	2.67	1.32	1.25	4.72	1.59	1.68	2.01	2.68	8.94	3.48	2.20	1.82
MAX	10	6.9	4.2	12	5.2	3.5	2.7	23	15	11	2.4	2.2
MIN	.30	.48	.26	1.0	.86	.79	1.4	1.1	3.2	1.9	2.1	1.6
AC-FT	164	78	77	290	89	103	120	165	532	214	135	108
a	4720	2820	2570	4870	3660	2780	2600	4670	4540	5590	5900	5250

e Estimated.

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

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.80	1.45	.76	1.15	.76	.78	1.37	.73	19.3	42.5	13.7	.70
MAX	3.06	3.67	1.37	4.72	1.59	1.68	2.99	2.68	81.8	218	89.8	1.82
(WY)	1996	1996	1995	1997	1997	1997	1996	1997	1995	1995	1995	1997
MIN	.085	.39	.23	.27	.19	.13	.040	.045	.049	.031	.005	.015
(WY)	1995	1994	1991	1991	1991	1995	1994	1994	1992	1994	1994	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1991 - 1997	
ANNUAL TOTAL	1620.49		1046.85			
ANNUAL MEAN	4.43		2.87		7.14	
HIGHEST ANNUAL MEAN					33.6	
LOWEST ANNUAL MEAN					.41	
HIGHEST DAILY MEAN	160	Jun 22	23	May 30	397	Jul 30 1995
LOWEST DAILY MEAN	.06	May 21	.26	Dec 6	.00	Oct 27 1990
ANNUAL SEVEN-DAY MINIMUM	.08	May 21	.32	Oct 8	.00	Mar 12 1991
INSTANTANEOUS PEAK FLOW			70	May 30	441	Jul 30 1995
INSTANTANEOUS PEAK STAGE			4.36	May 30	4.90	Jul 30 1995
ANNUAL RUNOFF (AC-FT)	3210		2080		5170	
ANNUAL DIVERSION (AC-FT) a	45280		49980			
10 PERCENT EXCEEDS	5.3		9.3		4.2	
50 PERCENT EXCEEDS	.96		1.9		.55	
90 PERCENT EXCEEDS	.31		.69		.05	

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

10287650 SADDLEBAG LAKE NEAR LEE VINING, CA

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

DRAINAGE AREA.—16.3 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 8,028 acre-ft, Oct. 1, elevation, 10,084.23 ft; minimum, 769 acre-ft, Apr. 29, elevation, 10,052.96 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Feb. 8, 1985)

10,050	217	10,070	4,392
10,055	1,163	10,080	6,890
10,060	2,172	10,091	9,970

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8028	7409	6717	6085	5271	3797	1930	886	2805	4877	5932	6067
2	8015	7377	6681	6271	5214	3756	1885	896	2897	4894	5942	6069
3	8012	7344	6639	6348	5158	3706	1836	911	3001	4911	5952	6067
4	8001	7318	6590	6366	5106	3638	1783	930	3084	4955	5965	6064
5	7995	7291	6629	6379	5048	3551	1739	957	3144	4994	5977	6054
6	7990	7254	6603	6379	4994	3481	1682	1000	3179	5031	6000	6044
7	7973	7222	6556	6366	4928	3403	1642	1048	3250	5075	6018	6039
8	7954	7190	6509	6348	4887	3325	1593	1074	3330	5111	6046	6026
9	7932	7168	6499	6305	4829	3259	1557	1112	3408	5172	6074	6023
10	7910	7137	6532	6253	4774	3186	1511	1157	3470	5221	6077	6008
11	7889	7105	6538	6195	4714	3115	1465	1232	3538	5268	6082	5998
12	7867	7073	6504	6166	4664	3045	1422	1301	3597	5307	6087	5988
13	7840	7044	6470	6115	4611	2977	1380	1382	3649	5337	6102	5972
14	7815	7014	6431	6054	4554	2907	1334	1471	3688	5376	6108	5985
15	7782	6996	6390	6003	4497	2840	1299	1559	3722	5421	6105	5947
16	7769	6980	6341	5944	4442	2777	1232	1652	3783	5471	6110	5929
17	7750	7054	6310	5881	4399	2712	1183	1727	3875	5506	6120	5909
18	7733	7038	6269	5820	4350	2648	1134	1808	3983	5525	6123	5901
19	7717	7036	6228	5765	4296	2581	1087	1889	4102	5550	6125	5894
20	7690	7006	6182	5753	4247	2522	1056	1961	4226	5575	6123	5868
21	7666	7009	6215	5705	4193	2462	1033	2012	4331	5618	6123	5853
22	7644	7014	6241	5708	4144	2401	998	2072	4413	5660	6120	5830
23	7614	6985	6205	5665	4099	2346	971	2128	4475	5713	6123	5808
24	7595	6964	6166	5613	4055	2292	923	2153	4532	5753	6118	5785
25	7584	6938	6118	5625	3995	2237	873	2172	4597	5780	6118	5778
26	7552	6911	6105	5613	3937	2180	829	2193	4671	5808	6118	5758
27	7517	6874	6082	5553	3902	2141	810	2231	4726	5830	6108	5740
28	7487	6838	6044	5501	3859	2095	800	2310	4791	5863	6100	5723
29	7481	6804	6039	5443	---	2048	769	2407	4834	5883	6092	5708
30	7468	6751	6011	5381	---	2000	879	2545	4865	5906	6085	5695
31	7444	---	5977	5325	---	1973	---	2700	---	5924	6077	---
MAX	8028	7409	6717	6379	5271	3797	1930	2700	4865	5924	6125	6069
MIN	7444	6751	5977	5325	3859	1973	769	886	2805	4877	5932	5695
a	10082.08	10079.47	10076.47	10073.86	10067.71	10059.04	10053.53	10062.49	10071.98	10076.26	10076.86	10075.35
b	-573	-693	-774	-652	-1466	-1886	-1094	+1821	+2165	+1059	+153	-382

CAL YR 1996 MAX 8150 MIN 1469 b -77
WTR YR 1997 MAX 8028 MIN 769 b -2322

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287700 TIOGA LAKE NEAR LEE VINING, CA

LOCATION.—Lat 37°55'41", long 119°15'01", in SE 1/4 SE 1/4 sec.19, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, at left abutment of dam on Glacier Creek and 7.4 mi west of Lee Vining.

DRAINAGE AREA.—3.67 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

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

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,276 acre-ft, July 23, elevation, 9,650.58 ft; minimum, 116 acre-ft, several days in February and March, elevation, 9,629.62 ft.

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

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

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	816	519	154	137	123	117	132	195	1066	1264	1262	1252
2	802	510	142	194	122	117	132	218	1057	1262	1260	1254
3	788	501	134	214	121	117	131	246	1061	1262	1260	1255
4	774	492	126	192	121	116	129	281	1052	1262	1261	1254
5	761	484	130	169	119	117	129	321	1022	1262	1261	1252
6	747	475	129	155	119	116	128	366	1003	1262	1260	1251
7	734	466	126	147	119	116	127	413	996	1262	1260	1250
8	724	458	120	142	119	116	128	459	996	1262	1264	1248
9	714	450	124	137	119	116	127	513	1007	1263	1263	1245
10	704	442	132	134	119	116	127	576	1014	1264	1263	1242
11	695	433	131	132	119	116	127	641	1019	1264	1263	1240
12	685	426	129	132	118	116	126	708	1016	1263	1262	1236
13	676	418	126	133	117	116	125	791	1002	1262	1262	1233
14	666	410	123	131	117	116	125	880	997	1262	1260	1228
15	655	404	121	130	117	117	126	944	1000	1262	1259	1225
16	646	399	119	129	116	117	128	956	1017	1262	1259	1222
17	634	408	118	128	118	117	132	947	1044	1262	1259	1218
18	629	404	117	126	118	117	136	940	1077	1262	1258	1214
19	621	400	117	125	118	117	139	928	1106	1262	1257	1211
20	611	395	117	130	117	118	144	927	1131	1261	1256	1208
21	602	392	127	129	117	118	152	936	1148	1262	1257	1203
22	592	393	127	135	117	118	153	940	1155	1265	1257	1198
23	582	387	132	135	118	119	153	934	1160	1276	1256	1193
24	576	380	129	133	117	120	149	918	1174	1270	1255	1179
25	569	373	126	137	117	121	146	901	1189	1266	1255	1162
26	563	366	125	138	117	125	149	886	1210	1265	1254	1142
27	553	326	127	133	118	127	159	897	1231	1263	1254	1122
28	544	269	125	130	118	128	161	939	1251	1265	1254	1103
29	541	220	128	127	---	130	159	998	1262	1266	1254	1083
30	536	178	129	125	---	131	173	1038	1265	1265	1253	1064
31	527	---	126	124	---	134	---	1073	---	1263	1252	---
MAX	816	519	154	214	123	134	173	1073	1265	1276	1264	1255
MIN	527	178	117	124	116	116	125	195	996	1261	1252	1064
a	9638.45	9631.09	9629.88	9629.82	9629.68	9630.07	9630.97	9647.69	9650.43	9650.40	9650.25	9647.55
b	-301	-349	-52	-2	-6	+16	+39	+900	+192	-2	-11	-188

CAL YR 1996 MAX 1284 MIN 112 b +11

WTR YR 1997 MAX 1276 MIN 116 b +236

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287760 ELLERY LAKE NEAR LEE VINING, CA

LOCATION.—Lat 37°56'08", long 119°13'50", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house at base of Rhinedollar Dam on Lee Vining Creek and 6.3 mi west of Lee Vining.

DRAINAGE AREA.—16.7 mi².

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

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Southern California Edison Co.).

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 677 acre-ft, Jan. 2, 1997, elevation, 9,495.43 ft; minimum, 195 acre-ft, Aug. 13, 1996, elevation, 9,487.17 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 677 acre-ft, Jan. 2, elevation, 9,495.43 ft; minimum, e391 acre-ft, July 1, elevation, unknown.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

9,485	96	9,493	522
9,489	290	9,497	780

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	460	434	505	442	441	428	431	564	e391	433	435
2	442	459	438	677	441	441	434	440	559	437	440	442
3	440	458	442	624	444	439	437	438	558	465	451	446
4	434	455	446	546	441	446	434	452	539	461	454	448
5	433	453	443	501	430	448	434	452	522	433	449	447
6	433	451	438	455	441	449	434	448	530	433	452	444
7	435	449	444	434	440	449	432	434	547	456	455	438
8	446	446	438	441	434	449	430	476	547	456	458	437
9	437	445	430	446	441	448	430	515	531	473	458	433
10	426	444	428	449	441	447	439	541	522	483	440	431
11	422	442	447	440	434	449	441	574	522	467	421	432
12	422	442	448	441	430	449	427	533	509	435	421	431
13	427	443	431	439	442	448	427	546	493	435	420	433
14	440	440	428	435	440	446	440	542	485	467	422	434
15	450	442	426	436	433	449	459	558	480	488	432	433
16	444	452	426	427	431	452	469	553	529	463	441	430
17	440	440	430	432	436	451	476	553	551	433	441	422
18	439	438	433	434	438	450	461	555	558	440	438	425
19	437	446	434	434	439	454	452	556	552	441	437	427
20	432	453	433	437	437	456	455	542	548	451	442	427
21	432	451	434	437	439	452	464	530	535	470	449	426
22	432	433	407	442	439	448	434	517	518	446	443	427
23	431	436	406	439	439	446	432	503	497	486	443	433
24	435	438	437	442	431	452	419	486	484	470	449	440
25	444	440	445	437	444	463	416	460	493	453	448	436
26	438	440	448	440	438	466	441	439	500	444	439	428
27	437	470	430	442	438	462	470	471	490	446	434	425
28	437	468	425	447	438	453	476	539	465	463	431	425
29	452	443	442	441	---	447	459	569	430	462	432	426
30	455	433	453	434	---	444	431	596	400	451	432	427
31	459	---	451	433	---	438	---	600	---	440	432	---
MAX	459	470	453	677	444	466	476	600	564	488	458	448
MIN	422	433	406	427	430	438	416	431	400	391	420	422
a	9491.97	9491.52	9491.83	9491.52	9491.61	9491.61	9491.48	9494.23	9490.96	9491.64	9491.50	9491.41
b	+23	-26	+18	-18	+5	0	-7	+169	-200	+40	-8	-5

CAL YR 1996 MAX 582 MIN 195 b +29

WTR YR 1997 MAX 677 MIN 391 b -9

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287770 LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING, CA

LOCATION.—Lat 37°56'10", long 119°13'48", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 100 ft downstream from Rhinedollar Dam Spillway and 6.3 mi west of Lee Vining.

DRAINAGE AREA.—16.7 mi².

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

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 9,450 ft above sea level, from topographic map.

REMARKS.—Flow regulated for power development by Saddlebag, Tioga, and Ellery Lakes (stations 10287650, 10287700, and 10287760). Most of the water is diverted at Ellery Lake to Poole Powerplant via Poole Powerplant Conduit intake (station 10287762). Estimated discharges are on days when flow released directly from conduit bypasses the gage.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 310 ft³/s, July 9, 1995, gage height, 4.63 ft; maximum gage height, 5.52 ft, Mar 22, 1993, (backwater from snow); no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.40	.00	.00	.00	.00	139	.00	.00	.00
2	.00	.00	.00	158	.00	.00	.00	.00	94	.00	.00	.00
3	.00	.00	.00	245	.00	.00	.00	.00	97	.00	.00	.00
4	.00	.00	.00	146	.00	.00	.00	.00	85	.00	.00	.00
5	.00	.00	.00	47	.00	.00	.00	.00	46	.00	.00	.00
6	.00	.00	.00	1.8	.00	.00	.00	.00	32	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	54	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	71	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	5.1	59	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	62	36	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	82	30	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	61	27	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	42	6.5	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	59	1.3	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	58	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	87	9.0	.30	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	78	53	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	78	77	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	79	75	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	79	67	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	47	55	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	34	37	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	17	15	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	1.0	.70	.34	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	4.0	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	3.5	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	17	.30	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	75	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	135	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	179	---	.00	.00	---
TOTAL	0.00	0.00	0.00	598.20	0.00	0.00	0.00	1275.10	1174.50	0.64	0.00	0.00
MEAN	.000	.000	.000	19.3	.000	.000	.000	41.1	39.2	.021	.000	.000
MAX	.00	.00	.00	245	.00	.00	.00	179	139	.34	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1190	.00	.00	.00	2530	2330	1.3	.00	.00
a	1370	1850	1970	3580	2200	3180	3600	5970	6600	5280	3040	1570

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

10287770 LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.97	.17	.000	2.76	.85	.73	2.11	7.80	26.6	22.0	1.47	.13
MAX	5.65	1.17	.000	19.3	5.40	2.62	14.1	41.1	58.1	130	9.89	.94
(WY)	1995	1995	1991	1997	1996	1992	1996	1997	1995	1995	1995	1992
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1992	1991	1991	1991	1992	1991	1991	1994	1992	1991	1991	1991

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1991 - 1997	
ANNUAL TOTAL	2852.05		3048.44			
ANNUAL MEAN	7.79		8.35		5.56	
HIGHEST ANNUAL MEAN					17.3	
LOWEST ANNUAL MEAN					.27	
HIGHEST DAILY MEAN	120	Jun 14	245	Jan 3	271	Jul 9 1995
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1990
INSTANTANEOUS PEAK FLOW			281	Jan 2	310	Jul 9 1995
INSTANTANEOUS PEAK STAGE			4.48	Jan 2	5.52	Mar 22 1993
ANNUAL RUNOFF (AC-FT)	5660		6050		4030	
ANNUAL DIVERSION (AC-FT) a	33100		40210			
10 PERCENT EXCEEDS	25		31		9.8	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

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

TIJUANA RIVER BASIN

11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA

LOCATION.—Lat 32°34'30", long 116°45'11", in NW 1/4 SW 1/4 sec.26, T.18 S., R.2 E., San Diego County, Hydrologic Unit 18070305, on right bank 0.8 mi upstream from confluence with Tecate Creek, 5.1 mi south of Dulzura, and 11.3 mi downstream from Barrett Lake.

DRAINAGE AREA.—310 mi².

PERIOD OF RECORD.—October 1936 to current year.

REVISED RECORDS.—WSP 1245: 1937–1938. WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 569.40 ft above sea level (levels by International Boundary and Water Commission).

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,700 ft³/s, Feb. 21, 1980, gage height, 11.15 ft, from rating curve extended above 8,700 ft³/s; no flow for part of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.07	3.3	3.8	.26	.00	.00	.00	.00	.00
2	.00	.00	.00	.11	2.8	1.9	.26	.00	.00	.00	.00	.00
3	.00	.00	.00	.24	1.8	1.5	.33	.05	.00	.00	.00	.00
4	.00	.00	.00	.21	1.8	1.3	.50	.01	.00	.00	.00	.00
5	.00	.00	.00	.21	1.7	1.0	.36	.00	.00	.00	.00	.00
6	.00	.00	.00	.32	1.5	.90	.25	.00	.00	.00	.00	.00
7	.00	.00	.00	.24	1.3	.87	.16	.00	.00	.00	.00	.00
8	.00	.00	.00	.23	1.3	.81	.12	.00	.00	.00	.00	.00
9	.00	.00	.57	.23	1.4	.78	.07	.00	.00	.00	.00	.00
10	.00	.00	2.4	.26	1.4	.71	.05	.00	.00	.00	.00	.00
11	.00	.00	.10	.34	2.4	.67	.04	.00	.00	.00	.00	.00
12	.00	.00	.03	5.7	1.4	.68	.02	.00	.00	.00	.00	.00
13	.00	.00	.00	57	1.4	.66	.01	.00	.00	.00	.00	.00
14	.00	.00	.00	15	1.1	.69	.00	.02	.00	.00	.00	.00
15	.00	.00	.00	5.7	1.1	.69	.18	.00	.00	.00	.00	.00
16	.00	.00	.00	4.6	.92	.67	.14	.00	.00	.00	.00	.00
17	.00	.00	.00	2.4	1.0	.65	.06	.00	.00	.00	.00	.00
18	.00	.00	.00	1.4	2.2	.58	.01	.00	.00	.00	.00	.00
19	.00	.00	.00	1.0	1.2	.45	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.87	1.1	.35	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.78	1.0	.29	.00	.00	.00	.00	.00	.00
22	.00	2.4	.02	.73	.90	.28	.00	.00	.00	.00	.00	.00
23	.00	.09	.10	1.6	.90	.32	.03	.00	.00	.00	.00	.00
24	.00	.00	.00	1.4	.90	.37	.01	.00	.00	.00	.00	.00
25	.00	.00	.00	1.1	.87	.29	.00	.00	.00	.00	.00	.00
26	1.2	.00	.00	12	.86	.19	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	14	1.8	.16	.00	.00	.00	.00	.00	.00
28	.00	.00	.03	9.0	6.7	.20	.00	.00	.00	.00	.00	.00
29	.00	.00	.04	5.9	---	.20	.00	.00	.00	.00	.00	.00
30	.00	.00	.02	3.9	---	.20	.00	.00	.00	.00	.00	.00
31	.00	---	.04	2.7	---	.25	---	.00	---	.00	.00	---
TOTAL	1.20	2.49	3.35	149.24	46.05	22.41	2.86	0.08	0.00	0.00	0.00	0.00
MEAN	.039	.083	.11	4.81	1.64	.72	.095	.003	.000	.000	.000	.000
MAX	1.2	2.4	2.4	57	6.7	3.8	.50	.05	.00	.00	.00	.00
MIN	.00	.00	.00	.07	.86	.16	.00	.00	.00	.00	.00	.00
AC-FT	2.4	4.9	6.6	296	91	44	5.7	.2	.00	.00	.00	.00

TIJUANA RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.20	.79	2.53	19.6	52.8	72.6	35.8	12.9	4.68	1.46	1.14	1.15
MAX	66.0	18.8	40.5	605	1200	1443	676	296	99.5	47.5	24.4	57.4
(WY)	1994	1984	1984	1993	1980	1983	1941	1983	1980	1980	1980	1993
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1937	1937	1950	1951	1951	1951	1955	1947	1940	1939	1938	1937

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1937 - 1997			
ANNUAL TOTAL	318.19				227.68							
ANNUAL MEAN	.87				.62				17.0			
HIGHEST ANNUAL MEAN									243			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	28 Mar 13				57 Jan 13				8430 Feb 21 1980			
LOWEST DAILY MEAN	.00 May 1				.00 Oct 1				.00 Oct 1 1936			
ANNUAL SEVEN-DAY MINIMUM	.00 May 6				.00 Oct 1				.00 Oct 1 1936			
INSTANTANEOUS PEAK FLOW					129 Jan 13				11700 Feb 21 1980			
INSTANTANEOUS PEAK STAGE					3.60 Jan 13				11.15 Feb 21 1980			
ANNUAL RUNOFF (AC-FT)	631				452				12330			
10 PERCENT EXCEEDS	2.4				1.3				10			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11012500 CAMPO CREEK NEAR CAMPO, CA

LOCATION.—Lat 32°35'28", long 116°31'29", in NE 1/4 SE 1/4 sec.24, T.18 S., R.4 E., San Diego County, Hydrologic Unit 18070305, on left bank just upstream from bridge on State Highway 94 and 3.5 mi southwest of Campo.

DRAINAGE AREA.—85.0 mi², of which 3 mi² are in Mexico.

PERIOD OF RECORD.—October 1936 to current year.

REVISED RECORDS.—WSP 1635: 1937–38(M), 1940(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 2,178.92 ft above sea level. Prior to Dec. 1, 1954, at datum 1 ft higher.

REMARKS.—Records fair. Peaks are attenuated by small conservation reservoir 1 mi upstream since August 1956. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,580 ft³/s, Jan. 16, 1993, gage height, 6.86 ft, from rating curve extended above 340 ft³/s; no flow for part of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.20	.26	2.4	5.0	10	2.2	.32	.06	.05	.01	.00
2	.08	.19	.26	3.1	4.9	5.7	2.4	.32	.09	.04	.00	.00
3	.08	.20	.25	4.4	4.8	4.9	2.6	.32	.10	.02	.00	.00
4	.05	.19	.25	3.9	4.7	4.6	3.5	.29	.12	.01	.00	.00
5	.04	.21	.26	3.3	4.8	3.8	3.4	.28	.20	.01	.00	.00
6	.04	.20	.31	3.4	4.7	3.3	3.1	.28	.29	.00	.00	.00
7	.03	.16	.28	2.9	4.3	3.3	2.7	.27	.28	.00	.00	.00
8	.02	.13	.27	2.5	4.2	3.4	2.5	.28	.23	.00	.00	.00
9	.02	.13	.42	2.4	4.4	3.3	2.3	.30	.19	.00	.00	.00
10	.03	.14	.39	2.5	4.4	3.2	2.3	.30	.15	.00	.00	.00
11	.04	.14	1.0	2.8	4.7	3.0	2.1	.32	.15	.00	.00	.00
12	.04	.14	1.6	5.5	4.7	2.9	2.0	.32	.16	.02	.00	.00
13	.05	.15	1.4	66	4.5	2.9	1.3	.29	.20	.03	.00	.00
14	.06	.18	1.1	25	3.9	2.8	.68	.28	.20	.02	.00	.00
15	.07	.22	.78	11	3.7	2.8	.59	.25	.18	.01	.00	.00
16	.10	.22	.62	8.3	3.8	2.8	.49	.20	.14	.01	.00	.00
17	.09	.22	.75	5.9	4.0	2.9	.41	.22	.11	.00	.00	.00
18	.09	.22	.76	4.7	9.1	2.8	.35	.25	.08	.00	.00	.00
19	.12	.21	.69	4.2	6.3	2.5	.36	.28	.07	.00	.00	.00
20	.13	.21	.55	4.2	4.6	2.3	.35	.26	.07	.00	.00	.00
21	.12	.29	.68	4.1	4.1	2.2	.30	.25	.06	.00	.00	.00
22	.10	.45	.88	4.1	3.8	2.2	.29	.21	.07	.00	.00	.00
23	.12	.32	2.0	8.8	3.7	2.3	.28	.19	.07	.00	.00	.00
24	.12	.26	2.1	12	3.8	2.7	.30	.22	.06	.00	.00	.00
25	.14	.24	1.9	6.4	3.9	2.5	.28	.23	.06	.00	.00	.00
26	.19	.26	1.8	24	3.9	2.1	.27	.22	.06	.00	.00	.00
27	.15	.23	1.9	17	5.2	2.0	.27	.18	.05	.00	.00	.00
28	.15	.24	2.2	9.9	19	2.0	.27	.13	.05	.00	.00	.00
29	.14	.27	2.7	7.2	---	1.9	.31	.10	.04	.01	.00	.00
30	.24	.26	2.5	5.5	---	1.8	.32	.15	.05	.02	.00	.00
31	.25	---	2.4	5.0	---	1.9	---	.10	---	.02	.00	---
TOTAL	2.95	6.48	33.26	272.4	142.9	96.8	38.52	7.61	3.64	0.27	0.01	0.00
MEAN	.095	.22	1.07	8.79	5.10	3.12	1.28	.25	.12	.009	.000	.000
MAX	.25	.45	2.7	66	19	10	3.5	.32	.29	.05	.01	.00
MIN	.02	.13	.25	2.4	3.7	1.8	.27	.10	.04	.00	.00	.00
AC-FT	5.9	13	66	540	283	192	76	15	7.2	.5	.02	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.82	1.50	2.64	5.84	7.94	11.9	7.37	3.47	1.79	.95	.89	.68
MAX	14.3	20.7	25.7	140	74.5	153	121	52.2	30.4	20.1	26.5	16.5
(WY)	1984	1984	1984	1993	1980	1983	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1937	1949	1949	1957	1957	1956	1957	1957	1950	1947	1946	1947

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1937 - 1997

ANNUAL TOTAL	1244.79	604.84	
ANNUAL MEAN	3.40	1.66	
HIGHEST ANNUAL MEAN			3.80
LOWEST ANNUAL MEAN			.0000
HIGHEST DAILY MEAN	79	Mar 14	745
LOWEST DAILY MEAN	.00	Aug 30	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 27	.00
INSTANTANEOUS PEAK FLOW			88
INSTANTANEOUS PEAK STAGE			2.32
ANNUAL RUNOFF (AC-FT)	2470	1200	2750
10 PERCENT EXCEEDS	8.8	4.4	9.0
50 PERCENT EXCEEDS	.32	.24	.10
90 PERCENT EXCEEDS	.03	.00	.00

11014000 JAMUL CREEK NEAR JAMUL, CA

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

DRAINAGE AREA.—70.1 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,870 ft³/s, Mar. 5, 1995, gage height, 7.59 ft, present datum, from rating curve extended above 1,200 ft³/s on basis of critical-depth computations; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 1,200 ft³/s on basis of critical-depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	0130	66	2.82				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.22	43	44	43	40	45	38	33	36
2	.00	.00	.00	.53	44	44	43	40	45	38	33	36
3	.00	.00	.00	1.0	44	44	43	40	45	37	32	35
4	.00	.00	.00	.94	44	44	43	40	45	37	32	35
5	.00	.00	.00	.89	44	44	43	40	44	37	32	35
6	.00	.00	.38	.89	44	44	43	39	43	37	32	34
7	.00	.00	.37	.75	44	44	43	40	44	37	32	34
8	.00	.00	.25	.58	44	44	43	40	43	37	32	33
9	.00	.00	.29	.58	44	44	43	40	43	37	32	32
10	.00	.00	.33	.72	44	44	43	40	42	37	31	32
11	.00	.00	.25	.84	44	43	42	40	43	37	31	31
12	.00	.00	.25	1.8	44	44	43	40	42	37	31	32
13	.00	.00	.25	23	44	44	42	40	43	37	31	32
14	.00	.00	.25	3.2	38	43	42	41	42	37	31	31
15	.00	.00	.25	2.0	7.7	43	42	40	42	36	30	32
16	.00	.00	.25	2.0	4.1	43	42	12	41	36	42	35
17	.00	.00	.27	1.5	3.2	43	42	11	41	36	42	41
18	.00	.00	.25	1.4	2.8	43	41	11	41	36	41	41
19	.00	.00	.19	1.3	2.2	43	41	11	41	36	41	41
20	.00	.00	.19	1.2	1.9	43	41	8.0	41	36	41	40
21	.00	.00	.15	1.1	1.7	43	41	28	40	36	41	40
22	.00	1.3	.15	1.0	1.5	43	41	35	40	36	40	39
23	.00	e.04	.15	1.4	1.4	43	41	41	40	35	40	38
24	.00	e.00	.15	3.2	1.3	43	41	42	40	35	39	38
25	.00	e.00	.15	25	10	43	41	41	40	35	39	36
26	.00	e.00	.12	37	40	43	40	41	39	35	38	9.1
27	.00	e.00	.11	34	43	43	40	41	39	34	38	17
28	.00	e.00	.15	36	44	43	40	43	39	34	38	19
29	.00	.00	.15	41	---	43	40	44	39	34	38	19
30	.00	.00	.16	42	---	43	40	44	38	34	37	19
31	.00	---	.19	43	---	43	---	44	---	34	37	---
TOTAL	0.00	1.34	5.65	310.04	773.8	1345	1253	1097.0	1250	1118	1107	972.1
MEAN	.000	.045	.18	10.0	27.6	43.4	41.8	35.4	41.7	36.1	35.7	32.4
MAX	.00	1.3	.38	43	44	44	43	44	45	38	42	41
MIN	.00	.00	.00	.22	1.3	43	40	8.0	38	34	30	9.1
AC-FT	.00	2.7	11	615	1530	2670	2490	2180	2480	2220	2200	1930

e Estimated.

OTAY RIVER BASIN

11014000 JAMUL CREEK NEAR JAMUL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.67	7.88	9.29	17.3	16.8	29.2	17.9	14.2	14.5	12.0	10.4	8.36
MAX	40.2	45.6	62.5	415	130	254	101	49.1	49.6	51.7	44.4	37.4
(WY)	1948	1946	1946	1993	1993	1995	1958	1954	1952	1995	1995	1947
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1950	1951	1951	1958	1961	1959	1955	1956	1953	1950	1949	1949

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1940 - 1997

ANNUAL TOTAL	3117.83	9232.93	
ANNUAL MEAN	8.52	25.3	13.4
HIGHEST ANNUAL MEAN			55.2
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	39	Jan 22	45
LOWEST DAILY MEAN	.00	Jun 21	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 21	.00
INSTANTANEOUS PEAK FLOW			66
INSTANTANEOUS PEAK STAGE			2.82
ANNUAL RUNOFF (AC-FT)	6180	18310	9720
10 PERCENT EXCEEDS	34	43	38
50 PERCENT EXCEEDS	.15	36	.20
90 PERCENT EXCEEDS	.00	.00	.00

11015000 SWEETWATER RIVER NEAR DESCANSO, CA

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

DRAINAGE AREA.—45.4 mi².

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,200 ft³/s, Feb. 16, 1927, gage height, 13.2 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 1,150 ft³/s on basis of slope area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	0830	134	6.28				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.04	.48	5.6	7.9	2.1	.73	.03	.00	.00	.00
2	.00	.00	.04	.82	4.9	6.1	2.2	.56	.03	.00	.00	.00
3	.00	.00	.04	1.2	4.5	5.4	2.3	.53	.03	.00	.00	.00
4	.00	.00	.04	.67	4.2	4.6	2.3	.40	.02	.00	.00	.00
5	.00	.00	.05	.89	4.0	3.9	2.2	.35	.06	.00	.00	.00
6	.00	.00	.53	.74	3.8	3.8	2.1	.30	.11	.00	.00	.00
7	.00	.00	.16	.54	3.5	3.5	1.9	.27	.19	.00	.00	.00
8	.00	.00	.12	.58	3.5	3.3	1.8	.29	.12	.00	.00	.00
9	.00	.00	.93	.63	3.4	3.1	1.9	.30	.08	.00	.00	.00
10	.00	.00	.42	.60	3.4	3.0	1.8	.27	.06	.00	.00	.00
11	.00	.00	.26	.57	3.7	3.0	1.8	.24	.05	.00	.00	.00
12	.00	.00	.23	6.6	3.4	2.9	1.7	.21	.05	.00	.00	.00
13	.00	.00	.18	55	3.3	2.8	1.6	.18	.08	.00	.00	.00
14	.00	.00	.17	20	3.0	2.7	1.5	.17	.11	.00	.00	.00
15	.00	.00	.17	9.5	2.9	2.7	1.5	.16	.09	.00	.00	.00
16	.00	.00	.22	8.7	2.9	2.7	1.4	.14	.06	.00	.00	.00
17	.00	.00	.25	6.8	3.4	2.6	1.3	.14	.03	.00	.00	.00
18	.00	.00	.20	5.7	4.4	2.4	1.3	.15	.02	.00	.00	.00
19	.00	.00	.20	4.9	3.3	2.3	1.3	.16	.01	.00	.00	.00
20	.00	.00	.24	4.3	3.1	2.3	1.2	.16	.00	.00	.00	.00
21	.00	.02	.27	3.7	3.0	2.3	1.1	.15	.00	.00	.00	.00
22	.00	.81	.92	3.2	3.0	2.3	.87	.14	.00	.00	.00	.00
23	.00	.21	.80	4.4	2.9	2.4	.79	.13	.00	.00	.00	.00
24	.00	.08	.52	5.9	2.8	2.4	1.0	.15	.00	.00	.00	.00
25	.00	.04	.47	4.3	2.9	2.2	.93	.13	.00	.00	.00	.00
26	.01	.02	.46	26	2.9	2.2	.80	.12	.00	.00	.00	.00
27	.00	.01	.51	21	5.2	2.2	.75	.11	.00	.00	.00	.00
28	.00	.03	1.3	12	15	2.2	.78	.09	.00	.00	.00	.00
29	.00	.07	.73	8.7	---	2.2	.75	.06	.00	.00	.00	.00
30	.02	.04	.59	7.2	---	2.2	.76	.04	.00	.00	.00	.00
31	.00	---	.56	6.2	---	2.2	---	.04	---	.00	.00	---
TOTAL	0.03	1.33	11.62	231.82	111.9	95.8	43.73	6.87	1.23	0.00	0.00	0.00
MEAN	.001	.044	.37	7.48	4.00	3.09	1.46	.22	.041	.000	.000	.000
MAX	.02	.81	1.3	55	15	7.9	2.3	.73	.19	.00	.00	.00
MIN	.00	.00	.04	.48	2.8	2.2	.75	.04	.00	.00	.00	.00
AC-FT	.06	2.6	23	460	222	190	87	14	2.4	.00	.00	.00

SWEETWATER RIVER BASIN

11015000 SWEETWATER RIVER NEAR DESCANSO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.21	1.53	4.88	13.5	28.4	39.2	18.0	7.33	2.78	.78	.45	.32
MAX	3.53	24.0	83.5	304	336	382	138	68.5	25.5	8.68	8.45	6.16
(WY)	1984	1966	1967	1993	1980	1983	1983	1983	1983	1980	1983	1978
MIN	.000	.000	.000	.000	.000	.042	.010	.000	.000	.000	.000	.000
(WY)	1957	1957	1957	1961	1961	1961	1961	1961	1959	1957	1957	1957

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1957 - 1997

ANNUAL TOTAL	668.10	504.33	
ANNUAL MEAN	1.83	1.38	9.69
HIGHEST ANNUAL MEAN			71.2
LOWEST ANNUAL MEAN			.004
HIGHEST DAILY MEAN	37	Mar 13	55
LOWEST DAILY MEAN	.00	Jun 30	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 30	.00
INSTANTANEOUS PEAK FLOW			134
INSTANTANEOUS PEAK STAGE			6.28
ANNUAL RUNOFF (AC-FT)	1330	1000	7020
10 PERCENT EXCEEDS	5.5	3.5	12
50 PERCENT EXCEEDS	.16	.08	.30
90 PERCENT EXCEEDS	.00	.00	.00

11022100 SAN VICENTE RESERVOIR NEAR LAKESIDE, CA

LOCATION.—Lat 32°54'45", long 116°55'25", in SW 1/4 NW 1/4 sec.31, T.14 S., R.1 E., San Diego County, Hydrologic Unit 18070304, at outlet tower near center of upstream face of San Vicente Dam on San Vicente Creek and 3.6 mi north of Lakeside.

DRAINAGE AREA.—74.2 mi².

PERIOD OF RECORD.—October 1946 to September 1961 (published with San Vicente Creek at San Vicente Dam, at Foster, station 11022000), October 1972 to current year. Monthend contents only October 1972 to September 1987.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by county of San Diego). October 1972 to current year, supplementary water-stage recorder used for flood warning only, at same site at datum 560 ft higher. Prior to October 1987, nonrecording gage at same site.

REMARKS.—Reservoir is formed by concrete-gravity dam, constructed in 1941–43 by city of San Diego; storage began during construction period. Capacity of reservoir at spillway level, 90,230 acre-ft, elevation, 650 ft. Dead storage below lowest outlet, 350 acre-ft, elevation, 493.0 ft. Reservoir storage includes supplemental water from the San Diego River, Santa Ysabel Creek, and Colorado River Basins. No diversion upstream from reservoir. Water is released as required for municipal use.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 94,200 acre-ft, spilling, Feb. 21, 1980, elevation, 653.54 ft; minimum observed, 12,390 acre-ft, Nov. 1, 1947, elevation, 549.22 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 68,510 acre-ft, Apr. 30, May 1, elevation, 628.54 ft; minimum, 52,380 acre-ft, Sept. 29, elevation, 610.61 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by city of San Diego, dated Feb. 18, 1944)

610	51,870	640	79,800
620	60,610	650	90,230
630	69,920	654	94,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61640	60090	58040	58460	63000	67950	67820	68490	63880	61440	57650	54810
2	61680	60000	57950	58560	63200	67950	67810	68470	63760	61280	57550	54720
3	61710	59930	57850	58700	63420	67960	67810	68460	63700	61100	57440	54620
4	61760	59850	57740	58790	63620	67960	67790	68440	63520	60940	57340	54530
5	61800	59780	57650	58910	63820	67970	67800	68380	63360	60770	57230	54450
6	61840	59710	57590	58990	64020	67960	67790	68250	63360	60600	57120	54360
7	61840	59630	57490	59080	64220	67950	67780	68120	63360	60440	57010	54270
8	61770	59550	57390	59180	64410	67950	67770	68000	63370	60270	56910	54190
9	61680	59480	57350	59260	64610	67960	67760	67870	63290	60130	56800	54100
10	61590	59400	57270	59360	64800	67970	67750	67760	63120	60020	56700	54020
11	61480	59310	57220	59450	65020	67960	67740	67640	63010	59920	56580	53940
12	61410	59240	57210	59780	65110	67960	67740	67500	62990	59820	56470	53840
13	61350	59170	57230	60130	65110	67950	67720	67390	62950	59740	56360	53750
14	61250	59150	57210	60240	65190	67950	67710	67220	62930	59640	56260	53660
15	61160	59050	57200	60320	65380	67940	67690	67030	62910	59540	56160	53570
16	61070	58960	57200	60400	65580	67940	67690	66850	62900	59430	56050	53480
17	60990	58870	57180	60420	65790	67940	67680	66670	62870	59320	55960	53390
18	60900	58780	57160	60450	65990	67930	67670	66480	62840	59210	55860	53300
19	60810	58710	57210	60450	66190	67930	67660	66300	62820	59090	55780	53200
20	60740	58660	57300	60450	66370	67920	67660	66110	62790	58980	55720	53100
21	60660	58710	57380	60450	66570	67910	67710	65930	62770	58870	55670	53010
22	60570	58780	57510	60530	66750	67890	67800	65730	62740	58750	55630	52910
23	60490	58740	57600	60760	66930	67890	67860	65540	62700	58650	55590	52820
24	60400	58720	57710	60970	67130	67880	67950	65360	62680	58530	55580	52710
25	60330	58650	57800	61210	67310	67870	68030	65180	62570	58420	55500	52710
26	60310	58560	57900	61620	67500	67860	68140	65000	62370	58300	55430	52620
27	60260	58450	57960	61890	67730	67860	68230	64820	62170	58180	55320	52530
28	60190	58330	58070	62160	67950	67850	68330	64630	61970	58070	55220	52440
29	60130	58250	58170	62380	---	67850	68440	64440	61780	57950	55120	52390
30	60140	58150	58250	62600	---	67840	68490	64260	61610	57850	55010	52390
31	60130	---	58330	62790	---	67830	---	64070	---	57750	54910	---
MAX	61840	60090	58330	62790	67950	67970	68490	68490	63880	61440	57650	54810
MIN	60130	58150	57160	58460	63000	67830	67660	64070	61610	57750	54910	52390
a	619.47	617.27	617.47	622.42	627.95	627.82	628.52	623.80	621.12	616.82	613.57	610.62
b	-1540	-1980	+180	+4460	+5160	-120	+660	-4420	-2460	-3860	-2840	-2520

CAL YR 1996 MAX 74040 MIN 57160 b -15560

WTR YR 1997 MAX 68490 MIN 52390 b -9280

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11022200 LOS COCHES CREEK NEAR LAKESIDE, CA

LOCATION.—Lat 32°50'10", long 116°53'58", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on upstream right bank side of bridge on Old Highway 8, 2.7 mi upstream from mouth, and 1.9 mi southeast of Lakeside.

DRAINAGE AREA.—12.2 mi².

PERIOD OF RECORD.—October 1983 to current year.

REVISED RECORDS.—WDR CA-86-1: Drainage area.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 560 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,090 ft³/s, Mar. 5, 1995, gage height, 9.74 ft; minimum daily, 0.05 ft³/s, Sept. 5, 6, 12, 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft³/s, or maximum, from rating curve extended above 209 ft³/s on basis of critical-depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	1615	103	4.36	Jan. 15	2100	108	4.42
Nov. 22	0345	133	4.75	Jan. 26	0330	96	4.26
Dec. 9	1930	85	4.11	Feb. 17	2115	130	4.71
Jan. 12	1930	144	4.89	Feb. 28	0445	78	4.03

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.15	.48	.60	1.1	1.9	.69	.35	.21	.13	.12	.08
2	.09	.13	.48	.78	1.2	1.4	.75	.31	.21	.11	.11	.06
3	.08	.13	.46	2.6	1.2	1.2	1.4	.28	.20	.10	.11	.06
4	.07	.13	.44	.75	1.2	1.1	.96	.27	.18	.10	.14	.06
5	.07	.13	.42	1.1	1.2	1.7	.74	.28	.22	.10	.09	.05
6	.07	.13	2.7	.80	1.1	1.9	.71	.28	.24	.10	.09	.05
7	.06	.12	.64	.63	1.0	1.8	.65	.26	.23	.11	.08	.06
8	.06	.12	.54	.60	1.0	1.6	.70	.27	.21	.11	.08	.07
9	.06	.12	7.9	.60	1.0	1.4	.94	.27	.20	.10	.09	.08
10	.06	.12	2.3	.60	1.3	1.1	1.0	.32	.20	.10	.09	.10
11	.06	.11	1.9	.60	1.6	.91	.71	.35	.20	.11	.09	.10
12	.07	.11	.99	44	1.1	.85	.61	.29	.18	.12	.09	.05
13	.08	.12	.70	31	.99	.80	.55	.36	.19	.12	.07	.06
14	.07	.12	.62	5.7	.93	.81	.58	.34	.18	.11	.08	.06
15	.07	.13	.59	11	.93	1.1	.49	.31	.16	.09	.10	.06
16	.07	.14	.56	4.4	.93	1.1	.47	.31	.16	.10	.10	.06
17	.07	.16	.58	1.9	12	1.1	.47	.31	.17	.09	.08	.06
18	.07	.17	.56	1.6	4.2	1.0	.46	.32	.15	.10	.08	.10
19	.08	.20	.58	1.4	1.5	.78	1.7	.34	.19	.13	.07	.10
20	.08	.22	.61	1.2	1.2	.65	1.9	.34	.15	.14	.08	.07
21	.06	7.2	.67	1.1	1.0	.65	1.8	.31	.14	.11	.08	.07
22	.06	20	1.8	1.1	1.0	.68	.90	.30	.13	.12	.07	.07
23	.07	.92	.75	4.1	1.0	.84	.55	.28	.13	.12	.08	.07
24	.07	.59	.60	1.5	1.0	.78	.46	.28	.13	.13	.09	.07
25	.07	.53	.59	3.3	1.0	.70	.43	.29	.12	.12	.11	4.9
26	3.8	.49	.56	25	1.0	.75	.51	.27	.11	.08	.15	.96
27	.12	.43	.76	2.8	4.4	.82	.70	.26	.11	.09	.14	.13
28	.09	.43	.97	1.6	14	.61	.62	.25	.10	.10	.06	.13
29	.09	.58	.64	1.3	---	.62	.51	.23	.12	.12	.06	.12
30	11	.46	.63	1.1	---	.65	.38	.22	.14	.11	.06	.10
31	.44	---	.60	1.1	---	.76	---	.21	---	.12	.07	---
TOTAL	17.28	34.39	32.62	155.86	61.08	32.06	23.34	9.06	5.06	3.39	2.81	8.01
MEAN	.56	1.15	1.05	5.03	2.18	1.03	.78	.29	.17	.11	.091	.27
MAX	.11	.20	.7.9	.44	.14	1.9	1.9	.36	.24	.14	.15	4.9
MIN	.06	.11	.42	.60	.93	.61	.38	.21	.10	.08	.06	.05
AC-FT	34	68	65	309	121	64	46	18	10	6.7	5.6	16

11022200 LOS COCHES CREEK NEAR LAKESIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.50	1.24	1.89	5.41	4.94	6.16	2.29	1.18	.68	.35	.24	.26
MAX	1.37	4.58	6.09	40.2	25.7	31.1	10.2	5.86	3.67	1.31	.54	.49
(WY)	1988	1984	1985	1993	1993	1995	1995	1995	1995	1995	1995	1986
MIN	.14	.17	.32	.66	1.09	.78	.45	.25	.16	.096	.079	.077
(WY)	1995	1993	1990	1989	1989	1989	1989	1984	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1984 - 1997	
ANNUAL TOTAL	543.36		384.96			
ANNUAL MEAN	1.48		1.05		2.08	
HIGHEST ANNUAL MEAN					6.77	
LOWEST ANNUAL MEAN					.50	
HIGHEST DAILY MEAN	96	Mar 13	44	Jan 12	248	Mar 5 1995
LOWEST DAILY MEAN	.06	Aug 25	.05	Sep 5	.05	Sep 5 1997
ANNUAL SEVEN-DAY MINIMUM	.06	Oct 5	.06	Sep 2	.06	Sep 2 1997
INSTANTANEOUS PEAK FLOW			144	Jan 12	1090	Mar 5 1995
INSTANTANEOUS PEAK STAGE			4.89	Jan 12	9.74	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	1080		764		1510	
10 PERCENT EXCEEDS	2.3		1.5		3.1	
50 PERCENT EXCEEDS	.37		.28		.53	
90 PERCENT EXCEEDS	.07		.07		.16	

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

LOCATION.—Lat 32°50'25", long 117°01'30", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, near right bank at Mast Road Bridge, 0.7 mi upstream from Old Mission Damsite, 2.8 mi west of Santee, and 14.2 mi downstream from El Capitan Lake.

DRAINAGE AREA.—368 mi².

PERIOD OF RECORD.—May 1912 to December 1915, April 1916 to current year. Monthly discharge only for some periods and yearly estimates only for 1924–25, published in WSP-1315-B. Prior to September 1981 published as "near Santee" (station 11022500).

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

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

REMARKS.—Records fair. Flow regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft, El Capitan Lake (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 45,400 ft³/s, Feb. 16, 1927, gage height, 18.1 ft, site and datum then in use, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 70,200 ft³/s, Jan. 27, 1916, gage height, 25.1 ft, site and datum in use prior to Nov. 10, 1920, from floodmarks, based on slope-conveyance computation of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	14	6.6	5.3	27	19	6.5	4.0	1.7	1.3	.78	.26
2	1.1	11	6.2	7.3	25	16	17	3.4	1.8	1.1	.73	.28
3	1.1	9.1	6.0	41	22	16	26	3.2	1.8	1.1	.66	.31
4	1.0	7.7	5.7	10	20	15	13	3.1	1.8	1.0	.66	.32
5	1.0	6.9	5.7	10	19	14	9.7	2.6	1.8	1.1	.64	.33
6	.97	5.9	52	9.0	18	12	8.0	2.5	1.8	1.0	.63	.37
7	.95	5.0	11	6.6	16	11	7.2	2.5	1.9	.94	.56	.36
8	.90	4.7	8.5	6.0	15	11	6.4	2.6	1.9	.96	.54	.35
9	.89	4.6	80	5.7	15	11	6.0	2.6	1.8	1.0	.54	.37
10	.95	4.4	32	5.9	19	10	5.6	2.6	1.8	1.0	.52	.44
11	1.1	4.0	52	6.1	23	10	5.2	2.7	1.8	1.1	.48	.46
12	1.1	3.8	25	368	14	10	5.2	2.7	1.8	1.1	.45	.50
13	1.0	3.6	14	299	14	9.8	5.4	2.7	1.8	1.0	.49	.45
14	1.1	3.6	11	87	13	9.5	5.3	2.7	1.7	1.0	.57	.42
15	1.1	3.2	9.2	112	11	9.3	5.7	2.7	1.6	1.1	.50	.48
16	1.2	3.2	8.0	77	11	8.9	5.2	2.7	1.5	1.1	.62	.54
17	1.2	3.2	7.3	42	15	8.4	4.7	2.4	1.5	1.0	.49	.43
18	1.1	2.9	6.4	34	27	7.7	4.3	2.3	1.5	.95	.44	.38
19	1.1	8.8	5.7	29	16	6.7	3.1	2.4	1.5	1.0	.46	.37
20	1.1	5.0	5.3	26	16	7.4	3.2	2.2	1.4	.96	.44	.37
21	1.0	73	5.2	24	15	6.7	4.1	1.9	1.4	.97	.44	.35
22	.97	227	23	22	13	7.6	4.6	1.9	1.4	1.1	.43	.35
23	.97	41	10	57	12	8.4	4.9	2.0	1.4	.98	.42	.36
24	1.0	20	6.8	24	11	7.3	3.3	1.8	1.4	.96	.39	.39
25	1.1	16	5.6	26	10	7.0	4.6	1.8	1.4	1.1	.37	130
26	63	13	5.1	277	9.4	6.5	4.5	1.8	1.3	.95	.41	22
27	6.3	11	5.6	102	34	6.6	3.8	1.8	1.3	.86	.31	7.9
28	4.0	8.9	12	57	67	6.9	4.2	1.8	1.2	.85	.32	4.6
29	3.4	9.1	6.1	44	---	6.9	5.6	1.7	1.1	.91	.30	3.1
30	103	7.2	5.6	34	---	6.3	3.9	1.9	1.3	.99	.29	2.5
31	26	---	5.4	29	---	6.5	---	1.9	---	.84	.29	---
TOTAL	231.90	540.8	448.0	1882.9	527.4	299.4	196.2	74.9	47.4	31.32	15.17	179.34
MEAN	7.48	18.0	14.5	60.7	18.8	9.66	6.54	2.42	1.58	1.01	.49	5.98
MAX	103	227	80	368	67	19	26	4.0	1.9	1.3	.78	130
MIN	.89	2.9	5.1	5.3	9.4	6.3	3.1	1.7	1.1	.84	.29	.26
AC-FT	460	1070	889	3730	1050	594	389	149	94	62	30	356

11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.12	5.70	21.1	32.8	91.7	82.1	48.5	18.2	4.79	3.01	2.73	1.86
MAX	20.8	78.8	728	410	1871	683	1324	379	181	156	139	38.3
(WY)	1988	1986	1922	1993	1927	1941	1941	1915	1980	1980	1980	1980
MIN	.000	.000	.000	.000	.000	.019	.000	.000	.000	.000	.000	.000
(WY)	1913	1913	1913	1951	1951	1951	1951	1913	1913	1912	1913	1913

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1912 - 1997			
ANNUAL TOTAL	4222.18				4474.73							
ANNUAL MEAN	11.5				12.3				25.8			
HIGHEST ANNUAL MEAN									219			
LOWEST ANNUAL MEAN									.002			
HIGHEST DAILY MEAN	361				368				27300			
LOWEST DAILY MEAN	.75				.26				.00			
ANNUAL SEVEN-DAY MINIMUM	.80				.29				.00			
INSTANTANEOUS PEAK FLOW					1670				45400			
INSTANTANEOUS PEAK STAGE					9.22				18.10			
ANNUAL RUNOFF (AC-FT)	8370				8880				18680			
10 PERCENT EXCEEDS	21				24				28			
50 PERCENT EXCEEDS	4.0				3.6				1.4			
90 PERCENT EXCEEDS	.95				.47				.00			

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

LOCATION.—Lat 32°45'54", long 117°10'04", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on left bank 2.6 mi upstream from mouth, 500 ft upstream from Fashion Valley Road crossing, 0.4 mi downstream from unnamed tributary, and 26.4 mi downstream from El Capitan Lake.

DRAINAGE AREA.—429 mi².

PERIOD OF RECORD.—October 1912 to January 1916 published as San Diego River at San Diego (monthly discharge only, published in WSP 1315-B), January 1982 to current year. Records for Oct. 1, 1981, to Jan. 17, 1982, published in WDR CA-82-1, are in error and should not be used.

REVISED RECORDS.—See PERIOD OF RECORD.

GAGE.—Water-stage recorder. Elevation of gage is 20 ft above sea level, from topographic map. See WSP 1315-B for history of changes for period October 1912 to January 1916.

REMARKS.—Records fair. Flow regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft; El Capitan Lake (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 75,000 ft³/s, Jan. 27, 1916, gage height, 19.3 ft, site and datum then in use, estimated on basis of upstream station, San Diego River near Santee; no flow at times during some years. Maximum discharge recorded since storage began in El Capitan Lake and San Vicente Reservoir, 9,430 ft³/s, Mar. 6, 1995, gage height, 13.47 ft, from rating curve extended above 5,800 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	55	13	11	49	78	7.1	3.7	2.0	1.3	1.4	.64
2	.94	23	12	9.8	42	39	14	3.5	1.9	1.3	1.3	.73
3	.87	15	11	65	38	29	26	3.4	1.8	1.2	1.4	.72
4	.84	12	11	38	39	25	31	3.5	1.7	1.2	1.5	.71
5	.73	9.5	10	29	34	20	26	3.4	1.8	1.4	1.3	.57
6	.76	7.9	72	23	30	19	17	3.2	1.7	1.5	1.1	.41
7	.84	7.0	48	15	28	18	13	3.0	1.7	1.5	1.1	.39
8	.81	6.5	28	13	26	18	10	3.0	1.9	1.4	1.3	.41
9	.76	6.2	33	11	25	16	8.7	2.8	1.9	1.3	1.5	.40
10	.60	5.9	145	10	28	15	8.1	2.9	1.8	1.3	1.4	.39
11	.60	5.4	99	9.4	61	14	7.9	2.8	1.7	1.4	1.4	.31
12	.65	4.9	104	257	38	13	7.6	2.7	1.8	1.4	1.2	.34
13	.78	4.7	51	921	29	13	7.8	2.7	1.8	1.5	1.1	.30
14	.85	4.6	29	188	25	12	7.4	2.7	2.0	1.5	1.1	.27
15	.84	4.4	21	123	23	12	7.0	2.8	2.0	1.4	1.0	.35
16	.72	4.5	18	234	23	11	6.6	2.5	2.0	1.5	.90	.47
17	.70	4.4	15	99	23	10	6.4	2.5	2.0	1.4	.86	.41
18	.71	4.4	14	64	23	10	6.2	2.5	1.8	1.4	.80	.35
19	.94	4.7	13	50	28	11	5.9	2.5	1.6	1.4	.73	.41
20	1.0	4.8	12	42	28	10	5.9	2.4	1.7	1.6	.66	.48
21	.88	71	11	37	25	9.0	6.1	2.2	1.7	1.6	.65	.55
22	.97	825	12	33	24	8.8	6.0	2.1	1.7	1.5	.64	.50
23	.68	170	25	153	23	9.0	5.7	2.0	1.5	1.4	.54	.38
24	.71	64	20	84	22	8.5	5.4	2.0	1.5	1.4	.50	.46
25	.73	34	17	49	21	8.2	5.1	2.1	1.6	1.5	.46	140
26	124	26	13	627	20	9.2	4.8	2.1	1.6	1.6	.46	71
27	20	21	11	292	23	8.3	4.6	2.0	1.5	1.5	.44	14
28	7.3	18	15	152	59	7.7	4.2	1.9	1.4	1.5	.37	13
29	4.8	17	13	101	---	7.3	3.9	1.9	1.6	1.5	.38	10
30	113	15	12	76	---	7.6	3.8	1.9	1.5	1.6	.39	7.4
31	166	---	11	62	---	7.6	---	1.9	---	1.6	.51	---
TOTAL	455.01	1455.8	919	3878.2	857	484.2	279.2	80.6	52.2	44.6	28.39	266.35
MEAN	14.7	48.5	29.6	125	30.6	15.6	9.31	2.60	1.74	1.44	.92	8.88
MAX	166	825	145	921	61	78	31	3.7	2.0	1.6	1.5	140
MIN	.60	4.4	10	9.4	20	7.3	3.8	1.9	1.4	1.2	.37	.27
AC-FT	903	2890	1820	7690	1700	960	554	160	104	88	56	528

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.97	30.2	46.3	112	94.1	161	45.3	17.7	6.97	2.93	2.41	3.56
MAX	31.2	144	143	683	458	777	242	135	21.3	8.93	9.47	20.0
(WY)	1987	1986	1985	1993	1993	1983	1983	1983	1983	1983	1983	1986
MIN	.62	.87	5.09	14.5	20.5	8.38	7.69	2.45	1.30	.25	.54	.033
(WY)	1990	1990	1990	1989	1989	1984	1989	1996	1985	1985	1985	1984

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1982 - 1997		
ANNUAL TOTAL	7656.36			8800.55					
ANNUAL MEAN	20.9			24.1			43.8		
HIGHEST ANNUAL MEAN							125		
LOWEST ANNUAL MEAN							11.5		
HIGHEST DAILY MEAN	825			921			4760		
LOWEST DAILY MEAN	.35			.27			.00		
ANNUAL SEVEN-DAY MINIMUM	.46			.34			.00		
INSTANTANEOUS PEAK FLOW				1720			9430		
INSTANTANEOUS PEAK STAGE				9.99			13.47		
ANNUAL RUNOFF (AC-FT)	15190			17460			31760		
10 PERCENT EXCEEDS	40			49			82		
50 PERCENT EXCEEDS	4.9			4.7			7.2		
90 PERCENT EXCEEDS	.60			.67			.70		

LOS PENASQUITOS CREEK BASIN

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA

LOCATION.—Lat 32°56'35", long 117°07'15", in Los Penasquitos Grant, San Diego County, Hydrologic Unit 18070304, on left bank 1.0 mi downstream from Cypress Creek and 5.5 mi southwest of Poway.

DRAINAGE AREA.—42.1 mi².

PERIOD OF RECORD.—October 1964 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above sea level, from topographic map.

REMARKS.—Records fair. Flow partly regulated by several conservation reservoirs upstream from station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,750 ft³/s, Feb. 21, 1980, gage height, 10.26 ft, from rating curve extended above 1,400 ft³/s; no flow at times in 1968, 1972, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft³/s, or maximum, from rating curve extended above 2,130 ft³/s on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	1800	590	5.31	Jan. 26	0430	1,040	6.40
Nov. 22	0400	1,850	7.89	Feb. 17	2245	512	5.09
Jan. 12	1930	2,370	8.63	Sept. 25	1530	1,370	7.07
Jan. 15	2200	753	5.72				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.6	3.6	4.5	12	8.6	3.6	3.3	2.0	2.1	3.9	2.5
2	1.5	2.5	7.7	6.7	11	5.9	3.8	3.0	2.2	2.4	2.4	2.9
3	1.6	2.0	6.7	75	11	6.5	11	2.5	2.0	1.6	1.6	1.9
4	1.6	2.1	3.9	7.8	10	5.2	18	2.2	1.9	1.7	1.8	1.8
5	1.8	2.5	3.7	10	8.5	4.7	4.0	2.5	3.0	1.7	1.9	1.8
6	1.6	2.1	61	6.3	7.8	4.8	3.4	2.3	3.1	1.9	1.7	2.9
7	1.5	2.0	6.5	4.4	7.8	4.7	3.0	2.4	3.1	2.0	1.8	2.4
8	1.7	2.0	5.2	4.4	7.4	4.8	3.2	2.5	3.0	2.1	2.6	2.1
9	1.5	1.9	41	4.2	6.3	4.4	3.6	2.2	2.8	1.9	2.5	2.2
10	1.4	1.8	42	3.9	6.9	4.4	3.9	2.2	2.3	2.1	2.5	1.9
11	3.9	2.1	114	3.8	14	4.6	3.7	2.1	2.0	2.3	2.3	2.0
12	1.3	2.1	29	449	6.8	4.7	4.0	2.2	2.1	1.9	2.9	2.1
13	1.3	2.0	8.4	293	6.2	8.0	4.1	2.4	2.3	1.8	3.4	2.4
14	1.7	2.3	5.9	77	5.8	4.2	4.3	1.8	2.7	2.2	3.8	1.9
15	1.8	2.4	4.3	135	5.3	4.5	4.0	1.9	2.1	2.4	3.6	4.4
16	1.6	2.3	4.6	95	5.3	4.3	4.0	2.0	2.0	2.4	2.7	8.5
17	1.6	1.9	4.4	26	65	4.4	4.2	2.2	2.9	2.6	2.3	3.0
18	1.6	2.0	4.1	17	41	3.6	4.4	2.1	3.1	2.2	2.7	2.7
19	1.7	2.2	4.8	13	6.5	3.9	4.5	2.4	2.8	2.0	3.0	2.0
20	1.6	2.4	4.5	11	4.9	3.5	4.6	2.5	2.7	1.9	2.4	2.0
21	1.8	140	4.9	8.9	4.3	3.6	4.7	2.2	2.7	2.3	2.0	1.9
22	1.6	422	17	7.9	4.1	4.2	6.3	2.2	2.5	2.6	1.9	1.8
23	1.4	27	12	51	3.9	4.3	6.3	1.9	2.7	2.2	2.0	1.7
24	1.9	7.6	4.3	15	4.1	4.0	5.1	7.0	3.0	2.7	1.9	2.0
25	1.8	5.2	3.9	39	3.8	3.7	4.3	3.7	3.4	3.3	2.2	307
26	5.1	4.5	3.8	413	3.8	3.6	4.0	2.1	3.0	2.8	2.4	33
27	2.2	3.8	20	72	24	3.8	3.7	2.3	3.5	2.6	2.1	6.4
28	1.9	3.6	19	33	75	3.6	3.6	2.2	2.7	2.8	2.0	3.7
29	2.1	5.3	5.1	22	---	3.7	3.6	1.9	2.3	3.4	2.1	3.2
30	140	3.6	4.1	17	---	3.2	3.4	1.8	2.2	3.2	2.1	2.8
31	26	---	4.1	14	---	3.6	---	2.1	---	2.6	2.0	---
TOTAL	219.7	666.8	463.5	1939.8	372.5	141.0	144.3	76.1	78.1	71.7	74.5	416.9
MEAN	7.09	22.2	15.0	62.6	13.3	4.55	4.81	2.45	2.60	2.31	2.40	13.9
MAX	140	422	114	449	75	8.6	18	7.0	3.5	3.4	3.9	307
MIN	1.3	1.8	3.6	3.8	3.8	3.2	3.0	1.8	1.9	1.6	1.6	1.7
AC-FT	436	1320	919	3850	739	280	286	151	155	142	148	827

LOS PENASQUITOS CREEK BASIN

163

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.52	5.58	9.07	25.1	27.5	34.6	8.03	2.66	1.40	.99	.91	1.48
MAX	7.09	28.7	51.6	233	215	213	27.5	12.5	5.89	2.85	3.01	13.9
(WY)	1997	1986	1966	1993	1980	1983	1995	1983	1995	1995	1995	1997
MIN	.030	.10	.23	.23	.41	.75	.27	.14	.056	.009	.020	.028
(WY)	1976	1978	1974	1976	1965	1965	1977	1974	1974	1977	1975	1975

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1965 - 1997	
ANNUAL TOTAL	3702.6		4664.9			
ANNUAL MEAN	10.1		12.8		9.84	
HIGHEST ANNUAL MEAN					35.9	
LOWEST ANNUAL MEAN					.80	
HIGHEST DAILY MEAN	422	Nov 22	449	Jan 12	1400	Mar 1 1978
LOWEST DAILY MEAN	1.2	Aug 31	1.3	Oct 12	.00	May 16 1968
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 26	1.6	Oct 12	.00	Jul 18 1977
INSTANTANEOUS PEAK FLOW			2370	Jan 12	4750	Feb 21 1980
INSTANTANEOUS PEAK STAGE			8.63	Jan 12	10.92	Jan 4 1995
ANNUAL RUNOFF (AC-FT)	7340		9250		7130	
10 PERCENT EXCEEDS	10		14		10	
50 PERCENT EXCEEDS	2.6		3.2		1.4	
90 PERCENT EXCEEDS	1.6		1.8		.24	

11025500 SANTA YSABEL CREEK NEAR RAMONA, CA

LOCATION.—Lat 33°06'25", long 116°51'55", in NW 1/4 NE 1/4 sec.27, T.12 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on left bank 1.6 mi downstream from Temescal Creek, 4.5 mi north of Ramona, and 5.0 mi downstream from Lake Sutherland.

DRAINAGE AREA.—112 mi².

PERIOD OF RECORD.—February 1912 to February 1923 (monthly discharge only for November and December 1919), October 1943 to current year.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 847.88 ft above sea level (levels by city of San Diego Water Department). See WSP 1315-B for history of changes prior to Feb. 3, 1923.

REMARKS.—Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Sutherland, capacity, 29,680 acre-ft, since July 1954. Some small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,400 ft³/s, Jan. 27, 1916, gage height, 14.0 ft, datum then in use, from rating curve extended above 1,500 ft³/s on basis of slope-conveyance study of peak flow; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.02	.57	e2.0	11	11	2.9	.32	.00	.00	.00	.00
2	.00	.03	.56	e3.0	10	7.8	2.8	.28	.00	.00	.00	.00
3	.00	.03	.54	e6.0	9.5	6.4	2.7	.27	.01	.00	.00	.00
4	.00	.03	.51	e4.0	8.8	5.9	3.0	.24	.01	.00	.00	.00
5	.00	.03	.55	e5.0	8.4	5.3	2.9	.22	.01	.00	.00	.00
6	.00	.04	1.3	3.5	7.8	4.8	2.7	.19	.01	.00	.00	.00
7	.00	.03	.89	2.5	7.0	4.5	2.6	.17	.03	.00	.00	.00
8	.00	.03	.94	2.0	6.7	4.2	2.6	.11	.02	.00	.00	.00
9	.00	.03	2.1	1.9	6.7	4.0	2.6	.08	.00	.00	.00	.00
10	.00	.03	9.6	1.9	7.0	3.7	2.8	.08	.00	.00	.00	.00
11	.00	.03	6.2	1.9	8.2	4.2	2.5	.06	.00	.00	.00	.00
12	.00	.04	8.5	14	7.3	4.0	2.0	.07	.00	.00	.00	.00
13	.00	.04	3.9	199	6.2	3.7	1.6	.07	.00	.00	.00	.00
14	.00	.04	2.0	80	6.1	3.6	1.2	.06	.00	.00	.00	.00
15	.00	.04	.97	31	5.9	3.3	1.0	.05	.00	.00	.00	.00
16	.00	.04	1.7	26	4.9	3.2	.83	.06	.00	.00	.00	.00
17	.00	.04	1.6	16	5.4	2.9	.75	.06	.01	.00	.00	.00
18	.00	.05	1.2	11	6.1	2.7	.60	.07	.00	.00	.00	.00
19	.00	.05	.91	9.1	6.0	2.5	.54	.08	.00	.00	.00	.00
20	.00	.05	.85	7.9	5.6	2.4	.58	.09	.00	.00	.00	.00
21	.00	.68	2.1	7.1	4.8	2.3	.53	.10	.00	.00	.00	.00
22	.00	9.3	2.7	6.3	4.6	2.2	.48	.02	.00	.00	.00	.00
23	.00	2.0	1.9	9.5	4.4	2.4	.45	.03	.00	.00	.00	.00
24	.00	.87	1.6	10	4.2	2.9	.41	.05	.00	.00	.00	.00
25	.00	.67	1.6	8.8	3.9	2.5	.35	.04	.00	.00	.00	.52
26	.00	.58	1.6	88	4.3	2.3	.31	.04	.00	.00	.00	.02
27	.00	.46	3.2	66	7.5	2.4	.29	.04	.00	.00	.00	.01
28	.00	.47	4.9	32	22	2.6	.29	.02	.00	.00	.00	.01
29	.00	.78	e3.6	21	---	2.8	.30	.00	.00	.00	.00	.01
30	.09	.57	e2.5	15	---	2.6	.32	.00	.00	.00	.00	.00
31	.03	---	e2.0	12	---	3.0	---	.00	---	.00	.00	---
TOTAL	0.12	17.10	73.09	703.4	200.3	118.1	42.93	2.97	0.10	0.00	0.00	0.57
MEAN	.004	.57	2.36	22.7	7.15	3.81	1.43	.096	.003	.000	.000	.019
MAX	.09	9.3	9.6	199	22	11	3.0	.32	.03	.00	.00	.52
MIN	.00	.02	.51	1.9	3.9	2.2	.29	.00	.00	.00	.00	.00
AC-FT	.2	34	145	1400	397	234	85	5.9	.2	.00	.00	1.1

e Estimated.

11025500 SANTA YSABEL CREEK NEAR RAMONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.76	4.16	28.3	106	70.6	72.7	38.9	27.8	9.07	2.83	1.53	.98
MAX	16.9	17.3	330	1690	345	249	153	221	47.0	15.6	10.5	8.63
(WY)	1917	1947	1922	1916	1916	1922	1922	1915	1915	1915	1916	1916
MIN	.000	.000	.000	1.70	3.54	6.37	4.75	1.10	.037	.000	.000	.000
(WY)	1948	1949	1951	1948	1912	1951	1951	1947	1951	1946	1921	1921

SUMMARY STATISTICS

WATER YEARS 1912 - 1954

ANNUAL MEAN	30.7	
HIGHEST ANNUAL MEAN	206	~ 1916
LOWEST ANNUAL MEAN	1.77	1951
HIGHEST DAILY MEAN	14100	Jan 27 1916
LOWEST DAILY MEAN	.00	Aug 16 1912
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 17 1912
INSTANTANEOUS PEAK FLOW	28400	Jan 27 1916
INSTANTANEOUS PEAK STAGE	14.00	Jan 27 1916
ANNUAL RUNOFF (AC-FT)	22250	
10 PERCENT EXCEEDS	50	
50 PERCENT EXCEEDS	4.1	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.51	2.15	5.49	16.1	41.5	44.2	19.3	7.89	3.29	1.03	.69	.40
MAX	6.30	43.5	124	220	795	425	207	110	42.2	13.8	11.9	7.07
(WY)	1981	1966	1967	1993	1980	1980	1983	1983	1983	1980	1983	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1955	1955	1959	1961	1961	1961	1959	1956	1955	1955	1955

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1955 - 1997

ANNUAL TOTAL	1126.30	1158.68	
ANNUAL MEAN	3.08	3.17	11.7
HIGHEST ANNUAL MEAN			131
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	84	Feb 1	199
LOWEST DAILY MEAN	.00	Jul 5	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 27	.00
INSTANTANEOUS PEAK FLOW			420
INSTANTANEOUS PEAK STAGE			4.23
ANNUAL RUNOFF (AC-FT)	2230	2300	8490
10 PERCENT EXCEEDS	7.9	6.8	12
50 PERCENT EXCEEDS	.55	.06	.10
90 PERCENT EXCEEDS	.00	.00	.00

11028500 SANTA MARIA CREEK NEAR RAMONA, CA

LOCATION.—Lat 33°03'08", long 116°56'41", in SE 1/4 SE 1/4 sec.11, T.13 S., R.1 W., San Diego County, Hydrologic Unit 18070304, on left bank 3.8 mi northwest of Ramona, and 4.6 mi upstream from mouth.

DRAINAGE AREA.—57.6 mi².

PERIOD OF RECORD.—December 1912 to September 1920, October 1946 to current year.

REVISED RECORDS.—WSP 1285: 1952. WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft above sea level. Prior to Oct. 1, 1946, at same site, at datum 1.78 ft lower.

REMARKS.—Records good except for discharges below 1 ft³/s, which are fair. No regulation upstream from station. Land application of treated sewage effluent upstream from the gage beginning December 1972 contributes to low flows.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,200 ft³/s, Feb. 21, 1980, gage height, 14.39 ft, from rating curve extended above 166 ft³/s on basis of slope-area measurement at gage height 4.56 ft and slope-conveyance study at gage height 14.39 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	0930	169	2.45				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.06	1.1	1.0	2.5	.24	.10	.00	.00	.00	.00
2	.00	.00	.06	1.2	.95	1.5	.31	.03	.00	.00	.00	.00
3	.00	.00	.12	1.1	.95	1.6	.43	.02	.00	.00	.00	.00
4	.00	.00	.13	.81	1.9	1.7	.53	.02	.00	.00	.00	.00
5	.00	.00	.40	.53	1.2	1.2	.33	.03	.00	.00	.00	.00
6	.00	.00	.27	.97	1.2	.86	.24	.02	.00	.00	.00	.00
7	.00	.00	.15	1.7	.75	.58	.17	.01	.00	.00	.00	.00
8	.00	.00	.10	1.2	.80	.65	.15	.01	.00	.00	.00	.00
9	.00	.00	.23	.33	.72	.57	.16	.02	.00	.00	.00	.00
10	.00	.00	1.3	.29	.69	.40	.37	.02	.00	.00	.00	.00
11	.00	.00	.82	.30	1.6	.49	.70	.04	.00	.00	.00	.00
12	.00	.00	1.2	8.0	.87	.53	1.0	.04	.00	.00	.00	.00
13	.00	.00	.49	63	.71	.40	.13	.02	.00	.00	.00	.00
14	.00	.00	1.6	14	1.2	.37	.08	.02	.00	.00	.00	.00
15	.00	.00	.89	6.8	1.1	.48	.06	.02	.00	.00	.00	.00
16	.00	.00	.58	27	1.4	.60	.04	.02	.00	.00	.00	.00
17	.00	.00	.18	4.3	1.7	.65	.07	.02	.00	.00	.00	.00
18	.00	.00	.61	1.6	1.6	.38	.08	.02	.00	.00	.00	.00
19	.00	.01	1.1	1.2	.83	.85	.09	.02	.00	.00	.00	.00
20	.00	.00	.21	1.5	.81	.87	.06	.02	.00	.00	.00	.00
21	.00	.04	.19	2.3	1.5	.83	.06	.01	.00	.00	.00	.00
22	.00	7.0	.29	.98	1.1	.38	.05	.01	.00	.00	.00	.00
23	.00	.77	.35	1.7	1.3	.35	.12	.00	.00	.00	.00	.00
24	.00	.17	.61	1.8	.60	.32	.05	.00	.00	.00	.00	.00
25	.00	.11	.21	2.5	.52	.55	.04	.03	.00	.00	.00	.00
26	.00	.09	.54	57	1.7	1.1	.34	.02	.00	.00	.00	.00
27	.00	.21	1.8	15	3.2	.30	.12	.01	.00	.00	.00	.00
28	.00	.19	.70	6.1	8.0	.24	.13	.01	.00	.00	.00	.00
29	.00	.34	.35	3.6	---	.23	.71	.00	.00	.00	.00	.00
30	.00	.09	.26	1.6	---	.23	.05	.00	.00	.00	.00	.00
31	.00	---	.53	1.1	---	.24	---	.00	---	.00	.00	---
TOTAL	0.00	9.02	16.33	230.61	39.90	21.95	6.91	0.61	0.00	0.00	0.00	0.00
MEAN	.000	.30	.53	7.44	1.43	.71	.23	.020	.000	.000	.000	.000
MAX	.00	7.0	1.8	63	8.0	2.5	1.0	.10	.00	.00	.00	.00
MIN	.00	.00	.06	.29	.52	.23	.04	.00	.00	.00	.00	.00
AC-FT	.00	18	32	457	79	44	14	1.2	.00	.00	.00	.00

11028500 SANTA MARIA CREEK NEAR RAMONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.052	.44	1.39	24.5	24.6	26.5	5.82	2.03	.48	.067	.10	.034
MAX	.45	10.9	26.5	545	443	288	54.4	31.0	7.66	1.28	4.03	.22
(WY)	1987	1966	1967	1916	1980	1983	1983	1915	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1914	1916	1920	1920	1951	1951	1950	1949	1920	1913	1913	1913

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1913 - 1997		
ANNUAL TOTAL	206.35			325.33					
ANNUAL MEAN	.56			.89			7.22		
HIGHEST ANNUAL MEAN							78.2		
LOWEST ANNUAL MEAN							.000		
HIGHEST DAILY MEAN	50	Mar 13		63	Jan 13		4960	Jan 27	1916
LOWEST DAILY MEAN	.00	May 8		.00	Oct 1		.00	Dec 17	1912
ANNUAL SEVEN-DAY MINIMUM	.00	May 10		.00	Oct 1		.00	Dec 17	1912
INSTANTANEOUS PEAK FLOW				169	Jan 13		15200	Feb 21	1980
INSTANTANEOUS PEAK STAGE				2.45	Jan 13		14.39	Feb 21	1980
ANNUAL RUNOFF (AC-FT)	409			645			5230		
10 PERCENT EXCEEDS	.89			1.2			2.8		
50 PERCENT EXCEEDS	.03			.01			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA

LOCATION.—Lat 33°13'05", long 117°21'34", in SE 1/4 SW 1/4 sec.13, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070303, on right bank 1.9 mi upstream from bridge on Interstate Highway 5, 2.4 mi upstream from mouth, and 1.9 mi northeast of Oceanside.

DRAINAGE AREA.—557 mi².

PERIOD OF RECORD.—April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year. Discharge measurements only Oct. 1, 1992, to Aug. 16, 1993.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 20 ft above sea level, from topographic map. April 1912 to September 1914, nonrecording gage at site 0.4 mi downstream at different datum. January 1916, nonrecording gage 1.4 mi downstream at different datum. October 1929 to Nov. 9, 1981, at site 0.8 mi downstream at different datum.

REMARKS.—Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft since 1923. Several diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 95,600 ft³/s, Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years. Since regulation by Lake Henshaw, maximum discharge, 25,700 ft³/s, Jan. 16, 1993, gage height, 21.70 ft, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	10	23	123	58	19	9.4	3.5	.95	e.00	e.00
2	.00	.00	10	23	111	51	19	9.2	3.5	.92	e.00	e.00
3	.00	.00	10	51	102	52	19	8.9	3.4	e.60	e.00	e.00
4	.00	.00	10	79	95	51	27	8.7	3.3	e.48	e.00	e.00
5	.00	.00	10	57	88	48	27	8.0	3.3	e.42	e.00	e.00
6	.00	.00	18	43	83	45	23	7.4	3.2	e.36	e.00	e.00
7	.00	.00	19	33	79	43	22	7.0	3.2	e.31	e.00	e.00
8	.00	.00	18	28	76	40	21	6.8	3.6	e.25	e.00	e.00
9	.00	.00	19	26	74	38	21	6.8	3.2	e.19	e.00	e.00
10	.00	.00	38	24	74	35	20	7.3	3.0	e.15	e.00	e.00
11	.00	.00	105	24	95	33	20	8.0	3.1	e.10	e.00	e.00
12	.00	.00	227	69	89	31	20	8.4	3.1	e.07	e.00	e.00
13	.00	.00	102	678	77	31	19	8.4	3.1	e.04	e.00	e.00
14	.00	.00	57	496	71	33	19	7.9	2.9	e.01	e.00	e.00
15	.00	.00	35	306	68	31	18	7.1	2.7	e.00	e.00	e.00
16	.00	.00	27	448	66	31	18	6.3	2.7	e.00	e.00	e.00
17	.00	.00	23	234	63	30	17	6.0	2.8	e.00	e.00	e.00
18	.00	.00	20	151	60	27	17	5.8	2.6	e.00	e.00	e.00
19	.00	.00	19	119	56	26	17	6.0	2.3	e.00	e.00	e.00
20	.00	.00	19	102	54	25	16	5.5	2.2	e.00	e.00	e.00
21	.00	.04	17	87	58	24	16	5.1	2.1	e.00	e.00	e.00
22	.00	117	16	81	56	22	15	4.8	1.9	e.00	e.00	e.00
23	.00	77	16	93	53	22	14	4.5	1.7	e.00	e.00	e.00
24	.00	34	18	137	51	22	13	4.3	1.6	e.00	e.00	e.00
25	.00	22	19	106	50	21	12	4.2	1.5	e.00	e.00	e.00
26	.00	16	17	448	48	20	11	4.1	1.4	e.00	e.00	e.00
27	.00	13	19	577	49	20	10	4.0	1.3	e.00	e.00	e.00
28	.00	12	30	357	75	19	10	4.0	1.2	e.00	e.00	e.00
29	.00	11	36	234	---	19	9.8	3.8	1.1	e.00	e.00	e.00
30	.00	11	30	177	---	19	9.3	3.7	.98	e.00	e.00	e.00
31	.00	---	26	143	---	19	---	3.6	---	e.00	e.00	---
TOTAL	0.00	313.04	1040	5454	2044	986	519.1	195.0	75.48	4.85	0.00	0.00
MEAN	.0000	10.4	33.5	176	73.0	31.8	17.3	6.29	2.52	.16	.0000	.0000
MAX	.00	117	227	678	123	58	27	9.4	3.6	.95	.00	.00
MIN	.00	.00	10	23	48	19	9.3	3.6	.98	.00	.00	.00
AC-FT	.00	621	2060	10820	4050	1960	1030	387	150	9.6	.00	.00

e Estimated.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.77	8.82	20.5	46.8	102	139	55.5	27.4	14.1	7.33	5.68	3.38
MAX	54.6	144	196	451	1858	1211	432	346	293	207	213	85.9
(WY)	1984	1984	1979	1980	1980	1995	1980	1980	1980	1980	1980	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1930	1930	1930	1930	1931	1931	1930	1930	1930

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1930 - 1997			
ANNUAL TOTAL	6529.92				10631.47							
ANNUAL MEAN	17.8				29.1				35.7			
HIGHEST ANNUAL MEAN									415			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	227				678				11300			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					897				25700			
INSTANTANEOUS PEAK STAGE					8.54				21.70			
ANNUAL RUNOFF (AC-FT)	12950				21090				25890			
10 PERCENT EXCEEDS	51				75				57			
50 PERCENT EXCEEDS	5.5				4.5				1.2			
90 PERCENT EXCEEDS	.00				.00				.00			

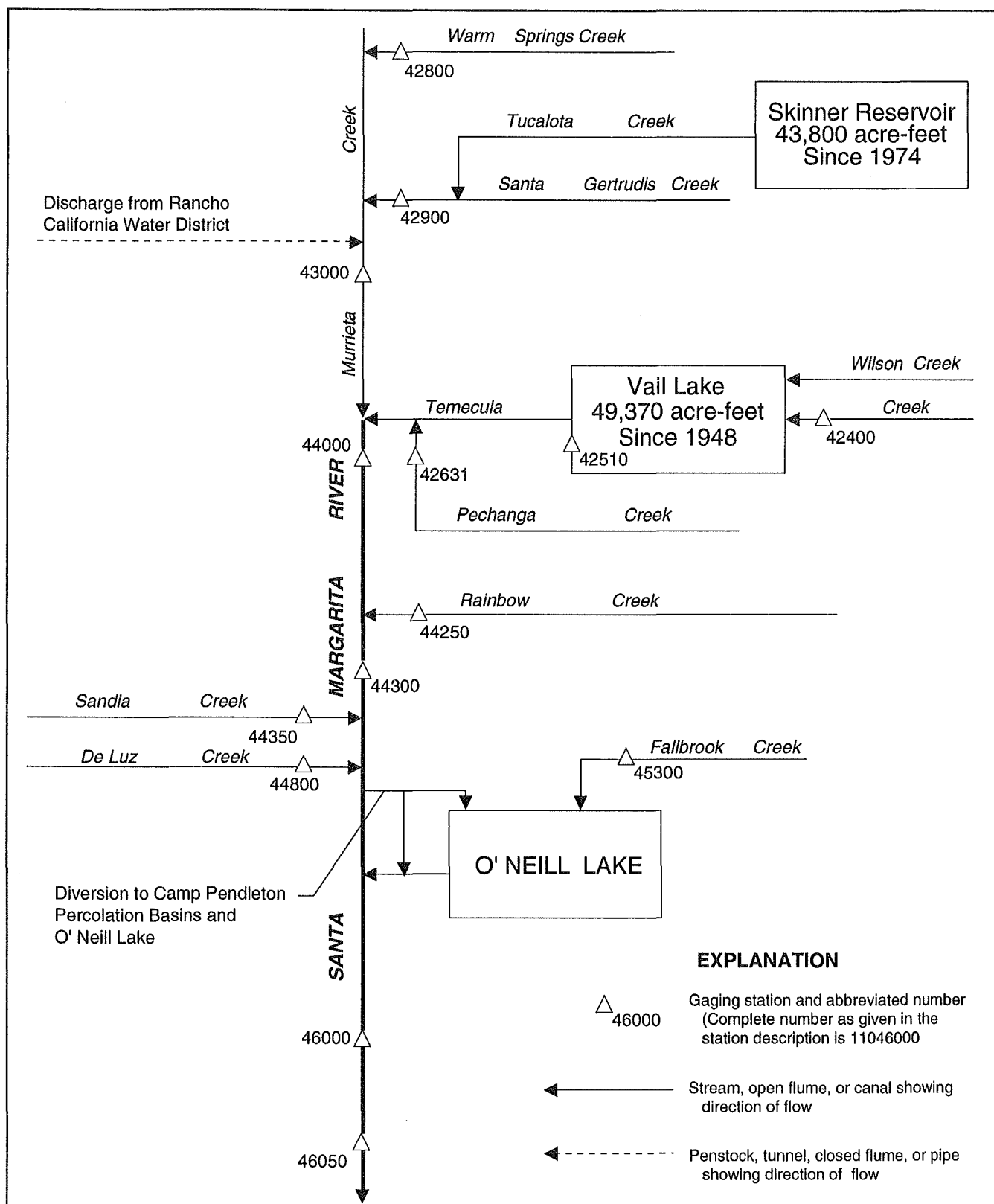


Figure 16. Diversions and storage in Santa Margarita River Basin.

11042400 TEMECULA CREEK NEAR AGUANGA, CA

LOCATION.—Lat 33°27'33", long 116°55'22", in SW 1/4 SW 1/4 sec.19, T.8 S., R.1 E., Riverside County, Hydrologic Unit 18070302, on right bank 1.6 mi downstream from Long Canyon and 3.5 mi northwest of Aguanga.

DRAINAGE AREA.—131 mi².

PERIOD OF RECORD.—August 1957 to current year.

REVISED RECORDS.—WDR CA-89-1: 1958(P), 1966(M), 1979(M), 1980(M), 1986(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,590 ft above sea level, from topographic map.

REMARKS.—Records good. No regulation upstream from station. Pumping upstream from station for irrigation of less than 1,000 acres. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,100 ft³/s, Jan. 16, 1993, gage height, 14.6 ft, from flood mark, from rating curve extended above 1,200 ft³/s on basis of critical depth computation; no flow for several days in some years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	1630	83	2.80				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.7	5.0	5.5	12	6.4	3.5	3.6	1.5	1.7	1.5	1.2
2	3.2	4.1	4.9	5.7	11	6.0	4.1	3.2	1.5	1.7	1.3	1.4
3	3.1	3.8	4.9	6.0	9.4	6.0	4.8	2.7	1.6	1.3	1.3	1.5
4	2.9	3.7	4.8	6.4	9.1	5.9	5.1	2.5	1.8	1.3	1.2	1.5
5	2.8	3.6	4.9	6.8	8.2	5.7	4.1	2.5	1.9	1.3	1.2	1.5
6	2.7	3.6	5.0	6.9	7.8	5.7	4.1	2.2	2.0	1.3	1.2	1.5
7	2.5	3.3	5.1	6.2	7.7	5.4	3.4	2.1	2.1	1.2	1.3	1.4
8	2.4	3.0	4.9	6.2	7.4	5.1	4.1	1.8	2.1	1.3	1.3	1.3
9	2.4	3.1	6.0	6.2	7.1	5.1	4.2	1.7	1.9	1.3	1.5	1.3
10	2.5	3.2	15	6.3	6.8	4.9	4.4	1.7	1.8	1.4	1.6	1.2
11	2.6	3.5	8.3	6.3	7.6	4.7	4.4	1.6	1.9	1.6	1.7	1.4
12	2.5	3.6	7.3	10	6.9	4.5	4.7	1.6	2.0	1.7	1.7	1.5
13	2.7	3.7	6.5	53	6.6	4.5	4.4	1.5	2.1	1.6	1.7	1.6
14	2.7	3.9	6.0	41	6.6	4.4	4.1	1.6	2.1	1.4	1.5	1.6
15	2.7	4.1	5.4	30	6.4	4.3	3.9	1.4	2.1	1.3	1.6	2.9
16	2.7	4.2	5.5	35	6.2	4.3	3.6	1.0	1.8	1.3	1.8	4.8
17	2.9	4.3	5.5	23	6.0	4.3	3.6	1.1	1.7	1.3	1.8	3.0
18	2.9	4.2	5.2	18	6.2	4.0	3.5	1.3	1.5	1.3	1.7	1.4
19	2.9	4.3	5.2	15	6.0	3.7	4.0	1.7	1.7	1.4	1.4	1.5
20	2.9	4.4	5.3	13	6.0	3.3	4.3	1.5	1.7	1.5	1.3	1.6
21	2.6	7.1	5.4	11	5.9	3.1	3.9	1.5	1.7	1.6	1.4	1.6
22	2.5	24	5.6	10	5.8	3.2	3.5	1.6	1.7	1.5	1.3	1.5
23	2.7	10	6.2	11	5.7	3.6	3.2	1.6	1.6	1.5	1.2	1.4
24	2.7	6.9	5.6	13	5.7	3.6	3.4	1.6	1.8	1.5	1.3	1.4
25	2.9	5.9	5.5	12	5.7	3.2	3.4	1.7	1.8	1.4	1.1	6.0
26	3.8	5.5	5.6	52	5.8	2.9	3.2	1.8	1.9	1.5	1.1	4.4
27	4.0	5.1	5.5	40	6.0	3.1	3.0	1.6	1.9	1.6	1.1	2.2
28	3.3	4.9	5.5	27	6.8	3.3	3.1	1.4	1.8	1.7	1.3	2.0
29	3.0	5.1	5.7	20	---	3.5	3.4	1.4	1.7	1.7	1.3	1.9
30	4.3	5.1	5.7	16	---	3.4	3.6	1.4	1.7	1.8	1.3	1.8
31	4.5	---	5.7	14	---	3.3	---	1.5	---	1.6	1.2	---
TOTAL	91.4	155.9	182.7	532.5	198.4	134.4	116.0	55.4	54.4	45.6	43.2	59.3
MEAN	2.95	5.20	5.89	17.2	7.09	4.34	3.87	1.79	1.81	1.47	1.39	1.98
MAX	4.5	24	15	53	12	6.4	5.1	3.6	2.1	1.8	1.8	6.0
MIN	2.4	3.0	4.8	5.5	5.7	2.9	3.0	1.0	1.5	1.2	1.1	1.2
AC-FT	181	309	362	1060	394	267	230	110	108	90	86	118

11042400 TEMECULA CREEK NEAR AGUANGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.51	3.49	5.84	18.3	27.5	22.3	11.2	4.80	2.56	1.55	1.35	1.31
MAX	7.94	47.9	66.0	361	266	105	87.3	21.6	13.1	8.19	9.40	6.93
(WY)	1984	1966	1967	1993	1980	1991	1958	1980	1980	1980	1983	1980
MIN	.000	.000	.000	.094	.70	.41	.34	.16	.067	.000	.000	.000
(WY)	1958	1963	1963	1963	1965	1965	1961	1961	1966	1964	1957	1957

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1957 - 1997			
ANNUAL TOTAL	2124.5				1669.2							
ANNUAL MEAN	5.80				4.57				8.37			
HIGHEST ANNUAL MEAN									56.1			
LOWEST ANNUAL MEAN									.28			
HIGHEST DAILY MEAN	66				53				3600			
LOWEST DAILY MEAN	2.2				1.0				.00			
ANNUAL SEVEN-DAY MINIMUM	2.3				1.2				.00			
INSTANTANEOUS PEAK FLOW					83				8100			
INSTANTANEOUS PEAK STAGE					2.80				14.60			
ANNUAL RUNOFF (AC-FT)	4210				3310				6070			
10 PERCENT EXCEEDS	9.8				7.0				12			
50 PERCENT EXCEEDS	4.5				3.2				1.7			
90 PERCENT EXCEEDS	2.5				1.4				.00			

11042510 VAIL LAKE NEAR TEMECULA, CA

LOCATION.—Lat 33°29'44", long 116°58'33", in Pauba Grant, Riverside County, Hydrologic Unit 18070302, near center of Vail Dam on Temecula Creek, 0.2 mi downstream from Arroyo Seco, and 10 mi east of Temecula.

DRAINAGE AREA.—320 mi².

PERIOD OF RECORD.—October 1960 to September 1985 (monthend contents only). Prior to October 1977, published with Temecula Creek at Vail Dam. October 1987 to current year.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by the U.S. Bureau of Reclamation). June 4, 1969, to September 1985, nonrecording gage.

REMARKS.—Reservoir is formed by concrete arch-type dam, completed in June 1949. Total capacity, 49,370 acre-ft between elevations 1,352.5 ft, bottom of lowest outlet, and 1,470 ft, crest of spillway, all of which is available for release. There had been no spill from Nov. 13, 1948, date of closure, to Feb. 20, 1980, when a peak spill of about 8,000 ft³/s occurred (from theoretical discharge curve). Water is released down Temecula Creek for diversion about 1 mi downstream. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 52,670 acre-ft, spilling, Feb. 21, 1980, elevation, 1,473.0 ft, from highwater mark; minimum 1,038 acre-ft, Oct. 31, 1960, elevation, 1,379.44 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 21,130 acre-ft, Jan. 31, Feb. 3, elevation, 1,437.61 ft; minimum, 18,850 acre-ft, Sept. 24, elevation, 1,434.10 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table dated Dec. 22, 1953)

1,390	2,400	1,420	11,400	1,450	30,420
1,400	4,530	1,430	16,390	1,460	39,280
1,410	7,560	1,440	22,780	1,475	54,940

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19790	19570	19900	e20290	21120	20750	20860	20900	20500	20120	19640	19170
2	19770	19570	19900	e20310	21120	20730	20860	20900	20480	20110	19620	19150
3	19770	19580	19920	e20330	21110	20720	20870	20880	20460	20090	19610	19140
4	19760	19590	19920	e20350	21110	20700	20880	20870	20460	20080	19590	19130
5	19750	19590	19930	e20370	21100	20680	20880	20840	20450	20060	19580	19110
6	19740	19590	19940	20390	21090	20670	20880	20820	20440	20050	19570	19110
7	19730	19590	19950	20390	21070	20670	20890	20800	20430	e20040	19560	19080
8	19710	19570	19970	20390	21060	20680	20890	20800	20420	20030	19550	19070
9	19710	19570	20020	20410	21050	20680	20900	20780	20410	20010	19540	19060
10	19700	19580	20030	20420	21050	20690	20900	20780	20390	20010	19520	19050
11	19690	19590	20050	20430	21050	20690	20900	20770	20390	20000	19500	19030
12	19680	19590	20070	20510	21040	20700	20900	20750	20370	19970	19480	19020
13	19660	19590	20080	20700	21030	20700	20920	20740	20360	19950	19460	19010
14	19660	19600	20080	20800	21010	20720	20920	20730	20350	19930	19450	18990
15	19650	19600	20080	20850	20980	20730	20920	20720	20330	19930	e19450	18990
16	19650	19610	20100	20900	20970	20740	20930	20720	20330	19910	e19430	18980
17	19640	19600	20080	20900	20960	20740	20920	20700	20310	19900	e19410	18980
18	19630	19610	20100	20900	20940	20760	20930	20690	20310	19880	19380	18960
19	19620	19610	20110	20890	20920	20760	20920	20680	20290	19880	19380	18940
20	19620	19620	e20120	20880	20910	20770	20930	20660	20290	19850	19360	18930
21	19570	19740	e20140	20860	20880	20770	20930	20640	20270	19840	19360	18910
22	19580	19810	e20150	20860	20870	20780	20940	20630	20250	19830	19340	18890
23	19570	19840	20160	20860	20850	20800	20940	20620	20230	19820	19320	18880
24	19570	19840	20170	20840	20830	20800	20920	20600	20220	19800	19300	18880
25	19560	19860	20180	20860	20810	20810	20930	20590	20210	19790	19290	18920
26	19550	19870	20200	20970	20780	20810	20920	20580	20200	19770	19270	18920
27	19550	19870	20210	21070	20780	20820	20920	20560	20190	19750	19250	18900
28	19540	19890	20220	21100	20770	20820	20910	20550	20180	19740	19230	18880
29	19520	19890	20230	21120	---	20840	20920	20540	20160	19730	19210	18880
30	19570	19890	20250	21120	---	20840	20910	20530	20150	19700	19200	18870
31	19570	---	20270	21120	---	20850	---	20520	---	19660	19180	---
MAX	19790	19890	20270	21120	21120	20850	20940	20900	20500	20120	19640	19170
MIN	19520	19570	19900	20290	20770	20670	20860	20520	20150	19660	19180	18870
a	1435.23	1435.73	1436.31	1437.59	1437.07	1437.19	1437.28	1436.69	1436.13	1435.37	1434.62	1434.13
b	-220	+320	+380	+850	-350	+80	+60	-390	-370	-490	-480	-310

CAL YR 1996 MAX 24010 MIN 19520 b -3780

WTR YR 1997 MAX 21120 MIN 18870 b -920

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

LOCATION.—Lat 33°28'06", long 117°07'40", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank on upstream side of Highway S-16 Bridge, 0.4 mi upstream from Temecula Creek, and 2.1 mi southeast of Temecula.

PERIOD OF RECORD.—October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

REMARKS.—Records fair. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River Basin.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0215	27	3.09				

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	1.3	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	1.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	2.7	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	1.50	0.00	4.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.050	.000	.14	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	1.5	.00	2.7	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	3.0	.00	8.4	.00	.00	.00	.00	.00	.00	.00	.00

SANTA MARGARITA RIVER BASIN

175

11042631 PECHANGA CREEK NEAR TEMECULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.008	.032	6.88	2.99	2.93	.24	.13	.056	.025	.018	.001
MAX	.003	.050	.15	63.4	24.4	16.5	1.70	.95	.51	.23	.18	.006
(WY)	1988	1997	1993	1993	1993	1995	1995	1993	1993	1993	1993	1993
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1990	1991	1992	1989	1989	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1988 - 1997	
ANNUAL TOTAL	4.15		5.76			
ANNUAL MEAN	.011		.016		1.11	
HIGHEST ANNUAL MEAN					8.27	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	1.7	Mar 13	2.7	Jan 26	900	Jan 16 1993
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW			27	Nov 22	3120	Jan 16 1993
INSTANTANEOUS PEAK STAGE			3.09	Nov 22	8.12	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	8.2		11		802	
10 PERCENT EXCEEDS	.00		.00		.26	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA

LOCATION.—Lat 33°31'56", long 117°10'34", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upstream end of Jefferson Road Bridge, 0.6 mi upstream from mouth, and 2.8 mi southeast of Murrieta.

DRAINAGE AREA.—55.4 mi².

PERIOD OF RECORD.—October 1987 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 1,040 ft above sea level, from topographic map.

REMARKS.—Records fair. Gage out of operation for channel work (lining) from Nov. 5, 1991, to June 10, 1992. Rancho California Water District can discharge into creek from automated pump, approximately 0.1 mi upstream from station. See schematic diagram for Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,570 ft³/s, Jan. 17, 1993, gage height, 8.59 ft, from rating curve extended above 2,190 ft³/s; no flow for many days each year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0130	72	4.42	Jan. 12	1630	148	4.63
Dec. 9	2130	98	4.50				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
2	.00	.27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
3	.00	.04	.00	.11	.00	1.9	.00	.00	.00	.00	.00	.22
4	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02
5	.00	.00	.00	.24	.00	.23	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.01	.01	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	11	.02	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	3.2	.00	1.6	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	3.1	.02	1.6	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	20	.10	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	30	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	9.7	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	15	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	4.0	.00	.00	.00	.00	.00	.00	.00	.02
17	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.79	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.33	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.58	.00	.00	.00	.00	.00	.00	.00
21	.00	7.9	.00	.00	5.7	.00	.00	.00	.00	.00	.00	.00
22	.00	12	.57	.00	3.4	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.38	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	1.1	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.64	.00	.00	.00	.00	.00	.00	.00	2.0
26	.00	.00	.13	22	.00	.00	.00	.00	.00	.00	.00	.41
27	.00	.00	.18	4.1	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.04	.20	.75	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.03	.00
30	.50	.00	.00	.00	---	.00	.00	.00	.00	.00	.03	.00
31	.14	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.64	20.28	18.38	106.97	15.20	3.74	0.01	0.00	0.00	0.00	0.06	2.72
MEAN	.021	.68	.59	3.45	.54	.12	.000	.000	.000	.000	.002	.091
MAX	.50	.12	.11	.30	5.7	1.9	.01	.00	.00	.00	.03	2.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.3	40	36	212	30	7.4	.02	.00	.00	.00	.1	5.4

SANTA MARGARITA RIVER BASIN

177

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.087	.15	.48	28.6	13.1	13.3	.32	.24	.000	.006	.000	.009
MAX	.46	.68	2.27	226	95.0	74.0	1.66	1.89	.000	.063	.002	.091
(WY)	1993	1997	1993	1993	1993	1991	1995	1993	1988	1988	1997	1997
MIN	.000	.000	.000	.036	.004	.000	.000	.000	.000	.000	.000	.000
(WY)	1989	1989	1990	1994	1989	1988	1989	1989	1988	1989	1988	1988

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1988 - 1997	
ANNUAL TOTAL	142.53		168.00			
ANNUAL MEAN	.39		.46		4.68	
HIGHEST ANNUAL MEAN					27.6	
LOWEST ANNUAL MEAN					.063	
HIGHEST DAILY MEAN	34	Jan 31	30	Jan 13	2070	Jan 16 1993
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1987
INSTANTANEOUS PEAK FLOW			148	Jan 12	5570	Jan 17 1993
INSTANTANEOUS PEAK STAGE			4.63	Jan 12	8.59	Jan 17 1993
ANNUAL RUNOFF (AC-FT)	283		333		3390	
10 PERCENT EXCEEDS	.00		.13		.64	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11042900 SANTA GERTRUDIS CREEK NEAR TEMECULA, CA

LOCATION.—Lat 33°31'28", long 117°09'50", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank 0.85 mi upstream from Murrieta Creek, 1.65 mi downstream from Tualota Creek, and 2.2 mi northeast of Temecula.

DRAINAGE AREA.—90.2 mi².

PERIOD OF RECORD.—October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

REVISED RECORDS.—WDR CA-94-1: Drainage area. WDR CA-96-1: 1993(M).

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,045 ft above sea level, from topographic map. Prior to Oct. 11, 1994, at site 800 ft upstream at different datum.

REMARKS.—Records fair. Flow partly regulated by Skinner Reservoir, capacity, 43,800 acre-ft. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,200 ft³/s, estimated, Jan. 16, 1993, gage height, 8.47 ft, site and datum then in use, based on critical depth computation; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.59	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.21	.00	1.2	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	16	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.56	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	5.0	.00	27	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	3.0	.00	34	.00	.00	.00	.00	.00	.00
9	.00	.00	21	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	16	.00	3.3	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	23	.00	11	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	2.9	48	1.1	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	58	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	9.4	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	27	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	46	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	4.4	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	32	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	25	11	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.18	.24	23	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	19	.00	.00	.00	.00	.00	.00	.00	12
26	.00	.00	.00	45	.00	.00	.00	.00	.00	.00	.00	5.4
27	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.07	2.6	.00	.00	.00	.00	.00	.00	.00	.00	2.7
29	.00	.03	.00	.00	---	.00	.00	.00	.00	.00	.00	.11
30	1.7	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.43	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	2.13	58.08	76.74	306.96	15.40	61.00	0.00	0.00	0.00	0.00	0.00	20.21
MEAN	.069	1.94	2.48	9.90	.55	1.97	.000	.000	.000	.000	.000	.67
MAX	1.7	32	23	58	11	34	.00	.00	.00	.00	.00	12
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	4.2	115	152	609	31	121	.00	.00	.00	.00	.00	40

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.023	.23	.47	18.3	10.0	13.6	7.58	3.69	.007	.009	.000	.077
MAX	.12	1.94	2.48	108	54.6	50.7	46.7	28.3	.044	.035	.000	.67
(WY)	1994	1997	1997	1993	1993	1995	1993	1993	1993	1995	1988	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1990	1991	1988	1988	1989	1988	1988	1988	1988	1988

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1988 - 1997

ANNUAL TOTAL	305.32	540.52	
ANNUAL MEAN	.83	1.48	
HIGHEST ANNUAL MEAN			4.48
LOWEST ANNUAL MEAN			23.2
HIGHEST DAILY MEAN	69	Jan 31	.006
LOWEST DAILY MEAN	.00	Jan 1	1340
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			.00
INSTANTANEOUS PEAK STAGE			311
ANNUAL RUNOFF (AC-FT)	606		2.65
10 PERCENT EXCEEDS	.00		7200
50 PERCENT EXCEEDS	.00		8.47
90 PERCENT EXCEEDS	.00		3250
			5.0
			.00
			.00

11043000 MURRIETA CREEK AT TEMECULA, CA

LOCATION.—Lat 33°28'47", long 117°08'35", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on right bank 0.4 mi upstream from confluence with Temecula Creek, 1.0 mi south of Temecula, and 12 mi downstream from Skinner Reservoir on Tualota Creek.

DRAINAGE AREA.—222 mi².

PERIOD OF RECORD.—October 1924 to current year. Prior to September 1930 monthly discharges only, published in WSP 1315-B.

REVISED RECORDS.—WSP 1345: 1952. WSP 1635: 1932, 1937. WSP 1928: Drainage area. WDR CA-93-1: 1991 (P), 1992 (M).

GAGE.—Water-stage recorder. Concrete control since Aug. 30, 1981. Elevation of gage is 970 ft above sea level, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.—Records poor. Flow partly regulated since 1974 by Skinner Reservoir, capacity, 43,800 acre-ft. Pumping upstream from station for irrigation. Rancho California Water District can discharge into creek, approximately 0.1 mi upstream, to supplement low flow. Varying amounts of backwater caused by beaver dams at times during low flow periods. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,000 ft³/s, Jan. 16, 1993, gage height, 17.24 ft, on basis of slope-area measurement of peak flow; no flow for many days 1989–93.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum, from rating curve extended above 6,430 ft³/s on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0130	718	4.57	Jan. 13	0515	845	4.14
Dec. 9	2045	491	3.52	Jan. 26	0815	777	4.00

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	.10	.47	1.4	1.4	1.7	2.6	e5.5	1.3	1.7	2.6	2.5
2	2.8	.12	.30	1.1	1.1	.51	3.9	e4.9	1.3	1.6	1.4	2.7
3	2.9	.14	.21	e7.0	.93	.25	4.7	5.3	1.9	1.3	2.3	2.6
4	2.9	.16	.17	1.1	.69	1.8	5.3	e4.0	1.9	.56	2.5	2.1
5	3.0	.19	.16	e12	.74	.39	5.3	3.6	2.9	.72	2.2	2.5
6	3.1	.17	.25	3.4	.54	.58	4.8	e4.0	e2.8	1.3	2.8	2.2
7	3.2	.17	.20	1.4	.57	9.7	4.6	e4.8	e2.5	2.0	e2.9	1.8
8	3.1	.17	.18	1.1	.45	13	5.0	e4.0	e2.5	1.5	3.2	2.1
9	3.0	.15	e50	.46	.73	1.2	5.2	e4.9	e2.6	2.4	3.0	2.1
10	2.7	.12	e55	.36	2.5	1.6	4.6	e4.0	e2.6	1.5	3.0	2.1
11	2.8	.14	27	.65	21	.96	5.1	e4.9	e2.6	1.8	3.1	2.3
12	2.8	.16	6.7	189	3.5	.37	4.5	e4.1	e2.6	2.2	3.1	2.6
13	2.7	.15	2.2	440	3.7	.50	4.6	4.5	e2.4	2.2	3.0	2.7
14	2.8	.16	1.5	74	3.7	.96	4.6	3.8	e2.2	2.2	2.9	2.7
15	2.7	.17	1.1	51	3.1	.29	4.9	4.7	e2.0	2.2	2.8	2.8
16	2.8	.16	1.3	79	2.5	.38	5.1	4.7	e1.8	2.0	e2.9	2.6
17	3.0	.11	1.5	4.3	1.6	.34	5.4	5.8	1.6	1.5	2.8	2.7
18	2.7	.10	1.4	1.1	1.5	.49	5.5	4.1	1.5	1.3	2.2	2.6
19	2.7	.14	1.3	1.5	2.1	.36	5.7	5.4	2.6	1.3	2.7	2.8
20	2.6	.16	1.3	.82	1.4	.25	5.6	4.1	2.0	1.6	2.4	2.7
21	2.6	96	1.3	.65	1.3	.23	5.7	5.1	2.2	2.6	2.1	2.4
22	2.6	221	17	.46	4.9	.77	e5.2	e4.3	1.1	2.8	2.6	e1.8
23	2.7	3.8	5.7	13	2.9	.76	5.9	e4.1	2.1	2.0	2.7	1.8
24	2.7	1.4	e2.8	3.5	.70	.37	e4.3	e3.5	1.5	2.0	2.5	2.2
25	2.7	1.8	e2.1	10	3.3	.07	5.9	e5.3	2.1	2.8	2.4	13
26	2.5	1.6	e2.0	401	1.2	.10	e4.5	e3.3	1.4	3.0	2.5	11
27	2.6	1.5	e2.0	49	5.1	1.3	6.3	e3.8	2.0	2.8	2.6	2.5
28	2.7	1.1	e8.0	12	.34	.73	6.4	e2.3	1.4	2.3	2.7	3.0
29	1.2	1.5	e3.0	3.8	---	2.1	6.6	2.5	1.9	2.2	2.9	2.8
30	2.2	.56	e2.0	2.1	---	.92	e5.3	1.5	1.3	2.5	2.9	2.1
31	5.7	---	1.9	1.7	---	3.2	---	2.9	---	e2.8	2.7	---
TOTAL	87.3	333.20	200.04	1367.90	73.49	46.18	153.1	129.7	60.6	60.68	82.4	91.8
MEAN	2.82	11.1	6.45	44.1	2.62	1.49	5.10	4.18	2.02	1.96	2.66	3.06
MAX	5.7	221	55	440	21	13	6.6	5.8	2.9	3.0	3.2	13
MIN	1.2	.10	.16	.36	.34	.07	2.6	1.5	1.1	.56	1.4	1.8
AC-FT	173	661	397	2710	146	92	304	257	120	120	163	182

e Estimated.

SANTA MARGARITA RIVER BASIN

11043000 MURRIETA CREEK AT TEMECULA, CA—Continued

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

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

SUMMARY STATISTICS

WATER YEARS 1931 - 1973

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.39	1.71	3.02	70.9	83.2	71.2	10.3	4.88	1.50	1.15	1.19	1.96
MAX	3.28	11.1	11.7	818	838	420	85.4	44.2	4.96	2.48	3.05	10.6
(WY)	1988	1997	1985	1993	1980	1978	1980	1980	1978	1985	1985	1976
MIN	.18	.000	.000	.39	.55	.093	.073	.19	.13	.13	.15	.17
(WY)	1994	1990	1990	1975	1977	1990	1989	1988	1994	1994	1993	1977

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1974 - 1997

ANNUAL TOTAL	1668.42	2686.39	
ANNUAL MEAN	4.56	7.36	20.8
HIGHEST ANNUAL MEAN			121 1993
LOWEST ANNUAL MEAN			1.02 1977
HIGHEST DAILY MEAN	221 Nov 22	440 Jan 13	7790 Jan 16 1993
LOWEST DAILY MEAN	.10 Nov 1	.07 Mar 25	.00 Dec 11 1976
ANNUAL SEVEN-DAY MINIMUM	.14 Nov 13	.14 Nov 13	.00 Nov 28 1988
INSTANTANEOUS PEAK FLOW		845 Jan 13	25000 Jan 16 1993
INSTANTANEOUS PEAK STAGE		(a) 4.82 Nov 21	17.24 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	3310	5330	15030
10 PERCENT EXCEEDS	3.8	5.5	8.3
50 PERCENT EXCEEDS	1.6	2.5	.90
90 PERCENT EXCEEDS	.19	.36	.14

(a) Maximum stage affected by beaver dam on control.

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA

LOCATION.—Lat 33°28'26", long 117°08'29", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at upper end of Temecula Canyon, 0.1 mi downstream from confluence of Murrieta and Temecula Creeks, 1.4 mi south of Temecula, 10 mi downstream from Vail Dam, and about 12 mi downstream from Skinner Reservoir.

DRAINAGE AREA.—588 mi².

PERIOD OF RECORD.—January 1923 to current year. Prior to October 1952, published as Temecula Creek at Railroad Canyon, near Temecula.

REVISED RECORDS.—WSP 981: 1927(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Concrete control since Nov. 3, 1966; buried by sand Nov. 19, 1985, uncovered by high flow in March 1991. Elevation of gage is 950 ft above sea level, from topographic map. Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

REMARKS.—Records good except for estimated daily discharges, which are fair. Flow partly regulated since November 1948 by Vail Lake (station 11042510) on Temecula Creek, and since 1974 by Skinner Reservoir. Rancho California Water District can discharge into Murrieta Creek, approximately 1.0 mi upstream, to supplement low flow. See schematic diagram of Santa Margarita River Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	2.0	e2.5	2.5	4.5	3.1	3.6	6.8	3.8	2.9	3.2	3.2
2	4.0	1.8	e2.0	2.6	4.2	2.7	4.6	5.3	3.5	3.0	2.8	3.2
3	4.0	1.7	e2.0	7.8	3.8	2.6	7.0	6.5	3.7	4.1	2.6	2.9
4	4.0	1.6	e2.0	3.0	3.6	3.7	6.5	5.0	3.7	3.3	3.0	2.6
5	3.9	1.5	2.1	16	3.5	2.8	7.2	5.4	4.1	3.5	3.3	2.6
6	4.2	1.6	2.2	7.3	3.1	2.7	5.4	4.7	3.2	3.1	3.1	2.7
7	3.9	1.4	2.1	3.7	3.1	17	7.4	6.0	4.5	3.5	3.0	2.7
8	3.8	1.4	2.1	2.8	3.0	19	6.2	4.9	3.4	3.0	2.9	2.6
9	3.8	1.4	64	2.8	3.0	3.7	6.7	6.1	4.0	3.6	3.0	2.6
10	3.8	1.4	68	2.7	4.0	2.8	4.9	5.3	3.2	3.1	3.2	2.7
11	3.6	1.6	27	2.7	27	2.5	6.9	6.4	3.7	3.0	3.3	2.8
12	3.8	1.9	11	267	4.2	2.3	4.8	5.2	3.0	2.9	3.4	2.8
13	3.8	1.5	4.1	573	3.3	2.3	6.0	6.4	4.3	2.9	3.2	2.9
14	3.9	1.4	3.0	94	3.0	2.6	4.1	5.3	3.2	3.0	3.0	2.9
15	3.9	1.5	2.6	71	2.8	2.3	6.1	7.3	4.3	3.2	3.0	3.2
16	3.8	1.5	2.5	85	2.7	2.3	5.6	6.0	2.8	3.3	3.0	3.0
17	3.8	1.5	2.5	12	2.6	2.3	9.3	6.8	3.8	2.7	3.0	3.0
18	3.7	1.5	2.5	6.6	2.6	2.3	7.8	5.7	2.9	2.4	2.9	2.9
19	3.6	1.5	2.4	6.5	3.8	2.3	9.1	7.6	3.8	2.2	3.0	2.8
20	3.6	1.5	2.3	4.5	3.2	2.3	7.9	6.1	3.0	2.3	3.1	2.9
21	3.5	85	2.3	4.5	3.7	2.3	8.1	7.6	4.0	2.8	3.1	2.9
22	3.4	388	18	4.4	5.3	2.5	5.5	6.7	3.0	3.1	3.1	2.4
23	3.5	13	10	23	5.1	2.5	6.6	6.6	4.3	3.0	3.1	2.4
24	3.5	e4.0	3.2	11	2.6	2.4	4.5	5.4	3.1	2.8	3.0	3.1
25	3.6	e4.0	2.7	18	4.9	2.2	6.2	7.3	3.8	3.3	2.9	17
26	3.6	e3.5	2.6	602	2.8	2.1	4.7	5.5	2.9	3.4	2.8	19
27	3.6	e3.5	2.7	58	6.6	3.8	6.7	5.7	4.2	3.5	2.8	5.0
28	3.6	e3.0	10	21	3.9	2.7	6.8	3.5	3.1	3.1	2.9	4.0
29	2.8	e3.0	3.8	9.8	---	4.8	8.6	4.2	3.5	2.8	3.1	3.8
30	4.8	e2.5	2.7	7.0	---	2.5	6.3	3.3	2.7	2.9	3.1	4.0
31	8.9	---	2.5	5.5	---	4.6	---	4.7	---	3.1	3.1	---
TOTAL	121.8	540.7	269.4	1937.7	125.9	116.0	191.1	179.3	106.5	94.8	94.0	120.6
MEAN	3.93	18.0	8.69	62.5	4.50	3.74	6.37	5.78	3.55	3.06	3.03	4.02
MAX	8.9	388	68	602	27	19	9.3	7.6	4.5	4.1	3.4	19
MIN	2.8	1.4	2.0	2.5	2.6	2.1	3.6	3.3	2.7	2.2	2.6	2.4
AC-FT	242	1070	534	3840	250	230	379	356	211	188	186	239

e Estimated.

SANTA MARGARITA RIVER BASIN

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.04	10.4	21.4	32.6	114	90.3	26.7	10.2	7.01	5.41	5.01	5.93
MAX	11.8	39.3	99.9	369	1205	1007	226	40.2	15.1	9.90	9.65	19.4
(WY)	1942	1945	1941	1943	1927	1938	1941	1941	1941	1941	1941	1939
MIN	3.77	3.11	4.97	8.03	7.59	5.90	4.19	3.62	3.12	1.55	1.90	2.31
(WY)	1925	1930	1930	1936	1925	1931	1928	1929	1929	1929	1926	1926

SUMMARY STATISTICS

WATER YEARS 1923 - 1948

ANNUAL MEAN	28.2	
HIGHEST ANNUAL MEAN	101	1927
LOWEST ANNUAL MEAN	6.22	1925
HIGHEST DAILY MEAN	19900	Feb 16 1927
LOWEST DAILY MEAN	.90	Aug 9 1929
ANNUAL SEVEN-DAY MINIMUM	.99	Aug 8 1929
INSTANTANEOUS PEAK FLOW	25000	Feb 16 1927
INSTANTANEOUS PEAK STAGE	14.60	Feb 16 1927
ANNUAL RUNOFF (AC-FT)	20390	
10 PERCENT EXCEEDS	21	
50 PERCENT EXCEEDS	8.5	
90 PERCENT EXCEEDS	3.5	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1973, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.39	6.24	8.90	21.8	36.7	18.6	12.4	3.97	3.35	2.79	3.01	3.06
MAX	6.04	53.3	41.4	251	638	212	177	6.70	5.59	4.69	6.38	6.55
(WY)	1954	1966	1966	1952	1969	1952	1958	1949	1949	1949	1953	1953
MIN	2.05	2.22	2.69	2.73	2.54	2.57	2.35	2.39	2.19	1.51	1.28	1.45
(WY)	1967	1967	1965	1965	1965	1965	1972	1970	1973	1972	1972	1970

SUMMARY STATISTICS

WATER YEARS 1949 - 1973

ANNUAL MEAN	10.2	
HIGHEST ANNUAL MEAN	62.5	1969
LOWEST ANNUAL MEAN	2.96	1964
HIGHEST DAILY MEAN	7730	Feb 25 1969
LOWEST DAILY MEAN	.30	Aug 18 1966
ANNUAL SEVEN-DAY MINIMUM	.67	Aug 17 1966
INSTANTANEOUS PEAK FLOW	14600	Feb 25 1969
INSTANTANEOUS PEAK STAGE	15.32	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	7390	
10 PERCENT EXCEEDS	7.3	
50 PERCENT EXCEEDS	3.7	
90 PERCENT EXCEEDS	2.2	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.06	4.63	5.68	97.3	113	91.3	13.9	7.47	3.17	2.41	2.63	3.32
MAX	10.8	32.8	21.9	1255	1105	438	85.6	46.6	6.87	4.55	9.99	13.9
(WY)	1994	1986	1985	1993	1980	1978	1980	1980	1978	1980	1993	1976
MIN	1.25	.27	.51	2.35	1.84	.36	.32	.58	.72	.58	.91	1.33
(WY)	1982	1989	1990	1976	1989	1988	1989	1988	1984	1984	1984	1987

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1974 - 1997

ANNUAL TOTAL	2954.6	3897.8	
ANNUAL MEAN	8.07	10.7	28.6
HIGHEST ANNUAL MEAN			183
LOWEST ANNUAL MEAN			2.17
HIGHEST DAILY MEAN	388	Nov 22	602 Jan 26
LOWEST DAILY MEAN	1.4	Nov 7	1.4 Nov 7
ANNUAL SEVEN-DAY MINIMUM	1.5	Nov 4	1.5 Nov 4
INSTANTANEOUS PEAK FLOW			1480 Nov 22
INSTANTANEOUS PEAK STAGE			4.48 Nov 22
ANNUAL RUNOFF (AC-FT)	5860	7730	22.50 Jan 16 1993
10 PERCENT EXCEEDS	6.0	7.8	14
50 PERCENT EXCEEDS	3.4	3.4	2.6
90 PERCENT EXCEEDS	2.1	2.3	1.1

11044250 RAINBOW CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33°24'27", long 117°12'00", NW 1/4 SE 1/4 sec.9, T.9 S., R.3 W., San Diego County, Hydrologic Unit 18070302, on left bank 1.0 mi upstream of the confluence with Santa Margarita River and 3.4 mi northeast of Fallbrook.

DRAINAGE AREA.—10.3 mi².

PERIOD OF RECORD.—November 1989 to current year.

REVISED RECORDS.—WDR CA-91-1: 1990(M).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 540 ft above sea level, from topographic map.

REMARKS.—Records fair. No regulation upstream from station. Undetermined amount of water upstream from station used for irrigation by a local nursery. Water is imported for domestic use and irrigation. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,000 ft³/s (estimated), Jan. 16, 1993, gage height, unknown, on basis of slope-area measurement of peak flow; maximum recorded gage height, 8.24 ft, Jan. 4, 1995; minimum daily, 0.04 ft³/s, July 23, 24, July 27 to Aug. 1, and Aug. 3, 1996.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0300	358	5.46	Jan. 12	1630	220	4.78
Dec. 9	1930	134	4.39	Jan. 15	1930	145	4.44
Dec. 22	1600	294	5.12	Jan. 26	0400	273	5.03

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.34	.55	1.0	6.6	2.1	.98	.43	.19	.09	.07	.06
2	.16	.32	.44	1.1	6.0	1.8	1.0	.40	.19	.08	.07	.06
3	.17	.31	.41	1.7	5.5	1.7	.86	.34	.19	.07	.07	.06
4	.16	.30	.40	1.7	5.1	1.7	1.0	.29	.19	.07	.08	.06
5	.15	.31	.43	3.4	4.7	1.3	.79	.36	.19	.07	.08	.06
6	.16	.29	1.2	1.7	4.2	1.3	.75	.30	.19	.06	.08	.07
7	.16	.28	.63	1.2	3.7	1.6	.76	.29	.19	.05	.07	.07
8	.15	.27	.55	1.1	3.9	1.6	.87	.29	.20	.06	.06	.07
9	.15	.26	11	1.1	3.6	1.6	.73	.29	.18	.06	.07	.07
10	.15	.27	3.1	1.1	4.9	1.3	.68	.25	.17	.06	.07	.08
11	.14	.28	5.1	1.1	5.9	1.6	.91	.26	.17	.07	.07	.08
12	.15	.28	1.5	37	3.8	1.3	.72	.30	.17	.07	.07	.08
13	.16	.29	.97	46	2.9	1.2	.53	.25	.16	.07	.06	.09
14	.17	.33	.68	13	2.8	1.5	.51	.24	.16	.07	.06	.09
15	.18	.36	.67	18	2.9	1.5	.48	.24	.16	.08	.06	.10
16	.18	.37	.59	11	2.9	1.4	.58	.89	.16	.07	.07	.11
17	.19	.36	.69	6.4	2.7	1.1	.61	.83	.17	.08	.08	.11
18	.18	.35	.98	5.4	2.8	.88	.58	.88	.17	.06	.07	.11
19	.18	.37	.58	4.4	2.5	1.1	.52	.87	.17	.06	.07	.11
20	.19	.37	.69	3.9	2.8	.91	.44	.66	.14	.07	.07	.12
21	.18	23	.80	2.8	2.5	1.2	.43	.75	.13	.06	.07	.12
22	.16	67	37	3.1	2.4	1.6	.46	.84	.12	.07	.07	.12
23	.16	1.6	2.4	12	2.4	1.1	.53	.31	.12	.08	.06	.13
24	.17	.85	.88	4.8	2.1	1.1	.55	.57	.12	.08	.06	.29
25	.19	.73	.89	7.0	2.1	.88	.44	.30	.11	.08	.06	6.7
26	.19	.60	.89	135	2.2	1.0	.40	.27	.11	.08	.06	6.2
27	.19	.50	1.8	35	4.5	1.2	.38	.23	.11	.08	.05	.85
28	.19	.44	5.0	14	2.9	.93	.57	.20	.10	.08	.05	.55
29	.20	.54	1.2	11	---	1.1	.46	.22	.10	.08	.05	.52
30	4.9	.54	1.1	7.1	---	.93	.41	.21	.10	.08	.05	1.1
31	.57	---	1.1	7.1	---	.98	---	.19	---	.08	.06	---
TOTAL	10.39	102.11	84.22	415.5	101.3	40.51	18.93	12.75	4.63	2.22	2.04	18.24
MEAN	.34	3.40	2.72	13.4	3.62	1.31	.63	.41	.15	.072	.066	.61
MAX	4.9	67	37	135	6.6	2.1	1.0	.89	.20	.09	.08	6.7
MIN	.14	.26	.40	1.0	2.1	.88	.38	.19	.10	.05	.05	.06
AC-FT	21	203	167	824	201	80	38	25	9.2	4.4	4.0	36

SANTA MARGARITA RIVER BASIN

11044250 RAINBOW CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.49	.88	1.13	18.6	11.9	12.8	2.75	1.09	.70	.41	.40	.50
MAX	.70	3.40	2.72	97.3	55.3	55.4	6.70	2.28	1.53	.90	.75	1.25
(WY)	1996	1997	1997	1993	1993	1995	1995	1995	1990	1990	1995	1995
MIN	.34	.26	.46	.65	2.16	1.31	.63	.24	.15	.066	.066	.13
(WY)	1997	1993	1991	1991	1990	1997	1997	1996	1997	1996	1997	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1990 - 1997	
ANNUAL TOTAL	510.24		812.84			
ANNUAL MEAN	1.39		2.23		4.71	
HIGHEST ANNUAL MEAN					14.4	
LOWEST ANNUAL MEAN					1.03	
HIGHEST DAILY MEAN	67		135		800	
LOWEST DAILY MEAN	.04		.05		.04	
ANNUAL SEVEN-DAY MINIMUM	.04		.05		.04	
INSTANTANEOUS PEAK FLOW			358		8000	
INSTANTANEOUS PEAK STAGE			5.46		8.24	
ANNUAL RUNOFF (AC-FT)	1010		1610		3410	
10 PERCENT EXCEEDS	1.8		4.0		5.3	
50 PERCENT EXCEEDS	.31		.36		.63	
90 PERCENT EXCEEDS	.10		.07		.17	

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

LOCATION.—Lat 33°24'49", long 117°14'25", in NW 1/4 NW 1/4 sec.7, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 0.3 mi upstream of confluence with Sandia Creek and 2.9 mi north of Fallbrook.

DRAINAGE AREA.—620 mi².

PERIOD OF RECORD.—October 1989 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft above sea level, from topographic map.

REMARKS.—Records fair. Flow partly regulated since November 1948 by Vail Lake (station 11042510) and since 1974 by Skinner Reservoir. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 34,000 ft³/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 15.89 ft; no flow several days in 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	13	6.3	11	26	11	9.1	8.9	2.3	2.6	4.6	3.0
2	4.8	5.5	5.9	12	23	10	9.4	9.1	2.6	2.1	3.8	3.0
3	5.1	4.6	5.8	22	22	9.8	12	7.4	3.2	2.7	3.4	2.6
4	5.2	4.6	5.6	21	20	9.5	15	8.7	3.4	3.0	3.4	2.5
5	5.0	4.6	5.7	16	19	9.0	15	6.0	3.3	3.1	3.3	2.5
6	4.8	4.6	8.2	33	18	8.2	15	6.2	3.8	3.1	3.3	2.5
7	5.2	4.1	7.3	14	17	12	14	5.4	3.2	3.5	3.3	3.1
8	4.8	3.8	7.1	11	17	25	15	6.9	3.0	3.0	3.5	3.1
9	4.4	3.7	14	9.5	15	20	14	6.3	2.3	3.3	3.7	2.9
10	4.6	3.8	144	9.4	15	8.3	15	8.6	1.6	2.9	3.8	2.6
11	4.3	3.8	51	9.6	36	6.7	15	7.3	1.2	3.6	4.2	2.5
12	4.1	3.8	35	168	21	6.4	17	8.4	1.7	3.3	4.2	2.8
13	4.9	3.7	19	684	15	5.4	15	6.6	2.2	3.8	4.1	3.0
14	5.1	3.8	13	e174	13	5.5	16	8.0	2.8	4.1	4.2	3.1
15	5.5	4.4	9.9	e91	12	6.7	13	5.6	2.7	4.1	3.7	3.5
16	5.7	4.6	8.9	179	11	5.9	14	6.8	2.7	4.3	3.7	4.5
17	6.2	4.6	9.2	45	11	5.6	13	6.4	2.1	4.1	3.8	3.9
18	6.3	4.9	8.3	29	12	5.9	15	8.7	2.0	4.7	3.5	3.0
19	6.5	4.8	8.2	24	11	5.1	14	11	2.1	4.1	3.2	3.2
20	6.7	5.1	8.1	22	11	4.8	15	9.5	2.1	5.0	3.4	3.7
21	6.0	12	9.3	19	9.6	6.0	11	5.5	1.8	4.6	3.6	4.0
22	5.5	517	22	19	10	6.0	11	6.2	2.3	5.6	3.2	4.0
23	5.7	41	41	44	13	6.5	8.0	4.6	2.4	6.5	3.1	3.6
24	5.6	18	16	33	11	6.9	7.2	5.2	2.5	7.5	3.1	2.9
25	5.9	11	13	29	8.8	5.9	5.5	3.3	2.4	7.5	3.2	9.2
26	6.3	8.7	11	778	12	5.6	6.9	3.4	2.4	7.5	3.0	33
27	5.6	7.0	12	175	12	6.6	5.6	2.3	2.3	6.4	3.0	17
28	5.6	6.2	20	70	16	7.3	7.8	2.4	2.0	6.7	2.9	7.8
29	5.8	6.4	21	46	---	7.4	10	1.5	2.4	6.8	3.0	5.9
30	9.5	7.8	14	35	---	9.2	14	1.6	2.2	5.6	2.7	5.5
31	15	---	12	29	---	6.5	---	2.0	---	5.0	2.9	---
TOTAL	180.3	730.9	571.8	2861.5	437.4	254.7	367.5	189.8	73.0	140.1	107.8	153.9
MEAN	5.82	24.4	18.4	92.3	15.6	8.22	12.3	6.12	2.43	4.52	3.48	5.13
MAX	15	517	144	778	36	25	17	11	3.8	7.5	4.6	33
MIN	4.1	3.7	5.6	9.4	8.8	4.8	5.5	1.5	1.2	2.1	2.7	2.5
AC-FT	358	1450	1130	5680	868	505	729	376	145	278	214	305

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.98	7.46	11.7	244	172	139	24.1	15.6	8.87	5.29	5.04	5.37
MAX	15.7	24.4	31.1	1462	860	490	70.4	54.5	25.1	11.4	10.1	9.03
(WY)	1994	1997	1993	1993	1993	1991	1993	1993	1993	1993	1993	1993
MIN	4.31	1.48	1.66	4.65	15.6	2.50	4.51	6.12	2.43	2.11	1.00	1.22
(WY)	1991	1992	1990	1991	1997	1990	1990	1997	1997	1990	1990	1990

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1990 - 1997

ANNUAL TOTAL	4538.9	6068.7	
ANNUAL MEAN	12.4	16.6	53.3
HIGHEST ANNUAL MEAN			220
LOWEST ANNUAL MEAN			5.99
HIGHEST DAILY MEAN	517	Nov 22	778
LOWEST DAILY MEAN	2.1	Jul 25	1.2
ANNUAL SEVEN-DAY MINIMUM	2.6	Jul 21	2.1
INSTANTANEOUS PEAK FLOW			2050
INSTANTANEOUS PEAK STAGE			4.65
ANNUAL RUNOFF (AC-FT)	9000	12040	38630
10 PERCENT EXCEEDS	15	20	49
50 PERCENT EXCEEDS	6.3	6.0	6.5
90 PERCENT EXCEEDS	3.2	2.7	2.2

e Estimated.

11044350 SANDIA CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33°25'28", long 117°14'54", in SW 1/4 NE 1/4 sec.1, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 1.05 mi north of intersection of Sandia and Rock Mountain Roads, 0.8 mi upstream from mouth, and 3.8 mi north of Fallbrook.

DRAINAGE AREA.—21.1 mi².

PERIOD OF RECORD.—October 1989 to current year.

REVISED RECORDS.—WDR CA-91-1: 1990(M).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 380 ft above sea level, from topographic map. Prior to Sept. 30, 1993, at site 0.65 mi downstream at different datum.

REMARKS.—Records fair. No regulation or diversion upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,100 ft³/s, Jan. 16, 1993, gage height, 17.60 ft, site and datum then in use, from floodmarks (may have been affected by backwater from the Santa Margarita River); no flow for many days in summer of 1996.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 536 ft³/s on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0245	319	3.45	Jan. 13	0630	206	3.12
Dec. 9	2300	69	2.65	Jan. 26	0700	503	3.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	1.5	3.0	6.7	26	12	4.8	3.2	1.4	1.2	.41	.35
2	.23	1.2	2.6	6.9	26	12	4.8	3.0	1.2	.95	.39	.35
3	.30	1.3	2.6	10	26	11	5.2	2.5	1.6	.75	.49	.34
4	.52	1.5	1.7	8.0	25	11	5.8	2.5	2.0	.52	.24	.27
5	.44	1.4	2.0	9.6	24	10	4.7	2.9	1.9	.53	.13	.26
6	.54	1.5	3.1	9.8	23	9.9	4.7	2.7	2.3	.49	.22	.21
7	.16	1.3	1.8	8.7	22	9.4	5.2	2.8	2.0	.55	.11	.25
8	.18	1.0	1.9	7.7	22	9.4	5.4	2.4	2.0	.68	.11	.27
9	.22	.93	11	7.4	22	8.5	4.5	2.2	1.8	.62	.18	.17
10	.14	.67	20	7.5	23	7.5	4.4	2.2	1.6	.47	.14	.35
11	.16	1.1	35	7.3	25	7.3	3.9	2.3	1.7	.52	.28	.27
12	.22	1.4	18	31	22	6.9	3.8	2.8	1.8	.53	.24	.18
13	.21	1.0	11	98	21	6.8	3.8	2.5	1.9	.54	.26	.29
14	.55	1.2	9.2	44	18	6.3	4.3	2.3	2.1	.60	.25	.26
15	.52	1.3	7.3	33	19	6.6	3.8	1.9	2.0	.63	.30	.38
16	.38	1.2	6.9	29	18	7.1	3.4	1.6	2.0	.65	.24	.57
17	.50	1.4	6.5	20	18	7.2	3.8	1.5	1.9	.65	.35	.40
18	.48	1.5	5.9	17	17	6.0	3.8	1.7	2.0	.67	.51	.27
19	.74	2.5	5.9	15	16	5.6	4.0	2.4	1.6	.65	.46	.21
20	.31	2.5	5.9	14	16	5.4	4.1	2.2	1.5	.72	.38	.19
21	.63	7.4	5.9	13	15	5.5	4.7	1.8	1.4	.99	.29	.14
22	.67	38	12	13	15	5.1	4.2	1.8	1.4	.87	.33	.26
23	.25	6.8	9.3	26	15	5.3	3.9	1.8	1.6	.70	.18	.13
24	.18	4.6	7.2	19	13	6.0	3.9	1.9	1.5	.71	.24	.04
25	.35	3.9	6.5	18	13	5.3	3.4	2.2	1.3	.93	.32	1.1
26	.48	3.5	6.2	224	13	4.7	3.0	2.1	1.2	.76	.17	1.9
27	.41	3.1	6.8	60	14	4.8	2.9	1.8	1.5	.49	.12	2.3
28	.56	3.1	13	39	14	4.9	3.2	1.6	1.1	.63	.11	1.8
29	.65	3.1	8.7	32	---	4.9	3.5	1.3	1.3	1.0	.19	1.2
30	2.4	2.9	7.6	30	---	5.4	3.7	1.7	1.4	.77	.18	1.1
31	2.8	---	7.1	27	---	5.6	---	1.6	---	.56	.34	---
TOTAL	16.37	103.80	251.6	891.6	541	223.4	124.6	67.2	50.0	21.33	8.16	15.81
MEAN	.53	3.46	8.12	28.8	19.3	7.21	4.15	2.17	1.67	.69	.26	.53
MAX	2.8	38	35	224	26	12	5.8	3.2	2.3	1.2	.51	2.3
MIN	.14	.67	1.7	6.7	13	4.7	2.9	1.3	1.1	.47	.11	.04
AC-FT	32	206	499	1770	1070	443	247	133	99	42	16	31

SANTA MARGARITA RIVER BASIN

187

11044350 SANDIA CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.39	2.14	3.31	45.2	29.5	28.6	10.9	5.94	4.00	1.84	1.08	.82
MAX	2.27	3.46	8.12	237	128	79.8	28.0	11.0	8.04	4.12	2.41	1.30
(WY)	1994	1997	1997	1993	1993	1995	1995	1995	1993	1995	1992	1992
MIN	.53	1.34	1.88	2.77	5.34	4.28	3.73	2.17	1.02	.31	.030	.062
(WY)	1997	1992	1990	1991	1991	1990	1996	1997	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1990 - 1997			
ANNUAL TOTAL	1230.06				2314.87							
ANNUAL MEAN	3.36				6.34				11.2			
HIGHEST ANNUAL MEAN									36.8			
LOWEST ANNUAL MEAN									2.65			
HIGHEST DAILY MEAN	38 Nov 22				224 Jan 26				2000 Jan 16 1993			
LOWEST DAILY MEAN	.00 Jul 26				.04 Sep 24				.00 Jul 26 1996			
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 14				.16 Aug 4				.00 Aug 14 1996			
INSTANTANEOUS PEAK FLOW					503 Jan 26				5100 Jan 16 1993			
INSTANTANEOUS PEAK STAGE					3.92 Jan 26				17.60 Jan 16 1993			
ANNUAL RUNOFF (AC-FT)	2440				4590				8080			
10 PERCENT EXCEEDS	8.0				17				17			
50 PERCENT EXCEEDS	2.0				2.0				2.5			
90 PERCENT EXCEEDS	.00				.25				.57			

11044800 DE LUZ CREEK NEAR DE LUZ, CA

LOCATION.—Lat 33°25'11", long 117°19'15", in SW 1/4 SE 1/4 sec. 5, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 4.85 mi upstream from mouth and 1.2 mi south of De Luz.

DRAINAGE AREA.—33.0 mi².

PERIOD OF RECORD.—October 1992 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above sea level, from topographic map. February 1951 to September 1965 and October 1989 to September 1991, at site 4.2 mi downstream (published as 11044900, De Luz Creek near Fallbrook).

REMARKS.—Records good. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,700 ft³/s, Jan. 16, 1993, gage height, 15.13 ft, on basis of flow-over-road computation; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 385 ft³/s on basis of flow-over-road computation:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 11	1745	158	5.29	Jan. 23	1130	110	5.07
Jan. 13	0630	224	5.54	Jan. 26	0600	649	6.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.5	6.0	27	5.3	3.1	1.4	.23	.00	.00	.00
2	.00	.00	1.3	5.4	24	5.1	3.4	1.4	.18	.00	.00	.00
3	.00	.00	1.4	12	23	5.4	3.6	1.2	.16	.00	.00	.00
4	.00	.00	1.7	12	20	4.5	3.8	1.1	.15	.00	.00	.00
5	.00	.00	1.7	10	19	4.4	3.8	1.1	.18	.00	.00	.00
6	.00	.00	1.8	13	19	4.3	3.6	.94	.20	.00	.00	.00
7	.00	.00	1.9	7.8	17	4.3	3.2	.93	.20	.00	.00	.00
8	.00	.00	2.0	6.7	17	3.9	3.0	.87	.22	.00	.00	.00
9	.00	.00	6.8	6.0	15	3.6	2.9	.91	.19	.00	.00	.00
10	.00	.00	19	5.1	15	3.2	3.1	.87	.17	.00	.00	.00
11	.00	.00	91	4.4	17	3.0	2.9	.89	.20	.00	.00	.00
12	.00	.00	39	33	15	3.2	2.3	.85	.17	.00	.00	.00
13	.00	.00	17	141	13	3.3	2.0	.80	.21	.00	.00	.00
14	.00	.00	9.9	70	12	3.2	2.3	.73	.25	.00	.00	.00
15	.00	.35	6.4	55	11	3.3	2.1	.64	.22	.00	.00	.00
16	.00	1.1	5.3	59	10	3.2	2.2	.58	.18	.00	.00	.00
17	.00	1.0	4.7	32	11	3.4	1.9	.56	.13	.00	.00	.00
18	.00	.74	3.5	25	9.4	2.7	2.0	.68	.09	.00	.00	.00
19	.00	.84	4.0	21	8.3	2.4	1.9	.65	.06	.00	.00	.00
20	.00	.86	4.2	20	7.6	2.2	1.7	.68	.04	.00	.00	.00
21	.00	2.2	4.3	18	7.2	2.5	1.6	.60	.05	.00	.00	.00
22	.00	17	6.7	17	6.6	2.7	1.5	.52	.03	.00	.00	.00
23	.00	4.9	7.3	58	6.6	2.9	1.5	.45	.03	.00	.00	.00
24	.00	2.9	5.1	33	5.7	3.7	1.6	.44	.00	.00	.00	.00
25	.00	2.2	4.4	28	5.7	3.5	1.4	.44	.00	.00	.00	.00
26	.00	1.7	4.2	314	5.9	3.1	1.3	.41	.00	.00	.00	.00
27	.00	1.4	4.7	122	6.3	3.2	1.2	.38	.00	.00	.00	.00
28	.00	1.7	21	68	6.4	3.4	1.3	.30	.00	.00	.00	.00
29	.00	1.6	14	49	---	2.8	1.5	.26	.00	.00	.00	.00
30	.00	1.6	9.1	37	---	2.7	1.5	.23	.00	.00	.00	.00
31	.00	---	7.2	29	---	2.8	---	.25	---	.00	.00	---
TOTAL	0.00	42.09	312.1	1317.4	360.7	107.2	69.2	22.06	3.54	0.00	0.00	0.00
MEAN	.000	1.40	10.1	42.5	12.9	3.46	2.31	.71	.12	.000	.000	.000
MAX	.00	17	91	314	27	5.4	3.8	1.4	.25	.00	.00	.00
MIN	.00	.00	1.3	4.4	5.7	2.2	1.2	.23	.00	.00	.00	.00
AC-FT	.00	83	619	2610	715	213	137	44	7.0	.00	.00	.00

SANTA MARGARITA RIVER BASIN

189

11044800 DE LUZ CREEK NEAR DE LUZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.41	.92	3.34	109	65.4	51.1	11.9	4.95	2.92	.88	.28	.14
MAX	1.07	1.40	10.1	365	200	189	32.7	10.6	7.33	2.30	.73	.40
(WY)	1993	1997	1997	1993	1993	1995	1995	1995	1993	1993	1995	1993
MIN	.000	.000	.33	1.56	12.9	3.46	2.31	.71	.12	.000	.000	.000
(WY)	1995	1995	1995	1994	1997	1997	1997	1997	1997	1996	1994	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1993 - 1997	
ANNUAL TOTAL	1235.21		2234.29			
ANNUAL MEAN	3.37		6.12		20.8	
HIGHEST ANNUAL MEAN					53.9	
LOWEST ANNUAL MEAN					2.69	
HIGHEST DAILY MEAN	91	Dec 11	314	Jan 26	3220	Jan 16 1993
LOWEST DAILY MEAN	.00	Jun 28	.00	Oct 1	.00	Aug 1 1994
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 28	.00	Oct 1	.00	Aug 1 1994
INSTANTANEOUS PEAK FLOW			649	Jan 26	9700	Jan 16 1993
INSTANTANEOUS PEAK STAGE			6.63	Jan 26	15.13	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	2450		4430		15040	
10 PERCENT EXCEEDS	7.5		15		33	
50 PERCENT EXCEEDS	1.1		.65		1.3	
90 PERCENT EXCEEDS	.00		.00		.00	

11045300 FALLBROOK CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33°20'49", long 117°19'01", in SE 1/4 SE 1/4 sec.32, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank at culvert on DeLuz Road, 0.75 mi upstream from O'Neill Lake, and 4.5 mi southwest of Fallbrook.

DRAINAGE AREA.—6.97 mi².

PERIOD OF RECORD.—October 1993 to current year. Discharge records for October 1964 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control with low water Parshall flume. Elevation of gage is 190 ft above sea level, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are poor. Slight regulation by two small storage reservoirs upstream from station. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 782 ft³/s, Jan. 4, 1995, gage height, 8.92 ft, from rating curve extended above 140 ft³/s on basis of culvert computation; no flow for many days in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0415	258	4.36	Jan. 26	0500	322	5.03
Jan. 13	0615	219	3.92				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.50	.96	1.2	3.3	1.8	.69	.51	.18	.04	.03	.03
2	.01	.50	.96	1.1	3.1	1.3	.69	.51	.16	.03	.02	e.03
3	.01	.46	.90	12	2.9	1.2	.75	.52	.16	.02	.02	e.03
4	.01	.44	.82	2.8	2.8	1.2	1.7	.52	.17	.03	.02	e.02
5	.01	.43	.84	1.7	2.5	1.2	1.2	.51	.17	.03	.02	e.02
6	.01	.39	.96	1.6	2.4	1.1	.98	.49	.18	.03	.02	e.02
7	.01	.35	.96	1.1	2.3	1.1	.92	.48	.20	.03	.02	e.02
8	.01	.29	.96	1.1	2.1	1.1	.82	.48	.20	.03	.03	e.02
9	.01	.26	4.5	1.1	2.1	1.1	.82	.47	.19	.02	.04	e.02
10	.01	.25	12	1.1	2.2	1.0	.85	.44	.18	.02	.04	e.02
11	.01	.23	30	1.1	4.5	.97	.96	.45	.17	.02	.04	e.02
12	.01	.20	7.9	22	2.3	1.1	.96	.44	.16	.02	.03	e.02
13	.01	.17	2.4	53	1.9	1.1	.93	.44	.17	.02	.04	e.02
14	.01	.18	1.6	8.4	1.6	1.1	.96	.43	.18	.03	.04	e.02
15	.02	.18	1.2	9.3	1.6	1.1	.90	.42	.19	.02	.04	e.02
16	.02	.17	1.1	11	1.6	1.1	.91	.40	.19	.02	.04	e.02
17	.02	.18	1.1	3.4	1.6	1.1	.78	.39	.18	.02	.04	e.02
18	.01	.19	1.0	2.6	1.7	1.0	.90	.38	.18	.02	.03	e.02
19	.02	.21	.96	2.4	1.6	1.0	.82	.37	.17	.02	.03	e.02
20	.01	.21	.96	2.2	1.6	.97	.82	.36	.15	.02	.04	e.02
21	.01	3.4	.83	2.1	1.6	1.0	.82	.34	.13	.03	.04	e.02
22	.01	68	1.7	2.1	1.5	1.1	.77	.33	.11	.03	.04	e.02
23	.01	15	3.8	20	1.5	1.1	.63	.31	.09	.03	.03	e.02
24	.02	2.0	1.1	4.5	1.5	1.0	.62	.30	.08	.03	.03	e.02
25	.02	1.3	.96	3.8	1.4	1.1	.56	.31	.07	.03	.04	e.65
26	.02	1.1	.96	97	1.4	1.1	.55	.30	.06	.02	.05	e.40
27	.02	1.0	1.0	29	2.0	1.1	.52	.28	.06	.02	.04	e.33
28	.03	.96	12	7.9	4.7	1.1	.59	.25	.07	.02	.05	e.30
29	.04	.96	2.3	5.7	---	1.0	.51	.23	.06	.03	.04	e.24
30	.11	.96	1.3	4.5	---	.86	.51	.21	.05	.03	.04	e.21
31	.43	---	1.2	3.8	---	.69	---	.20	---	.03	.03	---
TOTAL	0.96	100.47	99.23	320.6	61.3	33.79	24.44	12.07	4.31	0.79	1.06	2.64
MEAN	.031	3.35	3.20	10.3	2.19	1.09	.81	.39	.14	.025	.034	.088
MAX	.43	68	30	97	4.7	1.8	1.7	.52	.20	.04	.05	.65
MIN	.01	.17	.82	1.1	1.4	.69	.51	.20	.05	.02	.02	.02
AC-FT	1.9	199	197	636	122	67	48	24	8.5	1.6	2.1	5.2

e Estimated.

SANTA MARGARITA RIVER BASIN

191

11045300 FALLBROOK CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.14	1.13	1.22	7.83	3.73	7.55	1.82	1.04	.62	.23	.12	.075
MAX	.29	3.35	3.20	18.5	5.39	23.8	3.73	1.74	1.50	.73	.41	.20
(WY)	1996	1997	1997	1995	1994	1995	1995	1995	1995	1995	1995	1995
MIN	.015	.13	.33	.87	2.19	1.09	.81	.39	.14	.025	.024	.001
(WY)	1995	1995	1995	1994	1997	1997	1997	1997	1997	1997	1996	1994

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1994 - 1997		
ANNUAL TOTAL	508.33			661.66			2.13		
ANNUAL MEAN	1.39			1.81			4.60		
HIGHEST ANNUAL MEAN							1995		
LOWEST ANNUAL MEAN							.97		
HIGHEST DAILY MEAN	68			97			256		
LOWEST DAILY MEAN	.00			.01			.00		
ANNUAL SEVEN-DAY MINIMUM	.01			.01			.00		
INSTANTANEOUS PEAK FLOW				322			782		
INSTANTANEOUS PEAK STAGE				5.03			8.92		
ANNUAL RUNOFF (AC-FT)	1010			1310			1540		
10 PERCENT EXCEEDS	1.7			2.4			2.6		
50 PERCENT EXCEEDS	.50			.42			.51		
90 PERCENT EXCEEDS	.01			.02			.02		

11046000 SANTA MARGARITA RIVER AT YSIDORA, CA

LOCATION.—Lat 33°18'40", long 117°20'47", in NW 1/4 NW 1/4 sec.18, T.10 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank upstream side of Basilone Road Bridge, 7.9 mi upstream from mouth, and 5.2 mi upstream from Ysidora.

DRAINAGE AREA.—723 mi².

PERIOD OF RECORD.—February 1923 to current year. Low-flow records not equivalent prior to Dec. 10, 1980, due to installation of conservation ponds above downstream site.

REVISED RECORDS.—WDR CA-87-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 75 ft above sea level, from topographic map. February 1923 to Feb. 16, 1927, at site 4.4 mi downstream at different datum (destroyed by flood). Feb. 17, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Feb. 24, 1970, at site 5.4 mi downstream at different datum; Feb. 25, 1970, to Dec. 10, 1980, at site 6.2 mi downstream at different datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow partly regulated by Vail Lake (station 11042510) since November 1948 and by Skinner Reservoir since 1974. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 44,000 ft³/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 20.47 ft; no flow for all or part of most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	20	35	187	52	10	7.3	2.1	.00	.00	.00
2	.00	.00	14	33	170	47	10	6.1	1.9	.00	.00	.00
3	.00	.00	17	36	157	48	11	7.7	1.5	.00	.00	.00
4	.00	.00	18	54	129	46	11	7.5	1.3	.00	.00	.00
5	.00	.00	14	40	95	43	13	7.0	1.1	.00	.00	.00
6	.00	.00	21	47	81	e43	14	6.1	1.3	.00	.00	.00
7	.00	.00	23	39	66	42	13	6.4	1.6	.00	.00	.00
8	.00	.00	16	e30	67	e40	11	5.4	1.2	.00	.00	.00
9	.00	.00	21	e26	72	e38	9.7	5.0	.36	.00	.00	.00
10	.00	.00	125	27	68	e37	11	4.0	.02	.00	.00	.00
11	.00	.00	130	28	e70	e36	12	4.0	.00	.00	.00	.00
12	.00	.00	125	41	e67	e33	12	4.6	.00	.00	.00	.00
13	.00	.00	79	1120	67	e30	10	4.0	.00	.00	.00	.00
14	.00	.00	60	523	57	e27	8.8	4.7	.00	.00	.00	.00
15	.00	.00	49	297	54	e26	9.6	3.3	.00	.00	.00	.00
16	.00	.00	41	394	56	e25	11	3.9	.00	.00	.00	.00
17	.00	.00	37	236	52	e23	11	4.6	.00	.00	.00	.00
18	.00	.00	34	175	51	e21	11	4.7	.00	.00	.00	.00
19	.00	.00	32	120	e51	e20	9.9	4.6	.00	.00	.00	.00
20	.00	.00	30	99	e51	19	10	4.3	e.00	.00	.00	.00
21	.00	1.2	28	80	e50	20	11	4.0	e.00	.00	.00	.00
22	.00	823	29	68	e50	19	11	4.4	.00	.00	.00	.00
23	.00	207	64	107	e52	17	11	4.7	.00	.00	.00	.00
24	.00	48	50	138	e53	17	9.0	3.9	.00	.00	.00	.00
25	.00	28	38	111	55	16	8.3	3.4	.00	.00	.00	.00
26	.00	23	36	1760	53	16	7.9	3.1	.00	.00	.00	.00
27	.00	22	33	620	50	15	8.6	3.1	.00	.00	.00	.00
28	.00	21	58	334	55	14	8.6	2.8	.00	.00	.00	.00
29	.00	21	65	262	---	13	8.8	2.8	.00	.00	.00	.00
30	.00	22	44	233	---	13	7.7	2.5	.00	.00	.00	.00
31	.00	---	36	202	---	12	---	2.1	---	.00	.00	---
TOTAL	0.00	1216.20	1387	7315	2086	868	310.9	142.0	12.38	0.00	0.00	0.00
MEAN	.000	40.5	44.7	236	74.5	28.0	10.4	4.58	.41	.000	.000	.000
MAX	.00	823	130	1760	187	52	14	7.7	2.1	.00	.00	.00
MIN	.00	.00	14	26	50	12	7.7	2.1	.00	.00	.00	.00
AC-FT	.00	2410	2750	14510	4140	1720	617	282	25	.00	.00	.00

e Estimated.

SANTA MARGARITA RIVER BASIN

193

11046000 SANTA MARGARITA RIVER AT YSIDORA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.31	6.31	30.9	58.5	152	190	58.9	11.8	3.21	.54	.29	.88
MAX	13.3	65.8	141	532	1002	1730	465	101	28.7	3.15	2.30	13.5
(WY)	1942	1945	1941	1943	1937	1938	1941	1941	1941	1936	1935	1939
MIN	.000	.000	.000	.000	1.32	1.18	1.33	.000	.000	.000	.000	.000
(WY)	1924	1924	1948	1948	1925	1925	1925	1948	1923	1923	1923	1923

SUMMARY STATISTICS

WATER YEARS 1923 - 1948

ANNUAL MEAN	43.3	
HIGHEST ANNUAL MEAN	169	1938
LOWEST ANNUAL MEAN	.77	1948
HIGHEST DAILY MEAN	15500	Mar 3 1938
LOWEST DAILY MEAN	.00	May 11 1923
ANNUAL SEVEN-DAY MINIMUM	.00	May 11 1923
INSTANTANEOUS PEAK FLOW	33600	Feb 16 1927
INSTANTANEOUS PEAK STAGE	18.00	Feb 16 1927
ANNUAL RUNOFF (AC-FT)	31390	
10 PERCENT EXCEEDS	53	
50 PERCENT EXCEEDS	1.6	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1980, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.007	1.31	4.30	69.8	153	84.3	26.3	3.84	.65	.17	.036	.030
MAX	.23	41.7	71.7	749	2249	1071	379	52.7	12.1	3.14	.80	.67
(WY)	1970	1966	1967	1978	1980	1978	1958	1980	1979	1979	1980	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1949	1949	1949	1949	1950	1950	1949	1949	1949	1949	1949	1949

SUMMARY STATISTICS

WATER YEARS 1949 - 1980

ANNUAL MEAN	27.9	
HIGHEST ANNUAL MEAN	282	1980
LOWEST ANNUAL MEAN	.000	1950
HIGHEST DAILY MEAN	18000	Feb 21 1980
LOWEST DAILY MEAN	.00	Oct 1 1948
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1948
INSTANTANEOUS PEAK FLOW	24000	Feb 18 1980
INSTANTANEOUS PEAK STAGE	18.80	Feb 18 1980
ANNUAL RUNOFF (AC-FT)	20250	
10 PERCENT EXCEEDS	4.4	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.45	16.6	30.2	213	157	194	46.7	21.2	9.27	2.87	2.91	1.31
MAX	39.3	62.0	124	2261	1296	896	202	89.1	31.5	9.69	31.6	5.19
(WY)	1984	1984	1984	1993	1993	1995	1983	1983	1995	1983	1983	1993
MIN	.000	.000	.013	4.74	8.27	3.85	4.16	1.58	.000	.000	.000	.000
(WY)	1982	1985	1990	1991	1989	1987	1984	1984	1984	1981	1981	1981

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1981 - 1997

ANNUAL TOTAL	7741.15	13337.48	
ANNUAL MEAN	21.2	36.5	58.1
HIGHEST ANNUAL MEAN			337
LOWEST ANNUAL MEAN			4.59
HIGHEST DAILY MEAN	823	Nov 22	1760
LOWEST DAILY MEAN	.00	Jun 14	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 14	.00
INSTANTANEOUS PEAK FLOW			4030
INSTANTANEOUS PEAK STAGE			9.45
ANNUAL RUNOFF (AC-FT)	15350	26450	42060
10 PERCENT EXCEEDS	44	67	70
50 PERCENT EXCEEDS	3.6	3.9	7.0
90 PERCENT EXCEEDS	.00	.00	.00

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA

LOCATION.—Lat 33°14'08", long 117°24'27", in SW 1/4 NE 1/4 sec.9, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank 300 ft downstream from bridge on Interstate Highway 5, 0.5 mi upstream from mouth, and 3.5 mi northwest of Oceanside.

DRAINAGE AREA.—744 mi².

GAGE-HEIGHT RECORDS

PERIOD OF RECORD.—October 1989 to current year. Unpublished records for water year 1989 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Datum of gage is 2.78 ft below sea level.

REMARKS.—Gage height generally affected by tide. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum gage height, 15.10 ft, from floodmarks and hydrographers' notes, Jan. 16, 1993; minimum recorded gage height, 2.64 ft, but known to have been lower than elevation of sensor at times on several days during Spring 1993.

EXTREMES FOR CURRENT YEAR.—Maximum gage height, 9.27 ft, Nov. 24–26; minimum gage height, 3.11 ft, Dec. 5.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.51	6.45	7.29	7.24	4.11	3.21	4.78	4.06	5.14	4.24	5.02	3.73
2	6.54	6.47	7.31	7.25	4.05	3.20	5.16	4.26	5.57	4.21	4.70	3.72
3	6.55	6.49	7.30	7.26	4.31	3.21	5.83	4.37	6.11	4.17	4.95	3.73
4	6.58	6.52	7.31	7.27	4.47	3.18	5.95	4.36	6.56	4.12	5.66	3.71
5	6.61	6.54	7.31	7.28	4.85	3.11	6.40	4.22	7.18	4.09	5.78	3.76
6	6.64	6.58	7.34	7.28	5.80	3.24	6.77	4.19	7.21	4.03	6.39	3.74
7	6.66	6.60	7.36	7.29	6.11	3.27	6.77	4.13	7.33	3.93	6.89	3.70
8	6.68	6.63	7.36	7.29	6.49	3.34	6.99	4.01	7.20	3.92	7.00	3.73
9	6.70	6.65	7.35	7.28	6.89	3.44	7.05	3.92	6.64	3.91	6.79	3.79
10	6.72	6.67	7.35	7.29	7.34	3.53	7.08	3.91	6.00	3.93	6.57	3.69
11	6.78	6.70	7.36	7.30	7.36	4.13	6.92	3.91	5.87	3.93	6.37	3.65
12	6.77	6.72	7.37	7.31	7.10	4.05	6.63	3.94	5.69	3.96	6.20	3.61
13	6.82	6.74	7.37	7.33	---	---	6.36	4.86	5.58	3.92	6.03	3.60
14	6.82	6.75	7.36	7.34	---	---	6.04	4.54	5.15	3.89	5.79	3.60
15	6.83	6.77	7.37	7.36	---	---	5.55	4.22	5.20	3.89	5.43	3.62
16	6.82	6.80	7.39	7.36	---	---	5.65	4.24	5.45	3.87	5.03	3.61
17	6.86	6.81	7.40	7.36	---	---	5.87	4.13	5.62	3.89	4.94	3.57
18	6.86	6.82	7.41	7.37	---	---	6.24	4.02	6.27	3.83	5.17	3.56
19	6.88	6.84	7.39	7.38	---	---	6.45	3.91	6.02	3.82	5.35	3.54
20	6.91	6.84	7.41	7.39	---	---	6.54	3.84	6.22	3.82	5.71	3.52
21	6.90	6.84	7.75	7.39	---	---	6.64	3.79	5.89	3.80	5.90	3.50
22	6.90	6.84	8.60	7.75	---	---	6.65	3.76	5.75	3.80	5.86	3.35
23	6.91	6.85	9.21	8.60	---	---	6.49	3.79	5.86	3.78	5.73	3.34
24	6.93	6.86	9.27	9.21	---	---	6.45	3.97	5.34	3.76	5.75	3.33
25	6.93	6.87	9.27	9.24	---	---	6.06	3.91	5.13	3.75	5.75	3.30
26	7.13	6.90	9.27	5.78	---	---	6.28	4.23	5.50	3.76	5.82	3.30
27	7.13	7.06	6.10	3.37	---	---	5.74	4.84	5.97	3.80	5.63	3.29
28	7.12	7.07	5.82	3.36	---	---	5.15	4.60	6.10	3.75	5.61	3.28
29	7.12	7.08	5.58	3.29	---	---	4.92	4.45	---	---	5.59	3.29
30	7.23	7.10	4.64	3.24	---	---	4.80	4.36	---	---	5.37	3.35
31	7.27	7.23	---	---	4.64	4.06	5.00	4.30	---	---	5.09	3.35
MONTH	7.27	6.45	9.27	3.24	---	---	7.08	3.76	7.33	3.75	7.00	3.28

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.18	3.35	5.26	3.52	7.18	4.24	6.91	4.03	7.04	3.97	6.49	3.97
2	5.59	3.33	5.73	3.57	7.43	4.39	6.97	4.06	7.12	4.03	6.11	3.95
3	5.78	3.37	6.10	3.65	7.39	4.29	6.95	4.02	6.94	4.12	5.91	3.96
4	6.13	3.47	6.58	3.79	7.36	4.04	6.83	4.01	6.66	4.21	5.79	3.99
5	6.37	3.41	6.94	3.77	7.50	3.99	6.66	3.95	6.41	4.24	5.68	3.98
6	6.48	3.42	6.99	3.73	7.14	3.95	6.44	3.98	6.31	4.28	5.49	3.90
7	6.64	3.42	6.90	3.81	6.57	3.90	6.20	3.98	5.93	4.40	5.47	3.83
8	6.65	3.39	6.53	3.76	6.34	3.86	6.05	3.93	5.93	4.79	5.50	3.85
9	6.80	3.43	6.26	3.72	6.02	3.81	5.51	3.93	5.49	4.67	5.56	3.90
10	6.75	3.38	6.09	3.73	5.37	3.75	5.23	3.92	5.29	4.56	5.68	3.95
11	6.17	3.40	5.68	3.72	4.71	3.64	4.78	3.83	5.41	4.50	6.18	4.06
12	5.61	3.42	5.14	3.65	4.65	3.57	4.98	3.73	5.74	4.44	6.62	4.10
13	5.04	3.43	4.61	3.58	5.24	3.68	5.26	3.70	6.27	4.36	6.87	4.03
14	4.54	3.40	4.52	3.55	5.32	3.61	5.66	3.70	6.72	4.39	7.13	4.02
15	4.24	3.39	4.95	3.59	5.62	3.61	6.21	3.77	7.17	4.33	7.48	4.07
16	4.44	3.38	5.27	3.68	5.94	3.62	6.72	3.88	7.51	4.29	7.39	4.28
17	4.63	3.37	5.69	3.73	6.41	3.70	7.17	3.98	7.69	4.26	7.12	4.28
18	4.93	3.36	6.01	3.84	6.65	3.80	7.63	4.06	7.70	4.21	7.42	4.27
19	5.06	3.36	6.36	3.91	7.02	3.87	7.58	4.05	7.54	4.20	7.31	4.19
20	5.44	3.36	6.68	4.01	7.33	4.13	7.60	4.01	7.00	4.24	6.86	4.09
21	5.78	3.36	6.87	3.87	7.22	4.24	7.26	3.99	6.78	4.15	6.39	4.05
22	6.01	3.36	7.00	3.75	7.04	4.18	6.93	3.96	6.38	4.05	6.03	4.00
23	6.65	3.43	7.07	3.75	6.81	4.14	6.66	3.91	6.24	3.98	5.95	3.97
24	6.36	3.55	7.07	3.75	6.64	4.11	5.82	3.85	6.20	3.91	5.99	4.01
25	6.12	3.52	6.86	3.81	6.05	4.04	5.74	3.78	6.24	3.92	6.23	4.12
26	5.96	3.36	6.78	3.78	5.35	3.99	5.90	3.69	6.18	3.94	6.06	4.41
27	5.53	3.33	6.12	3.72	5.75	3.94	6.08	3.63	6.42	3.93	6.80	4.58
28	5.34	3.40	5.70	3.74	6.09	3.89	6.24	3.67	6.58	3.96	6.83	4.61
29	5.18	3.41	5.91	3.79	6.58	3.93	6.46	3.73	6.60	3.95	6.51	4.40
30	4.99	3.42	6.25	3.87	6.75	4.00	6.68	3.81	6.71	3.95	6.22	4.36
31	---	---	6.64	4.00	---	---	6.92	3.89	6.70	3.97	---	---
MONTH	6.80	3.33	7.07	3.52	7.50	3.57	7.63	3.63	7.70	3.91	7.48	3.83

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1993 to current year.

pH: October 1993 to current year.

WATER TEMPERATURE: October 1993 to current year.

DISSOLVED OXYGEN: October 1993 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1993.

REMARKS.—Interruptions in record at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 53,700 microsiemens, Oct. 5, 1995; minimum recorded, 234 microsiemens, Mar. 5, 1995.

pH: Maximum recorded, 9.6 standard units, Dec. 21, 22, 1996; minimum recorded, 6.2 standard units, Nov. 26, 1993.

WATER TEMPERATURE: Maximum recorded, 32.0°C, July 29, 1995, June 9, and Aug. 14, 16, 1996; minimum recorded, 5.0°C, Nov. 21, 1994.

DISSOLVED OXYGEN: Maximum recorded, 20.9 mg/L, May 1, 1996; minimum recorded, 0.0 mg/L, May 19, Aug. 29, 1994.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 51,300 microsiemens, July 31, Aug. 1, 15, 17, 18, 21, 28; minimum recorded, 450 microsiemens, Jan. 19.

pH: Maximum recorded, 9.6 standard units, Dec. 21, 22; minimum recorded, 6.9 standard units, Dec. 16.

WATER TEMPERATURE: Maximum recorded, 30.5°C, June 1; minimum recorded, 5.5°C, Dec. 4.

DISSOLVED OXYGEN: Maximum recorded, 20.0 mg/L, Feb. 11; minimum recorded, 1.4 mg/L, Nov. 21.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	38900	38100	33800	32000	---	---	2690	1190	1370	1290	21900	1660
2	38700	37400	32800	31600	---	---	32900	1890	1530	1360	35900	1650
3	38400	37100	32700	31300	---	---	42100	1480	3090	1430	40400	1650
4	37900	35400	32200	31400	---	---	46700	1720	24200	1500	39100	1770
5	38100	36400	32600	31500	---	---	45400	1940	46100	1580	42200	1640
6	37400	35800	32300	30800	46200	4330	47900	2020	46900	1690	44000	1740
7	37000	34800	32200	30700	---	---	40800	1750	47100	1830	44600	2480
8	36900	35400	32300	31100	---	---	42800	1970	42900	2500	44600	2950
9	36200	35400	31900	31000	49100	17500	47900	1170	43500	2250	40400	2070
10	35900	34900	31900	30800	---	---	50000	3070	43500	2500	43400	2090
11	35200	34000	32000	30500	43200	850	49900	1340	43500	2050	43700	2520
12	35000	34000	31800	30500	15200	1010	48300	1270	20900	1970	44000	2380
13	34700	33500	32000	30800	38100	1420	14400	575	6140	1970	44000	2210
14	34400	33100	31700	30600	47100	630	765	570	10700	2070	42600	2130
15	34000	32700	30800	30000	5650	3040	990	765	37400	2120	39500	2080
16	34500	33100	31500	30000	---	---	980	790	6990	2100	42500	2080
17	35200	33800	31400	30200	47900	3170	1060	795	13500	2150	31700	1920
18	34600	33500	31200	30100	---	---	41200	1060	46600	2170	30600	2060
19	34200	32700	31200	30400	41800	7490	47600	450	46100	2430	43100	2350
20	34100	32600	30800	30100	47800	4000	46000	470	46700	2440	43900	3020
21	33800	32600	30700	29200	48300	1270	35100	770	43800	1910	43900	3950
22	33600	32600	29400	25200	48300	1220	25100	795	31700	1730	43600	4490
23	33400	32000	28300	27600	47700	1830	44400	1570	17000	1780	43100	8120
24	33700	31900	28100	27200	43900	1650	18800	452	24000	1710	41400	10600
25	33100	32000	27400	26200	43500	2220	2930	1300	41300	1700	43400	9470
26	35600	32200	27400	26200	---	---	1300	461	42100	1820	43400	9250
27	35900	34200	---	---	---	---	786	552	42100	1560	---	---
28	35600	33500	---	---	---	---	991	786	41200	1660	---	---
29	34000	32800	---	---	---	---	1120	991	---	---	---	---
30	34900	32100	---	---	1610	1430	1200	1120	---	---	---	---
31	34100	31900	---	---	2070	650	1290	1200	---	---	---	---
MONTH	38900	31900	---	---	---	---	50000	450	47100	1290	---	---

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	49400	6250	50100	24200	49700	34800	---	---	51300	31100	50600	33900
2	48200	10400	50800	19300	50300	33000	---	---	51100	33700	49300	33600
3	48000	10700	50900	21200	49600	28900	---	---	50800	35900	50100	29200
4	49000	6390	50900	27100	50200	29700	---	---	49300	36600	50500	29600
5	---	---	50800	27000	50100	28000	---	---	50200	36300	50600	28100
6	---	---	50500	26900	50000	30500	---	---	50100	42000	50000	25500
7	47700	7690	49800	28900	48900	28600	---	---	50400	47300	49300	7310
8	48100	7030	48500	10000	50000	28200	---	---	50400	45200	49100	7860
9	50300	7800	49700	23100	48700	29100	---	---	46900	37900	49700	25100
10	50600	5680	50000	23200	50700	23900	---	---	43200	30800	49200	25900
11	50600	5250	51000	21700	47500	21300	---	---	46700	38600	48900	26300
12	50400	3970	50300	23500	46200	19100	---	---	48400	39100	49900	29400
13	46300	3080	49200	20100	49200	17400	---	---	49400	37500	50800	31500
14	47600	3030	49300	17800	50600	25700	---	---	49700	39400	50800	32000
15	17600	3310	51200	20800	50700	23100	---	---	51300	35900	50400	35100
16	46200	3420	50100	21800	---	---	---	---	50800	32300	49800	36200
17	48600	3920	50000	24600	---	---	---	---	51300	37200	49400	39600
18	49600	4490	49800	25500	---	---	---	---	51300	36200	50500	35900
19	49200	4640	50200	25400	---	---	---	---	50400	37400	50500	35700
20	50300	5400	49900	28800	---	---	---	---	51100	36100	49500	33700
21	49800	5140	49600	27000	---	---	---	---	51300	35300	50000	29800
22	49600	6100	49600	10500	---	---	---	---	51100	36600	49600	28500
23	49100	6740	49400	25800	---	---	---	---	50000	37700	50200	36400
24	48700	11400	49400	12700	---	---	48700	33500	50400	37300	49100	33400
25	49400	11600	49500	11400	---	---	50700	32900	50800	39500	49500	39900
26	50300	9660	49400	27100	---	---	50900	26700	51100	32100	49100	28400
27	50700	8930	49200	27200	---	---	50800	25100	50700	38300	50300	34300
28	50500	7840	48800	34500	---	---	50700	24400	51300	36200	50100	36600
29	49700	16800	50200	32300	---	---	51100	23100	51100	30000	49900	36800
30	50100	14600	50100	31200	---	---	51200	27400	51100	31100	49100	36300
31	---	---	49600	31600	---	---	51300	30000	51200	33100	---	---
MONTH	---	---	51200	10000	---	---	---	---	51300	30000	50800	7310

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.4	8.3	8.0	7.9	---	---	9.1	8.0	8.1	7.9	8.8	7.9
2	8.5	8.3	8.0	7.9	---	---	8.8	8.0	8.2	8.1	8.8	8.1
3	8.4	8.3	8.0	7.9	---	---	8.8	8.0	8.3	7.3	8.8	8.0
4	8.3	8.2	8.0	7.9	8.2	7.4	8.8	7.9	8.2	7.3	8.9	8.3
5	8.4	8.2	8.0	7.9	8.4	7.9	8.6	8.0	8.2	7.8	8.7	8.0
6	8.4	8.1	7.9	7.8	9.2	8.1	8.4	8.1	8.2	7.3	8.6	8.2
7	8.3	8.1	7.9	7.8	9.3	7.9	8.3	8.0	8.3	7.8	8.6	8.3
8	8.3	8.1	8.0	7.8	8.7	7.9	8.6	8.1	8.3	7.8	9.0	8.3
9	8.2	8.1	8.0	7.8	8.6	8.0	9.1	8.0	8.3	8.1	9.0	8.4
10	8.1	8.1	7.9	7.9	8.7	8.0	8.6	8.1	8.5	8.2	8.8	8.4
11	8.2	8.1	7.9	7.7	8.3	8.1	9.4	8.1	8.3	8.1	8.9	8.3
12	8.2	8.1	7.8	7.8	8.3	7.9	8.3	7.9	8.4	8.0	9.0	8.2
13	8.2	8.1	7.8	7.7	8.4	8.2	8.0	7.7	8.4	7.6	9.0	8.3
14	8.2	8.1	7.8	7.7	---	---	7.9	7.8	8.4	7.6	8.9	8.3
15	8.3	8.2	7.8	7.6	---	---	7.9	7.9	8.3	7.4	9.0	8.3
16	8.4	8.1	7.8	7.8	8.6	6.9	8.0	7.1	8.3	7.6	9.0	8.3
17	8.4	8.2	7.8	7.7	8.5	7.7	7.9	7.0	8.4	8.1	9.0	8.3
18	8.3	8.2	7.9	7.7	8.2	7.0	8.0	7.1	8.6	7.7	8.6	8.3
19	8.2	8.1	7.9	7.8	8.3	7.1	9.2	7.8	8.5	7.7	8.6	8.1
20	8.3	8.1	7.9	7.8	8.6	7.2	---	---	8.6	7.8	8.6	8.1
21	8.3	8.1	7.8	7.7	9.6	7.9	8.2	8.0	8.6	8.1	8.6	8.3
22	8.3	8.2	7.8	7.6	9.6	7.9	8.7	8.0	8.7	8.2	8.6	8.2
23	8.3	8.2	7.8	7.7	8.8	8.1	8.2	7.9	8.7	8.4	8.6	8.2
24	8.3	8.2	7.7	7.6	8.5	8.2	9.4	7.7	8.8	8.4	8.6	8.2
25	8.3	8.1	7.7	7.7	8.8	8.1	8.5	7.8	8.8	8.4	8.6	8.1
26	8.2	8.1	7.8	7.5	---	---	7.7	7.5	8.7	8.4	8.6	8.0
27	8.2	8.1	7.6	7.1	---	---	7.8	7.7	8.7	8.3	---	---
28	8.2	8.0	---	---	---	---	7.9	7.8	8.9	8.4	---	---
29	8.2	8.1	7.5	7.1	---	---	7.9	7.8	---	---	---	---
30	8.2	8.0	---	---	9.1	8.1	8.0	7.7	---	---	---	---
31	8.0	7.9	---	---	9.1	8.1	8.0	7.7	---	---	8.2	7.9
MONTH	8.5	7.9	---	---	---	---	---	---	8.9	7.3	---	---

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	7.8	8.7	8.1	8.4	7.9	---	---	---	---	---	---
2	8.2	7.9	8.8	7.9	8.3	8.0	---	---	---	---	---	---
3	8.1	7.9	8.7	8.0	8.6	8.0	---	---	---	---	---	---
4	8.1	7.8	8.5	8.0	8.6	7.8	---	---	---	---	---	---
5	8.2	7.9	8.6	8.1	8.6	7.8	---	---	---	---	---	---
6	8.2	7.8	8.6	7.9	8.5	7.8	---	---	---	---	---	---
7	8.2	7.7	8.6	7.8	8.2	7.8	---	---	---	---	---	---
8	8.1	7.7	8.7	8.0	8.5	7.7	---	---	---	---	---	---
9	8.1	7.6	8.7	7.9	8.6	8.1	---	---	---	---	---	---
10	8.1	7.7	8.3	7.9	8.8	8.1	---	---	---	---	---	---
11	8.2	7.7	8.1	7.8	8.4	8.0	---	---	---	---	---	---
12	8.2	7.8	8.1	7.7	8.3	7.9	---	---	---	---	---	---
13	8.2	7.8	8.3	7.7	8.4	8.0	---	---	---	---	---	---
14	8.2	7.8	8.6	7.9	8.3	7.8	---	---	---	---	---	---
15	8.2	7.7	8.8	8.0	8.3	7.8	---	---	---	---	---	---
16	8.2	7.7	8.7	7.9	---	---	---	---	---	---	---	---
17	8.2	7.8	8.5	7.9	---	---	---	---	---	---	---	---
18	8.2	7.8	8.4	8.0	---	---	---	---	---	---	---	---
19	8.2	7.8	8.4	7.9	---	---	---	---	---	---	---	---
20	8.2	7.7	8.6	8.0	---	---	---	---	---	---	---	---
21	8.3	7.6	8.7	7.9	---	---	---	---	---	---	---	---
22	8.5	7.6	8.6	7.8	---	---	---	---	---	---	---	---
23	8.6	8.1	8.6	8.0	---	---	---	---	---	---	---	---
24	8.5	7.9	8.8	8.1	---	---	---	---	---	---	---	---
25	8.5	8.0	8.8	8.0	---	---	---	---	---	---	---	---
26	8.5	8.0	8.8	8.0	---	---	---	---	---	---	---	---
27	8.6	8.0	8.6	8.0	---	---	---	---	---	---	---	---
28	8.6	8.0	8.7	8.0	---	---	---	---	---	---	---	---
29	8.7	8.0	8.4	8.1	---	---	---	---	---	---	---	---
30	8.7	8.0	8.3	7.9	---	---	---	---	---	---	---	---
31	---	---	8.2	7.9	---	---	---	---	---	---	---	---
MONTH	8.7	7.6	8.8	7.7	---	---	---	---	---	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.5	24.0	16.5	14.5	---	---	17.5	14.5	15.5	10.5	16.5	9.5
2	24.5	22.5	16.0	14.5	---	---	17.5	16.5	15.5	13.0	16.5	9.5
3	23.5	22.5	16.5	15.0	16.5	6.0	17.5	16.0	15.5	10.5	17.5	10.0
4	23.0	22.0	17.0	15.5	16.0	5.5	16.5	15.0	16.0	12.5	18.0	14.0
5	23.0	22.5	17.5	16.0	14.0	8.5	15.0	13.0	16.5	12.0	18.5	13.0
6	24.0	23.0	17.5	16.5	16.0	11.0	14.0	8.5	16.0	11.5	17.5	13.0
7	23.5	23.5	17.5	16.0	15.5	10.0	10.5	8.0	13.5	10.5	17.5	13.0
8	23.5	23.0	17.0	15.5	16.0	8.5	11.5	8.0	15.0	9.5	19.0	13.0
9	23.5	23.0	17.5	15.5	14.0	12.0	12.5	7.5	15.5	9.5	19.5	13.5
10	23.0	22.5	17.5	16.0	16.5	13.5	13.0	7.0	14.0	9.5	20.0	13.0
11	23.5	21.5	17.5	16.0	15.5	14.5	13.5	9.5	16.0	11.0	19.5	13.0
12	23.0	22.0	18.0	16.0	17.5	15.0	13.5	11.0	15.0	10.5	21.0	14.5
13	23.0	21.5	17.5	16.5	17.0	15.0	11.0	10.5	15.5	9.0	21.0	15.0
14	23.0	22.0	17.5	16.5	17.5	12.5	12.0	10.0	15.5	7.5	19.0	14.0
15	22.5	21.5	16.5	16.0	14.0	9.0	13.0	11.5	17.0	9.0	21.0	16.0
16	22.0	21.5	16.5	15.5	15.5	7.0	13.5	10.5	16.5	11.5	19.0	16.5
17	22.5	21.0	16.5	15.0	15.0	8.5	14.0	9.5	14.5	10.5	20.5	14.0
18	22.0	21.0	16.5	15.5	15.5	8.5	14.5	9.5	16.5	11.0	21.0	15.0
19	21.5	20.0	16.0	15.5	13.5	7.0	14.0	9.0	17.0	11.5	22.0	15.0
20	21.0	19.5	17.0	15.5	14.0	7.0	14.0	10.0	17.0	12.0	22.0	15.0
21	20.5	18.5	17.0	16.5	13.5	9.0	14.5	10.0	18.0	12.0	20.5	14.0
22	18.5	17.0	17.0	16.5	14.0	12.0	14.0	12.0	17.5	11.5	22.0	15.0
23	17.5	15.5	17.0	17.0	15.5	10.0	17.5	13.0	17.5	11.0	22.0	15.0
24	18.0	16.0	17.0	17.0	13.5	11.5	15.5	13.5	16.5	11.5	22.0	15.5
25	19.0	17.5	17.0	17.0	14.0	11.0	15.0	11.5	15.5	9.0	23.0	15.0
26	17.5	16.0	17.0	16.5	---	---	14.0	13.5	15.5	10.0	23.5	16.5
27	17.0	16.0	16.5	8.5	---	---	16.5	13.5	14.0	13.0	---	---
28	17.0	15.5	14.5	7.5	---	---	16.0	12.5	17.5	11.0	---	---
29	16.5	15.0	13.0	8.5	---	---	16.5	12.0	---	---	---	---
30	16.0	14.0	---	---	---	---	16.0	11.0	---	---	---	---
31	16.0	13.5	---	---	16.0	13.5	16.0	10.5	---	---	24.0	18.0
MONTH	24.5	13.5	---	---	---	---	17.5	7.0	18.0	7.5	---	---

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	22.5	15.5	27.0	18.0	30.5	22.5	---	---	29.5	21.5	27.5	22.5
2	19.0	14.0	26.5	16.5	29.5	22.0	---	---	29.5	22.0	30.0	23.5
3	18.5	12.5	26.0	16.5	29.5	23.0	---	---	30.0	22.0	29.5	23.0
4	20.0	13.0	24.5	16.5	29.5	22.5	---	---	30.0	22.0	30.0	23.5
5	19.5	14.0	26.5	17.5	28.5	21.5	---	---	30.0	21.5	29.0	23.0
6	19.0	13.5	27.5	19.0	27.5	21.0	---	---	29.0	22.5	29.0	24.0
7	22.0	14.5	28.5	19.0	22.5	21.0	---	---	27.5	23.5	28.0	22.5
8	23.5	16.5	29.0	19.5	28.5	21.0	---	---	27.0	24.5	27.0	21.5
9	21.5	16.5	28.5	20.0	28.5	22.0	---	---	27.5	25.5	27.5	23.0
10	23.5	15.5	26.5	20.5	29.0	22.0	---	---	28.0	25.0	27.5	23.5
11	24.5	16.0	24.5	20.0	26.5	22.5	---	---	28.5	25.5	27.0	24.0
12	25.0	16.0	25.5	20.0	26.5	22.5	---	---	28.0	25.0	28.5	23.0
13	25.0	16.0	27.0	20.5	23.5	20.0	---	---	28.5	24.5	28.0	22.0
14	25.5	16.0	28.5	22.0	26.0	21.5	---	---	29.5	23.5	26.5	21.0
15	25.5	16.0	29.0	23.0	27.5	22.0	---	---	27.0	22.0	23.5	21.0
16	25.5	18.0	27.0	22.0	---	---	---	---	25.5	22.0	25.5	21.0
17	26.5	18.0	26.5	22.0	---	---	---	---	28.0	22.5	27.0	21.5
18	26.0	18.0	23.0	21.0	---	---	---	---	27.0	22.0	25.5	20.5
19	26.0	18.0	25.0	20.5	---	---	---	---	28.5	21.5	25.5	20.5
20	26.5	19.0	28.0	20.5	---	---	---	---	29.0	23.5	25.0	19.5
21	25.5	19.5	28.5	21.5	---	---	---	---	27.0	22.5	25.5	18.0
22	27.5	19.5	27.5	20.5	---	---	---	---	28.5	22.5	26.0	21.5
23	24.0	16.5	28.0	19.0	---	---	---	---	28.5	23.5	26.5	21.5
24	24.0	17.5	28.5	19.5	---	---	---	---	29.5	26.0	26.0	20.5
25	26.5	16.0	28.5	20.0	---	---	24.0	20.5	27.0	25.0	24.5	21.0
26	27.0	16.5	28.5	20.0	---	---	25.0	22.0	26.5	24.0	27.0	21.5
27	27.5	16.5	26.5	20.5	---	---	24.5	21.5	28.0	22.0	27.0	21.5
28	26.0	18.0	27.0	20.5	---	---	23.5	22.0	30.0	22.5	27.5	21.5
29	26.0	18.0	28.0	20.5	---	---	26.0	22.0	30.0	23.0	25.5	21.5
30	26.5	18.0	26.0	23.0	---	---	27.5	21.5	30.0	23.0	27.0	22.0
31	---	---	28.0	22.0	---	---	28.0	21.5	29.5	23.0	---	---
MONTH	27.5	12.5	29.0	16.5	---	---	---	---	30.0	21.5	30.0	18.0

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	2.7	6.9	4.0	---	---	16.0	12.1	---	---	---	---
2	9.4	3.1	6.5	3.7	---	---	19.1	10.7	---	---	16.5	11.4
3	8.6	2.4	7.3	4.2	11.8	4.5	19.9	11.1	---	---	15.4	8.6
4	5.5	1.9	7.4	4.3	13.7	5.8	14.9	13.1	14.6	9.1	16.0	6.8
5	6.9	2.6	7.7	4.3	14.0	9.0	16.8	14.2	14.2	11.4	16.3	9.6
6	7.5	1.6	7.7	4.0	15.3	8.7	17.3	15.4	16.2	10.5	16.9	9.3
7	5.8	1.7	7.4	3.6	15.6	9.2	19.7	15.2	19.6	13.2	---	---
8	5.0	2.1	7.7	3.6	16.3	7.3	18.1	16.0	18.5	12.8	---	---
9	6.4	2.7	7.7	4.7	12.9	6.9	18.3	15.7	18.6	13.0	15.7	8.4
10	5.3	2.2	7.1	5.0	14.2	6.9	18.2	15.0	19.1	13.0	---	---
11	7.0	2.5	6.7	2.6	12.8	9.8	19.4	15.3	20.0	13.5	---	---
12	7.3	3.5	6.7	3.4	13.9	11.9	19.4	14.6	17.4	12.7	15.2	11.9
13	6.2	3.2	6.1	1.9	14.5	11.9	---	---	18.5	11.2	18.4	13.3
14	6.7	3.8	4.5	2.0	15.9	12.5	---	---	17.8	10.5	---	---
15	6.8	3.5	5.5	1.6	17.3	15.9	---	---	---	---	---	---
16	7.9	2.4	5.6	2.0	16.4	5.8	---	---	---	---	---	---
17	8.7	1.9	6.8	2.1	13.6	5.6	---	---	17.2	9.5	---	---
18	5.8	2.2	6.5	2.2	13.6	9.1	16.4	11.2	13.0	6.2	---	---
19	8.0	3.3	5.2	1.8	15.3	9.6	18.9	9.6	---	---	---	---
20	8.1	3.5	6.1	1.8	16.9	9.9	16.5	11.9	---	---	---	---
21	11.3	4.6	3.2	1.4	16.9	10.1	16.2	13.6	---	---	19.8	8.3
22	9.5	4.5	---	---	14.1	10.3	16.1	14.5	19.3	13.0	15.5	7.1
23	8.5	4.2	---	---	18.2	11.0	16.0	12.7	15.1	9.9	18.7	7.0
24	8.6	4.6	---	---	17.1	11.8	18.6	15.0	18.1	9.6	19.4	8.8
25	11.1	5.2	---	---	17.2	12.1	---	---	---	---	18.5	8.1
26	8.1	3.9	---	---	---	---	---	---	---	---	17.8	7.3
27	7.5	4.1	9.2	2.0	---	---	---	---	---	---	13.5	8.0
28	8.3	4.5	5.9	1.7	---	---	---	---	---	---	---	---
29	8.2	4.4	5.7	3.1	---	---	---	---	---	---	---	---
30	8.2	4.6	8.9	1.5	---	---	---	---	---	---	---	---
31	6.6	4.4	---	---	16.9	13.3	---	---	---	---	---	---
MONTH	11.3	1.6	---	---	---	---	---	---	---	---	---	---

Note: No dissolved-oxygen data from Mar. 28 through Sept. 30.

LOCATION.—Lat 33°13'46", long 117°24'34", in SE 1/4 SW 1/4 sec.9, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070302, on tidal flat of the Santa Margarita River on Camp Joseph H. Pendleton Naval Reservation, 0.6 mi west of Interstate Highway 5, and 3.0 mi northwest of Oceanside.

DISSOLVED OXYGEN: November 1993 to current year.

REMARKS.—Interruptions in record at times due to malfunction of recording equipment.

DISSOLVED OXYGEN: Maximum recorded, 21.1 mg/L, Apr. 18, 1997; minimum recorded, 0.0 mg/L, many days during period of record.

DISSOLVED OXYGEN: Maximum recorded, 21.1 mg/L, Apr. 18; minimum recorded, 0.0 mg/L, several days.

[illegible]

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	49000	45700	49000	17700	51500	50200	53400	51200	52200	50300	51100	49800
2	49700	17500	50600	48500	52500	50500	53500	51300	52200	50600	51000	49900
3	50800	39900	50800	49100	52300	50300	53500	51000	52400	50700	51000	49800
4	49900	46300	51400	18100	52500	49800	53300	51400	52300	50700	50900	48800
5	50700	48800	51900	49600	51800	49900	53200	51400	52200	50600	50900	48600
6	51100	50700	52600	49900	52300	50700	52900	51900	52200	50400	50400	19800
7	51200	50400	52500	50300	52400	50800	53400	51700	51900	50300	50700	18800
8	50800	12800	52500	18900	52400	50300	54400	51800	51900	50800	51200	18800
9	50700	48000	52700	18100	52500	49700	55100	52000	51800	50500	50900	46800
10	51400	49600	52100	17700	53100	50700	54800	52100	52000	49100	51100	47100
11	51100	27400	52600	20000	52600	18700	53900	28700	51900	47800	51900	47900
12	49200	20600	51900	17300	52000	19600	53800	20600	52000	48700	51000	49200
13	---	---	50900	17700	52400	18300	53600	19900	52200	49100	52000	49900
14	---	---	49600	17700	51300	18400	53800	19100	51900	48600	52000	50000
15	---	---	49300	17400	52800	18600	54900	19300	51400	49400	51100	49800
16	---	---	48400	16800	51300	18500	53500	51600	51200	50300	50600	49000
17	43200	15300	49900	16700	52300	19200	53500	51400	52000	49100	50500	49600
18	45900	44100	50100	18400	51600	50800	53600	51600	53100	50500	51100	49900
19	47300	16500	50700	49100	51800	18500	53600	51000	52700	50200	51200	37800
20	48600	47400	50800	49200	52500	51100	54800	52700	51100	49300	---	---
21	48600	47900	51800	49700	53000	51900	54600	53200	51600	48700	---	---
22	49400	17000	51000	18300	53700	52600	54200	52300	50900	48600	---	---
23	50200	49200	51900	49300	54300	52400	53300	51800	51500	49900	53000	50300
24	50900	46100	51300	18700	54500	51300	53300	51100	51800	48900	52700	51200
25	49700	18300	52000	17800	53900	51800	52300	25900	52700	49800	52700	47600
26	49100	36200	52600	20400	53600	51300	51700	17500	52700	49300	50700	47200
27	48400	34000	52600	49300	53800	50500	51300	18500	52700	50400	51800	50600
28	48100	18300	52300	48600	53500	19800	52000	49400	52600	50900	52300	51100
29	47400	12000	51200	19000	53600	50600	51600	17500	53000	51000	51900	51200
30	48900	12000	51500	49800	53200	51000	51300	50000	53100	51100	51900	51000
31	---	---	52300	50000	---	---	52000	50400	52000	49500	---	---
MONTH	---	---	52700	16700	54500	18300	55100	17500	53100	47800	---	---

SANTA MARGARITA RIVER BASIN

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.1	7.9	8.1	7.9	---	---	8.6	8.1	8.3	8.1	---	---
2	8.1	7.8	8.2	7.9	---	---	8.5	8.2	8.3	8.1	---	---
3	8.1	7.8	8.3	8.1	---	---	8.5	8.1	8.3	7.7	---	---
4	8.0	7.9	8.3	7.8	---	---	8.4	8.2	8.2	7.1	---	---
5	8.1	7.9	8.2	8.0	7.5	6.8	8.4	8.2	8.2	6.9	---	---
6	8.1	7.9	8.2	8.0	7.6	7.0	8.5	7.9	7.9	6.9	---	---
7	8.1	7.9	8.1	7.9	7.7	7.0	8.4	7.3	7.7	7.2	---	---
8	8.0	7.8	8.2	8.0	7.7	7.3	8.4	6.9	7.7	7.1	---	---
9	7.9	7.8	8.3	8.1	7.7	7.0	8.1	7.1	8.6	7.4	---	---
10	7.9	7.7	8.3	8.1	7.5	7.0	7.9	7.4	8.0	7.2	---	---
11	7.9	7.6	8.1	8.0	7.6	6.8	7.9	7.3	7.9	7.6	---	---
12	8.0	7.7	8.2	7.9	7.8	6.8	8.9	7.7	7.9	7.1	---	---
13	8.0	7.7	8.1	8.0	7.7	7.3	8.3	7.5	---	---	---	---
14	8.0	7.7	8.2	8.1	7.8	7.0	8.2	7.9	8.2	6.9	---	---
15	8.3	7.7	8.3	8.0	---	---	8.2	7.4	8.1	6.9	---	---
16	8.3	8.1	8.2	8.1	---	---	8.3	7.0	8.2	7.2	---	---
17	8.3	8.0	8.2	8.1	---	---	---	---	8.1	6.9	---	---
18	8.2	8.0	8.2	8.0	---	---	---	---	8.1	7.2	---	---
19	8.2	8.0	8.1	8.0	8.7	7.9	8.5	7.5	8.6	7.6	---	---
20	8.2	7.9	8.2	8.0	8.5	8.1	8.4	7.2	8.1	7.5	---	---
21	8.1	7.9	8.1	8.0	8.4	8.1	8.4	7.5	---	---	---	---
22	8.2	7.9	8.1	7.9	8.3	8.0	---	---	---	---	---	---
23	8.2	8.0	8.1	7.8	8.3	7.1	8.0	7.9	---	---	---	---
24	8.2	8.0	7.9	7.8	8.4	8.0	8.0	7.8	---	---	---	---
25	8.2	8.1	8.0	7.8	8.4	7.3	8.0	7.7	---	---	---	---
26	8.2	8.1	7.8	7.5	8.4	8.0	8.2	7.9	---	---	---	---
27	8.2	8.0	8.0	7.3	8.1	7.8	8.3	8.1	---	---	8.3	7.6
28	8.3	8.1	---	---	8.1	7.8	8.4	8.0	---	---	8.0	7.5
29	8.3	8.1	8.4	8.2	8.4	8.0	8.4	7.9	---	---	8.0	7.2
30	8.3	8.1	---	---	8.4	8.3	8.4	8.0	---	---	7.8	7.5
31	8.1	8.0	---	---	8.6	8.2	8.4	8.1	---	---	7.8	7.4
MONTH	8.3	7.6	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.8	7.0	8.2	8.0	8.9	8.0	9.2	8.1	9.0	7.8	8.6	7.9
2	7.9	7.4	8.4	8.0	8.8	7.9	9.3	8.1	8.9	7.8	8.8	7.8
3	7.9	7.1	8.5	8.0	8.6	7.9	9.3	8.0	8.8	7.9	8.7	7.8
4	7.9	7.6	8.2	7.9	8.4	7.7	9.2	8.0	8.8	7.8	8.6	7.7
5	7.8	7.6	8.5	7.9	8.4	7.7	9.0	8.0	8.7	7.8	8.5	7.8
6	7.8	7.7	8.3	7.8	8.4	7.9	8.9	7.9	8.6	7.8	8.6	7.8
7	7.8	7.5	8.2	7.8	8.4	7.7	8.8	7.9	8.4	7.8	8.4	8.0
8	7.9	7.7	8.2	7.8	8.7	7.6	8.8	7.9	8.4	7.9	8.3	7.9
9	7.8	7.6	8.3	7.9	8.9	7.8	8.6	7.9	8.3	7.9	8.3	7.7
10	7.9	7.6	8.1	7.6	8.9	8.1	8.5	7.9	8.3	8.0	8.3	7.7
11	7.8	7.5	8.0	7.6	8.7	7.9	8.4	7.7	8.3	7.9	8.2	7.8
12	7.8	7.2	8.0	7.5	8.6	7.9	8.3	7.0	8.2	7.9	8.4	7.8
13	8.0	7.1	7.9	7.4	8.4	7.8	8.2	7.7	8.3	7.8	8.6	7.9
14	8.1	7.1	8.2	7.5	8.5	8.1	8.3	7.9	8.2	7.8	8.6	7.9
15	8.0	7.3	8.3	7.7	8.3	7.9	8.2	7.8	8.3	7.8	8.0	7.8
16	8.1	7.5	8.2	7.7	8.3	8.0	8.4	7.8	8.4	7.6	8.2	7.6
17	8.1	7.6	8.3	7.8	8.3	7.8	8.6	7.8	8.5	7.5	8.4	7.8
18	8.2	7.8	8.0	7.7	8.2	7.7	8.8	7.7	8.1	7.6	8.4	7.8
19	8.2	7.9	8.5	7.6	8.1	7.6	8.9	7.6	8.0	7.4	8.3	7.7
20	8.4	8.0	8.4	7.7	8.3	7.6	8.8	7.6	8.1	7.4	8.3	7.8
21	8.3	8.0	8.7	7.8	8.3	7.7	8.7	7.8	8.1	7.5	8.2	7.6
22	8.3	8.1	8.7	7.7	8.3	7.6	8.6	7.6	8.2	7.6	8.3	7.9
23	8.2	7.9	8.8	7.9	8.3	7.7	8.5	7.7	8.1	7.6	8.2	7.8
24	8.5	8.0	8.8	8.0	8.5	7.8	8.3	7.7	8.1	7.6	8.2	7.6
25	8.2	7.9	8.8	8.1	8.6	7.9	8.2	7.8	8.2	7.7	8.1	7.6
26	8.0	7.6	8.8	7.9	8.5	7.9	8.3	7.8	8.5	7.7	8.3	7.5
27	8.1	7.8	8.7	8.1	8.6	8.0	8.2	7.9	8.7	7.8	8.5	7.7
28	8.2	7.9	8.5	7.9	8.8	8.2	8.2	7.7	8.6	7.8	8.4	7.9
29	8.2	7.9	8.4	7.9	8.9	8.1	8.3	7.7	9.0	7.9	8.3	7.9
30	8.2	7.8	8.4	8.0	8.7	8.1	8.4	7.8	9.2	8.0	8.4	7.8
31	---	---	8.7	7.9	---	---	8.9	7.9	8.9	8.0	---	---
MONTH	8.5	7.0	8.8	7.4	8.9	7.6	9.3	7.0	9.2	7.4	8.8	7.5

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.0	22.5	16.5	14.0	---	---	18.5	15.0	18.0	15.5	---	---
2	24.0	21.5	17.0	13.5	---	---	18.5	17.0	17.5	15.0	---	---
3	22.5	21.0	19.0	15.0	---	---	19.0	16.5	15.5	10.0	---	---
4	22.5	21.0	17.5	14.0	---	---	18.0	15.5	13.0	8.5	---	---
5	22.5	21.0	17.5	16.0	14.5	8.0	17.5	14.5	16.0	6.5	---	---
6	23.5	21.5	17.5	15.5	18.5	11.0	15.5	10.0	15.5	5.0	---	---
7	23.0	22.0	16.5	14.5	17.5	11.0	13.0	8.5	13.5	5.5	---	---
8	23.0	21.0	17.0	14.5	18.5	9.0	16.0	6.5	14.0	7.5	---	---
9	22.5	21.5	17.5	14.0	14.0	11.5	15.5	5.0	12.0	9.5	---	---
10	22.0	20.5	17.5	15.5	18.0	13.5	13.5	5.5	12.0	10.0	---	---
11	22.0	19.5	17.0	14.5	16.5	14.5	14.0	7.5	13.0	9.0	---	---
12	22.0	20.5	17.0	14.5	17.5	15.0	12.5	9.5	14.0	9.5	---	---
13	22.5	20.0	17.5	16.0	16.5	14.5	12.5	10.0	17.0	8.0	---	---
14	22.0	20.0	17.5	16.0	18.0	11.5	13.5	9.5	19.0	8.0	---	---
15	22.5	19.0	16.5	14.5	15.5	10.0	14.5	10.0	21.0	9.0	---	---
16	22.0	20.5	16.5	14.5	17.0	6.0	17.5	8.0	19.0	8.0	---	---
17	22.5	20.5	16.5	14.5	15.0	7.5	19.5	8.5	17.0	7.0	---	---
18	21.5	19.5	16.0	14.0	18.0	7.5	21.5	9.0	17.0	6.5	---	---
19	21.5	19.5	16.0	15.5	16.5	6.5	19.5	8.5	16.0	7.0	---	---
20	21.5	18.0	17.5	15.5	17.0	6.5	17.5	7.0	18.0	7.5	---	---
21	19.5	17.0	17.5	16.5	13.5	8.5	17.5	7.0	---	---	---	---
22	18.5	14.5	17.5	17.0	14.0	12.0	16.0	10.5	---	---	---	---
23	18.0	13.5	17.5	17.0	16.5	9.5	13.5	13.0	---	---	---	---
24	18.0	14.5	17.5	17.0	15.0	11.5	13.5	13.0	---	---	---	---
25	20.0	17.0	17.5	17.0	16.0	9.5	16.0	13.0	---	---	---	---
26	17.5	15.0	17.5	15.0	13.0	11.0	17.5	13.0	---	---	---	---
27	17.0	15.5	15.0	7.5	13.5	12.5	16.5	12.5	---	---	22.0	17.0
28	17.0	15.0	15.0	6.5	15.5	13.0	17.5	14.5	---	---	21.5	15.5
29	17.0	13.5	15.0	7.5	17.0	12.5	19.0	15.5	---	---	21.5	16.0
30	16.0	12.5	---	---	16.0	12.0	18.5	17.5	---	---	19.0	16.5
31	16.5	12.0	---	---	17.5	14.0	19.0	16.5	---	---	20.5	14.5
MONTH	24.0	12.0	---	---	---	---	21.5	5.0	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.5	13.5	24.0	18.5	32.0	24.0	32.0	22.0	33.0	23.0	29.5	23.0
2	16.5	12.5	25.0	18.5	31.5	22.5	33.0	22.0	33.0	23.0	33.0	23.5
3	18.0	10.5	25.0	15.0	31.5	23.0	34.0	22.5	33.0	24.0	32.0	24.5
4	18.5	9.5	24.5	18.0	31.0	22.5	33.0	23.0	32.5	24.0	32.5	25.0
5	20.5	13.5	29.5	18.5	31.0	22.0	32.5	24.0	33.0	24.0	31.0	25.5
6	20.5	13.0	31.0	19.5	28.5	21.0	33.0	23.0	31.0	25.0	31.5	25.5
7	20.5	11.5	32.0	18.0	23.5	20.5	31.0	23.0	28.5	24.5	30.0	24.0
8	23.0	14.0	31.5	20.5	30.0	21.0	31.5	23.5	27.5	24.0	30.5	22.5
9	21.5	15.5	30.0	20.5	29.5	22.5	30.5	23.5	28.5	24.0	30.0	24.5
10	25.0	13.0	28.0	22.0	29.0	22.0	30.5	24.5	29.0	24.5	30.5	25.0
11	24.0	14.5	25.5	21.5	26.5	20.5	30.0	23.0	29.5	24.5	29.5	25.5
12	21.5	14.0	26.5	21.5	27.0	19.5	30.0	21.0	29.0	24.5	29.0	24.5
13	22.0	14.5	25.5	22.5	24.0	19.0	30.0	20.0	30.0	23.5	30.0	22.5
14	22.0	14.5	27.5	22.0	26.0	19.0	30.0	22.0	30.0	25.5	28.0	22.0
15	22.0	14.5	28.0	24.0	26.0	19.0	28.0	24.0	29.0	25.0	24.5	22.5
16	22.0	15.0	26.5	22.5	26.0	19.5	30.0	24.0	27.5	23.0	26.5	22.0
17	22.5	17.0	27.0	22.5	25.0	23.0	30.5	24.0	31.0	23.0	29.0	20.0
18	22.0	16.5	24.0	22.0	25.0	22.0	33.0	24.0	29.0	21.5	27.5	21.0
19	22.5	17.5	27.5	21.5	28.0	22.0	32.0	22.5	30.5	22.0	25.5	21.0
20	26.0	17.5	29.5	22.0	30.0	22.5	30.5	22.0	29.5	24.0	26.0	18.0
21	24.5	18.0	30.0	23.0	30.5	22.5	29.5	20.5	28.0	23.5	26.0	16.0
22	25.5	18.0	30.0	20.5	30.5	22.0	29.5	22.0	30.5	23.5	27.5	17.0
23	24.0	18.0	31.5	20.0	30.5	22.5	29.0	23.0	31.5	25.0	27.5	21.0
24	23.5	16.0	31.5	21.0	30.0	22.0	26.5	22.5	31.5	26.0	26.0	22.0
25	25.0	14.0	30.5	21.0	29.5	22.5	26.5	22.0	30.0	25.5	24.5	23.0
26	22.5	16.5	30.0	21.0	29.5	23.0	28.0	22.5	30.0	24.5	29.0	22.0
27	22.0	16.5	30.0	22.0	29.5	23.5	28.0	21.0	30.5	23.5	28.5	22.0
28	21.5	17.5	31.0	21.5	29.5	24.0	26.5	21.0	31.0	24.0	28.5	22.5
29	24.5	17.5	32.0	23.0	30.0	23.5	27.0	22.0	33.0	24.0	27.0	22.5
30	23.0	16.5	28.0	24.5	29.0	23.5	29.5	23.0	32.5	23.5	28.5	22.5
31	---	---	29.0	23.0	---	---	31.5	22.0	32.0	23.5	---	---
MONTH	26.0	9.5	32.0	15.0	32.0	19.0	34.0	20.0	33.0	21.5	33.0	16.0

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.6	1.8	5.3	3.3	---	---	11.3	7.3	12.4	7.1	---	---
2	6.3	.8	7.3	3.5	---	---	10.4	6.8	10.0	7.0	---	---
3	5.6	1.5	7.9	3.1	---	---	11.0	6.9	11.9	7.4	---	---
4	4.9	2.3	6.2	2.7	---	---	12.5	7.3	12.7	8.0	---	---
5	5.0	1.9	7.1	2.0	12.1	6.5	10.1	7.1	13.5	8.1	---	---
6	6.0	1.5	6.2	1.4	11.1	6.0	12.0	7.5	14.2	8.8	---	---
7	5.4	1.9	4.8	3.0	11.1	5.9	12.8	8.1	13.8	8.8	---	---
8	6.3	2.0	5.5	2.5	13.2	5.9	13.5	8.1	13.2	9.1	---	---
9	5.6	1.7	6.1	3.8	11.1	6.1	14.2	8.8	12.5	8.8	---	---
10	4.5	.9	5.5	3.1	9.1	5.2	13.8	8.8	10.2	9.6	---	---
11	5.5	.7	5.1	2.8	7.3	3.3	13.2	9.1	12.2	9.5	---	---
12	5.5	1.3	4.6	2.0	8.1	1.5	12.4	8.7	12.8	8.7	---	---
13	6.7	1.3	4.5	1.8	7.6	4.3	10.1	9.5	13.3	8.5	---	---
14	5.9	1.8	4.7	1.6	10.9	2.9	12.1	9.4	12.9	9.6	---	---
15	8.4	1.7	7.1	2.5	11.4	7.3	12.5	8.6	12.8	9.4	---	---
16	7.8	3.1	6.2	3.3	13.1	7.4	13.0	8.2	13.2	9.4	---	---
17	8.8	3.2	6.0	3.5	12.5	6.4	12.6	9.3	13.6	8.8	---	---
18	8.5	3.6	4.7	3.4	12.4	7.0	12.4	9.1	15.5	8.8	---	---
19	7.6	3.5	4.6	2.7	12.6	6.9	12.8	9.0	15.5	10.2	---	---
20	8.7	2.8	6.6	2.4	12.6	7.1	13.2	8.4	13.9	8.9	---	---
21	6.9	4.0	4.5	1.2	10.0	7.1	13.4	8.4	---	---	---	---
22	8.2	3.9	6.9	1.2	8.7	4.9	12.3	7.9	---	---	---	---
23	8.2	5.0	5.8	.7	8.5	4.9	9.2	8.5	---	---	---	---
24	7.5	5.7	---	---	12.1	5.2	9.2	7.8	---	---	---	---
25	8.4	4.3	---	---	9.8	5.9	7.8	6.9	---	---	---	---
26	7.5	4.9	---	---	10.1	6.3	11.3	7.3	---	---	---	---
27	8.1	4.5	---	---	9.7	8.3	11.4	8.9	---	---	19.0	9.3
28	8.9	4.8	---	---	8.3	7.3	11.4	7.2	---	---	16.0	4.0
29	7.7	4.2	---	---	11.7	7.8	11.0	7.0	---	---	16.4	2.2
30	6.4	4.3	---	---	11.8	9.3	10.1	6.6	---	---	15.7	2.1
31	6.5	3.5	---	---	11.8	7.6	10.8	6.7	---	---	16.4	4.6
MONTH	8.9	.7	---	---	---	---	14.2	6.6	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.1	5.2	17.4	1.5	15.2	.9	13.4	.8	14.6	2.0	13.3	1.5
2	15.1	7.8	12.6	.4	17.6	2.4	10.9	.0	14.8	1.2	15.1	1.0
3	16.4	6.5	12.0	1.4	12.2	2.0	10.4	.6	14.7	1.3	12.8	.7
4	12.2	6.5	8.6	2.5	10.0	4.1	16.4	.5	11.5	2.4	12.6	.6
5	13.2	6.4	9.6	.8	8.9	4.5	6.6	.1	12.5	2.3	11.9	.8
6	14.1	4.8	7.6	1.5	8.6	4.5	10.9	.2	12.3	2.3	13.4	1.3
7	14.0	7.6	6.8	3.2	9.9	1.1	13.6	.3	8.7	2.5	10.5	1.3
8	14.9	6.1	7.6	2.9	12.6	.5	13.0	.5	8.9	3.2	10.6	.9
9	12.3	3.1	8.6	2.0	12.9	.0	8.9	.1	8.1	2.4	8.3	.9
10	11.9	6.4	9.8	.6	16.8	.0	9.9	1.0	7.6	2.5	8.5	1.0
11	15.3	6.1	---	---	9.7	.2	14.4	.5	7.4	.7	8.3	1.1
12	16.7	6.0	---	---	11.0	.0	17.3	1.3	7.0	.6	10.8	1.2
13	14.8	3.7	---	---	15.2	2.1	18.4	.5	9.2	.4	11.8	1.8
14	16.7	4.7	---	---	12.9	.3	16.7	1.9	8.9	.3	12.2	2.1
15	16.7	3.6	17.5	.3	19.8	.2	11.5	1.1	10.7	.1	5.4	2.0
16	20.4	3.6	15.3	1.0	16.7	.3	13.2	.9	12.6	.2	10.4	2.4
17	17.4	3.8	16.4	.1	13.8	1.1	16.1	.5	12.4	.6	11.8	5.0
18	21.1	5.7	9.7	.0	7.8	1.0	16.4	.3	7.1	.7	10.0	3.6
19	20.4	4.6	13.7	.1	8.6	.5	15.9	2.9	7.9	.3	10.8	2.8
20	20.4	3.9	7.8	1.5	7.4	.2	14.8	.7	6.9	.7	11.8	4.3
21	20.2	3.3	13.4	.2	6.5	.4	13.3	.7	6.6	.4	12.1	8.3
22	9.7	2.6	16.3	3.8	7.7	.4	11.1	1.0	8.7	1.0	12.1	5.1
23	10.8	.6	18.6	4.2	7.3	.9	10.4	1.1	7.9	1.4	10.8	3.6
24	9.7	.7	17.0	1.5	8.8	.4	9.7	1.1	7.8	.1	10.6	4.0
25	12.7	1.0	18.3	2.1	12.1	.9	7.9	2.9	9.0	.0	7.2	2.8
26	15.2	.5	16.2	3.6	12.0	.6	13.7	3.1	14.7	.4	11.4	2.7
27	9.1	.9	13.9	.9	11.5	.6	15.8	2.9	12.2	1.9	12.6	2.0
28	8.6	.8	8.8	1.2	18.6	.3	8.3	1.8	15.7	1.9	13.5	3.0
29	12.8	2.2	12.6	2.2	9.2	.4	11.3	1.9	14.6	2.1	12.5	2.8
30	18.4	2.0	10.3	1.0	16.1	1.0	11.0	2.0	12.9	2.3	12.6	3.1
31	---	---	14.3	.7	---	---	13.7	2.3	10.6	1.4	---	---
MONTH	21.1	.5	---	---	19.8	.0	18.4	.0	15.7	.0	15.1	.6

11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA

LOCATION.—Lat 33°17'32", long 117°27'21", NW 1/4 SE 1/4 sec.24, T.10 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on upstream side and at center of the Southern Pacific Railroad bridge, 0.5 mi upstream from mouth, and 8.5 mi northwest of Oceanside.

DRAINAGE AREA.—26.6 mi².

PERIOD OF RECORD.—May 1951 to September 1967, October 1969 to September 1979, and October 1993 to current year.

REVISED RECORDS.—WDR CA-72-1: 1971(M).

GAGE.—Water-stage recorder and multiple concrete culvert control. Elevation of gage is 35 ft above sea level, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation upstream from station. Some pumping upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,300 ft³/s, Mar. 4, 1978, gage height, 13.67 ft, estimated, from floodmarks, based on culvert computation of peak flow; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Feb. 25, 1969, reached a stage of 7.25 ft, from floodmarks, discharge, 4,200 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	.22	.38	.38	e8.3	1.2	.64	.39	.50	.61	.29	.53
2	.34	.36	.38	.39	e7.0	1.0	.69	.43	.59	.56	.23	.51
3	.33	.34	.38	5.6	e6.3	1.2	.66	.43	.59	.45	.23	.49
4	.33	.34	.37	.98	e5.9	1.2	.64	.39	.41	.41	.22	.44
5	.30	.25	.41	.67	e5.1	1.1	.68	.42	.41	.42	.25	.45
6	.30	.39	.44	.66	e4.4	1.0	.70	.43	.50	.51	.51	.43
7	.30	.37	.43	.56	3.4	.96	.72	.42	.56	.54	.52	.43
8	.28	.28	.43	.56	2.9	.95	.64	.43	.64	.52	.53	.45
9	.10	.27	.47	.56	2.3	1.0	.64	.43	.72	.49	.56	.46
10	.27	.26	.43	.56	2.8	1.1	.57	.43	.82	.46	.56	.46
11	.33	.32	4.2	.56	3.8	1.2	.56	.49	.87	.43	.56	.43
12	.34	.31	3.4	e15	2.5	1.2	.58	.39	.84	.43	.56	.43
13	.34	.25	.66	e93	2.4	1.0	.56	.38	.84	.43	.56	.45
14	.33	.34	.61	e18	1.6	.86	.56	.46	.84	.43	.56	.43
15	.31	.34	.46	e14	1.5	.84	.56	.41	.80	.43	.56	.48
16	.30	.33	.48	e25	1.6	.84	.51	.38	.75	.43	.56	.49
17	.30	.34	.44	e12	1.5	.84	.49	.41	.74	.45	.56	.54
18	.28	.34	.44	e10	1.5	.84	.49	.43	.74	.47	.56	.52
19	.29	.37	.43	e8.0	1.2	.74	.53	.46	.72	.46	.56	.35
20	.28	.37	.43	e5.0	1.2	.74	.56	.49	.70	.44	.56	.37
21	.20	.72	.43	e4.6	1.1	.74	.56	.37	.68	.43	.56	.49
22	.27	12	.43	e4.6	1.2	.74	.57	.33	.60	.47	.56	.43
23	.26	.48	.41	e24	1.2	.74	.61	.35	.52	.41	.55	.43
24	.27	.49	.40	e11	1.1	.74	.59	.38	.64	.37	.53	.41
25	.26	.49	.38	e8.3	1.0	.66	.56	.43	.64	.37	.51	.43
26	.28	.49	.38	e224	1.1	.64	.49	.49	.69	.35	.51	.44
27	.27	.44	.38	e82	1.5	.64	.41	.56	.70	.35	.50	.51
28	.25	.42	3.8	e40	1.6	.56	.42	.57	.64	.33	.50	.45
29	.26	.39	.49	e13	---	.57	.43	.56	.71	.37	.55	.47
30	.32	.38	.38	e11	---	.74	.43	.62	.65	.35	.49	.49
31	.33	---	.39	e9.5	---	.68	---	.54	---	.36	.50	---
TOTAL	8.96	22.69	23.54	643.48	77.0	27.26	17.05	13.70	20.05	13.53	15.26	13.69
MEAN	.29	.76	.76	20.8	2.75	.88	.57	.44	.67	.44	.49	.46
MAX	.34	.12	4.2	224	8.3	1.2	.72	.62	.87	.61	.56	.54
MIN	.10	.22	.37	.38	1.0	.56	.41	.33	.41	.33	.22	.35
AC-FT	18	45	47	1280	153	54	34	27	40	27	30	27

e Estimated.

LAS FLORES CREEK BASIN

11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.028	.24	.78	4.39	2.50	9.06	1.72	.12	.056	.055	.050	.074
MAX	.46	4.81	12.9	35.6	36.3	143	29.3	1.56	.67	.56	.49	.64
(WY)	1996	1966	1967	1995	1978	1978	1958	1995	1997	1995	1995	1979
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1954	1954	1963	1961	1955	1953	1953	1952	1952	1952	1952

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1952 - 1997			
ANNUAL TOTAL	199.18				896.21							
ANNUAL MEAN	.54				2.46				1.60			
HIGHEST ANNUAL MEAN									17.9			
LOWEST ANNUAL MEAN									.006			
HIGHEST DAILY MEAN	12				Nov 22				927			
LOWEST DAILY MEAN	.05				Aug 4				.00			
ANNUAL SEVEN-DAY MINIMUM	.07				Aug 2				.00			
INSTANTANEOUS PEAK FLOW					(a) Jan 26				7300			
INSTANTANEOUS PEAK STAGE					(a) Jan 26				13.67			
ANNUAL RUNOFF (AC-FT)	395				1780				1160			
10 PERCENT EXCEEDS	.85				2.4				.49			
50 PERCENT EXCEEDS	.34				.50				.00			
90 PERCENT EXCEEDS	.09				.33				.00			

(a) Peak occurred on Jan. 26, but peak discharge and stage are unknown.

11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA

LOCATION.—Lat 33°28'15", long 117°28'20", in SE 1/4 NE 1/4 sec.23, T.8 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on left bank 0.4 mi downstream from mouth of Devil Canyon and 8.6 miles northeast of San Clemente.

DRAINAGE AREA.—80.8 mi².

PERIOD OF RECORD.—October 1952 to September 1967, October 1993 to current year. Discharge records for October 1967 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 405 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,300 ft³/s, Dec. 6, 1966, gage height, 10.45 ft, from rating curve extended above 1,800 ft³/s on basis of slope-area measurement at gage height 10.14 ft; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge 9,240 ft³/s, gage height 11.12 ft, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum, from rating curve extended above 118 ft³/s on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	0615	489	5.47	Jan. 26	1100	684	5.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.62	.98	4.2	31	8.7	3.4	1.0	.00	.00	.00	.00
2	.00	.56	.98	4.4	27	8.0	3.3	1.0	.00	.00	.00	.00
3	.00	.53	.92	16	24	7.6	3.0	.88	.00	.00	.00	.00
4	.00	.53	.91	12	22	7.6	3.3	.79	.00	.00	.00	.00
5	.00	.53	.93	9.4	20	7.2	3.4	.75	.00	.00	.00	.00
6	.00	.55	1.8	9.7	19	6.8	3.4	.66	.00	.00	.00	.00
7	.00	.56	2.1	7.8	17	6.4	3.2	.58	.00	.00	.00	.00
8	.00	.53	1.7	6.5	16	6.4	3.0	.55	.00	.00	.00	.00
9	.00	.50	1.9	5.8	15	6.2	2.8	.52	.00	.00	.00	.00
10	.00	.47	7.3	5.3	14	5.7	2.7	.50	.00	.00	.00	.00
11	.00	.48	66	5.2	15	5.4	2.7	.48	.00	.00	.00	.00
12	.00	.48	43	22	14	5.2	2.7	.48	.00	.00	.00	.00
13	.00	.47	12	282	13	5.2	2.6	.48	.00	.00	.00	.00
14	.00	.51	7.1	96	12	5.2	2.4	.46	.00	.00	.00	.00
15	.00	.56	4.8	70	11	5.1	2.2	.43	.00	.00	.00	.00
16	.00	.59	3.9	103	10	5.0	2.2	.39	.00	.00	.00	.00
17	.00	.66	3.5	40	10	5.0	2.0	.38	.00	.00	.00	.00
18	.00	.71	3.0	28	10	4.7	1.9	.38	.00	.00	.00	.00
19	.00	.74	2.9	21	9.5	4.3	1.8	.38	.00	.00	.00	.00
20	.00	.74	2.9	17	9.4	3.8	1.8	.40	.00	.00	.00	.00
21	.00	2.7	2.7	14	8.8	3.6	1.8	.38	.00	.00	.00	.00
22	.00	16	3.1	13	8.7	3.6	1.7	.36	.00	.00	.00	.00
23	.00	5.1	4.3	24	8.6	3.6	1.5	.34	.00	.00	.00	.00
24	.00	3.0	3.6	29	8.3	3.7	1.4	.34	.00	.00	.00	.00
25	.00	2.1	3.0	23	8.1	3.7	1.3	.34	.00	.00	.00	.00
26	.00	1.7	2.9	445	8.0	3.4	1.2	.32	.00	.00	.00	.00
27	.00	1.3	3.1	204	8.4	3.4	.99	.28	.00	.00	.00	.00
28	.00	1.1	6.3	102	9.0	3.4	.85	.25	.00	.00	.00	.00
29	.00	1.0	6.3	65	---	3.4	.88	.22	.00	.00	.00	.00
30	.00	.98	4.9	47	---	3.4	1.0	.16	.00	.00	.00	.00
31	.14	---	4.4	38	---	3.4	---	.05	---	.00	.00	---
TOTAL	0.14	46.30	213.22	1769.3	386.8	158.1	66.42	14.53	0.00	0.00	0.00	0.00
MEAN	.005	1.54	6.88	57.1	13.8	5.10	2.21	.47	.000	.000	.000	.000
MAX	.14	16	66	445	31	8.7	3.4	1.0	.00	.00	.00	.00
MIN	.00	.47	.91	4.2	8.0	3.4	.85	.05	.00	.00	.00	.00
AC-FT	.3	92	423	3510	767	314	132	29	.00	.00	.00	.00

SAN MATEO CREEK BASIN

11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.082	3.97	12.1	20.0	18.8	33.3	22.5	4.09	1.39	.38	.069	.034
MAX	1.05	69.4	164	131	99.6	371	270	25.6	13.0	4.80	1.28	.64
(WY)	1996	1966	1967	1995	1995	1995	1958	1995	1995	1995	1995	1995
MIN	.000	.000	.000	.000	.089	.035	.007	.000	.000	.000	.000	.000
(WY)	1953	1954	1954	1963	1961	1961	1961	1961	1960	1953	1953	1953

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1953 - 1997			
ANNUAL TOTAL	1540.71				2654.81							
ANNUAL MEAN	4.21				7.27				9.69			
HIGHEST ANNUAL MEAN									59.2			
LOWEST ANNUAL MEAN									.019			
HIGHEST DAILY MEAN	125				445				2570			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					684				7300			
INSTANTANEOUS PEAK STAGE					5.87				10.45			
ANNUAL RUNOFF (AC-FT)	3060				5270				7020			
10 PERCENT EXCEEDS	9.7				13				12			
50 PERCENT EXCEEDS	.72				.53				.10			
90 PERCENT EXCEEDS	.00				.00				.00			

11046360 CRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE, CA

LOCATION.—Lat 33°25'35", long 117°34'10", in SW 1/4 SW 1/4 sec.36, T.8 S., R.7 W., San Diego County, Hydrologic Unit 18070301, on each of two major channels of Cristianitos Creek, at San Mateo Creek Road crossing, 0.5 mi upstream from confluence with San Mateo Creek, and 2.3 mi east of San Clemente.

DRAINAGE AREA.—31.6 mi².

PERIOD OF RECORD.—October 1993 to current year.

GAGE.—Two water-stage recorders (one on each of two channels) and culvert controls. Elevation of gage is 90 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,730 ft³/s, estimated, Mar. 5, 1995, from rating curves extended on basis of culvert computations; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 16, 1952, reached a discharge of 1,800 ft³/s, gage height of 8.86 ft, datum then in use, at site 1.8 mi upstream (station 11046350), on basis of slope-area measurement.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curves extended on basis of culvert computations:

Date	Time	Combined Discharge (north and south channels) (ft ³ /s)	Date	Time	Combined Discharge (north and south channels) (ft ³ /s)
Dec. 11	1130	108	Jan. 15	1815	417
Jan. 12	1600	361	Jan. 26	0515	477

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e3.6	.19	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	e1.9	.28	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	e6.5	e.92	.62	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	e.31	.48	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.23	.36	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.10	.44	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.11	.43	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.26	.36	.00	.00	.00	.00	.00	.00
9	.00	.00	2.0	.00	.15	.30	.00	.00	.00	.00	.00	.00
10	.00	.00	e.05	.00	1.4	.35	.00	.00	.00	.00	.00	.00
11	.00	.00	41	.00	2.3	.30	.00	.00	.00	.00	.00	.00
12	.00	.00	e3.5	51	.90	.16	.00	.00	.00	.00	.00	.00
13	.00	.00	e.00	e85	.62	.21	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	e1.8	.37	e.25	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	57	.44	e.11	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	e13	.34	e.04	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	e.05	.44	e.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.41	e.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.26	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00	.00	.00
21	.00	5.8	.00	.00	.25	.00	.00	.00	.00	.00	.00	.00
22	.00	e9.6	.00	.00	.39	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.44	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	1.5	.36	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	11	.33	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	e221	.54	.00	.00	.00	.00	.37	.00	.00
27	.00	.00	.00	e53	1.0	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	2.3	e21	.73	.00	.00	.00	.00	.02	.00	.00
29	.00	.00	.00	e15	---	.00	.00	.00	.00	e2.2	.00	.00
30	e.80	.00	.00	e9.6	---	.00	.00	.00	.00	.00	.00	.00
31	e.00	---	.00	e6.2	---	.00	---	.00	---	.00	.00	---
TOTAL	0.80	15.40	48.85	552.65	19.39	4.88	0.00	0.00	0.00	2.59	0.00	0.00
MEAN	.026	.51	1.58	17.8	.69	.16	.000	.000	.000	.084	.000	.000
MAX	.80	9.6	41	221	3.6	.62	.00	.00	.00	2.2	.00	.00
MIN	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00
AC-FT	1.6	31	97	1100	38	9.7	.00	.00	.00	5.1	.00	.00

e Estimated.

SAN MATEO CREEK BASIN

11046360 CRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.006	.13	.39	10.7	7.15	32.2	2.81	.91	.15	.021	.000	.000
MAX	.026	.51	1.58	24.6	26.0	128	11.3	3.63	.58	.084	.000	.000
(WY)	1997	1997	1997	1995	1995	1995	1995	1995	1995	1997	1994	1994
MIN	.000	.000	.000	.000	.42	.16	.000	.000	.000	.000	.000	.000
(WY)	1994	1994	1994	1994	1994	1997	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1994 - 1997

ANNUAL TOTAL	127.72		644.56									
ANNUAL MEAN	.35		1.77							4.56		
HIGHEST ANNUAL MEAN										16.2		1995
LOWEST ANNUAL MEAN										.066		1994
HIGHEST DAILY MEAN	41	Dec 11				221	Jan 26			827	Mar 6	1995
LOWEST DAILY MEAN	.00	Jan 1				.00	Oct 1			.00	Oct 1	1993
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1				.00	Oct 1			.00	Oct 1	1993
INSTANTANEOUS PEAK FLOW						477	Jan 26			1730	Mar 5	1995
ANNUAL RUNOFF (AC-FT)	253					1280				3300		
10 PERCENT EXCEEDS	.00					.44				3.3		
50 PERCENT EXCEEDS	.00					.00				.00		
90 PERCENT EXCEEDS	.00					.00				.00		

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA

LOCATION.—Lat 33°30'09", long 117°38'50", in NW 1/4 SE 1/4 sec.6, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on right bank 20 ft downstream from La Novia Street Bridge, 1.3 mi upstream from Arroyo Trabuco Creek, and 0.8 mi east of San Juan Capistrano.

DRAINAGE AREA.—109 mi².

PERIOD OF RECORD.—October 1985 to current year. October 1985 to September 1986, published as San Juan Creek at San Juan Capistrano.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 100 ft above sea level, from topographic map.

REMARKS.—Records poor through April and fair thereafter. No regulation upstream from station. Capistrano Water Co. diverts water 2.0 mi upstream. Various amounts of diverted water reach station as irrigation return flow. October 1928 to September 1969 and October 1969 to September 1985, data published as San Juan Creek near San Juan Capistrano (station 11046500) and San Juan Creek at San Juan Capistrano (station 11046550), which are located approximately 1.9 mi upstream and 1.0 mi downstream, respectively. Data for these sites are roughly equivalent.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,600 ft³/s, estimated, Mar. 5, 1995, gage height, 20.66 ft, from rating curve extended above 3,420 ft³/s; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum, from rating curve extended as noted above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0415	372	11.46	Jan. 26	1100	2,070	13.20
Jan. 15	1645	367	11.45				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.6	3.6	8.8	73	17	7.1	3.6	2.2	.77	.00	.00
2	.00	1.6	3.4	10	60	16	7.5	3.5	2.0	.74	.00	.00
3	.00	1.1	3.8	33	51	16	7.1	3.4	1.9	.44	.38	.00
4	.00	1.0	4.1	26	46	16	8.0	3.3	1.8	1.1	.32	.00
5	.00	1.2	4.2	21	39	16	7.0	3.3	1.9	1.6	.00	.00
6	.00	1.3	8.2	19	34	16	6.3	3.3	2.2	1.4	.00	.00
7	.00	e1.1	5.7	14	30	16	5.3	3.3	2.8	1.1	.00	.00
8	.00	e.97	5.1	12	29	14	4.7	3.3	2.5	.93	.00	.00
9	.00	e.95	17	11	29	13	3.7	3.3	2.3	.34	.00	.00
10	.00	e.92	43	10	30	13	3.1	3.2	2.2	.19	.00	.00
11	.00	e.90	116	9.6	34	12	3.3	3.3	2.3	.10	.00	.00
12	.00	e.90	64	69	30	11	3.0	e3.2	2.5	.00	.00	.00
13	.00	e.93	17	237	28	10	2.7	1.8	2.5	.05	.00	.00
14	.00	e.95	9.3	167	30	9.3	3.2	3.9	2.7	.49	.00	.00
15	.00	e.98	8.7	154	29	8.9	e3.6	3.8	2.8	.35	.00	.00
16	.00	1.1	8.1	139	28	8.4	e4.1	3.2	2.2	.43	.00	.00
17	.00	1.1	8.1	79	26	9.4	4.9	2.6	1.6	.00	.00	.00
18	.00	1.3	8.1	65	24	9.2	5.3	3.8	1.9	.14	.00	.00
19	.00	2.1	8.1	58	23	9.3	6.1	3.7	2.0	.17	.00	.00
20	.00	2.0	8.0	52	21	10	5.2	3.5	2.1	.41	.00	.00
21	.00	57	7.3	49	19	8.1	7.5	4.5	2.3	.45	.00	.00
22	.00	152	9.4	47	20	8.7	5.4	4.0	2.4	.33	.00	.00
23	.00	17	9.3	73	23	9.2	5.3	3.2	2.0	.00	.00	.00
24	.00	6.9	7.4	80	20	9.6	4.8	3.5	1.7	.00	.00	.00
25	.00	5.5	7.3	79	17	9.3	4.8	3.5	1.9	.00	.00	.08
26	.00	5.3	7.3	1270	17	8.2	3.9	3.2	1.6	.00	.00	.00
27	.00	4.2	8.1	446	19	7.4	3.9	3.3	1.7	.28	.00	.00
28	.00	4.0	74	231	20	7.3	3.9	2.9	1.9	.55	.00	.00
29	.00	3.9	18	163	---	8.0	3.6	2.4	1.7	.35	.00	.00
30	.85	3.6	11	120	---	6.9	3.6	2.3	1.4	.38	.00	.00
31	4.6	---	9.2	93	---	7.9	---	2.1	---	.22	.00	---
TOTAL	5.45	283.40	521.8	3845.4	849	341.1	147.9	101.2	63.0	13.31	0.70	0.08
MEAN	.18	9.45	16.8	124	30.3	11.0	4.93	3.26	2.10	.43	.023	.003
MAX	4.6	152	116	1270	73	17	8.0	4.5	2.8	1.6	.38	.08
MIN	.00	.90	3.4	8.8	17	6.9	2.7	1.8	1.4	.00	.00	.00
AC-FT	11	562	1030	7630	1680	677	293	201	125	26	1.4	.2

e Estimated.

SAN JUAN CREEK BASIN

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.45	2.01	4.40	80.1	66.8	84.0	14.9	6.42	2.66	.92	.42	.33
MAX	2.41	9.45	16.8	590	502	663	75.0	35.5	15.9	6.78	2.86	1.98
(WY)	1996	1997	1997	1993	1993	1995	1995	1995	1995	1995	1995	1993
MIN	.000	.000	.000	.51	1.17	.55	.037	.000	.000	.000	.000	.000
(WY)	1987	1987	1990	1990	1989	1990	1989	1987	1986	1986	1986	1986

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1986 - 1997		
ANNUAL TOTAL	2605.87			6172.34					
ANNUAL MEAN	7.12			16.9			21.8		
HIGHEST ANNUAL MEAN							106		
LOWEST ANNUAL MEAN							.61		
HIGHEST DAILY MEAN	167			Feb 21			5700		
LOWEST DAILY MEAN	.00			Jul 6			.00		
ANNUAL SEVEN-DAY MINIMUM	.00			Jul 6			.00		
INSTANTANEOUS PEAK FLOW				2070			25600		
INSTANTANEOUS PEAK STAGE				13.20			20.66		
ANNUAL RUNOFF (AC-FT)	5170			12240			15790		
10 PERCENT EXCEEDS	13			30			23		
50 PERCENT EXCEEDS	2.1			3.2			.95		
90 PERCENT EXCEEDS	.00			.00			.00		

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA

LOCATION.—Lat 33°29'54", long 117°39'54", on line between secs.1 and 12, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on left bank 30 ft downstream from Del Obispo Street Bridge in San Juan Capistrano.

DRAINAGE AREA.—54.1 mi².

PERIOD OF RECORD.—October 1972 to September 1977, October 1983 to September 1989, October 1995 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 80 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,020 ft³/s, Feb. 15, 1986, gage height, 15.35 ft, from rating curve extended above 220 ft³/s; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 450 ft³/s, or maximum, from rating curve extended above 396 ft³/s on basis of critical-depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	1315	787	12.62	Jan. 15	1645	1,160	13.17
Nov. 22	0100	1,820	14.02	Jan. 26	0500	1,790	13.98
Dec. 11	0700	1,360	13.43	Sept. 25	1200	505	12.14
Dec. 27	2330	761	12.58				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	5.1	6.4	12	50	13	5.3	4.0	2.4	1.9	1.4	.71
2	.53	4.2	6.3	54	45	13	4.5	4.3	2.6	1.6	1.0	.65
3	.76	3.7	6.0	136	40	13	17	4.1	2.7	1.4	.90	.65
4	.93	3.4	5.6	42	37	13	19	4.1	2.5	1.4	1.3	.63
5	.65	3.6	9.9	61	33	12	6.3	4.1	2.5	1.6	.85	.63
6	.57	3.4	70	32	29	13	5.5	4.3	2.7	1.7	.87	.52
7	.56	3.1	11	22	26	10	4.4	4.1	5.5	1.9	.92	.46
8	.64	3.1	7.7	17	24	9.7	4.1	3.9	3.1	1.5	1.1	.50
9	.59	3.3	148	15	22	9.9	4.1	3.7	2.5	1.3	1.1	.58
10	.55	3.0	134	14	23	9.7	4.4	3.5	2.2	1.1	1.1	.82
11	.62	3.2	590	13	41	9.3	4.8	3.5	2.2	1.1	.91	.64
12	.53	3.2	140	309	21	9.3	4.6	3.4	2.3	1.2	1.2	.56
13	.57	3.2	38	390	19	9.2	4.5	3.4	2.8	1.4	.88	.51
14	.60	3.3	23	71	17	8.4	4.7	3.4	2.7	1.5	.84	.48
15	.64	3.5	15	238	16	8.3	5.0	3.2	2.4	1.6	.97	2.3
16	.74	3.6	12	147	16	8.1	5.1	3.1	2.3	1.6	1.2	1.7
17	.69	3.5	11	58	16	8.2	5.4	3.1	2.3	1.4	1.4	1.0
18	.65	4.0	9.8	47	16	8.2	5.8	3.2	2.5	1.5	1.2	.77
19	.74	3.8	9.5	39	15	7.7	5.4	3.2	2.8	1.4	.96	.66
20	.61	3.9	8.1	32	15	6.6	5.9	3.2	2.4	1.3	.83	.63
21	.58	479	8.2	33	15	6.7	5.8	3.1	2.3	1.7	.75	.65
22	.55	482	83	44	15	6.6	5.5	2.9	2.4	1.6	.78	.61
23	.63	35	36	228	14	7.2	5.3	2.9	2.4	1.9	.76	.63
24	.66	16	17	52	14	8.0	5.1	2.8	2.4	1.8	.75	.69
25	1.5	11	14	185	13	7.4	4.4	2.9	2.3	1.9	.70	112
26	1.6	10	17	784	14	6.5	4.2	2.9	2.2	1.7	.73	39
27	1.6	7.6	124	285	27	6.3	4.1	2.9	2.3	1.7	.77	7.7
28	1.7	8.1	227	145	17	6.1	4.4	2.4	2.2	1.9	.69	3.5
29	1.9	8.7	22	92	---	5.1	3.7	2.4	2.1	1.7	.67	3.2
30	198	7.0	16	72	---	5.1	4.0	2.4	2.1	1.3	.65	2.9
31	18	---	14	58	---	5.5	---	2.4	---	1.5	.63	---
TOTAL	239.47	1135.5	1839.5	3727	650	270.1	172.3	102.8	76.1	48.1	28.81	186.28
MEAN	7.72	37.8	59.3	120	23.2	8.71	5.74	3.32	2.54	1.55	.93	6.21
MAX	198	482	590	784	50	13	19	4.3	5.5	1.9	1.4	112
MIN	.53	3.0	5.6	12	13	5.1	3.7	2.4	2.1	1.1	.63	.46
AC-FT	475	2250	3650	7390	1290	536	342	204	151	95	57	369

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.44	10.9	18.1	19.2	19.7	15.5	7.06	2.66	1.45	1.02	1.33	2.33
MAX	12.7	37.8	59.3	120	69.9	60.1	19.5	5.83	2.54	2.08	8.90	7.81
(WY)	1988	1997	1997	1997	1996	1986	1986	1977	1989	1996	1977	1986
MIN	.052	.81	1.73	.85	2.84	3.74	.92	.71	.007	.055	.019	.000
(WY)	1974	1975	1973	1976	1977	1988	1977	1988	1973	1973	1973	1973

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1973 - 1997	
ANNUAL TOTAL	7371.64		8475.96			
ANNUAL MEAN	20.1		23.2		8.51	
HIGHEST ANNUAL MEAN					23.2	
LOWEST ANNUAL MEAN					3.17	
HIGHEST DAILY MEAN	590	Dec 11	784	Jan 26	784	Jan 26 1997
LOWEST DAILY MEAN	.44	Sep 22	.46	Sep 7	.00	Oct 1 1972
ANNUAL SEVEN-DAY MINIMUM	.50	Sep 21	.57	Sep 3	.00	Oct 1 1972
INSTANTANEOUS PEAK FLOW			1820	Nov 22	2020	Feb 15 1986
INSTANTANEOUS PEAK STAGE			14.02	Nov 22	15.35	Feb 15 1986
ANNUAL RUNOFF (AC-FT)	14620		16810		6160	
10 PERCENT EXCEEDS	30		40		12	
50 PERCENT EXCEEDS	4.1		3.6		1.8	
90 PERCENT EXCEEDS	.57		.66		.12	

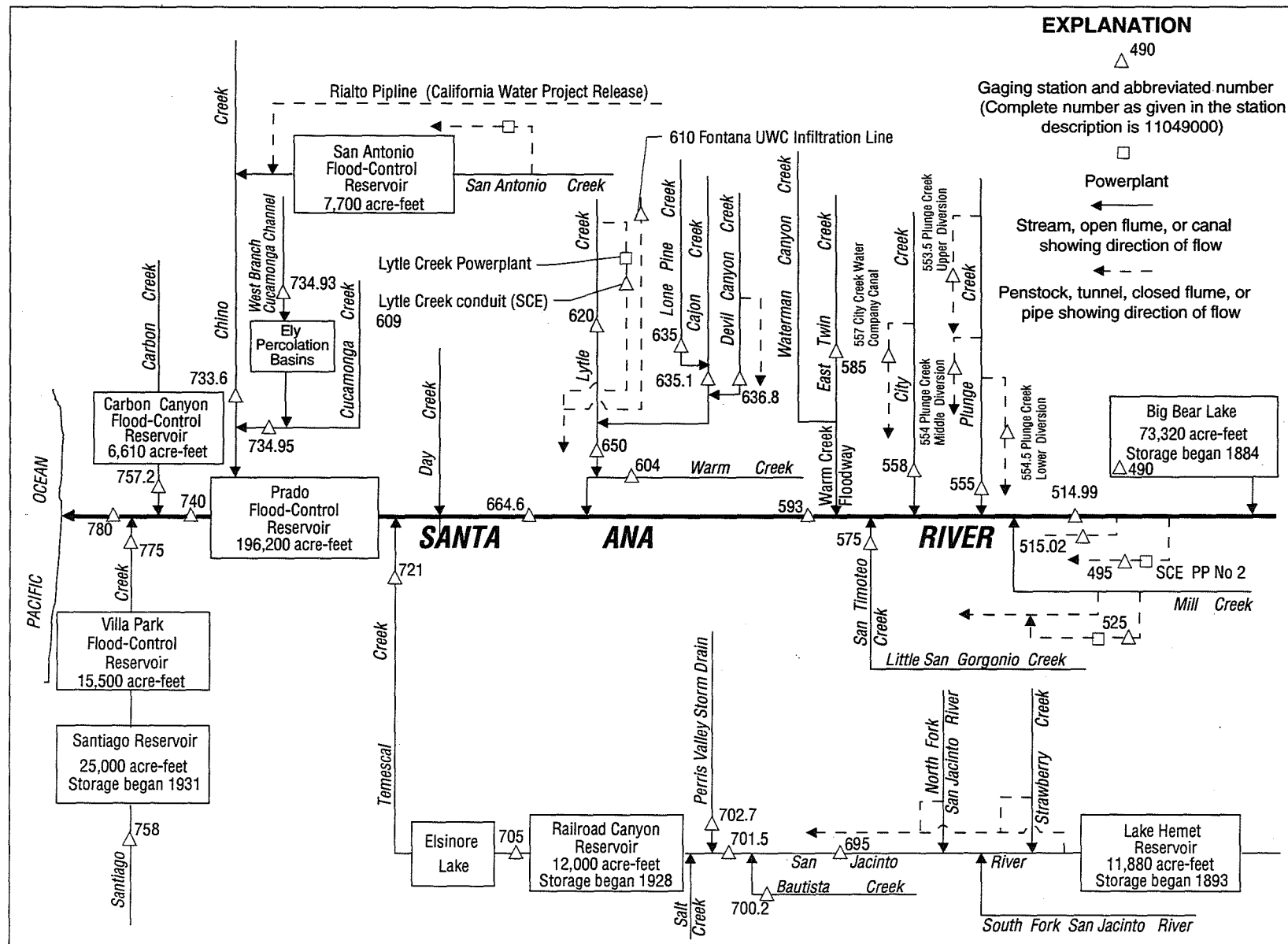


Figure 17. Diversions and storage in Santa Ana River Basin.

11049000 BIG BEAR LAKE NEAR BIG BEAR LAKE, CA

LOCATION.—Lat 34°14'33", long 116°58'33", in SW 1/4 sec.22, T.2 N., R.1 W., San Bernardino County, Hydrologic Unit 18070203, at Big Bear Lake Dam on Bear Creek, 4 mi west of town of Big Bear Lake, and 7.5 mi upstream from mouth.

DRAINAGE AREA.—38.9 mi², excludes Baldwin Lake drainage included in reports prior to 1983.

PERIOD OF RECORD.—October 1950 to current year. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

REVISED RECORDS.—WDR CA-83-1: Drainage area.

GAGE.—Nonrecording gage. Datum of gage is 6,670.9 ft above sea level (levels by Bear Valley Mutual Water Co.). Prior to 1912 at old dam 200 ft upstream at same datum, spillway at elevation 6723.3 ft.

REMARKS.—Lake is formed by multiple-arch concrete dam, completed in 1912, replacing existing lower dam built in 1884; storage began in spring of 1884. Capacity (based on July 1977 resurvey; present capacity table put into use August 1977), 73,320 acre-ft at elevation 6,743.3 ft, top of dam. No dead storage. During the year, 364 acre-ft was released. Between October 1996 and February 1997, 950 acre-ft was pumped from the lake for snowmaking. See schematic diagram of Santa Ana River Basin.

COOPERATION.—Record of contents provided by Big Bear Municipal Water District; not reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents unknown, lake spilled in 1969, 1970, 1980, 1983; minimum contents observed, 530 acre-ft, Nov. 24, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939; lake dry October, November 1898, August to November 1899, October, November 1904.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 65,980 acre-ft, Apr. 28; minimum contents observed, 58,310 acre-ft, Sept. 24.

MONTHEND CONTENTS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Contents (acre-ft)	Change in Contents (acre-ft)
Sept.30.	60,920	—
Oct. 31.	59,360	-1,560
Nov. 30.	60,540	+1,180
Dec. 31.	61,610	+1,070
CAL YR 1996.	—	-3,450
Jan. 31.	64,700	+3,090
Feb. 28.	65,130	+430
Mar. 31.	65,710	+580
Apr. 30.	65,820	+110
May 31.	64,080	-1,740
June 30.	62,590	-1,490
July 31.	61,020	-1,570
Aug. 31.	59,270	-1,750
Sept. 30.	58,400	-870
WTR YR 1997.	—	-2,520

11051500 SANTA ANA RIVER NEAR MENTONE, CA

LOCATION.—Lat 34°06'30", long 117°05'59", in SW 1/4 SW 1/4 sec.4, T.1 S., R.2 W., San Bernardino County, Hydrologic Unit 18070203, on right bank near mouth of canyon, 1.6 mi upstream from Mill Creek, 3.2 mi northeast of Mentone, and 16 mi downstream from Big Bear Lake.

DRAINAGE AREA.—210 mi², including area tributary to Baldwin Lake at head of Bear Valley.

PERIOD OF RECORD.—July 1896 to current year. Prior to October 1914, records for river only not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January and February 1916 published in WSP 1315-B.

REVISED RECORDS.—WSP 931: 1940. WSP 1635: 1918, 1920(M), 1922, 1937, 1943(M). WSP 1928: Drainage area. WSP 2128: 1910.

GAGE.—Three water-stage recorders. Main gage on right bank of river (station 11051499), canal gage on powerhouse diversion (station 11049500), and since 1970, supplementary gage on left bank of river (station 11051502). Elevation of the main and supplementary gages is 1,950 ft above sea level, from topographic map. Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 mi upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mi upstream at different datum. Canal gage at different datum.

REMARKS.—Records fair. Flow partly regulated by Big Bear Lake (station 11049000). The supplementary gage (station 11051502) measures water that is occasionally diverted out of the main channel 250 ft upstream for water distribution. Flow measured by the supplementary gage is included with the river record to maintain equivalence with records prior to 1970. For records of combined discharge of Santa Ana River and Southern California Edison Co.'s canal below Powerplant No. 2 (station 11049500), which diverts upstream from station, see station 11051501. Prior to Oct. 1, 1952, and since Apr. 26, 1976, Bear Valley Mutual Water Co. pumps water into channel above canal gage. See schematic diagram of Santa Ana River Basin.

COOPERATION.—Records for Southern California Edison Co.'s Canal near Mentone (station 11049500) were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—River only: Maximum discharge, 52,300 ft³/s, Mar. 2, 1938, gage height, 14.3 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined river and canal: Maximum discharge, 52,300 ft³/s, Mar. 2, 1938; minimum daily, 5.3 ft³/s, July 22, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.—Combined river and canal: Flood of Feb. 23, 1891, 53,700 ft³/s, from notes provided by F.C. Finkle, consulting engineer, Los Angeles.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	1.7	39	50	68	15	5.7	3.8	1.2	.91	.85	.18
2	.39	1.3	38	57	57	14	5.7	3.1	1.2	.87	.79	1.0
3	.38	1.3	38	211	44	14	5.7	2.0	1.1	.77	.71	21
4	.32	1.2	39	121	27	13	5.7	1.6	1.0	11	.66	23
5	.27	1.3	38	95	24	13	5.5	1.5	1.1	17	.63	21
6	.26	1.2	39	81	22	12	5.3	1.5	.99	17	.57	20
7	.26	1.1	36	56	20	12	5.5	1.4	.99	12	.28	18
8	.27	1.1	33	34	19	12	5.7	1.4	.90	3.6	.24	15
9	.25	.96	46	18	17	11	5.7	1.2	.85	3.1	.32	11
10	.29	.88	112	11	16	11	5.7	1.2	.80	2.0	.47	6.2
11	.30	.82	82	10	16	11	5.7	1.2	.72	1.5	.37	5.5
12	.29	.79	71	22	16	10	5.7	1.2	.78	1.4	.45	2.2
13	.27	.77	64	58	15	10	5.7	1.1	1.4	1.2	.32	1.9
14	.27	.74	54	59	15	10	5.4	1.1	1.9	1.2	.29	1.8
15	.26	.74	48	93	15	10	4.7	1.0	2.1	1.1	.33	2.9
16	.27	.74	47	89	15	10	4.8	.98	2.3	1.0	.50	3.4
17	.26	.73	46	43	15	10	4.5	1.1	2.4	1.0	.48	2.5
18	.28	.72	43	34	15	10	4.4	1.9	2.4	1.0	.38	2.2
19	.30	.73	42	27	14	10	4.4	2.3	2.4	1.0	.35	2.2
20	.34	.80	42	26	14	9.8	4.4	2.3	2.5	1.0	.38	1.8
21	.37	38	41	25	14	9.8	4.2	1.2	2.8	1.0	.24	1.7
22	.45	225	77	27	14	9.8	4.2	1.2	2.8	1.3	.22	1.5
23	.85	116	71	68	14	9.8	3.1	1.1	2.5	1.1	.24	.75
24	.44	69	57	67	13	9.8	3.1	1.1	1.6	1.1	.25	.57
25	.43	63	51	72	13	e9.0	4.4	1.8	1.3	1.0	.17	2.3
26	.44	51	53	959	13	e8.1	4.7	2.3	1.2	.99	.04	24
27	.49	46	54	454	22	7.1	4.8	2.5	1.1	.97	.05	15
28	.52	43	75	259	20	6.7	4.8	2.6	1.0	.97	.05	10
29	.49	42	61	200	---	6.4	4.1	2.5	.98	.97	.05	6.1
30	4.8	40	50	e137	---	6.0	4.0	1.7	.95	.94	.14	3.8
31	19	---	49	e84	---	5.7	---	1.3	---	.89	.18	---
TOTAL	34.19	752.62	1636	3547	587	316.0	147.3	52.18	45.26	90.88	11.00	228.50
MEAN	1.10	25.1	52.8	114	21.0	10.2	4.91	1.68	1.51	2.93	.35	7.62
MAX	19	225	112	959	68	15	5.7	3.8	2.8	17	.85	24
MIN	.25	.72	33	10	13	5.7	3.1	.98	.72	.77	.04	.18
AC-FT	68	1490	3250	7040	1160	627	292	103	90	180	22	453

e Estimated.

SANTA ANA RIVER BASIN

11051500 SANTA ANA RIVER NEAR MENTONE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.77	8.63	25.7	42.6	81.6	96.4	63.3	45.2	21.1	11.1	6.07	6.23
MAX	77.8	206	536	646	1052	1405	413	411	278	174	124	134
(WY)	1970	1966	1967	1993	1980	1938	1969	1969	1969	1969	1969	1969
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1934	1934	1949	1936	1961	1951	1959	1959	1959	1934	1934	1933

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1915 - 1997	
ANNUAL TOTAL	7718.24		7447.93			
ANNUAL MEAN	21.1		20.4		33.0	
HIGHEST ANNUAL MEAN					283	
LOWEST ANNUAL MEAN					.012	
HIGHEST DAILY MEAN	905	Feb 21	959	Jan 26	15500	Mar 2 1938
LOWEST DAILY MEAN	.25	Oct 9	.04	Aug 26	.00	Nov 21 1932
ANNUAL SEVEN-DAY MINIMUM	.27	Oct 5	.10	Aug 25	.00	Nov 21 1932
INSTANTANEOUS PEAK FLOW			1870	Jan 26	52300	Mar 2 1938
INSTANTANEOUS PEAK STAGE					14.30	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	15310		14770		23870	
10 PERCENT EXCEEDS	47		53		74	
50 PERCENT EXCEEDS	5.6		3.1		1.8	
90 PERCENT EXCEEDS	.48		.36		.00	

11051501 SANTA ANA RIVER NEAR MENTONE, CA—Continued

SANTA ANA RIVER AND SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR MENTONE, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	34	72	51	140	77	52	40	29	23	20	17
2	26	29	72	72	138	73	52	40	30	25	20	21
3	25	28	74	272	134	73	53	46	29	21	19	32
4	25	28	75	122	131	72	53	47	30	16	20	27
5	25	27	73	96	121	69	52	47	33	22	20	25
6	24	29	76	105	112	68	50	47	34	22	20	24
7	24	28	70	98	107	67	50	45	33	23	19	22
8	24	28	60	83	103	67	49	45	32	21	18	23
9	23	28	48	78	97	65	49	46	28	24	18	24
10	23	27	113	74	93	64	49	51	26	24	19	22
11	23	26	83	70	90	65	48	52	25	24	19	24
12	23	27	85	81	87	64	47	51	27	23	19	23
13	23	27	104	116	83	63	46	51	31	22	19	23
14	23	27	100	121	81	62	45	50	32	22	18	23
15	23	28	90	156	78	62	44	38	31	22	17	25
16	24	29	90	175	78	62	44	32	28	21	18	23
17	23	29	89	146	81	62	44	31	26	20	17	22
18	23	29	84	128	84	61	42	32	25	21	17	20
19	25	29	84	113	78	60	44	32	24	21	17	20
20	25	29	83	112	77	60	43	34	25	21	17	21
21	23	51	82	112	74	61	42	34	25	21	18	20
22	23	226	102	99	73	60	42	33	24	27	18	21
23	26	116	85	148	72	60	43	31	28	26	18	21
24	26	69	85	145	70	60	40	31	28	24	17	22
25	25	88	78	148	68	e58	39	32	26	22	16	27
26	25	96	90	966	70	e56	40	30	25	21	16	46
27	25	87	104	455	97	55	39	29	22	21	17	32
28	27	80	135	260	90	55	41	28	23	21	17	28
29	27	77	112	201	---	53	41	30	24	21	17	26
30	24	73	76	e166	---	52	40	31	21	21	17	28
31	39	---	50	e145	---	53	---	29	---	21	17	---
TOTAL	770	1529	2624	5114	2607	1939	1363	1195	824	684	559	732
MEAN	24.8	51.0	84.6	165	93.1	62.5	45.4	38.5	27.5	22.1	18.0	24.4
MAX	39	226	135	966	140	77	53	52	34	27	20	46
MIN	23	26	48	51	68	52	39	28	21	16	16	17
AC-FT	1530	3030	5200	10140	5170	3850	2700	2370	1630	1360	1110	1450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.0	45.7	59.1	92.7	124	137	116	99.1	73.6	63.0	56.8	54.3
MAX	122	219	538	1439	1052	1402	413	450	277	175	124	137
(WY)	1984	1966	1967	1916	1980	1938	1969	1983	1969	1922	1969	1969
MIN	10.4	12.5	14.4	19.0	18.3	21.6	20.6	19.2	15.1	9.36	9.91	9.75
(WY)	1991	1991	1991	1991	1991	1965	1961	1961	1989	1990	1990	1990

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1912 - 1997

ANNUAL TOTAL	23443	19940	
ANNUAL MEAN	64.1	54.6	80.7
HIGHEST ANNUAL MEAN			366
LOWEST ANNUAL MEAN			18.6
HIGHEST DAILY MEAN	906	Feb 21	966 Jan 26
LOWEST DAILY MEAN	21	Sep 25	16 Jul 4
ANNUAL SEVEN-DAY MINIMUM	23	Oct 9	17 Aug 24
INSTANTANEOUS PEAK FLOW			1870 Jan 26
ANNUAL RUNOFF (AC-FT)	46500	39550	52300
10 PERCENT EXCEEDS	111	102	58440
50 PERCENT EXCEEDS	50	33	136
90 PERCENT EXCEEDS	26	20	49
			24

e Estimated.

11052500 MILL CREEK POWER CANALS NOS. 2 AND 3 NEAR YUCAIPA, CA

LOCATION.—Lat 34°05'23", long 117°00'49", in NW 1/4 NW 1/4 sec.17, T.1 S., R.1 W., San Bernardino County, Hydrologic Unit 18070203, on penstock 100 ft downstream from Mill Creek Nos. 2 and 3 forebay, and 4.2 mi northeast of Yucaipa.

PERIOD OF RECORD.—October 1973 to September 1986, October 1993 to current year. Records for January 1919 to September 1973 available in files of the U.S. Geological Survey.

GAGE.—Acoustic-velocity meter and water stage recorder. Elevation of gage is 4,840 ft above sea level, from topographic map.

REMARKS.—Mill Creek Power Canals Nos. 2 and 3 divert from points 3 mi and 6 mi upstream from station, respectively. Canal No. 2, damaged during earthquake in 1992, was not used during water year 1997. Prior to October 1993, records collected at powerhouse at terminus of penstock. October 1993 to September 1995, records collected at auxiliary gage at Canal No. 3 intake. See schematic diagram of Santa Ana River Basin.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 41 ft³/s, May 6, 1995; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	13	16	15	18	18	e16	15	e15	14	12
2	11	11	13	17	15	18	18	e16	15	e15	13	12
3	11	11	14	16	15	18	18	e16	15	e15	14	12
4	11	11	13	16	15	18	18	e16	15	e15	14	9.9
5	11	11	14	16	15	17	18	e16	15	e15	14	.00
6	11	11	12	16	14	17	17	e16	15	e15	14	.00
7	11	11	13	16	14	17	17	e16	15	e15	14	.00
8	11	11	13	16	15	17	17	e16	15	e15	13	.00
9	11	11	13	16	16	17	17	e16	15	e15	13	.00
10	11	10	13	16	15	18	17	e16	15	e15	13	.00
11	11	11	13	16	13	18	17	e16	15	e15	13	.00
12	11	11	13	16	12	18	17	e16	15	e15	13	.00
13	11	11	13	16	12	18	17	e16	15	e15	13	.00
14	11	11	14	15	12	18	17	e16	15	e15	13	.00
15	11	11	17	16	15	18	17	e15	15	e15	13	.00
16	11	11	17	16	16	18	17	e15	15	e15	13	.00
17	11	11	17	16	16	18	17	e15	15	e15	13	.00
18	11	11	16	16	15	18	17	e15	15	e14	13	.00
19	11	11	16	15	18	18	17	e15	15	e14	13	.00
20	11	11	17	15	18	18	17	e15	15	e14	13	.00
21	11	11	17	15	18	18	17	e15	15	e14	12	.00
22	11	11	17	15	18	18	17	e15	15	e14	12	4.4
23	11	11	16	15	18	18	17	e15	15	e14	12	9.0
24	11	11	17	15	18	18	17	e15	15	e14	12	9.6
25	11	11	17	15	18	18	17	e15	15	e14	12	3.9
26	11	11	16	15	18	18	17	e15	15	e14	12	.00
27	11	11	17	15	18	18	17	e15	15	e14	12	.00
28	11	11	17	15	17	18	16	e15	15	e14	12	.00
29	11	11	16	15	---	18	16	15	15	e14	12	6.4
30	11	13	17	15	---	18	e16	15	e15	e14	12	11
31	11	---	16	14	---	18	---	15	---	14	12	---
TOTAL	341	331	467	482	439	553	512	479	450	451	398	90.20
MEAN	11.0	11.0	15.1	15.5	15.7	17.8	17.1	15.5	15.0	14.5	12.8	3.01
MAX	11	13	17	17	18	18	18	16	15	15	14	12
MIN	11	10	12	14	12	17	16	15	15	14	12	.00
AC-FT	676	657	926	956	871	1100	1020	950	893	895	789	179

e Estimated.

SANTA ANA RIVER BASIN

221

11052500 MILL CREEK POWER CANALS NOS. 2 AND 3 NEAR YUCAIPA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.1	16.3	15.9	16.2	17.0	19.5	22.0	22.7	21.3	18.8	17.6	16.8
MAX	26.8	23.5	23.9	26.6	27.8	30.1	33.3	31.8	28.7	29.2	30.2	27.9
(WY)	1981	1979	1979	1979	1979	1979	1995	1995	1979	1980	1980	1978
MIN	9.77	8.43	9.86	7.90	12.1	13.7	15.6	15.5	12.4	11.5	9.10	3.01
(WY)	1988	1989	1989	1995	1996	1976	1977	1997	1989	1989	1989	1997

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1974 - 1997			
ANNUAL TOTAL	5123.10				4993.20							
ANNUAL MEAN	14.0				13.7				18.4			
HIGHEST ANNUAL MEAN									26.2			
LOWEST ANNUAL MEAN									12.6			
HIGHEST DAILY MEAN	22 Mar 15				18 Feb 19				41 May 6 1995			
LOWEST DAILY MEAN	.00 Feb 1				.00 Sep 5				.00 Mar 3 1974			
ANNUAL SEVEN-DAY MINIMUM	6.8 Feb 17				.00 Sep 5				.00 Sep 5 1997			
ANNUAL RUNOFF (AC-FT)	10160				9900				13360			
10 PERCENT EXCEEDS	20				18				27			
50 PERCENT EXCEEDS	13				15				18			
90 PERCENT EXCEEDS	11				11				11			

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA

LOCATION.—Lat 34°07'06", long 117°08'27", in NE 1/4 NE 1/4 sec.1, T.1 S., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on left bank at mouth of canyon at crossing of North Fork Ditch siphon, and 1.8 mi northeast of East Highlands.

DRAINAGE AREA.—16.9 mi².

PERIOD OF RECORD.—January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

REVISED RECORDS.—WSP 1635: 1924, 1926, 1935–36(M), 1943, 1944(M), 1945, 1946(M), 1947, 1950(M). WSP 1715: 1956–58(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder on creek. Since March 1951 water-stage recorder and weir on upper diversion, discontinued Sept. 30, 1991, reactivated July 27, 1993; water-stage recorder and concrete-lined canal on middle diversion; crest-stage gage and sharp-crested weir on lower diversion. Elevation of creek gage is 1,590 ft above sea level, from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft higher. Diversions all at different datums.

REMARKS.—Records fair above 10 ft³/s and poor below. No regulation upstream from station. Diversion from Alder Creek to Upper Plunge Creek area was active 1904–67. Diversions for irrigation are made at sites 0.5 (station 11055450), 1.0 (station 11055400), and 2.5 mi (station 11055350) upstream from streamflow station. Water has been diverted upstream from station for irrigation during entire period of record. For combined discharge of Plunge Creek and diversions, see station 11055501. No flow in lower diversion since May 29, 1966. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 5,340 ft³/s, Mar. 2, 1938, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined creek and diversions: Maximum discharge, 4,770 ft³/s, Dec. 6, 1966; no flow Nov. 12, 1964, Sept. 29, 1965, Aug. 4, 1987, several days in November 1988, September 1991, many days in 1992.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum, from rating curve extended above 324 ft³/s on basis of slope-conveyance measurement at gage height 7.41 ft:

Date	Time	Creek only		Combined creek and diversions	
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)	
Jan. 26	0745	818	5.51	818	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	1.7	3.3	8.7	32	13	2.3	1.1	.37	.02	.32	.00
2	.08	.45	3.5	8.4	27	12	2.3	1.0	.45	.00	.23	.00
3	.11	.24	3.1	75	24	11	2.3	.96	.48	.00	.16	.00
4	.07	.26	3.0	34	22	10	2.3	.96	.48	.00	.13	.00
5	.04	.35	3.1	24	21	9.4	2.4	.98	.49	.00	.10	.00
6	.04	.40	3.3	19	20	8.9	2.3	.95	.58	.00	e.05	.00
7	.04	.30	3.2	15	18	8.4	2.3	.75	.59	.00	.00	.00
8	.03	.35	3.1	13	17	8.1	2.3	.76	.58	.00	.00	.00
9	.03	.29	16	12	15	7.7	2.3	.72	.43	.00	.00	.00
10	.05	.23	23	11	15	7.3	2.3	.82	.33	.00	.00	.00
11	.03	.19	19	9.8	14	6.9	2.3	.99	.53	.00	.00	.00
12	.02	.17	14	18	13	6.7	2.4	.98	1.6	.00	.00	.00
13	.01	.15	9.8	62	12	5.9	2.5	.94	1.3	.00	.00	.00
14	.00	.17	7.5	63	11	4.2	2.5	.68	1.3	.00	.00	.00
15	.00	.24	6.3	67	11	3.4	2.3	.41	1.2	.00	.00	.00
16	.00	.37	6.0	60	10	3.4	1.9	.43	.75	.00	.00	.00
17	.00	.37	5.6	43	9.9	3.4	1.9	.42	.34	.00	.00	.00
18	.00	.41	5.3	36	10	3.2	1.9	.30	.07	.00	.00	.00
19	.00	.43	5.2	32	9.4	3.0	2.0	.39	.01	.00	.00	.00
20	.00	.34	5.0	28	8.9	2.9	1.9	.79	.03	.00	.00	.00
21	.00	12	4.9	25	8.4	2.9	1.8	.87	.09	.00	.00	.00
22	.00	57	28	23	8.3	2.9	1.2	.93	.13	.33	.00	.00
23	.00	24	21	49	8.1	3.4	.96	.90	.22	.26	.00	.00
24	.00	8.6	12	45	8.1	3.3	1.0	1.1	.30	.52	.00	.00
25	.06	5.9	9.3	52	7.7	3.0	1.1	1.1	.21	1.3	.00	.00
26	.03	4.8	8.1	360	7.7	2.6	.77	.95	.14	1.4	.00	.48
27	.40	3.9	9.6	148	19	2.3	.71	.64	.10	.67	.00	.33
28	1.0	3.8	22	79	18	2.4	.76	.54	.10	.53	.00	.11
29	.18	3.8	14	53	---	2.4	1.1	.45	.08	.63	.00	.00
30	2.0	3.4	11	43	---	2.4	1.2	.38	.08	.53	.00	.00
31	2.5	---	9.5	38	---	2.4	---	.37	---	.42	.00	---
TOTAL	6.76	134.61	297.7	1553.9	405.5	168.8	55.30	23.56	13.36	6.61	0.99	0.92
MEAN	.22	4.49	9.60	50.1	14.5	5.45	1.84	.76	.45	.21	.032	.031
MAX	2.5	57	28	360	32	13	2.5	1.1	1.6	1.4	.32	.48
MIN	.00	.15	3.0	8.4	7.7	2.3	.71	.30	.01	.00	.00	.00
AC-FT	13	267	590	3080	804	335	110	47	26	13	2.0	1.8

e Estimated.

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.26	1.93	6.61	12.9	21.6	22.8	12.5	3.66	.93	.26	.14	.32
MAX	3.47	44.7	106	170	224	176	74.2	30.2	9.96	3.87	4.87	10.9
(WY)	1984	1966	1967	1993	1969	1938	1958	1983	1983	1983	1983	1978
MIN	.000	.000	.000	.003	.000	.029	.000	.000	.000	.000	.000	.000
(WY)	1920	1921	1930	1963	1961	1961	1961	1919	1919	1919	1919	1919

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1919 - 1997			
ANNUAL TOTAL	1606.81				2668.01							
ANNUAL MEAN	4.39				7.31				6.97			
HIGHEST ANNUAL MEAN									42.5			
LOWEST ANNUAL MEAN									.050			
HIGHEST DAILY MEAN	136				360				1840			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					818				5340			
INSTANTANEOUS PEAK STAGE					5.51							
ANNUAL RUNOFF (AC-FT)	3190				5290				5050			
10 PERCENT EXCEEDS	9.3				19				14			
50 PERCENT EXCEEDS	1.0				.87				.14			
90 PERCENT EXCEEDS	.00				.00				.00			

11055501 PLUNGE CREEK NEAR EAST HIGHLANDS, CA—Continued

PLUNGE CREEK AND DIVERSIONS NEAR EAST HIGHLANDS, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	2.5	3.3	8.7	32	13	5.1	3.1	1.2	.85	1.1	.64
2	.74	1.4	3.5	8.4	27	12	5.1	2.9	1.4	.80	.94	.67
3	.72	1.1	3.1	7.5	24	11	5.1	2.8	1.4	.77	.86	.84
4	.63	1.1	3.0	34	22	10	5.1	2.7	1.4	.75	.86	.84
5	.58	1.3	3.1	24	21	9.4	5.1	2.6	1.7	.77	.88	.80
6	.57	1.3	3.3	19	20	8.9	4.9	2.5	1.8	.78	e.90	.79
7	.55	1.2	3.2	15	18	8.4	4.8	2.3	1.9	.79	.93	.77
8	.54	1.3	3.1	13	17	8.1	4.8	2.3	1.8	.81	.79	.74
9	.56	1.2	16	12	15	7.7	4.8	2.1	1.4	.80	.77	.75
10	.70	1.1	23	11	15	7.3	4.7	2.2	1.3	.81	.85	.76
11	.70	1.1	19	9.8	14	6.9	4.6	2.5	.92	.89	.82	.79
12	.69	1.1	14	18	13	6.7	4.3	2.5	2.1	.89	.77	.82
13	.68	1.1	9.8	62	12	6.3	4.3	2.3	2.3	.82	.64	.80
14	.70	1.1	7.5	63	11	5.8	4.2	2.2	2.3	.79	.53	.91
15	.70	1.1	6.3	67	11	5.6	4.2	1.9	2.2	.79	.58	.95
16	.75	1.2	6.0	60	10	5.6	3.6	1.8	1.7	.72	.85	.91
17	.75	1.2	5.6	43	9.9	5.6	3.6	1.9	1.2	.68	.82	.74
18	.72	1.2	5.3	36	10	5.2	3.5	1.7	.90	.70	.74	.64
19	.80	1.3	5.2	32	9.4	5.0	3.8	1.9	.84	.77	.73	.66
20	.78	1.2	5.0	28	8.9	5.0	3.6	2.3	.85	.70	.72	.76
21	.72	13	4.9	25	8.4	4.8	3.3	2.4	.91	.49	.64	.70
22	.64	57	28	23	8.3	4.6	3.0	2.3	.96	.86	.71	.68
23	.59	24	21	49	8.1	4.6	3.1	2.3	1.1	.46	.66	.66
24	.68	8.6	12	45	8.1	4.5	3.1	2.6	1.1	.52	.65	.66
25	.89	5.9	9.3	52	7.7	4.4	3.3	2.5	.99	1.3	.63	.92
26	.72	4.8	8.1	360	7.7	4.7	2.8	2.2	.91	1.7	.61	1.4
27	.71	3.9	9.6	148	19	4.8	2.6	1.7	.85	1.5	.60	1.3
28	1.8	3.8	22	79	18	5.1	2.8	1.5	.85	1.3	.62	.97
29	1.1	3.8	14	53	---	4.9	3.3	1.4	.80	1.5	.62	.84
30	2.8	3.4	11	43	---	4.9	3.4	1.3	.93	1.3	.64	.29
31	3.1	---	9.5	38	---	5.1	---	1.3	---	1.2	.62	---
TOTAL	27.28	153.3	297.7	1553.9	405.5	205.9	119.9	68.0	40.01	27.81	23.08	24.00
MEAN	.88	5.11	9.60	50.1	14.5	6.64	4.00	2.19	1.33	.90	.74	.80
MAX	3.1	57	28	360	32	13	5.1	3.1	2.3	1.7	1.1	1.4
MIN	.54	1.1	3.0	8.4	7.7	4.4	2.6	1.3	.80	.46	.53	.29
AC-FT	54	304	590	3080	804	408	238	135	79	55	46	48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.39	3.49	7.77	18.1	23.1	24.8	13.8	6.77	3.44	1.78	1.29	1.44
MAX	7.23	45.2	106	170	224	126	79.0	31.9	14.2	7.44	7.43	14.1
(WY)	1984	1966	1967	1993	1969	1978	1958	1983	1980	1980	1983	1978
MIN	.033	.003	.77	1.00	1.50	1.62	1.33	.97	.63	.26	.028	.011
(WY)	1992	1992	1963	1963	1961	1961	1961	1961	1961	1992	1992	1992

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1951 - 1997			
ANNUAL TOTAL	1838.68				2946.38							
ANNUAL MEAN	5.02				8.07				8.89			
HIGHEST ANNUAL MEAN									44.4			
LOWEST ANNUAL MEAN									1.00			
HIGHEST DAILY MEAN	136				Feb 21				1840			
LOWEST DAILY MEAN	.54				Oct 8				.00			
ANNUAL SEVEN-DAY MINIMUM	.59				Oct 4				.00			
INSTANTANEOUS PEAK FLOW					818				Jan 26			
ANNUAL RUNOFF (AC-FT)	3650				5840				4770			
10 PERCENT EXCEEDS	9.3				19				15			
50 PERCENT EXCEEDS	2.2				2.3				2.3			
90 PERCENT EXCEEDS	.71				.69				.60			

e Estimated.

11055800 CITY CREEK NEAR HIGHLAND, CA

LOCATION.—Lat 34°08'38", long 117°11'16", in SW 1/4 NW 1/4 sec.27, T.1 N., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 0.6 mi upstream from Highland Avenue and 1.5 mi northeast of Highland.

DRAINAGE AREA.—19.6 mi².

PERIOD OF RECORD.—October 1919 to current year; combined records of creek and City Creek Water Co.'s canal, June 1924 to September 1986, October 1988 to current year.

REVISED RECORDS.—WSP 1635: 1920(M), 1923(M), 1937(M), 1939(M), 1946. WSP 1928: Drainage area.

GAGE.—Water-stage recorder on creek; water-stage recorder on canal. Elevation of creek gage is 1,580 ft above sea level, from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi downstream at different datum. Canal gage at different datum.

REMARKS.—Records fair. No regulation upstream from station. City Creek Water Co.'s canal (station 11055700) diverted from a site 0.5 mi upstream from station for irrigation throughout period of record until Sept. 30, 1986, and resumed diversion on Mar. 31, 1989. Diversion canal damaged by storms of January 1993, with no flow in canal from January 14, 1993, to April 5, 1995. See schematic diagram of Santa Ana River Basin. For combined discharge of City Creek and canal see station 11055801.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 7,000 ft³/s, Feb. 25, 1969, gage height, 9.39 ft, from rating curve extended above 580 ft³/s on basis of slope-area measurement at gage height 8.82 ft; no flow for many days in some years.

Combined creek and canal: Maximum discharge, 7,000 ft³/s, Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 110 ft³/s, or maximum:

Date	Time	Creek only		Combined creek and canal	
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)	
Nov. 22	0400	146	4.73	146	
Jan. 3	0630	228	5.04	228	
Jan. 15	1830	128	4.62	128	
Jan. 26	0645	1,360	7.15	1,360	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.73	4.6	9.4	41	15	8.1	5.3	1.9	1.3	e.45	.22
2	.45	.54	4.5	10	36	14	7.8	4.8	2.1	.93	e.42	.20
3	.55	.52	4.4	135	31	13	8.0	4.5	2.3	.78	e.42	.23
4	.43	.54	4.4	51	29	13	8.1	4.3	2.0	.63	e.41	.21
5	.33	.56	4.4	36	27	12	8.0	4.1	2.2	.56	e.41	.19
6	.30	1.1	4.9	27	25	12	7.9	4.0	2.7	.56	e.41	.19
7	.29	1.5	4.8	21	23	11	7.7	3.9	2.9	.60	e.40	.19
8	.27	1.5	4.5	17	21	11	7.5	3.8	2.9	.74	e.40	.18
9	.27	1.4	13	15	20	11	7.6	3.7	2.3	.74	e.39	.18
10	.27	1.4	30	14	20	10	7.4	3.5	2.0	.73	e.39	.18
11	.27	1.5	27	13	19	10	7.3	3.7	1.8	.83	e.38	.19
12	.28	1.5	20	20	18	9.9	7.1	3.7	2.2	1.2	e.38	.20
13	.33	1.5	13	51	17	9.8	6.9	3.4	3.8	1.1	.38	.20
14	.37	1.6	9.9	61	16	9.6	6.7	3.2	4.0	.83	.37	.21
15	.40	1.9	8.4	70	16	9.6	6.5	3.0	3.7	.68	.34	.26
16	.44	2.0	7.3	64	15	9.6	6.2	2.7	2.8	.57	.34	.33
17	.57	2.0	6.6	43	15	9.6	6.1	2.7	2.2	.42	.36	.29
18	.60	2.0	6.2	36	15	9.1	6.0	2.9	1.8	.29	.36	.25
19	.59	2.0	5.8	31	14	8.6	6.5	3.1	1.6	.31	.32	.24
20	.82	2.0	5.8	29	14	8.5	6.3	3.1	1.5	.36	.32	.25
21	.72	24	5.6	27	13	8.3	5.6	3.2	1.6	.38	.27	.25
22	.70	82	31	25	13	8.3	5.2	3.1	1.6	.43	.26	.23
23	.76	33	22	44	12	8.9	5.4	3.0	1.7	.54	.25	.21
24	.74	12	13	43	12	8.8	5.3	3.4	1.7	.38	.25	.20
25	.86	7.8	11	54	12	8.2	5.1	3.7	1.5	.35	.25	.30
26	.96	6.1	9.2	634	12	7.8	4.9	3.2	1.3	.33	.24	1.4
27	1.0	5.5	10	239	25	8.0	4.7	2.5	1.2	.34	.22	1.1
28	1.2	5.3	21	122	20	8.5	5.0	2.2	1.3	.34	.23	.55
29	1.3	5.1	14	80	---	8.2	5.7	2.0	1.3	.36	.23	.46
30	5.3	4.8	12	60	---	7.8	5.9	1.9	1.2	.38	.23	.46
31	2.1	---	10	48	---	8.2	---	1.9	---	.35	.23	---
TOTAL	23.83	213.39	348.3	2129.4	551	307.3	196.5	103.5	63.1	18.34	10.31	9.55
MEAN	.77	7.11	11.2	68.7	19.7	9.91	6.55	3.34	2.10	.59	.33	.32
MAX	5.3	82	31	634	41	15	8.1	5.3	4.0	1.3	.45	1.4
MIN	.27	.52	4.4	9.4	12	7.8	4.7	1.9	1.2	.29	.22	.18
AC-FT	47	423	691	4220	1090	610	390	205	125	36	20	19

e Estimated.

SANTA ANA RIVER BASIN

11055800 CITY CREEK NEAR HIGHLAND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.05	3.44	8.74	17.2	30.6	29.8	17.8	7.10	2.64	.99	.57	.60
MAX	8.48	43.4	89.5	199	451	219	148	44.6	21.7	11.7	9.56	5.70
(WY)	1984	1966	1967	1993	1969	1938	1926	1983	1983	1980	1983	1976
MIN	.000	.000	.000	.13	.35	.18	.033	.000	.000	.000	.000	.000
(WY)	1927	1922	1930	1936	1924	1926	1934	1934	1924	1924	1920	1920

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1920 - 1997

ANNUAL TOTAL	2813.83		3974.52									
ANNUAL MEAN	7.69		10.9							9.93		
HIGHEST ANNUAL MEAN										75.3		1969
LOWEST ANNUAL MEAN										.46		1961
HIGHEST DAILY MEAN	222	Feb 21				634	Jan 26		3360		Feb 25	1969
LOWEST DAILY MEAN	.14	Aug 30				.18	Sep 8		.00		Jul 18	1920
ANNUAL SEVEN-DAY MINIMUM	.15	Aug 27				.19	Sep 5		.00		Jul 18	1920
INSTANTANEOUS PEAK FLOW						1360	Jan 26		7000		Feb 25	1969
INSTANTANEOUS PEAK STAGE						7.15	Jan 26		9.39		Feb 25	1969
ANNUAL RUNOFF (AC-FT)	5580					7880			7190			
10 PERCENT EXCEEDS	16					23			19			
50 PERCENT EXCEEDS	4.0					3.2			1.3			
90 PERCENT EXCEEDS	.24					.27			.00			

11055801 CITY CREEK NEAR HIGHLAND, CA—Continued

CITY CREEK AND CITY CREEK WATER CO.'S CANAL NEAR HIGHLAND, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	2.8	4.6	9.4	41	15	8.1	5.3	1.9	1.3	e.55	.23
2	.45	1.9	4.5	10	36	14	7.8	4.8	2.1	.93	e.48	.25
3	.57	1.9	4.4	135	31	13	8.0	4.5	2.3	.78	e.46	.32
4	.43	1.8	4.4	51	29	13	8.1	4.3	2.0	.63	e.45	.28
5	.33	1.9	4.4	36	27	12	8.0	4.1	2.2	.56	e.44	.23
6	.30	1.7	4.9	27	25	12	7.9	4.0	2.7	.56	e.44	.21
7	.29	1.5	4.8	21	23	11	7.7	3.9	2.9	.60	e.44	.20
8	.27	1.5	4.5	17	21	11	7.5	3.8	2.9	.74	e.44	.20
9	.27	1.4	13	15	20	11	7.6	3.7	2.3	.74	e.46	.19
10	.27	1.4	31	14	20	10	7.4	3.5	2.0	.73	e.45	.18
11	.27	1.5	27	13	19	10	7.3	3.7	1.8	.83	e.44	.20
12	.28	1.5	20	20	18	9.9	7.1	3.7	2.2	1.2	e.46	.22
13	.33	1.5	13	51	17	9.8	6.9	3.4	3.8	1.1	.47	.22
14	.37	1.6	9.9	61	16	9.6	6.7	3.2	4.0	.83	.45	.21
15	.40	1.9	8.4	70	16	9.6	6.5	3.0	3.7	.68	.41	.32
16	.44	2.0	7.4	64	15	9.6	6.2	2.7	2.8	.57	.41	.49
17	.57	2.0	6.6	43	15	9.6	6.1	2.7	2.2	.47	.44	.37
18	.60	2.0	6.2	36	15	9.1	6.0	2.9	1.8	.42	.46	.26
19	.59	2.0	5.8	31	14	8.6	6.5	3.1	1.6	.46	.40	.25
20	.82	2.0	5.8	29	14	8.5	6.3	3.1	1.5	.64	.39	.27
21	.72	24	5.6	27	13	8.3	5.6	3.2	1.6	.68	.33	.28
22	.70	82	32	25	13	8.3	5.2	3.1	1.6	.96	.31	.27
23	.76	33	22	44	12	8.9	5.4	3.0	1.7	1.5	.29	.26
24	.74	12	13	43	12	8.8	5.3	3.4	1.7	.84	.29	.27
25	.86	7.8	11	54	12	8.2	5.1	3.7	1.5	.67	.30	.57
26	.96	6.1	9.2	634	12	7.8	4.9	3.2	1.3	.57	.30	2.8
27	1.0	5.5	10	239	25	8.0	4.7	2.5	1.2	.60	.25	2.3
28	1.2	5.3	21	122	20	8.5	5.0	2.2	1.3	.59	.25	1.3
29	1.3	5.1	14	80	---	8.2	5.7	2.0	1.3	.68	.25	.96
30	6.7	4.8	12	60	---	7.8	5.9	1.9	1.2	.79	.25	.95
31	4.8	---	10	48	---	8.2	---	1.9	---	.64	.24	---
TOTAL	27.95	221.4	350.4	2129.4	551	307.3	196.5	103.5	63.1	23.29	12.00	15.06
MEAN	.90	7.38	11.3	68.7	19.7	9.91	6.55	3.34	2.10	.75	.39	.50
MAX	6.7	82	32	634	41	15	8.1	5.3	4.0	1.5	.55	2.8
MIN	.27	1.4	4.4	9.4	12	7.8	4.7	1.9	1.2	.42	.24	.18
AC-FT	55	439	695	4220	1090	610	390	205	125	46	24	30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.17	4.75	9.19	18.2	31.8	31.1	19.4	9.75	5.28	2.55	1.61	1.56
MAX	10.2	44.1	89.9	199	451	221	148	44.6	21.7	12.6	11.0	7.05
(WY)	1984	1966	1967	1993	1969	1938	1926	1983	1983	1980	1983	1983
MIN	.13	.36	.69	2.07	2.55	2.89	2.14	.72	.72	.11	.051	.066
(WY)	1991	1991	1991	1936	1964	1961	1961	1934	1989	1990	1989	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1924 - 1997			
ANNUAL TOTAL	2898.31				4000.90							
ANNUAL MEAN	7.92				11.0				11.3			
HIGHEST ANNUAL MEAN									77.8			
LOWEST ANNUAL MEAN									2.04			
HIGHEST DAILY MEAN	224				634				3360			
LOWEST DAILY MEAN	.14				.18				.00			
ANNUAL SEVEN-DAY MINIMUM	.15				.20				.00			
INSTANTANEOUS PEAK FLOW												
ANNUAL RUNOFF (AC-FT)	5750				7940				7000			
10 PERCENT EXCEEDS	16				23				20			
50 PERCENT EXCEEDS	4.6				3.2				3.7			
90 PERCENT EXCEEDS	.27				.31				.40			

e Estimated.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA

LOCATION.—Lat 34°03'46", long 117°16'16", in NE 1/4 NW 1/4 sec.26, T.1 S., R.4 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 200 ft upstream from Redlands Boulevard Bridge and 0.6 mi northwest of Loma Linda.

DRAINAGE AREA.—125 mi².

PERIOD OF RECORD.—October 1954 to September 1965, February 1968 to September 1975, April 1979 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,030 ft above sea level, from topographic map. Prior to April 1979, water-stage recorder at site 0.2 mi downstream at different datum.

REMARKS.—Records fair except for discharges below 10 ft³/s and estimated daily discharges, which are poor. No regulation upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,000 ft³/s, Feb. 25, 1969, gage height, 8.2 ft, from floodmark, from rating curve extended above 2,100 ft³/s on basis of slope-conveyance study of peak flow, at site and datum then in use; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum, from rating curve extended above 1,500 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 21	1915	355	3.93	Jan. 15	1900	183	3.51
Jan. 13	0615	734	4.52	Jan. 26	1030	1,250	5.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
2	.00	.00	.00	1.6	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
3	.00	.00	.00	16	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
4	.00	.00	.00	.00	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
5	.00	.00	.00	1.5	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
6	.00	.00	.00	.00	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
7	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00
8	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
9	.00	.00	5.8	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
10	.00	.00	5.1	.00	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
11	.00	.00	4.7	.00	e.00	.00	.00	e.00	e.00	e.00	e.00	e.00
12	.00	.00	.39	55	e.00	.00	.00	e.00	e.00	e.00	e.00	e.00
13	.00	.00	.00	135	e.00	.00	.00	e.00	e.00	e.00	e.00	e.00
14	.00	.00	.00	10	.00	.00	.00	e.00	e.00	e.00	e.00	e.00
15	.00	.00	.00	46	.00	.00	.00	e.00	e.00	e.00	e.00	e.00
16	.00	.15	.00	9.1	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
17	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
18	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
19	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
20	.00	.00	.00	1.0	.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
21	.00	73	.00	.00	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
22	.00	24	19	.00	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
23	.00	.00	.73	11	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
24	.00	.00	.00	.00	e.00	.00	e.00	e.00	e.00	e.00	e.00	e.00
25	.00	.00	.00	16	e.00	.00	e.00	e.00	e.00	e.00	e.00	e4.0
26	.00	.00	.00	263	e.00	.00	e.00	e.00	e.00	e.00	e.00	e10
27	.00	.00	.76	18	e12	.00	e.00	e.00	e.00	e.00	e.00	e.00
28	.00	.00	1.2	.23	e10	e.00	e.00	e.00	e.00	e.00	e.00	e.00
29	.00	.00	.00	.00	---	e.00	e.00	e.00	e.00	e.00	e.00	e.00
30	10	.00	.00	.00	---	e.00	e.00	e.00	e.00	e.00	e.00	e.00
31	.03	---	.00	.00	---	.00	---	e.00	---	e.00	e.00	---
TOTAL	10.03	97.15	37.68	583.43	22.00	0.00	0.00	0.00	0.00	0.00	0.00	14.00
MEAN	.32	3.24	1.22	18.8	.79	.000	.000	.000	.000	.000	.000	.47
MAX	10	73	19	263	12	.00	.00	.00	.00	.00	.00	10
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	20	193	75	1160	44	.00	.00	.00	.00	.00	.00	28

e Estimated.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.86	1.53	2.09	9.82	12.3	7.09	1.42	.85	.78	.62	.63	.77
MAX	2.27	11.6	11.6	113	186	53.7	16.8	3.65	2.20	3.65	1.76	3.03
(WY)	1988	1983	1985	1993	1969	1991	1958	1969	1989	1968	1965	1965
MIN	.000	.000	.16	.079	.17	.000	.000	.000	.000	.000	.000	.000
(WY)	1996	1996	1996	1972	1968	1997	1979	1996	1996	1995	1995	1995

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR					FOR 1997 WATER YEAR			WATER YEARS 1955 - 1997			
ANNUAL TOTAL	515.53					764.29						
ANNUAL MEAN	1.41					2.09			3.22			
HIGHEST ANNUAL MEAN									21.7			
LOWEST ANNUAL MEAN									.74			
HIGHEST DAILY MEAN	102					263			3500			
LOWEST DAILY MEAN	.00					.00			.00			
ANNUAL SEVEN-DAY MINIMUM	.00					.00			.00			
INSTANTANEOUS PEAK FLOW						1250			15000			
INSTANTANEOUS PEAK STAGE						5.06			8.20			
ANNUAL RUNOFF (AC-FT)	1020					1520			2330			
10 PERCENT EXCEEDS	.00					.00			1.9			
50 PERCENT EXCEEDS	.00					.00			.60			
90 PERCENT EXCEEDS	.00					.00			.00			

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA

LOCATION.—Lat 34°10'45", long 117°15'53", in NE 1/4 NE 1/4 sec.14, T.1 N., R.4 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 1,000 ft upstream from Del Rosa Water Co.'s Diversion, 0.5 mi south of Arrowhead Springs, and 1.0 mi downstream from Strawberry Creek.

DRAINAGE AREA.—8.80 mi².

PERIOD OF RECORD.—December 1919 to current year. Prior to October 1952, published as Strawberry Creek near Arrowhead Springs.

REVISED RECORDS.—WSP 1635: 1924(M), 1927, 1928(M), 1929, 1932(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 1,590 ft above sea level, from topographic map.

REMARKS.—Records poor. No regulation upstream from station. One small diversion dam for domestic use upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,710 ft³/s, Jan. 29, 1980, gage height, 8.35 ft, on basis of slope-area measurement of peak flow; no flow at times in 1929, 1931–35.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 40 ft³/s, or maximum, from rating curve extended above 120 ft³/s on basis of slope-area measurement at gage height 8.35 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 21	1515	56	2.82	Jan. 15	1830	51	2.77
Dec. 22	1230	65	2.90	Jan. 26	unknown	unknown	unknown
Jan. 3	unknown	unknown	unknown				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.2	e2.8	5.6	17	8.1	4.9	3.2	2.3	1.4	.67	.78
2	1.2	2.1	e2.7	9.7	16	7.7	4.8	3.0	2.2	1.3	.64	.77
3	1.2	2.2	e2.6	e73	15	7.4	4.9	3.0	2.3	1.1	.71	.88
4	1.1	2.1	e2.5	30	14	7.1	4.8	3.0	2.2	.97	.71	.79
5	1.2	2.2	2.4	21	13	6.8	4.9	2.7	2.5	.95	.68	e.80
6	1.1	1.9	3.0	14	12	6.7	4.8	2.9	2.2	1.2	.69	.80
7	1.0	1.9	2.8	10	12	6.4	4.7	2.7	2.5	1.1	.70	.89
8	1.0	1.7	2.6	e9.5	11	6.3	4.6	2.8	2.2	1.2	.68	.90
9	1.0	1.6	7.8	e9.0	11	6.2	4.6	2.6	1.9	1.1	.73	.70
10	1.1	1.7	12	7.7	11	6.0	4.6	2.6	1.9	1.1	.86	.77
11	1.1	1.7	14	7.3	10	6.0	3.9	2.9	1.8	1.2	.79	.76
12	1.1	1.7	12	13	9.9	5.9	4.1	2.6	2.3	1.5	.92	.92
13	1.1	1.7	7.4	28	9.5	5.7	4.0	2.7	4.0	1.5	.73	1.1
14	1.1	2.0	5.8	29	8.8	5.4	4.0	2.4	3.1	1.1	.72	e1.2
15	1.1	2.2	4.9	33	8.4	5.5	4.1	2.5	2.6	1.2	.74	e.94
16	1.1	2.0	4.6	31	8.2	5.7	3.9	2.3	2.1	1.0	.88	e1.1
17	1.2	1.9	4.0	23	8.1	5.5	4.1	2.4	1.8	.97	.99	e1.0
18	1.1	1.7	3.8	19	8.0	5.3	3.8	2.7	1.8	.90	.81	e.94
19	1.2	1.7	3.6	16	7.7	5.0	4.2	2.5	1.6	1.1	.77	e.91
20	1.3	1.6	3.5	16	7.4	5.0	4.0	2.7	1.6	1.3	.84	e1.1
21	1.4	16	3.5	14	7.2	4.9	3.6	2.6	1.7	1.2	.80	e1.0
22	1.5	27	20	13	7.2	5.1	3.7	2.5	1.7	1.7	.78	e.93
23	1.5	13	11	25	7.1	5.5	3.5	2.6	1.6	1.3	.73	e.87
24	1.6	5.9	7.1	20	6.9	5.4	3.6	2.7	1.7	1.2	.73	e.83
25	1.6	4.2	6.1	e36	6.7	5.2	3.3	2.8	1.5	1.1	.72	e1.3
26	1.7	e4.0	5.5	e317	6.7	5.1	3.1	2.5	1.6	1.2	.68	e1.8
27	1.9	e3.4	9.2	e131	13	5.1	3.0	2.2	1.5	.96	.73	e1.7
28	1.9	e3.2	13	e57	9.8	5.4	3.0	2.2	1.6	.82	.75	e1.8
29	2.1	e3.0	8.1	e36	---	5.1	3.6	2.1	1.6	.71	.78	e1.6
30	4.5	e2.9	6.7	22	---	5.0	3.3	2.1	1.5	.73	.85	e1.3
31	2.5	---	6.1	19	---	5.0	---	2.2	---	.77	.85	---
TOTAL	44.6	120.4	201.1	1094.8	282.6	180.5	121.4	80.7	60.9	34.88	23.66	31.18
MEAN	1.44	4.01	6.49	35.3	10.1	5.82	4.05	2.60	2.03	1.13	.76	1.04
MAX	4.5	27	20	317	17	8.1	4.9	3.2	4.0	1.7	.99	1.8
MIN	1.0	1.6	2.4	5.6	6.7	4.9	3.0	2.1	1.5	.71	.64	.70
AC-FT	88	239	399	2170	561	358	241	160	121	69	47	62

e Estimated.

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.50	2.53	4.90	8.05	12.3	13.7	8.05	4.72	2.80	1.62	1.24	1.14
MAX	11.4	20.3	43.6	95.7	102	101	38.3	19.3	11.6	9.40	11.9	4.94
(WY)	1984	1966	1967	1993	1993	1991	1978	1983	1983	1983	1983	1983
MIN	.20	.47	.51	.91	1.14	1.27	.56	.66	.56	.18	.20	.20
(WY)	1965	1965	1990	1963	1964	1972	1977	1934	1961	1964	1964	1964

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1921 - 1997		
ANNUAL TOTAL	1784.90			2276.72					
ANNUAL MEAN	4.88			6.24			5.17		
HIGHEST ANNUAL MEAN							23.1		
LOWEST ANNUAL MEAN							.85		
HIGHEST DAILY MEAN	120			Feb 21			317		
LOWEST DAILY MEAN	.86			Jul 5			.64		
ANNUAL SEVEN-DAY MINIMUM	.91			Aug 27			.69		
INSTANTANEOUS PEAK FLOW							(a)		
INSTANTANEOUS PEAK STAGE							(a)		
ANNUAL RUNOFF (AC-FT)	3540			4520			3750		
10 PERCENT EXCEEDS	9.6			12			9.2		
50 PERCENT EXCEEDS	2.4			2.5			2.0		
90 PERCENT EXCEEDS	1.0			.83			.51		

(a) Peak discharge and stage are unknown due to silted intakes.

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34°03'54", long 117°17'58", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank, 0.4 mi downstream from E Street Bridge, 0.4 mi upstream from Warm Creek, 1.2 mi downstream from San Timoteo Creek, 2.8 mi south of San Bernardino, and 26 mi downstream from Big Bear Lake.

DRAINAGE AREA.—541 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1939 to September 1954, October 1966 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 940 ft above sea level, from topographic map. Prior to Nov. 10, 1950, water-stage recorder on right bank 0.4 mi upstream at datum 964.50 ft above sea level. Nov. 11, 1950, to Sept. 30, 1954, water-stage recorder on both banks 0.4 mi upstream at datum 964.50 ft above sea level. Oct. 1, 1966, to Sept. 30, 1976, water-stage recorder on right bank 0.4 mi upstream at datum 954.50 ft above sea level. Oct. 1, 1976, to Sept. 30, 1977, gage was removed for channel construction. Oct. 1, 1977, to Jan. 28, 1981, water-stage recorder on right bank 0.5 mi upstream at elevation 950 ft above sea level, from topographic map.

REMARKS.—Records poor. Flow partly regulated by Big Bear Lake (station 11049000). Natural flow of stream affected by ground-water withdrawals and diversion for domestic use and irrigation upstream from station. Effluent from sewage reclamation plant 1.0 mi upstream caused sustained flow past gage from 1967 to Mar. 21, 1996. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,000 ft³/s, Feb. 25, 1969, gage height, 11.9 ft, site and datum then in use; no flow for many days many years prior to 1967 and since Mar. 21, 1996.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,000 ft³/s, or maximum, from rating curve extended above 5,930 ft³/s on basis of critical-depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	1445	1,740	5.20	Jan. 3	0415	1,890	5.26
Nov. 21	1630	3,790	5.79	Jan. 13	0345	3,120	5.63
Dec. 9	1915	1,440	5.07	Jan. 15	1815	1,440	5.07
Dec. 22	1300	1,720	5.19	Jan. 26	0745	4,680	5.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e28	.02	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	6.4	e25	2.4	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	875	e15	.69	.00	.00	.00	.00	.00	2.1
4	.00	.00	.00	124	e12	.00	.00	.00	.00	.00	.00	9.9
5	.00	.00	.00	51	e9.5	.00	.00	.00	.00	.00	.00	50
6	.00	.00	.00	25	.48	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	11	.67	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	2.2	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	176	2.5	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	192	4.3	.82	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	40	7.9	.40	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	11	358	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	779	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	282	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	434	.00	.00	.00	.00	.00	.00	.00	1.1
16	.00	.00	.00	200	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	62	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	34	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	27	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	47	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	e664	.00	32	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	e806	313	11	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	203	73	231	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	12	9.5	120	.00	.00	.00	.00	.00	.00	.00	.00
25	.21	.00	.00	411	.00	.00	.00	.00	.00	.00	.00	56
26	.00	.00	.00	1900	.00	.00	.00	.00	.00	.00	.00	92
27	.00	.00	13	579	15	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	32	260	105	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	131	---	.00	.00	.00	.00	.00	.00	.00
30	233	.00	.00	96	---	.00	.00	.00	.00	.00	.00	.00
31	3.6	---	.00	35	---	.00	---	.00	---	.00	.00	---
TOTAL	236.81	1685.00	859.50	7138.30	211.87	3.11	0.00	0.00	0.00	0.00	0.00	211.10
MEAN	7.64	56.2	27.7	230	7.57	.10	.000	.000	.000	.000	.000	7.04
MAX	233	806	313	1900	105	2.4	.00	.00	.00	.00	.00	92
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	470	3340	1700	14160	420	6.2	.00	.00	.00	.00	.00	419

e Estimated.

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	3.47	20.9	23.7	20.6	37.4	27.2	11.3	2.39	.93	.87	.63
MAX	3.35	21.3	117	109	72.2	183	237	145	31.2	9.87	8.37	6.32
(WY)	1942	1945	1946	1943	1945	1943	1941	1941	1941	1940	1940	1939
MIN	.000	.007	.000	1.90	2.41	1.70	1.14	.14	.000	.000	.000	.000
(WY)	1951	1952	1951	1948	1942	1951	1951	1942	1950	1950	1942	1948

SUMMARY STATISTICS

WATER YEARS 1939 - 1954

ANNUAL MEAN	12.7
HIGHEST ANNUAL MEAN	56.6
LOWEST ANNUAL MEAN	.78
HIGHEST DAILY MEAN	2350
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
ANNUAL RUNOFF (AC-FT)	9190
10 PERCENT EXCEEDS	16
50 PERCENT EXCEEDS	1.0
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.9	43.3	77.4	158	232	253	132	103	63.9	40.8	36.8	34.6
MAX	117	191	469	1327	2096	1279	742	707	339	162	160	75.0
(WY)	1984	1984	1967	1993	1980	1980	1980	1983	1983	1969	1983	1983
MIN	12.4	13.2	14.8	13.2	11.6	10.6	12.5	9.35	13.0	9.08	9.97	9.93
(WY)	1968	1972	1970	1972	1968	1972	1972	1967	1971	1967	1967	1967

SUMMARY STATISTICS

WATER YEARS 1967 - 1995

ANNUAL MEAN	100
HIGHEST ANNUAL MEAN	441
LOWEST ANNUAL MEAN	17.2
HIGHEST DAILY MEAN	14800
LOWEST DAILY MEAN	6.4
ANNUAL SEVEN-DAY MINIMUM	8.1
INSTANTANEOUS PEAK FLOW	28000
INSTANTANEOUS PEAK STAGE	11.90
ANNUAL RUNOFF (AC-FT)	72490
10 PERCENT EXCEEDS	165
50 PERCENT EXCEEDS	35
90 PERCENT EXCEEDS	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.9	48.0	30.1	150	131	35.4	.006	.000	.000	.000	.000	3.52
MAX	38.1	56.2	32.4	230	251	70.6	.013	.000	.000	.000	.000	7.04
(WY)	1996	1997	1996	1997	1996	1996	1996	1996	1996	1996	1996	1997
MIN	7.64	39.9	27.7	70.0	7.57	.10	.000	.000	.000	.000	.000	.000
(WY)	1997	1996	1997	1996	1997	1997	1997	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1996 - 1997

ANNUAL TOTAL	14407.50	10345.69	
ANNUAL MEAN	39.4	28.3	34.7
HIGHEST ANNUAL MEAN			41.0
LOWEST ANNUAL MEAN			28.3
HIGHEST DAILY MEAN	2370	Feb 20	2370
LOWEST DAILY MEAN	.00	Mar 22	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 22	.00
INSTANTANEOUS PEAK FLOW			4680
INSTANTANEOUS PEAK STAGE			5.96
ANNUAL RUNOFF (AC-FT)	28580	20520	25130
10 PERCENT EXCEEDS	50	27	45
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1983–86, 1988 to current year.

WATER TEMPERATURE: November 1982 to September 1983.

SEDIMENT DATA: Water years 1983–86, 1988 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: November 1982 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: October 1982 to September 1983.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. FALL DIAM. % FINER THAN .002 MM (70337)	SED. SUSP. FALL DIAM. % FINER THAN .004 MM (70338)	SED. SUSP. FALL DIAM. % FINER THAN .008 MM (70339)
NOV								
22...	0830	1000	17.0	9050	24400	11	14	21
DEC								
10...	1630	50	14.0	1470	198	--	--	--
JAN								
04...	1030	119	11.5	1460	469	--	--	--
13...	1630	218	10.0	3600	2120	31	38	48
28...	1000	277	11.0	1440	1080	--	--	--
							</	

11060400 WARM CREEK NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34°04'42", long 117°17'58", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.2 mi downstream from Interstate Highway 215 Bridge and 2.0 mi southwest of San Bernardino.

DRAINAGE AREA.—11.0 mi².

PERIOD OF RECORD.—February 1964 to September 1972, October 1974 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area, WDR CA-92-1: 1978(M), 1980–81(M), 1983–86(M).

GAGE.—Water-stage recorder. Elevation of gage is 960 ft above sea level, from topographic map. Prior to Oct. 1, 1974, at site 0.1 mi upstream at different datum.

REMARKS.—Records fair. Natural channel prior to October 1972; concrete-lined channel since October 1974. Possible diversion during high flows into Warm Creek from Lytle Creek flood detention basin 3.4 mi upstream. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,500 ft³/s, Mar. 4, 1978, gage height, 4.88 ft, from rating curve extended above 420 ft³/s on basis of step-backwater analysis; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.26	.08	2.6	8.2	7.5	3.4	1.2	.71	.55	.13	.20
2	.13	.07	.08	43	7.7	6.9	3.0	1.1	.70	.59	.10	2.7
3	.07	.08	.08	82	6.9	5.8	2.8	1.1	.71	.54	.09	.35
4	.05	.08	.11	18	5.8	5.3	4.0	1.0	.67	.57	.09	.20
5	.05	.08	.11	19	4.5	5.0	4.7	1.0	.73	.50	.10	.22
6	.05	.11	1.0	7.1	6.3	5.8	3.6	1.0	2.6	.52	.10	.29
7	.32	.11	.16	5.4	9.6	6.3	2.1	1.0	1.6	.48	.11	.33
8	.31	.11	.16	2.7	4.8	5.2	2.0	1.1	.58	.37	.10	.57
9	.10	.33	.58	2.0	5.5	4.4	1.2	1.0	.58	.35	.11	.50
10	.04	.08	e29	1.5	7.5	5.4	1.2	.77	.58	.46	.11	.30
11	.06	.08	e4.5	3.1	11	4.9	1.3	.77	.58	.34	.17	.26
12	.07	.04	e4.1	68	7.2	4.5	1.2	1.0	.58	.32	.20	.26
13	.08	.08	3.9	95	5.2	3.2	1.2	1.5	.69	.33	.22	.24
14	.09	.08	3.7	31	11	3.3	1.2	1.5	.58	.32	.23	4.6
15	.12	.08	2.7	49	5.8	3.5	1.2	1.8	.58	.33	.18	8.0
16	.12	.08	2.1	3.2	5.8	3.0	2.1	.77	.58	.30	.22	.28
17	.12	.08	2.6	2.3	7.5	2.7	2.0	.80	.67	.37	.22	.27
18	.13	.08	3.4	2.2	7.5	3.1	2.0	.77	.72	.29	.22	.59
19	.15	.23	5.0	2.1	6.2	2.9	1.0	.81	.86	.25	.20	.36
20	.15	.11	3.5	16	5.2	2.9	1.2	.85	.64	.20	.19	.32
21	.11	146	2.1	3.2	4.6	3.0	1.3	.77	.70	.19	.18	.40
22	.07	82	59	3.5	3.9	3.0	2.8	.85	.60	.22	.19	.50
23	.08	3.0	2.6	60	3.9	2.8	1.7	.77	.60	.18	.22	.80
24	.11	1.3	2.4	7.8	4.0	3.7	1.3	.77	.63	.16	.23	.65
25	.12	.32	2.1	114	4.7	4.0	1.4	.77	.65	.15	.48	21
26	.10	.08	2.1	103	4.8	2.2	1.6	.77	.68	.18	.18	3.2
27	.07	.08	31	11	56	2.4	1.6	.81	.63	.14	.16	.29
28	.10	.08	14	25	14	2.2	1.5	.88	.57	.14	.13	.23
29	.08	.08	2.6	22	---	2.2	1.5	.77	.57	.14	.14	.23
30	49	.08	2.6	9.1	---	2.4	1.3	.74	.59	.14	.15	.23
31	.18	---	2.6	8.3	---	2.6	---	.72	---	.14	.18	---
TOTAL	52.31	235.27	247.38	822.1	235.1	122.1	58.4	29.46	22.16	9.76	5.33	48.37
MEAN	1.69	7.84	7.98	26.5	8.40	3.94	1.95	.95	.74	.31	.17	1.61
MAX	49	146	59	114	56	7.5	4.7	1.8	2.6	.59	.48	21
MIN	.04	.04	.08	1.5	3.9	2.2	1.0	.72	.57	.14	.09	.20
AC-FT	104	467	491	1630	466	242	116	58	44	19	11	96

e Estimated.

11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1972, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	2.77	4.73	4.68	4.19	1.15	1.82	.033	.000	.000	.003	.006
MAX	.49	13.1	14.0	32.7	29.6	4.35	11.5	.24	.000	.003	.026	.050
(WY)	1970	1966	1972	1969	1969	1970	1965	1969	1965	1968	1967	1965
MIN	.000	.000	.41	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1969	1969	1972	1967	1972	1966	1965	1965	1965	1965	1966

SUMMARY STATISTICS

WATER YEARS 1965 - 1972

ANNUAL MEAN	1.61
HIGHEST ANNUAL MEAN	5.16
LOWEST ANNUAL MEAN	.33
HIGHEST DAILY MEAN	488
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	2200
INSTANTANEOUS PEAK STAGE	5.55
ANNUAL RUNOFF (AC-FT)	1170
10 PERCENT EXCEEDS	.00
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.25	10.2	12.4	19.2	39.1	37.1	13.9	12.3	9.56	8.76	8.60	8.01
MAX	32.4	33.1	41.6	41.2	418	376	44.2	86.7	43.6	34.5	50.6	30.3
(WY)	1984	1986	1985	1993	1978	1978	1986	1980	1980	1980	1983	1983
MIN	.12	.087	.40	.11	.85	2.51	.17	.37	.067	.11	.061	.023
(WY)	1978	1996	1980	1976	1977	1977	1977	1978	1978	1979	1979	1979

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1975 - 1997

ANNUAL TOTAL	1974.69	1887.74	
ANNUAL MEAN	5.40	5.17	15.5
HIGHEST ANNUAL MEAN			70.5
LOWEST ANNUAL MEAN			1.91
HIGHEST DAILY MEAN	276	Feb 20	146
LOWEST DAILY MEAN	.04	Oct 10	.04
ANNUAL SEVEN-DAY MINIMUM	.07	Nov 10	.07
INSTANTANEOUS PEAK FLOW			1060
INSTANTANEOUS PEAK STAGE			2.44
ANNUAL RUNOFF (AC-FT)	3920	3740	11240
10 PERCENT EXCEEDS	4.9	7.5	27
50 PERCENT EXCEEDS	.45	.77	6.3
90 PERCENT EXCEEDS	.08	.09	.09

11062000 LYTLE CREEK NEAR FONTANA, CA

LOCATION.—Lat 34°12'44", long 117°27'26", in NW 1/4 SE 1/4 sec.36, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 25 ft upstream from highway culvert crossing, 0.7 mi upstream from right tributary, 2.3 mi downstream from Lytle Creek Conduit, and 8 mi north of Fontana.

DRAINAGE AREA.—46.6 mi².

PERIOD OF RECORD.—October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898–99, as "near San Bernardino" 1904–18, and as Lytle Creek and Fontana pipeline near Fontana 1919–31). Monthly discharge only for some periods published in WSP 1315-B.

REVISED RECORDS.—WSP 1011: 1943. WDR CA-83-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage on creek. Elevation of gage is 2,380 ft above sea level, from topographic map. October 1918 to Mar. 21, 1938, at site 1 mi downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft downstream at datum 4.58 ft lower. Water-stage recorder and sharp-crested weir on conduit since June 3, 1949. Water-stage recorder and sharp-crested weir on infiltration line from Oct. 1, 1971, to Sept. 30, 1992; non-recording flow meter on diversion pipe since Oct. 1, 1992.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Southern California Edison Co.'s Lytle Creek conduit (station 11060900) diverts 2.3 mi upstream for power development and Fontana Water Co. collects water from an infiltration line (station 11061000) upstream for irrigation and domestic use. Spill can occur from Southern California Edison Co.'s Lytle Creek forebay during unusually high flows. Water can be pumped from channel by two pumps at Miller Narrows at a point approximately 2 mi. upstream. No water has been pumped out of channel since 1971. For records of combined discharge of Lytle Creek and diversions, see station 11062001. Records pertaining to distribution of flows diverted from Lytle Creek are available in the files of the U.S. Geological Survey. See schematic diagram of Santa Ana River Basin.

COOPERATION.—Records for Lytle Creek conduit were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Records for Fontana Water Co.'s infiltration line were provided by Fontana Water Co.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 35,900 ft³/s, Jan. 25, 1969, gage height, 15.0 ft, from floodmark, from rating curve extended above 570 ft³/s on basis of slope-area measurements at gage heights 10.78 and 15.0 ft; no flow at times most years. Combined creek and diversions: Maximum discharge, 35,900 ft³/s, Jan. 25, 1969; minimum daily, 2.6 ft³/s, Nov. 28, 1989.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Creek only Gage height (ft)	Combined creek and diversions Discharge (ft ³ /s)
Dec. 22	1200	418	3.72	424
Jan. 26	0300	332	3.44	332

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	1.5	6.2	38	48	18	7.0	.31	.00	.03	.00	.00
2	.07	.66	6.0	37	45	17	6.5	.50	.00	.00	.00	.00
3	.00	.21	5.7	53	39	17	6.0	.44	.00	.00	.00	.00
4	.00	.01	4.9	50	34	16	6.0	.56	.00	.00	.00	.00
5	.00	.11	4.0	47	33	16	5.9	.00	.00	.00	.00	.00
6	.00	.06	4.3	32	32	15	5.8	.00	.00	.00	.00	.00
7	.00	.06	3.1	20	31	15	5.8	.00	.00	.40	.00	.00
8	.00	.01	2.3	18	30	15	5.7	.13	.00	.00	.00	.00
9	.00	.00	58	16	29	14	5.6	.06	.00	.00	.00	.00
10	.00	.00	e76	14	28	14	5.1	.02	.00	.00	.00	.00
11	.00	.00	e97	13	27	13	4.3	.00	.00	.00	.00	.00
12	.00	.00	58	25	27	13	1.7	.04	.00	.00	.00	.00
13	.00	.00	33	30	27	12	2.6	.00	.12	.00	.00	.00
14	.00	.00	22	18	26	12	4.3	.08	.00	.00	.00	.00
15	.00	.00	19	39	25	11	3.8	.00	.00	.00	.00	.00
16	.00	.00	15	38	24	12	3.9	.50	.00	.00	.00	.00
17	.00	.00	12	28	24	14	3.3	.00	.00	.00	.00	.00
18	.00	7.4	11	27	23	13	2.8	.00	.00	.00	.00	.00
19	.00	15	9.4	26	22	13	2.2	.00	.00	.00	.00	.00
20	.00	15	8.0	33	22	13	1.2	.00	.00	.00	.00	.00
21	.00	25	7.7	41	21	11	1.2	.00	.00	.38	.00	.00
22	.00	84	126	44	20	7.8	1.4	.00	.00	.00	.00	.00
23	.00	29	55	58	20	7.4	1.4	.00	.00	.00	.00	.00
24	.00	22	45	54	20	7.3	.88	.00	.00	.00	.00	.00
25	.00	20	40	69	19	7.2	.14	.00	.00	.00	.00	7.9
26	.00	20	38	194	19	7.4	.09	.00	.02	.00	.00	17
27	.00	15	46	111	20	7.4	.21	.00	.00	.00	.00	14
28	.00	10	54	87	19	7.5	.22	.00	.00	.00	.00	13
29	.00	8.3	46	68	---	7.2	.13	.00	.00	.00	.00	7.7
30	28	6.9	42	55	---	7.6	.09	.00	.00	.00	.00	1.3
31	12	---	40	51	---	7.1	---	.00	---	.00	.00	---
TOTAL	40.07	280.22	994.6	1434	754	367.9	95.26	2.64	0.14	0.81	0.00	60.90
MEAN	1.29	9.34	32.1	46.3	26.9	11.9	3.18	.085	.005	.026	.000	2.03
MAX	28	84	126	194	48	18	7.0	.56	.12	.40	.00	17
MIN	.00	.00	2.3	13	19	7.1	.09	.00	.00	.00	.00	.00
AC-FT	79	556	1970	2840	1500	730	189	5.2	.3	1.6	.00	121

e Estimated.

SANTA ANA RIVER BASIN

11062000 LYTLE CREEK NEAR FONTANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.96	7.60	10.1	27.1	42.2	53.4	29.5	19.8	14.3	10.3	7.08	5.60
MAX	48.2	275	151	552	633	752	254	189	157	131	80.5	65.7
(WY)	1984	1966	1967	1969	1980	1938	1978	1993	1983	1983	1969	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1919 - 1997

ANNUAL TOTAL	5887.30	4030.54	
ANNUAL MEAN	16.1	11.0	19.4
HIGHEST ANNUAL MEAN			177
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	356	Feb 20	8950
LOWEST DAILY MEAN	.00	Sep 8	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 3	.00
INSTANTANEOUS PEAK FLOW			418
INSTANTANEOUS PEAK STAGE			3.72
ANNUAL RUNOFF (AC-FT)	11680	7990	14020
10 PERCENT EXCEEDS	40	35	42
50 PERCENT EXCEEDS	6.9	.11	.00
90 PERCENT EXCEEDS	.00	.00	.00

11062001 LYTLE CREEK NEAR FONTANA, CA—Continued

LYTLE CREEK, SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CREEK CONDUIT, AND
FONTANA WATER CO.'S INFILTRATION LINE DIVERSION

COMBINED DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	26	30	e45	62	35	e27	23	19	19	17	17
2	23	25	e27	e44	59	34	e27	23	19	19	17	17
3	24	25	e26	e60	56	34	e25	22	19	18	17	18
4	24	24	e27	e57	54	33	e25	24	19	18	11	17
5	24	24	e26	54	53	32	e25	20	19	19	11	18
6	23	24	e27	46	52	31	e25	17	19	17	15	17
7	24	24	e26	46	50	31	e25	15	20	17	16	16
8	22	24	e26	42	49	31	e25	14	20	19	16	17
9	23	24	e70	41	47	29	e25	14	19	17	17	16
10	23	25	e82	40	46	29	e24	14	19	17	17	16
11	23	23	e103	38	45	28	e23	14	19	17	17	16
12	23	24	e65	45	45	29	e25	14	20	19	18	16
13	23	23	e48	46	45	28	e25	15	20	18	16	15
14	22	24	e44	44	43	28	e27	14	21	18	17	15
15	22	23	e41	59	42	27	e27	14	19	18	18	16
16	23	24	e36	51	40	28	e27	14	20	17	18	15
17	22	24	e33	50	40	29	e26	19	19	17	17	15
18	22	22	e31	48	40	28	e26	19	19	17	18	15
19	21	21	e27	46	40	28	e24	20	19	18	18	15
20	21	21	e25	52	39	28	e23	20	19	17	18	15
21	21	32	e24	49	39	26	e23	20	19	17	18	15
22	21	91	e132	50	38	27	e23	20	18	19	18	15
23	21	36	e62	65	38	28	e23	20	21	19	18	15
24	21	29	e52	62	38	27	e23	20	19	18	18	15
25	21	26	e47	70	37	28	e22	19	19	18	18	22
26	21	35	e46	194	36	30	e22	20	19	19	18	23
27	22	35	e53	111	37	27	e21	19	18	18	17	19
28	21	33	e61	87	36	28	e22	19	18	18	18	18
29	14	32	e54	69	---	27	e22	20	18	18	18	18
30	36	30	e49	66	---	30	e22	20	18	18	18	18
31	27	---	e47	65	---	e27	---	19	---	18	17	---
TOTAL	702	853	1447	1842	1246	905	729	565	574	556	525	500
MEAN	22.6	28.4	46.7	59.4	44.5	29.2	24.3	18.2	19.1	17.9	16.9	16.7
MAX	36	91	132	194	62	35	27	24	21	19	18	23
MIN	14	21	24	38	36	26	21	14	18	17	11	15
AC-FT	1390	1690	2870	3650	2470	1800	1450	1120	1140	1100	1040	992

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.6	28.6	31.1	57.3	68.6	79.4	56.8	46.9	39.1	32.8	29.9	27.6
MAX	71.9	285	168	650	653	785	264	225	164	131	107	81.5
(WY)	1984	1966	1967	1916	1980	1938	1978	1978	1978	1969	1969	1978
MIN	7.54	8.05	7.65	11.0	11.7	12.1	10.8	10.9	9.41	7.05	6.98	6.43
(WY)	1962	1991	1951	1951	1899	1965	1899	1961	1990	1899	1990	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1899 - 1997	
ANNUAL TOTAL	12321		10444			
ANNUAL MEAN	33.7		28.6		43.9	
HIGHEST ANNUAL MEAN					194	
LOWEST ANNUAL MEAN					10.7	
HIGHEST DAILY MEAN	363		194		8960	
LOWEST DAILY MEAN	14		11		2.6	
ANNUAL SEVEN-DAY MINIMUM	17		14		4.0	
INSTANTANEOUS PEAK FLOW			424		35900	
ANNUAL RUNOFF (AC-FT)	24440		20720		31800	
10 PERCENT EXCEEDS	54		49		77	
50 PERCENT EXCEEDS	26		23		26	
90 PERCENT EXCEEDS	20		17		13	

e Estimated.

11063500 LONE PINE CREEK NEAR KEENBROOK, CA

LOCATION.—Lat 34°15'59", long 117°27'47", in SE 1/4 SW 1/4 sec.12, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 50 ft upstream from the Atchison, Topeka, & Santa Fe Railway Co. bridge, 150 ft upstream from confluence with Cajon Creek, and 1.1 mi north of Keenbrook.

DRAINAGE AREA.—15.1 mi².

PERIOD OF RECORD.—December 1919 to September 1938, June 1949 to current year.

REVISED RECORDS.—WSP 1635: 1920–22(M), 1924–25(M), 1926–27, 1928(M), 1930, 1931(M), 1932–33, 1934–36(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above sea level. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood), and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft higher.

REMARKS.—Records good. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,180 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; no flow Aug. 6–8, Sept. 29, 30, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 80 ft³/s, or maximum, from rating curve extended above 322 ft³/s on basis of slope-conveyance measurement at gage height 9.07 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	1830	78	2.54				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	1.3	1.5	1.6	1.3	1.1	.96	.80	.80	.63	.55
2	1.3	1.2	1.3	1.5	1.6	1.3	1.1	.94	.80	.80	.62	.55
3	1.2	1.1	1.3	1.5	1.6	1.3	1.1	.92	.80	.80	.58	.54
4	1.2	1.1	1.3	1.4	1.6	1.4	1.1	.90	.83	.76	.58	.58
5	1.2	1.2	1.3	1.4	1.6	1.3	1.1	.89	.87	.69	.58	.58
6	1.2	1.2	1.3	1.4	1.6	1.3	1.1	.89	.86	.68	.58	.58
7	1.2	1.2	1.3	1.4	1.6	1.3	1.1	.90	.88	.68	.60	.58
8	1.1	1.2	1.3	1.4	1.6	1.3	1.1	.92	.85	.68	.58	.58
9	1.2	1.2	1.0	1.4	1.5	1.3	1.1	.89	.80	.68	.58	.58
10	1.2	1.2	3.6	1.4	1.5	1.3	1.1	.90	.80	.68	.58	.57
11	1.2	1.2	4.0	1.4	1.5	1.3	1.0	.92	.80	.68	.58	.58
12	1.2	1.2	2.2	1.6	1.5	1.3	1.0	.90	.87	.68	.58	.58
13	1.2	1.2	1.8	2.7	1.5	1.3	.99	.89	.90	.68	.58	.57
14	1.2	1.3	1.7	1.6	1.4	1.3	.98	.89	.88	.68	.58	.58
15	1.2	1.3	1.6	3.4	1.4	1.3	.97	.88	.85	.68	.58	.58
16	1.2	1.3	1.5	2.2	1.4	1.3	.97	.87	.80	.68	.58	.58
17	1.2	1.3	1.4	1.7	1.4	1.3	.96	.89	.80	.68	.58	.58
18	1.2	1.3	1.4	1.6	1.3	1.2	.98	.89	.80	.72	.58	.58
19	1.2	1.2	1.4	1.5	1.3	1.2	1.1	.89	.80	.71	.58	.58
20	1.2	1.2	1.4	1.8	1.3	1.2	.97	.88	.80	.70	.58	.58
21	1.2	1.8	1.4	1.6	1.3	1.2	.94	.88	.80	.75	.58	.58
22	1.2	2.3	1.0	1.7	1.3	1.2	.94	.88	.80	.80	.58	.56
23	1.2	1.6	2.2	2.3	1.3	1.2	.94	.88	.80	.74	.58	.57
24	1.2	1.4	1.9	1.7	1.3	1.2	.94	.86	.80	.73	.58	.58
25	1.2	1.3	1.8	2.1	1.3	1.2	.92	.80	.80	.68	.58	.68
26	1.2	1.3	1.7	5.6	1.3	1.1	.90	.80	.80	.68	.58	.64
27	1.2	1.3	2.3	2.1	1.3	1.2	.91	.80	.76	.68	.58	.58
28	1.2	1.3	2.3	1.9	1.3	1.2	.96	.80	.76	.68	.58	.58
29	1.2	1.3	1.8	1.7	---	1.1	.99	.80	.77	.68	.58	.58
30	1.7	1.3	1.6	1.7	---	1.1	.97	.80	.79	.67	.58	.58
31	1.2	---	1.6	1.6	---	1.1	---	.80	---	.65	.57	---
TOTAL	37.7	39.2	71.0	57.8	40.2	38.6	30.33	27.11	24.47	21.88	18.08	17.41
MEAN	1.22	1.31	2.29	1.86	1.44	1.25	1.01	.87	.82	.71	.58	.58
MAX	1.7	2.3	1.0	5.6	1.6	1.4	1.1	.96	.90	.80	.63	.68
MIN	1.1	1.1	1.3	1.4	1.3	1.1	.90	.80	.76	.65	.57	.54
AC-FT	75	78	141	115	80	77	60	54	49	43	36	35

11063500 LONE PINE CREEK NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.00	1.20	1.91	2.39	4.07	4.63	2.07	1.65	1.34	1.12	1.09	1.05
MAX	5.35	6.51	15.0	24.1	40.6	98.1	11.0	8.91	7.41	5.95	6.61	6.09
(WY)	1984	1966	1923	1969	1969	1938	1980	1980	1980	1993	1993	1993
MIN	.079	.091	.095	.094	.10	.10	.10	.10	.10	.10	.090	.093
(WY)	1991	1991	1991	1991	1964	1964	1961	1928	1928	1928	1965	1965

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1920 - 1997			
ANNUAL TOTAL	808.4				423.78							
ANNUAL MEAN	2.21				1.16				1.97			
HIGHEST ANNUAL MEAN									11.4			
LOWEST ANNUAL MEAN									.11			
HIGHEST DAILY MEAN	23 Feb 21				10 Dec 9				1480 Mar 2 1938			
LOWEST DAILY MEAN	1.0 Aug 23				.54 Sep 3				.00 Aug 6 1965			
ANNUAL SEVEN-DAY MINIMUM	1.0 Sep 3				.56 Aug 28				.06 Aug 2 1965			
INSTANTANEOUS PEAK FLOW					78 Dec 9				6180 Mar 2 1938			
INSTANTANEOUS PEAK STAGE					2.54 Dec 9							
ANNUAL RUNOFF (AC-FT)	1600				841				1430			
10 PERCENT EXCEEDS	3.1				1.6				4.1			
50 PERCENT EXCEEDS	1.9				1.1				.60			
90 PERCENT EXCEEDS	1.2				.58				.10			

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA

LOCATION.—Lat 34°16'04", long 117°27'58", in NW 1/4 NW 1/4 sec.13, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 0.25 mi downstream from Lone Pine Creek and 0.95 mi north of Keenbrook.

DRAINAGE AREA.—56.5 mi².

PERIOD OF RECORD.—October 1971 to September 1977, October 1983 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,600 ft above sea level, from topographic map. Oct. 1, 1971, to Sept. 30, 1977, at site 0.25 mi upstream at abandoned diversion dam at different datum.

REMARKS.—Records good except for estimated daily discharges, which are poor. Concrete control installed Oct. 1, 1987. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,700 ft³/s, Feb. 8, 1993, gage height, 8.48 ft, from rating curve extended above 180 ft³/s on basis of slope-area measurement at gage height 8.48 ft; minimum daily, 1.7 ft³/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft³/s, or maximum, from rating curve extended above 180 ft³/s on basis of slope-area measurement at gage height 8.48 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 9	unknown	303	5.58	Dec. 22	1015	326	5.62

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	6.2	e6.5	10	17	9.3	6.6	5.6	e4.9	4.2	3.4	3.2
2	5.3	5.9	e6.3	11	17	8.8	6.6	5.7	e4.9	4.2	3.3	3.2
3	5.1	6.0	e6.3	11	16	8.8	6.8	5.8	e4.9	4.1	3.3	3.3
4	5.1	5.9	e6.2	11	15	8.9	6.8	5.6	e5.2	4.1	3.3	3.3
5	5.1	6.0	e6.2	10	14	9.1	6.7	5.5	5.5	4.0	3.2	3.4
6	5.1	5.9	e6.1	10	14	9.0	6.6	5.6	5.4	4.1	3.3	3.4
7	5.0	5.8	e6.2	9.7	13	8.7	6.5	5.6	5.4	4.1	3.7	3.4
8	5.1	e5.7	e6.8	9.6	13	8.4	6.6	5.7	5.4	4.1	3.8	3.4
9	5.1	e5.6	e4.0	9.0	13	8.0	6.6	5.6	5.1	4.1	4.0	3.4
10	5.1	e5.7	e1.7	8.8	12	7.9	6.6	5.6	4.9	4.0	4.2	3.3
11	5.2	e5.7	e1.9	8.9	12	7.8	6.5	5.6	5.1	4.1	4.2	3.5
12	5.2	e5.6	e1.2	11	12	7.8	6.5	5.6	5.3	4.1	4.2	3.6
13	5.2	e5.6	9.7	22	12	7.7	6.4	5.4	5.5	4.0	4.0	3.6
14	5.2	e5.7	8.4	13	12	7.7	6.3	5.4	5.4	3.9	3.8	3.5
15	5.3	e5.8	7.8	28	12	7.6	6.2	5.3	5.2	3.9	3.9	3.9
16	5.5	e5.8	7.5	20	12	7.7	6.0	5.3	5.0	3.7	4.1	3.7
17	5.5	e5.7	7.1	16	12	7.4	5.8	5.5	4.9	3.7	4.0	3.4
18	5.6	e5.8	6.8	14	11	7.0	5.9	5.5	4.5	3.8	3.6	3.4
19	5.3	e5.8	6.8	13	11	6.7	6.4	5.5	4.6	3.9	3.6	3.6
20	5.1	e6.0	6.6	16	11	6.8	6.2	5.5	4.5	3.9	3.7	3.7
21	5.0	e1.3	6.4	14	11	6.9	6.2	5.5	5.0	4.0	3.5	3.5
22	5.1	e1.9	7.0	15	11	7.0	6.0	5.4	4.7	4.3	3.5	3.5
23	5.2	e1.0	2.6	23	11	7.1	6.2	5.5	4.8	4.0	3.5	3.4
24	5.2	e8.6	1.7	18	10	7.0	6.1	5.5	4.6	3.8	3.4	3.5
25	5.2	e8.0	1.4	23	10	6.7	5.9	e5.2	4.5	3.8	3.2	5.8
26	5.3	e7.4	1.2	5.5	10	6.7	5.6	e5.2	4.6	3.8	3.3	4.7
27	5.3	e7.2	1.9	3.0	9.8	6.8	5.1	e5.0	4.6	3.8	3.4	4.1
28	5.3	e7.1	1.9	2.4	9.8	7.0	5.4	e4.8	4.4	3.7	3.4	4.2
29	5.5	e7.0	1.3	2.3	---	6.7	5.8	e5.0	4.1	3.6	3.5	3.7
30	10	e6.7	1.2	2.1	---	6.7	5.7	e4.9	4.3	3.6	3.4	3.6
31	6.8	---	1.1	1.9	---	6.8	---	e4.9	---	3.5	3.4	---
TOTAL	168.2	210.2	418.7	527.0	343.6	236.5	186.6	167.8	147.2	121.9	112.1	109.2
MEAN	5.43	7.01	13.5	17.0	12.3	7.63	6.22	5.41	4.91	3.93	3.62	3.64
MAX	10	19	70	55	17	9.3	6.8	5.8	5.5	4.3	4.2	5.8
MIN	5.0	5.6	6.1	8.8	9.8	6.7	5.1	4.8	4.1	3.5	3.2	3.2
AC-FT	334	417	830	1050	682	469	370	333	292	242	222	217

e Estimated.

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.59	6.03	9.70	21.5	21.8	16.8	9.97	7.96	6.12	5.19	4.88	5.88
MAX	14.8	13.2	26.5	134	121	51.5	27.7	17.4	15.8	16.0	15.1	24.5
(WY)	1984	1984	1972	1993	1993	1995	1993	1993	1993	1993	1993	1976
MIN	2.00	1.97	2.05	2.33	5.06	4.31	2.93	3.39	1.98	2.05	2.12	1.99
(WY)	1991	1992	1991	1991	1977	1990	1977	1976	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1972 - 1997			
ANNUAL TOTAL	3655.0				2749.0							
ANNUAL MEAN	9.99				7.53				10.1			
HIGHEST ANNUAL MEAN									35.5			
LOWEST ANNUAL MEAN									3.80			
HIGHEST DAILY MEAN	214				70				850			
LOWEST DAILY MEAN	5.0				3.2				1.7			
ANNUAL SEVEN-DAY MINIMUM	5.1				3.3				1.8			
INSTANTANEOUS PEAK FLOW					326				6700			
INSTANTANEOUS PEAK STAGE					5.62				8.48			
ANNUAL RUNOFF (AC-FT)	7250				5450				7300			
10 PERCENT EXCEEDS	12				13				15			
50 PERCENT EXCEEDS	7.1				5.6				5.9			
90 PERCENT EXCEEDS	5.3				3.6				2.8			

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34°12'30", long 117°19'50", in Muscupiabe Grant, San Bernardino County, Hydrologic Unit 18070203, on left bank 0.6 mi downstream from confluence of East and West Forks and 7.5 mi northwest of San Bernardino.

DRAINAGE AREA.—5.49 mi².

PERIOD OF RECORD.—November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder on creek; flowmeter on diversion. Elevation of gage is 2,080 ft above sea level, from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi downstream at different datum. December 1919 to July 1969, at site 0.4 mi downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi downstream at different datum.

REMARKS.—Records fair. No regulation upstream from station. City of San Bernardino diverts upstream from station at times for municipal supply. No diversion since June 1993. See schematic diagram of Santa Ana River Basin. Records given below are for creek only unless otherwise indicated.

COOPERATION.—Records of diversion were provided by city of San Bernardino.

EXTREMES FOR PERIOD OF RECORD (1913–14 and since 1919).—Maximum discharge, 3,720 ft³/s, Jan. 25, 1969, gage height, 5.40 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 158 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0300	83	5.81	Jan. 3	0200	96	5.87
Dec. 9	2315	93	5.85	Jan. 26	0045	126	5.96
Dec. 22	1300	110	5.92				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.84	1.7	5.3	22	8.2	4.0	2.8	.74	.56	.19	.00
2	.00	1.7	1.8	9.7	20	7.2	3.9	2.7	.75	.52	.19	.00
3	.00	1.2	1.7	67	19	7.6	3.9	2.7	.81	.55	.18	.00
4	.00	.19	1.8	27	17	7.8	3.9	2.7	.90	.53	.18	.00
5	.00	.18	1.7	18	15	7.7	3.9	2.7	1.0	.52	.12	.00
6	.00	.20	2.5	14	14	7.6	3.9	2.7	1.1	.49	.02	.00
7	.00	.23	2.4	11	13	7.2	3.9	2.7	1.1	.51	.01	.00
8	.00	.25	2.3	8.2	13	6.7	3.9	2.6	1.0	.49	.00	.00
9	.00	.24	14	7.0	12	6.9	3.9	2.5	.93	.53	.00	.00
10	.00	.23	18	6.3	11	7.1	3.8	1.8	.87	.48	.00	.00
11	.00	.24	14	5.8	11	7.0	3.9	1.8	.90	.19	.00	.00
12	.00	.25	10	10	11	6.8	3.9	1.9	1.1	.20	.00	.00
13	.00	.26	7.7	18	10	6.2	3.8	1.9	1.9	.18	.00	.00
14	.00	.30	6.2	16	9.8	6.1	3.7	1.9	1.3	.16	.00	.00
15	.00	.44	5.3	20	9.4	6.1	3.1	1.8	.91	.15	.00	.00
16	.00	.68	4.6	18	9.1	6.0	3.1	1.8	.62	.14	.00	.00
17	.00	.64	4.0	15	9.1	5.7	3.1	1.8	.57	.13	.00	.00
18	.00	.51	3.9	13	9.3	5.6	3.3	1.8	.48	.19	.00	.00
19	.00	.36	3.7	12	8.5	5.2	3.5	1.9	.56	.30	.00	.00
20	.00	.37	3.4	14	8.5	5.0	3.5	1.8	.56	.41	.00	.00
21	.00	7.6	3.1	12	8.2	4.9	3.4	1.8	.51	.39	.00	.00
22	.00	30	28	13	7.8	4.6	3.2	1.9	.50	.56	.00	.00
23	.00	6.4	9.4	22	7.3	4.3	2.7	1.9	.53	.53	.00	.00
24	.00	3.7	7.0	18	6.7	4.2	2.7	1.8	.54	.42	.00	.00
25	.00	2.8	5.9	36	6.7	4.0	2.7	1.9	.54	.38	.00	.57
26	.00	2.5	5.4	87	6.5	4.0	2.7	1.8	.66	.24	.00	2.0
27	.00	2.3	7.0	58	11	4.1	2.8	1.8	.68	.32	.00	.88
28	.00	1.9	8.5	46	8.7	4.2	3.0	1.7	.72	.36	.00	.17
29	.00	1.7	6.7	36	---	4.0	3.1	1.4	.71	.39	.00	.23
30	4.6	1.6	6.0	27	---	4.0	3.0	.83	.73	.38	.00	.22
31	3.0	---	5.7	24	---	4.1	---	.78	---	.23	.00	---
TOTAL	7.60	69.81	203.4	694.3	314.6	180.1	103.2	61.91	24.22	11.43	0.89	4.07
MEAN	.25	2.33	6.56	22.4	11.2	5.81	3.44	2.00	.81	.37	.029	.14
MAX	4.6	30	28	87	22	8.2	4.0	2.8	1.9	.56	.19	2.0
MIN	.00	.18	1.7	5.3	6.5	4.0	2.7	.78	.48	.13	.00	.00
AC-FT	15	138	403	1380	624	357	205	123	48	23	1.8	8.1
a	15	138	403	1380	624	357	205	123	48	23	1.8	8.1

a Combined discharge, in acre-ft, of Devil Canyon Creek and City of San Bernardino Diversion.

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.34	.96	1.78	3.76	6.76	7.52	4.37	2.14	.93	.50	.33	.32
MAX	3.36	12.9	14.0	44.4	108	72.9	28.3	15.2	7.35	4.66	3.83	3.33
(WY)	1984	1966	1967	1993	1980	1938	1978	1983	1995	1993	1993	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1926	1926	1926	1926	1948	1951	1951	1951	1947	1926	1925	1924

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1920 - 1997	
ANNUAL TOTAL	1263.62		1675.53			
ANNUAL MEAN	3.45		4.59		2.43	
HIGHEST ANNUAL MEAN					16.1	1980
LOWEST ANNUAL MEAN					.000	1951
HIGHEST DAILY MEAN	107	Feb 20	87	Jan 26	556	Jan 25 1969
LOWEST DAILY MEAN	.00	Aug 26	.00	Oct 1	.00	Sep 23 1921
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 26	.00	Oct 1	.00	Sep 23 1921
INSTANTANEOUS PEAK FLOW			126	Jan 26	3720	Jan 25 1969
INSTANTANEOUS PEAK STAGE			5.96	Jan 26	6.70	Feb 19 1980
ANNUAL RUNOFF (AC-FT)	2510		3320		1760	
10 PERCENT EXCEEDS	8.5		12		5.3	
50 PERCENT EXCEEDS	1.6		1.8		.13	
90 PERCENT EXCEEDS	.00		.00		.00	

11065000 LYTLE CREEK AT COLTON, CA

LOCATION.—Lat 34°04'44", long 117°18'17", in San Bernardino Grant, San Bernardino County, Hydrologic Unit 18070203, on right bank 400 ft downstream from Colton Avenue, 1,930 ft upstream from outlet end of channel, and 1.3 mi northeast of Colton.

DRAINAGE AREA.—186 mi².

PERIOD OF RECORD.—October 1957 to September 1983, October 1984 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 974.67 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.—Records fair except for discharges below 10 ft³/s, which are poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 mi upstream. Diversions upstream from station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,500 ft³/s, Mar. 4, 1978, gage height, 14.8 ft, from rating curve extended above 4,200 ft³/s on basis of discharge for design flood at gage height 21.4 ft; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	3.4	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	22	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.23	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.50	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	48	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	19	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	41	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.01	28	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	58	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	15	.00	.00	.00	.00	.00	.00	.00	1.6
15	.00	.00	.00	24	.00	.00	.00	.00	.00	.00	.00	2.4
16	.00	.00	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	3.8	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	67	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	52	91	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	25	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	87	.00	.00	.00	.00	.00	.00	.00	3.3
26	.00	.00	.02	225	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	11	10	3.2	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	3.1	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	22	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	22.00	119.00	213.63	501.58	3.20	0.00	0.00	0.00	0.00	0.00	0.00	7.30
MEAN	.71	3.97	6.89	16.2	.11	.000	.000	.000	.000	.000	.000	.24
MAX	22	67	91	225	3.2	.00	.00	.00	.00	.00	.00	3.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	44	236	424	995	6.3	.00	.00	.00	.00	.00	.00	14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.81	4.84	8.13	21.1	30.0	21.1	4.54	4.37	2.46	1.20	.78	.81
MAX	15.8	79.1	104	318	363	326	57.3	87.6	61.3	35.4	17.1	9.58
(WY)	1981	1966	1966	1969	1980	1978	1969	1969	1978	1978	1969	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1958	1958	1959	1963	1961	1959	1961	1959	1958	1958	1958	1958

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1958 - 1997

ANNUAL TOTAL	1925.62	866.71	
ANNUAL MEAN	5.26	2.37	8.25
HIGHEST ANNUAL MEAN			65.4
LOWEST ANNUAL MEAN			.008
HIGHEST DAILY MEAN	675	Feb 20	5040
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			764
INSTANTANEOUS PEAK STAGE			2.72
ANNUAL RUNOFF (AC-FT)	3820	1720	5980
10 PERCENT EXCEEDS	.00	.00	3.9
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA

LOCATION.—Lat 33°58'07", long 117°26'51", in NE 1/4 SW 1/4 sec.30, T.2 S., R.5 W., Riverside County, Hydrologic Unit 18070203, on left bank at MWD pipeline crossing, 0.8 mi downstream from Union Pacific Railroad Bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.

DRAINAGE AREA.—852 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1970 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 685 ft above sea level, from topographic map. Gage moved to left bank at present datum on June 17, 1993 (formerly on right bank). Prior to Oct. 1, 1984, water-stage recorder at site 300 ft upstream on left bank at different datum.

REMARKS.—Records fair except for discharges above 900 ft³/s and estimated daily discharges, which are poor. Flow partly regulated by Big Bear Lake (station 11049000). Natural streamflow affected by ground-water withdrawals, diversions for irrigation, and return flows from irrigated areas. The records at this station are equivalent to those collected at Santa Ana River at Riverside Narrows, near Arlington minus the flow at Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,700 ft³/s, Mar. 6, 1995, gage height, 14.47 ft, on basis of area-velocity study; maximum gage height, 20.23 ft, Mar. 4, 1978; minimum daily, 15 ft³/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge since at least 1927, 100,000 ft³/s, Mar. 2, 1938, on basis of slope-area measurement at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft³/s, on basis of slope-conveyance study at site 8.2 mi upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	2115	1,750	7.94	Jan. 3	0545	2,920	8.36
Nov. 21	2000	3,920	9.08	Jan. 13	0645	4,010	9.14
Dec. 9	2015	2,780	8.25	Jan. 15	2100	3,090	8.49
Dec. 22	1630	2,760	8.24	Jan. 26	1100	4,820	9.44

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	113	86	103	134	96	101	98	79	82	69	65
2	99	120	88	142	136	87	97	92	75	82	74	71
3	96	115	89	1370	117	96	96	91	90	80	70	71
4	98	117	86	308	133	86	102	87	86	84	e71	73
5	105	120	97	182	131	98	103	89	86	84	e71	102
6	106	114	136	109	125	94	100	88	84	80	e71	90
7	99	102	119	92	117	93	101	88	88	73	e71	79
8	97	110	122	91	110	91	100	85	93	75	e70	75
9	92	105	541	84	111	95	105	84	88	83	e70	71
10	93	100	315	91	116	96	109	82	86	86	e70	65
11	92	101	363	93	123	100	109	81	90	82	e70	70
12	97	101	173	774	113	96	97	82	84	83	e70	72
13	91	99	141	1560	112	91	101	83	77	84	e71	73
14	108	111	120	988	115	98	96	84	82	83	e73	79
15	88	115	100	1160	112	94	99	83	83	78	e74	94
16	85	112	98	731	117	91	102	80	75	74	70	100
17	76	107	97	145	115	100	102	80	63	70	72	96
18	94	106	98	125	116	98	98	86	73	70	74	94
19	83	110	94	120	121	87	105	85	80	75	73	84
20	80	111	91	123	114	93	102	85	80	65	75	82
21	75	1140	85	125	108	97	102	76	81	e65	e74	84
22	78	1490	437	136	110	97	103	80	81	e66	e72	71
23	79	397	171	746	107	95	103	80	80	e67	e70	65
24	85	129	119	193	98	102	99	77	80	e67	e68	66
25	87	129	98	825	100	111	97	77	79	e67	e67	136
26	88	104	120	3730	105	110	93	80	83	68	65	166
27	87	94	143	2800	111	116	97	85	77	70	66	110
28	89	83	157	1070	203	113	96	82	86	70	66	100
29	87	84	104	317	---	113	98	76	84	68	60	92
30	445	84	126	201	---	112	97	75	77	72	66	96
31	170	---	131	144	---	104	---	75	---	67	65	---
TOTAL	3245	5923	4745	18678	3330	3050	3010	2576	2450	2320	2168	2592
MEAN	105	197	153	603	119	98.4	100	83.1	81.7	74.8	69.9	86.4
MAX	445	1490	541	3730	203	116	109	98	93	86	75	166
MIN	75	83	85	84	98	86	93	75	63	65	60	65
AC-FT	6440	11750	9410	37050	6610	6050	5970	5110	4860	4600	4300	5140

e Estimated.

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	57.1	76.2	99.9	244	261	336	142	106	73.3	49.7	48.4	50.1
MAX	194	259	292	1839	1411	1806	604	666	351	145	233	129
(WY)	1988	1984	1984	1993	1980	1995	1983	1983	1983	1983	1983	1976
MIN	20.5	21.2	23.3	24.7	23.1	23.7	23.1	22.3	20.2	16.8	17.9	18.0
(WY)	1974	1975	1974	1972	1972	1972	1971	1972	1981	1981	1981	1974

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1970 - 1997	
ANNUAL TOTAL	50433		54087			
ANNUAL MEAN	138		148		129	
HIGHEST ANNUAL MEAN					416	
LOWEST ANNUAL MEAN					29.0	
HIGHEST DAILY MEAN	2970		Feb 21		11500	
LOWEST DAILY MEAN	53		Jan 2		15	
ANNUAL SEVEN-DAY MINIMUM	57		Feb 12		16	
INSTANTANEOUS PEAK FLOW			4820		30700	
INSTANTANEOUS PEAK STAGE			9.44		20.23	
ANNUAL RUNOFF (AC-FT)	100000		107300		93570	
10 PERCENT EXCEEDS	143		136		185	
50 PERCENT EXCEEDS	91		93		57	
90 PERCENT EXCEEDS	68		71		22	

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1970 to current year.

SPECIFIC CONDUCTANCE: Water years 1970–78.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT					
04...	0750	93	893	18.0	552
18...	1325	98	861	22.0	540
NOV					
01...	1050	112	857	17.0	516
20...	1030	113	845	18.0	522
DEC					
03...	1620	90	854	17.5	536
10...	1145	249	472	16.0	296
JAN					
06...	1515	104	860	14.0	538
16...	1515	352	573	15.0	358
FEB					
03...	1415	125	825	18.5	514
12...	1300	110	821	16.0	516
MAR					
04...	1400	87	878	19.5	552
24...	1045	99	881	19.5	564
APR					
01...	1415	99	928	21.5	584
11...	1000	106	989	16.5	627
24...	1145	101	993	22.0	628
MAY					
01...	1000	99	855	20.5	532
08...	0920	87	927	20.0	580
27...	1100	89	900	25.5	555
JUN					
03...	1000	91	1010	20.0	630
18...	1245	79	1020	28.5	646
JUL					
01...	0955	85	920	22.5	578
11...	1330	77	877	27.0	555
AUG					
04...	1225	71	964	31.0	599
15...	1150	76	1000	25.0	630
SEP					
03...	0945	71	1020	23.5	650
16...	1110	100	862	24.0	545

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA

LOCATION.—Lat 33°44'17", long 116°49'59", in SE 1/4 NE 1/4 sec.13, T.5 S., R.1 E., Riverside County, Hydrologic Unit 18070202, on left bank 0.6 mi downstream from bridge on State Highway 74, 1.5 mi downstream from North Fork San Jacinto River, 7.8 mi southeast of San Jacinto, and 9.5 mi downstream from Lake Hemet.

DRAINAGE AREA.—142 mi².

PERIOD OF RECORD.—October 1920 to February 1927, March 1927 to September 1991, October 1996 to September 1997. River only records for October 1969 to September 1980 and October 1981 to September 1991 are at site upstream of Lake Hemet Municipal Water District's lower canal and are equivalent to other records if lower canal diversion is deducted from flow past station. Records of lower canal diversion are available at Lake Hemet Municipal Water District. Combined records of river and diversions are equivalent for October 1948 to September 1981. Combined records of river and diversion for October 1981 to September 1990, published in WDR CA-82-1 to WDR CA-90-1, are not equivalent due to diversion for municipal supply upstream of gages beginning in 1982. Monthly discharge only for October 1920 and July to September 1926 are published in WSP 1315-B.

REVISED RECORDS.—WSP 881: 1938. WSP 1635: 1950. WSP 1928: Drainage area. WDR CA-97-1: Date of peak discharge for Water Year 1991.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 1,910 ft above sea level, from topographic map. From 1927 to 1991 gage operated at various locations and datums approximately 0.6 mi upstream. See WDR CA-91-1 for further description.

REMARKS.—Records fair. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts 4.5 mi upstream from station. Several other small diversions in the basin. Diversions upstream from station began prior to 1920. See schematic of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—(River only) Maximum discharge, 45,000 ft³/s, Feb. 16, 1927, on basis of slope area measurement of peak flow. No flow for several months in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum, from rating curve extended above 80 ft³/s on basis of critical depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	1445	284	3.95				

REVISIONS.—The date of the maximum discharge for the 1991 water year has been revised to Mar. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.63	1.4	14	52	39	1.3	.49	.00	.00	.00	.00
2	.00	.46	.68	17	51	24	2.0	.38	.02	.00	.00	.00
3	.00	.39	.57	67	62	15	1.9	.37	.04	.00	.00	.00
4	.00	.34	.51	69	53	11	1.5	.28	.00	.00	.00	.00
5	.00	.33	.54	62	44	8.0	1.6	.38	.00	.00	.00	.00
6	.00	.30	3.3	53	39	12	1.2	.20	.00	.00	.00	.00
7	.00	.31	5.7	41	35	13	1.9	.15	.00	.00	.00	.00
8	.00	.17	2.9	33	32	7.2	.98	.13	.00	.00	.00	.00
9	.00	.16	3.0	29	30	5.6	1.4	.11	.00	.00	.00	.00
10	.00	.18	48	26	25	4.9	.81	.09	.00	.00	.00	.00
11	.00	.21	51	21	29	5.2	.85	.08	.00	.00	.00	.00
12	.00	.21	54	33	26	3.9	.62	.06	.00	.00	.00	.00
13	.00	.21	30	64	24	3.6	.54	.05	.00	.00	.00	.00
14	.01	.20	17	62	20	3.4	.61	.06	.00	.00	.00	.00
15	.01	.23	12	57	13	4.6	.50	.08	.00	.00	.00	.00
16	.02	.27	9.9	59	14	5.3	.38	.06	.00	.00	.00	.00
17	.03	.30	8.4	53	10	4.7	.31	.57	.00	.00	.00	.00
18	.03	.33	6.5	49	11	4.0	.32	1.3	.00	.00	.00	.00
19	.06	.22	4.6	46	7.6	3.1	.33	.29	.00	.00	.00	.00
20	.06	.20	3.8	43	6.8	1.5	.34	.08	.00	.00	.00	.00
21	.05	16	3.5	41	6.1	1.6	.35	.07	.00	.00	.00	.00
22	.05	78	11	38	5.1	1.5	.34	.14	.00	.00	.00	.00
23	.06	52	38	57	4.1	1.7	.36	.05	.00	.00	.00	.00
24	.06	13	12	56	3.8	1.7	.56	.14	.00	.00	.00	.00
25	.04	6.2	8.6	56	4.6	1.2	.79	.28	.00	.00	.00	.00
26	.04	3.8	6.7	178	3.5	1.1	.48	.19	.00	.00	.00	42
27	.04	2.5	6.1	128	19	2.0	.30	.07	.00	.00	.00	3.6
28	.05	2.5	39	83	59	.84	.24	.11	.00	.00	.00	1.9
29	.05	2.0	30	71	---	.71	.23	.04	.00	.00	.00	.79
30	.08	1.7	20	59	---	.73	.35	.05	.00	.00	.00	.39
31	.97	---	15	53	---	1.0	---	.00	---	.00	.00	---
TOTAL	1.71	183.35	453.70	1718	689.6	193.08	23.39	6.35	0.06	0.00	0.00	48.68
MEAN	.055	6.11	14.6	55.4	24.6	6.23	.78	.20	.002	.000	.000	1.62
MAX	.97	78	54	178	62	39	2.0	1.3	.04	.00	.00	42
MIN	.00	.16	.51	14	3.5	.71	.23	.00	.00	.00	.00	.00
AC-FT	3.4	364	900	3410	1370	383	46	13	.1	.00	.00	97

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.72	4.27	15.5	19.5	55.4	67.4	47.5	20.9	5.55	1.16	1.13	1.24
MAX	14.2	164	283	230	1039	743	312	224	81.0	13.0	13.6	23.1
(WY)	1980	1966	1967	1969	1980	1938	1941	1983	1983	1979	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1923	1924	1930	1936	1951	1947	1934	1934	1931	1924	1923	1922

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1921 - 1997

ANNUAL TOTAL	3317.92		
ANNUAL MEAN	9.09	19.6	
HIGHEST ANNUAL MEAN		156	1980
LOWEST ANNUAL MEAN		.075	1951
HIGHEST DAILY MEAN	178	7590	Feb 21 1980
LOWEST DAILY MEAN	.00	.00	Oct 1 1920
ANNUAL SEVEN-DAY MINIMUM	.00	.00	Oct 1 1920
INSTANTANEOUS PEAK FLOW	284	45000	Feb 16 1927
INSTANTANEOUS PEAK STAGE	3.95		
ANNUAL RUNOFF (AC-FT)	6580	14190	
10 PERCENT EXCEEDS	39	39	
50 PERCENT EXCEEDS	.28	.13	
90 PERCENT EXCEEDS	.00	.00	

11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA

LOCATION.—Lat 33°42'42", long 116°52'04", in NW 1/4 NE 1/4 sec.27, T.5 S., R.1 E., Riverside County, Hydrologic Unit 18070202, on right bank at the head of the concrete-lined flood channel, 3.7 mi upstream from the mouth, and 3.0 mi southeast of Valle Vista.

DRAINAGE AREA.—47.6 mi².

PERIOD OF RECORD.—October 1987 to current year.

GAGE.—Water-stage recorder, concrete control and crest-stage gage. Elevation of gage is 2,080 ft above sea level, from topographic map. Prior to October 1988 at datum 10.00 ft lower.

REMARKS.—Records fair. No regulation upstream from station. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Minor diversion upstream from station for irrigation. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,310 ft³/s, Jan. 16, 1993, gage height, 3.53 ft, from rating curve developed on basis of critical-depth computations at concrete control; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve developed on basis of critical-depth computations at concrete control:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 13	0800	48	1.35				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.77	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.19	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	3.0	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	4.7	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.67	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	4.2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	2.0	.48	.23	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	7.5	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	7.1	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	9.5	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.82	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	1.9	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	1.90	6.20	2.07	37.47	2.46	0.00	0.02	0.00	0.00	0.00	0.00	0.00
MEAN	.061	.21	.067	1.21	.088	.000	.001	.000	.000	.000	.000	.000
MAX	1.9	4.2	1.4	9.5	1.6	.00	.02	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	3.8	12	4.1	74	4.9	.00	.04	.00	.00	.00	.00	.00

11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.007	.021	.021	4.14	2.84	3.87	.24	.023	.001	.001	.073	.050
MAX	.061	.21	.12	31.1	22.3	26.4	2.01	.23	.011	.010	.55	.50
(WY)	1997	1997	1988	1993	1993	1995	1995	1995	1995	1996	1994	1995
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1988	1988	1989	1989	1989	1989	1989	1988	1988	1988	1989	1988

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1988 - 1997		
ANNUAL TOTAL	74.68			50.12					
ANNUAL MEAN	.20			.14			.94		
HIGHEST ANNUAL MEAN							4.35		
LOWEST ANNUAL MEAN							.000		
HIGHEST DAILY MEAN	24	Feb	1	9.5	Jan	26	298	Jan	16 1993
LOWEST DAILY MEAN	.00	Jan	1	.00	Oct	1	.00	Oct	1 1987
ANNUAL SEVEN-DAY MINIMUM	.00	Jan	1	.00	Oct	1	.00	Oct	1 1987
INSTANTANEOUS PEAK FLOW				48	Jan	13	1310	Jan	16 1993
INSTANTANEOUS PEAK STAGE				1.35	Jan	13	3.53	Jan	16 1993
ANNUAL RUNOFF (AC-FT)	148			99			678		
10 PERCENT EXCEEDS	.00			.00			.00		
50 PERCENT EXCEEDS	.00			.00			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

11070150 SAN JACINTO RIVER ABOVE STATE STREET, NEAR SAN JACINTO, CA

LOCATION.—Lat 33°49'17", long 116°58'21", in NE 1/4 SW 1/4 sec.15, T.4 S., R.1 W., Riverside County, Hydrologic Unit 18070202, on left bank 300 ft upstream from State Street Bridge, 5.5 mi downstream from confluence with Bautista Creek, and 2.5 mi northwest of San Jacinto.

DRAINAGE AREA.—252 mi².

PERIOD OF RECORD.—October 1996 to September 1997.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,500 ft above sea level, from topographic map.

REMARKS.—Records poor. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts 4.0 mi upstream from station on San Jacinto River near San Jacinto (station 11069500). See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, unknown, Jan. 26, 1997, gage height, 3.34 ft, from floodmarks; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	1845	unknown	3.34				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	e2.5	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.081	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	2.5	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	5.0	.00	.00	.00	.00	.00	.00	.00	.00

e Estimated.

11070150 SAN JACINTO RIVER ABOVE STATE STREET, NEAR SAN JACINTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.081	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.000	.000	.000	.081	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997
MIN	.000	.000	.000	.081	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS

FOR 1997 WATER YEAR

ANNUAL TOTAL	2.50	
ANNUAL MEAN	.007	
HIGHEST DAILY MEAN	2.5	Jan 26
LOWEST DAILY MEAN	.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1
INSTANTANEOUS PEAK FLOW	(a)	Jan 26
INSTANTANEOUS PEAK STAGE	3.34	Jan 26
ANNUAL RUNOFF (AC-FT)	5.0	
10 PERCENT EXCEEDS	.00	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

(a) Peak discharge is unknown but is known to have occurred on Jan. 26.

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA

LOCATION.—Lat 33°48'04", long 117°12'19", in SW 1/4 SW 1/4 sec.21, T.4 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 1.9 mi northeast of Perris and 2.0 mi upstream from San Jacinto River.

DRAINAGE AREA.—93.3 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1969 to September 1975, October 1989 to current year.

REVISED RECORDS.—WDR CA-92-1: 1991(M).

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,410 ft above sea level, from topographic map. October 1969 to September 1975, at same site at different datum.

REMARKS.—Records good. Some regulation by percolation basins upstream from station. Some pumping for irrigation upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,400 ft³/s, Feb. 12, 1992, gage height, 7.81 ft, from rating curve extended above 2,120 ft³/s on basis of slope area measurement of peak flow; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,100 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 21	1830	785	3.95				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	39	.00	.00	.02	.00	.00	.00	.00	.00
4	.00	.00	.00	.85	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	8.7	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.68	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	30	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	23	.00	3.1	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	19	.00	2.4	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	11	119	.64	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.04	208	.65	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	34	.35	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	83	.72	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	32	.11	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.30	.35	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.69	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	156	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	135	14	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	5.0	4.9	15	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.61	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00	28
26	.00	.00	.00	187	.00	.00	.00	.00	.00	.00	.00	98
27	.00	.00	.00	37	.00	.00	.00	.00	.00	.00	.00	.27
28	.00	.00	15	.91	1.9	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.12	.01	---	.00	.00	.00	.00	.00	.00	.00
30	45	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	7.1	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	52.10	296.00	117.06	780.06	10.98	0.03	0.02	0.00	0.00	0.00	0.00	126.27
MEAN	1.68	9.87	3.78	25.2	.39	.001	.001	.000	.000	.000	.000	4.21
MAX	45	156	30	208	3.1	.03	.02	.00	.00	.00	.00	98
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	103	.587	232	1550	22	.06	.04	.00	.00	.00	.00	250

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.22	1.34	4.08	24.2	20.3	13.6	.63	.16	.16	.010	.007	.31
MAX	1.68	9.87	35.1	167	87.5	70.7	4.87	1.06	1.73	.089	.092	4.21
(WY)	1997	1997	1993	1993	1993	1991	1994	1990	1995	1992	1996	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1970	1972	1970	1975	1971	1972	1970	1970	1970	1970	1970	1970

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1970 - 1997			
ANNUAL TOTAL	1575.96				1382.52							
ANNUAL MEAN	4.31				3.79				5.37			
HIGHEST ANNUAL MEAN									24.4			
LOWEST ANNUAL MEAN									.30			
HIGHEST DAILY MEAN	366 Feb 21				208 Jan 13				1270 Jan 16 1993			
LOWEST DAILY MEAN	.00 Jan 1				.00 Oct 1				.00 Oct 1 1969			
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1				.00 Oct 1				.00 Oct 1 1969			
INSTANTANEOUS PEAK FLOW					785 Nov 21				4400 Feb 12 1992			
INSTANTANEOUS PEAK STAGE					3.95 Nov 21				7.81 Feb 12 1992			
ANNUAL RUNOFF (AC-FT)	3130				2740				3890			
10 PERCENT EXCEEDS	.29				.45				.12			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.—October 1989 to September 1997 (discontinued).

INSTRUMENTATION.—Recording tipping-bucket rain gage since Oct. 17, 1989.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily rainfall, 2.81 in, Dec. 7, 1992; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 1.25 in, Nov. 21; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.04	.00	.00	.09	.00	.00	e.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.01	.00	.00	e.00	.00	.00
5	.00	.00	.05	.14	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.01	.00	.01	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
9	.00	.00	.55	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.11	.00	.38	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.10	.00	.01	.00	e.00	.00	.00	.00	.00	.00
12	.00	.00	.00	1.07	.00	.00	e.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.47	.01	.00	e.00	.00	.00	.00	.00	.00
14	.00	.00	.01	.05	.00	.00	e.00	.00	.00	.00	.00	.07
15	.00	.00	.00	.53	.00	.00	.00	.00	.00	.00	.00	.13
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	1.25	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.15	.19	.01	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.20	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.40	.00	.00	.00	.00	.00	.00	.00	.55
26	.00	.00	.00	.14	.00	.00	.00	.00	.00	.00	.00	.12
27	.00	.00	.09	.01	.02	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.01	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.58	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.01	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.59	1.41	1.18	3.11	0.43	0.00	0.11	0.00	0.00	0.00	0.00	0.87
MEAN	.02	.05	.04	.10	.02	.00	.00	.00	.00	.00	.00	.03
MAX	.58	1.25	.55	1.07	.38	.00	.09	.00	.00	.00	.00	.55
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1996 TOTAL 8.11 MEAN .02 MAX 1.25 MIN .00

WTR YR 1997 TOTAL 7.70 MEAN .02 MAX 1.25 MIN .00

e Estimated.

11070500 SAN JACINTO RIVER NEAR ELSINORE, CA

LOCATION.—Lat 33°39'51", long 117°17'35", in SE 1/4 NE 1/4 sec.9, T.6 S., R.4 W., Riverside County, Hydrologic Unit 18070203, on right bank 2.0 mi east of Elsinore, 2.1 mi downstream from Railroad Canyon Dam, and 36 mi downstream from Lake Hemet.

DRAINAGE AREA.—723 mi².

PERIOD OF RECORD.—January 1916 to current year. Monthly figures 1927–50, adjusted for diversion, published in WSP 1315-B.

REVISED RECORDS.—WDR CA-72-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,270 ft above sea level, from topographic map. Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mi downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site, at different datum.

REMARKS.—Records fair. Flow partly regulated by Lake Hemet, capacity 13,500 acre-ft, and since 1928 by Railroad Canyon Reservoir, capacity, 12,000 acre-ft, 2.1 mi upstream from station. Diversions for irrigation and domestic use upstream from Railroad Canyon Reservoir took place in some years prior to water year 1994. See schematic diagram of Santa Ana River basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,000 ft³/s, Feb. 17, 1927, gage height, 11.8 ft, from rating curve extended above 2,000 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.54	.71	1.1	4.7	1.0	.65	.43	.01	.00	.00	.00
2	.08	.51	.74	1.0	4.3	.93	.65	.39	.01	.00	.00	.00
3	.14	.55	.74	1.1	3.5	.94	.66	.35	.04	.00	.00	.00
4	.06	.53	.74	1.0	2.7	.97	.76	.34	.07	.00	.00	.00
5	.02	.52	.81	1.0	2.2	1.1	.74	.30	.06	.00	.00	.00
6	.00	.50	.82	1.0	2.7	1.0	.74	.26	.10	.00	.00	.00
7	.01	.48	.78	.98	2.7	1.0	.74	.26	.13	.00	.00	.00
8	.01	.47	.78	.98	2.1	1.0	.72	.28	.14	.00	.00	.00
9	.01	.44	1.2	.98	1.9	.96	.71	.28	.06	.00	.00	.00
10	.07	.44	2.4	.98	2.0	.93	.74	.29	.04	.00	.00	.00
11	.07	.47	1.2	.98	7.0	.93	.74	.29	.03	.00	.00	.00
12	.09	.51	1.1	2.7	9.3	.88	.74	.31	.32	.00	.00	.00
13	.15	.52	1.1	6.0	8.7	.88	.73	.33	.15	.00	.00	.00
14	.19	.58	1.0	1.9	5.1	.88	.70	.33	.11	.00	.00	.03
15	.22	.59	.94	2.5	2.7	.87	.65	.32	.12	.00	.00	.00
16	.25	.56	.93	6.5	2.2	.83	.64	.30	.05	.00	.00	.00
17	.29	.56	.98	34	2.0	.83	.75	.30	.01	.00	.00	.00
18	.29	.56	.98	20	3.3	.78	.69	.33	.00	.00	.00	.00
19	.28	.56	.98	9.6	2.5	.72	.71	.36	.00	.00	.00	.00
20	.29	.56	.98	4.6	1.7	.69	.73	.38	.00	.00	.00	.00
21	.29	1.0	.99	2.5	1.9	.67	.63	.39	.00	.00	.00	.00
22	.29	2.4	1.2	2.3	1.3	.65	.55	.38	.00	.00	.00	.00
23	.29	.87	1.4	3.9	1.3	.66	.51	.39	.00	.00	.00	.00
24	.31	.72	1.2	19	2.2	.67	.52	.37	.00	.00	.00	.00
25	.33	.69	1.2	19	3.7	.65	.51	.39	.00	.00	.00	.08
26	.33	.67	1.1	306	1.8	.67	.48	.36	.00	.00	.00	.28
27	.33	.65	1.1	685	1.1	.68	.45	.26	.00	.00	.00	.20
28	.33	.65	1.1	230	1.0	.68	.42	.15	.00	.00	.00	.12
29	.33	.68	1.1	39	---	.69	.44	.08	.00	.00	.00	.08
30	.38	.69	1.1	16	---	.68	.44	.04	.00	.00	.00	.08
31	.66	---	1.1	7.5	---	.65	---	.04	---	.00	.00	---
TOTAL	6.44	19.47	32.50	1429.10	87.6	25.47	19.14	9.28	1.45	0.00	0.00	0.87
MEAN	.21	.65	1.05	46.1	3.13	.82	.64	.30	.048	.000	.000	.029
MAX	.66	2.4	2.4	685	9.3	1.1	.76	.43	.32	.00	.00	.28
MIN	.00	.44	.71	.98	1.0	.65	.42	.04	.00	.00	.00	.00
AC-FT	13	39	64	2830	174	51	38	18	2.9	.00	.00	1.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.59	.76	5.14	36.6	88.2	74.0	23.9	5.64	.80	.61	.40	.51
MAX	22.0	28.1	268	1303	2116	802	333	132	13.8	19.7	14.6	15.4
(WY)	1938	1938	1922	1916	1980	1983	1941	1983	1937	1938	1937	1938
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1917	1917	1917	1921	1921	1921	1921	1921	1919	1918	1918	1917

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1916 - 1997

ANNUAL TOTAL	278.05	1631.32	
ANNUAL MEAN	.76	4.47	17.4
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	14	Feb 21	14000
LOWEST DAILY MEAN	.00	Jul 22	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 12	.00
INSTANTANEOUS PEAK FLOW		975	16000
INSTANTANEOUS PEAK STAGE		7.14	11.80
ANNUAL RUNOFF (AC-FT)	552	3240	12610
10 PERCENT EXCEEDS	1.4	2.2	4.0
50 PERCENT EXCEEDS	.61	.42	.08
90 PERCENT EXCEEDS	.04	.00	.00

11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA

LOCATION.—Lat 33°53'21", long 117°33'43", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on right bank 500 ft upstream from Main Street Bridge in Corona and 1.5 mi upstream from topographic boundary of Prado Flood Control Basin.

DRAINAGE AREA.—224 mi², excludes 768 mi² above Lake Elsinore.

PERIOD OF RECORD.—October 1980 to July 1983, February 1984 to current year. December 1967 to September 1974, water-stage recorder at site 1.2 mi downstream at different datum (published as station 11072200, Temescal Creek at Corona).

GAGE.—Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 600 ft above sea level, from topographic map. October 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.—Records fair. Flow regulated by several small storage reservoirs. Many diversions upstream from station for irrigation. Water discharged to channel from Arlington Desalter at times since September 1990; records for water years 1981 to 1990 and 1991 to current year are not equivalent. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,720 ft³/s, Mar. 1, 1983, gage height, 11.67 ft, site and datum then in use, on basis of slope-conveyance study; minimum daily, 0.27 ft³/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 8,850 ft³/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site (station 11072200) 1.2 mi downstream on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	12	12	17	9.2	12	11	8.0	9.8	10	10	8.8
2	21	13	13	25	9.1	11	11	9.7	10	12	12	10
3	22	13	14	26	13	11	15	11	11	11	13	9.9
4	21	12	15	11	8.9	12	11	11	11	13	13	12
5	18	12	20	26	9.0	12	10	9.5	11	13	11	12
6	17	12	30	8.0	9.1	12	10	12	13	13	9.6	12
7	15	12	15	8.6	11	12	9.7	12	11	11	10	13
8	14	13	16	9.1	9.7	13	9.7	11	8.6	11	12	11
9	14	13	112	9.6	9.6	13	8.6	11	11	13	11	8.4
10	13	12	17	9.6	103	12	12	11	9.7	13	12	11
11	15	13	54	11	35	11	11	11	10	12	11	11
12	16	13	16	153	10	12	13	10	9.6	11	11	10
13	18	13	11	171	10	12	12	11	11	12	11	10
14	15	13	9.8	29	10	12	11	11	11	12	9.9	12
15	12	12	9.3	123	11	12	11	11	11	7.3	10	13
16	13	12	8.5	12	11	12	12	11	12	6.5	11	8.1
17	12	12	8.3	11	12	12	12	11	12	12	10	8.1
18	11	12	7.8	10	13	11	12	11	12	5.0	8.3	7.7
19	11	12	8.4	11	10	11	11	11	13	12	9.5	8.2
20	12	11	8.9	11	10	11	11	11	13	9.9	10	9.0
21	11	217	9.5	18	13	12	11	12	14	11	11	10
22	12	89	16	19	12	12	11	11	13	10	9.9	9.7
23	12	14	10	102	11	6.7	10	9.9	14	12	9.6	9.5
24	11	11	10	11	10	4.1	10	5.8	16	12	9.4	9.8
25	11	12	10	171	11	11	10	7.6	18	14	10	88
26	12	11	10	146	14	10	11	11	21	15	10	6.8
27	11	11	44	17	22	6.2	11	11	17	14	10	8.1
28	11	11	24	11	14	13	10	9.6	12	13	9.5	7.3
29	11	12	11	10	---	13	8.8	10	12	12	10	7.3
30	80	12	11	10	---	13	8.9	10	11	12	10	8.9
31	13	---	11	9.8	---	11	---	10	---	11	9.5	---
TOTAL	504	647	572.5	1216.7	430.6	348.0	325.7	323.1	368.7	355.7	324.2	370.6
MEAN	16.3	21.6	18.5	39.2	15.4	11.2	10.9	10.4	12.3	11.5	10.5	12.4
MAX	80	217	112	171	103	13	15	12	21	15	13	88
MIN	11	11	7.8	8.0	8.9	4.1	8.6	5.8	8.6	5.0	8.3	6.8
AC-FT	1000	1280	1140	2410	854	690	646	641	731	706	643	735

11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1990, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.62	15.1	23.8	23.0	14.5	40.9	13.1	12.0	9.35	7.15	6.45	6.99
MAX	16.1	55.9	126	116	25.5	237	39.3	43.7	30.0	10.9	13.4	11.3
(WY)	1986	1981	1981	1981	1981	1983	1983	1983	1983	1985	1990	1985
MIN	2.36	4.67	2.53	7.01	7.42	6.26	4.02	3.77	1.12	1.20	1.79	1.09
(WY)	1985	1987	1982	1989	1982	1990	1989	1982	1982	1982	1982	1981

SUMMARY STATISTICS

WATER YEARS 1981 - 1990

ANNUAL MEAN	12.4
HIGHEST ANNUAL MEAN	33.7
LOWEST ANNUAL MEAN	6.10
HIGHEST DAILY MEAN	1720
LOWEST DAILY MEAN	.27
ANNUAL SEVEN-DAY MINIMUM	.56
INSTANTANEOUS PEAK FLOW	4720
INSTANTANEOUS PEAK STAGE	11.67
ANNUAL RUNOFF (AC-FT)	8990
10 PERCENT EXCEEDS	27
50 PERCENT EXCEEDS	6.1
90 PERCENT EXCEEDS	2.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.7	14.8	16.8	60.5	91.4	92.8	43.8	26.2	15.9	13.5	12.2	12.3
MAX	16.3	24.3	26.4	161	351	349	190	100	34.3	24.9	20.1	15.1
(WY)	1997	1994	1993	1995	1993	1995	1995	1995	1995	1993	1993	1994
MIN	6.22	5.55	10.4	13.0	15.4	11.2	2.89	3.24	7.33	3.56	6.98	7.08
(WY)	1996	1996	1995	1994	1997	1997	1991	1992	1992	1994	1994	1995

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1991 - 1997

ANNUAL TOTAL	8078.6	5786.8	
ANNUAL MEAN	22.1	15.9	34.1
HIGHEST ANNUAL MEAN			81.8
LOWEST ANNUAL MEAN			14.2
HIGHEST DAILY MEAN	409	Feb 20	217
LOWEST DAILY MEAN	2.5	Aug 14	4.1
ANNUAL SEVEN-DAY MINIMUM	4.7	Aug 13	8.7
INSTANTANEOUS PEAK FLOW			960
INSTANTANEOUS PEAK STAGE			4.62
ANNUAL RUNOFF (AC-FT)	16020	11480	24730
10 PERCENT EXCEEDS	31	17	60
50 PERCENT EXCEEDS	14	11	13
90 PERCENT EXCEEDS	11	9.1	4.4

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA

LOCATION.—Lat 34°00'14", long 117°43'34", in Santa Ana del Chino Grant, San Bernardino County, Hydrologic Unit 18070203, on right bank 300 ft downstream from Schaefer Avenue, 0.8 mi downstream from San Antonio Creek, and 1.5 mi southwest of Chino.

DRAINAGE AREA.—48.9 mi².

PERIOD OF RECORD.—October 1969 to current year.

REVISED RECORDS.—WDR CA-84-1: 1983(M). WDR CA-95-1: 1992, 1993.

GAGE.—Water-stage recorder. Concrete dikes formed low-water control from October 1975 to Apr. 16, 1991. Elevation of gage is 685 ft above sea level, from topographic map.

REMARKS.—Records good above 10 ft³/s and fair below. Flow mostly regulated by San Antonio Flood-Control Reservoir, capacity, 7,700 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use, irrigation, and return flow from irrigated areas. California Water Project reported releases of 42,930 acre-ft to the basin via San Antonio Creek from Rialto Pipeline below San Antonio Dam at a site 10 mi upstream. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,700 ft³/s, Feb. 27, 1983, gage height, 10.32 ft, from rating curve extended above 560 ft³/s on basis of slope-conveyance study; no flow May 21, June 30, July 1, Oct. 30, Nov. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 9.23 ft, present datum, discharge, 9,200 ft³/s, on basis of contracted-opening measurement at site 6.1 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.1	.69	11	1.3	.97	1.2	129	99	111	96	204
2	1.0	.88	.80	47	1.3	1.1	1.1	63	96	105	97	204
3	1.1	.85	.77	76	1.6	1.2	1.2	129	96	105	99	201
4	1.2	.82	.81	1.1	1.2	1.4	1.2	132	99	108	116	194
5	1.2	.70	5.2	6.3	1.2	1.2	1.3	127	98	107	194	197
6	1.1	.73	9.1	.86	1.0	1.0	1.2	130	96	103	191	194
7	1.2	.71	.90	.84	1.0	1.5	1.2	132	92	102	195	197
8	1.3	.79	.90	.94	1.0	.98	1.2	130	90	100	202	198
9	1.0	.93	290	.80	1.0	.98	1.2	127	90	94	206	200
10	1.2	.96	34	.74	6.2	2.0	1.4	136	96	93	202	205
11	1.0	.92	158	.78	2.1	1.7	1.3	138	109	95	202	198
12	1.0	1.0	19	130	1.0	1.1	1.3	136	110	96	197	198
13	.97	.79	2.3	118	3.6	1.2	1.4	134	113	94	200	202
14	1.1	.90	1.2	24	2.2	2.2	1.3	132	106	88	199	204
15	1.1	1.1	.91	95	2.4	2.5	1.4	106	107	91	204	200
16	.99	.67	1.1	2.5	3.1	1.6	1.3	85	107	103	205	197
17	1.2	.62	1.0	1.3	2.8	1.1	1.3	80	106	103	212	202
18	1.2	.67	.97	.99	2.8	1.2	1.4	73	105	106	197	209
19	1.5	.73	.93	.92	2.4	1.2	1.4	72	105	105	199	207
20	1.2	.89	1.0	20	1.1	1.3	1.5	72	103	105	202	205
21	1.3	413	.92	22	1.2	1.2	1.4	77	104	96	196	218
22	1.1	56	93	4.1	1.0	1.3	1.6	76	103	94	199	221
23	.98	1.4	1.7	106	1.0	1.2	38	77	104	93	194	222
24	1.2	1.0	1.3	1.4	1.4	1.2	111	81	103	117	193	226
25	1.1	1.1	1.2	187	1.0	1.2	105	83	107	130	192	198
26	1.1	1.1	1.0	388	1.0	1.1	119	84	108	99	200	88
27	.91	.86	67	11	3.0	1.2	127	89	108	99	197	184
28	1.2	.90	20	3.3	1.3	1.2	124	92	108	96	205	189
29	.97	.88	1.4	2.4	---	1.2	124	104	110	99	206	185
30	151	.70	1.3	2.1	---	1.7	120	109	111	96	200	185
31	2.5	---	1.3	1.9	---	1.2	---	95	---	97	204	---
TOTAL	186.12	493.70	719.70	1268.27	51.2	41.13	896.8	3230	3089	3130	5801	5932
MEAN	6.00	16.5	23.2	40.9	1.83	1.33	29.9	104	103	101	187	198
MAX	151	413	290	388	6.2	2.5	127	138	113	130	212	226
MIN	.91	.62	.69	.74	1.0	.97	1.1	63	90	88	96	88
AC-FT	369	979	1430	2520	102	82	1780	6410	6130	6210	11510	11770

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.0	16.3	28.1	35.1	35.7	31.8	10.3	13.5	21.3	21.8	18.0	16.0
MAX	126	113	189	186	193	257	68.6	104	184	176	191	198
(WY)	1979	1976	1976	1976	1980	1978	1974	1997	1976	1974	1974	1997
MIN	.061	.23	.53	.55	.33	.30	.14	.22	.062	.069	.14	.13
(WY)	1978	1978	1970	1972	1972	1972	1977	1973	1977	1977	1976	1977

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1970 - 1997

ANNUAL TOTAL	13464.01	24838.92	
ANNUAL MEAN	36.8	68.1	21.7
HIGHEST ANNUAL MEAN			92.4
LOWEST ANNUAL MEAN			3.24
HIGHEST DAILY MEAN	1000	Feb 20	2060
LOWEST DAILY MEAN	.62	Nov 17	.00
ANNUAL SEVEN-DAY MINIMUM	.78	Nov 2	.02
INSTANTANEOUS PEAK FLOW		2480	Jan 26
INSTANTANEOUS PEAK STAGE		6.56	Jan 26
ANNUAL RUNOFF (AC-FT)	26710	49270	15710
10 PERCENT EXCEEDS	94	198	83
50 PERCENT EXCEEDS	1.4	11	1.0
90 PERCENT EXCEEDS	.91	.94	.32

11073493 WEST BRANCH CUÇAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA

LOCATION.—Lat 34°02'15", long 117°37'09", in SE 1/4 SW 1/4 sec.33, T.1 S., R.7 W., San Bernardino County, Hydrologic Unit 18070203, on right bank and 700 ft upstream from northwest corner of westernmost Ely Percolation Basins in Ontario.

DRAINAGE AREA.—6.01 mi².

PERIOD OF RECORD.—October 1996 to September 1997.

GAGE.—Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 850 ft above sea level, from topographic map.

REMARKS.—Records good above 30 ft³/s and poor below. No regulation or diversion upstream from station. Flow at gage is primarily urban runoff. Irrigation return flow and various industrial releases represent most of the base flow at this site. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 593 ft³/s, Nov. 21, 1996, gage height, 2.95 ft, from rating curve extended above 250 ft³/s on basis of step-backwater computations; no flow June 11, July 15–19, 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft³/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 21	1415	593	2.95	Jan. 15	1430	306	2.34
Dec. 9	1745	409	2.58	Jan. 26	1945	530	2.83
Jan. 13	0130	480	2.73				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.9	1.3	13	2.3	1.5	1.5	3.2	.53	.05	.55	.23
2	1.5	2.4	1.3	22	2.3	1.4	1.3	3.6	.26	.05	.30	.37
3	1.9	2.9	1.4	53	2.3	1.4	1.4	1.3	.51	.04	.14	1.2
4	1.9	2.9	1.4	7.4	1.9	1.7	1.5	.04	.06	.05	.07	.40
5	2.4	2.9	3.5	7.9	1.6	1.5	1.4	.04	.08	.05	.13	.39
6	2.4	2.9	3.2	1.9	1.3	1.4	1.8	.13	.14	.10	.13	.51
7	2.4	1.9	.99	1.5	.94	1.6	2.6	.51	.11	.06	.12	.42
8	1.9	1.5	.88	1.3	1.1	1.3	1.6	.97	.19	.02	.08	2.4
9	1.9	1.5	74	1.7	1.2	1.5	1.5	.50	.51	.03	.13	.85
10	1.9	1.5	21	2.4	2.7	1.6	1.4	.19	.38	.04	.13	1.3
11	1.5	1.5	38	3.0	1.5	1.3	1.4	.08	.00	.05	.17	1.9
12	1.5	1.5	17	60	1.1	1.3	1.2	.10	.08	.04	.15	1.6
13	1.5	1.9	8.9	57	1.3	1.3	1.1	.33	.44	.04	.16	1.9
14	1.9	2.9	9.7	16	1.3	1.7	1.0	.30	.23	.04	.13	3.4
15	1.9	2.9	3.2	44	1.2	1.5	.89	.45	.17	.00	.14	6.9
16	2.4	2.7	2.9	9.9	.84	1.4	.74	.74	.26	.00	.14	3.9
17	2.4	2.5	2.4	6.7	.96	1.3	.57	.64	.21	.00	.17	2.6
18	2.4	2.4	2.2	2.4	1.0	1.3	.78	.58	.12	.00	.18	2.0
19	2.4	2.6	2.1	1.8	1.1	1.7	1.1	.44	.34	.00	.12	1.8
20	.82	2.6	2.4	9.6	1.1	1.2	1.0	.32	.53	.01	.08	1.2
21	.10	128	2.5	12	.90	.96	.88	.16	.48	.03	.07	.32
22	.60	47	39	5.3	1.2	.76	.92	.35	.26	.05	.11	.37
23	1.9	7.2	6.2	36	1.7	.59	.92	.42	.48	.05	.25	.37
24	1.9	5.5	4.8	8.1	2.0	1.1	.92	.71	.55	.05	.30	.58
25	1.9	3.9	4.1	78	1.6	.87	1.1	.87	.29	.06	.33	23
26	1.5	2.8	3.0	129	1.7	1.1	1.2	.38	.58	.05	.17	3.8
27	1.5	1.3	16	24	4.5	1.4	1.7	.04	.77	.06	.20	.78
28	1.5	1.4	14	9.3	1.9	1.3	3.3	.07	1.2	.27	.22	.45
29	1.9	1.4	8.8	2.1	---	1.5	6.0	.21	.29	2.2	.24	.37
30	35	1.4	7.7	1.6	---	1.4	4.1	.50	.15	.85	.24	.35
31	7.5	---	7.4	2.0	---	1.2	---	.91	---	.49	.28	---
TOTAL	93.72	246.7	311.27	629.9	44.54	41.08	46.82	19.08	10.20	4.83	5.63	65.66
MEAN	3.02	8.22	10.0	20.3	1.59	1.33	1.56	.62	.34	.16	.18	2.19
MAX	35	128	74	129	4.5	1.7	6.0	3.6	1.2	2.2	.55	23
MIN	.10	1.3	.88	1.3	.84	.59	.57	.04	.00	.00	.07	.23
AC-FT	186	489	617	1250	88	81	93	38	20	9.6	11	130

11073493 WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.02	8.22	10.0	20.3	1.59	1.33	1.56	.62	.34	.16	.18	2.19
MAX	3.02	8.22	10.0	20.3	1.59	1.33	1.56	.62	.34	.16	.18	2.19
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997
MIN	3.02	8.22	10.0	20.3	1.59	1.33	1.56	.62	.34	.16	.18	2.19
(WY)	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS

FOR 1997 WATER YEAR

ANNUAL TOTAL	1519.43	
ANNUAL MEAN	4.16	
HIGHEST DAILY MEAN	129	Jan 26
LOWEST DAILY MEAN	.00	Jun 11
ANNUAL SEVEN-DAY MINIMUM	.01	Jul 15
INSTANTANEOUS PEAK FLOW	593	Nov 21
INSTANTANEOUS PEAK STAGE	2.95	Nov 21
ANNUAL RUNOFF (AC-FT)	3010	
10 PERCENT EXCEEDS	7.0	
50 PERCENT EXCEEDS	1.3	
90 PERCENT EXCEEDS	.08	

11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA

LOCATION.—Lat 33°58'58", long 117°35'55", in SW 1/4 NE 1/4 sec.22, T.2 S., R.7 W., San Bernardino County, Hydrologic Unit 18070203, on right bank 300 ft upstream from Merrill Avenue Bridge and 4.6 mi west of Mira Loma.

DRAINAGE AREA.—75.8 mi².

PERIOD OF RECORD.—January 1968 to July 1977, January 1979 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 660 ft above sea level, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.—Records fair above 100 ft³/s and poor below. Channel is a trapezoidal concrete floodway; records for low and medium flows prior to July 31, 1977, are not equivalent (channel concrete lined since July 31, 1977). Chino Basin Municipal Water District Tertiary Plant No. 1 began discharging effluent 1.5 mi upstream from station on May 8, 1985. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,100 ft³/s, Feb. 27, 1983, gage height, 7.85 ft, from floodmark, on basis of slope-conveyance study of peak flow; prior to operation of Plant No. 1, no flow for most of some years; minimum daily, since 1985, 2.5 ft³/s, June 6, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	e32	35	54	e35	38	35	29	e34	e33	e35	36
2	36	e31	34	100	e33	39	e34	e30	e33	e34	e35	43
3	34	e31	35	167	e32	36	e33	e31	e32	e31	e34	32
4	32	e33	35	38	e34	33	e34	34	e31	e34	e34	e34
5	28	e32	54	58	e34	36	36	33	e30	e34	e34	e35
6	27	e31	57	40	e35	36	38	e30	e30	e33	38	e35
7	30	31	35	37	e34	33	38	e31	e32	e34	39	36
8	38	30	41	38	e33	e32	37	e31	e33	e35	37	39
9	42	32	396	40	e34	32	35	31	e34	e35	35	35
10	38	33	75	44	34	35	e34	33	e36	e35	34	78
11	40	35	176	49	34	34	e34	34	37	e34	36	54
12	40	35	54	391	32	e34	e33	e33	38	e34	35	42
13	41	36	33	345	35	e35	e32	e33	e36	e35	34	44
14	e40	36	33	71	36	e35	e33	e34	e36	e35	e35	46
15	e38	e35	38	246	38	e34	e33	e36	e35	e34	e35	72
16	e38	e36	e34	38	36	e34	34	37	e35	e33	e35	48
17	e36	e38	e33	e37	40	e35	30	38	e34	e35	e36	47
18	e36	e37	e33	e37	58	e34	29	36	e35	e34	e36	39
19	e37	e37	29	e36	41	e37	29	e35	e35	e35	e35	41
20	e36	e35	31	61	40	e36	31	e35	e34	e36	e34	36
21	e40	715	33	92	37	e34	e32	e33	e34	e36	e36	38
22	e38	303	349	37	37	e35	e34	e34	36	e36	e35	38
23	e37	45	35	182	39	e35	e33	e33	30	e35	e36	37
24	e36	e35	e34	e35	e33	e36	e33	e33	35	e36	34	35
25	e35	e32	e33	442	e36	e34	e32	e32	31	e35	36	193
26	33	e31	e34	772	e40	e35	e31	e34	33	e36	35	48
27	39	35	77	114	52	e34	e32	e34	36	e35	32	42
28	39	34	48	35	37	e35	31	e34	e34	e35	e33	40
29	44	34	31	e33	---	e34	30	e33	e33	e36	e35	37
30	270	32	32	e34	---	e35	30	e33	e33	e35	e34	30
31	31	---	35	e34	---	37	---	e34	---	e34	31	---
TOTAL	1360	1972	2032	3737	1039	1082	990	1031	1015	1072	1083	1410
MEAN	43.9	65.7	65.5	121	37.1	34.9	33.0	33.3	33.8	34.6	34.9	47.0
MAX	270	715	396	772	58	39	38	38	38	36	39	193
MIN	27	30	29	33	32	32	29	29	30	31	31	30
AC-FT	2700	3910	4030	7410	2060	2150	1960	2040	2010	2130	2150	2800

e Estimated.

11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1977, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.021	1.15	1.55	18.2	4.65	1.91	1.35	.065	.001	.000	.000	.11
MAX	.19	6.07	7.91	149	30.7	7.94	13.1	.54	.007	.000	.000	1.03
(WY)	1972	1971	1972	1969	1969	1969	1969	1977	1969	1968	1968	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1969	1969	1970	1975	1972	1972	1968	1968	1968	1968	1968	1968

SUMMARY STATISTICS

WATER YEARS 1968 - 1977

ANNUAL TOTAL	
ANNUAL MEAN	2.73
HIGHEST ANNUAL MEAN	16.8 1969
LOWEST ANNUAL MEAN	.16 1976
HIGHEST DAILY MEAN	2600 Jan 25 1969
LOWEST DAILY MEAN	.00 Feb 1 1968
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 1 1968
INSTANTANEOUS PEAK FLOW	9100 Jan 25 1969
INSTANTANEOUS PEAK STAGE	7.08 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1980
10 PERCENT EXCEEDS	.10
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1984, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.49	11.3	7.69	34.1	65.0	46.3	12.1	3.43	.48	.37	1.47	1.08
MAX	11.1	27.9	24.7	149	216	205	63.4	19.8	2.30	1.22	6.99	3.45
(WY)	1984	1983	1984	1983	1980	1983	1983	1983	1983	1983	1983	1983
MIN	.091	.002	.006	1.67	1.29	2.44	.056	.063	.008	.019	.009	.011
(WY)	1981	1980	1980	1984	1984	1984	1981	1979	1979	1981	1979	1979

SUMMARY STATISTICS

WATER YEARS 1979 - 1984

ANNUAL TOTAL	
ANNUAL MEAN	17.5
HIGHEST ANNUAL MEAN	53.4 1983
LOWEST ANNUAL MEAN	1.51 1981
HIGHEST DAILY MEAN	2530 Mar 1 1983
LOWEST DAILY MEAN	.00 Feb 6 1979
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 6 1979
INSTANTANEOUS PEAK FLOW	16100 Feb 27 1983
INSTANTANEOUS PEAK STAGE	7.85 Feb 27 1983
ANNUAL RUNOFF (AC-FT)	12700
10 PERCENT EXCEEDS	10
50 PERCENT EXCEEDS	.13
90 PERCENT EXCEEDS	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.9	36.6	43.9	83.4	79.3	66.1	33.8	28.3	31.0	28.9	30.0	35.9
MAX	52.9	65.7	83.0	265	197	198	54.2	44.9	57.1	46.2	51.8	52.0
(WY)	1988	1997	1993	1993	1993	1995	1995	1992	1992	1992	1992	1986
MIN	20.4	23.4	21.0	26.1	34.9	25.3	20.5	18.5	18.1	19.3	18.5	16.4
(WY)	1987	1989	1987	1989	1989	1988	1987	1988	1988	1987	1987	1988

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1986 - 1997

ANNUAL TOTAL	21369	17823	
ANNUAL MEAN	58.4	48.8	44.3
HIGHEST ANNUAL MEAN			71.4 1993
LOWEST ANNUAL MEAN			26.6 1987
HIGHEST DAILY MEAN	2490	Feb 20	772 Jan 26 2490 Feb 20 1996
LOWEST DAILY MEAN	26	Feb 29	27 Oct 6 2.5 Jun 6 1987
ANNUAL SEVEN-DAY MINIMUM	30	Jan 1	30 Apr 26 12 Aug 25 1988
INSTANTANEOUS PEAK FLOW			3330 Nov 21 10400 Jan 7 1993
INSTANTANEOUS PEAK STAGE			3.74 Nov 21 5.40 Jan 7 1993
ANNUAL RUNOFF (AC-FT)	42390	35350	32070
10 PERCENT EXCEEDS	54	46	54
50 PERCENT EXCEEDS	38	35	30
90 PERCENT EXCEEDS	31	31	19

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA

LOCATION.—Lat 33°53'00", long 117°38'40", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona.

DRAINAGE AREA.—1,490 mi², excludes 768 mi² above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.—Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.—Records good. Flow regulated since 1940 by Prado flood-control reservoir, capacity, 196,200 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, and return flow from irrigated areas. During the current year, the California Water Project released 42,930 acre-ft to the basin. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,440 ft³/s, Feb. 21, 1980, gage height, 6.88 ft; maximum gage height, 7.29 ft, Jan. 19, 1993; minimum daily, 2.4 ft³/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938 reached a discharge of 100,000 ft³/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	398	481	416	487	312	242	315	286	273	258	338
2	198	385	484	366	487	304	235	285	294	209	252	350
3	194	363	484	390	464	322	227	281	287	230	249	348
4	192	318	481	393	442	331	236	303	268	247	254	347
5	194	243	474	393	439	301	227	313	276	257	304	347
6	199	233	443	452	435	272	229	298	289	263	346	366
7	201	215	332	482	432	250	234	248	335	267	340	345
8	191	213	272	472	428	243	219	263	303	268	343	352
9	186	210	248	339	421	246	209	272	314	260	348	348
10	183	207	322	231	364	245	213	286	230	249	353	361
11	186	206	326	217	336	248	215	291	255	255	356	364
12	185	207	445	241	333	230	217	293	284	259	353	352
13	186	210	545	407	325	232	222	297	302	264	352	355
14	197	219	548	868	328	237	224	299	295	268	351	374
15	207	223	534	928	326	239	219	297	297	265	350	378
16	191	220	542	1080	327	245	211	297	298	258	353	397
17	195	218	534	575	327	244	219	297	292	263	359	357
18	190	222	522	498	396	245	214	301	270	258	355	380
19	202	227	508	492	432	234	212	299	280	256	345	353
20	200	231	486	449	427	233	221	265	289	256	344	350
21	191	167	434	447	421	240	222	279	284	262	344	364
22	185	399	367	461	417	243	215	290	308	266	346	371
23	189	531	476	616	412	248	216	299	332	263	346	371
24	194	530	457	702	403	252	281	299	289	269	340	362
25	198	524	402	695	395	247	295	313	220	308	341	319
26	198	520	285	4820	387	252	295	324	294	272	342	506
27	198	514	260	3700	342	239	302	270	241	270	334	535
28	209	511	337	847	317	245	308	282	287	270	337	388
29	213	503	344	577	---	239	310	281	313	270	353	395
30	155	491	368	545	---	238	313	277	311	267	352	395
31	302	---	435	487	---	240	---	271	---	266	336	---
TOTAL	6095	9658	13176	23586	11050	7896	7202	8985	8623	8108	10336	11168
MEAN	197	322	425	761	395	255	240	290	287	262	333	372
MAX	302	531	548	4820	487	331	313	324	335	308	359	535
MIN	155	167	248	217	317	230	209	248	220	209	249	319
AC-FT	12090	19160	26130	46780	21920	15660	14290	17820	17100	16080	20500	22150

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	99.2	128	194	315	363	388	238	161	136	110	89.9	85.5
MAX	344	322	709	3543	2681	2556	1101	843	736	393	352	372
(WY)	1984	1997	1967	1993	1980	1980	1980	1983	1983	1995	1983	1997
MIN	22.4	33.5	39.5	49.2	49.8	54.3	43.3	35.2	29.0	17.7	14.8	16.2
(WY)	1962	1963	1963	1963	1961	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1941 - 1997	
ANNUAL TOTAL	121133		125883			
ANNUAL MEAN	331		345		192	
HIGHEST ANNUAL MEAN					789	
LOWEST ANNUAL MEAN					36.4	
HIGHEST DAILY MEAN	5800		4820		6440	
LOWEST DAILY MEAN	155		155		2.4	
ANNUAL SEVEN-DAY MINIMUM	162		188		3.0	
INSTANTANEOUS PEAK FLOW			5940		7440	
INSTANTANEOUS PEAK STAGE			6.71		7.29	
ANNUAL RUNOFF (AC-FT)	240300		249700		138800	
10 PERCENT EXCEEDS	484		484		329	
50 PERCENT EXCEEDS	277		298		111	
90 PERCENT EXCEEDS	170		210		37	

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1967 to current year.

CHEMICAL DATA: Water years 1967 to current year.

BIOLOGICAL DATA: Water years 1975–81.

SPECIFIC CONDUCTANCE: Water years 1970 to current year.

WATER TEMPERATURE: Water years 1970 to current year.

SEDIMENT DATA: Water years 1974–94.

PERIOD OF DAILY RECORD.—

CHLORIDE: October 1970 to September 1971.

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURE: October 1969 to current year.

SUSPENDED-SEDIMENT DISCHARGE: October 1973 to June 1982.

INSTRUMENTATION.—Water-quality monitor recording specific conductance and water temperature since October 1969.

REMARKS.—Specific-conductance and water-temperature values are affected by releases from Prado Dam. Interruptions in record at times due to malfunction of recording or sensing equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,830 microsiemens, Apr. 30, 1971; minimum recorded, 220 microsiemens, Feb. 20, 1978.

WATER TEMPERATURE: Maximum recorded, 36.0°C, Sept. 4, 1972, Sept. 8, 1984; minimum recorded, 2.5°C, Dec. 30, 1969.

SEDIMENT CONCENTRATION: Maximum daily mean, 2,870 mg/L, Mar. 5, 1978; minimum daily mean, 3 mg/L, Apr. 2, 1980, and several days during 1982.

SEDIMENT LOAD: Maximum daily, 18,900 tons, Mar. 5, 1978; minimum daily, 0.58 ton, Sept. 20, 1978.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,060 microsiemens, Dec. 25–26; minimum recorded, 336 microsiemens, Jan. 13.

WATER TEMPERATURE: Maximum recorded, 27.5°C, Aug. 4–6, Sept. 4–5; minimum recorded, 11.0°C, Feb. 14–15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT					
08...	1200	194	939	21.0	586
30...	1220	102	939	14.5	600
NOV					
19...	1130	235	908	16.0	562
26...	1200	520	500	17.5	304
DEC					
11...	1600	290	539	14.5	320
31...	1320	475	956	16.0	590
JAN					
22...	1315	461	789	12.5	464
30...	1430	485	476	15.0	278
FEB					
06...	1445	429	854	15.0	518
12...	1120	337	938	14.0	568
27...	1450	321	1020	14.5	630
MAR					
07...	1445	245	1020	15.5	633
25...	1420	245	969	19.5	607
APR					
08...	1415	217	958	18.0	596
16...	1415	204	967	20.5	608
30...	1330	310	813	19.5	495
MAY					
14...	1335	300	805	23.0	--
29...	1130	282	775	23.0	461
JUN					
06...	1145	293	768	23.0	466
26...	1120	304	798	23.5	488
JUL					
09...	1125	263	766	22.5	467
23...	1140	271	754	23.0	460
AUG					
07...	1055	345	662	24.0	410
21...	1140	350	644	24.0	383
SEP					
11...	1145	365	643	23.0	383
26...	1235	637	724	23.5	459

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	998	918	858	728	743	653	1040	958	731	649	1030	1010
2	998	908	947	848	784	683	958	769	773	682	1030	1010
3	938	918	947	897	844	754	800	471	876	724	1030	1020
4	938	919	966	916	855	804	603	481	899	798	1030	1020
5	939	919	966	926	936	825	754	593	942	840	1030	1010
6	999	909	975	935	936	766	816	674	934	824	1030	1010
7	989	909	1050	924	977	816	907	816	985	884	1030	1010
8	969	919	964	931	967	947	989	907	975	925	1020	998
9	980	930	973	933	957	568	1040	989	976	946	1010	994
10	980	940	973	933	598	459	1020	991	977	946	1010	991
11	980	940	962	932	610	469	1050	992	997	908	1010	991
12	981	941	962	932	620	521	1020	635	---	---	1010	988
13	991	941	961	931	603	523	635	336	---	---	1000	984
14	972	952	961	930	824	603	438	386	963	941	998	983
15	972	932	940	910	716	626	459	418	967	945	999	982
16	993	962	950	909	698	647	520	449	968	953	996	981
17	993	953	959	909	761	650	522	491	973	956	994	977
18	994	953	968	899	883	751	663	522	980	959	991	975
19	---	---	948	908	914	883	665	614	984	964	993	975
20	---	---	977	927	956	905	706	625	989	969	985	968
21	---	---	946	636	1040	956	798	687	994	976	983	968
22	---	---	705	474	1050	409	809	728	997	980	983	966
23	---	---	543	484	700	551	829	729	1000	980	979	964
24	---	---	592	512	924	662	729	669	1010	984	976	962
25	987	947	651	541	1060	924	719	649	1010	991	981	960
26	987	957	600	510	1060	987	689	419	1020	995	984	966
27	998	947	661	510	999	729	419	389	1030	1000	979	966
28	978	938	681	621	729	660	429	409	1030	1010	979	963
29	969	928	682	612	793	671	460	409	---	---	980	963
30	1010	849	722	622	955	793	586	451	---	---	978	962
31	859	708	---	---	1040	945	678	586	---	---	976	960
MONTH	---	---	1050	474	1060	409	1050	336	---	---	1030	960
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	973	958	814	798	777	748	---	---	722	698	655	628
2	972	954	825	797	769	750	---	---	720	700	714	627
3	973	956	825	797	782	742	---	---	722	697	658	633
4	971	956	813	798	763	736	---	---	725	701	661	637
5	970	953	813	795	---	---	---	---	715	659	662	638
6	971	953	813	793	---	---	---	---	677	649	691	640
7	968	950	810	793	---	---	---	---	664	642	648	628
8	970	953	811	795	---	---	---	---	656	639	658	632
9	970	955	814	796	---	---	---	---	652	639	660	640
10	970	954	817	797	---	---	779	750	650	633	660	623
11	972	955	814	798	---	---	766	742	644	627	648	626
12	974	956	815	797	---	---	765	742	639	624	652	634
13	976	958	815	798	---	---	764	746	636	622	649	632
14	974	959	816	799	---	---	765	748	637	622	680	637
15	977	959	811	791	---	---	762	735	650	620	682	634
16	978	960	805	784	---	---	765	735	647	631	700	654
17	971	947	799	779	---	---	763	744	653	633	673	645
18	962	937	793	775	---	---	750	736	685	641	695	643
19	952	929	789	771	---	---	758	726	665	636	653	631
20	940	914	802	770	---	---	751	723	654	631	657	631
21	929	905	803	773	---	---	749	724	649	631	667	639
22	918	895	797	772	---	---	750	726	648	629	668	652
23	909	886	794	765	---	---	762	729	649	630	672	652
24	897	866	784	754	---	---	744	729	644	629	662	644
25	876	853	804	754	---	---	759	701	645	627	685	547
26	866	840	795	752	---	---	754	722	647	625	854	584
27	856	833	769	742	---	---	739	694	650	624	803	654
28	845	821	779	739	---	---	726	693	646	621	654	616
29	834	814	786	753	---	---	728	686	643	621	644	618
30	825	799	778	741	---	---	714	665	650	624	692	641
31	---	---	772	748	---	---	716	682	656	632	---	---
MONTH	978	799	825	739	---	---	---	---	725	620	854	547

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.0	22.0	15.0	14.5	14.0	13.5	19.0	16.5	15.5	15.0	14.5	13.0
2	23.5	21.5	16.0	15.0	14.0	13.0	19.0	18.0	15.5	15.0	15.5	13.0
3	24.5	20.5	16.5	15.5	13.5	13.0	18.5	17.0	15.5	15.0	16.0	13.5
4	25.0	21.5	18.0	16.0	14.0	13.0	17.0	16.0	15.5	15.0	17.0	15.0
5	25.0	22.0	18.5	16.5	14.5	13.5	16.5	16.0	15.0	15.0	18.0	14.0
6	25.5	22.0	18.0	15.5	16.5	14.5	16.0	13.5	15.0	14.5	18.5	14.0
7	26.0	22.5	17.5	14.5	16.5	14.5	13.5	12.0	15.0	14.5	19.0	14.0
8	26.0	21.0	18.0	15.5	17.0	14.0	14.0	11.5	14.5	14.0	19.0	14.5
9	24.0	21.0	19.0	16.0	16.0	14.0	15.5	12.5	14.5	14.0	20.5	15.0
10	24.0	20.5	19.0	16.0	14.5	14.0	15.0	12.5	14.5	14.0	21.0	16.0
11	22.0	18.5	19.0	16.0	14.5	14.5	15.0	14.0	14.5	14.0	21.0	16.5
12	21.5	18.0	18.5	16.0	15.0	14.5	15.0	13.5	---	---	20.0	16.0
13	21.0	18.0	18.5	16.0	15.5	15.0	13.5	11.5	---	---	21.0	16.0
14	20.5	18.0	18.5	16.5	16.5	14.5	12.0	11.5	12.0	11.0	20.5	16.5
15	21.0	18.5	17.5	16.0	14.5	13.0	12.0	11.5	13.0	11.0	20.5	16.5
16	21.0	19.5	17.0	14.5	13.5	13.0	12.5	11.5	13.0	11.5	20.0	17.5
17	21.0	18.5	18.0	15.5	13.5	13.0	12.5	11.5	13.0	12.0	21.0	16.5
18	20.5	18.0	18.0	15.5	13.0	12.0	13.0	11.5	14.0	12.5	22.0	16.5
19	---	---	18.0	16.0	12.0	11.5	12.5	12.0	14.0	12.5	22.5	17.0
20	---	---	19.5	17.0	12.5	11.5	12.5	12.0	14.5	13.0	22.5	17.5
21	---	---	19.5	18.5	14.0	12.0	13.0	12.0	15.0	13.5	22.0	17.0
22	---	---	18.5	18.0	15.0	13.5	13.0	12.5	15.0	13.5	21.0	17.5
23	---	---	18.0	18.0	14.0	13.0	13.5	13.0	15.5	14.0	21.0	18.0
24	---	---	18.0	18.0	14.0	13.5	13.5	13.0	14.5	13.0	21.5	17.5
25	18.0	16.5	18.0	17.5	15.5	13.0	14.5	13.5	14.0	12.5	21.0	17.5
26	17.5	15.0	18.0	17.0	15.0	13.5	15.0	14.5	14.5	13.0	21.0	16.5
27	15.5	14.0	17.0	16.0	15.5	14.5	15.5	14.5	14.5	13.5	20.5	17.0
28	16.0	13.5	16.0	15.0	15.5	14.5	15.5	15.0	15.0	13.0	20.0	17.5
29	16.0	13.5	15.5	15.0	16.0	15.0	16.0	15.0	---	---	21.0	16.0
30	16.0	14.5	15.0	14.0	16.5	15.5	16.0	15.0	---	---	20.5	17.0
31	15.0	14.5	---	---	17.0	16.0	15.5	15.0	---	---	20.5	17.0
MONTH	---	---	19.5	14.0	17.0	11.5	19.0	11.5	---	---	22.5	13.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.0	15.0	23.0	18.5	---	---	---	---	26.5	22.0	25.5	22.5
2	18.0	14.0	22.5	17.5	---	---	---	---	27.0	22.0	26.5	22.5
3	18.0	14.5	22.5	17.5	---	---	---	---	27.0	22.5	27.0	23.5
4	19.0	15.0	22.0	17.0	---	---	---	---	27.5	23.0	27.5	24.0
5	18.5	16.0	22.5	17.5	---	---	---	---	27.5	23.5	27.5	24.0
6	19.5	15.0	22.5	17.5	---	---	---	---	27.5	24.0	27.0	23.5
7	20.5	15.5	22.5	17.5	---	---	---	---	27.0	24.0	26.5	23.0
8	20.5	15.5	23.0	18.0	---	---	---	---	26.5	24.0	26.0	22.5
9	20.0	16.5	23.5	18.5	---	---	---	---	26.5	23.5	26.5	22.5
10	20.0	15.0	24.0	19.0	---	---	25.0	21.5	25.5	23.0	26.5	23.0
11	21.0	15.5	24.0	20.0	---	---	25.0	22.0	25.0	22.5	26.0	22.5
12	21.5	16.0	24.5	20.0	---	---	25.0	21.5	25.5	22.0	25.5	23.0
13	22.0	16.5	25.0	20.5	---	---	25.5	21.5	26.0	22.0	25.5	22.5
14	22.5	17.0	25.5	20.5	---	---	26.0	22.0	26.0	22.5	25.5	22.0
15	23.0	17.5	26.5	21.0	---	---	26.0	22.0	25.5	22.5	25.0	23.0
16	22.5	18.0	26.0	21.5	---	---	26.0	22.0	25.0	23.0	25.0	22.5
17	22.5	17.5	25.5	21.5	---	---	26.5	23.0	25.5	22.5	25.0	22.5
18	22.0	18.0	24.5	21.0	---	---	26.5	23.0	26.0	22.0	24.5	21.5
19	21.5	18.5	25.0	21.0	---	---	26.5	23.0	26.5	23.0	24.5	21.0
20	23.0	18.0	27.0	20.5	---	---	26.0	22.0	27.0	24.0	24.0	20.5
21	23.5	19.0	---	---	---	---	26.0	22.0	27.0	23.5	24.5	20.5
22	23.5	19.0	---	---	---	---	26.0	23.0	27.0	23.0	25.0	21.0
23	23.0	19.0	---	---	---	---	26.5	22.5	26.5	23.5	24.5	21.0
24	21.5	17.0	---	---	---	---	26.5	22.5	26.5	23.0	24.5	21.0
25	21.5	16.5	---	---	---	---	26.5	23.0	26.5	23.0	24.0	22.5
26	22.0	17.0	---	---	---	---	25.5	22.0	26.0	22.5	24.0	23.0
27	22.0	17.5	---	---	---	---	25.5	21.5	26.0	22.5	25.5	22.0
28	21.5	17.5	---	---	---	---	25.0	21.5	26.0	22.0	26.0	22.0
29	21.5	18.0	---	---	---	---	25.0	22.0	26.5	22.5	25.5	22.5
30	23.0	17.5	---	---	---	---	25.5	21.5	26.0	22.5	25.5	23.0
31	---	---	---	---	---	---	26.5	21.5	26.0	22.0	---	---
MONTH	23.5	14.0	---	---	---	---	---	---	27.5	22.0	27.5	20.5

11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA

LOCATION.—Lat 33°54'48", long 117°50'30", in SW 1/4 NE 1/4 sec.17, T.3 S., R.9 W., Orange County, Hydrologic Unit 18070106, on right wall of outlet channel 250 ft downstream from toe of Carbon Canyon Dam and 2.4 mi northwest of Yorba Linda.

DRAINAGE AREA.—19.5 mi².

PERIOD OF RECORD.—October 1961 to current year.

REVISED RECORDS.—WDR CA-88-1: 1983(M).

GAGE.—Water-stage recorder. Datum of gage is 396.35 ft, U.S. Army Corps of Engineers datum. Prior to Dec. 3, 1971, at datum 2.00 ft higher.

REMARKS.—Records fair except for discharges below 10 ft³/s, which are poor. Flow regulated by Carbon Canyon flood-control reservoir, capacity, 6,610 acre-ft. No diversion upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 796 ft³/s, Mar. 1, 1983, gage height, 5.11 ft, present datum, from rating curve extended above 110 ft³/s on basis of optical current-meter measurement at 241 ft³/s and normal depth solution for discharge computation at gage height 4.27 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.52	.00	1.0	5.7	2.6	.28	.00	.05	.00	.00	.00
2	.00	.41	.00	2.4	5.3	2.7	.28	.00	.02	.00	.00	.00
3	.00	.15	.00	14	5.4	2.8	.27	.00	.00	.00	.00	.00
4	.00	.04	.00	2.8	4.9	2.6	.17	.00	.00	.00	.00	.00
5	.00	.02	.00	2.7	5.1	1.6	.11	.00	.00	.00	.00	.00
6	.00	.00	1.1	1.8	4.9	.73	.06	.00	.00	.00	.00	.00
7	.00	.00	.05	1.3	4.6	.58	.06	.00	.00	.00	.00	.00
8	.00	.00	.00	1.2	5.3	.47	.06	.00	.00	.00	.00	.00
9	.00	.00	12	1.1	5.7	.37	.06	.00	.00	.00	.00	.00
10	.00	.00	7.3	1.2	5.4	.35	.06	.00	.02	.00	.00	.00
11	.00	.00	20	1.2	5.6	.23	.12	.00	.02	.00	.00	.00
12	.00	.00	7.3	17	4.9	.13	.10	.00	.00	.00	.00	.00
13	.00	.00	2.7	24	4.9	.15	.10	.00	.02	.00	.00	.00
14	.00	.06	1.5	7.4	4.9	.15	.10	.00	.01	.00	.00	.00
15	.00	.60	.90	18	4.2	.14	.10	.00	.02	.00	.00	.01
16	.00	.09	1.8	6.6	3.6	.10	.11	.00	.01	.00	.00	.00
17	.00	.06	2.0	3.5	3.8	.08	.09	.00	.01	.00	.00	.00
18	.00	.09	1.0	2.5	3.5	.10	.09	.00	.03	.00	.00	.00
19	.00	.15	.77	2.0	3.3	.09	.06	.00	.04	.00	.00	.00
20	.00	.09	.71	1.8	3.3	.08	.05	.00	.03	.00	.00	.00
21	.00	21	.81	1.6	3.0	.06	.04	.00	.02	.00	.00	.01
22	.00	30	6.1	1.9	2.9	.03	.02	.00	.02	.01	.00	.02
23	.00	3.2	2.2	27	3.0	.06	.02	.00	.02	.00	.00	.02
24	.00	1.0	1.4	5.6	2.7	.14	.02	.00	.02	.00	.00	.02
25	.00	.42	1.1	13	2.6	.09	.00	.00	.00	.00	.00	.04
26	.00	.19	1.0	87	2.6	.04	.00	.00	.01	.00	.00	.00
27	.00	.05	6.4	43	3.5	.00	.00	.00	.02	.00	.00	.00
28	.00	.01	15	11	3.1	.00	.00	.04	.02	.00	.00	.00
29	.00	.00	2.5	7.7	---	.05	.00	.12	.01	.01	.00	.00
30	5.5	.00	1.7	6.3	---	.13	.00	.10	.00	.01	.00	.00
31	1.6	---	1.3	5.6	---	.23	---	.06	---	.00	.00	---
TOTAL	7.10	58.15	98.64	323.2	117.7	16.88	2.43	0.32	0.42	0.03	0.00	0.12
MEAN	.23	1.94	3.18	10.4	4.20	.54	.081	.010	.014	.001	.000	.004
MAX	5.5	30	20	87	5.7	2.8	.28	.12	.05	.01	.00	.04
MIN	.00	.00	.00	1.0	2.6	.00	.00	.00	.00	.00	.00	.00
AC-FT	14	115	196	641	233	33	4.8	.6	.8	.06	.00	.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.061	.22	.55	2.80	4.77	4.84	.64	.23	.11	.047	.018	.013
MAX	.73	1.94	6.36	32.4	46.9	36.2	5.76	3.44	1.83	.67	.29	.22
(WY)	1996	1997	1967	1993	1980	1983	1995	1980	1995	1983	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1962	1962	1963	1963	1964	1962	1962	1962	1962	1962	1962	1962

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS 1962 - 1997
ANNUAL TOTAL	480.64	624.99	
ANNUAL MEAN	1.31	1.71	1.17
HIGHEST ANNUAL MEAN			7.27
LOWEST ANNUAL MEAN			.004
HIGHEST DAILY MEAN	80	Feb 20	322
LOWEST DAILY MEAN	.00	Jun 6	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 6	.00
INSTANTANEOUS PEAK FLOW			125
INSTANTANEOUS PEAK STAGE			3.02
ANNUAL RUNOFF (AC-FT)	953	1240	851
10 PERCENT EXCEEDS	2.0	4.9	.53
50 PERCENT EXCEEDS	.10	.01	.00
90 PERCENT EXCEEDS	.00	.00	.00

11075800 SANTIAGO CREEK AT MODJESKA, CA

LOCATION.—Lat 33°42'46", long 117°38'39", in NE 1/4 NE 1/4 sec.30, T.5 S., R.7 W., Orange County, Hydrologic Unit 18070203, on right bank at Santiago Canyon Road Bridge, 0.9 mi northwest of Modjeska, 1.0 mi downstream from Harding Creek, and 1.5 mi downstream from Modjeska Reservoir.

DRAINAGE AREA.—13.0 mi².

PERIOD OF RECORD.—October 1961 to current year.

REVISED RECORDS.—WDR CA-73-1: 1969. WDR CA-86-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,210 ft above sea level, from topographic map. Prior to Sept. 10, 1969, at site 0.6 mi upstream at datum approximately 48 ft higher. Sept. 10, 1969, to Feb. 6, 1985, at site 0.6 mi upstream at datum approximately 44 ft higher.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Slight regulation by Modjeska Reservoir on Harding Creek. Santiago County Water District diverts water at Modjeska Reservoir on Harding Creek. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,520 ft³/s, Feb. 25, 1969, gage height, 6.18 ft, site and datum then in use, from rating curve extended above 840 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 11.34, Mar. 5, 1995; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 444 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	0615	257	6.47				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	e.06	7.5	28	4.0	.89	.00	e.00	.00	.00	.00
2	.00	.00	e.02	7.0	24	3.9	.75	.00	e.00	.00	.00	.00
3	.00	.00	.01	9.7	20	4.4	.84	.00	e.00	.00	.00	.00
4	.00	.00	.00	9.2	17	3.6	1.1	.00	e.00	.00	.00	.00
5	.00	.00	.08	9.3	15	2.6	1.1	.00	e.00	.00	.00	.00
6	.00	.00	1.0	9.0	14	2.5	.93	.00	e.00	.00	.00	.00
7	.00	.00	1.1	8.2	13	2.2	.69	.00	e.00	.00	.00	.00
8	.00	.00	.70	7.4	12	2.1	.62	.00	e.00	.00	.00	.00
9	.00	.00	1.3	6.7	12	1.8	.59	.00	e.00	.00	.00	.00
10	.00	.00	4.6	6.3	12	1.5	.54	.00	e.00	.00	.00	.00
11	.00	.00	39	5.8	12	1.4	.45	.00	e.00	.00	.00	.00
12	.00	.00	17	9.9	10	1.3	.41	.00	e.00	.00	.00	.00
13	.00	.00	8.9	49	9.5	1.3	e.30	.00	e.00	.00	.00	.00
14	.00	.00	5.9	29	9.9	1.0	e.18	.00	e.00	.00	.00	.00
15	.00	.00	5.0	29	8.8	.96	e.08	.00	e.00	.00	.00	.00
16	.00	.00	3.9	28	8.0	.97	e.03	.00	e.00	.00	.00	.00
17	.00	.00	3.2	22	7.7	.97	.01	.00	.00	.00	.00	.00
18	.00	.00	2.7	18	7.5	.91	.00	.00	.00	.00	.00	.00
19	.00	.00	2.5	15	6.6	.72	.01	.00	.00	.00	.00	.00
20	.00	.00	2.1	13	6.0	.59	.13	.00	.00	.00	.00	.00
21	.00	.40	1.9	11	5.7	.48	.00	.00	.00	.00	.00	.00
22	.00	3.7	4.5	11	5.4	.50	.00	.00	.00	.00	.00	.00
23	.00	2.4	8.5	22	5.2	.78	.00	.00	.00	.00	.00	.00
24	.00	1.4	6.5	18	5.1	1.0	.00	.00	.00	.00	.00	.00
25	.00	.98	5.2	20	4.8	.84	.00	.00	.00	.00	.00	.00
26	.00	.75	4.4	188	5.0	.55	.00	.00	.00	.00	.00	.00
27	.00	.60	5.6	115	5.5	.47	.00	.00	.00	.00	.00	.00
28	.00	.47	25	80	4.9	.63	.00	e.00	.00	.00	.00	.00
29	.00	.25	16	54	---	.60	.00	e.00	.00	.00	.00	.00
30	.00	e.15	11	45	---	.70	.00	e.00	.00	.00	.00	.00
31	.00	---	9.0	34	---	1.0	---	e.00	---	.00	.00	---
TOTAL	0.00	11.10	196.67	897.0	294.6	46.27	9.65	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.37	6.34	28.9	10.5	1.49	.32	.000	.000	.000	.000	.000
MAX	.00	3.7	39	188	28	4.4	1.1	.00	.00	.00	.00	.00
MIN	.00	.00	.00	5.8	4.8	.47	.00	.00	.00	.00	.00	.00
AC-FT	.00	22	390	1780	584	92	19	.00	.00	.00	.00	.00

e Estimated.

11075800 SANTIAGO CREEK AT MODJESKA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.20	1.87	5.72	18.1	31.0	23.7	6.32	3.15	1.38	.38	.14	.076
MAX	5.00	33.5	97.4	179	376	137	33.7	27.0	7.82	2.84	1.68	1.07
(WY)	1984	1966	1967	1993	1969	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.050	.15	.017	.000	.000	.000	.000	.000
(WY)	1962	1962	1963	1963	1965	1965	1992	1992	1987	1963	1962	1962

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR					FOR 1997 WATER YEAR			WATER YEARS 1962 - 1997			
ANNUAL TOTAL	636.90					1455.29						
ANNUAL MEAN	1.74					3.99			7.56			
HIGHEST ANNUAL MEAN									47.2			
LOWEST ANNUAL MEAN									.21			
HIGHEST DAILY MEAN	55					188			3590			
LOWEST DAILY MEAN	.00					.00			.00			
ANNUAL SEVEN-DAY MINIMUM	.00					.00			.00			
INSTANTANEOUS PEAK FLOW						257			6520			
INSTANTANEOUS PEAK STAGE						6.47			11.34			
ANNUAL RUNOFF (AC-FT)	1260					2890			5470			
10 PERCENT EXCEEDS	4.5					9.9			10			
50 PERCENT EXCEEDS	.00					.00			.27			
90 PERCENT EXCEEDS	.00					.00			.00			

11077500 SANTIAGO CREEK AT SANTA ANA, CA

LOCATION.—Lat 33°46'13", long 117°53'01", in SW 1/4 NW 1/4 sec.1, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on left bank 50 ft upstream from Bristol Street Bridge at Santa Ana and 1,625 ft upstream from mouth at Santa Ana River.

DRAINAGE AREA.—98.6 mi².

PERIOD OF RECORD.—October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1315-B.

REVISED RECORDS.—WSP 1635: 1934, 1935(M), 1936. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 120 ft above sea level, from topographic map. Prior to Sept. 8, 1969, at site 0.1 mi upstream at different datum; from Sept. 9, 1969, to July 21, 1976, at site 50 ft downstream at different datum; from July 22, 1976, to Sept. 30, 1993, at site 77 ft upstream at datum 5.25 ft lower.

REMARKS.—Records fair. Flow regulated since December 1931 by Santiago Reservoir, capacity, 25,000 acre-ft; since January 1963 by Villa Park flood-control reservoir, capacity, 15,500 acre-ft, and affected by intervening gravel pits. Diversions upstream from station by Irvine Company and Serrano and Carpenter Irrigation Districts. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,600 ft³/s, Feb. 25, 1969, gage height, 9.10 ft, site and datum then in use; maximum gage height, 11.57 ft, Jan. 4, 1995; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	2.0	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	28	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.23	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	38	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	34	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	39	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	82	.00	.08	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	23	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	22	.00	.00	.00	.00	.00	.00	.00	e4.6
26	.00	.00	.00	10	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	9.4	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	5.2	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	10	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	10.00	95.00	80.83	144.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.60
MEAN	.32	3.17	2.61	4.65	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.15
MAX	10	82	38	39	.00	.00	.00	.00	.00	.00	.00	4.6
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	20	188	160	286	.00	.00	.00	.00	.00	.00	.00	9.1

e Estimated.

11077500 SANTIAGO CREEK AT SANTA ANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.079	.37	2.20	5.64	9.28	29.7	7.56	.32	.002	.000	.000	.053
MAX	2.61	3.03	9.71	62.3	94.6	329	159	3.85	.050	.000	.000	1.20
(WY)	1935	1945	1937	1952	1937	1938	1941	1941	1941	1931	1931	1939
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1936	1952	1931	1932	1931	1931	1931	1931	1931

SUMMARY STATISTICS

WATER YEARS 1931 - 1963

ANNUAL MEAN	4.60
HIGHEST ANNUAL MEAN	40.0 1941
LOWEST ANNUAL MEAN	.067 1961
HIGHEST DAILY MEAN	2320 Mar 3 1938
LOWEST DAILY MEAN	.00 Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1930
INSTANTANEOUS PEAK FLOW	4400 Mar 2 1938
INSTANTANEOUS PEAK STAGE	9.85 Jan 16 1952
ANNUAL RUNOFF (AC-FT)	3330
10 PERCENT EXCEEDS	.40
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.20	1.86	1.98	12.6	36.1	24.5	.57	.051	.011	.018	.057	.11
MAX	4.29	7.80	10.1	259	616	253	4.52	1.25	.24	.58	1.60	1.59
(WY)	1984	1983	1967	1993	1969	1978	1965	1977	1993	1984	1977	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1969	1964	1972	1964	1966	1966	1964	1964	1964	1964	1964

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1964 - 1997

ANNUAL TOTAL	533.63	334.51	
ANNUAL MEAN	1.46	.92	6.35
HIGHEST ANNUAL MEAN			71.7 1969
LOWEST ANNUAL MEAN			.18 1987
HIGHEST DAILY MEAN	121 Feb 20	82 Nov 21	4270 Feb 25 1969
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Oct 1 1963
INSTANTANEOUS PEAK FLOW		526 Nov 21	6600 Feb 25 1969
INSTANTANEOUS PEAK STAGE		8.24 Nov 21	11.57 Jan 4 1995
ANNUAL RUNOFF (AC-FT)	1060	664	4600
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11078000 SANTA ANA RIVER AT SANTA ANA, CA

LOCATION.—Lat 33°45'04", long 117°54'27", in NW 1/4 SE 1/4 sec.10, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on right bank 850 ft upstream from Fifth Street Bridge in Santa Ana and 1.6 mi downstream from Santiago Creek.

DRAINAGE AREA.—1,700 mi², excludes 768 mi² above Lake Elsinore.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1923 to September 1989, October 1990 to current year. Discharge measurements only, October 1989 to September 1990.

REVISED RECORDS.—WSP 1635: 1940(M), 1944. WDR CA-74-1: Drainage area. WDR CA-79-1: 1978(M).

GAGE.—Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 70 ft above sea level, from topographic map. Oct. 1, 1990, to Feb. 12, 1991, at site 900 ft downstream at different datum. Feb. 13, 1991, to Apr. 4, 1994, at datum 3 ft lower. See WDR CA-90-1 for complete history of location and datum changes.

REMARKS.—Records fair. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, return flow from irrigation. Since 1940, natural flow affected by Prado Flood-Control Reservoir, capacity, 196,200 acre-ft; three small flood-control reservoirs, combined capacity, 31,900 acre-ft; Big Bear Lake (station 11049000); and Santiago Reservoir, capacity, 25,000 acre-ft. Discharge up to 100 ft³/s can be diverted from Carbon Creek to Coyote Creek 1.5 mi upstream from mouth of Carbon Creek. Gage out of operation from Apr. 5, 1994, through Nov. 14, 1994, due to channel work (lining). See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,300 ft³/s, Mar. 3, 1938, gage height, 10.20 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.95	.02	.00	.00	.00	.00	.00	.00	.00
2	e.00	.00	.00	5.4	.00	.00	.00	.00	.00	.00	.00	.00
3	e.00	.00	.00	43	.00	.00	.00	.00	.00	.00	.00	.00
4	e.00	.00	.00	.28	.00	.00	.00	.00	.00	.00	.00	.00
5	e.00	.00	.43	2.3	.00	.00	.00	.00	.00	.00	.00	.00
6	e.00	.00	.06	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	e.00	.00	301	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	e.00	.00	116	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	431	.00	.00	.00	.00	.00	.00	.00	.02	.00
12	.00	.00	20	196	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.11	349	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	16	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	762	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	628	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	65	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	12	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.10	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	3.2	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	650	.00	6.8	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	555	3.5	3.2	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	47	.00	504	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	253	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	413	.00	.00	.00	.00	.00	.00	.00	12
26	.00	.00	.00	3530	.00	.00	.00	.00	.00	.00	.00	15
27	.00	.00	59	3480	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	101	898	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.15	167	---	.00	.00	.00	.00	.00	.00	.00
30	95	.00	.00	171	---	.00	.00	.00	.00	.00	.00	.00
31	2.1	---	.00	12	---	.00	---	.00	---	.00	.00	---
TOTAL	97.10	1252.00	1032.25	11521.23	0.02	0.00	0.00	0.00	0.00	0.00	0.02	27.00
MEAN	3.13	41.7	33.3	372	.001	.000	.000	.000	.000	.000	.001	.90
MAX	95	650	431	3530	.02	.00	.00	.00	.00	.00	.02	15
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	193	2480	2050	22850	.04	.00	.00	.00	.00	.00	.04	54

e Estimated.

11078000 SANTA ANA RIVER AT SANTA ANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1939, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.50	.46	5.97	5.50	106	137	29.0	.63	.000	.000	.000	.097
MAX	7.94	2.43	29.3	34.2	1028	2029	358	4.65	.000	.000	.000	1.65
(WY)	1935	1924	1939	1934	1927	1938	1926	1938	1923	1923	1923	1939
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1924	1925	1926	1926	1925	1929	1930	1925	1923	1923	1923	1923

SUMMARY STATISTICS

WATER YEARS 1923 - 1939

ANNUAL MEAN	23.7	
HIGHEST ANNUAL MEAN	178	1938
LOWEST ANNUAL MEAN	.000	1931
HIGHEST DAILY MEAN	20300	Mar 3 1938
LOWEST DAILY MEAN	.00	Mar 16 1923
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 21 1923
INSTANTANEOUS PEAK FLOW	46300	Mar 3 1938
INSTANTANEOUS PEAK STAGE	10.20	Mar 3 1938
ANNUAL RUNOFF (AC-FT)		17190
10 PERCENT EXCEEDS	3.6	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.49	12.2	35.6	179	234	254	62.2	17.1	8.26	.43	2.00	1.46
MAX	179	154	428	3962	3014	2342	889	613	433	22.9	102	40.6
(WY)	1984	1984	1985	1993	1980	1969	1980	1983	1983	1980	1983	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1940	1940	1940	1976	1949	1949	1949	1940	1940	1940	1940	1940

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1940 - 1997

ANNUAL TOTAL	13545.46	13929.62	
ANNUAL MEAN	37.0	38.2	66.7
HIGHEST ANNUAL MEAN			612
LOWEST ANNUAL MEAN			.006
HIGHEST DAILY MEAN	3730	Feb 22	3530 Jan 26
LOWEST DAILY MEAN	.00	Jan 1	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00 Oct 1
INSTANTANEOUS PEAK FLOW			6760 Jan 27
INSTANTANEOUS PEAK STAGE			5.20 Jan 27
ANNUAL RUNOFF (AC-FT)	26870	27630	48320
10 PERCENT EXCEEDS	1.3	1.4	10
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11078000 SANTA ANA RIVER AT SANTA ANA, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1968–71, 1973 to current year.

WATER TEMPERATURE: Water years 1968–69, 1971, 1973–80, 1982–87.

SEDIMENT DATA: Water years 1968–71, 1973 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1967 to September 1969, October 1970 to September 1971, October 1972 to September 1980, October 1981 to September 1987.

SUSPENDED-SEDIMENT DISCHARGE: October 1967 to September 1971, October 1972 to September 1980, October 1981 to September 1987.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN (70331)
DEC						
11...	1415	406	17.0	223	244	90
JAN						
13...	1000	254	14.5	1820	1250	98
23...	1320	251	14.0	1010	684	98
27...	1100	3510	15.5	2840	26900	30

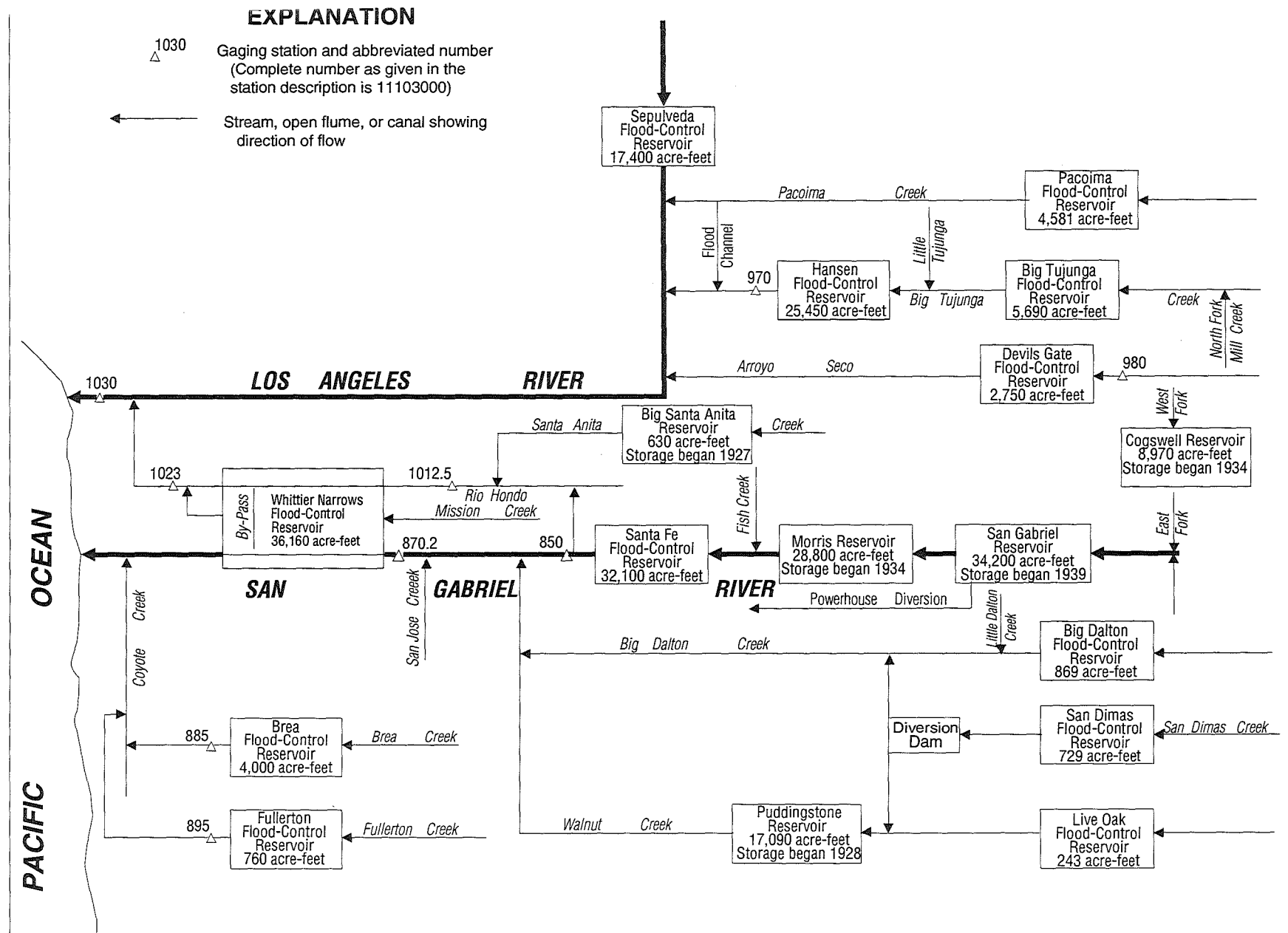


Figure 18. Diversions and storage in San Gabriel and Los Angeles River Basins.

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA

LOCATION.—Lat 34°06'44", long 117°58'07", in NE 1/4 SW 1/4 sec.6, T.1 S., R.10 W., Los Angeles County, Hydrologic Unit 18070106, on left bank at stilling basin of outlet of Santa Fe Flood-Control Dam, 500 ft downstream from axis of dam, and 1.7 mi north of Baldwin Park.

DRAINAGE AREA.—236 mi².

PERIOD OF RECORD.—October 1942 to current year.

REVISED RECORDS.—WSP 1315-B and 1635: 1943(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 400.00 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.—Records fair except for estimated daily discharges and discharges below 100 ft³/s, which are poor. Flow regulated by Cogswell and San Gabriel Flood-Control Reservoirs, combined capacity, 43,170 acre-ft; Morris Reservoir, capacity, 28,800 acre-ft; and Santa Fe Flood-Control Reservoir, capacity, 32,100 acre-ft. Diversions upstream from station for irrigation, power development, and ground-water replenishment. At times water is diverted from side of stilling basin to headwaters of Rio Hondo; 14,220 acre-ft were diverted during the current year. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,900 ft³/s, Jan. 26, 1969, gage height, 22.20 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	.00	.00	e.00	227	.00	.00	.00	.00	.00	.00	.00
2	.60	.00	.00	e.00	235	.00	.00	.00	.00	.00	.00	.00
3	.03	.00	.05	e.00	229	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	e3.0	185	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	e.30	99	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	e.10	9.4	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	e.04	.65	.00	.00	.00	.00	.00	9.0	.00
8	.00	.00	.00	e.04	2.2	.00	.00	.00	.00	.00	13	.00
9	.00	.00	7.0	.04	.94	.00	.00	.00	.00	.00	14	.00
10	2.4	.00	2.1	.04	.43	.00	.00	.00	.00	.00	14	.00
11	5.0	.00	64	.03	.98	.00	.00	.00	.00	.00	15	.00
12	5.4	.00	24	1.3	.93	.00	.00	.00	.00	.00	13	.00
13	5.8	.00	.26	2.6	.32	.00	.00	.00	.00	.00	11	.00
14	6.1	.00	.08	.68	.15	.00	.00	.00	.00	.00	8.3	.00
15	6.5	.00	.04	4.1	.06	.00	.00	.00	.00	.00	.34	.00
16	6.3	.00	.04	8.7	.04	.00	.00	.00	.00	.00	.10	.00
17	2.1	.00	.04	2.3	.04	.00	.00	.00	.00	.00	.04	.00
18	.04	.00	.04	.60	.04	.00	.00	.00	.00	.00	.04	.00
19	.04	.00	e.04	.17	.03	.00	.00	.00	.00	.00	.02	.00
20	.04	.00	e.03	.07	.03	.00	.00	.00	.00	.00	.00	.00
21	.04	.51	e.03	.04	.02	.00	.00	.00	.00	.00	.00	.00
22	.04	1.6	e.80	.04	.02	.00	.00	.00	.00	.00	.00	.00
23	.04	.03	e.04	3.3	.02	.00	.00	.00	.00	.00	.00	.00
24	5.2	.03	e.03	1.3	.00	.00	.00	.00	.00	.00	.00	.00
25	8.5	.02	e.03	1.0	.00	.00	.00	.00	.00	1.9	.00	.00
26	10	.02	e.02	2.1	.00	.00	.00	.00	.00	.34	.00	.00
27	11	.01	e.03	33	.00	.00	.00	.00	.00	.04	.00	.00
28	11	.01	e.03	53	.00	.00	.00	.00	.00	.02	.00	.00
29	12	.00	e.02	72	---	.00	.00	.00	.00	.00	.00	.00
30	11	.00	e.00	145	---	.00	.00	.00	.00	.00	.00	.00
31	3.7	---	e.00	226	---	.00	---	.00	---	.00	.00	---
TOTAL	116.47	2.23	98.75	560.89	991.30	0.00	0.00	0.00	0.00	2.30	97.84	0.00
MEAN	3.76	.074	3.19	18.1	35.4	.000	.000	.000	.000	.074	3.16	.000
MAX	12	1.6	64	226	235	.00	.00	.00	.00	1.9	15	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	231	4.4	196	1110	1970	.00	.00	.00	.00	4.6	194	.00

e Estimated.

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.69	17.8	30.6	136	233	210	60.7	56.2	25.6	8.48	5.88	10.1
MAX	74.6	577	514	2151	3259	2465	616	480	414	170	121	206
(WY)	1993	1966	1947	1969	1969	1978	1978	1958	1958	1962	1962	1946
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1943	1943	1943	1945	1947	1947	1945	1945	1945	1943	1943	1943

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1943 - 1997	
ANNUAL TOTAL	1153.79		1869.78			
ANNUAL MEAN	3.15		5.12		65.6	
HIGHEST ANNUAL MEAN					540	1969
LOWEST ANNUAL MEAN					.000	1948
HIGHEST DAILY MEAN	90	Feb 22	235	Feb 2	26000	Jan 26 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 4	.00	Oct 1 1942
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Nov 1	.00	Oct 1 1942
INSTANTANEOUS PEAK FLOW			253	Feb 2	30900	Jan 26 1969
INSTANTANEOUS PEAK STAGE			11.37	Feb 2	22.20	Jan 26 1969
ANNUAL RUNOFF (AC-FT)	2290		3710		47530	
10 PERCENT EXCEEDS	6.4		4.5		72	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA

LOCATION.—Lat 34°02'03", long 118°02'14", in La Puente Grant, Los Angeles County, Hydrologic Unit 18070106, at Peck Road 0.8 mi downstream from San Jose Flood Channel, 1.2 mi upstream from axis of Whittier Narrows Dam, and 1.8 mi south of El Monte.

DRAINAGE AREA.—442 mi².

PERIOD OF RECORD.—October 1955 to September 1957, October 1963 to current year.

REVISED RECORDS.—WDR CA-86-1: Drainage area.

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

REMARKS.—Records good except for discharges below 200 ft³/s, which are fair. Flow regulated by several reservoirs, combined capacity, 123,000 acre-ft. Many diversions upstream from station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at a site 14.9 mi upstream from gage, at Metropolitan Water District aqueduct crossing on San Dimas Creek for ground-water replenishment. Los Angeles County Department of Public Works diverted 14,220 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during the current year. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,600 ft³/s, Jan. 25, 1969, from rating curve extended above 29,000 ft³/s, gage height, 10.90 ft; no flow for part of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	41	54	98	104	65	127	88	247	55	98	50
2	72	37	68	216	101	62	204	91	166	60	88	54
3	70	34	57	589	124	63	187	97	56	60	84	35
4	68	37	49	106	151	59	315	93	54	51	85	35
5	68	35	54	135	137	68	317	87	57	55	81	34
6	65	39	126	102	114	57	320	79	55	50	87	48
7	76	39	57	96	111	59	253	94	60	53	78	52
8	68	42	58	89	99	68	129	66	67	57	81	52
9	64	39	1640	123	72	64	123	235	56	55	71	35
10	70	36	289	77	135	57	262	256	53	51	75	34
11	71	37	1610	72	102	78	251	256	64	56	77	34
12	67	38	215	651	67	42	253	186	151	58	78	34
13	71	40	94	1420	65	48	263	65	264	56	77	50
14	66	35	109	276	69	42	259	58	260	71	66	54
15	71	44	113	1280	74	59	191	96	255	61	67	98
16	38	38	88	98	64	52	102	242	179	58	63	36
17	39	35	62	66	80	56	130	253	24	59	65	41
18	39	34	54	82	77	52	250	257	17	61	69	35
19	35	36	85	100	72	52	247	202	48	74	69	34
20	37	36	115	191	63	94	252	86	233	57	70	24
21	41	2020	101	170	56	122	249	65	241	64	70	26
22	42	840	667	137	69	127	255	76	238	67	74	57
23	39	64	124	1220	59	127	189	242	175	93	73	56
24	35	52	187	179	59	129	95	260	51	90	53	77
25	38	81	46	1300	54	133	94	251	45	89	70	605
26	32	149	42	2630	57	126	97	201	71	87	67	134
27	36	87	646	320	67	123	96	89	227	81	73	115
28	47	69	290	108	59	125	96	63	188	89	36	127
29	46	58	49	101	---	131	88	95	81	82	31	123
30	1290	56	61	109	---	124	93	238	71	84	45	92
31	52	---	74	107	---	127	---	254	---	95	49	---
TOTAL	2927	4228	7284	12248	2361	2591	5787	4721	3754	2079	2170	2281
MEAN	94.4	141	235	395	84.3	83.6	193	152	125	67.1	70.0	76.0
MAX	1290	2020	1640	2630	151	133	320	260	264	95	98	605
MIN	32	34	42	66	54	42	88	58	17	50	31	24
AC-FT	5810	8390	14450	24290	4680	5140	11480	9360	7450	4120	4300	4520

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.6	148	159	392	568	410	117	93.1	67.5	58.0	56.4	75.1
MAX	208	782	426	4150	4497	3796	591	274	254	230	208	205
(WY)	1979	1966	1993	1993	1980	1978	1978	1983	1976	1973	1973	1978
MIN	.000	.000	9.84	19.0	.000	.000	.47	.14	.000	.000	.000	.000
(WY)	1956	1978	1977	1968	1956	1956	1956	1957	1956	1956	1956	1957

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1956 - 1997

ANNUAL TOTAL	53219	52431										
ANNUAL MEAN	145	144								184		
HIGHEST ANNUAL MEAN										810		1993
LOWEST ANNUAL MEAN										24.4		1977
HIGHEST DAILY MEAN	6920	Feb 20	2630	Jan 26	24800						Jan 26	1969
LOWEST DAILY MEAN	12	Jan 3	17	Jun 18	.00					.00	Oct 1	1955
ANNUAL SEVEN-DAY MINIMUM	28	Sep 2	36	Sep 16	.00					.00	Oct 1	1955
INSTANTANEOUS PEAK FLOW			9260	Dec 9	46600						Jan 25	1969
INSTANTANEOUS PEAK STAGE			7.24	Dec 9	10.90						Jan 25	1969
ANNUAL RUNOFF (AC-FT)	105600		104000		133300							
10 PERCENT EXCEEDS	158		253		212							
50 PERCENT EXCEEDS	65		73		67							
90 PERCENT EXCEEDS	35		39		.10							

11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA

LOCATION.—Lat 33°53'16", long 117°55'32", in NE 1/4 NE 1/4 sec.28, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on right bank 0.2 mi downstream from Brea Dam and 1 mi north of Fullerton.

DRAINAGE AREA.—21.6 mi².

PERIOD OF RECORD.—January 1942 to current year.

REVISED RECORDS.—WSP 1041: 1944(M). WSP 1635: 1956, 1958. WSP 1928: Drainage area

GAGE.—Water-stage recorder. Elevation of gage is 200 ft above sea level, from topographic map. Prior to Dec. 4, 1964, at datum 1.03 ft higher.

REMARKS.—Records poor below 10 ft³/s and fair above, except for estimated daily discharges, which are poor. Flow regulated by Brea Flood-Control Reservoir, capacity, 4,000 acre-ft. No diversion upstream from station. Since August 1966 low flow mostly the result of irrigation wastewater from golf course 0.8 mi upstream. See schematic diagram of San Gabriel and Los Angeles River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,700 ft³/s, Feb. 18, 1980; no flow for parts of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	2.7	1.3	2.7	5.6	2.8	1.1	.97	.67	.44	.46	.73
2	.51	1.7	1.2	22	5.5	3.1	1.1	.79	.65	.51	.49	.87
3	.49	1.3	.92	44	5.1	3.2	1.1	.84	.58	.53	.45	.60
4	.54	.94	1.5	3.8	4.3	2.8	1.1	.79	.59	.47	.41	.41
5	.50	.90	2.4	5.2	4.9	2.9	1.1	.83	.65	.39	.48	.60
6	.43	.76	e5.0	3.4	3.6	3.1	1.2	.82	.72	.41	.57	.51
7	.48	.54	e4.1	4.5	4.0	2.9	1.2	.83	.53	.46	.62	.52
8	.50	1.3	e3.7	3.3	3.9	2.8	1.1	.83	.49	.45	.63	.48
9	.52	1.4	e114	2.7	2.8	2.4	1.1	.83	.51	.53	.61	.47
10	.45	.79	e94	2.5	7.5	2.3	1.0	.79	.47	.82	.70	.44
11	.76	.76	e255	2.8	11	2.3	1.1	.75	.41	.80	.82	.49
12	.86	.67	e20	e80	5.7	3.1	1.0	.79	.33	.91	.96	.44
13	.42	.46	e6.2	e115	4.8	2.6	1.0	.73	.49	.54	.87	.42
14	.41	.37	e3.5	36	4.5	2.4	1.0	.71	.38	.55	.58	.42
15	.33	.35	e2.8	68	3.5	2.1	1.0	.69	.37	.62	.53	.92
16	.32	.21	e2.3	19	3.4	1.9	.84	.83	.39	1.6	.41	.44
17	.30	.20	e1.5	7.5	2.8	1.8	.90	.67	.45	1.9	.38	.46
18	.45	.29	1.1	5.2	2.5	1.7	.80	.66	.42	1.8	.40	.50
19	.35	.24	1.4	5.1	2.3	1.9	.82	.77	.41	1.2	.43	.47
20	.29	.30	1.3	7.3	2.2	2.9	.90	.74	.40	1.6	.46	.46
21	.54	e125	1.5	7.1	2.0	2.0	.90	.75	.35	1.4	.46	.44
22	.25	e90	34	9.1	2.6	2.2	.80	.69	.39	1.2	.51	.39
23	.29	e7.5	9.1	e222	3.0	3.8	.90	.67	.43	.79	.60	.42
24	.30	e4.6	4.4	e15	4.8	2.3	.95	.66	.41	.54	.54	.47
25	.45	e4.0	4.4	e97	4.3	2.3	.85	.65	.40	.54	.71	33
26	.36	e3.5	3.7	e349	6.6	2.7	1.3	.62	.36	.56	.66	8.4
27	.29	e3.1	67	e160	3.1	2.0	1.4	.72	.52	.49	.66	2.1
28	.24	e2.2	43	e15	2.7	1.6	.90	.69	.71	.50	.58	4.0
29	.20	e1.8	10	11	---	1.5	.81	.65	.66	.51	.61	3.8
30	e65	1.4	5.1	9.4	---	1.3	.89	.68	.43	.48	.57	3.2
31	e8.5	---	2.8	6.6	---	1.2	---	.66	---	.44	.55	---
TOTAL	85.93	259.28	708.22	1341.2	119.0	73.9	30.16	23.10	14.57	23.98	17.71	66.87
MEAN	2.77	8.64	22.8	43.3	4.25	2.38	1.01	.75	.49	.77	.57	2.23
MAX	65	125	255	349	11	3.8	1.4	.97	.72	1.9	.96	.33
MIN	.20	.20	.92	2.5	2.0	1.2	.80	.62	.33	.39	.38	.39
AC-FT	170	514	1400	2660	236	147	60	46	29	48	35	133

e Estimated.

11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.03	3.06	4.47	10.2	12.9	9.79	2.95	.84	.62	.47	.56	.79
MAX	15.3	31.6	26.6	95.8	165	79.9	50.3	4.49	7.56	3.03	4.68	7.02
(WY)	1984	1984	1989	1993	1980	1978	1983	1977	1995	1995	1983	1986
MIN	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1943	1943	1951	1951	1951	1951	1950	1942	1942	1942	1942	1942

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR					FOR 1997 WATER YEAR			WATER YEARS 1942 - 1997			
ANNUAL TOTAL	3022.45					2763.92						
ANNUAL MEAN	8.26					7.57			3.93			
HIGHEST ANNUAL MEAN									20.9			
LOWEST ANNUAL MEAN									.001			
HIGHEST DAILY MEAN	429					Feb 20			1700			
LOWEST DAILY MEAN	.00					Jun 27			.00			
ANNUAL SEVEN-DAY MINIMUM	.08					Jul 18			.00			
INSTANTANEOUS PEAK FLOW									a			
INSTANTANEOUS PEAK STAGE									a			
ANNUAL RUNOFF (AC-FT)	6000					5480			2850			
10 PERCENT EXCEEDS	12					7.2			3.1			
50 PERCENT EXCEEDS	.90					.87			.20			
90 PERCENT EXCEEDS	.25					.41			.00			

a Instantaneous peak discharge and stage for period of record are unknown, but probably occurred on Feb. 18, 1980.

11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA

LOCATION.—Lat 33°53'45", long 117°53'07", in NW 1/4 SW 1/4 sec.24, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on left bank of outlet channel of Fullerton Dam and 1.6 mi southeast of Brea.

DRAINAGE AREA.—4.94 mi².

PERIOD OF RECORD.—October 1941 to current year.

REVISED RECORDS.—WSP 1245: 1950(M). WSP 1928: Drainage area. WDR CA-82-1: 1981.

GAGE.—Water-stage recorder. Elevation of gage is 250 ft above sea level, from topographic map. V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956. Prior to Dec. 3, 1971, at datum 3.00 ft higher.

REMARKS.—Records fair. Flow regulated by Fullerton flood-control reservoir, capacity, 760 acre-ft (resurvey of 1970). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of San Gabriel and Los Angeles River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 392 ft³/s, Mar. 1, 1983, gage height, 8.25 ft, present datum; no flow at times some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	1.4	.45	.71	4.5	1.1	.47	.84	.36	.40	.43	.46
2	.42	.83	1.1	5.7	4.5	1.1	5.7	.81	.42	.38	.41	.44
3	.57	.51	.48	22	4.5	1.3	11	.74	.41	.42	.36	.47
4	.53	1.2	.52	1.2	5.0	1.2	3.8	.68	.42	.41	.39	.42
5	.50	.61	.52	2.8	5.4	1.2	1.1	.76	.56	.38	.41	.47
6	.47	.59	.94	.66	4.5	1.2	1.0	.74	.46	.36	.49	.47
7	.50	.40	.24	.40	2.5	1.1	1.1	.83	.43	.42	.46	.42
8	.50	.54	.24	.43	.61	.94	1.3	.79	.42	.46	.48	.47
9	.44	.30	39	.45	.60	.75	1.0	.82	.43	.39	.43	.48
10	.49	.52	16	.47	1.2	.50	1.1	.68	.43	.55	.38	.40
11	.45	.65	86	.44	3.1	.45	1.1	.54	.42	.47	.44	.44
12	.47	.46	17	29	.64	.35	1.1	.58	.44	.43	.44	.50
13	.42	.51	3.1	32	.54	.38	.99	.66	.47	.39	.41	.49
14	.45	.38	1.0	2.8	.52	.52	1.1	.59	.40	.46	.50	.43
15	.52	.70	.16	23	.51	.53	1.1	.60	.38	.42	.47	.98
16	.48	.52	.14	6.7	.53	.44	1.0	.67	.42	.41	.49	.43
17	.44	.47	.11	.84	.54	.40	.99	.51	.40	.45	.42	.42
18	.42	.48	.10	.54	.60	.50	.99	.48	.38	.48	.46	.45
19	.43	.62	.11	.51	.54	.49	.97	.63	.42	.57	.42	.47
20	.40	.48	.15	.43	1.2	.49	.95	.62	.43	.35	.41	.44
21	.35	72	.20	1.1	.99	.43	.94	.48	.43	.55	.47	.34
22	.38	54	8.1	1.0	.97	.45	.90	.57	.42	.53	.42	.39
23	.40	5.8	.79	57	.94	.44	.89	.57	.41	.39	.42	.38
24	.46	1.4	.49	2.8	.92	.46	.76	.45	.40	.41	.38	.35
25	.43	.71	.40	43	.87	.47	.68	.38	.37	.41	.42	13
26	.52	1.6	.40	82	8.7	.47	.70	.41	.42	.44	.41	.78
27	.48	2.0	30	24	11	.47	.67	.49	.46	.40	.41	.42
28	.47	.70	28	8.2	3.0	.48	.69	.51	.40	.44	.45	.36
29	.46	.62	.98	5.4	---	.52	.80	.47	.35	.51	.49	.37
30	36	.14	.71	5.0	---	.50	.77	.58	.37	.44	.48	.38
31	3.9	---	.58	5.0	---	.48	---	.40	---	.45	.42	---
TOTAL	53.20	151.14	238.01	365.58	69.42	20.11	45.66	18.88	12.53	13.57	13.47	26.32
MEAN	1.72	5.04	7.68	11.8	2.48	.65	1.52	.61	.42	.44	.43	.88
MAX	.36	.72	.86	.82	.11	1.3	.11	.84	.56	.57	.50	.13
MIN	.35	.14	.10	.40	.51	.35	.47	.38	.35	.35	.36	.34
AC-FT	106	300	472	725	138	40	91	37	25	27	27	52

11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.030	.034	.99	.41	.75	.058	.000	.002	.001	.000	.000
MAX	.000	.31	.19	6.62	3.34	4.60	.36	.003	.020	.016	.000	.000
(WY)	1942	1945	1946	1952	1944	1943	1952	1945	1942	1942	1942	1942
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1942	1942	1942	1942	1942	1942	1942	1942	1943	1943	1942	1942

SUMMARY STATISTICS

WATER YEARS 1942 - 1954

ANNUAL MEAN	.19	
HIGHEST ANNUAL MEAN	.92	1952
LOWEST ANNUAL MEAN	.000	1948
HIGHEST DAILY MEAN	79	Jan 19 1952
LOWEST DAILY MEAN	.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1941
INSTANTANEOUS PEAK FLOW	298	Mar 16 1943
INSTANTANEOUS PEAK STAGE	3.80	Mar 16 1943
ANNUAL RUNOFF (AC-FT)	137	
10 PERCENT EXCEEDS	.00	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.55	1.16	1.95	4.32	4.53	3.33	.93	.38	.34	.30	.36	.45
MAX	5.31	5.76	9.96	28.0	25.0	18.6	6.28	1.92	1.66	1.01	1.72	2.53
(WY)	1984	1986	1993	1993	1980	1983	1958	1977	1995	1991	1977	1986
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1955	1955	1963	1964	1966	1955	1961	1955	1955	1955	1955

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1955 - 1997

ANNUAL TOTAL	1058.32	1027.89	
ANNUAL MEAN	2.89	2.82	1.54
HIGHEST ANNUAL MEAN			5.16
LOWEST ANNUAL MEAN			.028
HIGHEST DAILY MEAN	161	Feb 20	86
LOWEST DAILY MEAN	.10	Dec 18	.10
ANNUAL SEVEN-DAY MINIMUM	.14	Dec 15	.14
INSTANTANEOUS PEAK FLOW			364
INSTANTANEOUS PEAK STAGE			8.17
ANNUAL RUNOFF (AC-FT)	2100	2040	1110
10 PERCENT EXCEEDS	1.6	4.1	1.0
50 PERCENT EXCEEDS	.48	.49	.29
90 PERCENT EXCEEDS	.38	.39	.00

11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA

LOCATION.—Lat 34°15'13", long 118°23'17", in Mission San Fernando Grant, Los Angeles County, Hydrologic Unit 18070105, in city of Los Angeles, on left bank of outlet channel 0.5 mi downstream from Hansen Dam, 0.1 mi upstream from Glen Oaks Boulevard, and 3 mi southeast of San Fernando.

DRAINAGE AREA.—153 mi².

PERIOD OF RECORD.—May 1932 to February 1938, August 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1975, published as Tujunga Creek below Hansen Dam.

REVISED RECORDS.—WDR CA-84-1: 1978(M).

GAGE.—Water-stage recorder. Datum of gage is 943.32 ft above sea level (U.S. Army Corps of Engineers benchmark). See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.—Records fair except for discharges below 100 ft³/s, which are poor. Flow regulated since July 1931 by Big Tujunga Flood-Control Reservoir, capacity, 5,690 acre-ft, and since September 1940 by Hansen Flood-Control Reservoir, capacity, 25,450 acre-ft. Several small diversions for domestic use and irrigation. Since about 1948, Los Angeles County Department of Public Works has diverted water 0.3 mi upstream from gage to spreading grounds, as shown in footnote below table. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,200 ft³/s, Feb. 10, 1978, Mar. 2, 1983; maximum gage height, 7.64 ft, Mar. 2, 1983; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 54,000 ft³/s, estimated, Mar. 2, 1938.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	16	.00	.00	58	.00	16	.00	.00	.21	4.1	.00
2	7.4	13	.00	.00	56	.00	16	.00	5.5	.00	3.4	.00
3	6.1	12	.00	.00	108	.00	16	.00	6.1	.00	3.4	.00
4	6.1	12	.00	.00	92	.00	18	.00	6.9	.00	4.2	.00
5	6.1	13	.00	.00	49	.00	21	.00	9.0	.00	2.4	.00
6	6.1	14	.00	.00	30	.00	21	.00	8.0	.00	.50	.00
7	6.4	18	.00	.00	.00	.00	21	.00	8.0	1.8	2.3	.00
8	8.0	18	.00	.00	.00	.00	19	.76	8.0	.07	3.7	.00
9	8.0	13	1.2	.00	.00	.00	20	.04	8.0	.97	4.8	.00
10	8.0	8.5	6.5	.00	.00	.00	19	.00	9.9	4.8	5.9	.00
11	8.0	7.1	67	.00	.00	11	19	.00	10	4.2	5.6	.00
12	8.0	6.3	17	9.0	.00	32	20	.00	2.8	10	4.6	.00
13	9.4	11	.00	.00	.00	29	21	.00	.00	8.0	3.7	.00
14	9.7	8.4	.00	.00	.00	29	21	.34	.00	7.1	4.2	.00
15	9.7	9.3	.00	59	.00	30	9.5	.53	.00	5.6	2.6	.00
16	9.7	9.7	.00	49	.00	32	.00	.00	.00	5.9	4.4	.00
17	9.7	9.7	.00	47	.13	32	.00	.00	.00	5.2	4.6	.00
18	9.7	12	.00	47	.00	29	.00	.00	.00	4.1	3.9	.00
19	9.7	7.6	.00	47	.00	28	.00	.80	.00	5.3	2.2	.00
20	9.7	3.4	.00	47	.00	25	.00	.00	.00	5.5	.50	.00
21	11	3.9	.00	47	.00	21	.00	.00	.00	4.6	.50	.00
22	9.7	.91	102	75	.00	23	.00	.00	.00	4.1	.50	.00
23	9.7	.00	.00	161	.00	24	.00	.00	.20	1.8	1.7	.00
24	9.7	.00	43	129	.00	24	.00	.00	.00	3.4	3.4	.00
25	8.6	.00	51	130	.19	23	.00	.00	.00	3.4	2.1	.00
26	8.0	.00	26	88	.00	21	.00	.00	.00	4.4	.92	.00
27	8.9	.00	.00	151	.00	21	.00	.00	.00	4.7	.50	.00
28	9.7	.00	.00	130	.40	19	.00	.00	.00	4.6	.16	.00
29	11	.00	.00	124	---	19	.00	.00	.00	4.6	.04	.00
30	15	.00	.00	110	---	19	.74	.00	.00	4.6	.00	.00
31	16	---	.00	69	---	19	---	.00	---	5.1	.00	---
TOTAL	281.8	226.81	313.70	1519.00	393.72	510.00	278.24	2.47	82.40	114.05	80.82	0.00
MEAN	9.09	7.56	10.1	49.0	14.1	16.5	9.27	.080	2.75	3.68	2.61	.000
MAX	16	18	102	161	108	32	21	.80	10	10	5.9	.00
MIN	6.1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	559	450	622	3010	781	1010	552	4.9	163	226	160	.00
a	843	812	1780	4350	1050	1250	792	238	373	394	329	372

a Combined discharge, in acre-feet, of creek and diversion.

11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.62	7.91	3.88	42.0	91.5	83.5	26.7	16.8	5.83	1.56	1.49	3.23
MAX	32.2	153	65.3	742	1218	1387	252	285	64.6	26.8	18.4	41.4
(WY)	1984	1984	1984	1993	1993	1983	1983	1983	1978	1979	1979	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1948	1948	1950	1949	1949	1950	1950	1949	1948	1948	1948	1948

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1948 - 1997	
ANNUAL TOTAL	5948.40		3803.01			
ANNUAL MEAN	16.3		10.4		23.6	
HIGHEST ANNUAL MEAN					224	1993
LOWEST ANNUAL MEAN					.000	1950
HIGHEST DAILY MEAN	743	Feb 21	161	Jan 23	11400	Mar 2 1983
LOWEST DAILY MEAN	.00	Jan 1	.00	Nov 23	.00	Oct 1 1947
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Nov 23	.00	Oct 1 1947
INSTANTANEOUS PEAK FLOW			853	Dec 22	15200	Mar 2 1983
INSTANTANEOUS PEAK STAGE			2.19	Dec 22	7.64	Mar 2 1983
ANNUAL RUNOFF (AC-FT)	11800		7540		17070	
10 PERCENT EXCEEDS	48		25		16	
50 PERCENT EXCEEDS	3.7		.50		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11098000 ARROYO SECO NEAR PASADENA, CA

LOCATION.—Lat 34°13'20", long 118°10'36", in NW 1/4 NE 1/4 sec.31, T.2 N., R.12 W., Los Angeles County, Hydrologic Unit 18070105, on right bank 0.7 mi east of Angeles Crest Highway, 1.5 mi upstream from Millard Canyon, and 5.5 mi northwest of Pasadena.

DRAINAGE AREA.—16.0 mi².

PERIOD OF RECORD.—December 1910 to January 1913 (fragmentary), April 1913 to November 1915, April 1916 to current year.

REVISED RECORDS.—WSP 1315-B: 1914(M), 1918(M), 1920–21(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above sea level. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

REMARKS.—Records good except those for estimated daily discharges and discharges below 1 ft³/s, which are fair. No regulation or diversion upstream from station. See schematic diagram of San Gabriel and Los Angeles River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,620 ft³/s, Mar. 2, 1938, gage height, 9.42 ft, present datum, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 22	1230	569	3.81				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	.53	1.9	5.8	22	7.6	3.5	2.0	2.0	e.47	e.43	e.25
2	.42	.42	1.7	6.6	20	7.2	3.1	1.9	2.1	e.43	e.40	e.27
3	.36	.50	1.7	16	19	7.2	3.2	1.8	2.1	e.40	e.40	e.27
4	.27	.64	1.6	10	17	7.2	3.4	1.5	2.0	e.37	e.40	e.26
5	.29	.73	1.5	9.3	16	7.1	3.7	.72	1.8	e.35	e.40	e.26
6	.31	.83	1.8	7.0	15	6.9	3.5	.63	2.0	e.32	e.38	e.25
7	.36	.83	1.7	6.2	14	6.8	3.4	.59	1.9	.29	e.38	e.25
8	.39	.81	1.6	5.6	13	6.6	3.7	.56	1.8	.37	e.38	e.25
9	.33	.81	6.6	5.0	13	6.4	3.8	.65	1.5	.31	e.38	e.23
10	.20	.80	40	4.7	18	5.9	3.7	.61	1.4	.37	e.40	e.23
11	.24	.79	79	4.4	17	5.9	3.8	.61	1.4	.46	e.39	e.23
12	.36	.80	26	9.6	13	5.9	3.5	.74	1.5	.46	e.38	e.23
13	.49	.82	13	19	12	5.8	3.3	1.1	2.6	.40	e.35	e.24
14	.52	.85	8.4	13	12	5.6	3.2	1.1	2.2	e.41	e.34	e.25
15	.48	.98	6.1	39	11	5.6	3.1	1.0	1.9	e.41	e.31	e.26
16	.46	.99	5.2	36	10	5.6	2.8	.96	1.3	e.42	e.29	e.27
17	.52	1.0	4.6	21	11	5.5	2.7	1.1	1.2	e.42	e.29	e.24
18	.42	1.1	4.0	16	10	5.2	2.6	1.3	1.1	e.43	e.29	e.26
19	.40	1.1	3.5	13	9.7	4.8	3.0	1.4	.96	e.44	e.29	e.28
20	.31	1.1	3.3	17	9.1	4.4	3.2	1.4	.91	e.45	e.27	e.30
21	.16	7.7	3.2	15	8.8	4.4	2.5	1.5	.89	e.45	e.27	e.30
22	.13	26	124	16	8.5	4.3	2.1	1.5	.81	e.46	e.27	e.22
23	.13	8.6	36	42	8.2	4.6	1.9	1.4	.83	e.47	e.27	e.22
24	.13	5.1	16	29	7.9	4.7	2.0	1.3	.78	e.47	e.27	e.23
25	.14	3.6	11	35	7.5	4.3	2.0	1.2	.73	e.48	e.25	.51
26	.14	2.8	8.4	87	7.6	4.0	1.8	1.3	e.70	e.48	e.25	.53
27	.52	2.1	9.6	67	8.2	4.1	1.9	1.1	e.62	e.49	e.25	.34
28	.81	2.0	11	49	8.0	4.2	2.0	.94	e.58	e.50	e.25	e.29
29	.83	1.9	8.3	36	---	3.9	2.1	.98	e.54	e.50	e.25	e.29
30	1.4	1.8	7.3	30	---	3.6	2.2	.79	e.50	e.48	e.25	e.29
31	.70	---	6.4	25	---	3.6	---	1.3	---	e.45	e.25	---
TOTAL	12.59	78.03	454.4	695.2	346.5	168.9	86.7	34.98	40.65	13.21	9.98	8.30
MEAN	.41	2.60	14.7	22.4	12.4	5.45	2.89	1.13	1.35	.43	.32	.28
MAX	1.4	26	124	87	22	7.6	3.8	2.0	2.6	.50	.43	.53
MIN	.13	.42	1.5	4.4	7.5	3.6	1.8	.56	.50	.29	.25	.22
AC-FT	25	155	901	1380	687	335	172	69	81	26	20	16

e Estimated.

11098000 ARROYO SECO NEAR PASADENA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.16	3.92	8.93	19.0	32.7	28.6	14.0	6.53	3.35	1.64	.99	1.03
MAX	8.54	97.4	132	251	344	235	91.5	48.0	19.2	10.7	7.70	8.26
(WY)	1984	1966	1922	1969	1914	1938	1941	1983	1983	1969	1983	1976
MIN	.000	.060	.12	.58	.93	1.16	.69	.50	.35	.042	.000	.000
(WY)	1927	1934	1991	1991	1924	1961	1961	1961	1961	1960	1925	1925

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1911 - 1997	
ANNUAL TOTAL	2906.23		1949.44			
ANNUAL MEAN	7.94		5.34		10.1	
HIGHEST ANNUAL MEAN					57.8	
LOWEST ANNUAL MEAN					.75	
HIGHEST DAILY MEAN	376	Feb 21	124	Dec 22	3690	Feb 20 1914
LOWEST DAILY MEAN	.13	Sep 10	.13	Oct 22	.00	Aug 18 1920
ANNUAL SEVEN-DAY MINIMUM	.16	Oct 20	.16	Oct 20	.00	Aug 18 1920
INSTANTANEOUS PEAK FLOW			569	Dec 22	8620	Mar 2 1938
INSTANTANEOUS PEAK STAGE			3.81	Dec 22	9.42	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	5760		3870		7290	
10 PERCENT EXCEEDS	14		13		16	
50 PERCENT EXCEEDS	2.0		1.4		1.8	
90 PERCENT EXCEEDS	.31		.27		.20	

11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA

LOCATION.—Lat 34°03'30", long 118°04'15", in Potrero Grande Grant, Los Angeles County, Hydrologic Unit 18070105, on right bank 0.3 mi downstream from Garvey Avenue, 0.4 mi downstream from Rubio Wash, 2.8 mi upstream from axis of Whittier Narrows Dam, and 2.2 mi west of El Monte.

DRAINAGE AREA.—91.2 mi².

PERIOD OF RECORD.—February 1956 to current year.

GAGE.—Water-stage recorder. Concrete trapezoidal channel. Datum of gage is 217.8 ft above sea level.

REMARKS.—Records fair. Flow regulated by Big Santa Anita, Sawpit, and Eaton flood-control reservoirs, and Sierra Madre, Las Flores, and Rubio debris basins, combined capacity, 2,195 acre-ft. Many diversions upstream from station for domestic use and irrigation. Los Angeles County Department of Public Works diverted 14,220 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during current year. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion provided by the Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,200 ft³/s, Feb. 16, 1980, gage height, 7.35 ft; no flow for some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	1.2	2.7	15	8.8	.91	.84	.83	1.7	119	1.2	.69
2	5.6	2.8	5.6	168	4.2	.81	1.1	.67	2.1	251	1.1	1.2
3	1.7	.86	25	232	3.2	2.1	.98	.89	2.3	288	.91	1.1
4	2.5	1.2	64	6.9	1.6	1.8	.99	.60	3.0	271	1.1	1.1
5	3.9	1.4	74	22	2.4	1.5	1.0	.62	3.4	185	1.2	.97
6	1.8	2.3	92	2.5	1.9	.98	.83	.74	3.5	110	1.3	.94
7	1.9	4.3	81	1.3	1.6	.96	.76	1.6	3.2	66	1.1	.96
8	1.1	.65	83	.79	1.3	1.0	1.1	1.1	2.6	103	.96	1.0
9	1.3	.70	1060	.76	1.2	1.0	.56	.92	2.8	168	.91	2.1
10	1.6	3.7	550	1.4	25	1.4	.50	2.3	3.0	223	.72	1.9
11	1.3	3.7	991	6.6	4.6	.95	.58	1.9	3.0	287	1.1	2.5
12	.72	.86	72	531	2.8	.92	.67	2.4	4.0	263	1.1	1.3
13	.93	3.9	9.8	367	2.2	1.1	.55	2.2	11	175	1.2	1.4
14	.82	6.5	9.3	44	1.6	1.2	.38	2.1	1.5	107	.92	1.5
15	.90	4.2	9.1	706	1.1	1.2	.34	3.2	.87	139	.88	23
16	1.8	.74	7.8	4.4	1.1	1.1	.27	5.2	2.5	197	.93	1.5
17	1.0	3.3	4.0	1.8	2.7	1.1	.41	2.3	1.7	252	.88	1.6
18	1.0	3.5	1.0	3.1	2.9	1.1	.54	2.6	1.5	305	.75	1.1
19	1.7	5.4	1.2	3.3	2.8	.93	.47	2.3	2.2	249	.66	1.1
20	5.1	5.5	4.1	81	2.4	1.1	.30	2.7	1.9	165	.76	1.1
21	4.0	1250	7.0	81	1.2	1.3	.41	2.3	1.2	97	1.0	1.2
22	1.6	325	364	76	1.0	1.2	.55	2.2	.96	132	1.2	1.2
23	2.2	6.3	4.3	599	1.1	1.1	.46	2.0	1.3	119	1.0	1.2
24	2.2	5.1	6.4	2.0	.99	1.3	.73	2.5	1.7	2.5	1.1	1.4
25	1.5	2.9	2.9	735	3.1	1.0	1.7	1.7	17	2.2	1.6	472
26	1.2	2.8	2.1	1150	2.1	1.5	.60	1.5	68	2.7	1.1	4.2
27	.78	1.3	271	76	14	1.3	.63	2.0	75	2.3	.98	1.5
28	1.2	.46	42	33	1.2	1.3	2.4	2.0	79	2.3	1.0	1.2
29	1.3	.35	1.6	35	---	1.0	.99	2.1	72	2.5	.79	1.7
30	643	.28	2.1	33	---	.91	.78	2.1	66	71	.86	1.7
31	1.6	---	1.4	14	---	1.3	---	1.6	---	42	.63	---
TOTAL	706.45	1651.20	3851.4	5032.85	100.09	36.37	22.42	59.17	439.93	4398.5	30.94	535.36
MEAN	22.8	55.0	124	162	3.57	1.17	.75	1.91	14.7	142	1.00	17.8
MAX	643	1250	1060	1150	25	2.1	2.4	5.2	79	305	1.6	472
MIN	.72	.28	1.0	.76	.99	.81	.27	.60	.87	2.2	.63	.69
AC-FT	1400	3280	7640	9980	199	72	44	117	873	8720	61	1060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.3	39.1	46.3	96.7	143	101	39.4	22.7	24.8	16.6	9.69	11.8
MAX	253	284	178	834	860	796	236	168	166	187	112	109
(WY)	1984	1966	1978	1993	1969	1983	1983	1986	1996	1983	1991	1982
MIN	.59	.087	.49	.95	.34	.31	.47	.41	.13	.26	.035	.097
(WY)	1978	1957	1959	1976	1961	1956	1977	1959	1956	1956	1956	1956

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1956 - 1997

ANNUAL TOTAL	27553.47	16864.68	
ANNUAL MEAN	75.3	46.2	47.3
HIGHEST ANNUAL MEAN			187
LOWEST ANNUAL MEAN			6.01
HIGHEST DAILY MEAN	2960	Feb 20	7700
LOWEST DAILY MEAN	.28	Nov 30	.00
ANNUAL SEVEN-DAY MINIMUM	.87	May 17	.00
INSTANTANEOUS PEAK FLOW			5480
INSTANTANEOUS PEAK STAGE			4.13
ANNUAL RUNOFF (AC-FT)	54650	33450	34260
10 PERCENT EXCEEDS	177	108	93
50 PERCENT EXCEEDS	2.1	1.7	1.9
90 PERCENT EXCEEDS	.87	.76	.50

11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA

LOCATION.—Lat 34°01'00", long 118°05'15", in Paso de Bartolo Grant, Los Angeles County, Hydrologic Unit 18070105, on right levee 0.2 mi upstream from Beverly Boulevard, 0.4 mi downstream from axis of Whittier Narrows Dam, and 1.0 mi northeast of Montebello.

DRAINAGE AREA.—124 mi².

PERIOD OF RECORD.—October 1966 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 175 ft above sea level, from topographic map.

REMARKS.—Records fair except for discharges below 100 ft³/s, which are poor. Flow regulated by Whittier Narrows Flood-Control Reservoir, capacity, 36,160 acre-ft. There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Discharge records for current year provided by Los Angeles County Department of Public Works for the following dates: Oct. 1–29, Oct. 31 to Nov. 19, Nov. 24–25, Dec. 19–21 and 23–26, Dec. 29 to Jan. 1, Jan. 4–6, and Jan. 29 to Sept. 30.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,800 ft³/s, Jan. 25, 1969, gage height, 13.82 ft, from rating curve extended above 15,000 ft³/s on basis of gate openings at dam at gage heights 12.32 and 13.82 ft; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	6.3	123	25	102	18	110	126	.01	81	9.1	35
2	25	5.9	148	127	97	16	113	123	.00	144	7.6	43
3	22	4.7	171	487	96	11	140	122	12	227	7.3	26
4	21	8.7	253	27	102	64	170	125	128	191	5.3	28
5	22	15	268	40	102	67	170	128	143	156	.84	31
6	21	13	365	44	99	67	168	126	81	122	.74	49
7	31	23	219	99	97	64	164	155	76	78	.86	50
8	23	17	204	90	80	71	145	112	69	100	.66	54
9	22	16	717	105	71	74	134	104	63	163	.27	38
10	22	17	1270	89	85	67	169	107	137	186	.18	36
11	22	19	1100	92	38	81	160	106	128	214	.07	75
12	21	14	250	732	19	52	160	104	128	211	26	86
13	21	13	254	1310	26	54	155	113	153	172	38	99
14	21	21	225	166	28	55	157	104	154	130	42	100
15	16	24	199	361	26	62	161	71	150	143	42	136
16	13	21	175	159	26	65	140	74	113	179	40	32
17	13	22	109	126	27	65	143	68	49	203	42	38
18	13	24	64	166	25	63	196	85	29	222	24	35
19	13	23	58	145	25	58	194	85	29	205	.55	33
20	14	57	32	136	25	48	191	86	64	166	.22	27
21	14	1430	33	194	23	46	200	52	65	118	.24	27
22	13	2200	654	209	16	46	122	12	64	106	.35	43
23	19	111	37	718	11	47	123	2.5	64	88	.29	50
24	11	19	28	187	7.4	46	94	2.5	57	44	.34	50
25	17	14	23	2450	7.5	48	93	2.2	60	19	.06	277
26	17	218	21	4180	12	51	91	2.2	110	18	34	55
27	16	203	551	553	25	65	94	1.8	85	16	41	111
28	16	119	293	142	18	107	101	.01	86	16	27	110
29	12	121	26	132	---	109	133	.01	78	15	23	92
30	1160	124	24	134	---	111	131	.01	91	56	29	65
31	.38	---	32	111	---	109	---	.01	---	61	33	---
TOTAL	1699.38	4923.6	7926	13536	1315.9	1907	4322	2199.24	2466.01	3850	475.97	1931
MEAN	54.8	164	256	437	47.0	61.5	144	70.9	82.2	124	15.4	64.4
MAX	1160	2200	1270	4180	102	111	200	155	154	227	42	277
MIN	.38	4.7	21	25	7.4	11	91	.01	.00	15	.06	26
AC-FT	3370	9770	15720	26850	2610	3780	8570	4360	4890	7640	944	3830

LOS ANGELES RIVER BASIN

11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	106	142	163	364	514	359	119	111	102	73.6	56.9	75.8
MAX	302	362	522	2378	3459	2265	371	289	355	205	244	413
(WY)	1984	1992	1992	1993	1969	1983	1983	1994	1992	1993	1991	1991
MIN	.001	7.08	10.3	29.2	22.1	15.6	4.25	10.6	.093	1.10	2.57	.13
(WY)	1978	1978	1977	1976	1984	1972	1977	1972	1977	1972	1995	1972

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1967 - 1997			
ANNUAL TOTAL	56015.98				46552.10							
ANNUAL MEAN	153				128				180			
HIGHEST ANNUAL MEAN									638			
LOWEST ANNUAL MEAN									40.9			
HIGHEST DAILY MEAN	6220				4180				21200			
LOWEST DAILY MEAN	.38				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	7.7				.26				.00			
INSTANTANEOUS PEAK FLOW					17100				38800			
INSTANTANEOUS PEAK STAGE					8.95				13.82			
ANNUAL RUNOFF (AC-FT)	111100				92340				130700			
10 PERCENT EXCEEDS	247				199				255			
50 PERCENT EXCEEDS	77				64				81			
90 PERCENT EXCEEDS	21				10				3.6			

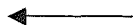
EXPLANATION

△ 111500

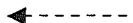
Gaging station and abbreviated number
(Complete number as given in the station description is 11111500)



Powerplant



Stream, open flume, or canal showing direction of flow



Penstock, tunnel, closed flume, or pipe showing direction of flow

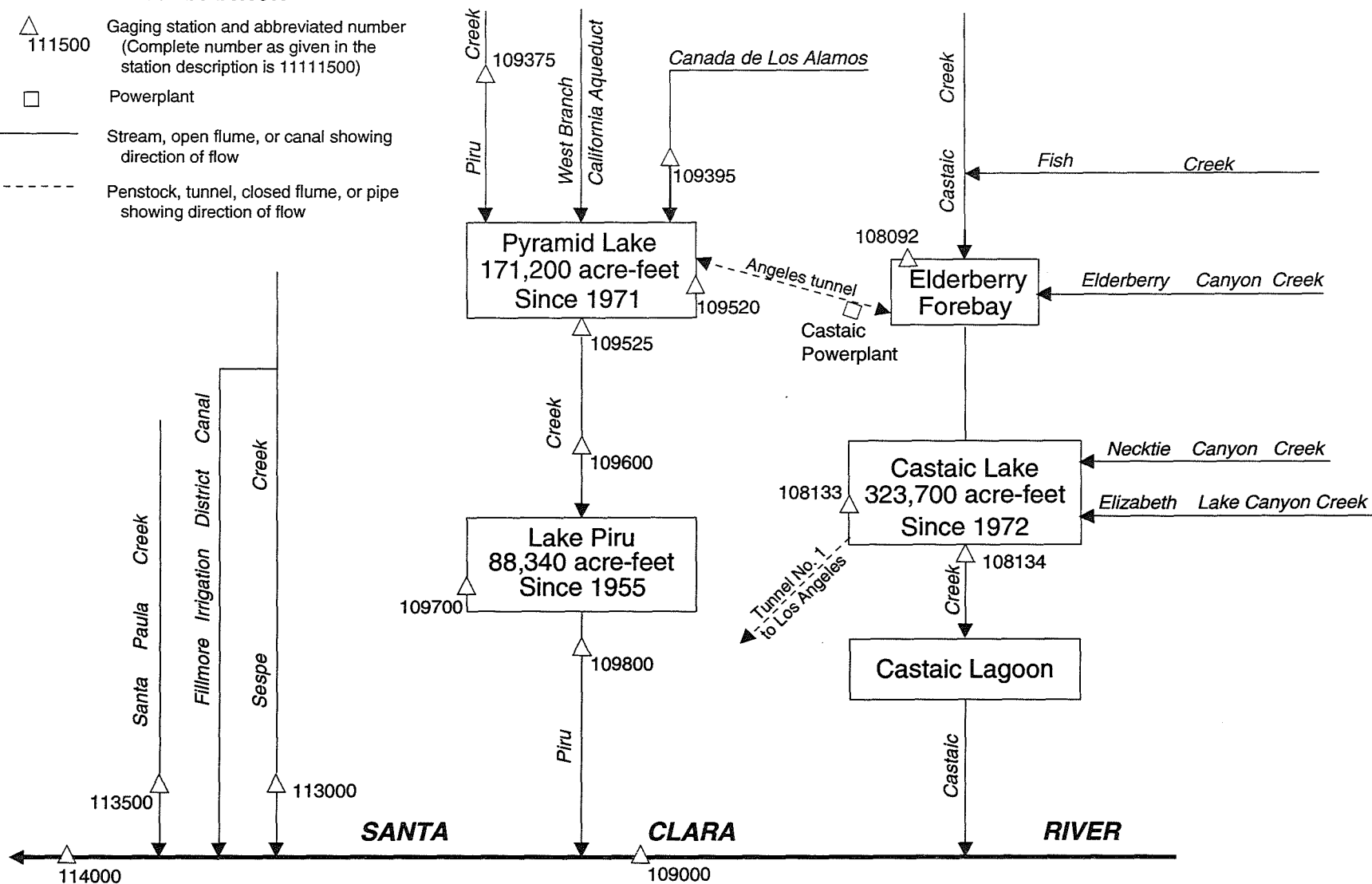


Figure 19. Diversions and storage in Santa Clara River Basin.

11108092 ELDERBERRY FOREBAY NEAR CASTAIC, CA

LOCATION.—Lat 34°33'46", long 118°37'58", in SW 1/4 SE 1/4 sec.36, T.6 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, Angeles National Forest, in outlet tower in Elderberry Forebay and 5 mi north of Castaic.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995 in files of California Department of Water Resources.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by Los Angeles Department of Water and Power).

REMARKS.—Forebay is formed by a concrete dam on Castaic Creek completed in 1974. Capacity, 32,476 acre-ft at spillway crest on dam at elevation 1,540 ft. Storage at normal minimum pool, 12,228 acre-ft at elevation 1,490 ft. Forebay receives water from Pyramid Lake (station 11109520) via Castaic Powerplant. Water is pumped at times to Pyramid Lake during off-peak periods to be re-released through the powerplant. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.—Maximum contents, 30,720 acre-ft, June 7, 1996, elevation, 1,536.41 ft; minimum, 15,716 acre-ft, Feb. 9, 1996, elevation, 1,500.54 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 30,706 acre-ft, Aug. 1, elevation, 1,536.42 ft; minimum 15,959 acre-ft, Mar. 28, elevation, 1,501.18 ft.

Capacity table (elevation in feet, and contents, in acre-feet)
Based on table provided by California Department of Water Resources dated Jan. 27, 1995)

1,490	12,228	1,520	23,240
1,500	15,527	1,530	27,680
1,510	19,183	1,540	32,476

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23189	24300	26681	21120	18366	23143	22383	26932	22333	25327	30706	20755
2	22271	22396	25825	24057	19993	16242	21250	25141	23024	26672	29555	22568
3	23523	21282	26220	21331	21507	22618	20716	21902	22774	26900	22581	24996
4	23502	22681	26946	19664	23228	25438	21311	19054	23206	25283	22513	25785
5	25345	26301	25504	19974	22821	25013	19234	23360	21193	27267	25167	27474
6	22690	23979	25504	20397	23266	24475	19455	25718	22606	20755	25385	25887
7	25563	25375	24491	18699	22982	24125	23733	24907	19497	20628	26504	21728
8	24562	26568	22442	18950	20473	20378	25053	22901	17354	22229	24031	22208
9	22636	24567	25150	20544	18540	19541	22998	27547	20147	23029	22560	25066
10	24239	21250	25771	22618	22200	21980	23905	22038	18992	21242	18434	26822
11	22388	22118	24361	21047	21315	19350	24545	18710	19038	21161	21360	22321
12	21112	21360	21733	18468	20861	19731	23537	21877	17963	18954	22471	26197
13	19214	21413	19961	24243	19767	24741	23096	24789	17467	20476	23957	24100
14	21588	23902	19767	21984	21882	25982	24763	26550	17769	18828	24933	18760
15	21964	22847	18803	25642	22728	24009	24497	24475	17552	21323	26288	20313
16	22142	21952	22564	25296	19517	18855	28347	25190	22496	23754	23029	22564
17	22158	21849	21934	23045	19092	21347	27460	23029	25838	25504	17993	19903
18	22610	25367	24798	20616	19603	21597	23651	23987	24841	25905	21396	20353
19	21675	22345	24754	17324	20576	23117	23198	23651	23923	23711	26252	22939
20	20504	20840	21728	20785	19555	24798	20885	25955	24894	18801	27974	19354
21	22909	22399	19342	20025	18171	19478	27147	23160	22096	18197	26301	18862
22	24798	18418	18388	23656	18156	17795	25731	22471	17910	18574	27248	22188
23	23962	20930	19923	23711	20624	17662	24640	22673	17019	23454	25150	24921
24	22480	20763	18718	19715	23694	19680	20160	21872	22204	24267	19934	21597
25	20998	21613	19766	21988	23151	22606	20610	20648	25318	27820	20672	23730
26	22880	21222	22564	20460	21262	21531	23155	20926	24723	24383	21560	26130
27	23849	23391	19591	23845	25647	18063	22009	24952	26355	16673	22279	22964
28	24457	21923	21161	20917	25318	15959	24291	23160	22188	20287	25114	18801
29	23488	22981	18993	19412	---	16264	23733	23253	17200	19362	24121	22707
30	22770	26800	21364	22167	---	17743	22079	23514	22648	20938	22965	25384
31	23458	---	18916	21457	---	24588	---	23574	---	27203	23717	---
MAX	25563	26800	26946	25642	25647	25982	28347	27547	26355	27820	30706	27474
MIN	19214	18418	18388	17324	18156	15959	19234	18710	17019	16673	17993	18760
a	1520.51	1528.08	1509.30	1515.73	1524.78	1523.12	1517.24	1520.78	1518.60	1520.96	1521.11	1524.93
b	1524	3342	-7884	2541	3861	-730	-2509	1495	-926	4555	-3486	1667

CAL YR 1996 MAX 30720 MIN 15716 b 1247

WTR YR 1997 MAX 30706 MIN 15959 b 3450

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11108133 CASTAIC LAKE NEAR CASTAIC, CA

LOCATION.—Lat 34°31'22", long 118°36'43", in NW 1/4 NE 1/4 sec.13, T.5 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, in intake tower in Castaic Lake and 2.3 mi north of Castaic.

DRAINAGE AREA.—137 mi², excludes 18.1 mi² non-contributing area in Elizabeth Canyon Creek Basin.

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

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

REMARKS.—Lake is formed by earthfill dam. Storage began April 1972. Dead storage below outlet tower to downstream distribution system, 1,799 acre-ft, elevation, 1,213 ft. Capacity below spillway level, 323,699 acre-ft, elevation 1,515 ft. Lake receives California Aqueduct water diverted from Pyramid Lake (station 11109520) via Castaic Powerplant to Elderberry Forebay (station 11108092). Water is released downstream through Castaic Tunnel No. 1 and to Castaic Lagoon. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.—Maximum contents, 321,914 acre-ft, Mar. 28, 29, 1993, elevation, 1,514.20 ft; minimum, 142,325 acre-ft, Jan. 7, 1995, elevation, 1,415.48 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 317,520 acre-ft, May 16, elevation, 1,512.22 ft; minimum, 235,948 acre-ft, Sept. 16, elevation, 1,472.14 ft.

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

1450	196,414	1490	270,629
1460	213,807	1500	291,186
1470	231,964	1510	310,451
1480	250,894	1520	334,985

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284760	285527	289279	288192	306129	296146	292743	315711	312746	285029	260167	239195
2	287233	284449	288547	287921	305415	295638	294896	317056	311433	283973	259359	238630
3	287754	283601	287837	291627	304552	295172	297081	315909	312089	283146	258573	240327
4	288610	283435	287149	291333	303819	294664	299082	314787	314303	282320	257395	240705
5	287108	282609	286608	291123	305437	295765	301135	313667	315931	281496	256103	239911
6	285943	284035	285943	290724	304595	295256	300578	311870	315051	280879	254737	239157
7	284201	284718	285237	294241	305696	294643	302035	312023	313732	280037	253180	238593
8	285590	285071	284677	293924	304983	293713	306648	314369	312636	279196	251803	237841
9	286775	286775	284201	293607	304078	292911	310473	314501	311324	278336	251029	236903
10	285278	286027	283787	294410	303195	292132	313974	313250	310233	277315	250217	239139
11	287942	284822	283477	293987	304336	293523	317476	312089	308709	276499	249619	240459
12	286442	285610	283001	293755	303539	292406	316968	311958	307298	275482	248849	239515
13	286879	285922	282465	293734	305934	291207	316152	310822	306215	273049	247888	238386
14	285444	284449	282052	296698	305005	291291	315271	312965	305113	274873	247120	237634
15	285586	285195	281352	296337	304056	290116	316130	316262	303970	274061	246354	236697
16	286920	283890	280920	295956	303195	288735	315029	317520	302658	272241	245780	235948
17	286941	282506	284491	298656	302293	287942	316350	316262	301585	271858	245207	238217
18	287274	283456	283890	299253	300428	286587	315469	315029	300086	270851	244444	240988
19	286005	284553	283290	298656	300578	287379	314128	313952	299018	270048	243644	239723
20	284636	284926	284594	298059	299509	286130	313009	312636	297527	269444	243074	238969
21	283352	286130	284035	301156	300214	288192	311739	313732	296252	268641	242314	238405
22	281867	286858	283683	300664	299061	286941	313118	316659	295193	267619	241556	237653
23	283352	286359	283063	306131	297846	285860	313710	315997	293713	266818	240799	236715
24	284843	285839	285216	306237	296698	284428	314062	314677	292448	266019	240232	238781
25	286359	287754	284615	305977	297166	285610	314589	313557	291207	265222	239383	239779
26	285092	289446	284076	306042	297719	287441	313491	312636	289928	264624	238630	239383
27	283849	289049	287441	305588	297144	289007	311958	311280	288672	263829	240742	238818
28	282465	288505	287212	306475	296677	289844	310451	311717	287629	263035	240516	238254
29	284014	287754	286941	305696	---	289991	311280	313623	286587	262222	240894	237503
30	286671	287087	286629	305675	---	289258	312746	314303	285901	261431	240516	236715
31	286504	---	288359	306821	---	291270	---	313842	---	260621	239761	---
MAX	288610	289446	289279	306821	306129	296146	317476	317520	315931	285029	260167	240988
MIN	281867	282506	280920	287921	296677	284428	292743	310822	285901	260621	238630	235948
a	1497.76	1498.04	1498.65	1507.33	1502.60	1500.04	1510.05	1510.55	1497.47	1484.98	1474.17	1472.55
b	2158	583	1272	1862	-10144	-5407	21476	1096	-27941	-25280	-20860	-3046
CAL YR 1996	MAX	317587	MIN	25358	b	23536						
WTR YR 1997	MAX	317520	MIN	235948	b	-47631						

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11108134 CASTAIC CREEK RELEASE FLOW BELOW CASTAIC LAKE, NEAR CASTAIC, CA

LOCATION.—Lat 34°31'10", long 118°36'34", in NE 1/4 SE 1/4 sec.13, T.5 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, in outlet structure below Castaic Dam and 1.9 mi north of Castaic.

DRAINAGE AREA.—138 mi², excludes 18.1 mi² noncontributing area in Elizabeth Canyon Creek Basin.

PERIOD OF RECORD.—October 1994 to current year. Records for 1995 water year published as station 11108135. Records for station 11108135 for October 1976 to September 1978 and October 1988 to September 1994 are not equivalent at low flows due to evaporation and seepage.

GAGE.—Flow meters on outlet pipes. Elevation of gage is 1,200 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Castaic Lake (station 11108133). See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 300 ft³/s, Mar. 22–26, 1997; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 7,670 ft³/s, Mar. 2, 1983, at station 11108135; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	38	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	100	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	150	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	200	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	250	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	250	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	250	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	250	75	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	250	75	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	250	75	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	250	75	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	275	75	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	300	65	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	300	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	300	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	300	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	300	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	219	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	83	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	30	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	30	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	30	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	4405.00	440.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	142	14.7	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	300	75	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	8740	873	.00	.00	.00	.00	.00

11108134 CASTAIC CREEK RELEASE FLOW BELOW CASTAIC LAKE, NEAR CASTAIC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.000	.000	47.4	32.0	3.65	9.34	11.4	9.97	.000
MAX	.000	.000	.000	.000	.000	142	81.4	10.9	28.0	34.2	29.9	.000
(WY)	1995	1995	1995	1995	1995	1997	1996	1996	1995	1995	1995	1995
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1996	1996	1996	1995

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1995 - 1997		
ANNUAL TOTAL	2780.00			4845.00					
ANNUAL MEAN	7.60			13.3			9.54		
HIGHEST ANNUAL MEAN							13.3		
LOWEST ANNUAL MEAN							7.60		
HIGHEST DAILY MEAN	100	Apr	7	300	Mar	22	300	Mar	22 1997
LOWEST DAILY MEAN	.00	Jan	1	.00	Oct	1	.00	Oct	1 1994
ANNUAL SEVEN-DAY MINIMUM	.00	Jan	1	.00	Oct	1	.00	Oct	1 1994
ANNUAL RUNOFF (AC-FT)	5510			9610			6910		
10 PERCENT EXCEEDS	.00			.00			34		
50 PERCENT EXCEEDS	.00			.00			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

SANTA CLARA RIVER BASIN

11109000 SANTA CLARA RIVER NEAR PIRU, CA

LOCATION.—Lat 34°24'13", long 118°44'18", in San Francisco Grant, Ventura County, Hydrologic Unit 18070102, on right downstream bank on private property owned by Newhall Farms, 0.1 mi south of Highway 126, 3 mi east of Piru, and 8 mi west of intersection of Highway 126 and Interstate 5.

DRAINAGE AREA.—645 mi².

PERIOD OF RECORD.—October 1927 to September 1932, October 1996 to September 1997.

GAGE.—Water-stage recorder and crest-stage gage.

REMARKS.—Records poor. Base flow affected by pumping from wells along stream for irrigation. Flow partly regulated since January 1972 by Castaic Lake (station 11108133), capacity 323,700 acre-ft. Imported water from California Water Project stored and released at Castaic Dam. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 303 ft³/s, March 24, 1997, gage height, 3.74 ft; minimum daily, 9.0 ft³/s, Nov. 6, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e28	e20	e14	52	61	57	71	55	e12	e24	e27	e19
2	e28	e17	e14	61	62	58	58	43	e11	e24	e27	e19
3	28	e14	e13	105	64	53	57	39	e12	e25	e27	e19
4	43	e12	e13	63	e70	51	60	42	e13	e25	e27	e19
5	44	e11	e12	58	72	49	59	e36	e15	e25	e26	e18
6	15	e9.0	e12	51	73	51	61	e35	e16	e25	e26	e18
7	26	e9.5	e11	55	71	48	62	e34	e17	e25	e25	e18
8	32	e10	e10	51	80	47	49	e33	e18	e25	e24	e18
9	41	e11	e30	55	87	53	50	e33	e19	e25	e24	e18
10	45	e12	e100	60	64	100	56	e32	e21	e25	e23	e18
11	45	e13	e300	68	76	111	56	e31	e22	e25	e23	e19
12	51	e14	e100	78	77	115	54	e30	e23	e25	e22	e19
13	36	e15	e70	146	70	122	52	e29	e23	e25	e22	e19
14	41	e16	e50	95	72	136	49	e28	e23	e25	e22	e20
15	48	e17	e44	176	70	154	48	e27	e23	e25	e22	e20
16	47	e18	e40	98	72	157	54	e26	e23	e26	e21	e20
17	48	e19	e47	76	82	179	55	e26	e23	e26	e21	e21
18	49	e20	e45	66	76	188	75	e25	e23	e26	e21	e21
19	49	e21	e44	62	76	176	77	e24	e24	e26	e21	e21
20	58	e22	e42	81	66	161	80	e23	e24	e26	e21	e22
21	57	e40	e41	71	79	175	74	e22	e24	e26	e21	e22
22	60	e80	e1000	74	69	193	67	e21	e24	e26	e21	e22
23	73	e140	e210	131	67	260	52	e21	e24	e26	e20	e23
24	68	e80	e120	90	68	280	46	e20	e24	e26	e20	e23
25	79	e50	e85	128	64	210	46	e19	e24	e26	e20	e23
26	97	e30	e70	271	65	186	45	e18	e24	e26	e20	e24
27	106	e25	e90	133	60	179	44	e17	e24	e26	e20	e24
28	113	e21	e80	75	60	176	47	e16	e24	e26	e20	e24
29	117	e19	e60	64	---	100	47	e15	e24	e27	e19	e24
30	e250	e16	e55	58	---	76	48	e14	e24	e27	e19	e25
31	e70	---	52	58	---	74	---	e13	---	e27	e19	---
TOTAL	1892	801.5	2874	2710	1973	3975	1699	847	625	792	691	620
MEAN	61.0	26.7	92.7	87.4	70.5	128	56.6	27.3	20.8	25.5	22.3	20.7
MAX	250	140	1000	271	87	280	80	55	24	27	27	25
MIN	15	9.0	10	51	60	47	44	13	11	24	19	18
AC-FT	3750	1590	5700	5380	3910	7880	3370	1680	1240	1570	1370	1230

e Estimated.

11109000 SANTA CLARA RIVER NEAR PIRU, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.7	21.1	37.1	33.5	61.6	48.1	21.1	9.90	5.89	5.69	4.84	4.58
MAX	61.0	62.2	92.7	87.4	174	128	56.6	27.3	20.8	25.5	22.3	20.7
(WY)	1997	1928	1997	1997	1932	1997	1997	1997	1997	1997	1997	1997
MIN	.000	4.03	7.32	20.4	16.7	15.5	2.93	3.00	.000	.000	.000	.000
(WY)	1931	1931	1930	1929	1930	1931	1931	1930	1930	1930	1929	1930

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1928 - 1997

ANNUAL TOTAL	19499.5	
ANNUAL MEAN	53.4	22.1
HIGHEST ANNUAL MEAN		53.4
LOWEST ANNUAL MEAN		8.05
HIGHEST DAILY MEAN	1000	Dec 22
LOWEST DAILY MEAN	9.0	Nov 6
ANNUAL SEVEN-DAY MINIMUM	11	Nov 4
INSTANTANEOUS PEAK FLOW	303	Mar 24
INSTANTANEOUS PEAK STAGE	3.74	Mar 24
ANNUAL RUNOFF (AC-FT)	38680	15990
10 PERCENT EXCEEDS	100	51
50 PERCENT EXCEEDS	32	10
90 PERCENT EXCEEDS	18	.00

11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA

LOCATION.—Lat 34°39'58", long 118°49'24", in SE 1/4 SE 1/4 sec.30, T.7 N., R.18 W., Ventura County, Hydrologic Unit 18070102, Los Padres National Forest, on left bank 300 ft downstream from the confluence of Piru Creek and Buck Creek and 2.3 mi southeast of U.S. Forest Service Hardluck Campground, and 3.7 mi northwest of Pyramid Dam.

DRAINAGE AREA.—198 mi².

PERIOD OF RECORD.—October 1976 to September 1978, October 1988 to current year. February 1975 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,700 ft above sea level, from topographic map.

REMARKS.—No regulation or diversion upstream from station. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 19,000 ft³/s, estimated, Mar. 4, 1978, gage height, 10.08 ft, maximum gage height, 12.06 ft, Feb. 12, 1992; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	16	10	43	64	20	12	10	3.6	2.5	1.7	1.9
2	4.3	12	10	62	55	19	12	10	3.7	2.3	1.6	2.3
3	4.2	10	10	100	40	19	13	9.8	3.7	2.1	1.5	2.8
4	4.1	9.7	10	85	32	18	13	9.4	3.7	1.9	1.5	2.6
5	4.1	9.4	10	65	30	18	13	9.1	4.1	1.7	1.4	2.5
6	4.0	9.1	10	56	30	17	13	8.6	4.0	1.6	1.4	2.2
7	4.0	8.9	10	34	31	17	13	8.4	3.7	1.6	1.7	2.0
8	3.9	8.6	10	30	30	17	12	8.3	3.6	1.6	1.7	1.9
9	4.0	8.3	104	29	29	17	12	7.7	3.6	1.6	1.7	1.9
10	4.1	8.1	184	27	29	16	12	7.5	3.4	1.6	1.7	2.0
11	4.3	8.1	219	25	31	16	12	7.0	3.3	1.9	2.1	2.0
12	4.4	8.1	85	25	29	16	12	6.9	3.3	2.1	2.2	2.1
13	4.6	8.1	43	27	28	16	12	6.7	3.5	2.0	2.0	2.1
14	4.9	8.2	27	25	26	16	12	6.3	3.9	1.7	1.9	2.0
15	5.0	8.3	21	36	25	16	12	5.9	4.4	1.6	1.9	2.1
16	5.0	8.3	17	43	24	15	12	5.8	3.6	1.6	1.9	2.3
17	5.1	8.4	16	36	24	15	12	5.8	3.1	1.5	2.0	2.3
18	5.1	8.5	15	31	25	15	12	5.9	2.8	1.4	1.9	2.3
19	5.3	8.4	13	29	24	15	12	5.7	2.5	1.5	1.8	2.3
20	5.7	8.3	13	36	22	14	12	6.7	2.4	1.5	2.0	2.2
21	5.8	19	12	37	22	14	12	6.0	2.4	1.5	2.1	2.2
22	5.8	31	282	46	22	14	11	5.5	2.4	1.9	1.9	2.2
23	5.9	29	125	165	21	14	11	5.4	2.3	3.0	1.7	2.1
24	5.9	16	56	147	21	14	11	5.8	2.2	2.5	1.7	2.1
25	6.1	13	34	138	20	14	11	5.7	2.1	2.0	1.9	3.0
26	7.7	12	27	305	20	13	11	5.4	2.0	1.9	1.9	4.3
27	7.5	11	26	212	20	13	11	5.1	2.0	1.8	1.9	3.2
28	7.2	11	47	139	21	13	11	5.0	2.2	1.7	1.9	2.9
29	30	11	38	104	---	13	11	4.5	2.3	1.7	2.0	2.5
30	145	10	34	84	---	13	11	4.1	2.4	1.8	2.0	2.5
31	42	---	43	72	---	12	---	3.8	---	1.8	2.0	---
TOTAL	359.0	345.8	1561	2293	795	479	356	207.8	92.2	56.9	56.6	70.8
MEAN	11.6	11.5	50.4	74.0	28.4	15.5	11.9	6.70	3.07	1.84	1.83	2.36
MAX	145	31	282	305	64	20	13	10	4.4	3.0	2.2	4.3
MIN	3.9	8.1	10	25	20	12	11	3.8	2.0	1.4	1.4	1.9
AC-FT	712	686	3100	4550	1580	950	706	412	183	113	112	140

11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.36	6.56	16.8	99.5	203	186	91.0	38.7	16.8	8.07	5.08	5.08
MAX	14.9	17.1	50.4	501	679	674	235	93.5	49.4	24.7	16.1	13.8
(WY)	1994	1994	1997	1995	1993	1978	1978	1978	1993	1993	1993	1993
MIN	.099	1.16	1.62	2.28	5.36	5.31	2.67	1.21	.46	.001	.000	.000
(WY)	1978	1978	1991	1991	1990	1990	1990	1990	1990	1990	1989	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1977 - 1997	
ANNUAL TOTAL	7735.2		6673.1			
ANNUAL MEAN	21.1		18.3		56.0	
HIGHEST ANNUAL MEAN					153	
LOWEST ANNUAL MEAN					2.45	
HIGHEST DAILY MEAN	707	Feb 20	305	Jan 26	7010	Feb 9 1978
LOWEST DAILY MEAN	2.6	Jul 25	1.4	Jul 18	.00	Sep 6 1977
ANNUAL SEVEN-DAY MINIMUM	2.7	Jul 21	1.5	Jul 15	.00	Sep 6 1977
INSTANTANEOUS PEAK FLOW			807	Dec 22	19000	Mar 4 1978
INSTANTANEOUS PEAK STAGE			5.16	Dec 22	10.08	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	15340		13240		40550	
10 PERCENT EXCEEDS	38		36		134	
50 PERCENT EXCEEDS	10		8.3		9.2	
90 PERCENT EXCEEDS	3.3		1.9		.68	

SANTA CLARA RIVER BASIN

11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA

LOCATION.—Lat 34°41'31", long 118°47'25", in SW 1/4 SE 1/4 sec.16, T.7 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, on right bank 1.1 mi south of Hungry Valley Road off-ramp from Interstate Highway 5 and 0.4 mi above Pyramid Landing on Pyramid Lake.

DRAINAGE AREA.—61.9 mi².

PERIOD OF RECORD.—October 1976 to September 1978, October 1988 to current year. March 1965 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,800 ft above sea level, from topographic map.

REMARKS.—No regulation or diversion upstream from station. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,990 ft³/s, Feb. 10, 1978, gage height, 5.10 ft; minimum daily, 0.30 ft³/s, May 10, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.0	3.5	3.2	3.8	3.5	3.4	3.1	2.3	2.6	2.2	3.3
2	2.7	3.5	3.6	3.1	4.0	3.5	3.4	3.0	2.1	2.5	2.2	3.2
3	2.9	3.5	3.5	5.1	3.9	3.4	3.3	2.9	1.8	2.4	2.1	3.2
4	3.0	3.4	3.4	3.3	3.8	3.2	3.3	2.9	1.8	2.3	2.0	2.9
5	2.8	3.5	3.3	3.3	3.8	3.4	3.3	2.8	2.0	2.2	2.0	2.7
6	2.7	3.2	3.2	3.0	3.8	3.2	3.4	2.7	2.1	2.1	2.1	2.7
7	2.6	3.1	3.1	3.0	3.8	3.0	3.3	2.6	2.1	2.0	2.0	2.7
8	2.5	3.0	3.0	2.7	3.8	2.9	3.3	2.7	2.3	2.2	2.0	2.6
9	2.5	3.0	8.5	2.9	3.8	3.0	3.2	2.7	2.4	2.4	2.1	2.5
10	2.6	3.0	7.3	3.2	3.8	3.0	3.3	2.7	2.4	2.4	2.2	2.5
11	2.7	3.0	3.6	3.0	3.8	3.1	3.2	2.7	2.5	2.6	2.2	2.6
12	2.8	3.0	3.2	3.2	3.8	3.3	3.1	2.8	2.8	2.8	2.3	2.8
13	2.8	2.9	3.1	3.0	3.7	3.4	3.1	2.6	3.4	2.9	2.3	2.9
14	2.8	3.0	3.0	3.2	3.6	3.5	3.0	2.5	3.4	3.0	2.3	2.6
15	2.8	3.0	3.0	4.0	3.7	3.5	3.0	2.5	3.5	2.9	2.3	2.6
16	2.8	2.9	3.0	3.2	3.8	3.6	2.9	2.5	3.1	2.6	2.4	2.7
17	2.8	2.9	3.0	3.0	4.1	3.5	2.9	2.4	2.8	2.6	2.6	2.8
18	2.8	3.0	3.0	3.1	4.8	3.3	2.9	2.3	2.6	2.5	2.6	2.8
19	2.8	3.0	3.0	3.1	3.6	3.3	3.0	2.3	2.5	2.5	2.6	2.9
20	2.9	3.1	3.0	3.5	3.6	3.1	3.0	2.4	2.5	2.5	2.6	2.7
21	3.0	4.7	3.1	2.9	3.6	3.1	3.0	2.5	2.5	2.5	2.6	2.6
22	3.0	4.0	6.3	3.3	3.6	3.3	2.9	2.3	2.5	2.5	2.6	2.5
23	3.1	3.5	3.2	3.4	3.6	3.5	2.9	2.4	2.5	2.7	2.6	2.4
24	3.4	3.4	3.0	3.5	3.6	3.4	2.9	2.6	2.5	2.7	2.6	2.4
25	3.5	3.4	3.0	3.8	3.6	3.3	2.9	2.7	2.4	2.7	2.6	2.6
26	4.5	3.3	3.0	4.7	3.7	3.3	2.8	2.6	2.3	2.5	2.6	3.1
27	4.4	3.2	3.0	3.8	3.6	3.4	3.0	2.5	2.3	2.5	2.9	2.9
28	4.1	3.3	3.0	3.3	4.4	3.4	3.1	2.5	2.4	2.4	3.0	2.7
29	4.2	3.4	3.0	3.6	---	3.3	3.2	2.5	2.5	2.4	3.0	2.6
30	11	3.4	3.1	3.9	---	3.4	3.1	2.4	2.6	2.3	3.1	2.5
31	4.5	---	3.2	4.1	---	3.4	---	2.3	---	2.2	3.2	---
TOTAL	103.6	98.6	110.2	105.4	106.5	102.5	93.1	80.4	74.9	77.4	75.9	82.0
MEAN	3.34	3.29	3.55	3.40	3.80	3.31	3.10	2.59	2.50	2.50	2.45	2.73
MAX	11	4.7	8.5	5.1	4.8	3.6	3.4	3.1	3.5	3.0	3.2	3.3
MIN	2.5	2.9	3.0	2.7	3.6	2.9	2.8	2.3	1.8	2.0	2.0	2.4
AC-FT	205	196	219	209	211	203	185	159	149	154	151	163

11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.11	2.49	2.96	5.42	12.4	8.25	2.79	2.25	1.93	1.65	1.65	1.79
MAX	3.34	3.29	3.65	22.0	64.3	40.5	4.55	3.55	2.97	2.50	2.45	2.73
(WY)	1997	1997	1993	1995	1978	1978	1995	1995	1995	1997	1997	1997
MIN	1.40	1.56	1.93	2.38	1.80	1.80	1.50	.83	1.18	.97	1.32	1.27
(WY)	1977	1978	1977	1978	1977	1977	1977	1977	1978	1977	1977	1977

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1977 - 1997	
ANNUAL TOTAL	1072.6		1110.5			
ANNUAL MEAN	2.93		3.04		3.76	
HIGHEST ANNUAL MEAN					9.72	1978
LOWEST ANNUAL MEAN					1.54	1977
HIGHEST DAILY MEAN	11	Feb 20	11	Oct 30	1220	Feb 10 1978
LOWEST DAILY MEAN	1.4	Jul 5	1.8	Jun 3	.30	May 10 1977
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 1	2.0	Jun 1	.36	May 10 1977
INSTANTANEOUS PEAK FLOW			21	Dec 9	2990	Feb 10 1978
INSTANTANEOUS PEAK STAGE			3.01	Dec 9	5.10	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	2130		2200		2720	
10 PERCENT EXCEEDS	4.0		3.7		3.6	
50 PERCENT EXCEEDS	2.8		3.0		2.3	
90 PERCENT EXCEEDS	1.9		2.4		1.4	

11109396 NORTH PORTAL TEHACHAPI TUNNEL NEAR GORMAN, CA

LOCATION.—Lat 34°55'46", long 118°48'17", unsurveyed, T.10 N., R.18 E., Kern County, Los Alamos Y Caliente Grant, at entrance to Tehachapi Tunnel 1.5 mi southeast of A.D. Edmonston Pumping Plant, and 10 mi north of Gorman.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995 in files of California Department of Water Resources.

GAGE.—Acoustic velocity meter. Elevation of gage is 3,220 ft above sea level, from topographic map.

REMARKS.—Records represent flow pumped from the California Aqueduct through the A.D. Edmonston Pumping Plant to southern California. Downstream, the flow splits as it leaves Tehachapi Afterbay. The East Branch flows through Alamo Powerplant (station 10260776), and the West Branch flows through William Warne Powerplant (station 11109398). See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were computed by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,560 ft³/s, Apr. 14, 1996; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	709	660	371	536	.00	1920	2140	2480	1290	1120	2270
2	1280	465	248	492	660	359	2720	2040	1910	1290	1730	1090
3	1190	.00	521	868	179	704	2710	2250	2420	1290	2600	1060
4	1180	399	457	1050	235	947	2880	1960	2130	1990	1310	978
5	1120	723	289	660	289	565	2370	1480	2170	1910	1110	1000
6	768	869	.00	577	228	441	2950	1310	2020	2270	1120	990
7	666	869	28	619	174	521	2750	1490	2090	1530	1120	1950
8	704	800	1.5	631	188	474	2630	1480	1320	1410	1130	1010
9	630	466	480	591	325	744	2630	1320	1290	1360	1650	1140
10	974	663	674	331	257	580	2710	1450	880	1350	1840	1310
11	1060	387	868	536	203	393	2710	2270	963	1380	1230	1160
12	1010	665	730	398	220	940	2430	1420	865	2480	1460	1410
13	995	865	743	357	206	666	3380	2140	880	2440	1390	1100
14	684	797	522	289	220	1060	2400	2060	1250	1240	1480	2270
15	406	877	660	289	330	1240	2400	2320	1240	1440	1430	1500
16	573	364	509	344	658	1750	2380	2060	1030	1340	1690	1810
17	819	.00	679	796	466	1310	2660	2510	961	1310	2530	1830
18	711	210	799	811	505	1430	2080	2360	1140	1250	1360	1810
19	751	846	593	729	482	1490	1980	1330	1210	2060	1490	1790
20	673	842	674	1110	579	1480	1650	1690	1210	2140	1350	2590
21	732	718	635	1000	385	1140	1770	2050	1720	1310	1260	2190
22	766	868	522	715	509	964	2340	2130	1730	1340	1280	1830
23	759	360	399	990	660	1630	2040	2210	1090	1150	1380	1740
24	758	.00	331	811	496	851	2070	3100	1170	1200	2320	1840
25	770	304	660	356	1.5	1130	2050	3480	1170	1270	1250	1820
26	683	1020	358	220	9.6	1180	2070	3090	1180	2170	1450	1360
27	386	1000	783	330	.00	1310	1630	2050	1450	2270	1260	1180
28	496	1140	454	495	.00	1370	1840	2140	1600	1260	1260	1420
29	771	1000	248	565	---	1840	2140	2050	1320	1170	1260	1170
30	762	605	303	550	---	2560	2070	2040	1000	1140	1020	1390
31	735	---	481	605	---	2120	---	2520	---	1120	2270	---
TOTAL	25372	18831.00	15309.50	18486	9001.10	33189.00	70360	63940	42889	48170	46150	46008
MEAN	818	628	494	596	321	1071	2345	2063	1430	1554	1489	1534
MAX	1560	1140	868	1110	660	2560	3380	3480	2480	2480	2600	2590
MIN	386	.00	.00	220	.00	.00	1630	1310	865	1120	1020	978
AC-FT	50330	37350	30370	36670	17850	65830	139600	126800	85070	95550	91540	91260
a	11560	3050	5830	7950	480	13070	3270	32250	74310	95920	8430	65480
b	36480	36360	21300	29790	16120	27840	57040	43820	8580	2020	6970	25440

a Diversion, in acre-feet, to Alamo Powerplant, provided by California Department of Water Resources.

b Diversion, in acre-feet, to William Warne Powerplant, provided by California Department of Water Resources.

11109396 NORTH PORTAL TEHACHAPI TUNNEL NEAR GORMAN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	461	488	446	487	572	1008	2061	1806	1452	1574	1551	1647
MAX	818	628	494	596	814	1071	2345	2063	1474	1594	1613	1761
(WY)	1997	1997	1997	1997	1996	1997	1997	1997	1996	1996	1996	1996
MIN	104	349	399	378	321	945	1776	1550	1430	1554	1489	1534
(WY)	1996	1996	1996	1996	1997	1996	1996	1996	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1996 - 1997		
ANNUAL TOTAL	421930.50			437705.60					
ANNUAL MEAN	1153			1199			1130		
HIGHEST ANNUAL MEAN							1199		
LOWEST ANNUAL MEAN							1061		
HIGHEST DAILY MEAN	3560			Apr 14			3560		
LOWEST DAILY MEAN	.00			Jan 3			.00		
ANNUAL SEVEN-DAY MINIMUM	114			Jan 3			.00		
ANNUAL RUNOFF (AC-FT)	836900			124			Feb 24		
ANNUAL DIVERSION (AC-FT)	397600			868200			818800		
ANNUAL DIVERSION (AC-FT)	311800								
10 PERCENT EXCEEDS	1910			2270			2050		
50 PERCENT EXCEEDS	1140			1120			1120		
90 PERCENT EXCEEDS	396			339			204		

11109520 PYRAMID LAKE NEAR GORMAN, CA

LOCATION.—Lat 34°38'41", long 118°45'47", in NE 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, Angeles National Forest, in control structure near left abutment of Pyramid Dam on Piru Creek, and 11.7 mi southeast of Gorman.

DRAINAGE AREA.—295 mi².

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

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

REMARKS.—Reservoir is formed by earthfill dam. Storage began August 1974. Dead storage below outlet to Angeles Tunnel, 5,720 acre-ft, elevation 2,345 ft, included in contents. Capacity below invert of radial gate, 133,600 acre-ft, elevation 2,547.72 ft; below top of radial gate, 169,901 acre-ft, elevation, 2,578 ft; below spillway level, 171,196 acre-ft, elevation, 2,579 ft. Lake receives imported water from West Branch California Aqueduct via William Warne Powerplant (station 11109398). Water is released through the Angeles Tunnel to Castaic Powerplant and during periods of low electricity demand water from Elderberry Forebay (station 11108092) is pumped back to Pyramid Lake. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (at 2400) FOR PERIOD OF RECORD.—Maximum contents, 170,457 acre-ft, Feb. 9, 1996; elevation, 2,578.43 ft; minimum, 137,883 acre-ft, Nov. 26, 1991, elevation, 2,551.53 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 169,798 acre-ft, Mar. 29, elevation, 2,577.92 ft; minimum, 145,132 acre-ft, Nov. 8, elevation, 2,557.83 ft.

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

2545	130,601	2565	153,364
2550	136,154	2570	159,778
2555	141,850	2575	166,057
2560	147,680	2580	172,497

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156122	147209	149315	165067	167754	160809	163489	155817	164220	159010	153510	163410
2	154491	149137	150220	163438	166006	164915	164801	157040	164877	157839	154916	162571
3	152906	150351	149755	163476	165105	162095	165270	161183	164712	158282	161858	158825
4	152099	148686	148875	167102	164169	159815	165194	163980	161908	159852	162208	158258
5	151811	146327	150422	167780	163086	158788	167498	160262	162108	157519	159741	156906
6	154515	147775	150518	169089	163312	160461	168780	158171	161308	164535	159456	158430
7	152256	146151	151523	167332	162559	161408	165156	158307	165599	164283	158418	162609
8	150948	145132	153703	167076	165029	165143	161570	157900	168215	162734	160934	163011
9	151128	145893	152352	166413	166898	166171	162208	153123	165688	161658	162396	161083
10	150984	149517	153630	163136	163917	164498	159989	158763	166808	163426	166400	157175
11	150387	149957	158344	164510	162835	165295	157937	162521	166617	163740	163426	160560
12	151727	149791	161333	167166	163829	165054	161770	161096	167664	165765	162258	157040
13	151715	149374	164712	161645	162233	160536	162233	159481	168087	164005	160784	159023
14	150950	148271	166541	162433	160672	159320	161645	155427	167690	165815	159580	164510
15	149767	148484	167805	159295	159617	161595	161196	154248	167895	163249	158258	163778
16	148165	149588	165156	160349	162697	166808	158566	152448	162747	160971	161595	162609
17	148129	149850	162697	160959	163892	165473	158196	155622	159382	159010	166579	163866
18	147421	146761	160959	163816	164283	166311	162734	154551	160337	158393	163907	162133
19	149755	149101	161995	167959	163136	163766	163287	156612	161333	160461	159072	161096
20	150960	150649	164422	166299	165485	162960	165536	155451	160287	165650	157323	165511
21	149695	148508	166910	164056	166350	165815	160834	157704	163111	164902	158998	166426
22	149196	152906	169025	161858	167562	167498	161171	155098	167268	165498	158307	164131
23	148425	151415	168806	160585	165105	167613	161908	156416	168049	160573	160250	163111
24	148330	151823	168074	162509	163099	167166	165587	160324	162772	159728	165612	164915
25	148319	149172	167818	161983	162521	163551	164788	164637	159443	156025	165333	162521
26	147787	149434	165828	165676	162935	163652	162358	165714	159790	159419	164940	160299
27	146797	148994	166159	163312	158147	166949	163514	163099	158097	167179	161958	163426
28	147751	152544	164528	165384	158689	169424	162885	164649	162170	163476	159753	167562
29	147397	153051	166706	167485	---	169798	163237	162634	167409	164333	160039	164586
30	146526	150494	165054	164940	---	167191	163262	161745	161795	163036	161320	162885
31	146503	---	166706	164776	---	160598	---	163073	---	156967	160374	---
MAX	150387	153051	169025	169089	167754	169798	168780	165714	168215	160971	166579	167562
MIN	146503	145132	148875	159295	158147	158788	157937	152448	158097	156025	153510	156906
a	2559.00	2562.37	2575.51	2573.99	2569.12	2570.66	2572.79	2572.64	2571.62	2567.72	2570.48	2572.49
b	11198	3991	16212	-1930	-6087	1909	2664	-189	-1278	-4828	3407	2511

CAL YR 1996 MAX 170457 b 5036

WTR YR 1997 MAX 169798 b 5181

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA

LOCATION.—Lat 34°38'30", long 118°45'49", in SW 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, Los Padres National Forest, at downstream base of dam and 11.7 mi southeast of Gorman.

DRAINAGE AREA.—295 mi².

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.—Flow meters with totalizer. Elevation of gage is 2,200 ft above sea level, from topographic map.

REMARKS.—Flow regulated beginning December 1971 by Pyramid Lake (station 11109520). See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with a Federal Energy Regulatory Commission project.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,990 ft³/s, Feb. 26, 1993; minimum daily, 4.0 ft³/s, Nov. 1–5, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.0	5.0	50	100	30	25	25	25	25	25	25
2	5.0	4.0	5.0	50	100	30	25	25	25	25	25	24
3	5.0	4.0	5.0	50	100	25	25	25	25	25	25	24
4	5.0	4.0	5.0	100	50	25	25	25	25	25	25	23
5	5.0	4.0	5.0	50	50	25	25	25	25	25	25	22
6	5.0	5.0	5.0	50	50	25	25	25	25	25	25	22
7	5.0	5.0	5.0	50	75	25	25	25	25	25	25	22
8	5.0	5.0	5.0	50	100	25	25	25	25	25	25	21
9	5.0	5.0	5.0	50	100	25	25	25	25	25	25	21
10	5.0	5.0	5.0	35	100	25	25	25	25	25	25	20
11	5.0	5.0	5.0	35	100	25	25	25	25	25	25	20
12	5.0	5.0	5.0	35	100	25	25	25	25	25	25	19
13	5.0	5.0	5.0	35	100	25	25	25	25	25	25	19
14	5.0	5.0	5.0	35	100	25	25	25	25	25	25	18
15	5.0	5.0	5.0	35	100	25	25	25	25	25	25	18
16	5.0	5.0	5.0	75	100	25	25	25	25	25	25	17
17	5.0	5.0	5.0	75	78	25	25	25	25	25	25	17
18	5.0	5.0	5.0	50	50	25	25	25	25	25	26	16
19	5.0	5.0	5.0	35	50	25	25	25	25	25	26	16
20	5.0	5.0	5.0	35	50	25	25	25	25	25	26	15
21	5.0	5.0	5.0	35	50	25	25	25	25	25	26	14
22	5.0	5.0	5.0	35	50	25	25	25	25	25	26	14
23	5.0	5.0	5.0	35	45	25	25	25	25	26	26	13
24	5.0	5.0	22	35	35	25	25	25	25	26	26	13
25	5.0	5.0	25	75	35	25	25	25	25	26	26	12
26	5.0	5.0	25	75	35	25	25	25	25	26	26	12
27	5.0	5.0	30	95	35	25	26	25	25	26	26	11
28	5.0	5.0	50	200	35	25	26	25	26	26	26	11
29	5.0	5.0	50	200	---	25	26	25	26	26	26	10
30	5.0	5.0	50	150	---	25	26	25	26	26	26	10
31	5.0	---	50	100	---	25	---	24	---	26	26	---
TOTAL	155.0	145.0	417.0	2015	1973	785	754	774	753	784	789	519
MEAN	5.00	4.83	13.5	65.0	70.5	25.3	25.1	25.0	25.1	25.3	25.5	17.3
MAX	5.0	5.0	50	200	100	30	26	25	26	26	26	25
MIN	5.0	4.0	5.0	35	35	25	25	24	25	25	25	10
AC-FT	307	288	827	4000	3910	1560	1500	1540	1490	1560	1560	1030

11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.4	25.7	24.7	111	130	80.3	39.2	31.7	24.3	23.3	21.3	20.1
MAX	45.5	83.8	64.0	422	491	242	132	97.3	41.0	32.9	25.8	25.6
(WY)	1993	1993	1996	1995	1992	1992	1993	1991	1993	1993	1993	1993
MIN	5.00	4.83	5.03	5.00	5.00	5.10	5.57	10.6	12.5	13.6	12.9	13.0
(WY)	1997	1997	1995	1991	1991	1995	1992	1990	1990	1989	1989	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1989 - 1997	
ANNUAL TOTAL	11134.0		9863.0			
ANNUAL MEAN	30.4		27.0		45.5	
HIGHEST ANNUAL MEAN					119	
LOWEST ANNUAL MEAN					10.8	
HIGHEST DAILY MEAN	502	Feb 21	200	Jan 28	3990	Feb 26 1993
LOWEST DAILY MEAN	4.0	Nov 1	4.0	Nov 1	4.0	Nov 1 1996
ANNUAL SEVEN-DAY MINIMUM	4.3	Oct 30	4.3	Oct 30	4.3	Oct 30 1996
ANNUAL RUNOFF (AC-FT)	22080		19560		32940	
10 PERCENT EXCEEDS	74		50		61	
50 PERCENT EXCEEDS	25		25		25	
90 PERCENT EXCEEDS	5.0		5.0		5.0	

11109600 PIRU CREEK ABOVE LAKE PIRU, CA

LOCATION.—Lat 34°31'23", long 118°45'22", in NE 1/4 NW 1/4 sec.15, T.5 N., R.18 W., Ventura County, Hydrologic Unit 18070102, on left bank near Blue Point, 1.3 mi downstream from Agua Blanca Creek, 4.3 mi upstream from Santa Felicia Dam, 8.0 mi northeast of Piru, and 15 mi downstream from Pyramid Dam.

DRAINAGE AREA.—372 mi².

PERIOD OF RECORD.—October 1955 to current year.

CHEMICAL DATA: Water years 1972–80.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 1,058.55 ft above sea level (levels by U.S. Forest Service). Prior to Dec. 15, 1972, at site 0.3 mi upstream at different datum.

REMARKS.—Records fair except those for estimated daily discharges, which are poor. Flow regulated beginning December 1971 by Pyramid Lake (station 11109520). Imported water from the California Water Project stored and released at Pyramid Dam. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,200 ft³/s, Feb. 25, 1969, gage height, 18.6 ft, site and datum then in use, from floodmarks, from rating curve extended above 4,000 ft³/s on basis of slope-area measurement at gage height 12.2 ft and inflow-outflow records for Lake Piru; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 35,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.2	e15	e7.3	71	133	e48	29	26	22	e24	e23	e19
2	e4.6	e12	e7.4	74	132	e47	29	26	22	e24	e23	e19
3	e4.0	e9.6	e7.5	88	128	e47	29	26	23	e24	e23	e19
4	e4.1	e8.2	e7.8	85	84	47	29	26	23	e24	e23	e19
5	e4.2	e7.2	e8.0	104	79	47	29	26	23	e24	e23	e18
6	e4.4	e6.5	e8.4	71	76	46	29	25	23	e24	e23	e18
7	e4.6	e6.3	e8.7	69	95	39	28	25	23	e24	e23	e18
8	e4.7	e6.6	e9.0	68	99	38	28	25	23	e24	e23	e18
9	e4.8	e6.8	81	64	115	38	27	24	23	e24	e23	e18
10	e5.0	e7.0	151	59	113	38	28	24	23	e24	e23	16
11	e5.2	e7.3	125	48	112	37	28	24	23	24	e23	16
12	e5.5	e7.6	65	49	112	37	18	24	24	24	e22	16
13	e5.8	e8.0	43	52	108	36	28	23	24	24	e22	14
14	e6.0	e8.5	35	48	108	36	30	22	24	23	e22	14
15	e6.2	e9.0	30	99	107	36	29	22	25	23	e22	13
16	e6.3	e10	28	99	107	36	22	22	e25	22	e22	12
17	e6.5	e11	25	87	97	36	24	22	e25	22	e22	12
18	e6.6	e12	23	67	63	35	25	22	e25	22	e21	12
19	e6.9	e13	22	55	59	34	27	23	e25	23	e21	12
20	e7.0	e14	21	66	59	33	27	23	e25	23	e21	11
21	e7.4	e16	21	57	57	32	26	23	e25	23	e21	10
22	e7.6	e80	298	65	56	32	26	23	e25	e23	e21	9.6
23	e8.0	e19	94	126	54	32	26	23	e25	e23	e21	9.0
24	e8.2	e15	67	136	e53	33	24	23	e25	e23	e20	8.9
25	e8.6	e13	57	161	e52	31	26	23	e25	e23	e20	10
26	e9.0	e10	50	242	e51	31	26	23	e25	e23	e20	10
27	e9.4	e8.5	74	210	e50	31	26	22	e25	e23	e20	8.6
28	e9.8	e7.5	85	252	e49	31	27	22	e24	e23	e20	7.4
29	e10	e7.2	77	208	---	30	27	22	e24	e23	e20	7.0
30	e170	e7.2	74	148	---	30	27	22	e24	e23	e19	6.9
31	e20	---	72	141	---	30	---	22	---	e23	e19	---
TOTAL	375.6	369.0	1682.1	3169	2408	1134	804	728	720	723	669	401.4
MEAN	12.1	12.3	54.3	102	86.0	36.6	26.8	23.5	24.0	23.3	21.6	13.4
MAX	170	80	298	252	133	48	30	26	25	24	23	19
MIN	4.0	6.3	7.3	48	49	30	18	22	22	22	19	6.9
AC-FT	745	732	3340	6290	4780	2250	1590	1440	1430	1430	1330	796

e Estimated.

11109600 PIRU CREEK ABOVE LAKE PIRU, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1971, BY WATER YEAR (WY)

MEAN	2.14	54.7	52.8	106	229	100	102	33.7	12.6	4.22	2.00	1.86
MAX	11.9	503	291	992	1657	569	741	165	53.4	22.4	11.3	9.63
(WY)	1970	1966	1966	1969	1969	1969	1958	1967	1969	1969	1969	1969
MIN	.000	.34	2.91	9.24	7.50	7.26	3.96	1.34	.12	.000	.000	.000
(WY)	1956	1965	1957	1965	1965	1961	1961	1961	1961	1960	1957	1956

SUMMARY STATISTICS

WATER YEARS 1956 - 1971

ANNUAL MEAN	57.2
HIGHEST ANNUAL MEAN	294 1969
LOWEST ANNUAL MEAN	5.66 1961
HIGHEST DAILY MEAN	15600 Feb 25 1969
LOWEST DAILY MEAN	.00 Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1955
INSTANTANEOUS PEAK FLOW	31200 Feb 25 1969
INSTANTANEOUS PEAK STAGE	18.6 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	41470
10 PERCENT EXCEEDS	84
50 PERCENT EXCEEDS	8.2
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1997, BY WATER YEAR (WY)

MEAN	14.0	18.7	37.9	123	211	193	81.5	49.7	29.3	19.9	16.2	13.9
MAX	51.8	92.4	180	1154	855	1126	289	204	93.7	46.8	37.4	29.3
(WY)	1993	1993	1984	1995	1992	1983	1983	1983	1978	1979	1978	1978
MIN	2.17	4.09	4.05	5.64	13.9	11.2	6.11	5.46	3.84	6.32	.80	.16
(WY)	1973	1978	1990	1991	1987	1977	1977	1972	1976	1972	1972	1972

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1972 - 1997

ANNUAL TOTAL	14208.4	13183.1	
ANNUAL MEAN	38.8	36.1	66.6
HIGHEST ANNUAL MEAN			193 1993
LOWEST ANNUAL MEAN			9.52 1990
HIGHEST DAILY MEAN	550 Feb 20	298 Dec 22	14000 Mar 1 1983
LOWEST DAILY MEAN	4.0 Oct 3	4.0 Oct 3	.07 Jun 9 1972
ANNUAL SEVEN-DAY MINIMUM	4.4 Oct 2	4.4 Oct 2	.09 Sep 3 1972
INSTANTANEOUS PEAK FLOW		619 Dec 22	20900 Mar 1 1983
INSTANTANEOUS PEAK STAGE		4.12 Dec 22	11.36 Mar 1 1983
ANNUAL RUNOFF (AC-FT)	28180	26150	48280
10 PERCENT EXCEEDS	88	82	115
50 PERCENT EXCEEDS	25	24	19
90 PERCENT EXCEEDS	7.5	7.5	6.0

11109700 LAKE PIRU NEAR PIRU, CA

LOCATION.—Lat 34°27'41", long 118°45'02", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, near center of Santa Felicia Dam on Piru Creek, 0.5 mi downstream from Santa Felicia Canyon, 4.2 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.—425 mi².

PERIOD OF RECORD.—May 1955 to current year. Prior to October 1985, monthend elevation and contents only.

GAGE.—Water-stage recorder. Datum of gage is sea level (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum. Jan. 27, 1956, to Dec. 1, 1980, nonrecording gage at same site and datum.

REMARKS.—Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity below spillway level at elevation 1,055.0 ft, 88,340 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use, and irrigation on the Oxnard Plain. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 109,400 acre-ft, Feb. 25, 1969, elevation, 1,061.45 ft; lake dry, Oct. 25, to Nov. 20, 1961.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 68,500 acre-ft, July 24–29; maximum elevation, 1,037.74 ft, July 28; minimum contents 47,600 acre-ft, Sept. 30; minimum elevation 1,016.44 ft, Sept. 30.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by United Water Conservation District in October 1985)

970	14,800	1,000	33,900	1,040	70,900
980	20,300	1,010	42,000	1,050	82,300
990	26,700	1,020	50,800	1,060	94,600
1,030	60,500				

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56900	50000	48100	52200	59700	64300	65900	66900	67800	68400	67700	57300
2	56600	49800	48000	52400	59900	64400	65900	66900	67800	68300	67200	57000
3	56200	49600	48000	52500	60200	64500	66000	67000	67800	68400	66900	56600
4	55900	49400	48000	52700	60300	64500	66100	67000	67900	68400	66500	56300
5	55500	49200	48000	53000	60500	64600	66100	67100	67800	68400	66200	56000
6	55100	49000	48000	53100	60700	64700	66100	67100	67900	68300	65900	55700
7	54800	48800	48000	53200	60800	64800	66200	67100	67900	68300	65600	55300
8	54400	48600	48000	53300	61000	64800	66200	67100	67900	68300	65100	55000
9	54000	48400	48400	53400	61300	64900	66300	67200	67900	68400	64800	54800
10	53700	48200	49000	53600	61500	64900	66300	67200	68000	68300	64500	54400
11	53400	48000	49400	53600	61800	65000	66300	67200	68000	68300	64100	54100
12	53100	47900	49500	53800	62100	65000	66400	67200	68000	68300	63800	53800
13	52900	47900	49600	53900	62300	65100	66400	67300	68000	68300	63500	53500
14	52600	47900	49700	54000	62500	65100	66500	67300	68000	68400	63100	53100
15	52300	47800	49700	54200	62700	65200	66500	67400	68100	68400	62800	52800
16	52100	47800	49700	54400	62900	65200	66500	67300	68100	68400	62400	52500
17	51900	47800	49700	54600	63100	65300	66600	67400	68100	68400	62100	52200
18	51700	47800	49700	54800	63300	65300	66600	67400	68200	68400	61700	51800
19	51500	47800	49700	54900	63400	65400	66600	67400	68200	68400	61300	51500
20	51300	47800	49700	55000	63500	65400	66700	67500	68200	68400	61000	51100
21	51000	48000	49700	55200	63600	65500	66700	67500	68200	68400	60700	50700
22	50800	48100	50700	55300	63700	65500	66700	67500	68200	68400	60400	50400
23	50600	48100	50900	55700	63800	65500	66700	67600	68200	68400	60000	50000
24	50400	48100	51000	56000	63900	65600	66800	67600	68300	68500	59700	49700
25	50200	48100	51100	56500	64000	65700	66800	67600	68300	68500	59400	49300
26	50100	48100	51200	57200	64100	65700	66800	67700	68300	68500	59100	49000
27	50000	48100	51500	57700	64200	65800	66800	67700	68300	68500	58800	48600
28	49900	48100	51600	58300	64200	65800	66800	67800	68300	68500	58400	48300
29	49800	48100	51800	58800	---	65800	66900	67800	68300	68500	58100	48000
30	50100	48100	51900	59100	---	65900	66900	67800	68300	68300	57900	47600
31	50100	---	52100	59400	---	65900	---	67800	---	68000	57600	---
MAX	56900	50000	52100	59400	64200	65900	66900	67800	68300	68500	67700	57300
MIN	49800	47800	48000	52200	59700	64300	65900	66900	67800	68000	57600	47600
a	1019.25	1016.95	1021.34	1028.90	1033.69	1035.30	1036.26	1037.07	1037.59	1037.25	1027.07	1016.44
b	-7200	-2000	+4000	+7300	+4800	+1700	+1000	+900	+500	-300	-10400	-1000

CAL YR 1996 b +6700

WTR YR 1997 b -9700

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA

LOCATION.—Lat 34°27'37", long 118°45'04", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, on right bank 750 ft downstream from Santa Felicia Dam, 1 mi upstream from Lime Canyon, 4 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.—425 mi².

PERIOD OF RECORD.—October 1955 to September 1968, October 1973 to current year.

CHEMICAL DATA.: Water years 1969, 1974–80.

WATER TEMPERATURE.: Water year 1969.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 858.8 ft above sea level (levels by United Water Conservation District).

REMARKS.—Records good. Since May 1955, flow regulated by Lake Piru (station 11109700), and since December 1971, by Pyramid Lake (station 11109520). Imported water from the California Water Project stored by Pyramid Lake. Spill from Lake Piru bypasses gage. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 623 ft³/s, Aug. 2, 1982, gage height, 3.82 ft; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	84	12	11	5.0	5.5	4.8	5.9	5.0	10	194	161
2	188	124	11	11	5.4	5.5	4.8	5.6	5.2	10	194	177
3	189	124	11	11	5.5	5.5	4.8	5.5	4.6	10	194	178
4	191	126	11	11	5.5	5.5	4.8	5.6	4.1	10	202	174
5	194	124	11	11	5.5	5.5	4.8	5.7	4.1	10	196	174
6	194	124	11	11	5.5	5.5	4.8	5.7	4.2	9.8	194	170
7	194	124	11	11	5.5	5.5	4.8	5.7	4.3	10	196	166
8	196	123	11	11	5.5	5.5	4.8	6.0	4.3	10	199	164
9	197	122	11	11	5.5	5.5	4.8	6.0	4.4	10	200	165
10	165	122	11	11	5.4	5.5	4.8	6.0	4.7	10	197	165
11	148	122	11	11	5.2	5.5	4.8	5.6	4.8	10	197	166
12	150	50	11	11	5.3	5.4	4.8	5.5	4.8	10	197	168
13	150	15	11	11	5.5	5.2	4.8	5.5	5.0	10	197	168
14	150	15	11	11	5.5	5.2	4.8	5.6	4.9	10	196	153
15	128	15	13	11	5.5	5.2	4.9	5.7	4.8	10	194	167
16	117	14	12	11	5.5	5.2	5.0	5.7	4.8	10	194	179
17	117	14	12	6.8	5.5	5.2	5.1	5.7	4.8	7.0	194	168
18	119	14	12	5.5	5.5	5.2	5.2	5.5	4.7	9.3	194	177
19	120	14	12	6.1	5.5	5.2	5.2	5.5	4.8	9.8	194	174
20	120	14	12	7.1	5.5	5.4	5.2	5.4	4.8	9.8	186	176
21	120	14	12	7.2	5.5	5.5	5.3	5.2	4.8	9.8	185	176
22	122	14	11	7.2	5.5	5.5	5.5	5.4	4.8	9.8	185	176
23	122	14	11	5.3	5.5	5.5	5.5	4.8	4.8	9.8	185	176
24	121	13	11	6.3	5.4	5.6	5.5	4.3	4.9	9.8	183	179
25	70	13	11	6.0	5.2	5.1	5.5	4.3	7.6	10	182	179
26	47	12	12	6.0	5.2	4.8	5.5	4.3	9.8	10	182	179
27	47	12	12	5.7	5.2	4.8	5.5	4.4	9.8	10	181	179
28	48	12	11	5.7	5.4	4.8	5.6	4.5	9.8	10	183	182
29	99	12	11	5.7	---	4.8	5.9	4.4	9.8	10	182	182
30	55	12	11	5.4	---	5.2	6.0	4.4	9.8	95	182	182
31	17	---	11	4.5	---	5.1	---	4.8	---	193	181	---
TOTAL	4083	1612	352	266.5	151.7	164.4	153.6	164.2	169.0	572.9	5920	5180
MEAN	132	53.7	11.4	8.60	5.42	5.30	5.12	5.30	5.63	18.5	191	173
MAX	197	126	13	11	5.5	5.6	6.0	6.0	9.8	193	202	182
MIN	17	12	11	4.5	5.0	4.8	4.8	4.3	4.1	7.0	181	153
AC-FT	8100	3200	698	529	301	326	305	326	335	1140	11740	10270

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1968, BY WATER YEAR (WY)

MEAN	11.0	13.9	33.1	10.4	14.2	25.3	49.7	46.0	56.8	94.4	88.0	44.3
MAX	29.8	97.7	235	34.6	35.7	115	136	194	245	465	396	248
(WY)	1961	1967	1959	1966	1966	1963	1964	1966	1962	1958	1958	1967
MIN	.000	.86	.003	.15	.018	.006	5.59	6.76	6.76	6.82	6.93	5.94
(WY)	1956	1956	1956	1968	1957	1957	1957	1964	1964	1959	1959	1968

SUMMARY STATISTICS

WATER YEARS 1956 - 1968

ANNUAL MEAN	40.8	
HIGHEST ANNUAL MEAN	102	1958
LOWEST ANNUAL MEAN	10.0	1961
HIGHEST DAILY MEAN	526	Sep 26 1959
LOWEST DAILY MEAN	.00	Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1955
INSTANTANEOUS PEAK FLOW	544	Aug 18 1958
INSTANTANEOUS PEAK STAGE	3.66	Aug 18 1958
ANNUAL RUNOFF (AC-FT)	29540	
10 PERCENT EXCEEDS	101	
50 PERCENT EXCEEDS	8.6	
90 PERCENT EXCEEDS	1.4	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1997, BY WATER YEAR (WY)

MEAN	106	50.3	18.3	14.4	19.6	26.7	23.6	43.4	49.9	73.4	88.4	108
MAX	446	323	89.5	86.6	123	132	109	224	241	271	322	294
(WY)	1993	1993	1995	1994	1984	1995	1980	1988	1987	1986	1982	1979
MIN	4.17	4.68	3.91	.000	.049	.16	.088	.004	1.49	4.09	3.94	4.32
(WY)	1987	1987	1978	1978	1983	1983	1983	1983	1983	1983	1991	1991

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1974 - 1997

ANNUAL TOTAL	11193.1		18789.3		
ANNUAL MEAN	30.6		51.5		
HIGHEST ANNUAL MEAN				52.0	
LOWEST ANNUAL MEAN				138	1993
HIGHEST DAILY MEAN	197	Oct 9	202	Aug 4	1983
LOWEST DAILY MEAN	1.4	Jan 29	4.1	Jun 4	Jul 14 1986
ANNUAL SEVEN-DAY MINIMUM	2.0	Jan 24	4.3	Jun 3	Feb 10 1976
INSTANTANEOUS PEAK FLOW			207	Aug 4	Feb 10 1976
INSTANTANEOUS PEAK STAGE			3.03	Sep 15	Aug 2 1982
ANNUAL RUNOFF (AC-FT)	22200		37270		Aug 2 1982
10 PERCENT EXCEEDS	122		182		37660
50 PERCENT EXCEEDS	5.0		10		194
90 PERCENT EXCEEDS	2.6		4.8		6.9
					3.5

1111500 SESPE CREEK NEAR WHEELER SPRINGS, CA

LOCATION.—Lat 34°34'40", long 119°15'25", in NW 1/4 SW 1/4 sec.30, T.6 N., R.22 W., Ventura County, Hydrologic Unit 18070102, on right bank at Sespe Gorge, 1.6 mi upstream from Tule Creek, and 5 mi northeast of Wheeler Springs.

DRAINAGE AREA.—49.5 mi².

PERIOD OF RECORD.—October 1947 to September 30, 1997 (discontinued).

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 3,500.65 ft above sea level (levels by Ventura County Flood Control District).

REMARKS.—Records fair. No regulation or diversion upstream from station. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,600 ft³/s, Mar. 1, 1983, gage height, 15.02 ft, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow; no flow for many days in some years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	0145	169	1.98	Dec. 22	0930	503	2.95
Dec. 10	2215	138	1.82	Jan. 25	2315	224	2.03

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	e2.7	e2.1	11	26	10	5.1	2.7	1.1	.51	.18	.10
2	.32	2.3	e2.0	14	23	9.9	5.0	2.7	1.3	.48	.16	.11
3	.32	2.1	e2.0	40	21	9.8	5.0	2.6	1.4	.48	.16	.11
4	.32	1.9	e1.9	29	20	9.5	5.0	2.5	1.4	.43	.16	.10
5	.33	1.8	e1.8	e27	19	9.4	5.0	2.2	1.4	.42	.16	.10
6	.33	1.7	e1.7	e24	18	8.8	4.7	2.0	1.7	.46	.15	.10
7	.35	1.7	e1.6	e22	16	8.7	4.4	2.1	1.4	.46	.15	.10
8	.34	1.7	e1.6	e19	16	8.5	4.1	2.1	1.4	.39	.15	.10
9	.35	1.6	18	e17	15	8.4	4.1	2.0	1.6	.32	.15	.09
10	.35	1.7	55	e15	15	8.0	4.1	2.0	1.3	.31	.16	.09
11	.37	1.7	48	e12	15	7.9	3.8	2.0	1.2	.33	.15	.09
12	.35	1.8	14	10	14	7.8	3.7	2.1	1.1	.36	.15	.09
13	.36	1.9	8.0	11	13	7.5	3.6	2.0	1.1	.36	.14	.10
14	.36	1.9	6.6	9.7	13	7.4	3.5	1.8	1.1	.32	.14	.10
15	.34	2.0	6.1	26	13	7.2	3.2	1.7	1.3	.31	.13	.10
16	.32	2.0	5.7	20	12	7.0	3.1	1.7	1.1	.28	.12	.10
17	.31	2.0	5.3	16	14	6.9	3.0	1.7	.95	.26	.12	.10
18	.33	2.1	5.1	15	18	6.7	2.9	1.6	.89	.25	.12	.10
19	.36	2.2	5.0	14	14	6.5	2.8	1.8	.80	.26	.12	.10
20	.36	2.2	5.0	16	13	6.4	2.7	2.0	.73	.15	.11	.10
21	.38	5.5	5.0	16	12	6.3	2.5	1.6	.70	.15	.11	.11
22	.39	6.3	184	19	12	6.2	2.5	1.5	.70	.16	.11	.11
23	.43	3.4	42	67	12	6.1	2.4	1.5	.61	.16	.11	.11
24	.47	2.9	21	40	11	5.9	2.4	1.7	.55	.16	.11	.11
25	.50	2.6	14	99	11	5.7	2.4	1.6	.50	.17	.10	.12
26	.64	e2.5	12	172	11	5.6	2.3	1.5	.50	.18	.10	.13
27	.57	e2.4	16	111	11	5.5	2.5	1.4	.49	.18	.10	.12
28	.60	e2.4	15	62	11	5.3	2.9	1.4	.48	.18	.10	.12
29	3.3	e2.3	12	44	---	5.3	2.8	1.3	.50	.20	.10	.12
30	e32	e2.2	12	35	---	5.2	2.8	1.3	.53	.19	.10	.12
31	e4.8	---	12	31	---	5.2	---	1.1	---	.18	.10	---
TOTAL	50.83	71.5	541.5	1063.7	419	224.6	104.3	57.2	29.83	9.05	4.02	3.15
MEAN	1.64	2.38	17.5	34.3	15.0	7.25	3.48	1.85	.99	.29	.13	.11
MAX	.32	6.3	184	172	26	10	5.1	2.7	1.7	.51	.18	.13
MIN	.28	1.6	1.6	9.7	11	5.2	2.3	1.1	.48	.15	.10	.09
AC-FT	101	142	1070	2110	831	445	207	113	59	18	8.0	6.2

e Estimated.

11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.83	4.94	7.40	33.9	62.2	53.1	23.3	8.03	2.94	1.34	.68	.82
MAX	10.3	131	85.5	456	561	553	233	59.5	18.6	8.08	5.11	10.7
(WY)	1984	1966	1966	1995	1993	1983	1958	1983	1983	1983	1983	1976
MIN	.019	.077	.063	.16	.67	.95	.68	.43	.15	.023	.000	.000
(WY)	1962	1951	1991	1991	1951	1951	1951	1961	1951	1951	1951	1951

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1948 - 1997	
ANNUAL TOTAL	1757.13		2578.68			
ANNUAL MEAN	4.80		7.06		16.4	
HIGHEST ANNUAL MEAN					101	
LOWEST ANNUAL MEAN					.33	
HIGHEST DAILY MEAN	184	Dec 22	184	Dec 22	6430	Mar 1 1983
LOWEST DAILY MEAN	.05	Sep 3	.09	Sep 9	.00	Aug 25 1949
ANNUAL SEVEN-DAY MINIMUM	.06	Sep 1	.09	Sep 6	.00	Aug 25 1949
INSTANTANEOUS PEAK FLOW			503	Dec 22	11600	Mar 1 1983
INSTANTANEOUS PEAK STAGE			2.95	Dec 22	15.02	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	3490		5110		11860	
10 PERCENT EXCEEDS	8.8		16		19	
50 PERCENT EXCEEDS	2.2		1.9		1.5	
90 PERCENT EXCEEDS	.21		.12		.10	

11113000 SESPE CREEK NEAR FILLMORE, CA

LOCATION.—Lat 34°26'32", long 118°55'35", in SE 1/4 NW 1/4 SE 1/4 sec.12, T.4 N., R.20 W., Ventura County, Hydrologic Unit 18070102, on right bank 0.6 mi downstream from Little Sespe Creek and 2.9 mi north of Fillmore.

DRAINAGE AREA.—251 mi².

PERIOD OF RECORD.—September 1911 to September 1913, October 1927 to September 1985, October 1990 to January 1993, Oct. 1, 1993, to current year; combined records of creek and canal, October 1927 to September 1939 monthly only, October 1939 to September 1985, October 1990 to January 1993. Prior to 1935, published as "at Sespe."

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 580 ft above sea level, from topographic map. See WSP 1315-B for history of changes prior to Jan. 17, 1946. Oct. 1, 1990, to Jan. 15, 1993, at site 0.5 mi upstream at same elevation. Gage on diversion canal discontinued Jan. 15, 1993.

REMARKS.—Records good except those for estimated daily discharges, which are poor. No regulation upstream from station. Fillmore Irrigation Co. has diverted water 1 mi upstream since September 1911. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 73,000 ft³/s, Feb. 10, 1978, gage height, 22.40 ft, from rating curve extended above 17,000 ft³/s on basis of slope-area measurement at gage height 22.40 ft; maximum gage height, 24.95 ft, Feb. 25, 1969, from debris wave; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	0230	2,960	9.47	Dec. 22	0900	19,800	12.70
Dec. 10	2045	3,160	8.98	Jan. 25	2230	2,790	9.48

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	60	83	279	303	76	41	14	2.1	e1.1	.60	.53
2	1.2	40	84	304	262	75	39	14	e2.2	e1.0	.55	.53
3	1.2	30	86	510	237	73	40	12	e2.5	e1.0	.54	.53
4	1.3	24	88	387	215	70	41	11	e2.5	e.92	.52	.52
5	1.4	20	91	301	193	72	42	12	e2.5	e.91	.51	.51
6	1.5	20	94	249	178	70	44	12	e3.0	e1.0	.51	.51
7	1.6	19	99	218	165	69	46	12	e2.6	e1.0	.55	.49
8	1.6	19	100	182	156	68	45	12	e2.7	e.96	.58	.48
9	1.9	19	102	161	149	66	39	13	e2.8	e.93	.58	.47
10	2.1	20	681	147	142	65	35	10	e2.6	.84	.60	.45
11	2.1	21	1410	136	143	64	33	8.9	e2.4	.92	.65	.45
12	2.2	22	954	133	131	63	33	7.7	e2.2	.96	.67	.47
13	2.5	24	552	140	123	62	31	8.5	e2.3	.92	.64	.47
14	2.8	25	398	127	116	61	30	8.1	e2.3	.92	.63	.45
15	3.1	27	301	499	112	61	29	8.2	e2.5	.82	.64	.45
16	3.4	29	262	378	108	61	29	8.2	e2.3	.75	.68	.43
17	3.7	31	228	242	107	60	28	8.9	e2.0	.71	.71	.46
18	3.9	33	205	222	103	59	27	8.8	e1.9	.68	.78	.46
19	4.3	35	192	186	106	57	26	8.1	e1.8	.88	.60	.47
20	4.2	38	173	184	99	54	25	8.2	e1.7	.67	.82	.51
21	4.4	40	166	205	93	52	22	6.4	e1.6	.66	.64	.52
22	4.7	137	5770	274	91	49	21	5.4	e1.6	1.4	.79	.51
23	5.3	461	1240	1140	88	48	19	5.3	e1.4	.87	.59	.46
24	6.0	181	600	658	85	47	18	5.5	e1.3	.70	.58	.44
25	6.8	117	421	994	83	46	17	5.4	e1.2	.66	.65	.49
26	8.5	96	330	2340	81	49	17	6.0	e1.1	.63	.59	.51
27	7.9	87	564	1360	81	44	16	7.0	e1.1	.65	.56	.50
28	8.8	83	604	760	79	42	16	5.9	e1.1	.67	.55	.45
29	17	82	393	548	---	42	16	2.4	e1.2	.67	.54	.43
30	764	82	327	443	---	41	15	2.2	e1.2	.68	.54	.45
31	146	---	316	357	---	42	---	2.7	---	.67	.54	---
TOTAL	1026.6	1922	16914	14064	3829	1808	880	259.8	59.7	26.15	18.93	14.40
MEAN	33.1	64.1	546	454	137	58.3	29.3	8.38	1.99	.84	.61	.48
MAX	764	461	5770	2340	303	76	46	14	3.0	1.4	.82	.53
MIN	1.2	19	83	127	79	41	15	2.2	1.1	.63	.51	.43
AC-FT	2040	3810	33550	27900	7590	3590	1750	515	118	52	38	29

e Estimated.

11113000 SESPE CREEK NEAR FILLMORE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.18	41.6	99.5	249	449	362	163	49.7	17.3	6.79	3.49	3.51
MAX	55.4	1285	698	3378	3231	2301	1632	327	109	56.5	44.5	45.6
(WY)	1984	1966	1966	1969	1969	1978	1958	1983	1941	1983	1983	1939
MIN	.000	.000	.000	1.35	4.74	2.82	.67	.25	.000	.000	.000	.000
(WY)	1913	1930	1930	1948	1951	1961	1961	1961	1928	1928	1912	1912

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1911 - 1997	
ANNUAL TOTAL	33473.14		40822.58		119	
ANNUAL MEAN	91.5		112		641	
HIGHEST ANNUAL MEAN					1969	
LOWEST ANNUAL MEAN					1.78	
HIGHEST DAILY MEAN	5770	Dec 22	5770	Dec 22	29100	Jan 25 1969
LOWEST DAILY MEAN	.64	Aug 31	.43	Sep 16	.00	Jul 11 1912
ANNUAL SEVEN-DAY MINIMUM	.68	Aug 28	.45	Sep 10	.00	Jul 11 1912
INSTANTANEOUS PEAK FLOW			19800	Dec 22	73000	Feb 10 1978
INSTANTANEOUS PEAK STAGE			12.70	Dec 22	24.95	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	66390		80970		86220	
10 PERCENT EXCEEDS	161		267		171	
50 PERCENT EXCEEDS	18		16		9.5	
90 PERCENT EXCEEDS	1.1		.54		.20	

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA

LOCATION.—Lat 34°24'48", long 119°04'53", in NW 1/4 SE 1/4 sec.21, T.4 N., R.21 W., Mission San Buenaventura Grant, Ventura County, Hydrologic Unit 18070102, on right bank 1.3 mi downstream from Sisar Creek, and 4.8 mi north of Santa Paula.

DRAINAGE AREA.—38.4 mi².

PERIOD OF RECORD.—October 1927 to current year. October 1, 1995, to current year, operated by Ventura County Public Works Agency. March 1912 to September 1913, at site 1.2 mi upstream; records not equivalent.

CHEMICAL DATA: 1969–80

WATER TEMPERATURE: 1969–71, 1974–75.

REVISED RECORDS.—WSP 1635: 1933(M), 1934, 1936(M), 1941(M). WDR CA-95-1: 1994. WSP 1715: Drainage area.

GAGE.—Water-stage recorder, crest-stage gage, and ultra-sonic sensor. Elevation of gage is 785 ft above sea level, from topographic map. Prior to Oct. 22, 1980, at various sites and datums 1.3 mi downstream. See WDR CA-79-1 for history of changes prior to Oct. 22, 1980. Prior to Feb. 12, 1992, at datum 5.0 ft higher at same site. High flow data for 1996 recorded by sonic sensor gage set to sea level datum.

REMARKS.—Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records of discharge collected and provided by Ventura County Public Works Agency.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,000 ft³/s, Feb. 25, 1969, gage height, 15.18 ft, from floodmark, site and datum then in use, from rating curve extended above 2,300 ft³/s on basis of critical-depth measurement at gage height 12.2 ft; maximum gage height 15.28 ft, Jan. 10, 1995, at present datum; no flow at times in 1927, 1949, 1951–52, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 22	0830	2,130	9.42	Jan. 26	1330	565	7.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	11	5.5	70	95	34	17	9.8	7.4	5.9	3.5	2.1
2	2.5	7.3	5.4	84	91	33	14	9.4	7.0	5.3	3.3	2.0
3	2.5	6.9	5.2	98	84	32	14	9.5	7.0	5.3	3.2	1.9
4	2.3	6.6	5.2	69	84	31	14	9.7	6.9	5.5	3.5	2.0
5	2.3	4.7	5.2	63	78	30	14	9.5	6.9	5.3	3.3	2.1
6	2.1	4.5	5.1	56	65	29	14	9.3	6.5	5.3	2.9	2.0
7	2.1	4.2	4.9	51	62	28	13	9.2	6.4	5.5	2.9	1.9
8	2.0	4.0	4.8	48	60	28	13	9.2	6.7	5.5	3.1	1.8
9	2.1	3.6	4.8	46	57	27	12	9.4	7.1	5.3	3.1	1.7
10	2.1	3.6	280	44	57	26	12	9.2	7.0	5.1	3.4	1.8
11	2.0	3.4	202	44	55	26	13	9.1	6.8	5.5	3.3	1.7
12	2.0	3.3	95	46	53	26	13	9.0	6.8	5.5	3.1	1.8
13	2.0	3.3	55	46	51	25	12	8.9	6.9	5.3	3.0	1.9
14	2.1	3.3	54	41	49	24	12	8.9	6.6	5.0	3.1	1.7
15	2.3	3.4	34	91	48	24	11	8.9	6.6	5.1	3.1	1.6
16	2.3	3.3	35	67	46	24	11	8.9	6.4	4.8	3.1	1.9
17	2.1	3.4	31	60	46	24	11	8.6	6.5	3.9	3.4	2.1
18	2.5	3.4	26	52	45	23	11	8.5	6.4	3.9	3.2	2.1
19	2.5	3.3	24	49	43	22	12	8.5	6.3	4.1	2.9	2.1
20	2.3	3.3	23	51	43	20	11	8.5	6.1	4.5	3.0	2.2
21	2.3	22	23	50	42	19	11	8.5	5.9	4.3	2.9	2.2
22	2.1	56	487	77	42	19	10	8.5	5.9	4.4	2.7	2.2
23	2.1	12	111	240	40	20	10	8.5	6.3	4.2	2.7	2.0
24	2.3	8.7	87	160	40	20	9.6	8.5	6.3	4.0	2.7	1.8
25	2.3	7.9	69	215	40	18	9.5	8.1	6.1	3.9	2.8	1.9
26	2.3	7.1	69	393	39	17	9.6	8.1	5.7	4.1	2.9	2.1
27	2.5	6.5	95	281	37	17	9.5	7.5	5.1	4.3	2.4	2.1
28	2.7	6.1	82	202	35	18	9.9	7.3	5.9	4.1	2.2	1.9
29	3.8	6.0	70	142	---	17	10	7.0	5.5	4.1	2.1	1.8
30	66	5.7	75	116	---	17	9.8	7.2	6.1	4.1	2.4	1.7
31	10	---	69	103	---	17	---	7.3	---	4.0	2.3	---
TOTAL	143.2	227.8	2185.3	3155	1527	735	352.9	268.5	193.1	147.1	91.5	58.1
MEAN	4.62	7.59	70.5	102	54.5	23.7	11.8	8.66	6.44	4.75	2.95	1.94
MAX	66	56	487	393	95	34	17	9.8	7.4	5.9	3.5	2.2
MIN	2.0	3.3	4.8	41	35	17	9.5	7.0	5.1	3.9	2.1	1.6
AC-FT	284	452	4330	6260	3030	1460	700	533	383	292	181	115

11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.03	8.13	15.9	46.6	86.6	69.8	34.8	14.2	8.15	4.98	3.23	3.12
MAX	18.8	183	128	718	841	454	375	78.7	46.4	26.9	16.5	24.5
(WY)	1984	1966	1967	1969	1969	1978	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.76	.97	1.69	.000	.081	.000	.000	.000	.000
(WY)	1929	1930	1930	1928	1930	1961	1928	1928	1928	1928	1928	1928

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1928 - 1997	
ANNUAL TOTAL	6373.7		9084.5			
ANNUAL MEAN	17.4		24.9		24.5	
HIGHEST ANNUAL MEAN					156	
LOWEST ANNUAL MEAN					1.37	
HIGHEST DAILY MEAN	552		487		8900	
LOWEST DAILY MEAN	2.0		1.6		.00	
ANNUAL SEVEN-DAY MINIMUM	2.0		1.7		.00	
INSTANTANEOUS PEAK FLOW			2130		21000	
INSTANTANEOUS PEAK STAGE			9.42		15.28	
ANNUAL RUNOFF (AC-FT)	12640		18020		17780	
10 PERCENT EXCEEDS	32		64		36	
50 PERCENT EXCEEDS	6.5		7.2		4.8	
90 PERCENT EXCEEDS	2.6		2.1		.90	

11114000 SANTA CLARA RIVER AT MONTALVO, CA

LOCATION.—Lat 34°16'44", long 119°08'28" in Santa Clara Del Norte Grant, Ventura County, Hydrologic Unit 18070102, on right downstream side of State Highway 118 bridge, 0.8 mi southeast of Saticoy.

DRAINAGE AREA.—1,577 mi².

PERIOD OF RECORD.—October 1927 to September 1932, October 1949 to September 1988, October 1989 to September 1993, October 1995 to September 1996. Discharge measurements only October 1993 to September 1994 at site 3.9 mi downstream, October 1994 to current year at present site. Monthly discharge only for 1950–65, published in WSP 2128 (daily discharge available in the files of the U.S. Geological Survey).

CHEMICAL DATA.—Water years 1968–85, 1989, 1991–1993.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 120 ft above sea level from topographic map. Oct. 1, 1927, to Sept. 30, 1932, Oct. 1, 1949, to Sept. 30, 1967, and Feb. 3, 1970, to Sept. 30, 1993, at site 3.9 mi downstream at different datums. Oct. 1, 1967, to Feb. 2, 1970, at present site at different datum. Feb. 9, 1984, to Jan. 27, 1993, supplementary gage 3.2 mi downstream at different datum.

REMARKS.—Records fair, except estimated daily discharges, which are poor. Flow partly regulated by Lake Piru (station 11109700), capacity, 88,340 acre-ft, 33 mi upstream since May 1955; by Pyramid Lake (station 11109520), capacity 171,196 acre-ft, 42 mi upstream since December 1971; by Castaic Lake (station 11108133), capacity 324,000 acre-ft, 43 mi upstream since January 1972. Natural flow affected by ground-water withdrawals, diversions, municipal use, and ground-water replenishment. Imported water from the California Water Project released to the basin at Castaic Dam and Pyramid Dam. Diversion to spreading grounds and for irrigation in Pleasant Valley, at site 6.0 mi upstream. Discharge represents flow to the ocean regardless of upstream development. See schematic diagram of Santa Clara River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 165,000 ft³/s, Jan. 25, 1969, gage height, 17.41 ft, at datum 5.0 ft higher; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 120,000 ft³/s, estimated by Ventura County Flood Control District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e20	e60	e30	282	28	18	5.3	.00	e.00	.00	.00
2	.00	e2.0	e58	e50	329	32	18	4.5	e.00	e.00	.00	.00
3	.00	e.20	e56	e100	264	26	17	4.0	e.00	e.00	.00	.00
4	.00	e.02	e55	e55	254	27	22	4.4	e.00	e.00	.00	.00
5	.00	.00	e53	e48	236	25	24	3.7	e.00	e.00	.00	.00
6	.00	e.00	e52	e40	212	35	19	5.0	e.00	e.00	.02	.00
7	1.5	e.00	e51	e35	203	25	19	4.2	e.00	e.00	.00	.00
8	.00	e.00	e50	e30	195	24	16	3.6	e.00	e.00	.00	.00
9	.00	e.00	e108	e27	177	31	15	3.4	e.00	.00	.00	.00
10	.00	e.00	e1700	e25	175	28	18	2.8	e.00	.00	.00	.00
11	.00	e.00	e400	19	178	25	16	2.3	e.00	.00	.00	.00
12	.00	e.00	e130	69	154	24	17	2.3	e.00	.00	.00	.00
13	.00	e.00	e30	234	125	23	18	1.9	e.00	.00	.00	.00
14	.00	e.00	e25	37	113	25	17	1.8	e.00	.00	.00	.00
15	.00	e.00	e20	685	100	26	15	2.4	e.00	.00	.00	.00
16	.00	e.00	e18	256	93	24	13	3.0	e.00	.00	.00	.00
17	.00	e.00	e16	67	88	22	12	1.8	e.00	.00	.00	.00
18	.00	e.00	e14	26	72	22	13	3.6	e.00	.00	.00	.00
19	.00	e.00	e12	32	53	23	13	1.3	e.00	.00	.00	.00
20	.00	e.00	e11	100	38	23	16	.31	e.00	.00	.00	.00
21	.00	e20	e10	115	33	39	11	.00	e.00	.00	.00	.00
22	.00	e70	e6000	208	37	30	9.2	.00	e.00	.00	.00	.00
23	.00	e600	e500	1370	36	32	9.0	.24	e.00	.00	.00	.00
24	.00	e90	e40	293	156	26	8.5	.41	e.00	.00	.00	.00
25	.00	e85	e50	1030	87	20	8.3	.00	e.00	.00	.00	.00
26	.00	e80	e36	5690	30	28	9.0	.00	e.00	.00	.00	.00
27	.00	e75	e300	858	29	22	7.0	.00	e.00	.00	.00	.00
28	.00	e70	e80	199	34	24	6.6	.00	e.00	.00	.00	.00
29	.06	e65	e50	189	---	20	5.6	.00	e.00	.00	.00	.00
30	2060	e62	e40	219	---	23	5.8	.00	e.00	.00	.00	.00
31	169	---	e35	290	---	25	---	.00	---	.00	.00	---
TOTAL	2230.56	1239.22	10060	12426	3783	807	416.0	62.26	0.00	0.00	0.02	0.00
MEAN	72.0	41.3	325	401	135	26.0	13.9	2.01	.000	.000	.001	.000
MAX	2060	600	6000	5690	329	39	24	5.3	.00	.00	.02	.00
MIN	.00	.00	10	19	29	20	5.6	.00	.00	.00	.00	.00
AC-FT	4420	2460	19950	24650	7500	1600	825	123	.00	.00	.04	.00

e Estimated.

11114000 SANTA CLARA RIVER AT MONTALVO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.15	53.9	100	329	789	538	181	26.1	5.96	2.41	.22	1.12
MAX	72.0	1603	917	5477	7314	5985	2668	736	182	61.8	8.85	31.7
(WY)	1997	1966	1966	1969	1969	1983	1958	1983	1993	1993	1969	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1928	1928	1930	1951	1951	1931	1950	1932	1928	1928	1928	1928

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1928 - 1997

ANNUAL TOTAL	41756.05	31024.06	
ANNUAL MEAN	114	85.0	166
HIGHEST ANNUAL MEAN			1229
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	9330	Feb 20	92300
LOWEST DAILY MEAN	.00	Jul 2	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 2	.00
INSTANTANEOUS PEAK FLOW			20500
INSTANTANEOUS PEAK STAGE			9.50
ANNUAL RUNOFF (AC-FT)	82820	61540	120100
10 PERCENT EXCEEDS	101	119	80
50 PERCENT EXCEEDS	5.9	1.8	.00
90 PERCENT EXCEEDS	.00	.00	.00

1118500 VENTURA RIVER NEAR VENTURA, CA

LOCATION.—Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, Ventura County, Hydrologic Unit 18070101, on right bank 420 ft downstream from bridge on Casitas Pass Road at Foster Memorial Park, 0.2 mi downstream from Coyote Creek, and 5 mi north of Ventura.

DRAINAGE AREA.—188 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—September 1911 to January 1914, October 1929 to current year; combined records of river and diversion, October 1932 to current year.

REVISED RECORDS.—WSP 1565: 1957. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage on river; water-stage recorder and Parshall flume on diversion. Datum of gage is 205.23 ft, Ventura County Flood Control datum. See WSP 1315-B for history of changes prior to Nov. 2, 1949. Nov. 2, 1949, to June 12, 1969, at site 80 ft downstream at datum 9.00 ft lower. June 13, 1969, to Dec. 22, 1986, at site 370 ft upstream at datum 5.00 ft lower.

REMARKS.—Records fair. Flow partly regulated since March 1948 by Matilija Reservoir (station 11115000), usable capacity, 1,480 acre-ft, and since October 1959 by Lake Casitas (station 11119700), capacity, 267,000 acre-ft. Water diverted to Lake Casitas on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. For records of combined discharge of river and Ventura City Diversion (station 11118400), see station 11118501.

EXTREMES FOR PERIOD OF RECORD.—River only: Maximum discharge, 63,600 ft³/s, Feb. 10, 1978, gage height, 24.14 ft, from rating curve extended above 34,000 ft³/s; maximum gage height, 29.3 ft, Jan. 25, 1969, present datum, from floodmarks; no flow at times in many years. Combined river and diversion: Maximum discharge, 63,600 ft³/s, Feb. 10, 1978; no flow Nov. 28, 29, 1977; Oct. 23–26, 1989; July 9–11, 1990; many days, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	3.6	e16	25	64	57	16	16	4.4	3.0	2.9	2.5
2	.09	3.8	e16	42	55	58	15	16	5.0	3.0	2.9	2.3
3	e.10	3.4	e15	109	51	59	16	14	4.8	3.0	2.9	2.2
4	e.11	2.9	e15	45	65	35	17	17	4.6	3.4	2.9	2.0
5	e.12	2.2	e15	43	60	27	17	14	4.6	3.7	2.8	2.0
6	e.13	e1.9	e15	37	55	22	16	12	3.9	4.1	2.9	2.0
7	e.14	e2.0	e14	31	50	21	17	10	4.3	3.9	2.9	1.9
8	e.15	e2.1	e15	28	36	18	18	10	4.1	4.1	2.8	1.8
9	.17	e2.2	e47	e8.5	41	16	15	11	3.9	3.9	2.7	1.6
10	.20	e2.4	e380	e8.0	46	16	17	9.6	3.9	3.5	2.7	1.6
11	.19	e2.6	325	21	45	15	20	9.7	3.7	3.2	2.8	1.6
12	.20	e2.8	59	26	39	12	20	9.2	4.1	e3.2	2.8	1.5
13	.15	e3.0	27	49	47	12	18	8.2	3.5	e3.2	2.9	1.5
14	.12	e3.3	27	26	86	13	18	8.6	3.4	e3.2	2.9	1.5
15	.10	e3.5	21	168	88	13	20	7.7	3.5	e3.1	2.8	1.4
16	.11	e3.8	17	61	90	12	21	7.1	3.7	e3.1	2.8	1.4
17	.11	e4.2	13	69	91	19	30	6.4	4.1	e3.1	2.8	1.3
18	.10	e4.6	11	39	89	13	28	6.5	4.1	e3.1	2.8	1.2
19	.08	e5.0	9.5	30	66	9.5	33	7.6	3.9	e3.1	2.8	1.1
20	.07	e5.5	8.6	30	63	19	32	7.5	3.9	e3.1	2.9	1.0
21	.06	e6.0	8.5	30	64	14	28	7.5	4.1	e3.0	2.8	.96
22	.06	e20	250	39	65	10	26	7.0	3.9	e3.0	2.8	.99
23	.05	e70	45	401	63	12	24	6.6	3.9	3.2	2.8	.99
24	.08	e26	27	93	63	13	12	6.3	3.7	3.3	2.7	.95
25	.16	e24	38	279	60	13	13	6.1	3.5	3.3	2.8	.88
26	.18	e21	27	1230	58	13	15	6.4	3.7	3.3	2.8	.85
27	.14	e19	155	437	59	11	17	5.7	4.3	3.2	2.8	.79
28	.14	e18	60	212	58	12	19	5.4	3.5	3.1	2.8	.68
29	.64	e17	43	139	---	14	20	5.1	3.5	3.0	2.9	.63
30	55	e16	32	98	---	15	19	4.9	3.5	3.1	2.7	.57
31	4.4	---	28	75	---	15	---	4.8	---	3.0	2.5	---
TOTAL	63.44	301.8	1779.6	3928.5	1717	608.5	597	273.9	119.0	101.5	87.1	41.69
MEAN	2.05	10.1	57.4	127	61.3	19.6	19.9	8.84	3.97	3.27	2.81	1.39
MAX	55	70	380	1230	91	59	33	17	5.0	4.1	2.9	2.5
MIN	.05	1.9	8.5	8.0	36	9.5	12	4.8	3.4	3.0	2.5	.57
AC-F'T	126	599	3530	7790	3410	1210	1180	543	236	201	173	83

e Estimated.

11118500 VENTURA RIVER NEAR VENTURA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.29	5.15	36.5	121	192	237	78.0	26.1	12.1	6.15	3.59	2.51
MAX	21.4	38.8	174	1103	1058	1951	874	226	103	56.1	35.8	21.2
(WY)	1942	1947	1932	1952	1941	1938	1941	1941	1941	1941	1941	1941
MIN	.000	.000	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1931	1930	1951	1949	1934	1934	1931	1930	1930

SUMMARY STATISTICS

WATER YEARS 1930 - 1957

ANNUAL MEAN	59.7
HIGHEST ANNUAL MEAN	354
LOWEST ANNUAL MEAN	.000
HIGHEST DAILY MEAN	17900
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	39200
INSTANTANEOUS PEAK STAGE	19.20
ANNUAL RUNOFF (AC-FT)	43230
10 PERCENT EXCEEDS	71
50 PERCENT EXCEEDS	1.9
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.51	14.7	24.7	150	272	206	68.4	26.8	12.3	6.72	3.44	2.78
MAX	40.9	278	234	1880	1899	1797	758	238	81.6	38.5	17.4	15.2
(WY)	1984	1966	1966	1969	1969	1983	1983	1983	1995	1978	1978	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1962	1965	1969	1976	1961	1990	1961	1961	1961	1961	1961	1961

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1960 - 1997

ANNUAL TOTAL	7824.88	9619.03	
ANNUAL MEAN	21.4	26.4	64.8
HIGHEST ANNUAL MEAN			383
LOWEST ANNUAL MEAN			.29
HIGHEST DAILY MEAN	1430	Feb 20	1230
LOWEST DAILY MEAN	.05	Oct 23	.05
ANNUAL SEVEN-DAY MINIMUM	.07	Oct 18	.07
INSTANTANEOUS PEAK FLOW			4960
INSTANTANEOUS PEAK STAGE			8.32
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (AC-FT)	15520	19080	46920
10 PERCENT EXCEEDS	37	59	47
50 PERCENT EXCEEDS	4.4	6.5	3.0
90 PERCENT EXCEEDS	.30	.96	.00

VENTURA RIVER BASIN

11118501 VENTURA RIVER NEAR VENTURA, CA—Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	3.6	16	25	64	57	17	19	5.7	4.1	3.3	2.5
2	.09	3.8	16	42	55	58	17	19	6.3	4.0	3.3	2.3
3	.10	3.4	15	109	51	59	18	17	6.2	4.0	3.2	2.2
4	.11	3.0	15	45	65	35	19	19	6.3	4.3	3.1	2.0
5	.12	2.2	15	43	60	28	19	16	6.3	4.6	3.0	2.0
6	.13	1.9	15	37	55	24	18	15	5.8	5.0	3.0	2.0
7	.14	2.0	14	31	50	23	19	13	6.7	4.8	3.0	1.9
8	.15	2.1	15	28	36	20	20	12	6.4	4.9	2.9	1.8
9	.17	2.2	47	8.8	41	18	18	13	6.1	4.8	2.8	1.6
10	.20	2.4	380	8.5	46	17	19	12	6.1	4.6	2.8	1.6
11	.19	2.6	325	21	45	17	22	11	5.8	4.4	2.9	1.6
12	.20	2.8	59	27	39	15	22	11	6.1	4.4	2.9	1.5
13	.15	3.0	27	50	47	14	21	10	5.6	4.3	2.9	1.5
14	.12	3.3	27	26	86	14	21	10	5.3	4.2	2.9	1.5
15	.10	3.5	21	168	88	14	23	9.6	5.3	4.0	2.8	1.4
16	.11	3.8	17	61	90	14	23	8.8	5.2	4.0	2.8	1.4
17	.11	4.2	13	69	91	19	31	8.4	5.4	3.9	2.8	1.3
18	.10	4.6	11	40	89	15	28	8.4	5.3	4.0	2.8	1.2
19	.08	5.0	9.7	31	66	12	33	9.1	5.1	3.9	2.8	1.1
20	.07	5.5	8.8	31	63	19	32	8.7	5.2	3.9	2.9	1.0
21	.06	6.0	8.8	31	64	16	28	8.7	5.4	3.8	2.8	.96
22	.06	20	250	39	65	13	26	8.2	5.2	3.8	2.8	.99
23	.05	70	45	401	63	13	25	7.9	5.2	3.8	2.8	.99
24	.08	26	27	93	63	14	15	7.7	4.8	4.2	2.7	.95
25	.16	24	38	279	60	15	16	7.6	4.7	4.1	2.8	.88
26	.18	21	27	1230	58	15	18	7.8	4.4	4.0	2.8	.85
27	.14	19	155	437	59	13	20	7.1	5.1	3.8	2.8	.79
28	.14	18	60	212	58	14	22	6.7	4.7	3.8	2.8	.68
29	.64	17	43	139	---	16	23	6.3	4.6	3.6	2.9	.63
30	55	16	32	98	---	16	22	6.1	4.7	3.6	2.7	.57
31	4.4	---	28	75	---	17	---	5.9	---	3.5	2.5	---
TOTAL	63.44	301.9	1780.3	3935.3	1717	654	655	330.0	165.0	128.1	89.3	41.69
MEAN	2.05	10.1	57.4	127	61.3	21.1	21.8	10.6	5.50	4.13	2.88	1.39
MAX	55	70	380	1230	91	59	33	19	6.7	5.0	3.3	2.5
MIN	.05	1.9	8.8	8.5	36	12	15	5.9	4.4	3.5	2.5	.57
AC-FT	126	599	3530	7810	3410	1300	1300	655	327	254	177	83

11118501 VENTURA RIVER NEAR VENTURA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.12	9.68	33.2	138	191	266	91.0	35.4	20.8	13.2	9.67	8.33
MAX	27.8	45.3	115	1106	1061	1953	877	232	110	65.0	43.2	28.7
(WY)	1942	1947	1937	1952	1941	1938	1941	1941	1941	1941	1941	1941
MIN	.39	.29	.14	2.16	1.72	2.71	2.54	1.34	1.64	.92	.37	.23
(WY)	1936	1937	1933	1949	1949	1951	1951	1933	1936	1936	1935	1935

SUMMARY STATISTICS

WATER YEARS 1933 - 1957

ANNUAL TOTAL	
ANNUAL MEAN	72.9
HIGHEST ANNUAL MEAN	359
LOWEST ANNUAL MEAN	2.31
HIGHEST DAILY MEAN	17900
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	63600
INSTANTANEOUS PEAK STAGE	29.30
ANNUAL RUNOFF (AC-FT)	52800
10 PERCENT EXCEEDS	84
50 PERCENT EXCEEDS	11
90 PERCENT EXCEEDS	2.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.61	20.4	29.9	156	277	213	76.7	35.9	21.3	15.4	11.3	9.81
MAX	50.3	282	240	1883	1901	1804	766	248	90.5	49.1	27.8	26.2
(WY)	1984	1966	1966	1969	1969	1983	1983	1983	1978	1983	1978	1983
MIN	.000	.000	.11	1.88	2.04	3.17	3.19	2.89	2.07	1.48	.63	.005
(WY)	1995	1995	1995	1991	1961	1961	1961	1961	1961	1961	1994	1994

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1960 - 1997

ANNUAL TOTAL	8031.13	9861.03	
ANNUAL MEAN	21.9	27.0	71.9
HIGHEST ANNUAL MEAN			384
LOWEST ANNUAL MEAN			2.22
HIGHEST DAILY MEAN	1430	Feb 20	1230
LOWEST DAILY MEAN	.05	Oct 23	.05
ANNUAL SEVEN-DAY MINIMUM	.07	Oct 18	.07
INSTANTANEOUS PEAK FLOW			63600
INSTANTANEOUS PEAK STAGE			29.30
ANNUAL RUNOFF (AC-FT)	15930	19560	52100
10 PERCENT EXCEEDS	37	59	55
50 PERCENT EXCEEDS	5.6	8.2	12
90 PERCENT EXCEEDS	.30	.96	3.2

11118500 VENTURA RIVER NEAR VENTURA, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—December 1907 to December 1908, water years 1967 to current year.

CHEMICAL DATA: December 1907 to December 1908, water years 1967–79.

WATER TEMPERATURE: Water years 1969, 1971–73, 1975–81, 1986.

SEDIMENT DATA: Water years 1969–73, 1975 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1968 to September 1969, October 1970 to September 1973, October 1974 to September 1981, October 1985 to September 1986.

SUSPENDED-SEDIMENT DISCHARGE: October 1968 to September 1973, October 1974 to September 1981, October 1985 to September 1986.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV					
22...	0840	19	16.0	30	1.6
DEC					
10...	0915	84	14.0	182	41
JAN					
10...	0830	22	12.0	3	.18
FEB					
04...	0920	67	11.5	37	6.7

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA

LOCATION.—Lat 34°24'05", long 119°29'08", in El Rincon Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 100 ft upstream from bridge on State Highway 192, 165 ft downstream from Gobernador Creek, and 1.8 mi northeast of Carpinteria.

DRAINAGE AREA.—13.1 mi².

PERIOD OF RECORD.—January 1941 to September 1977, October 1978 to current year.

REVISED RECORDS.—WSP 1061: 1943. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 130 ft above sea level, from topographic map. Prior to July 1, 1958, at site 100 ft downstream, at datum 6.00 ft higher. July 2, 1958, to Aug. 27, 1970, at site 65 ft downstream at datum 4.00 ft higher. Aug. 28, 1970, to Sept. 30, 1977, at site 100 ft downstream at same datum.

REMARKS.—Records fair. No regulation upstream from station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 mi upstream from station. Small lake 0.8 mi southeast of station and outside the drainage area stores storm runoff and surplus water diverted from Gobernador Creek by Gobernador Land and Water Co. At times this lake is drained by pumping water back into Gobernador Creek 1,000 ft upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,880 ft³/s, Dec. 27, 1971, gage height, 14.10 ft, from floodmark, from rating curve extended above 130 ft³/s on basis of slope-area measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 125 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	2015	353	5.10	Jan. 26	1545	2,220	7.59
Jan. 23	0415	148	4.46				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	2.5	25	3.2	.08	.00	.00	.00	.00	.00
2	.00	.00	.00	4.3	22	3.0	.15	.00	.00	.00	.00	.00
3	.00	.00	.00	9.3	20	3.0	.23	.00	.00	.00	.00	.00
4	.00	.00	.00	4.3	18	2.9	.30	.00	.00	.00	.00	.00
5	.00	.00	.00	3.4	17	2.5	.36	.00	.00	.00	.00	.00
6	.00	.00	.00	3.1	15	2.3	.35	.00	.00	.00	.00	.00
7	.00	.00	.00	3.0	14	2.4	.19	.00	.00	.00	.00	.00
8	.00	.00	.00	2.9	13	2.2	.00	.00	.00	.00	.00	.00
9	.00	.00	6.3	3.0	12	2.1	.00	.00	.00	.00	.00	.00
10	.00	.00	82	2.8	12	1.6	.00	.00	.00	.00	.00	.00
11	.00	.00	45	2.6	11	1.3	.00	.00	.00	.00	.00	.00
12	.00	.00	10	3.2	10	1.2	.00	.00	.00	.00	.00	.00
13	.00	.00	5.2	4.2	9.4	1.1	.00	.00	.00	.00	.00	.00
14	.00	.00	3.8	3.1	8.6	.86	.00	.00	.00	.00	.00	.00
15	.00	.00	3.0	5.0	7.1	.97	.45	.00	.00	.00	.00	.00
16	.00	.00	2.6	4.1	8.1	.97	.00	.00	.00	.00	.00	.00
17	.00	.00	2.4	3.3	8.0	.96	.00	.00	.00	.00	.00	.00
18	.00	.00	2.3	3.0	6.9	.76	.00	.00	.00	.00	.00	.00
19	.00	.00	2.3	3.0	7.8	.45	.00	.00	.00	.00	.00	.00
20	.00	.00	1.4	3.3	7.4	.28	.00	.00	.00	.00	.00	.00
21	.00	6.1	1.8	3.2	5.2	.31	.00	.00	.00	.00	.00	.00
22	.00	14	9.1	4.4	5.2	.47	.00	.00	.00	.00	.00	.00
23	.00	7.6	3.6	73	5.1	.47	.00	.00	.00	.00	.00	.00
24	.00	4.1	2.9	19	4.5	.64	.00	.00	.00	.00	.00	.00
25	.00	2.2	2.6	34	4.4	.67	.00	.00	.00	.00	.00	.00
26	.00	1.2	2.2	351	4.5	.23	.00	.00	.00	.00	.00	.00
27	.00	.43	3.5	128	4.6	.20	.00	.00	.00	.00	.00	.00
28	.00	.14	3.9	67	3.4	.43	.00	.00	.00	.00	.00	.00
29	.39	.00	2.9	48	---	.46	.00	.00	.00	.00	.00	.00
30	14	.00	2.6	36	---	.33	.00	.00	.00	.00	.00	.00
31	2.0	---	2.5	29	---	.31	---	.00	---	.00	.00	---
TOTAL	16.39	35.77	203.90	866.0	289.2	38.57	2.11	0.00	0.00	0.00	0.00	0.00
MEAN	.53	1.19	6.58	27.9	10.3	1.24	.070	.000	.000	.000	.000	.000
MAX	14	14	82	351	25	3.2	.45	.00	.00	.00	.00	.00
MIN	.00	.00	.00	2.5	3.4	.20	.00	.00	.00	.00	.00	.00
AC-FT	33	71	404	1720	574	77	4.2	.00	.00	.00	.00	.00

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.10	.83	2.49	13.7	13.9	9.32	4.03	.91	.37	.17	.069	.065
MAX	3.59	16.7	38.9	242	209	83.8	67.8	9.93	4.48	2.23	1.21	.99
(WY)	1984	1966	1967	1995	1969	1995	1958	1983	1995	1941	1983	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1946	1944	1948	1945	1948	1947	1947	1945	1942	1942	1942	1942

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1941 - 1997

ANNUAL TOTAL	1464.04	1451.94	
ANNUAL MEAN	4.00	3.98	3.59
HIGHEST ANNUAL MEAN			33.5
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	443	Feb 20	4000
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 7	.00
INSTANTANEOUS PEAK FLOW			2220
INSTANTANEOUS PEAK STAGE			7.59
ANNUAL RUNOFF (AC-FT)	2900	2880	2600
10 PERCENT EXCEEDS	6.9	7.0	3.1
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA

LOCATION.—Lat 34°25'35", long 119°43'20", in Pueblo Lands of Santa Barbara, Santa Barbara County, Hydrologic Unit 18060013, on left bank 200 ft downstream from Los Olivos Street in Santa Barbara.

DRAINAGE AREA.—8.38 mi².

PERIOD OF RECORD.—October 1970 to current year

GAGE.—Water-stage recorder and low-flow concrete control. Concrete-lined channel. Elevation of gage is 105 ft above sea level, from topographic map.

REMARKS.—Records poor. At times water is released to creek for ground-water recharge from Gibraltar Tunnel several miles upstream. Control installed Nov. 26, 1979.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,580 ft³/s, Jan. 18, 1973, gage height, 4.97 ft, from rating curve extended above 41 ft³/s on basis of computation of flow in concrete-lined channel; maximum gage height, 6.60 ft, Jan. 10, 1995; no flow most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 26	unknown	226	2.83				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	6.3	e8.0	.53	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	17	e7.0	.38	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	15	e5.9	.50	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	7.7	e5.5	.16	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	5.9	e5.2	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	4.4	5.0	.29	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	3.6	4.4	.22	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	3.1	4.1	.02	.00	.00	.00	.00	.00	.00
9	.00	.00	31	2.2	3.7	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	87	1.8	4.0	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	58	1.6	4.5	.03	.00	.00	.00	.00	.00	.00
12	.00	.00	16	4.8	3.9	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	9.0	2.2	3.8	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	5.7	2.1	3.8	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	3.8	7.9	3.4	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	2.6	3.0	3.1	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	1.8	1.9	3.5	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	1.2	1.5	3.8	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.75	1.3	3.3	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.04	4.0	2.9	.00	.00	.00	.00	.00	.00	.00
21	.00	29	.00	4.5	1.9	.00	.00	.00	.00	.00	.00	.00
22	.00	17	21	3.7	1.7	.00	.00	.00	.00	.00	.00	.00
23	.00	4.0	6.0	5.0	1.4	.00	.00	.00	.00	.00	.00	.00
24	.00	.35	3.4	52	.96	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	2.5	81	.85	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	1.7	e85	.91	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	8.9	e36	.94	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	5.4	e24	.86	.00	.00	.00	.00	.00	.00	.00
29	16	.00	3.6	e18	---	.00	.00	.00	.00	.00	.00	.00
30	30	.00	2.9	e15	---	.00	.00	.00	.00	.00	.00	.00
31	.54	---	2.3	e10	---	.00	---	.00	---	.00	.00	---
TOTAL	46.54	50.35	274.59	431.5	98.32	2.13	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	1.50	1.68	8.86	13.9	3.51	.069	.000	.000	.000	.000	.000	.000
MAX	30	29	87	85	8.0	.53	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	1.3	.85	.00	.00	.00	.00	.00	.00	.00
AC-FT	92	100	545	856	195	4.2	.00	.00	.00	.00	.00	.00

e Estimated.

MISSION CREEK BASIN

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.17	1.12	2.56	8.90	10.5	9.29	2.00	.76	.13	.023	.041	.15
MAX	2.01	14.0	13.9	79.9	54.8	62.3	17.2	8.88	1.25	.49	1.08	1.37
(WY)	1984	1973	1972	1995	1978	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1975	1973	1976	1972	1972	1972	1972	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1971 - 1997			
ANNUAL TOTAL	839.19				903.43							
ANNUAL MEAN	2.29				2.48				2.93			
HIGHEST ANNUAL MEAN									15.1			
LOWEST ANNUAL MEAN									.12			
HIGHEST DAILY MEAN	124				87				1390			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					226				2580			
INSTANTANEOUS PEAK STAGE					2.83				6.60			
ANNUAL RUNOFF (AC-FT)	1660				1790				2130			
10 PERCENT EXCEEDS	3.8				4.6				3.1			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA

LOCATION.—Lat 34°26'42", long 119°48'10", in Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank at University Drive, 0.2 mi east of Patterson Avenue, and 1.5 mi northeast of Goleta.

DRAINAGE AREA.—6.35 mi².

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 60 ft above sea level, from topographic map.

REMARKS.—Records poor. No regulation upstream from station. Some pumping for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,600 ft³/s, Mar. 10, 1995, gage height, 10.16 ft, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow; no flow most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	2330	82	2.12	Jan. 21	1545	80	2.11
Dec. 10	1830	103	2.23	Jan. 26	1445	468	3.52

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.09	.24	.10	3.3	.58	.11	.00	.00	.00	.00	.00
2	.00	.05	.23	5.4	2.3	.56	.16	.04	.00	.00	.00	.00
3	.00	.03	.21	7.9	1.9	.43	.17	.00	.00	.00	.00	.00
4	.00	.02	.20	.86	1.6	.51	.12	.00	.00	.00	.00	.00
5	.00	.01	.21	.58	1.3	.51	.20	.00	.00	.00	.00	.00
6	.00	.00	.16	.58	1.0	.42	.26	.00	.00	.00	.00	.00
7	.00	.00	.13	.58	1.0	.41	.14	.00	.00	.00	.00	.00
8	.00	.00	.08	.58	.97	.43	.12	.00	.00	.00	.00	.00
9	.00	.00	5.9	.46	.89	.42	.08	.00	.00	.00	.00	.00
10	.00	.00	38	.49	.92	.29	.09	.00	.00	.00	.00	.00
11	.00	.00	22	.44	1.8	.34	.08	.00	.00	.00	.00	.00
12	.00	.00	6.9	e.44	2.1	.35	.09	.00	.00	.00	.00	.00
13	.00	.00	1.9	e.50	.85	.32	.11	.00	.00	.00	.00	.00
14	.00	.00	.88	.55	.77	.30	.08	.00	.00	.00	.00	.00
15	.00	.00	.59	11	.77	.29	.03	.00	.00	.00	.00	.00
16	.00	.00	.46	1.6	.77	.29	.01	.00	.00	.00	.00	.00
17	.00	.00	.44	.75	.80	.29	.01	.00	.00	.00	.00	.00
18	.00	.01	.44	.62	.74	.19	.01	.02	.00	.00	.00	.00
19	.00	.01	.42	.60	.67	.22	.03	.24	.00	.00	.00	.00
20	.00	.05	.38	2.7	.72	.22	.06	.10	.00	.00	.00	.00
21	.00	14	.30	e30	.68	.18	.01	.15	.00	.00	.00	.00
22	.00	7.3	2.8	e45	.58	.26	.00	.06	.00	.00	.00	.00
23	.00	.63	.18	25	.58	.25	.00	.00	.00	.00	.00	.00
24	.00	.32	.16	2.1	.58	.18	.00	.00	.00	.00	.00	.00
25	.00	.24	.06	17	.58	.25	.00	.00	.00	.00	.00	.00
26	.00	.20	.02	55	.58	.23	.00	.00	.00	.00	.00	.00
27	.00	.17	.02	21	.58	.26	.00	.00	.00	.00	.00	.00
28	.00	.18	.00	11	.58	.15	.00	.00	.00	.00	.00	.00
29	11	.21	.00	7.3	---	.18	.00	.00	.00	.00	.00	.00
30	6.5	.21	.00	5.5	---	.19	.00	.00	.00	.00	.00	.00
31	.15	---	.01	4.2	---	.18	---	.00	---	.00	.00	---
TOTAL	17.65	23.73	83.32	259.83	29.91	9.68	1.97	0.61	0.00	0.00	0.00	0.00
MEAN	.57	.79	2.69	8.38	1.07	.31	.066	.020	.000	.000	.000	.000
MAX	11	14	38	55	3.3	.58	.26	.24	.00	.00	.00	.00
MIN	.00	.00	.00	.10	.58	.15	.00	.00	.00	.00	.00	.00
AC-FT	35	47	165	515	59	19	3.9	1.2	.00	.00	.00	.00

e Estimated.

ATASCADERO CREEK BASIN

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
EAN	.11	.26	1.32	6.01	7.17	7.34	1.00	.28	.099	.037	.027	.039
MAX	2.05	2.35	8.18	61.2	34.6	32.9	7.64	3.42	1.15	.52	.27	.50
(WY)	1984	1983	1984	1995	1978	1978	1983	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.002	.001	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1975	1990	1989	1977	1972	1972	1972	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR					FOR 1997 WATER YEAR			WATER YEARS 1971 - 1997			
ANNUAL TOTAL	432.30					426.70						
ANNUAL MEAN	1.18					1.17			1.95			
HIGHEST ANNUAL MEAN									8.78			
LOWEST ANNUAL MEAN									.039			
HIGHEST DAILY MEAN	122					55			629			
LOWEST DAILY MEAN	.00					.00			.00			
ANNUAL SEVEN-DAY MINIMUM	.00					.00			.00			
INSTANTANEOUS PEAK FLOW						468			4600			
INSTANTANEOUS PEAK STAGE						3.52			10.16			
ANNUAL RUNOFF (AC-FT)	857					846			1420			
10 PERCENT EXCEEDS	.64					.94			1.3			
50 PERCENT EXCEEDS	.00					.00			.00			
90 PERCENT EXCEEDS	.00					.00			.00			

11120000 ATASCADERO CREEK NEAR GOLETA, CA

LOCATION.—Lat 34°25'29", long 119°48'39", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on downstream side of center pier of county road bridge 100 ft downstream from Maria Ygnacio Creek, 1.3 mi upstream from mouth, and 1.3 mi southeast of Goleta.

DRAINAGE AREA.—18.9 mi².

PERIOD OF RECORD.—October 1941 to current year. Prior to October 1947, published as "Alascadero Creek near Goleta."

SEDIMENT CONCENTRATION: 1982 water year.

SUSPENDED-SEDIMENT DISCHARGE: 1982 water year.

WATER TEMPERATURE: 1982 water year.

REVISED RECORDS.—WSP 1635: 1943–45(M), 1947(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and broad-crested weir. Datum of gage is 8.59 ft, Santa Barbara County benchmark. Prior to Dec. 14, 1967, at site 275 ft downstream, datum 4.00 ft higher. Dec. 14, 1967, to Sept. 30, 1976, at datum 4.00 ft higher; Oct. 1, 1976, to Sept. 30, 1978, at datum 2.00 ft higher, both at present site.

REMARKS.—Records fair except those for estimated daily discharges, which are poor. No regulation upstream from station. Small diversions for irrigation upstream from station. Some low-flow results from return irrigation wastewater.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,200 ft³/s, Mar. 10, 1995, gage height, 12.45 ft, present datum, from rating curve extended above 6,900 ft³/s; maximum gage height, 17.3 ft, from floodmark, Dec. 3, 1974, present datum; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 260 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	2200	357	3.24	Jan. 2	2100	407	3.36
Nov. 21	1945	300	3.09	Jan. 22	2145	326	3.16
Dec. 10	1800	438	3.43	Jan. 25	1430	264	2.99

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.75	1.8	e18	e4.5	e.63	e.18	.07	.00	.00	.00	.00
2	.00	.51	1.6	e60	e3.5	e.61	e.16	.01	.00	.00	.00	.00
3	.00	.38	1.5	e41	e2.5	e.58	e.14	.02	.00	.00	.00	.00
4	.00	.26	e1.4	e10	e2.2	e.56	e.12	.02	.00	.00	.00	.00
5	.01	.16	e1.3	e6.0	e1.7	e.56	e.12	.04	.00	.00	.00	.00
6	.01	.10	e1.2	e3.0	e1.5	e.48	e.11	.03	.00	.00	.00	.00
7	.00	.10	e1.1	e2.2	e1.4	e.46	e.10	.07	.00	.00	.00	.00
8	.01	.08	e1.0	e1.9	e1.3	e.45	e.10	.18	.01	.00	.00	.00
9	.00	.08	21	e1.6	e1.2	e.48	.10	.25	.01	.00	.00	.00
10	.00	.08	174	e1.5	e3.0	e.40	.09	.02	.00	.00	.00	.00
11	.00	.08	71	e1.4	e5.0	e.39	.11	.02	.00	.00	.00	.00
12	.00	.09	26	e1.6	e6.0	e.40	.11	.23	.00	.00	.00	.00
13	.00	.10	e18	e1.7	e5.0	e.37	.12	.13	.01	.00	.00	.00
14	.00	.08	e13	e2.0	e4.0	e.35	.16	.24	.00	.00	.00	.00
15	.00	.08	e9.0	e20	e3.0	e.34	.14	.06	.01	.00	.00	.00
16	.00	.08	e6.0	6.0	e2.0	e.34	.14	.07	.01	.00	.00	.00
17	.00	.08	e4.5	5.8	e1.5	e.33	.15	.06	.01	.00	.00	.00
18	.00	.08	e3.7	e3.5	e1.3	e.26	.18	.06	.01	.00	.00	.00
19	.00	.10	e2.7	e2.0	e1.1	e.27	.17	.20	.00	.00	.00	.00
20	.00	.91	e2.3	14	e1.0	e.26	.18	.07	.00	.00	.00	.00
21	.00	93	e2.0	17	e.92	e.23	.17	e.06	.00	.00	.00	.00
22	.00	53	e1.5	53	e.80	e.26	.13	e.03	.00	.00	.00	.00
23	.00	8.3	e39	112	e.75	e.30	.08	.02	e.00	.00	.00	.00
24	.00	3.8	e10	20	e.68	e.23	.09	.01	e.00	.00	.00	.00
25	.00	3.0	e4.0	105	e.66	e.30	.12	.00	.05	.00	.00	.04
26	.00	2.8	e1.0	117	e.65	e.27	.14	.01	.00	.00	.00	.03
27	.00	2.3	e.90	39	e.64	e.31	.04	.01	.00	.00	.00	.00
28	.00	2.1	e.80	e17	e.63	e.20	.05	.01	.00	.00	e.00	.00
29	60	1.9	e.60	e10	---	e.23	.06	.01	.00	.00	e.00	.00
30	41	1.8	e.50	e5.4	---	e.24	.15	.00	.00	.00	.00	.00
31	1.4	---	e.60	e5.1	---	e.23	---	.00	---	.00	.00	---
TOTAL	102.43	176.18	423.00	703.7	58.43	11.32	3.71	2.01	0.12	0.00	0.00	0.07
MEAN	3.30	5.87	13.6	22.7	2.09	.37	.12	.065	.004	.000	.000	.002
MAX	60	93	174	117	6.0	.63	.18	.25	.05	.00	.00	.04
MIN	.00	.08	.50	1.4	.63	.20	.04	.00	.00	.00	.00	.00
AC-FT	203	349	839	1400	116	22	7.4	4.0	.2	.00	.00	.1

e Estimated.

ATASCADERO CREEK BASIN

11120000 ATASCADERO CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.36	3.33	5.55	18.0	19.1	14.4	3.82	.57	.16	.046	.060	.25
MAX	8.08	49.8	41.5	230	143	112	63.5	8.69	2.20	.59	1.41	4.68
(WY)	1984	1966	1967	1969	1962	1995	1958	1983	1983	1995	1983	1976
MIN	.000	.000	.000	.000	.000	.010	.000	.000	.000	.000	.000	.000
(WY)	1942	1942	1943	1951	1948	1990	1950	1942	1942	1942	1942	1942

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1942 - 1997			
ANNUAL TOTAL	1601.43				1480.97							
ANNUAL MEAN	4.38				4.06				5.40			
HIGHEST ANNUAL MEAN									29.0			
LOWEST ANNUAL MEAN									.018			
HIGHEST DAILY MEAN	350				174				2410			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					438				10200			
INSTANTANEOUS PEAK STAGE					3.43				17.30			
ANNUAL RUNOFF (AC-FT)	3180				2940				3910			
10 PERCENT EXCEEDS	4.5				5.0				2.8			
50 PERCENT EXCEEDS	.08				.08				.02			
90 PERCENT EXCEEDS	.00				.00				.00			

11120500 SAN JOSE CREEK NEAR GOLETA, CA

LOCATION.—Lat 34°27'33", long 119°48'29", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 1.1 mi downstream from unnamed tributary and 1.7 mi northeast of Goleta.

DRAINAGE AREA.—5.51 mi².

PERIOD OF RECORD.—January 1941 to January 1995, October 1995 to current year.

CHEMICAL DATA: Water years 1978–91.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder, crest-stage gage, and concrete low-water control. Datum of gage is 95.61 ft, Santa Barbara County Road Department datum. Prior to Dec. 24, 1955, at datum 5.50 ft higher. Dec. 24, 1955, to Jan. 10, 1960, at datum 1.5 ft higher. Prior to Oct. 1, 1971, at site 75 ft downstream.

REMARKS.—Records fair. No regulation upstream from station. Many small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,000 ft³/s, Jan. 25, 1969, gage height, 10.10 ft, from rating curve extended above 400 ft³/s on basis of slope-area measurement at gage height 9.32 ft; maximum gage height, 12.74 ft, present datum, Jan. 21, 1943; no flow at times in most years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	2245	113	4.20	Dec. 10	1915	122	4.26
Nov. 21	2245	187	4.63	Jan. 26	1415	400	5.49

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.43	.35	3.4	1.1	.07	.73	.36	.20	.08	.26	.10
2	.11	.32	.39	15	.72	.09	.83	.32	.15	.07	.16	.10
3	.15	.33	.37	21	.48	.09	.84	.29	.17	.06	.13	.11
4	.19	.37	.37	8.2	.37	.08	.81	.19	.20	.07	.15	.10
5	.13	.39	.24	4.7	.30	.06	.88	.21	.20	.08	.13	.13
6	.17	.38	.25	3.8	.24	.07	.73	.17	.13	.08	.12	.11
7	.23	.37	.24	3.0	.21	.04	.81	.17	.15	.08	.14	.09
8	.17	.39	.29	2.3	.17	.06	.76	.22	.28	.10	.15	.08
9	.15	.38	17	2.1	.15	.06	.40	.27	.26	.11	.19	.07
10	.22	.39	63	1.9	.15	.06	.44	.20	.19	.14	.21	.06
11	.17	.47	37	1.7	.13	.07	.41	.20	.11	.20	.20	.09
12	.17	.49	15	1.8	.12	.08	.39	.17	.21	.31	.13	.08
13	.23	.52	7.2	1.8	.11	.09	.41	.24	.25	.31	.07	.07
14	.28	.64	4.3	1.7	.11	.10	.52	.28	.09	.20	.06	.07
15	.33	.61	3.4	9.8	.13	.11	.51	.17	.10	.28	.06	.07
16	.35	.79	3.0	3.7	.12	.14	.59	.18	.08	.15	.06	.08
17	.55	1.0	2.5	2.7	.12	.16	.65	.32	.07	.12	.11	.07
18	.38	1.0	1.9	2.2	.09	.17	.55	.34	.07	.09	.27	.07
19	.31	1.0	1.7	1.7	.06	.19	.49	.26	.08	.07	.11	.08
20	.43	1.2	1.7	2.3	.06	.22	.58	.22	.10	.08	.24	.08
21	.60	17	1.2	2.4	.07	.20	.38	.33	.17	.10	.40	.06
22	.36	25	13	10	.06	.28	.42	.38	.17	.13	.07	.06
23	.42	4.4	3.9	46	.06	.34	.45	.41	.13	.17	.05	.05
24	.61	1.4	2.8	20	.06	.46	.48	.32	.15	.24	.05	.04
25	.87	.79	2.3	41	.06	.51	.43	.37	.15	.29	.07	.07
26	.61	.54	1.9	72	.07	.48	.52	.38	.11	.26	.08	.05
27	.55	.42	11	21	.08	.56	.34	.27	.19	.39	.07	.05
28	.90	.38	6.7	8.6	.08	.60	.38	.17	.11	.33	.07	.05
29	13	.37	3.8	4.1	---	.54	.49	.13	.14	.45	.09	.06
30	12	.35	3.2	2.4	---	.56	.41	.17	.09	.28	.09	.08
31	1.0	---	2.9	1.5	---	.70	---	.16	---	.57	.10	---
TOTAL	35.75	62.12	212.90	323.8	5.48	7.24	16.63	7.87	4.50	5.89	4.09	2.28
MEAN	1.15	2.07	6.87	10.4	.20	.23	.55	.25	.15	.19	.13	.076
MAX	13	25	63	72	1.1	.70	.88	.41	.28	.57	.40	.13
MIN	.11	.32	.24	1.5	.06	.04	.34	.13	.07	.06	.05	.04
AC-FT	71	123	422	642	11	14	33	16	8.9	12	8.1	4.5

SAN JOSE CREEK BASIN

11120500 SAN JOSE CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

MEAN	.27	1.12	2.43	5.58	7.38	5.62	2.66	.72	.29	.15	.13	.14
MAX	6.40	21.2	23.5	35.6	53.4	37.3	29.0	4.91	1.69	.98	.89	1.40
(WY)	1984	1966	1967	1952	1962	1978	1958	1983	1983	1983	1954	1954
MIN	.000	.000	.000	.000	.021	.10	.021	.000	.000	.000	.000	.000
(WY)	1947	1948	1948	1948	1948	1990	1990	1948	1946	1946	1946	1946

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1941 - 1997

ANNUAL TOTAL	978.00	688.55	
ANNUAL MEAN	2.67	1.89	2.04
HIGHEST ANNUAL MEAN			9.80 1983
LOWEST ANNUAL MEAN			.042 1948
HIGHEST DAILY MEAN	116 Feb 20	72 Jan 26	602 Jan 15 1952
LOWEST DAILY MEAN	.00 Jul 31	.04 Mar 7	
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 30	.05 Sep 22	.00 Aug 18 1942
INSTANTANEOUS PEAK FLOW		400 Jan 26	2000 Jan 25 1969
INSTANTANEOUS PEAK STAGE		5.49 Jan 26	12.74 Jan 21 1943
ANNUAL RUNOFF (AC-FT)	1940	1370	1480
10 PERCENT EXCEEDS	5.9	2.9	2.0
50 PERCENT EXCEEDS	.56	.25	.24
90 PERCENT EXCEEDS	.12	.07	.00

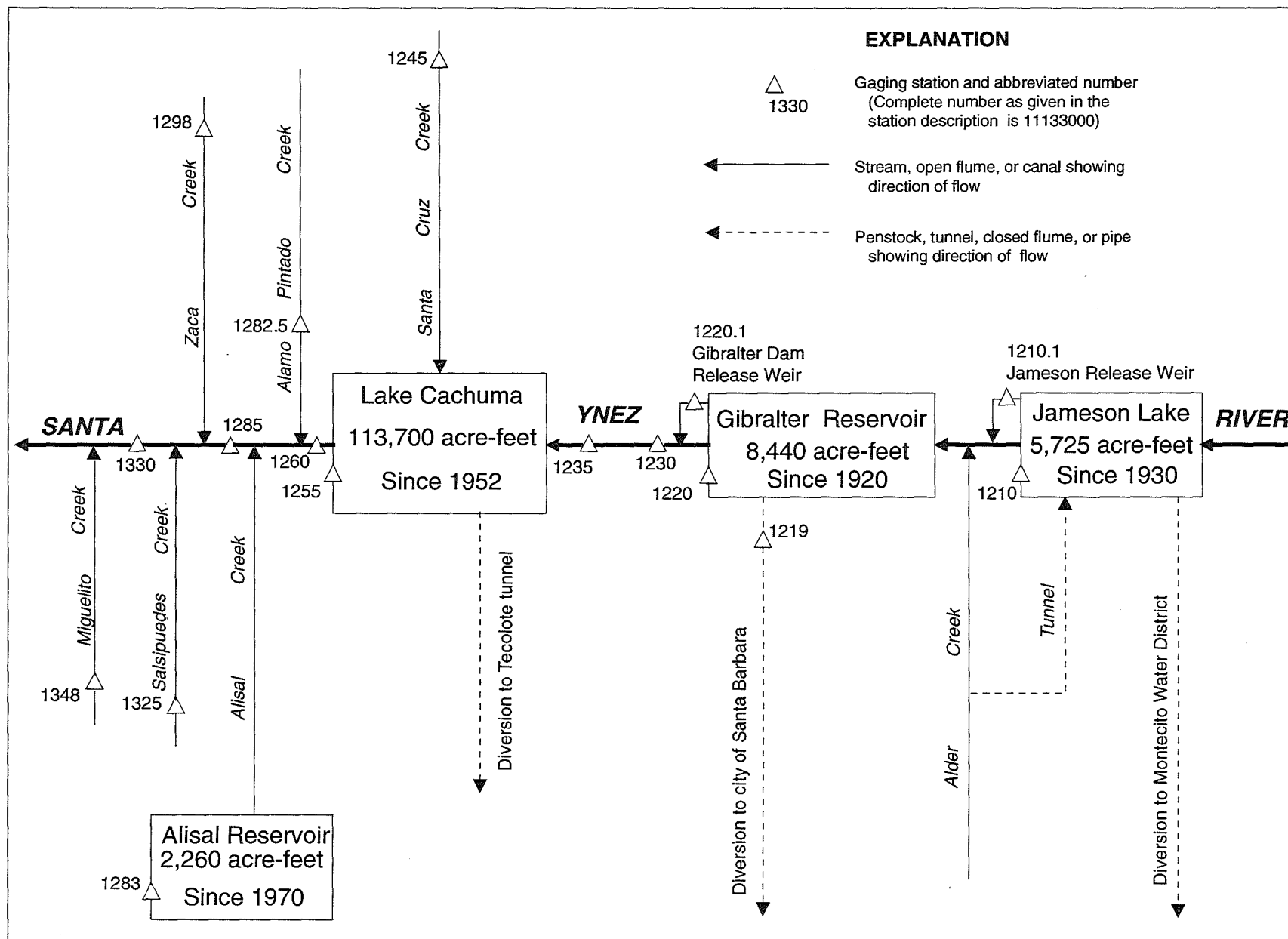


Figure 20. Diversions and storage in Santa Ynez River Basin.

11121000 SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CA

LOCATION.—Lat 34°29'32", long 119°30'25", in NE 1/4 NW 1/4 sec.28, T.5 N., R.25 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream face of Juncal Dam, 6.5 mi north of Carpinteria, and 8 mi northeast of Montecito.

DRAINAGE AREA.—13.9 mi², excludes area of Alder Creek.

PERIOD OF RECORD.—December 1930 to current year. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.—Two water-stage recorders. Datum of lake gage is 2,021.6 ft U.S. Bureau of Reclamation Datum or 2,000 ft above sea level. Supplementary gage and sharp-crested weir on outlet conduit of lake release, at different datum.

REMARKS.—Records of total inflow represent all water reaching Jameson Lake, including precipitation on the lake. Total inflow computed on basis of records of storage, diversion (draft) to city of Montecito, spill and release (station 11121010) to river, evaporation, and seepage. Records of net inflow exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on survey made in 1994. Lake capacity at spillway level, gage height 223.82 ft, 5,213 acre-ft. Dead storage, 32 acre-ft, below lowest outlet at gage height 139.0 ft included in these records. There is no regulation or diversion upstream from station. At times flow of Alder Creek, which enters Santa Ynez River 2 mi downstream from Juncal Dam, is diverted at elevation 2,250 ft through a tunnel to Jameson Lake and is included in these records. See schematic diagram of Santa Ynez River Basin.

COOPERATION.—Reservoir-operation records and related data provided by Montecito Water District.

AVERAGE DISCHARGE.—66 years (water years 1932–97), spill and release, 8.23 ft³/s, 5,960 acre-ft/yr.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (ft) ^a	Contents (acre-ft)	Change in contents (acre-ft)	Draft (acre-ft)	Spill and release (acre-ft)	Evapo- ration and seepage (acre-ft)	Total inflow (acre-ft)	Rain on reservoir (acre-ft)	Net inflow (acre-ft)
Sept. 30	2,213.60	4,060	---	---	---	---	---	---	---
Oct. 31	2,212.72	3,960	-100	170	0	23	93	47	46
Nov. 30	2,212.10	3,910	-50	119	0	7	76	1	75
Dec. 31	2,216.41	4,360	+450	110	0	4	564	75	489
CAL YR 1996	---	---	-310	1,848	1,456	338	3,332	360	2,972
Jan. 31	2,223.57	5,180	+820	89	0	2	911	50	861
Feb. 28	2,223.96	5,230	+50	71	746	9	876	1	875
Mar. 31	2,223.78	5,210	-20	131	248	35	394	0	394
Apr. 30	2,222.70	5,080	-130	175	0	45	90	0	90
May 31	2,220.92	4,870	-210	211	0	57	58	2	56
June 30	2,218.75	4,620	-250	224	0	52	26	0	26
July 31	2,216.40	4,360	-260	227	0	52	19	1	18
Aug. 31	2,213.72	4,070	-290	237	0	59	6	0	6
Sept. 30	2,211.20	3,810	-260	234	0	41	15	0	15
WTR YR 1997	---	---	-250	1,998	994	386	3,128	177	2,951

^a Elevation at 0800.

NOTE.—For months when inflow to the lake was small and other quantities were large, preliminary computations may indicated negative net inflow. This arises primarily from the difficulty of computing net inflow as the residual of several large quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

11122000 SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.—Lat 34°31'34", long 119°41'08", in NW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream face of Gibraltar Dam, and 7 mi north of Santa Barbara.

DRAINAGE AREA.—216 mi².

PERIOD OF RECORD.—April 1920 to current year. November 1903 to November 1918 (fragmentary) at river station at damsite; records not equivalent because records since April 1920 are based on operation of Gibraltar Reservoir, and since December 1930, Jameson Lake. Prior to October 1945, published as "Santa Ynez River near Santa Barbara."

REVISED RECORDS.—WSP 706: 1921–22. WSP 1041: 1944. WSP 1395: DA. WSP 1635: 1914, 15 (M). WDR CA-86-1: 1934–43.

GAGE.—Two water-stage recorders. Datum of gage is sea level. Supplementary gage and sharp-crested weir on diversion from reservoir at different datum. See WSP 1735 for history of changes on both gages prior to Oct. 1, 1955. Spill and release measured by station (11123000) downstream from dam.

REMARKS.—Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage, diversion (draft—station 11121900) to city of Santa Barbara, spill and release (station 11123000) to river, evaporation, and seepage. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on survey made in February 1989. Reservoir capacity at spillway level, elevation, 1,399.82 ft, 8,440 acre-ft. Lowest outlet at elevation 1,333.86 ft. Flow regulated by Jameson Lake (station 11121000) since December 1930. See schematic diagram of Santa Ynez River Basin.

COOPERATION.—Reservoir-operation records and related data provided by city of Santa Barbara.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

Date	Elevation (ft) ^a	Contents (acre-ft)	Change in contents (acre-ft)	Draft (acre-ft)	Spill and release (acre-ft)	Evaporation and seepage (acre-ft)	Total inflow (acre-ft)	Rain on reservoir (acre-ft)	Net inflow (acre-ft)
Sept. 30	1,391.03	6,310	---	---	---	---	---	---	---
Oct. 31	1,389.18	5,900	-410	487	0	39	116	0	116
Nov. 30	1,388.14	5,690	-210	352	0	11	153	32	121
Dec. 31	1,399.87	8,530	+2,840	356	2,790	15	6,001	162	5,839
CAL YR 1996	---	---	+3,410	3,664	14,259	1,235	22,568	552	21,500
Jan. 31	1,400.05	8,590	+60	249	19,900	3	20,212	182	20,030
Feb. 28	1,399.77	8,510	-80	274	5,350	28	5,572	3	5,569
Mar. 31	1,399.86	8,530	+20	477	1,370	41	1,908	0	1,908
Apr. 30	1,399.68	8,500	-30	528	219	40	757	0	757
May 31	1,397.44	7,880	-620	639	1.0	79	99	0	99
June 30	1,394.88	7,190	-690	499	0	691	1	0	1
July 31	1,393.63	6,900	-290	149	0	293	2	1	1
Aug. 31	1,391.07	6,320	-580	123	318	581	1	0	1
Sept. 30	1,390.25	6,130	-190	71	0	193	3	2	1
WTR YR 1997	---	---	-180	4,204	29,948	2,014	34,825	382	34,443

^a Elevation at 0800.

NOTE.—For months when inflow to the lake was small and other quantities were large, preliminary computations may indicated negative net inflow. This arises primarily from the difficulty of computing net inflow as the residual of several large quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.—Lat 34°31'28", long 119°41'11", in SW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., Santa Barbara County, Hydrologic Unit 18060010, on left bank 700 ft downstream from Gibraltar Dam and 7 mi north of Santa Barbara.

DRAINAGE AREA.—216 mi².

PERIOD OF RECORD.—April 1920 to current year. Monthly discharge only prior to October 1933. Daily records for water years 1934–43 in files of U.S. Geological Survey.

REVISED RECORDS.—WDR CA-86-1: 1934–43.

GAGE.—Two water-stage recorders. Datum of gage on main channel is 1,227 ft above sea level. Supplementary gage and sharp-crested weir on the release channel from Gibraltar Dam to river at different datum (station 11122010). See WSP 1735 for history of changes on both gages prior to May 20, 1958.

REMARKS.—Records fair. Flow regulated by Jameson Lake (station 11121000) and Gibraltar Reservoir (station 11122000). City of Santa Barbara diverted 3,990 acre-ft during current year from Gibraltar Reservoir; Montecito Water District diverted 1,821 acre-ft during current year from Jameson Lake. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 54,200 ft³/s, Jan. 25, 1969, gage height, 25.8 ft, from rating curve extended above 2,100 ft³/s on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 and 25.8 ft; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	66	226	43	10	.06	.00	.00	.00	.00
2	.00	.00	.00	303	212	40	6.5	.05	.00	.00	.00	.00
3	.00	.00	.00	433	195	40	5.4	.06	.00	.00	.00	.00
4	.00	.00	.00	213	177	26	6.2	.07	.00	.00	.00	.00
5	.00	.00	.00	161	147	28	6.6	.07	.00	.00	.01	.00
6	.00	.00	.00	126	135	35	7.0	.08	.00	.00	6.5	.00
7	.00	.00	.00	111	142	38	7.0	.07	.00	.00	7.7	.00
8	.00	.00	.00	85	114	36	6.3	.04	.00	.00	9.7	.00
9	.00	.00	.00	55	103	26	5.8	.03	.00	.00	10	.00
10	.00	.00	.13	68	100	21	5.4	.02	.00	.00	10	.00
11	.00	.00	.29	68	100	29	5.4	.01	.00	.00	10	.00
12	.00	.00	.21	66	95	30	5.8	.00	.00	.00	10	.00
13	.00	.00	.67	70	94	27	5.4	.00	.00	.00	10	.00
14	.00	.00	1.9	68	72	21	5.3	.00	.00	.00	10	.00
15	.00	.00	5.6	349	89	17	5.1	.00	.00	.00	10	.00
16	.00	.00	10	247	67	21	4.6	.00	.00	.00	10	.00
17	.00	.00	14	134	61	26	3.7	.00	.00	.00	10	.00
18	.00	.00	19	98	59	23	3.1	.00	.00	.00	10	.00
19	.00	.00	20	101	61	18	1.8	.00	.00	.00	11	.00
20	.00	.00	21	123	60	16	.87	.00	.00	.00	11	.00
21	.00	.00	21	126	49	15	.94	.00	.00	.00	7.6	.00
22	.00	.00	413	244	48	15	.79	.00	.00	.00	.12	.00
23	.00	.00	236	942	57	15	.56	.00	.00	.00	.01	.00
24	.00	.00	109	519	50	16	.33	.00	.00	.00	.00	.00
25	.00	.00	63	654	45	16	.14	.00	.00	.00	.00	.00
26	.00	.00	56	1610	46	14	.12	.00	.00	.00	.00	.00
27	.00	.00	66	1180	45	6.9	.12	.00	.00	.00	.00	.00
28	.00	.00	119	672	46	4.5	.11	.00	.00	.00	.00	.00
29	.00	.00	90	483	---	6.2	.08	.00	.00	.00	.00	.00
30	.00	.00	76	355	---	10	.06	.00	.00	.00	.00	.00
31	.00	---	67	304	---	13	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	1408.80	10034	2695	692.6	110.52	0.56	0.00	0.00	153.64	0.00
MEAN	.000	.000	45.4	324	96.3	22.3	3.68	.018	.000	.000	4.96	.000
MAX	.00	.00	413	1610	226	43	10	.08	.00	.00	11	.00
MIN	.00	.00	.00	55	45	4.5	.06	.00	.00	.00	.00	.00
AC-FT	.00	.00	2790	19900	5350	1370	219	1.1	.00	.00	305	.00

SANTA YNEZ RIVER BASIN

345

11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.70	6.37	25.8	131	221	238	101	25.1	6.64	2.98	1.34	.38
MAX	32.6	336	607	2077	2189	1712	1168	258	82.9	43.6	24.1	2.92
(WY)	1984	1966	1967	1969	1969	1983	1958	1983	1983	1983	1995	1958
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1960	1959	1944	1938	1949	1948	1948	1940	1960	1960	1960	1960

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1934 - 1997	
ANNUAL TOTAL	7187.93		15095.12			
ANNUAL MEAN	19.6		41.4		62.5	
HIGHEST ANNUAL MEAN					437	1969
LOWEST ANNUAL MEAN					.000	1961
HIGHEST DAILY MEAN	1150	Feb 20	1610	Jan 26	26600	Jan 25 1969
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1	.00	Dec 16 1933
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Dec 16 1933
INSTANTANEOUS PEAK FLOW			2520	Jan 26	54200	Jan 25 1969
INSTANTANEOUS PEAK STAGE			11.99	Jan 26	25.80	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	14260		29940		45280	
10 PERCENT EXCEEDS	47		100		75	
50 PERCENT EXCEEDS	.00		.00		.08	
90 PERCENT EXCEEDS	.00		.00		.00	

11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°32'37", long 119°51'50", in San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.3 mi downstream from Los Laureles Canyon Creek, 10 mi downstream from Gibraltar Reservoir, and 13.3 mi east of Santa Ynez.

DRAINAGE AREA.—277 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—April 1947 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder. Datum of gage is 787.8 ft above sea level.

REMARKS.—Records good. Flow regulated by Jameson Lake and Gibraltar Reservoir (stations 11121000 and 11122000). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station. Satellite telemeter at station. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 67,500 ft³/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft³/s on basis of peak flow for station below Gibraltar Dam plus tributary inflow; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.09	1.3	66	345	57	18	3.1	.00	.00	.00	.00
2	.00	.08	1.4	184	267	54	17	2.6	.00	.00	.00	.00
3	.00	.08	1.4	422	257	52	15	2.1	.00	.00	.00	.00
4	.00	.06	1.4	303	227	51	13	2.6	.00	.00	.00	.00
5	.00	.07	1.2	197	206	38	13	2.3	.00	.00	.00	.00
6	.00	.07	1.2	147	179	41	13	2.0	.00	.00	.00	.00
7	.00	.02	1.2	124	175	46	13	1.8	.00	.00	.00	.00
8	.00	.06	1.2	115	160	46	12	1.8	.00	.00	.00	.00
9	.00	.05	1.1	71	142	45	12	1.6	.00	.00	.00	.00
10	.00	.12	1.88	56	132	35	11	1.1	.00	.00	.00	.00
11	.00	.11	2.13	64	129	33	11	1.5	.00	.00	.00	.00
12	.00	.12	2.70	61	123	37	10	1.8	.00	.00	.00	.00
13	.00	.22	3.39	66	121	37	9.9	1.6	.00	.00	.00	.00
14	.00	.18	2.27	66	114	35	9.6	.65	.00	.00	.00	.00
15	.00	.19	2.22	147	107	30	9.3	.42	.00	.00	.00	.00
16	.00	.30	2.21	381	91	28	8.8	.29	.00	.00	.00	.00
17	.00	.37	2.24	188	88	29	8.6	.11	.00	.00	.00	.00
18	.00	.28	2.25	106	78	31	8.3	.00	.00	.00	.00	.00
19	.00	.29	2.27	99	76	29	7.7	.00	.00	.00	.00	.00
20	.00	.38	2.28	108	75	28	7.4	.00	.00	.00	.00	.00
21	.00	.72	2.28	119	72	25	6.9	.10	.00	.00	.00	.00
22	.00	4.5	3.29	168	63	24	6.1	.03	.00	.00	.00	.00
23	.00	1.9	4.75	919	64	24	5.3	.45	.00	.00	.00	.00
24	.00	1.5	2.14	669	69	23	4.4	.03	.00	.00	.00	.00
25	.00	1.4	1.11	597	61	23	4.1	.07	.00	.00	.00	.00
26	.00	1.4	2.72	1920	59	22	4.0	.32	.00	.00	.00	.00
27	.00	1.4	2.74	1630	59	21	3.7	.00	.00	.00	.00	.00
28	.00	1.3	2.94	898	59	18	3.5	.00	.00	.00	.00	.00
29	5.6	1.3	1.12	688	---	14	3.4	.07	.00	.00	.00	.00
30	11	1.3	2.87	533	---	13	3.3	.00	.00	.00	.00	.00
31	.24	---	2.74	437	---	15	---	.09	---	.00	.00	---
TOTAL	16.84	19.86	2375.3	11549	3598	1004	272.3	28.53	0.00	0.00	0.00	0.00
MEAN	.54	.66	76.6	373	129	32.4	9.08	.92	.000	.000	.000	.000
MAX	11	4.5	4.75	1920	345	57	18	3.1	.00	.00	.00	.00
MIN	.00	.02	1.2	56	59	13	3.3	.00	.00	.00	.00	.00
AC-FT	33	39	4710	22910	7140	1990	540	57	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.50	8.08	37.2	196	301	289	122	33.7	8.70	2.38	.81	.28
MAX	18.8	315	608	2755	2682	2525	1480	320	109	30.3	10.1	4.21
(WY)	1984	1966	1967	1969	1969	1995	1958	1983	1983	1983	1995	1983
MIN	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000
(WY)	1948	1948	1948	1948	1948	1990	1951	1951	1948	1948	1947	1947

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1947 - 1997			
ANNUAL TOTAL	10836.05				18863.83							
ANNUAL MEAN	29.6				51.7				82.3			
HIGHEST ANNUAL MEAN									554			
LOWEST ANNUAL MEAN									.013			
HIGHEST DAILY MEAN	1640				Feb 21				33700			
LOWEST DAILY MEAN	.00				Sep 1				Oct 1			
ANNUAL SEVEN-DAY MINIMUM	.00				Sep 1				Oct 1			
INSTANTANEOUS PEAK FLOW									3020			
INSTANTANEOUS PEAK STAGE									7.50			
ANNUAL RUNOFF (AC-FT)	21490				37420				59590			
10 PERCENT EXCEEDS	68				122				86			
50 PERCENT EXCEEDS	1.3				.30				.04			
90 PERCENT EXCEEDS	.00				.00				.00			

WATER-QUALITY RECORDS

CHEMICAL DATA: Water years 1973–89, 1991 to current year.

[illegible]

NOV										
21...	1515	0.87	1230	7.6	17.0	--	--	--	--	--
FEB										
10...	1700	5.3	982	8.4	12.0	470	110	47	42	16
MAY										
13...	1010	1.7	1150	7.6	19.5	--	--	--	--	--

[illegible][illegible]

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°35'48", long 119°54'28", in San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 0.6 mi downstream from Pine Canyon and 9.9 mi east of Santa Ynez.

DRAINAGE AREA.—74.0 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder. Datum of gage is 783.38 ft above sea level. See WSP 1735 for history of changes prior to Sept. 27, 1952. Sept. 27, 1952, to June 24, 1969, at datum 3.25 ft higher.

REMARKS.—Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,050 ft³/s, Feb. 24, 1969, gage height, 14.45 ft, from floodmark, present datum, from rating curve extended above 2,500 ft³/s on basis of slope-area measurement at gage height 14.16 ft; no flow at times since 1953.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 160 ft³/s on basis of slope-area measurement at gage height 12.10 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 22	0642	186	8.08	Jan. 16	unknown	unknown	unknown
Dec. 10	2339	732	9.55	Jan. 23	unknown	2,220	10.43
Dec. 22	1000	1,270	10.39	Jan. 26	2015	334	8.63
Jan. 3	0200	383	8.77				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	2.4	62	90	27	14	e6.3	1.7	.19	.00	.00
2	.00	.00	2.4	198	83	26	14	e6.1	1.7	.13	.00	.00
3	.00	.00	2.3	196	79	25	14	e5.9	1.6	.11	.00	.00
4	.00	.00	2.2	101	76	25	14	e5.7	1.6	.10	.00	.00
5	.00	.00	2.3	56	71	24	14	e5.5	1.7	.09	.00	.00
6	.00	.00	2.4	87	66	23	14	e5.3	1.9	.07	.00	.00
7	.00	.00	2.5	74	63	23	14	e5.1	1.9	.07	.00	.00
8	.00	.00	2.4	e70	60	22	13	e5.0	1.9	.07	.00	.00
9	.00	.00	4.4	e40	56	22	12	e4.8	2.0	.07	.00	.00
10	.00	.00	171	e48	55	21	13	e4.6	1.9	.07	.00	.00
11	.00	.00	302	e48	53	20	13	e4.5	1.7	.07	.00	.00
12	.00	.00	119	e45	50	20	13	e4.3	1.5	.06	.00	.00
13	.00	.00	56	e49	48	19	e12	e4.2	1.5	.07	.00	.00
14	.00	.00	35	e50	46	19	e12	3.7	1.4	.09	.00	.00
15	.00	.03	26	e100	44	19	e11	3.5	1.4	.08	.00	.00
16	.00	.09	22	e200	43	18	e11	3.3	1.4	.08	.00	.00
17	.00	.15	20	e53	42	18	e10	3.2	1.2	.08	.00	.00
18	.00	.41	18	e50	42	18	e10	3.3	.97	.08	.00	.00
19	.00	.66	16	e53	40	17	e9.5	3.2	.82	.08	.00	.00
20	.00	.67	15	e57	38	17	e9.0	3.0	.71	.08	.00	.00
21	.00	18	14	e60	37	16	e9.0	2.9	.67	.08	.00	.00
22	.00	94	234	e170	36	16	e8.5	2.8	.62	.08	.00	.00
23	.00	24	81	e450	36	16	e8.2	2.8	.57	.08	.00	.00
24	.00	9.8	47	e70	35	16	e8.1	2.8	.53	.07	.00	.00
25	.00	6.0	37	159	34	16	e7.8	2.9	.41	.06	.00	.00
26	.00	4.4	31	207	32	15	e7.5	2.8	.33	.05	.00	.00
27	.00	3.5	45	177	30	15	e7.2	2.5	.29	.04	.00	.00
28	.00	3.1	48	137	29	15	e7.0	2.3	.28	.03	.00	.00
29	.01	2.7	34	118	---	15	e6.8	2.2	.22	.01	.00	.00
30	.09	2.5	30	105	---	14	e6.6	2.0	.18	.00	.00	.00
31	.00	---	35	97	---	14	---	1.9	---	.00	.00	---
TOTAL	0.10	170.01	1459.3	3387	1414	591	323.2	118.4	34.60	2.24	0.00	0.00
MEAN	.003	5.67	47.1	109	50.5	19.1	10.8	3.82	1.15	.072	.000	.000
MAX	.09	94	302	450	90	27	14	6.3	2.0	.19	.00	.00
MIN	.00	.00	2.2	40	29	14	6.6	1.9	.18	.00	.00	.00
AC-FT	.2	337	2890	6720	2800	1170	641	235	69	4.4	.00	.00

e Estimated.

SANTA YNEZ RIVER BASIN

349

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.56	3.08	11.5	38.6	64.2	58.7	33.5	13.1	5.34	1.89	.76	.42
MAX	12.4	50.4	205	510	743	355	378	98.1	40.3	20.5	9.93	4.64
(WY)	1984	1966	1967	1969	1969	1995	1958	1983	1983	1983	1983	1983
MIN	.000	.000	.000	.000	.10	.23	.11	.000	.000	.000	.000	.000
(WY)	1954	1954	1954	1963	1951	1948	1961	1961	1961	1959	1953	1953

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1942 - 1997		
ANNUAL TOTAL	6449.28			7499.85					
ANNUAL MEAN	17.6			20.5			19.1		
HIGHEST ANNUAL MEAN							134		
LOWEST ANNUAL MEAN							.066		
HIGHEST DAILY MEAN	876			Feb 20			5000		
LOWEST DAILY MEAN	.00			Aug 24			.00		
ANNUAL SEVEN-DAY MINIMUM	.00			Aug 24			.00		
INSTANTANEOUS PEAK FLOW				2220			Jan 23		
INSTANTANEOUS PEAK STAGE				10.43			Jan 23		
ANNUAL RUNOFF (AC-FT)	12790			14880			13810		
10 PERCENT EXCEEDS	42			56			32		
50 PERCENT EXCEEDS	3.8			2.4			1.1		
90 PERCENT EXCEEDS	.00			.00			.00		

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1991 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11125500 LAKE CACHUMA NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°34'57", long 119°58'47", in Lomas de la Purification Grant, Santa Barbara County, Hydrologic Unit 18060010, at Bradbury Dam on Santa Ynez River, on upstream face near left end of dam, and 6.1 mi east of Santa Ynez.

DRAINAGE AREA.—417 mi².

PERIOD OF RECORD.—November 1952 to current year. Prior to October 1985, only monthend elevations and contents and total diversions published. November 1952 to October 1960, published as "Cachuma Reservoir near Santa Ynez."

GAGE.—Water-stage recorder. Datum of gage is sea level (U.S. Bureau of Reclamation benchmark). Prior to Oct. 1, 1965, nonrecording gage.

REMARKS.—Reservoir is formed by earthfill dam. Storage began November 1952. Dead storage below outlet gage to river, elevation, 600 ft, 531 acre-ft, included in contents. Capacity below sill of inlet to Tecolote Tunnel, elevation, 660 ft, 26,771 acre-ft; below spillway level, elevation, 720 ft, 113,716 acre-ft; and below top of four radial gates, elevation, 750 ft, 190,409 acre-ft. Water is released from outlet to Santa Ynez River to satisfy downstream water rights. Water diverted to Tecolote Tunnel for use by city of Santa Barbara, nearby communities, Santa Ynez River Water Conservation District, and Cachuma Recreation Area. Records, including extremes, represent total contents at 0800 hours. See schematic diagram of Santa Ynez River Basin.

COOPERATION.—Reservoir elevation, contents, and diversion figures provided by U.S. Bureau of Reclamation. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 221,100 acre-ft, Feb. 24, 1969, elevation, 755.11 ft; minimum since initial filling in April 1958, 27,681 acre-ft, Feb. 27, 1991, elevation 661.06 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.—Maximum contents, 160,739 acre-ft, Mar. 24-27, elevation, 739.63 ft; minimum, 115,128 acre-ft, Dec. 9, elevation, 720.66 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on surveys by U.S. Bureau of Reclamation)

680	47,346	710	93,627	740	161,730
690	60,576	720	113,716	750	190,409
700	75,972	730	136,306	760	222,431

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120326	116463	115449	123512	151484	159882	160632	158072	154231	149946	141101	131999
2	120193	116419	115449	124231	152156	159936	160605	157940	154100	149767	140760	131741
3	120040	116311	115407	125293	152751	160043	160605	157887	153943	149587	140419	131506
4	119908	116268	115342	126407	153320	160123	160525	157781	153786	149383	140053	131250
5	119776	116224	115300	127113	153838	160204	160471	157675	153605	149204	139736	130995
6	119667	116159	115235	127619	154310	160230	160418	157543	153450	148999	139371	130716
7	119535	116116	115214	128055	154728	160284	160364	157357	153320	148794	139030	130460
8	119382	116051	115150	128377	155174	160337	160311	157251	153217	148590	138665	130204
9	119272	115964	115128	128676	155592	160364	160177	157092	153087	148414	138304	129902
10	119118	115921	115364	128906	155959	160445	160150	156960	152958	148287	137967	129576
11	118987	115856	117026	129136	156352	160445	160096	156854	152803	148110	137630	129274
12	118833	115792	117957	129390	156669	160445	160043	156722	152674	147782	137317	128998
13	118680	115728	118263	129716	156960	160471	159989	156589	152467	147453	137028	128699
14	118548	115663	118461	130018	157251	160471	159936	156457	152337	147125	136739	128446
15	118461	115621	118570	130414	157516	160498	159855	156352	152182	146771	136450	128193
16	118132	115514	118636	131297	157781	160552	159775	156247	152001	146417	136187	127941
17	117957	115428	118680	132023	158019	160578	159668	156116	151872	146039	135997	127734
18	117740	115364	118702	132517	158205	160578	159534	156037	151716	145690	135735	127550
19	117524	115257	118746	132870	158416	160659	159480	155907	151561	145365	135497	127343
20	117351	115235	118812	133293	158575	160659	159427	155802	151432	144990	135236	127113
21	117156	115342	118855	133763	158734	160686	159373	155671	151277	144641	135022	126907
22	117026	115621	119031	134308	158946	160686	159293	155566	151173	144291	134760	126657
23	116831	115749	120570	135379	159106	160712	159132	155462	151071	143992	134522	126407
24	116679	115792	121191	137413	159239	160739	158999	155357	150969	143692	134261	126134
25	116484	115749	121569	138762	159373	160739	158893	155252	150841	143395	133999	125907
26	116332	115728	121879	140687	159507	160739	158787	155147	150713	143074	133740	125657
27	116268	115706	122123	144516	159641	160739	158655	155016	150585	142754	133411	125430
28	116138	115642	122367	146897	159748	160712	158522	154886	150432	142433	133128	125248
29	116094	115578	122726	148515	---	160712	158364	154728	150278	142087	132823	124998
30	116636	115514	123018	149741	---	160686	158258	154571	150125	141791	132517	124771
31	116571	---	123287	150713	---	160659	---	154414	---	141446	132258	---
MAX	120326	116463	123287	150713	159748	160739	160632	158072	154231	149946	141101	131999
MIN	116094	115235	115128	123512	151484	159882	158258	154414	150125	141446	132258	124771
a	721.33	720.84	724.38	735.81	739.26	739.60	738.70	737.24	735.58	732.12	728.29	725.04
b	-3932	-1057	+7773	+27426	+9035	+911	-2401	-3844	-4289	-8679	-9188	-7487
c	2395	1200	961	984	1356	2198	2484	2563	2564	3208	3334	3538

CAL YR 1996 MAX 151794 MIN 115128 b -5297

WTR YR 1997 MAX 160739 MIN 115128 b +4268

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversion, in acre-feet, to Tecolote Tunnel.

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°35'21", long 119°59'16", in Canada de los Pinos Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 0.7 mi downstream from Bradbury Dam, and 5.5 mi southeast of Santa Ynez.

DRAINAGE AREA.—422 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—December 1928 to September 1931, October 1932 to September 1976, May 1994 to current year (seasonal records only).

GAGE.—Water-stage recorder. Datum of gage is 545.66 ft above sea level (Bureau of Reclamation benchmark). Prior to Oct. 1, 1955, at site 2.5 mi downstream at different datum. Oct. 1, 1955, to Sept. 16, 1969, at site 0.4 mi downstream at datum 7.2 ft higher.

REMARKS.—Records poor, no records computed above 250 ft³/s. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (stations 11121000, 11122000, 11125500). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and to the Santa Ynez Valley for municipal supply. Some water pumped from wells along river banks for irrigation. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 79,000 ft³/s Jan. 25, 1969, gage height, 22.00 ft, from floodmark, present datum, on basis of computation of maximum flow over dam; no flow at times in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	18	---	---	---	---	12	4.0	4.2	1.3	81	44
2	33	13	---	---	---	---	11	3.3	3.5	8.2	84	45
3	30	11	---	---	---	---	16	1.2	3.4	1.4	85	45
4	22	6.8	---	---	---	---	16	.87	3.4	1.4	84	44
5	22	5.4	---	---	---	---	12	1.6	3.3	.98	83	44
6	23	4.8	---	---	---	---	5.4	1.5	3.6	.96	84	45
7	24	4.6	---	---	---	---	2.7	1.3	3.3	.91	88	47
8	24	4.2	---	---	---	---	2.1	1.3	4.8	.65	87	48
9	26	3.9	---	---	---	---	3.5	1.7	e3.5	.51	90	60
10	30	3.7	---	---	---	---	3.2	1.5	2.2	.86	96	60
11	29	4.0	---	---	---	---	2.7	1.6	1.4	30	95	61
12	30	3.6	---	---	---	---	4.2	1.5	1.3	66	75	57
13	29	3.8	---	---	---	---	2.8	e4.0	1.9	68	72	43
14	31	3.7	---	---	---	---	2.5	3.1	4.0	67	72	44
15	49	3.6	---	---	---	---	3.5	2.8	7.2	65	66	37
16	83	4.1	---	---	---	---	4.4	3.1	6.9	67	62	32
17	75	3.5	---	---	---	---	6.8	3.1	2.8	70	65	30
18	75	3.9	---	---	---	---	12	2.8	1.9	71	63	23
19	76	3.1	---	---	---	---	13	3.3	1.6	72	63	25
20	66	2.8	---	---	---	---	14	3.5	1.4	71	65	26
21	58	---	---	---	---	---	13	4.0	1.4	71	64	34
22	49	---	---	---	---	---	15	3.5	1.2	71	60	55
23	42	---	---	---	---	---	16	3.3	1.1	73	61	54
24	38	---	---	---	---	---	12	3.5	1.2	73	56	53
25	34	---	---	---	---	---	5.2	4.1	1.1	73	55	56
26	31	---	---	---	---	---	13	4.8	1.2	76	62	53
27	25	---	---	---	---	---	15	4.3	1.1	75	69	53
28	27	---	---	---	---	---	15	3.8	.90	77	71	53
29	39	---	---	---	---	---	11	3.8	1.2	79	60	54
30	43	---	---	---	---	---	4.0	3.9	.75	81	47	59
31	26	---	---	---	---	---	---	4.2	---	82	45	---
TOTAL	1225	---	---	---	---	---	269.0	90.27	76.75	1495.17	2210	1384
MEAN	39.5	---	---	---	---	---	8.97	2.91	2.56	48.2	71.3	46.1
MAX	83	---	---	---	---	---	16	4.8	7.2	82	96	61
MIN	22	---	---	---	---	---	2.1	.87	.75	.51	45	23
AC-FT	2430	---	---	---	---	---	534	179	152	2970	4380	2750

e Estimated.

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	954	926
2	---	---	---	---	---	---	---	---	---	---	939	926
3	---	---	---	---	---	---	---	---	---	---	957	928
4	---	---	---	---	---	---	---	---	---	---	938	927
5	---	---	---	---	---	---	---	---	---	---	936	923
6	---	---	---	---	---	---	---	---	---	---	940	919
7	---	---	---	---	---	---	---	---	---	---	949	922
8	---	---	---	---	---	---	---	---	---	---	964	927
9	---	---	---	---	---	---	---	---	---	---	943	925
10	---	---	---	---	---	---	---	---	---	---	950	929
11	---	---	---	---	---	---	---	---	---	---	964	929
12	---	---	---	---	---	---	---	---	931	920	942	929
13	---	---	---	---	---	---	---	---	930	919	945	930
14	---	---	---	---	---	---	---	---	939	920	945	931
15	---	---	---	---	---	---	---	---	936	922	942	930
16	---	---	---	---	---	---	---	---	992	924	946	931
17	---	---	---	---	---	---	---	---	935	924	944	935
18	---	---	---	---	---	---	---	---	933	923	948	937
19	---	---	---	---	---	---	---	---	947	924	951	938
20	---	---	---	---	---	---	---	---	939	927	947	932
21	---	---	---	---	---	---	---	---	938	927	944	930
22	---	---	---	---	---	---	---	---	946	927	952	938
23	---	---	---	---	---	---	---	---	959	926	955	941
24	---	---	---	---	---	---	---	---	937	928	954	945
25	---	---	---	---	---	---	---	---	951	925	958	947
26	---	---	---	---	---	---	---	---	936	927	975	948
27	---	---	---	---	---	---	---	---	939	906	959	947
28	---	---	---	---	---	---	---	---	941	926	961	949
29	---	---	---	---	---	---	---	---	---	---	961	951
30	---	---	---	---	---	---	---	---	---	---	957	949
31	---	---	---	---	---	---	---	---	---	---	956	949
MONTH	---	---	---	---	---	---	---	---	---	---	975	919
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	957	944	946	936	941	930	923	903	930	910	925	912
2	962	946	952	934	943	924	926	906	924	908	924	912
3	966	948	946	936	942	920	922	908	927	914	931	913
4	955	945	954	938	946	920	928	909	925	913	924	914
5	957	945	949	937	937	910	935	917	924	911	932	913
6	958	944	946	932	944	925	929	915	925	911	934	916
7	955	947	947	933	939	922	929	910	926	912	933	923
8	959	948	947	930	949	922	928	914	924	913	937	917
9	954	947	947	935	941	927	933	915	924	914	929	916
10	960	946	949	923	936	920	930	915	927	915	934	916
11	960	948	946	936	937	925	923	913	924	911	932	914
12	960	948	947	937	938	919	924	908	921	908	934	919
13	962	948	953	937	936	921	927	910	924	907	939	923
14	956	948	948	934	944	928	923	909	925	907	949	928
15	958	946	945	935	937	929	921	909	922	907	948	933
16	955	944	948	933	940	928	921	908	919	908	945	930
17	953	944	947	936	940	928	919	908	922	909	946	937
18	949	941	944	934	944	929	919	907	921	907	950	926
19	949	940	953	937	942	930	918	907	920	910	935	916
20	951	939	949	928	940	920	917	909	923	908	934	914
21	951	938	939	927	936	918	918	907	920	908	933	916
22	950	938	942	927	936	910	920	911	922	906	931	916
23	951	938	940	927	929	910	924	916	926	906	930	916
24	947	935	940	926	931	910	926	917	920	908	924	913
25	954	936	938	923	933	912	925	914	928	907	929	915
26	958	947	942	920	932	915	923	913	922	907	930	915
27	953	941	941	925	931	916	924	913	922	908	930	915
28	951	935	940	926	931	913	924	912	920	907	932	915
29	949	936	942	922	929	913	928	911	923	909	930	915
30	948	936	944	925	925	909	920	911	922	909	931	914
31	---	---	939	928	---	---	921	909	922	912	---	---
MONTH	966	935	954	920	949	909	935	903	930	906	950	912

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	---	---	12.5	12.5
2	---	---	---	---	---	---	---	---	---	---	12.5	12.5
3	---	---	---	---	---	---	---	---	---	---	13.5	13.5
4	---	---	---	---	---	---	---	---	---	---	12.5	12.5
5	---	---	---	---	---	---	---	---	---	---	13.0	13.0
6	---	---	---	---	---	---	---	---	---	---	13.0	13.0
7	---	---	---	---	---	---	---	---	---	---	13.5	13.5
8	---	---	---	---	---	---	---	---	---	---	13.5	13.5
9	---	---	---	---	---	---	---	---	---	---	14.0	14.0
10	---	---	---	---	---	---	---	---	---	---	14.0	14.0
11	---	---	---	---	---	---	---	---	---	---	15.0	15.0
12	---	---	---	---	---	---	---	---	13.0	13.0	15.0	15.0
13	---	---	---	---	---	---	---	---	12.5	12.5	14.5	14.5
14	---	---	---	---	---	---	---	---	12.5	12.5	14.5	14.5
15	---	---	---	---	---	---	---	---	12.5	12.5	14.5	14.5
16	---	---	---	---	---	---	---	---	13.0	13.0	15.5	15.5
17	---	---	---	---	---	---	---	---	13.0	13.0	15.0	15.0
18	---	---	---	---	---	---	---	---	12.5	12.5	15.5	15.5
19	---	---	---	---	---	---	---	---	12.5	12.5	16.0	16.0
20	---	---	---	---	---	---	---	---	13.5	13.5	16.0	16.0
21	---	---	---	---	---	---	---	---	12.5	12.5	16.0	16.0
22	---	---	---	---	---	---	---	---	13.0	13.0	16.0	16.0
23	---	---	---	---	---	---	---	---	13.0	13.0	16.5	16.5
24	---	---	---	---	---	---	---	---	13.0	13.0	16.0	16.0
25	---	---	---	---	---	---	---	---	12.0	12.0	16.5	16.5
26	---	---	---	---	---	---	---	---	13.0	13.0	16.5	16.5
27	---	---	---	---	---	---	---	---	13.5	13.5	17.0	17.0
28	---	---	---	---	---	---	---	---	12.5	12.5	16.5	16.5
29	---	---	---	---	---	---	---	---	---	---	16.0	16.0
30	---	---	---	---	---	---	---	---	---	---	15.5	15.5
31	---	---	---	---	---	---	---	---	---	---	16.0	16.0
MONTH	---	---	---	---	---	---	---	---	---	---	17.0	12.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	15.0	15.0	15.0	19.5	19.5	18.0	18.0	16.0	16.0	15.5	15.5
2	15.0	15.0	14.5	14.5	19.5	19.5	16.5	16.5	15.5	15.5	15.5	15.5
3	14.0	14.0	15.0	15.0	19.5	19.5	15.0	15.0	16.0	16.0	15.5	15.5
4	14.5	14.5	16.5	16.5	19.5	19.5	18.5	18.5	16.0	16.0	15.5	15.5
5	15.5	15.5	16.5	16.5	19.5	19.5	19.5	19.5	16.0	16.0	15.5	15.5
6	14.5	14.5	17.0	17.0	18.0	18.0	19.5	19.5	15.5	15.5	15.5	15.5
7	14.5	14.5	17.0	17.0	19.0	19.0	20.5	20.5	16.0	16.0	15.5	15.5
8	15.5	15.5	18.0	18.0	19.5	19.5	19.5	19.5	16.0	16.0	15.5	15.5
9	14.5	14.5	17.5	17.5	18.0	18.0	19.5	19.5	15.5	15.5	15.5	15.5
10	14.0	14.0	18.0	18.0	19.0	19.0	19.5	19.5	15.5	15.5	15.5	15.5
11	15.5	15.5	18.0	18.0	19.0	19.0	16.0	16.0	15.5	15.5	15.5	15.5
12	15.0	15.0	18.0	18.0	19.5	19.5	15.5	15.5	15.5	15.5	15.5	15.5
13	16.0	16.0	18.0	18.0	18.0	18.0	15.5	15.5	15.5	15.5	15.5	15.5
14	16.0	16.0	18.0	18.0	17.5	17.5	15.5	15.5	15.5	15.5	15.5	15.5
15	16.0	16.0	18.0	18.0	16.0	16.0	15.5	15.5	15.5	15.5	15.5	15.5
16	16.0	16.0	19.0	19.0	16.5	16.5	15.5	15.5	15.5	15.5	15.0	15.0
17	16.5	16.5	19.5	19.5	17.5	17.5	15.5	15.5	15.5	15.5	15.5	15.5
18	16.0	16.0	18.5	18.5	19.0	19.0	15.5	15.5	15.5	15.5	15.5	15.5
19	16.0	16.0	19.5	19.5	19.5	19.5	15.5	15.5	15.5	15.5	15.5	15.5
20	15.5	15.5	19.5	19.5	20.0	20.0	15.5	15.5	16.0	16.0	14.5	14.5
21	16.0	16.0	19.0	19.0	19.5	19.5	15.5	15.5	15.5	15.5	15.0	15.0
22	16.0	16.0	19.0	19.0	18.5	18.5	15.5	15.5	15.5	15.5	15.0	15.0
23	15.5	15.5	18.0	18.0	18.0	18.0	16.0	16.0	15.5	15.5	15.5	15.5
24	14.5	14.5	18.5	18.5	18.0	18.0	15.5	15.5	15.5	15.5	15.5	15.5
25	15.0	15.0	18.0	18.0	19.0	19.0	15.5	15.5	15.5	15.5	16.0	16.0
26	15.5	15.5	17.5	17.5	19.5	19.5	15.5	15.5	15.5	15.5	15.5	15.5
27	16.0	16.0	19.0	19.0	19.5	19.5	15.5	15.5	15.5	15.5	15.5	15.5
28	14.5	14.5	19.5	19.5	19.0	19.0	15.5	15.5	15.5	15.5	15.5	15.5
29	15.0	15.0	20.5	20.5	19.0	19.0	16.0	16.0	15.5	15.5	15.5	15.5
30	15.0	15.0	19.5	19.5	19.0	19.0	16.0	16.0	15.0	15.0	15.5	15.5
31	---	---	20.5	20.5	---	---	15.5	15.5	15.5	15.5	---	---
MONTH	16.5	14.0	20.5	14.5	20.0	16.0	20.5	15.0	16.0	15.0	16.0	14.5

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA

LOCATION.—Lat 34°37'06", long 120°07'11", in NW 1/4 NW 1/4 sec.11, T.6 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at downstream side of bridge on Alamo Pintado Road, 1.5 mi northeast of Solvang.

DRAINAGE AREA.—29.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1970 to September 1985, October 1989 to September 1992, October 1994 to current year. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 540.49 ft, Santa Barbara County datum.

REMARKS.—Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 900 ft³/s, Mar. 1, 1983, gage height, 6.10 ft, from rating curve extended above 70 ft³/s on basis of slope-area measurements at gage heights 4.90 ft and 5.51 ft; maximum gage height, 6.80 ft, Feb. 9, 1978, from floodmark; no flow most of each year.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 10.32 ft, from information provided by Santa Barbara County Flood Control District.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 22	1100	180	3.09				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.28	.68	.67	.71	.97	e.30	e1.0	2.3	.88	1.6	.94
2	1.1	.16	.68	5.0	5.8	.80	e.40	e1.0	.59	.83	1.5	.85
3	1.2	.20	1.6	8.2	1.1	3.1	e.50	e.94	.04	.77	1.4	.55
4	1.2	.15	.61	.67	.32	e3.0	e.60	e.90	.03	.74	1.2	.47
5	.42	.32	1.0	.40	.22	e2.8	e.75	e.86	2.5	.68	1.1	.41
6	.64	.43	.78	.55	.22	e2.7	e.90	1.1	4.3	.65	1.0	.64
7	.42	.22	.67	.74	.25	e2.6	e1.0	1.1	4.1	.69	.98	.80
8	.37	.29	.76	.59	.26	e2.4	e1.1	1.1	3.9	.14	.87	.88
9	.42	.25	1.3	.38	.67	e2.3	e1.2	1.2	3.7	.38	.85	.96
10	.50	.27	2.9	6.5	.37	e2.2	e1.7	1.2	3.5	.54	.77	1.2
11	.48	.32	2.8	49	.79	e2.0	e2.0	1.1	3.3	.49	.73	1.3
12	.81	.32	.18	49	1.2	e1.9	e1.9	.98	3.2	.74	1.6	7.0
13	4.4	.37	.00	.53	.85	e1.8	e1.9	.99	3.0	.83	2.2	3.5
14	3.7	.46	.00	.27	1.4	e1.7	e1.9	.76	2.6	1.3	2.5	3.4
15	2.0	.53	.00	8.5	1.5	e1.6	e1.8	2.3	2.4	.75	4.0	3.2
16	2.6	.53	.00	10	1.3	1.5	e1.8	.81	2.3	.51	8.4	3.2
17	2.1	.67	.00	1.9	1.5	1.6	e1.7	.74	2.2	.43	8.5	3.7
18	1.4	.74	.00	.06	1.4	e1.6	e1.7	.76	2.1	.42	8.1	5.0
19	1.5	.65	.00	.06	1.3	e.70	e1.6	.76	2.0	.44	7.4	5.6
20	1.7	.60	.00	5.0	1.0	e.40	e1.6	.80	1.9	2.0	4.9	6.6
21	2.5	1.9	.00	3.1	.95	e.50	e1.5	.75	1.8	.41	3.3	7.4
22	2.5	1.1	14	4.0	.89	e.60	e1.5	.84	1.7	.06	1.3	7.6
23	1.8	.87	.40	6.9	1.1	e.70	e1.4	.84	1.6	.12	1.7	7.1
24	1.8	.83	.38	5.3	1.1	e.50	e1.4	.78	1.5	.09	2.6	10
25	1.6	.77	.38	3.1	1.2	e.40	e1.3	2.5	1.4	.11	2.2	12
26	3.2	.77	.47	23	1.3	e.30	e1.3	.58	1.3	.13	1.2	11
27	2.4	.77	.62	e18	1.1	e.24	e1.2	.30	1.2	.19	1.0	12
28	5.5	.77	.38	e14	1.4	e.18	e1.2	.26	1.2	1.7	1.2	16
29	6.0	.76	.38	e9.3	---	e.15	e1.1	.31	1.1	2.0	1.2	21
30	4.4	.68	.48	e4.9	---	e.20	e1.1	1.1	1.1	1.8	1.1	24
31	.25	---	.32	.22	---	e.25	---	2.5	---	1.7	1.1	---
TOTAL	60.31	16.98	31.77	239.84	31.20	41.69	39.35	31.16	63.86	22.52	77.50	178.30
MEAN	1.95	.57	1.02	7.74	1.11	1.34	1.31	1.01	2.13	.73	2.50	5.94
MAX	6.0	1.9	14	49	5.8	3.1	2.0	2.5	4.3	2.0	8.5	24
MIN	.25	.15	.00	.06	.22	.15	.30	.26	.03	.06	.73	.41
AC-FT	120	34	63	476	62	83	78	62	127	45	154	354

e Estimated.

SANTA YNEZ RIVER BASIN

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.22	.38	.38	3.99	4.74	6.55	.94	.39	.42	.16	.22	.40
MAX	2.04	5.73	1.92	56.8	26.2	44.8	8.24	2.86	4.83	1.04	2.50	5.94
(WY)	1996	1996	1984	1995	1992	1995	1983	1995	1995	1995	1997	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1971	1973	1971	1971	1971	1971	1971	1971	1971	1971	1971

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1971 - 1997

ANNUAL TOTAL	969.92	834.48	
ANNUAL MEAN	2.65	2.29	1.55
HIGHEST ANNUAL MEAN			10.6
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	350	Feb 20	542
LOWEST DAILY MEAN	.00	Dec 13	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 13	.00
INSTANTANEOUS PEAK FLOW			180
INSTANTANEOUS PEAK STAGE			3.09
ANNUAL RUNOFF (AC-FT)	1920	1660	1130
10 PERCENT EXCEEDS	3.2	4.9	1.2
50 PERCENT EXCEEDS	.77	1.1	.00
90 PERCENT EXCEEDS	.29	.26	.00

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 09...	1430	1.24	1490	8.5	17.5	590	130	68	73
DATE	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
APR 09...	21	1	2.0	578	474	290	67	.5	42
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 09...	972	1.32	.01	5.2	<.02	.18	124	7	3

11128300 ALISAL RESERVOIR NEAR SOLVANG, CA

LOCATION.—Lat 34°32'56", long 120°07'45", in NE 1/4 NW 1/4 sec.4, T.5 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, in cove on right bank 0.4 mi upstream from reservoir spillway and 3 mi south of Solvang.

DRAINAGE AREA.—7.83 mi².

PERIOD OF RECORD.—December 1971 to current year. Prior to October 1985, only monthend elevations and contents published.

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

REMARKS.—Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft between bottom of outlet gate at elevation 555.70 ft, and crest of spillway at elevation 599.88 ft. Dead storage, 110 acre-ft. Inflow must total 150 acre-ft during any one month between November and June in order to store flows for that water year. Records, including extremes, represent total contents at 2,400 hours. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 2,770 acre-ft, Mar. 4, 1978, elevation, 604.31 ft; minimum, 748 acre-ft, Nov. 8–10, 1972, elevation, 577.15 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 2,450 acre-ft, Jan. 25, elevation, 600.73 ft; minimum contents, 1,920 acre-ft, Oct. 25–28, elevation, 594.70 ft.

Capacity table (elevation in feet, and contents, in acre-feet)
(Based on data provided by Santa Barbara County Flood Control District in 1971)

590	1,540	600	2,380
595	1,940	605	2,840

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1980	2000	2020	2390	2390	2380	2360	e2330	2260	2150	e2070	1990
2	1970	2000	2020	2390	2390	2380	2350	e2330	2260	2150	e2070	1990
3	1970	2000	2020	2390	2390	2380	2350	e2330	2250	e2140	e2070	1990
4	1970	2000	2020	2390	2390	2380	2350	e2330	2250	e2140	e2070	1990
5	1970	2000	2030	2390	2380	2380	2350	2330	2240	e2140	e2060	1980
6	1970	2000	2030	2390	2380	2380	2350	2330	2240	e2140	e2060	1980
7	1970	2000	2030	2380	2380	2380	2350	2330	2240	e2130	e2060	1980
8	1960	2000	2030	2380	2380	2370	2350	2320	2240	e2130	2060	1980
9	1960	2000	2050	2380	2380	2370	2340	2320	2230	e2130	2050	1970
10	1960	2000	2250	2380	2380	2380	2340	2320	2230	e2130	2050	1970
11	1960	2000	2330	2380	2380	2380	2340	2320	2230	e2120	2050	1970
12	1960	2000	2350	2380	2380	2370	2340	2310	2220	e2120	2040	1960
13	1950	2000	2370	2380	2380	2370	2340	2310	2220	e2120	2040	1960
14	1950	2000	2380	2380	2380	2370	2340	2310	2220	e2120	2040	1960
15	1950	1990	2380	2390	2380	2370	2340	2310	2220	e2120	2030	1960
16	1950	1990	2380	2380	2380	2370	2330	2300	2210	e2110	2030	1960
17	1940	1990	2380	2380	2380	2370	2330	2300	2210	e2110	2030	1950
18	1940	1990	2380	2380	2380	2370	e2330	2300	2200	e2110	2030	1950
19	1940	1990	2380	2380	2380	2370	e2330	2300	2190	e2110	2020	1950
20	1940	2000	2380	2380	2380	2370	e2330	2290	2190	e2100	2020	1950
21	1930	2000	2380	2380	2380	2370	e2330	2290	2180	e2100	2010	1940
22	1930	2020	2390	2410	2380	2370	e2330	2290	2180	e2100	e2010	1940
23	1930	2020	2390	2410	2380	2370	e2330	2290	2180	e2100	e2010	1940
24	1930	2020	2380	2400	2380	2370	e2330	2280	2180	e2090	e2010	1940
25	1920	2020	2380	2450	2380	2370	e2330	2280	2170	e2090	e2010	1930
26	1920	2020	2380	2440	2380	2370	e2330	2280	2170	e2090	2010	1930
27	1920	2020	2390	2410	2380	2370	e2330	2280	2160	e2090	2000	1930
28	1920	2020	2380	2400	2380	2370	e2330	2270	2160	e2080	2000	1920
29	1980	2020	2380	2400	---	2370	e2330	2270	2160	e2080	2000	1920
30	2000	2020	2380	2400	---	2360	e2330	2260	2160	e2080	2000	1920
31	2000	---	2380	2390	---	2360	---	2260	---	e2080	1990	---
MAX	2000	2020	2390	2450	2390	2380	2360	2330	2260	2150	2070	1990
MIN	1920	1990	2020	2380	2380	2360	2330	2260	2160	2080	1990	1920
a	595.74	596.03	600.00	600.14	599.95	599.74	599.44	598.67	597.50	596.63	595.67	594.76
b	+20	+20	+360	+10	-10	-20	-30	-70	-100	-80	-90	-70

CAL YR 1996 b +280

WTR YR 1997 b -60

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11128500 SANTA YNEZ RIVER AT SOLVANG, CA

LOCATION.—Lat 34°35'06", long 120°08'37", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, near left bank on downstream end of pier of Alisal Road Bridge, 25 ft downstream from Alisal Creek, 0.8 mi southwest of Solvang, and 10 mi downstream from Lake Cachuma.

DRAINAGE AREA.—579 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to current year.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 357.43 ft above sea level. Various datums used during period of record.

July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 2.00 ft higher. Oct. 1, 1968, to Sept. 30, 1988, water-stage recorder at datum 5.00 ft higher.

REMARKS.—Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952, by Lake Cachuma (stations 11121000, 11122000, and 11125500). Additional water may be added by releases from Alisal Reservoir (11128300). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water for irrigation pumped from wells along banks of river in valley upstream. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD (water years 1928–36, 1946–97).—Maximum discharge, 82,000 ft³/s, Jan. 25, 1969, estimated on basis of discharge measurements up to 81,000 ft³/s for Santa Ynez River near Buellton, gage height, 17.1 ft, from floodmark; no flow for several months in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	14	5.3	17	41	12	4.0	2.0	.00	.00	79	38
2	23	11	5.3	55	37	12	3.8	1.9	.00	.00	83	40
3	20	9.3	5.3	75	34	12	3.2	1.8	.00	.00	84	41
4	19	8.2	5.2	41	33	11	2.3	1.8	.00	.00	83	43
5	13	7.2	5.4	31	31	10	1.5	1.7	.00	.00	80	43
6	13	6.4	5.9	23	29	9.1	1.5	1.5	.00	.00	84	40
7	13	5.5	5.5	20	28	8.9	1.3	1.5	.00	.00	82	37
8	11	5.5	5.3	17	26	8.0	1.5	1.5	.00	.00	74	38
9	9.8	5.0	8.7	15	25	7.4	1.6	1.5	.00	.00	73	42
10	9.0	4.7	79	13	24	7.4	1.8	1.3	.00	.00	73	46
11	9.8	4.2	151	12	25	7.7	1.4	1.5	.00	.00	73	46
12	11	3.4	72	12	24	7.1	1.2	1.8	.00	.00	67	46
13	10	3.0	39	16	21	6.4	1.7	1.6	.00	.00	52	39
14	11	2.9	30	15	21	5.6	2.0	1.3	.00	.00	46	33
15	12	2.9	25	32	19	5.8	2.0	1.0	.00	.00	46	32
16	39	2.8	21	42	18	6.5	1.9	.51	.00	22	43	26
17	46	3.2	17	21	18	6.1	2.0	.00	.00	51	40	24
18	45	3.1	15	16	18	6.1	1.8	.00	.00	56	38	21
19	43	2.8	13	14	18	5.6	.69	.00	.00	60	36	16
20	39	2.9	12	32	17	4.9	.00	.00	.00	61	31	14
21	30	7.5	11	28	17	4.7	.00	.00	.00	61	29	13
22	28	8.2	62	37	16	4.9	.00	.00	.00	63	29	21
23	21	7.4	38	143	15	4.8	.59	.00	.00	67	28	25
24	17	6.8	26	86	14	4.9	.72	.00	.00	71	31	26
25	13	6.4	20	100	14	4.8	.97	.00	.00	82	31	26
26	11	6.1	17	166	14	4.4	1.2	.00	.00	83	32	26
27	9.2	5.9	19	146	14	4.4	1.1	.00	.00	83	42	25
28	7.7	5.6	20	86	13	4.2	1.5	.00	.00	83	45	25
29	46	5.5	18	66	---	3.9	1.7	.00	.00	83	46	25
30	49	5.4	17	54	---	4.0	1.7	.00	.00	82	39	25
31	23	---	16	46	---	3.8	---	.00	---	80	38	---
TOTAL	680.5	172.8	789.9	1477	624	208.4	46.67	24.21	0.00	1088.00	1657	942
MEAN	22.0	5.76	25.5	47.6	22.3	6.72	1.56	.78	.000	35.1	53.5	31.4
MAX	49	14	151	166	41	12	4.0	2.0	.00	83	84	46
MIN	7.7	2.8	5.2	12	13	3.8	.00	.00	.00	.00	28	13
AC-FT	1350	343	1570	2930	1240	413	93	48	.00	2160	3290	1870

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1950, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.92	7.04	32.8	62.0	176	52.4	48.1	11.7	8.56	4.00	2.41	2.51
MAX	6.69	34.9	257	211	1240	164	375	59.3	36.8	17.0	6.36	5.69
(WY)	1939	1947	1932	1935	1932	1935	1935	1935	1938	1938	1938	1938
MIN	.25	2.40	4.20	4.87	5.90	4.95	3.51	2.36	1.27	.21	.000	.000
(WY)	1950	1930	1930	1948	1948	1950	1931	1948	1948	1949	1948	1948

SUMMARY STATISTICS

WATER YEARS 1929 - 1950

ANNUAL TOTAL	
ANNUAL MEAN	32.9
HIGHEST ANNUAL MEAN	152 1932
LOWEST ANNUAL MEAN	3.31 1948
HIGHEST DAILY MEAN	12300 Feb 9 1932
LOWEST DAILY MEAN	.00 Jul 15 1931
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 15 1931
INSTANTANEOUS PEAK FLOW	18700 Feb 9 1932
ANNUAL RUNOFF (AC-FT)	23800
10 PERCENT EXCEEDS	35
50 PERCENT EXCEEDS	5.3
90 PERCENT EXCEEDS	1.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.82	4.29	19.4	253	353	400	142	39.6	10.4	5.85	6.90	6.39
MAX	88.7	96.2	263	3572	4445	4029	1258	568	105	41.0	58.9	38.3
(WY)	1992	1966	1984	1995	1969	1983	1983	1983	1983	1969	1996	1994
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1952	1952	1963	1976	1991	1989	1961	1961	1961	1957	1954	1954

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1952 - 1997

ANNUAL TOTAL	9269.62	7710.48	
ANNUAL MEAN	25.3	21.1	103
HIGHEST ANNUAL MEAN			758 1969
LOWEST ANNUAL MEAN			.86 1961
HIGHEST DAILY MEAN	793 Feb 20	166 Jan 26	40000 Jan 25 1969
LOWEST DAILY MEAN	.00 May 20	.00 Apr 20	.00 Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	.00 May 20	.00 May 17	.00 Oct 1 1951
INSTANTANEOUS PEAK FLOW		258 Dec 10	82000 Jan 25 1969
INSTANTANEOUS PEAK STAGE		2.53 Dec 10	17.10 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	18390	15290	74380
10 PERCENT EXCEEDS	62	60	70
50 PERCENT EXCEEDS	11	11	2.0
90 PERCENT EXCEEDS	.00	.00	.00

[illegible]

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.—Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2 ft upstream from bridge on Frontage Road, 0.9 mi upstream from Dry Creek, 2.4 mi north of Buellton, and 4.0 mi upstream from mouth.

DRAINAGE AREA.—32.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—September 1963 to September 1981, October 1989 to September 30, 1992, October 1994 to current year.

Gage.—Water-stage recorder. Datum of gage is 471.54 ft above sea level.

REMARKS.—Records poor. Some pumping from wells along stream for irrigation upstream from station. Small regulation by Zaca Lake, about 15 mi upstream. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,390 ft³/s, Feb. 24, 1969, gage height, 9.20 ft; maximum gage height, 9.66 ft, Mar. 4, 1978; no flow most of each year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	0915	52	2.97				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	4.9	e9.0	.62	e.08	.00	.00	e.00	.00	.00
2	.00	.00	.00	30	e7.0	.56	e.10	.00	.00	e.00	.00	.00
3	.00	.00	.48	34	e6.2	.56	e.15	.00	.00	e.00	.00	.00
4	.00	.00	3.0	22	e5.7	.62	e.13	.00	.00	.00	.00	.00
5	.00	.00	9.1	14	e5.3	.54	e.10	.00	e.00	.00	.00	.00
6	.00	.00	14	e9.0	e4.7	.53	e.09	.00	e.00	.00	.00	.00
7	.00	.00	8.9	e4.5	e4.3	.54	e.08	.00	e.00	.00	.00	.00
8	.00	.00	8.4	e3.8	e3.4	e.45	e.07	.00	e.00	.00	.00	.00
9	.00	.00	17	e3.3	e3.2	e.40	e.08	.00	e.00	.00	.00	.00
10	.00	.00	26	e3.0	e2.8	e.35	e.10	.00	e.00	.00	.00	.00
11	.00	.00	29	e2.5	e2.7	e.30	e.09	.00	e.00	.00	.00	.00
12	.00	.00	26	e2.3	e2.5	e.25	e.08	.00	e.00	.00	.00	.00
13	.00	.00	17	e3.0	3.3	e.20	e.07	.00	e.00	.00	.00	.00
14	.00	.00	8.8	e4.0	2.6	e.23	e.06	.00	e.00	.00	.00	.00
15	.00	.00	3.1	17	2.1	e.15	e.05	.00	e.00	.00	.00	.00
16	.00	.00	2.7	11	1.5	e.30	e.04	.00	e.00	.00	.00	.00
17	.00	.00	2.0	6.9	2.0	e.40	e.03	.00	e.00	.00	.00	.00
18	.00	.00	2.0	5.3	1.5	e.30	e.02	.00	e.00	.00	.00	.00
19	.00	.00	2.0	6.5	1.2	e.20	e.01	.00	e.00	.00	.00	.00
20	.00	.00	2.0	22	.88	e.10	.00	.00	e.00	.00	.00	.00
21	.00	15	1.5	12	1.3	e.14	.00	.00	e.00	.00	.00	.00
22	.00	18	16	19	1.3	e.15	.00	.00	e.00	.00	.00	.00
23	.00	3.6	15	27	1.0	e.20	.00	.00	e.00	.00	.00	.00
24	.00	.00	8.0	35	.94	e.15	.00	.00	e.00	.00	.00	.00
25	.00	.00	3.1	31	1.1	e.10	.00	.00	e.00	.00	.00	.00
26	.00	.00	1.4	34	.86	e.08	.00	.00	e.00	.00	.00	.00
27	.00	.00	3.6	34	.74	e.06	.00	.00	e.00	.00	.00	.00
28	.00	.00	.91	24	.91	e.05	.00	.00	e.00	.00	.00	.00
29	.00	.00	.92	e20	---	e.04	.00	.00	e.00	.00	.00	.00
30	.00	.00	2.1	e15	---	e.04	.00	.00	e.00	.00	.00	.00
31	.00	---	2.7	e12	---	e.05	---	.00	---	.00	.00	---
TOTAL	0.00	36.60	236.71	472.0	80.03	8.66	1.43	0.00	0.00	0.00	0.00	0.00
MEAN	.000	1.22	7.64	15.2	2.86	.28	.048	.000	.000	.000	.000	.000
MAX	.00	18	29	35	9.0	.62	.15	.00	.00	.00	.00	.00
MIN	.00	.00	.00	2.3	.74	.04	.00	.00	.00	.00	.00	.00
AC-FT	.00	73	470	936	159	17	2.8	.00	.00	.00	.00	.00

e Estimated.

11129800 ZACA CREEK NEAR BUELLTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.002	.058	.51	3.51	6.20	4.63	1.21	.35	.099	.016	.003	.002
MAX	.036	1.22	7.64	32.1	56.8	40.1	9.75	4.31	1.89	.38	.073	.059
(WY)	1996	1997	1997	1969	1969	1995	1995	1995	1995	1995	1995	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1964	1967	1964	1968	1964	1964	1964	1964	1964	1964	1964	1964

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1964 - 1997			
ANNUAL TOTAL	554.12				835.43							
ANNUAL MEAN	1.51				2.29				1.36			
HIGHEST ANNUAL MEAN									9.23			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	49				35				450			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					52				1390			
INSTANTANEOUS PEAK STAGE					2.97				9.66			
ANNUAL RUNOFF (AC-FT)	1100				1660				983			
10 PERCENT EXCEEDS	3.5				6.9				.67			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11129800 ZACA CREEK NEAR BUELLTON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL AS CACO3 (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
APR 10...	1405	.10	2680	8.5	20.5	1200	230	140	200	27
DATE		SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LILITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
APR 10...	2	11	438	6	369	960	200	.7	33	
DATE		SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 10...	2010	2.73	<.01	.07	.03	.41	494	26	14	

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA

LOCATION.—Lat 34°35'19", long 120°24'27", in W 1/2 sec.24, T.6 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at bridge on Jalama Road, 0.4 mi downstream from El Jaro Creek, and 4.4 mi southeast of Lompoc.

DRAINAGE AREA.—47.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1941 to current year.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder and concrete low-water control. Elevation of gage is 220 ft above sea level, from topographic map.

REMARKS.—Records good. No regulation upstream from station. Small diversions for irrigation upstream from station. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,400 ft³/s, Mar. 15, 1952, gage height, 20.80 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1750	733	3.88	Jan. 22	2330	1,250	4.91
Jan. 2	2300	378	3.04	Jan. 25	1600	796	4.00

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.93	1.0	23	25	7.0	4.1	3.3	.94	.72	.53	.37
2	.76	.86	1.1	102	22	7.2	4.1	3.2	.89	.61	.37	.39
3	.76	.82	1.0	72	20	7.3	4.1	3.1	1.1	.55	.34	.52
4	.76	.82	1.1	16	18	7.0	4.1	2.8	1.1	.52	.44	.47
5	.76	.85	1.1	15	17	6.8	4.1	2.4	.96	.58	.28	.39
6	.86	.83	1.2	9.4	15	6.9	3.8	2.2	.92	.71	.27	.32
7	.86	.83	1.1	7.5	14	7.0	3.8	2.1	1.1	.57	.20	.30
8	.87	.84	1.1	6.5	14	6.7	3.6	2.1	1.4	.56	.39	.30
9	.84	.85	3.9	5.8	13	6.5	3.4	2.2	1.4	.69	.21	.29
10	.86	.87	159	5.6	13	6.3	3.5	2.2	1.3	.89	.29	.37
11	.90	.87	69	5.4	13	6.3	3.4	2.6	1.0	.74	.50	.37
12	.99	.86	15	5.7	12	6.1	3.1	2.5	1.5	.65	.40	.35
13	.96	.86	6.6	10	11	5.9	3.2	2.2	1.9	.68	.33	.35
14	.86	1.2	4.6	6.7	11	5.7	3.0	1.8	1.8	.57	.40	.40
15	.83	1.2	3.8	50	10	5.7	2.8	2.0	1.8	.55	.36	.37
16	.85	1.2	3.5	12	10	5.7	2.8	2.1	1.7	.61	.46	.30
17	.87	1.4	3.3	8.6	10	5.6	2.7	2.0	.99	.67	.55	.35
18	.87	1.4	3.1	7.4	9.5	5.4	2.7	2.0	1.0	.56	.60	.39
19	.88	1.3	3.0	6.8	9.1	5.0	2.9	1.9	1.4	.56	.52	.34
20	.87	1.4	3.0	45	9.0	5.0	2.8	1.9	1.7	.58	.45	.36
21	.87	3.2	2.9	25	8.6	5.0	2.8	1.7	1.8	.65	.39	.35
22	.88	3.8	12	125	8.7	5.0	2.8	1.5	1.7	.85	.43	.29
23	.93	1.3	4.2	242	8.6	5.1	2.7	1.4	1.6	1.2	.30	.29
24	1.0	1.1	3.3	52	8.2	5.2	2.8	1.4	1.5	1.0	.24	.26
25	1.0	1.1	3.2	256	8.2	5.0	2.9	1.3	.89	.87	.20	.28
26	1.0	1.1	3.1	201	8.3	4.8	2.8	1.3	.81	.87	.21	.27
27	1.1	1.1	19	88	7.8	4.7	2.9	1.2	1.3	.86	.18	.31
28	1.3	1.1	6.3	51	7.6	4.7	3.3	.91	1.5	.81	.25	.29
29	15	1.1	4.4	39	---	4.7	3.3	.97	1.5	.82	.15	.24
30	6.4	.98	5.4	32	---	4.3	3.4	.89	1.2	.65	.30	.25
31	1.0	---	8.2	28	---	4.3	---	.95	---	.60	.35	---
TOTAL	47.45	36.07	358.5	1559.4	341.6	177.9	97.7	60.12	39.70	21.75	10.89	10.13
MEAN	1.53	1.20	11.6	50.3	12.2	5.74	3.26	1.94	1.32	.70	.35	.34
MAX	15	3.8	159	256	25	7.3	4.1	3.3	1.9	1.2	.60	.52
MIN	.76	.82	1.0	5.4	7.6	4.3	2.7	.89	.81	.52	.15	.24
AC-FT	94	72	711	3090	678	353	194	119	79	43	22	20

SANTA YNEZ RIVER BASIN

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.78	2.17	7.51	24.9	37.6	37.8	14.4	4.18	2.20	1.27	.87	.74
MAX	4.26	48.6	102	281	294	545	158	28.5	12.5	8.23	5.77	4.51
(WY)	1942	1966	1956	1995	1962	1995	1941	1983	1983	1941	1941	1941
MIN	.000	.041	.050	.081	.33	.36	.21	.000	.000	.000	.015	.010
(WY)	1962	1991	1990	1991	1991	1990	1989	1961	1961	1961	1972	1972

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1941 - 1997	
ANNUAL TOTAL	2015.28		2761.21			
ANNUAL MEAN	5.51		7.56		10.8	
HIGHEST ANNUAL MEAN					80.6	
LOWEST ANNUAL MEAN					.17	
HIGHEST DAILY MEAN	398	Feb 20	256	Jan 25	5390	Mar 11 1995
LOWEST DAILY MEAN	.36	Sep 18	.15	Aug 29		
ANNUAL SEVEN-DAY MINIMUM	.41	Sep 16	.22	Aug 23	.00	Jul 23 1948
INSTANTANEOUS PEAK FLOW			1250	Jan 22	11400	Mar 15 1952
INSTANTANEOUS PEAK STAGE			4.91	Jan 22	20.80	Mar 15 1952
ANNUAL RUNOFF (AC-FT)	4000		5480		7810	
10 PERCENT EXCEEDS	8.2		12		11	
50 PERCENT EXCEEDS	1.8		1.4		1.4	
90 PERCENT EXCEEDS	.59		.36		.10	

WATER-QUALITY RECORDS

WATER TEMPERATURE: Water years 1982–83.

WATER TEMPERATURE: Water years 1982-83.

INSTRUMENTATION.—Water-quality monitor, water years 1982–83.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
OCT										
02...	1700	0.75	1370	8.0	20.5	--	--	--	--	--
NOV										
20...	0845	1.4	1380	8.0	16.0	--	--	--	--	--
FEB										
12...	1400	12	1380	8.5	14.0	550	140	48	89	26
MAY										
08...	1125	2.1	1330	8.4	15.0	--	--	--	--	--
JUN										
04...	1440	1.2	1400	8.4	21.5	--	--	--	--	--
AUG										
11...	1420	0.65	1600	8.1	23.0	--	--	--	--	--
SEP										
03...	1305	0.61	1490	8.0	24.5	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA

LOCATION.—Lat 34°38'14", long 120°25'28", in Canada de Salsipuedes Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.6 mi upstream from State Highway 246, 1.9 mi east of Lompoc, 1.8 mi downstream from Salsipuedes Creek, and 32 mi downstream from Lake Cachuma.

WATER-DISCHARGE RECORDS

DRAINAGE AREA.—789 mi².

PERIOD OF RECORD.—May 1947 to November 1951 (irrigation seasons only). May 1952 to September 1963, October 1964 to September 1979, October 1980 to current year. Records equivalent, except for low-flow periods, to those published as "near Lompoc" (station 11133500), November to December 1906, October 1907 to September 1918, May 1925 to September 1960, and October 1978 to September 1980.

CHEMICAL DATA: Water years 1978–88.

REVISIONS.—WSP 1928: Drainage area.

GAGE.—Two water-stage recorders. Elevation of main gage is 85 ft (prior to Apr. 10, 1991, at datum 5 ft higher) above sea level, from topographic map. See WSP 1715 for history of changes prior to Oct. 1, 1961. Since Oct. 1, 1961, at various sites and datums within 0.1 mi of present site. Supplementary gage, used for high-water periods, at site 0.6 mi downstream at datum 79.25 ft above sea level.

REMARKS.—Records good. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952, by Lake Cachuma (stations 11121000, 11122000, and 11125500). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream. Satellite telemeter at station. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD (water years 1952–63, 1964–93).—Maximum discharge, 80,000 ft³/s, Jan. 25, 1969, gage height, 24.20 ft, from supplementary gage; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 9, 1907, reached a stage of 22.0 ft, site and datum then in use, discharge, 120,000 ft³/s, from mean-depth study.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	38	16	56	140	33	11	1.7	.14	.00	4.9	17
2	25	28	15	196	124	34	10	1.6	.10	.00	14	17
3	19	22	15	434	112	36	9.7	1.4	.06	.00	21	19
4	16	19	14	192	100	34	8.7	1.4	.01	.00	29	20
5	14	16	15	154	91	33	7.8	1.5	.02	.00	35	20
6	12	15	17	115	86	30	6.9	1.3	.02	.00	36	18
7	11	13	17	89	80	29	6.7	1.2	.05	.00	37	17
8	9.3	12	16	71	77	26	6.9	1.1	.05	.00	39	17
9	8.5	11	22	54	73	26	6.3	1.1	.13	.00	40	17
10	7.4	10	386	44	70	25	5.3	1.1	.30	.00	44	16
11	6.7	10	907	41	69	25	4.4	.93	.42	.00	47	20
12	6.7	10	531	38	66	21	4.0	1.0	.34	.00	47	21
13	6.4	10	187	46	61	18	3.4	.88	.19	.00	44	24
14	6.6	11	124	42	56	16	3.2	.73	.08	.00	35	24
15	6.2	11	92	133	56	14	3.1	.54	.05	.00	32	22
16	5.8	9.8	72	86	54	14	3.0	.39	.04	.00	30	22
17	5.4	10	59	88	54	15	3.0	.44	.05	.00	28	20
18	13	11	48	66	52	15	2.7	.43	.02	.00	27	20
19	18	11	40	52	46	15	2.7	.55	.00	.00	25	19
20	20	12	35	167	43	15	2.8	.57	.00	.00	23	15
21	20	20	33	165	40	13	2.7	.35	.00	.00	21	13
22	19	36	56	213	40	13	2.7	.30	.00	.00	19	12
23	18	31	87	1330	39	13	2.5	.26	.00	.00	17	11
24	17	25	82	625	39	15	2.4	.47	.06	.00	15	15
25	15	23	60	972	36	16	2.2	.60	.08	.00	15	18
26	13	20	48	1220	39	14	2.1	.53	.05	.00	15	18
27	11	19	71	1080	38	14	1.9	.42	.05	.00	16	18
28	10	17	53	690	38	13	2.1	.38	.05	.00	15	19
29	13	17	43	223	---	13	2.2	.29	.04	.00	19	20
30	91	16	44	181	---	12	2.0	.19	.00	.00	21	19
31	64	---	48	158	---	12	---	.19	---	.00	20	---
TOTAL	535.0	513.8	3253	9021	1819	622	134.4	23.84	2.40	0.00	830.9	548
MEAN	17.3	17.1	105	291	65.0	20.1	4.48	.77	.080	.000	26.8	18.3
MAX	91	38	907	1330	140	36	11	1.7	.42	.00	47	24
MIN	5.4	9.8	14	38	36	12	1.9	.19	.00	.00	4.9	11
AC-FT	1060	1020	6450	17890	3610	1230	267	47	4.8	.00	1650	1090

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.39	6.37	28.9	252	380	424	167	52.1	12.9	3.71	2.93	2.85
MAX	29.9	112	291	3303	4969	3590	1154	618	177	30.0	26.8	29.4
(WY)	1992	1966	1984	1969	1969	1983	1983	1983	1983	1983	1997	1992
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1955	1955	1955	1989	1961	1990	1961	1961	1961	1960	1954	1954

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1952 - 1997	
ANNUAL TOTAL	15438.09		17303.34			
ANNUAL MEAN	42.2		47.4		110	
HIGHEST ANNUAL MEAN					853	1969
LOWEST ANNUAL MEAN					.000	1990
HIGHEST DAILY MEAN	1850	Feb 20	1330	Jan 23	38000	Jan 25 1969
LOWEST DAILY MEAN	.00	Jul 27	.00	Jun 19	.00	Sep 18 1953
ANNUAL SEVEN-DAY MINIMUM	.09	Jul 21	.00	Jun 30	.00	Oct 23 1953
INSTANTANEOUS PEAK FLOW			3550	Jan 23	80000	Jan 25 1969
INSTANTANEOUS PEAK STAGE			7.82	Jan 23	24.20	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	30620		34320		79620	
10 PERCENT EXCEEDS	73		81		98	
50 PERCENT EXCEEDS	19		15		1.6	
90 PERCENT EXCEEDS	.62		.00		.00	

11134800 MIGUELITO CREEK AT LOMPOC, CA

LOCATION.—Lat 34°37'54", long 120°27'50", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 120 ft upstream from drop structure to debris basin and 1,900 ft south of Lompoc Union High School.

DRAINAGE AREA.—11.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1970 to May 6, 1986, October 1987 to current year.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 97.94 ft, Santa Barbara County Flood Control District datum. Prior to May 6, 1986, on right bank at site 350 ft downstream at different datum.

REMARKS.—Records poor. No regulation or diversion upstream from station; some pumping from wells along stream for irrigation. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,830 ft³/s, Mar. 10, 1995, gage height, 3.71 ft, from theoretical rating curve above 50 ft³/s; no flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 5.83 ft, site in use prior to 1986, from floodmark, discharge, 680 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 140 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 22	2215	203	1.41				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.05	.60	.06	1.6	2.5	.23	e.86	e.58	e.30	e.22	.23	.43
2	e.05	.60	.06	11	2.0	e.23	e.82	e.59	e.35	e.20	.23	.44
3	e.05	.48	.06	5.9	2.0	.23	e.81	e.59	e.31	e.18	.32	.44
4	e.05	.43	.06	2.3	2.0	.23	e.87	e.62	e.32	e.16	.46	.43
5	e.05	.42	.13	2.3	1.7	.23	e.79	e.60	e.28	e.18	.60	.43
6	e.05	.28	.08	1.7	1.4	.14	e.71	.31	e.27	e.19	.60	.43
7	e.05	.23	.13	1.7	1.4	.13	e.65	.31	e.25	e.20	.60	.43
8	e.05	.23	.13	1.7	1.4	.13	e.61	.36	e.28	e.22	.60	.35
9	.05	.16	3.0	1.5	1.3	.21	e.56	.35	e.28	e.24	.54	.23
10	.05	.13	15	1.4	1.1	.15	e.54	.36	e.26	e.24	.43	.23
11	.03	.08	7.1	1.4	1.2	.21	e.56	.67	e.29	e.28	.43	.23
12	.03	.08	1.6	1.5	1.4	.27	e.58	.69	e.26	.33	.43	.23
13	.03	.06	1.1	3.0	1.3	.33	e.55	.29	e.23	.27	.43	.23
14	.04	.06	.77	2.0	.99	.26	e.53	.34	e.22	.23	.43	.23
15	.05	.06	.65	4.4	.70	.23	e.50	.37	e.24	.23	.44	.23
16	.04	.06	.60	2.4	.70	.30	e.49	.44	e.28	.33	.43	.23
17	.03	.07	.51	2.0	.68	.31	e.53	e.41	e.32	e.33	.43	.23
18	.03	.06	.43	2.0	.57	.26	e.52	e.40	e.34	e.33	.43	e.27
19	.03	.06	.37	2.0	.43	.27	e.56	e.39	e.34	.33	e.43	e.31
20	.03	.07	.33	8.4	.43	.31	e.53	e.36	e.30	.33	e.43	e.35
21	.02	.49	.33	4.3	.42	.33	e.53	e.37	e.35	.33	.43	e.39
22	.02	.59	1.7	18	.33	.31	e.56	e.35	e.29	.33	.43	.43
23	.02	.11	1.4	20	.33	e.35	e.54	e.29	e.27	.33	.43	.43
24	.02	.08	1.2	5.0	.33	.48	e.54	e.33	e.26	.33	.43	.43
25	.03	.06	1.1	28	.33	.60	e.52	e.30	e.24	.33	.43	.64
26	.03	.06	1.1	13	.23	.51	e.52	e.28	e.25	.33	.43	.70
27	.02	.06	1.5	6.2	.23	.55	e.52	e.31	e.23	.33	.43	.70
28	.02	.06	1.4	4.4	.23	.64	e.55	e.34	e.22	.33	.43	e.70
29	5.5	.06	1.1	3.9	---	.90	e.63	e.32	e.20	.30	.43	e.65
30	1.3	.06	1.1	3.4	---	1.0	e.60	e.30	e.22	.23	.43	.60
31	.98	---	1.1	3.2	---	.91	---	e.32	---	.23	.43	---
TOTAL	8.80	5.85	45.20	169.6	27.63	11.24	18.08	12.54	8.25	8.42	13.65	12.05
MEAN	.28	.19	1.46	5.47	.99	.36	.60	.40	.28	.27	.44	.40
MAX	5.5	.60	15	28	2.5	1.0	.87	.69	.35	.33	.60	.70
MIN	.02	.06	.06	1.4	.23	.13	.49	.28	.20	.16	.23	.23
AC-FT	17	12	90	336	55	22	36	25	16	17	27	24

e Estimated.

11134800 MIGUELITO CREEK AT LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.25	.53	1.73	3.92	5.27	8.98	1.89	1.02	.65	.45	.34	.31
MAX	1.39	2.77	8.69	37.9	19.7	106	14.2	6.04	3.79	2.64	2.33	2.05
(WY)	1984	1996	1993	1995	1978	1995	1983	1983	1983	1983	1983	1983
MIN	.001	.001	.008	.019	.047	.091	.076	.053	.008	.016	.006	.000
(WY)	1973	1978	1990	1991	1972	1972	1972	1972	1992	1992	1972	1972

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1971 - 1997	
ANNUAL TOTAL	858.56		341.31			
ANNUAL MEAN	2.35		.94		2.10	
HIGHEST ANNUAL MEAN					13.8	
LOWEST ANNUAL MEAN					.15	
HIGHEST DAILY MEAN	97	Feb 20	28	Jan 25	1170	Mar 11 1995
LOWEST DAILY MEAN	.02	Oct 21	.02	Oct 21	.00	Jul 21 1971
ANNUAL SEVEN-DAY MINIMUM	.02	Oct 21	.02	Oct 21	.00	Sep 8 1971
INSTANTANEOUS PEAK FLOW			203	Jan 22	1830	Mar 10 1995
INSTANTANEOUS PEAK STAGE			1.41	Jan 22	3.71	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	1700		677		1520	
10 PERCENT EXCEEDS	3.0		1.6		2.5	
50 PERCENT EXCEEDS	.44		.35		.34	
90 PERCENT EXCEEDS	.06		.06		.02	

11134800 MIGUELITO CREEK AT LOMPOC, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1980–86, 1988–96, April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
APR 09...	1120	1260	8.9	16.5	580	130	64	64	19
DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
APR 09...	1	2.4	347	35	342	260	100	.4	39
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 09...	868	1.18	<.01	.09	<.02	.24	228	<9	5

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.—Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060009, on Vandenberg Military Reservation, on downstream side of San Antonio Road Bridge, 0.7 mi east of junction of San Antonio Road and Lompoc-Casmalia Road, and 3.8 mi south of Casmalia.

DRAINAGE AREA.—135 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1955 to September 1993, October 1994 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 160 ft above sea level, from topographic map. Prior to June 27, 1958, at datum 2.00 ft higher.

REMARKS.—Records good except those for estimated daily discharges, which are poor. No regulation upstream from station. Flow affected by pumping from wells along stream for irrigation upstream from station. At times water is released to creek from Vandenberg Air Force Base Water-Treatment Plant.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,680 ft³/s, Mar. 1, 1983, gage height, 14.32 ft, from rating curve extended above 1,100 ft³/s on basis of slope-area measurement at gage height 12.93 ft; minimum daily, 0.10 ft³/s, June 19, 20, 1957.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	2130	135	2.99	Jan. 3	0115	204	3.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.56	3.8	8.1	e7.0	1.2	.83	.58	.44	.36	.39	.87
2	.49	.58	3.9	75	e6.6	1.2	.82	.60	.47	.38	.36	1.0
3	.50	.60	3.8	86	e6.2	1.2	.82	.60	.43	.33	.36	1.3
4	.55	.60	3.8	14	e6.0	1.1	.85	.62	.33	.27	.36	.88
5	.55	.60	4.4	6.3	e5.5	1.1	.79	.55	.34	.28	.31	.87
6	.51	.60	4.9	4.4	e5.0	1.1	.78	.54	.34	.22	.35	1.7
7	.51	.60	4.2	3.4	e4.5	1.0	.76	.52	.36	.22	.42	.47
8	.51	.67	4.2	2.9	e4.0	.94	.78	.56	.38	.24	.40	.45
9	.56	.55	6.8	2.5	e3.5	.89	.78	.55	.38	.33	.47	.39
10	.56	.58	43	2.1	e3.0	.87	.72	.57	.35	.36	.54	.37
11	.56	.60	80	1.8	e2.5	.88	.76	.59	.38	.30	.54	.37
12	.56	.63	44	1.7	e2.0	.84	.78	.56	.36	.30	.46	.38
13	.55	.66	6.9	1.9	1.9	.79	.77	.55	.34	.30	.47	.40
14	.55	.66	e6.0	2.2	1.7	.77	.75	.56	.33	.30	.52	.38
15	.56	.65	e5.0	24	1.7	.81	.73	.56	.34	.30	.55	.38
16	.56	.60	e4.0	12	1.5	.85	.70	.56	.36	.33	.55	.39
17	.55	.66	e3.0	3.2	1.5	.89	.72	.56	.38	.34	.64	.38
18	.54	.72	e1.4	2.5	1.4	.97	.72	.56	.40	.37	.66	.40
19	.56	.69	1.1	2.6	1.3	.98	.74	.56	.40	.34	.69	.40
20	.56	1.3	1.0	22	1.3	.99	.66	.56	.40	.33	.63	.40
21	.56	5.6	.92	24	1.3	.89	.66	.52	.53	.33	.84	.39
22	.52	28	2.1	46	1.2	.82	.68	.51	.40	.38	.96	.40
23	.54	6.1	3.8	72	1.2	.85	.67	.50	.38	.42	1.0	.38
24	.57	3.3	.93	29	1.3	.83	.66	.51	.38	.36	.77	.37
25	.60	2.9	.72	26	1.2	.82	.60	.49	.38	.32	.85	.39
26	.60	3.2	.70	59	1.3	.83	.60	.48	.41	.33	.81	.39
27	.60	3.6	2.7	43	1.3	.82	.60	.49	.39	.36	.86	.39
28	.60	3.6	1.7	21	1.3	.81	.61	.51	.39	.38	.79	.37
29	1.6	3.6	.64	11	---	.83	.66	.49	.39	.35	.76	.37
30	3.2	3.7	.65	8.2	---	.85	.59	.44	.34	.37	.75	.40
31	.73	---	1.6	7.8	---	.85	---	.45	---	.39	.79	---
TOTAL	20.88	76.71	251.66	625.6	78.2	28.57	21.59	16.70	11.50	10.19	18.85	16.03
MEAN	.67	2.56	8.12	20.2	2.79	.92	.72	.54	.38	.33	.61	.53
MAX	3.2	28	80	86	7.0	1.2	.85	.62	.53	.42	1.0	1.7
MIN	.47	.55	.64	1.7	1.2	.77	.59	.44	.33	.22	.31	.37
AC-FT	41	152	499	1240	155	57	43	33	23	20	37	32

e Estimated.

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.80	1.60	2.90	12.2	24.0	20.6	7.12	1.38	.91	.66	.68	.72
MAX	2.36	6.73	10.6	104	163	234	149	3.85	2.07	1.59	1.84	2.23
(WY)	1964	1973	1956	1995	1962	1983	1958	1983	1983	1983	1981	1972
MIN	.19	.19	.29	.41	.54	.44	.30	.24	.17	.18	.21	.16
(WY)	1990	1990	1990	1991	1991	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR				FOR 1997 WATER YEAR				WATER YEARS 1956 - 1997			
ANNUAL TOTAL	1644.78				1176.48							
ANNUAL MEAN	4.49				3.22				6.04			
HIGHEST ANNUAL MEAN									39.7			
LOWEST ANNUAL MEAN									.47			
HIGHEST DAILY MEAN	294				86				2040			
LOWEST DAILY MEAN	.47				.22				.10			
ANNUAL SEVEN-DAY MINIMUM	.50				.27				.13			
INSTANTANEOUS PEAK FLOW					204				4680			
INSTANTANEOUS PEAK STAGE					3.60				14.32			
ANNUAL RUNOFF (AC-FT)	3260				2330				4370			
10 PERCENT EXCEEDS	6.0				4.7				4.6			
50 PERCENT EXCEEDS	.83				.66				1.0			
90 PERCENT EXCEEDS	.55				.36				.37			

WATER-QUALITY RECORDS

INSTRUMENTATION.—Water-quality monitor from December 1981 to September 1983.

DATE	TIME	DIS-CHARGE,	SPE-	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,	
		INST. CUBIC FEET PER SECOND (00061)	CON-DUCT-ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND-ARD UNITS) (00400)		NESS TOTAL (MG/L AS CAC03) (00900)		SOLIUM, DIS-SOLVED (MG/L AS MG) (00925)		
OCT 01...	1700	0.50	2870	7.7	17.5	--	--	--	--	--
NOV 19...	1730	0.64	2690	7.7	15.5	--	--	--	--	--
FEB 12...	1715	1.8	2570	8.1	12.5	700	180	60	260	44
MAY 05...	1320	0.51	3170	8.6	21.0	--	--	--	--	--
JUN 03...	1330	0.49	3160	8.2	20.5	--	--	--	--	--
AUG 05...	1430	0.41	3060	8.0	30.0	--	--	--	--	--
SEP 08...	1150	0.44	2860	8.1	19.5	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

[illegible]

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA

LOCATION.—Lat 35°01'19", long 120°13'39", SW 1/4 sec.14, T.11 N., R.32 W., San Luis Obispo–Santa Barbara County Line, Hydrologic Unit 18060007, on downstream side of bridge on State Highway 166, 1.5 mi downstream from Buckhorn Canyon, and 13 mi northeast of Santa Maria.

DRAINAGE AREA.—886 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1903 to December 1905 (published as Santa Maria River near Santa Maria), October 1959 to current year.

Monthly discharge only for October 1903 and July 1904. Yearly estimate for water year 1941 (incomplete), published in WSP 1315-B.

REVISED RECORDS.—WDR CA-71-1: Drainage area. WDR CA-77-1: 1976.

GAGE.—Water-stage recorder. Elevation of gage is 760 ft above sea level, from topographic map. Prior to October 1959, nonrecording gage at different site and datum.

REMARKS.—Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of several thousand acres in Upper Cuyama Valley.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,800 ft³/s, Feb. 25, 1969, gage height, 13.70 ft, from rating curve extended above 4,900 ft³/s on basis of slope-area measurement at gage height 10.85 ft; maximum gage height, 14.74 ft, Mar. 4, 1978; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 11	unknown	371	6.07	Jan. 15	unknown	unknown	unknown
Dec. 22	unknown	1,220	7.32	Jan. 26	1530	1,810	7.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.09	e6.0	e20	107	26	14	4.8	1.2	1.7	.62	e.20
2	.15	.09	e5.5	e35	93	26	e13	4.5	1.4	1.6	.58	e.19
3	.15	.10	e5.0	e55	80	29	e13	4.3	1.6	1.4	.55	e.17
4	.14	.10	e5.0	e45	73	30	e12	4.1	1.6	1.4	.55	e.17
5	.14	.08	e5.0	e35	66	29	e11	4.0	1.6	1.3	.54	e.16
6	.15	.09	e6.0	e28	62	30	e10	3.9	1.5	1.2	.55	e.16
7	.15	.09	e5.5	e21	60	28	e9.9	3.7	1.5	1.2	.55	e.16
8	.16	.09	e5.0	e20	57	26	9.8	3.6	1.5	1.3	e.54	e.15
9	.17	.06	e25	e19	53	24	9.4	3.5	1.9	1.3	e.52	e.14
10	.17	.06	e100	e18	52	23	9.4	3.4	2.1	1.3	e.51	e.14
11	.16	.06	e500	e17	51	23	9.2	3.3	2.1	1.3	e.49	e.14
12	.16	.06	e180	e40	47	21	8.8	3.0	2.0	1.3	e.48	e.13
13	.16	.06	e80	e80	43	22	8.8	2.7	1.9	1.3	e.47	e.12
14	.14	.06	e40	e45	40	21	8.9	2.4	1.9	1.2	e.45	e.12
15	.15	.06	e20	e250	38	24	8.3	2.4	1.8	1.0	e.44	e.12
16	.16	.06	e18	43	37	24	7.2	2.3	1.7	.89	e.42	e.11
17	.16	.06	e17	112	36	23	6.8	2.3	1.6	.86	e.41	e.10
18	.16	.06	e15	86	36	18	6.2	2.1	1.1	.81	e.40	e.10
19	.16	e.05	e13	72	33	19	6.0	2.4	1.2	.81	e.38	e.10
20	.13	e.05	e12	92	32	19	6.0	2.8	1.4	.77	e.37	e.09
21	.12	e3.0	e10	94	31	20	6.0	2.7	1.4	.74	e.35	e.08
22	.11	e90	e800	119	30	20	5.9	2.5	1.4	.82	e.34	e.08
23	.11	e40	e300	233	29	20	5.5	2.3	1.4	.87	e.33	e.08
24	.11	e20	e150	215	28	19	5.2	2.3	1.5	.73	e.31	e.07
25	.10	e13	e70	170	26	21	5.0	2.1	1.6	.68	e.30	e.06
26	.11	e10	e30	621	27	17	4.8	1.9	1.7	.65	e.28	e.06
27	.11	e9.0	e33	559	27	17	4.7	1.7	1.7	.70	e.27	e.06
28	.11	e8.0	e35	315	29	17	4.9	1.5	1.8	.70	e.26	e.05
29	3.5	e7.0	e29	201	---	15	5.1	1.4	1.8	.69	e.24	e.04
30	4.7	e6.5	e25	143	---	16	4.9	1.3	1.7	.66	e.23	e.04
31	.25	---	e22	123	---	16	---	1.2	---	.64	e.21	---
TOTAL	12.40	207.93	2567.0	3926	1323	683	239.7	86.4	48.6	31.82	12.94	3.39
MEAN	.40	6.93	82.8	127	47.3	22.0	7.99	2.79	1.62	1.03	.42	.11
MAX	4.7	90	800	621	107	30	14	4.8	2.1	1.7	.62	.20
MIN	.10	.05	5.0	17	26	15	4.7	1.2	1.1	.64	.21	.04
AC-FT	25	412	5090	7790	2620	1350	475	171	96	63	26	6.7

e Estimated.

SANTA MARIA RIVER BASIN

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.58	2.54	14.2	41.9	95.4	104	22.2	6.23	2.96	1.41	.77	1.41
MAX	8.40	23.6	275	467	920	974	214	53.6	23.6	8.87	6.99	22.7
(WY)	1984	1966	1967	1969	1969	1995	1967	1983	1983	1969	1983	1990
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1960	1960	1960	1960	1964	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1960 - 1997	
ANNUAL TOTAL	10284.50		9142.18			
ANNUAL MEAN	28.1		25.0		24.1	
HIGHEST ANNUAL MEAN					141	
LOWEST ANNUAL MEAN					.002	
HIGHEST DAILY MEAN	2000	Feb 20	800	Dec 22	9390	Feb 25 1969
LOWEST DAILY MEAN	.05	Nov 19	.04	Sep 29	.00	Oct 1 1959
ANNUAL SEVEN-DAY MINIMUM	.06	Nov 14	.05	Sep 24	.00	Oct 1 1959
INSTANTANEOUS PEAK FLOW			1810	Jan 26	17800	Feb 25 1969
INSTANTANEOUS PEAK STAGE			7.88	Jan 26	14.74	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	20400		18130		17470	
10 PERCENT EXCEEDS	44		52		17	
50 PERCENT EXCEEDS	3.2		2.3		.46	
90 PERCENT EXCEEDS	.12		.11		.00	

WATER-QUALITY RECORDS

CHEMICAL DATA: Water year 1978 to current year.

[illegible]

11138500 SISQUOC RIVER NEAR SISQUOC, CA

LOCATION.—Lat 34°50'23", long 120°10'02", in Sisquoc Grant, Santa Barbara County, Hydrologic Unit 18060008, on left bank 2.6 mi upstream from La Brea Creek and 7 mi east of Sisquoc.

DRAINAGE AREA.—281 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1943 to current year. October 1929 to September 1933, at site 0.2 mi downstream; low-flow records not equivalent owing to diversion immediately upstream. Monthly discharge only for some periods, published in WSP 1315-B.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete diversion dam. Datum of gage is 624.30 ft above sea level (levels by U.S. Army Corps of Engineers). See WSP 1735 for history of changes prior to Aug. 24, 1951.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 23,200 ft³/s, Dec. 6, 1966, gage height, 15.75 ft, from rating curve extended above 1,700 ft³/s on basis of slope-area measurements at gage heights 10.08 and 15.75 ft; no flow Nov. 11–18, 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 11,000 ft³/s, gage height, 8.1 ft, from high-water mark in gage well, at site in use 1929–33, from rating curve extended above 2,800 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 11	0315	1,000	4.25	Jan. 15	1415	502	3.36
Dec. 22	1500	1,070	4.34	Jan. 23	1315	608	3.58
Jan. 3	0700	761	3.86	Jan. 26	2400	682	3.72

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	1.3	4.5	28	82	67	28	14	2.4	.91	.83	.74
2	.83	1.3	4.2	258	82	65	29	13	2.5	.90	.77	1.2
3	.78	1.3	4.2	476	83	65	29	12	2.4	.85	.76	.89
4	.67	1.3	4.1	127	82	62	29	11	2.4	.85	.69	.72
5	.63	1.3	4.2	39	84	61	29	11	2.3	.86	.66	.65
6	.58	1.4	4.3	31	85	59	29	9.5	2.3	.83	.67	.54
7	.54	1.3	4.0	29	85	57	29	9.0	2.3	.85	.64	.48
8	.53	1.3	3.9	28	86	56	29	8.7	2.3	.76	.66	.40
9	.54	1.4	6.8	27	88	55	28	8.3	2.1	.70	.66	.37
10	.58	1.4	88	27	90	53	28	8.0	1.8	.70	.68	.37
11	.65	1.4	690	27	91	52	28	8.2	1.8	.70	.65	.32
12	.66	1.4	258	27	92	50	29	8.0	1.8	.76	.62	.30
13	.65	1.4	44	29	93	49	29	7.3	1.8	.72	.73	.31
14	.54	1.5	44	28	91	46	28	6.7	1.7	.71	.73	.25
15	.49	1.6	45	206	91	44	23	6.2	1.7	.83	.74	.24
16	.55	1.6	48	149	87	43	23	5.4	1.6	1.0	.74	.20
17	.54	2.1	52	41	88	42	23	5.3	1.6	1.1	.73	.19
18	.54	1.6	53	34	85	42	22	5.2	1.5	1.1	.67	.19
19	.58	1.7	48	34	83	39	20	5.0	1.4	1.1	.61	.16
20	.57	2.2	43	39	80	36	20	4.9	1.4	1.1	.62	.15
21	.58	4.4	40	39	78	33	19	4.4	1.4	1.1	.62	.14
22	.56	12	324	130	78	28	19	4.0	1.4	1.4	.76	.12
23	.62	39	91	434	76	27	18	3.9	1.4	1.3	.70	.12
24	.72	17	30	270	75	27	16	3.7	1.1	1.2	.69	.10
25	.77	10	27	243	72	27	16	3.6	1.1	1.2	.68	.11
26	.78	7.5	25	513	71	26	16	3.5	1.0	1.1	.68	.11
27	.70	6.2	25	511	72	27	17	3.1	.98	1.1	.66	.09
28	.68	5.8	29	316	70	26	17	2.9	.95	.90	.64	.08
29	3.4	5.2	26	201	---	27	16	3.1	.95	.87	.63	.07
30	3.6	4.7	25	128	---	27	15	2.8	.93	.85	.62	.07
31	1.8	---	25	90	---	28	---	2.5	---	.86	.78	---
TOTAL	26.56	141.6	2120.2	4559	2320	1346	701	204.2	50.31	29.21	21.32	9.68
MEAN	.86	4.72	68.4	147	82.9	43.4	23.4	6.59	1.68	.94	.69	.32
MAX	3.6	39	690	513	93	67	29	14	2.5	1.4	.83	1.2
MIN	.49	1.3	3.9	27	70	26	15	2.5	.93	.70	.61	.07
AC-FT	53	281	4210	9040	4600	2670	1390	405	100	58	42	19

SANTA MARIA RIVER BASIN

387

11138500 SISQUOC RIVER NEAR SISQUOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.47	6.61	27.3	83.9	154	145	89.7	30.0	10.9	4.37	2.33	2.35
MAX	46.0	80.5	555	1457	1731	871	975	208	80.1	33.9	17.4	17.9
(WY)	1968	1966	1967	1969	1969	1983	1958	1967	1983	1983	1983	1967
MIN	.13	.15	.20	.42	.97	1.44	.55	.34	.73	.32	.16	.20
(WY)	1990	1990	1990	1991	1949	1948	1990	1990	1990	1989	1989	1989

SUMMARY STATISTICS

FOR 1996 CALENDAR YEAR

FOR 1997 WATER YEAR

WATER YEARS 1944 - 1997

ANNUAL TOTAL	14429.73	11529.08	
ANNUAL MEAN	39.4	31.6	45.9
HIGHEST ANNUAL MEAN			361 1969
LOWEST ANNUAL MEAN			1.07 1948
HIGHEST DAILY MEAN	1900 Feb 20	690 Dec 11	14800 Jan 25 1969
LOWEST DAILY MEAN	.49 Oct 15	.07 Sep 29	.00 Nov 11 1967
ANNUAL SEVEN-DAY MINIMUM	.54 Oct 14	.09 Sep 24	.00 Nov 11 1967
INSTANTANEOUS PEAK FLOW		1070 Dec 22	23200 Dec 6 1966
INSTANTANEOUS PEAK STAGE		4.34 Dec 22	15.75 Dec 6 1966
ANNUAL RUNOFF (AC-FT)	28620	22870	33280
10 PERCENT EXCEEDS	90	82	80
50 PERCENT EXCEEDS	5.5	3.9	2.4
90 PERCENT EXCEEDS	.77	.58	.79

11138500 SISQUOC RIVER NEAR SISQUOC, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-	SPE-	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,	SODIUM	
		CHARGE,	CON-	WATER		NESS		SIUM,			DIS-
		INST.	DUCT-	WHOLE				DIS-			DIS-
		CUBIC	(STAND-	FIELD		ATURE		SOLVED			SOLVED
		FEET	ARD	(STAND-		WATER		(MG/L			(MG/L
PER	ANCE	UNITS	WATER	AS	AS CA)	AS MG)	(MG/L	(MG/L	PERCENT		
SECOND	(US/CM	(00095)	(DEG C)	(CACO3)	(00900)	(00915)	(00925)	(00930)	(00932)		
(00061)	(00095)	(00400)	(00010)	(00900)	(00915)	(00925)	(00930)	(00932)			
OCT											
01...	1030	1.1	1170	7.8	19.0	--	--	--	--	--	
NOV											
19...	1115	1.4	1200	7.9	16.0	--	--	--	--	--	
FEB											
13...	1515	93	985	8.5	14.0	470	90	60	47	18	
MAY											
09...	1355	9.0	1070	8.6	21.0	--	--	--	--	--	
JUN											
02...	1440	2.7	1080	8.5	24.5	--	--	--	--	--	
AUG											
07...	1540	0.64	1100	8.4	23.5	--	--	--	--	--	
SEP											
04...	0955	0.75	1160	7.9	20.0	--	--	--	--	--	

[illegible][illegible]

11140000 SISQUOC RIVER NEAR GAREY, CA

LOCATION.—Lat 34°53'38", long 120°18'20", in SW 1/4 sec.36, T.10 N., R.33 W., Santa Barbara County, Hydrologic Unit 18060008, on downstream side of Santa Maria Mesa Road Bridge near left bank, 0.6 mi northeast of Garey, and 3.7 mi downstream from Tepusquet Creek.

DRAINAGE AREA.—471 mi².

PERIOD OF RECORD.—October 1940 to current year. Records for water year 1941 incomplete; yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

REVISED RECORDS.—WSP 1011: 1941, 1943. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of main gage is 354.8 ft, Santa Barbara County datum. See WSP 1735 for history of changes of main gage prior to Oct. 1, 1959. Oct. 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplementary gage on downstream side of bridge near right bank at same datum. Supplementary gage discontinued June 8, 1992.

REMARKS.—Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of about 7,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33,600 ft³/s, Mar. 1, 1983, gage height, 11.16 ft, from rating curve extended above 22,000 ft³/s; maximum gage height, 13.50 ft, Dec. 6, 1966; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 11	1100	1,070	6.38	Jan. 15	2045	1,050	6.37
Dec. 22	1930	3,060	7.10	Jan. 26	2245	2,020	6.76
Jan. 3	0900	1,940	6.73				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	.00	53	341	e66	1.3	e.00	.00	e.00	.00	.00
2	.00	e.00	.00	920	281	e63	.68	e.00	e.00	e.00	.00	.00
3	.00	e.00	.00	1500	249	e61	.00	e.00	e.00	e.00	.00	.00
4	.00	e.00	.00	698	221	e58	.00	e.00	e.00	e.00	.00	.00
5	.00	e.00	.00	351	197	e56	.00	e.00	e.00	e.00	.00	.00
6	.00	e.00	.00	233	180	e54	.00	e.00	e.00	e.00	.00	.00
7	.00	e.00	.00	187	169	e51	.00	e.00	e.00	e.00	.00	.00
8	.00	e.00	.00	157	156	e49	.00	e.00	e.00	e.00	.00	.00
9	.00	e.00	.00	134	147	e46	.00	e.00	e.00	e.00	.00	.00
10	.00	e.00	.00	112	138	e44	.00	e.00	e.00	e.00	.00	.00
11	.00	e.00	526	91	132	e42	.00	e.00	e.00	e.00	.00	.00
12	.00	e.00	600	80	125	e39	.00	e.00	e.00	e.00	.00	.00
13	.00	e.00	152	152	104	e37	.00	e.00	e.00	e.00	.00	.00
14	.00	.00	63	148	e101	e34	.00	e.00	e.00	e.00	.00	.00
15	e.00	.00	29	422	e99	e32	.00	e.00	e.00	e.00	.00	.00
16	e.00	.00	12	703	e96	e30	.00	.00	e.00	e.00	.00	.00
17	e.00	.00	6.6	361	e94	e27	.00	.00	e.00	e.00	.00	.00
18	e.00	.00	5.5	257	e91	e25	e.00	.00	e.00	e.00	.00	.00
19	e.00	.00	5.0	212	e89	e22	e.00	.00	e.00	e.00	.00	.00
20	e.00	.00	4.8	258	e87	e20	e.00	.00	e.00	e.00	.00	.00
21	e.00	.00	4.8	294	e84	16	e.00	.00	e.00	e.00	.00	.00
22	e.00	.00	267	502	e82	14	e.00	.00	e.00	e.00	.00	.00
23	e.00	.00	307	1030	e80	14	e.00	.00	e.00	e.00	.00	.00
24	e.00	.00	116	951	e78	13	e.00	.00	e.00	e.00	.00	.00
25	e.00	.00	73	726	e75	9.3	e.00	.00	e.00	e.00	.00	.00
26	e.00	.00	49	1260	e73	8.2	e.00	.00	e.00	e.00	.00	.00
27	e.00	.00	38	1510	e71	5.9	e.00	.00	e.00	e.00	.00	.00
28	e.00	.00	73	1020	e68	3.8	e.00	.00	e.00	e.00	.00	.00
29	e.00	.00	57	772	---	2.7	e.00	.00	e.00	e.00	.00	.00
30	e.00	.00	41	581	---	2.3	e.00	.00	e.00	e.00	.00	.00
31	e.00	---	36	446	---	1.7	---	.00	---	e.00	.00	---
TOTAL	0.00	0.00	2465.70	16121	3708	946.9	1.98	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	79.5	520	132	30.5	.066	.000	.000	.000	.000	.000
MAX	.00	.00	600	1510	341	66	1.3	.00	.00	.00	.00	.00
MIN	.00	.00	.00	53	68	1.7	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	4890	31980	7350	1880	3.9	.00	.00	.00	.00	.00

e Estimated.

11140000 SISQUOC RIVER NEAR GAREY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.13	2.65	18.3	103	181	180	78.1	14.8	2.04	.18	.048	.097
MAX	3.88	39.0	506	1531	2165	1833	1072	211	53.0	9.09	1.40	4.00
(WY)	1968	1966	1967	1969	1969	1983	1958	1983	1983	1983	1967	1967
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1942	1942	1944	1944	1947	1947	1947	1946	1945	1942	1942	1942

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR			FOR 1997 WATER YEAR			WATER YEARS 1942 - 1997		
ANNUAL TOTAL	22516.85			23243.58					
ANNUAL MEAN	61.5			63.7			47.6		
HIGHEST ANNUAL MEAN							397		
LOWEST ANNUAL MEAN							.000		
HIGHEST DAILY MEAN	4560			Feb 20			1510		
LOWEST DAILY MEAN	.00			Jan 1			Jan 27		
ANNUAL SEVEN-DAY MINIMUM	.00			Jan 1			Oct 1		
INSTANTANEOUS PEAK FLOW							3060		
INSTANTANEOUS PEAK STAGE							Dec 22		
ANNUAL RUNOFF (AC-FT)	44660			7.10			Dec 22		
10 PERCENT EXCEEDS	127			46100			33600		
50 PERCENT EXCEEDS	.00			154			13.50		
90 PERCENT EXCEEDS	.00			.00			34520		
							42		
							.00		
							.00		

11141050 ORCUTT CREEK NEAR ORCUTT, CA

LOCATION.—Lat 34°53'01", long 120°29'38", in SW 1/4 SE 1/4 sec.6, T.9 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on right bank 10 ft upstream from Black Road Bridge, 0.2 mi northeast of State Highway 1, and 3.0 mi northwest of Orcutt.

DRAINAGE AREA.—18.5 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1982 to September 1992, October 1994 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above sea level, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. Natural flow affected by pumping and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,830 ft³/s, Mar. 1, 1983, gage height, 7.53 ft, from floodmarks, from rating curve extended above 10 ft³/s on basis of slope-area measurements at gage heights 4.83 and 7.53 ft; maximum gage height, 11.07 ft, Mar. 10, 1995; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharge greater than base discharge of 25 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 10	1445	68	3.11	Jan. 20	0200	25	2.75
Jan. 2	2000	180	3.55	Jan. 23	0100	50	2.95
Jan. 15	0500	37	2.86	Jan. 26	0215	180	3.55

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.07	.10	4.6	1.2	.17	.09	.06	.04	.03	.02	.00
2	.00	.05	.08	37	1.2	.17	.05	.09	.09	.05	.00	.00
3	.00	.04	.10	21	.89	.17	.12	.08	.11	.01	.00	.00
4	.00	.04	.02	2.5	.54	.14	.12	.09	.08	.02	.00	.00
5	.00	.03	.23	2.1	.68	.15	.05	.10	.14	.02	.01	.00
6	.00	.03	.67	1.2	.68	.24	.03	.12	.11	.00	.01	.00
7	.00	.04	.08	.95	.79	.25	.06	.11	.07	.00	.00	.00
8	.00	.09	.04	.72	.58	.30	.09	.02	.06	.00	.05	.00
9	.00	.06	2.4	.32	.58	.16	.07	.06	.09	.00	.06	.00
10	.00	.09	18	.33	.96	.19	.05	.03	.02	.00	.00	.06
11	.02	.09	8.7	.33	.92	.17	.13	.02	.07	.01	.05	.00
12	.00	.07	1.7	.42	.65	.15	.10	.01	.07	.00	.00	.00
13	.00	.11	.44	4.1	.45	.12	.09	.01	.01	.00	.00	.05
14	.00	.05	.13	7.2	.39	.30	.15	.07	.06	.00	.21	.00
15	.01	.11	.01	14	.77	.31	.13	.05	.01	.00	.03	.00
16	.00	.06	.00	3.8	.69	.13	.05	.03	.11	.00	.05	.06
17	.00	.13	.00	2.3	.53	.12	.08	.03	.05	.04	.00	.05
18	.00	.11	.00	1.8	.51	.13	.12	.01	.07	.00	.00	.12
19	.00	.07	.00	1.8	.71	.13	.17	.02	.09	.00	.00	.21
20	.00	.19	.00	10	.51	.15	.06	.04	.12	.00	.00	.22
21	.00	3.1	.00	4.7	.30	.15	.14	.04	.04	.02	.00	.00
22	.00	2.6	1.1	18	.38	.14	.19	.05	.00	.00	.01	.00
23	.00	.48	.09	20	.32	.12	.09	.05	.08	.06	.03	.00
24	.00	.10	.02	6.2	.28	.11	.09	.02	.14	.03	.15	.01
25	.08	.06	.02	7.9	.33	.07	.05	.00	.00	.02	.36	.01
26	.13	.06	.02	18	.51	.08	.04	.04	.06	.00	.03	.04
27	.00	.06	1.4	3.3	.55	.09	.04	.10	.01	.00	.00	.00
28	.00	.04	.16	2.4	.41	.06	.08	.08	.00	.06	.00	.01
29	1.9	.04	.04	1.7	---	.09	.09	.03	.00	.00	.01	.08
30	1.0	.04	.94	1.2	---	.06	.11	.12	.01	.00	.05	.00
31	.28	---	.43	.96	---	.05	---	.03	---	.00	.00	---
TOTAL	3.42	8.11	36.92	200.83	17.31	4.67	2.73	1.61	1.81	0.37	1.13	0.92
MEAN	.11	.27	1.19	6.48	.62	.15	.091	.052	.060	.012	.036	.031
MAX	1.9	3.1	18	37	1.2	.31	.19	.12	.14	.06	.36	.22
MIN	.00	.03	.00	.32	.28	.05	.03	.00	.00	.00	.00	.00
AC-FT	6.8	16	73	398	34	9.3	5.4	3.2	3.6	.7	2.2	1.8

e Estimated.

11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.071	.19	.74	3.79	5.04	14.3	.61	.24	.14	.087	.087	.072
MAX	.29	.63	2.68	27.5	20.1	120	3.17	.87	.43	.29	.23	.18
(WY)	1984	1983	1992	1995	1996	1995	1983	1995	1988	1989	1983	1983
MIN	.000	.000	.018	.040	.070	.059	.020	.031	.009	.003	.003	.005
(WY)	1995	1995	1996	1985	1984	1989	1990	1986	1996	1996	1992	1996

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1983 - 1997	
ANNUAL TOTAL	722.28		279.83			
ANNUAL MEAN	1.97		.77		2.12	
HIGHEST ANNUAL MEAN					13.8	
LOWEST ANNUAL MEAN					.090	
HIGHEST DAILY MEAN	246	Feb 20	37	Jan 2	1460	Mar 10 1995
LOWEST DAILY MEAN	.00	May 11	.00	Oct 1	.00	Oct 1 1982
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 27	.00	Oct 1	.00	Oct 1 1982
INSTANTANEOUS PEAK FLOW			180	Jan 2	1830	Mar 1 1983
INSTANTANEOUS PEAK STAGE			3.55	Jan 2	11.07	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	1430		555		1530	
10 PERCENT EXCEEDS	1.7		.98		1.0	
50 PERCENT EXCEEDS	.03		.06		.06	
90 PERCENT EXCEEDS	.00		.00		.00	

WATER-QUALITY RECORDS

CHEMICAL DATA: Water years 1983–92, October 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE,	SPE-	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,	SODIUM	
		INST.	CIFIC	WATER		NESS		STUM,			
		CUBIC	CON-	FIELD		TOTAL		DIS-			DIS-
		FEET	DUCT-	(STAND-		AS		SOLVED			SOLVED
PER	ANCE	ARDS	WATER	(DEG C)	CAC03)	(MG/L	(MG/L	(MG/L	(MG/L	PERCENT	
SECOND	(US/CM)	UNITS)	(00010)	(00900)	(00915)	(00925)	(00930)	(00932)			
(00061)	(00095)	(00400)									
NOV 19...	1530	0.03	2590	8.2	17.0	--	--	--	--	--	
FEB 14...	0930	0.23	2960	8.4	11.0	560	120	64	420	62	
MAY 07...	1030	0.26	1300	8.1	22.0	--	--	--	--	--	
JUN 03...	1030	0.16	1420	8.3	20.0	--	--	--	--	--	

[illegible][illegible]

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and other collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1997

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum Gage height (ft)	Annual maximum Discharge (ft ³ /s)
BRISTOL LAKE BASIN							
10253000	Gourd Creek near Ludlow, CA	Lat 34°40'35", long 116°01'20", in SW 1/4 sec.23, T.7 N., R.9E., San Bernardino County, Hydrologic Unit 18090208, at culvert on U.S. Highway 40 (formerly U.S. Highway 66), 8.5 mi southeast of Ludlow.	0.30	1959–74, 1976–97		—	0
10261800	Beacon Creek at Helendale, CA	Lat 34°45'00", long 117°18'53", in SE 1/4 sec.29, T.8 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, at culvert on county road (formerly U.S. Highways 66 and 91), 0.6 mi northeast of Helendale.	.72	1959–60, 1961–67a, 1968–69, 1976–97		—	0
10262600	Boom Creek near Barstow, CA	Lat 34°54'20", long 116°56'55", NW 1/4 NE 1/4 sec.2, T.9 N., R.1 W., San Bernardino County, Hydrologic Unit 1890208, at culvert on Interstate Highway 15, 4.3 mi east of Barstow.	.24	1956–66, 1967–73a, 1976–97		—	0
ANTELOPE VALLEY							
10263900	Buckhorn Creek near Valyermo, CA	Lat 34°53'35", long 117°55'13", in SW 1/4 sec.15, T.3 N., R.10 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 2, Angeles National Forest, 8.1 mi southwest of Valyermo.	.48	1961–66a, 1967–69, 1971–73, 1977–97	12-22	2.05	12
10264530	Pine Creek near Palmdale, CA	Lat 34°36'09", long 118°31'48", in SE 1/4 SW 1/4 sec.15, T.6 N., R.13 W., Los Angeles County, on left bank at culvert on Elizabeth Lake Road, 7.5 mi northwest of Palmdale.	1.78	1958–73, 1977–88, 1988–94a, 1997		—	0
10264560	Spencer Canyon Creek near Fairmont, CA	Lat 34°46'33", long 118°34'08", in SW 1/4 SW 1/4 sec.15, T.8 N., R.16 W., Los Angeles County, Hydrologic Unit 18090206, at culvert on State Highway 138, 8.5 mi northwest of Fairmont.	3.60	1959–64, 1965–73a, 1974, 1978–97		—	0
10264646	South Drainage Bissell/ Rosamond Hills near Edwards Air Force Base, CA	Lat 34°53'18", long 117°58'23" in NE 1/4 NW 1/4 sec.7, T.9 N., R.10 W., Kern County, Hydrologic Unit 18090206, 1.8 mi southwest of intersection of Forbes Ave. and Rosamond Blvd., 2.3 mi southwest of Edwards Air Force Base.	9.25	1996–97		—	0
10264656	Mojave Creek near Edwards, CA	Lat 34°58'07", long 117°59'38" in NW 1/4 NE 1/4 sec.13, T.10 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, 3.75 mi NW of intersection of Forbes and Mojave Ave., 3.75 mi NW of Edwards.		1996–97		—	0

a Operated as a continuous-record station.

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Discharge (ft ³ /s)
ANTELOPE VALLEY—Continued							
10264660	Mojave Creek at Rosamond Blvd. at Edwards, CA	Lat 34°54'51", long 117°55'00" in SE 1/4 SE 1/4 sec.34, T.10 N., R.10 W., Kern County, Hydrologic Unit 18090206, NW corner of Rosamond Blvd. and Lancaster, 0.8 mi SE of Edwards.		1996–97		—	0
10264673	North Base Tributary at RR crossing near Edwards, CA	Lat 34°59'32", long 117°53'09", in SW 1/4 NE 1/4 sec.01, T.10 N., R.10 W., Kern County, Hydrologic Unit 18090206, 0.6 mi N on Rosamond Blvd., from intersection of N. Base Blvd., 6.6 mi N of intersection of Mojave Blvd., in Edwards.				—	0
SANTA ANA RIVER BASIN							
11070158	Line "D" Storm Drain at Santa Fe Street, near San Jacinto, CA	Lat 33°46'44", long 116°57'46", in San Jacinto Viejo Grant, Riverside County, Hydrologic Unit 18070202, on right bank at downstream end of Santa Fe Street crossing, 0.1 mi south of Seventh Street, and 0.5 mi southwest of San Jacinto.	Indeterminate	1997	09-26-97	2.63	123
11070160	Line "E" Storm Drain below State Street, near San Jacinto, CA	Lat 33°46'41", long 116°58'18", in San Jacinto Viejo Grant, Riverside County, Hydrologic Unit 18070202, on right bank 50 ft downstream from State Street Crossing, 0.2 mi south of Seventh Street, and 1.0 mi southwest of San Jacinto.	Indeterminate	1997	09-26-97	23.07	193
11070185	Lamb Canyon Creek at Victory Ranch, near San Jacinto, CA	Lat 33°51'31", long 117°00'53", in NW 1/4 NW 1/4 sec. 5, T.4 S., R.1 W., Riverside County, Hydrologic Unit 18070202, on left bank at private road culvert crossing, 0.25 mi upstream of confluence with San Jacinto River, and 6.0 mi northwest of San Jacinto.	3.97	1997	01-26-97	4.93	44
SANTA YNEZ RIVER BASIN							
11131700	Santa Rita Creek near Lompoc, CA	Lat 34° 38'41", long 120°22'09", in Santa Rita Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2.4 mi upstream from mouth, and 6.5 mi east of Lompoc.	14.1	1976–79 1981–97		—	0
11133700	Purisima Creek near Lompoc, CA	Lat 34° 41'34", long 120°25'51", in Purisima Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank 1.1 mi northeast of junction of Buener road and Lompoc–Casmalia Road, and 4.0 mi northeast of Lompoc.	4.75	1972–75a 1976–97		—	0
11135200	Rodeo–San Pasqual Creek near Lompoc, CA	Lat 34°38'42", long 120°30'57", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 0.1 mi east of Dewolf Avenue at Highway 246, and 3.3 mi west of Lompoc.	7.80	1971–72 1973–78 1980–97		—	0

a Operated as a continuous-record station.

Water-quality partial-record stations are particular sites where chemical-quality, biological, and (or) sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

SANTA YNEZ RIVER BASIN

11123490 KELLY CREEK AT LOS LAURELES CANYON NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°32'22", long 119°50'50", San Marcos Grant, Santa Barbara County, Hydrologic Unit 18060010, 0.4 mi north of Highway 150 (154) on Paradise Road, 300 ft upstream of bridge crossing, 1.2 mi northwest of San Marcos Pass.

DRAINAGE AREA.—4.10 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 08...	1115	.57	808	8.3	12.5	340	60	47	260
DATE	SODIUM PERCENT (00932)	SODIUM RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
APR 08...	62	6	5.9	269	220	63	380	.5	41
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 08...	995	1.35	<.01	.05	<.02	.02	340	30	27

SANTA YNEZ RIVER BASIN

11124600 TEQUEPIS CANYON CREEK NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°33'26", long 119°57'12", in SW 1/4 NE 1/4 sec.32, T.6 N., R.29 W., Santa Barbara County, Hydrologic Unit 18060010, 0.9 mi north of Highway 150 (154) on Tequepis Creek Road, 8.4 mi east of Santa Ynez.

DRAINAGE AREA.—2.0 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 08...	1515	.13	500	8.1	14.5	240	70	16	17
DATE	SODIUM PERCENT (00932)	SODIUM RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
APR 08...	14	.5	.8	227	186	84	9.0	.2	16
DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 08...	325	.44	<.01	<.05	<.02	<.01	48.8	<3	<1

SANTA YNEZ RIVER BASIN

11128025 QUIOTA CREEK AT REFUGIO ROAD NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°34'02", long 120°05'37", Nojoqui Land Grant, Santa Barbara County, Hydrologic Unit 18060010, 3.0 mi south of intersection of Highway 246 and Refugio Road, located 30 ft upstream of where the creek crosses Refugio Road.

DRAINAGE AREA.—6.32 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 09...	1430	1.24	1490	8.5	17.5	590	130	68	73
DATE	SODIUM PERCENT (00932)	SODIUM RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
APR 09...	21	1	2.0	578	474	290	67	.5	42
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 09...	972	1.32	.01	5.2	<.02	.18	124	7	3

SANTA YNEZ RIVER BASIN

11128400 ALISAL CREEK NEAR SOLVANG, CA

LOCATION.—Lat 34°34'35", long 120°08'51", T.6 N., R.31 W, Nojoqui Grant, Santa Barbara County, Hydrologic Unit 18060010, 0.6 mi upstream of mouth and confluence with Santa Ynez River, at footbridge, 1.9 mi south of Solvang.

DRAINAGE AREA.—11.6 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
APR 10...	1035	.320	1360	8.4	12.5	610	150	58	73	21
DATE		SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
APR 10...	1	1	1.6	417	6	352	340	64	.8	15
DATE		SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 10...	911	911	1.24	<.01	.20	.02	.04	317	<3	4

SANTA YNEZ RIVER BASIN

11130800 SANTA ROSA CREEK AT HIGHWAY 246 NEAR BUELLTON, CA

LOCATION.—Lat 34°31'07", long 120°16'59 T.6 N., R. 32 W., Santa Rosa Grant, Santa Barbara County, Hydrologic Unit 18060010, 1 mi south of Highway 246 on Mail Road, 0.1 mi east on Santos Road on downstream side of bridge over Santa Rosa Creek, 5.1 mi west of Buellton.

DRAINAGE AREA.—15.2 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
APR 10...	1450	E.01	1110	8.6	15.0	420	130	22	81	30
DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKA- LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
APR 10...	2	2.5	295	12	262	170	120	.3	38	
DATE	TIME	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 10...	729	.99	.02	1.7	<.02	.65	127	5	120	

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

SANTA YNEZ RIVER BASIN

11132700, SALSIPUEDES CREEK AT SANTA ROSA ROAD NEAR LOMPOC, CA

LOCATION.—Lat 34°37'18", long 120°25'18", Canada de Salsipuede Grant, Santa Barbara County, Hydrologic Unit 18060010, 2 mi southeast of Lompoc, 4 mi east of Highway 1.

DRAINAGE AREA.—52.6 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 10...	1105	3.8	1360	8.4	13.0	550	130	54	99
DATE	SODIUM PERCENT (00932)	SODIUM RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
APR 10...	28	2	2.5	383	314	300	110	.5	18
DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 10...	904	1.23	<.01	<.05	<.02	.03	582	8	10

SANTA YNEZ RIVER BASIN

11133600 CEBADA CANYON CREEK NEAR LOMPOC, CA

LOCATION.—Lat 34°39'53", long 120°24'37", Santa Rita Grant, Santa Barbara County, Hydrologic Unit 18060010, 2 mi northeast of Lompoc, on Lompoc Casmalia Road.

DRAINAGE AREA.—7.06 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
APR 09...	1540	.15	935	7.8	18.0	230	55	22	94
DATE	SODIUM PERCENT (00932)	SODIUM RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
APR 09...	47	3	5.7	71	58	97	180	1.0	57
DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
APR 09...	580	.79	.09	5.5	.39	1.2	120	9	6

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES

SANTA YNEZ RIVER BASIN

11135180 SLOANS CANYON CREEK NEAR LOMPOC, CA

LOCATION.—Lat 34°37'44", long 120°30'00, Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, 0.93 mi south of Highway 246 on Pasqual Road, 1 mi west of Lompoc.

DRAINAGE AREA.—4.18 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to September 1997.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	
APR 08...	1500	1620	8.3	16.0	700	120	97	91	22	
DATE	RATIO	SODIUM AD- SORP- TION (MG/L AS K) (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)
APR 08...	1	3.3	478	6	402	310	140	.4	34	
DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	
APR 08...	1040	1.41	<.01	.05	<.02	.06	186	17	47	

SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA

LOCATION.—Lat 34°57'27", long 120°37'54", Santa Barbara County, Hydrologic Unit 18060008, at culvert on West Main Street, and 3.6 mi southwest of Guadalupe.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE	PH WATER WHOLE FIELD (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM AD-SORP-TION RATIO PERCENT	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	
		(00061)	(00095)	(00400)	(00010)	(00900)	(00915)	(00925)	(00930)	(00932)	(00931)	(00935)
FEB 14...	1300	--	2630	8.0	17.0	1100	260	120	160	23	2	7.3
SEP 11...	1000	7.2	2900	8.0	20.5	1300	280	140	200	25	2	8.3
DATE	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
	(00453)	(39086)	(00945)	(00940)	(00950)	(00955)	(70300)	(70301)	(70303)	(00613)	(00631)	(00608)
FEB 14...	299	245	840	190	.40	29	2040	1910	2.77	.650	35.0	.710
SEP 11...	362	297	990	240	.3	31	2440	2210	3.32	.14	34	.10
DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	BORON, DIS-SOLVED (UG/L AS B)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALA-CHLOR IN BOT-TOM MA-TOTAL RECOVER (UG/L)	ALDRIN, TOTAL IN BOT-TOM MA-TOTAL RECOVER (UG/KG)	AME-TRYNE TOTAL (UG/L)	ATRA-ZINE WATER UNFLTRD REC (UG/L)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L)	
	(00671)	(01020)	(01046)	(01056)	(39519)	(39251)	(77825)	(39333)	(82184)	(39630)	(75981)	
FEB 14...	.590	315	<9.0	170	<2	<1	<.1	<.1	<.1	<.1	<.20	
SEP 11...	.42	361	<9	55	<5	--	<.1	<.2	<.1	<.1	<.20	
DATE	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L)	BROM-ACIL WATER WHLREC (UG/L)	BUTA-CHLOR WATER WHLREC (UG/L)	BUTYL-ATE WATER WHLREC (UG/L)	CARBOX-IN WATER WHOLE RECOV-ERABLE (UG/L)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TOTAL RECOVER (UG/KG)	CHLOR-PYRIFOS IN BOT-TOTAL RECOVER (UG/L)	CYAN-AZINE TOTAL RECOVER (UG/L)	CYCLO-ATE WATER WHOLE RECOV-ERABLE TOTAL (UG/L)	P,P'-DDE, RECOVER IN BOT-TOM MA-TOTAL RECOVER (UG/KG)	P,P'-DDT, RECOVER IN BOT-TOM MA-TOTAL RECOVER (UG/KG)	
	(75980)	(30234)	(30235)	(30236)	(30245)	(39351)	(38932)	(81757)	(30254)	(39368)	(39373)	
FEB 14...	<.20	<.2	<.1	<.1	<.2	<1	.87	<.2	<.1	3.4	2.9	
SEP 11...	<.20	<.2	<.1	<.1	<.2	12	.14	<.2	<.1	130	190	

SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	DEF TOTAL (UG/L) (39040)	DI- AZINON, TOTAL (UG/L) (39570)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	DIPHEN- AMID WATER WHOLE RECOV- ERABLE (UG/L) (30255)	DISUL- FOTON UNFILT RECOVER (UG/L) (39011)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY- FONATE) WATER TOT.REC (UG/L) (82614)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)
FEB 14...	<.01	<.01	.5	<.1	--	<.1	.4	<.01	<.010	<.1	<.1
SEP 11...	<.03	.01	5.7	<.1	<.01	<.8	<.2	<.01	<.010	.2	<.2
DATE	HEXAZI- NONE WATER WHOLE RECOV- ERABLE (UG/L) (30264)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MALA- THION, TOTAL (UG/L) (39530)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	METHYL PARA- THION, TOTAL (UG/L) (39600)	METOLA- CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI- BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	PARA- THION, TOTAL (UG/L) (39540)	PER- THANE IN BOT- TOM MA- TERIAL (UG/KG) (81886)	PHORATE TOTAL (UG/L) (39023)
FEB 14...	<.2	<.1	<.01	<.8	<.01	<.2	<.1	<.1	<.01	<.1	--
SEP 11...	<.2	.2	E.12	<1.6	<.01	<.2	<.1	<.2	<.01	--	<.01
DATE	PROME- TONE TOTAL (UG/L) (39056)	PROME- TRYNE TOTAL (UG/L) (39057)	PROPA- CHLOR WATER WHOLE RECOV. (UG/L) (30295)	PRO- PAZINE TOTAL (UG/L) (39024)	SIME- TRYNE TOTAL (UG/L) (39054)	SIMA- ZINE TOTAL (UG/L) (39055)	TER- BACIL WATER WHOLE RECOV. (UG/L) (30311)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	TRI- FLURA- LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI- THION (UG/L) (39786)	VER- NOLATE WATER WHOLE RECOV. (UG/L) (30324)
FEB 14...	<.2	<.1	<.1	<.1	<.1	<.1	<.2	<10	<.1	<.01	<.1
SEP 11...	<.2	.1	<.1	<.1	<.1	<.1	<.2	<50	<.1	<.01	<.1

	Page		Page
A		Boom Creek near Barstow	394
BELOUR DITCH NEAR BISHOP	132	BORREGO PALM CREEK NEAR BORREGO SPRINGS	50
CESS TO USGS WATER DATA	11	Bottom material, definition of	12
curacy of the Records	8	BREA CREEK BELOW BREA DAM, NEAR FULLERTON	286
re-foot, definition of	12	BUCKHORN CREEK AT EAST 120TH AVENUE, NEAR ROGERS LAKE	107
lenosine triphosphate, definition of	12	Buckhorn Creek near Valyermo	394
NEW LAKE NEAR JUNE LAKE	140	C	
AMO PINTADO CREEK NEAR SOLVANG	357	CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK	242
amo River (at the United States-Mexico International Boundary)	41	CAMPO CREEK NEAR CAMPO	150
AMO RIVER AT DROP NO. 3, NEAR CALIPATRIA	44	CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE	306
AMO RIVER NEAR NILAND	46	CARBON CREEK BELOW CARBON CANYON DAM	273
gae, definition of	12	CARPINTERIA CREEK NEAR CARPINTERIA	331
gal growth potential, definition of	12	CARUTHERS CREEK NEAR IVANPAH	37
ISAL CREEK NEAR SOLVANG	400	CASTAIC CREEK RELEASE FLOW BELOW CASTAIC LAKE, NEAR CASTAIC	300
ISAL RESERVOIR NEAR SOLVANG	360	CASTAIC LAKE NEAR CASTAIC	299
IALYSES OF SAMPLES COLLECTED AT WATER-QUALITY MISCELLANEOUS SITES	397	CEBADA CANYON CREEK NEAR LOMPOC	403
IALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS	405	Cell volume determination	12
DREAS CREEK NEAR PALM SPRINGS	72	Cells per volume	13
nual 7-day mininum, definition of	13	Chemical oxygen demand, definition of	13
nual mean, explanation of	7	CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS	65
nual runoff, explanation of	7	CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO	262
nual total, explanation of	7	Chlorophyll, definition of	13
aifer, definition of	12	CITY CREEK NEAR HIGHLAND	225
angement of Records	8	CITY CREEK WATER CO.'S CANAL NEAR HIGHLAND	227
ROYO SECO NEAR PASADENA	292	Classification of Records	8
ROYO TRABUCO AT SAN JUAN CAPISTRANO	213	Color unit, definition of	13
esian, definition of	12	Contents, definition of	13
ificial substrate, definition of	17	Continuing-record station	8
mass, definition of	12	Control structure, definition of	13
ASCADERO CREEK NEAR GOLETA	337	Control, definition of	13
B		COOPERATION	1
teria, definition of 12		Cooperation paragraph	6
UTISTA CREEK AT HEAD OF FLOOD-CONTROL CHANNEL, NEAR HEMET	252	COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA	148
con Creek at Helendale	394	Crest-stage partial-record stations	394
material, definition of	12	CRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE	209
load discharge, definition of	16	Cross-Sectional Data	10
load, definition of	16	Cubic foot per second, definition of	13
thic organisms, definition of	12	Cubic foot per second-day, definition of	13
BEAR LAKE NEAR BIG BEAR LAKE	216	CUCAMONGA CREEK NEAR MIRA LOMA	266
ROCK CREEK NEAR VALYERMO	102	CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA	383
TUJUNGA CREEK BELOW HANSEN DAM	290	D	
hemical oxygen demand, definition of	12	Daily mean values, data table of	6
nass, definition of	12	Data Collection and Computation	4
CH CREEK BELOW DIVERSION DAM, NEAR BISHOP	118	Data Presentation	5, 11
CH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2, NEAR BISHOP	129	DE LUZ CREEK NEAR DE LUZ	188
HOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP	133	DEEP CREEK NEAR HESPERIA	84
op Creek Basin, diversions and storage in	116	DEEP CREEK NEAR PALM DESERT	77
HOP CREEK BELOW INTAKE NO. 3 DIVERSION DAM, NEAR BISHOP	128	DEFINITION OF TERMS	12
HOP CREEK BELOW INTAKE NO. 4 DIVERSION DAM, NEAR BISHOP	130	DEVIL CANYON CREEK NEAR SAN BERNARDINO	244
HOP CREEK BELOW INTAKE NO. 5 DIVERSION DAM, NEAR BISHOP	131	Diatoms, definition of	16
op Creek Powerplant No. 6	133	Discharge at partial-record stations and miscellaneous sites	394
k Samples	10	Discharge, definition of	13
-green algae, definition of	16	Dissolved Trace-Element Concentrations	35
		Dissolved, definition of	13

	Page		Page
Dissolved-solids concentration, definition of	13	Hydrologic Bench-Mark Network, definition of	14
Diversions and storage in Bishop Creek Basin	116	Hydrologic unit, definition of	14
Diversions and storage in Mojave River Basin	83		
Diversions and storage in Salton Sea Basin	39	I	
Diversions and storage in San Gabriel and Los Angeles River Basins	281	Identifying Estimated Daily Discharge 8	
Diversions and storage in Santa Ana River Basin	215	Imperial County, location of discharge and water-quality stations	23
Diversions and storage in Santa Clara River Basin	297	Instantaneous discharge, definition of	13
Diversions and storage in Santa Margarita River Basin	170	Instantaneous low flow, explanation of	7
Diversions and storage in Santa Ynez River Basin	341	Instantaneous peak flow, explanation of	7
Diversity index, definition of	13	Instantaneous peak stage, explanation of	7
Downstream Order System	3	INTAKE NO. 2 RESERVOIR NEAR BISHOP	126
Drainage area paragraph	5	INTRODUCTION	1
Drainage area, definition of	13	Inyo County, location of discharge stations	24
Drainage basin, definition of	14		
Dry mass, definition of	12	J	
E		JAMUL CREEK NEAR JAMUL	151
EAST FORK OF WEST FORK MOJAVE RIVER		K	
ABOVE SILVERWOOD LAKE, NEAR HESPERIA	88	KELLY CREEK AT LOS LAURELES CANYON NEAR SANTA YNEZ	397
EAST TWIN CREEK NEAR ARROWHEAD SPRINGS	230	Kern County, location of discharge and water-quality stations	25
ELDERBERRY FOREBAY NEAR CASTAIC	298		
ELLERY LAKE NEAR LEE VINING	145	L	
Equipment blank	10	Laboratory Measurements	10
EXPLANATION OF THE RECORDS	3	Lakes and reservoirs:	
Extremes for current year paragraph	6	AGNEW LAKE NEAR JUNE LAKE	140
Extremes for period of record paragraph	6	ALISAL RESERVOIR NEAR SOLVANG	360
Extremes outside period of record paragraph	6	BIG BEAR LAKE NEAR BIG BEAR LAKE	216
F		CACHUMA, LAKE, NEAR SANTA YNEZ	351
FALLBROOK CREEK NEAR FALLBROOK	190	CASTAIC LAKE NEAR CASTAIC	299
FALLS CREEK DIVERSION NEAR WHITE WATER	60	ELDERBERRY FOREBAY NEAR CASTAIC	298
FALLS CREEK NEAR WHITE WATER	58	ELLERY LAKE NEAR LEE VINING	145
Fecal-coliform bacteria, definition of	12	GEM LAKE NEAR JUNE LAKE	139
Fecal-streptococcal bacteria, definition of	12	INTAKE NO. 2 RESERVOIR NEAR BISHOP	126
Field blank	10	LUNDY LAKE NEAR LEE VINING	135
Filter blank	10	PIRU, LAKE, NEAR PIRU	315
FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY	41	PYRAMID LAKE NEAR GORMAN	310
FONTANA WATER CO.'S		SABRINA, LAKE, NEAR BISHOP	123
INFILTRATION LINE DIVERSION	239	SADDLEBAG LAKE NEAR LEE VINING	143
FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA	288	SALTON SEA NEAR WESTMORLAND	40
G		SAN VICENTE RESERVOIR NEAR LAKESIDE	155
Gage datum, definition of	14	SILVERWOOD LAKE NEAR HESPERIA	90
Gage height, definition of	14	SOUTH LAKE NEAR BISHOP	120
Gage paragraph	6	TIOGA LAKE NEAR LEE VINING	144
Gaging station, definition of	14	VAIL LAKE NEAR TEMECULA	173
GEM LAKE NEAR JUNE LAKE	139	WAUGH LAKE NEAR JUNE LAKE	138
Gourd Creek near Ludlow	394	LAKE CACHUMA NEAR SANTA YNEZ	351
Green algae, definition of	16	LAKE PIRU NEAR PIRU	315
GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE	405	LAKE SABRINA NEAR BISHOP	123
GREEN CREEK CONDUIT OUTLET NEAR BISHOP	119	Lamb Canyon Creek at Victory Ranch, near San Jacinto	395
H		LAS FLORES CREEK NEAR OCEANSIDE	205
Hardness, definition of	14	Latitude-Longitude System	3
Highest annual mean, explanation of	7	LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING	146
Highest daily mean, explanation of	7	Light-attenuation coefficient, definition of	14
HOT CREEK AT FLUME, NEAR MAMMOTH	114	Line "D" Storm Drain at Santa Fe Street, near San Jacinto	395
Hydrologic Bench-Mark Network	2	Line "E" Storm Drain below State Street, near San Jacinto	395
		Location paragraph	5
		LONE PINE CREEK NEAR KEENBROOK	240
		Los Angeles and San Gabriel River Basins, diversions and storage in	281

	Page		Page
Los Angeles County, location of discharge and water-quality stations	26	National Water Data Exchange	8
OS COCHES CREEK NEAR LAKESIDE	156	National Water Information System (NWIS)	11, 15
OS PENASQUITOS CREEK NEAR POWAY	162	National Water-Quality Assessment (NAWQA) Program	15
Lowest annual mean, explanation of	7	National Water-Quality Assessment Program	3
Lowest daily mean, explanation of	7	Natural substrate, definition of	17
UNDY LAKE NEAR LEE VINING	135	Nekton, definition of	15
Undy Powerplant Tailrace	136	New River (at the United States-Mexico International Boundary)	41
UTILE CREEK AT COLTON	246	NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO	47
UTILE CREEK NEAR FONTANA	237	NEW RIVER NEAR WESTMORLAND	49
		North Base Tributary at RR crossing near Edwards	395
M		NORTH PORTAL TEHACHAPI TUNNEL NEAR GORMAN	308
Macrophytes, definition of	14	O	
MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA	335	Onsite Measurements and Sample Collection	9
MC GEE CREEK DIVERSION NEAR BISHOP	117	Orange County, location of discharge and water-quality stations	28
Mean concentration, definition of	17	ORCUTT CREEK NEAR ORCUTT	391
Mean discharge, definition of	13	Organic mass, definition of	12
Metamorphic stage, definition of	14	Organism count/area, definition of	15
Methylene blue active substance, definition of	14	Organism count/volume, definition of	15
MEXICO AT INTERNATIONAL BOUNDARY, FLOW FROM	41	Organism, definition of	15
Micrograms per gram, definition of	14	Other Records Available	8
Micrograms per liter, definition of	14	P	
MOBILE FORK BISHOP CREEK BELOW INTAKE NO. 2 RESERVOIR, NEAR BISHOP	127	PALM CANYON CREEK NEAR PALM SPRINGS 70 PALM CANYON WASH NEAR CATHEDRAL CITY	74
MOBILE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP	124	Parameter, definition of	15
GUELITO CREEK AT LOMPOC	376	Partial-record station	8
MOBILE CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING	136	Partial-record station, definition of	15
MOBILE CREEK POWER CANALS NOS. 2 AND 3 NEAR YUCAIPA	220	Partial-record stations and miscellaneous sites, discharge at	394
Milligrams per liter, definition of	14	Partial-record stations, crest-stage	394
Miscellaneous sampling site	8	PARTIAL-RECORD STATIONS, WATER-QUALITY, ANALYSES OF SAMPLES COLLECTED AT	405
Miscellaneous sites and partial-record stations, discharge at	394	Particle size, definition of	15
MISCELLANEOUS SITES, WATER-QUALITY, ANALYSES OF SAMPLES COLLECTED AT,	397	Particle-size classification, definition of	15
MISSION CREEK NEAR DESERT HOT SPRINGS 63 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA	333	PECHANGA CREEK NEAR TEMECULA	174
MOJAVE CREEK AT FORBES AVENUE, AT EDWARDS AIR FORCE BASE	109	Percent composition or percent of total, definition of	15
Mojave Creek at Rosamond Blvd. at Edwards	395	Period of record paragraph	5
Mojave Creek near Edwards	394	Periphyton, definition of	15
MOJAVE RIVER AT AFTON	100	PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS	256
MOJAVE RIVER AT BARSTOW	99	Pesticides, definition of	15
MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE	97	pH, definition of	15
Mojave River Basin, diversions and storage in	83	Phytoplankton, definition of	16
MOJAVE RIVER BELOW MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA	95	Picocurie, definition of	16
Mono County, location of discharge stations	27	Pine Creek near Palmdale	394
Monthly mean data, statistics of	6	PIRU CREEK ABOVE LAKE PIRU	313
MURRIETA CREEK AT TEMECULA	179	PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE	304
		PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN	311
		PIRU CREEK BELOW SANTA FELICIA DAM	316
		Plankton, definition of	16
		PLUNGE CREEK AND DIVERSIONS NEAR EAST HIGHLANDS	224
		Plunge Creek Lower Diversion	222
		Plunge Creek Middle Diversion	222
		PLUNGE CREEK NEAR EAST HIGHLANDS	222
		Plunge Creek Upper Diversion	222
		Polychlorinated biphenyls, definition of	16
		Poole Powerplant	146
		Poole Powerplant Conduit intake	146
		Preservation blank	10
		Primary productivity, definition of	16
N			
Nanograms per liter, definition of	14		
National Atmospheric Deposition Program	2, 14		
National Geodetic Vertical Datum of 1929, definition of	14		
National Stream Quality Accounting Network	15		
National Stream-Quality Accounting Network	2		
National Trends Network	2, 14		
National Trends Network, change in procedures	35		

	Page		Page
PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS	19	SANDIA CREEK NEAR FALLBROOK	186
Purissima Creek near Lompoc	395	SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO	232
PYRAMID LAKE NEAR GORMAN	310	SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON	247
Q		SANTA ANA RIVER AT SANTA ANA	278
QUIOTA CREEK AT REFUGIO ROAD NEAR SANTA YNEZ	399	Santa Ana River Basin, diversions and storage in	215
R		SANTA ANA RIVER BELOW PRADO DAM	268
RAINBOW CREEK NEAR FALLBROOK	183	SANTA ANA RIVER NEAR MENTONE	217
Records of Stage and Water Discharge	4	Santa Ana River near Mentone (main gage)	217
Records of Surface-Water Quality	8	Santa Ana River near Mentone (supplementary gage)	217
Recoverable, definition of	16	Santa Barbara County, location of discharge and water-quality stations	32
Reference Samples	10	SANTA CLARA RIVER AT MONTALVO.....	324
Remark Codes	35	Santa Clara River Basin, diversions and storage in	297
Remarks paragraph	6	SANTA CLARA RIVER NEAR PIRU	302
Replicate Samples	11	SANTA CRUZ CREEK NEAR SANTA YNEZ	348
Revised record paragraph	5	SANTA GERTRUDIS CREEK NEAR TEMECULA	178
Revisions paragraph	6	SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK	185
RIO HONDO ABOVE WHITTIER NARROWS DAM	294	SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE	194
RIO HONDO BELOW WHITTIER NARROWS DAM	295	SANTA MARGARITA RIVER AT YSIDORA	192
Riverside County, location of discharge and water-quality stations	29	Santa Margarita River Basin, diversions and storage in	170
Rodeo-San Pasqual Creek near Lompoc	395	SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE	200
ROGERS LAKE TRIBUTARY AT EDWARDS AIR FORCE BASE	111	SANTA MARGARITA RIVER NEAR TEMECULA	181
RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE	141	SANTA MARIA CREEK NEAR RAMONA	166
Rush Creek Powerplant Tailrace	141	SANTA PAULA CREEK NEAR SANTA PAULA	322
S		Santa Rita Creek near Lompoc	395
SADDLEBAG LAKE NEAR LEE VINING	143	SANTA ROSA CREEK AT HIGHWAY 246, NEAR BUELLTON	401
SALSIPUEDES CREEK AT SANTA ROSA ROAD, NEAR LOMPOC	402	SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA	343
SALSIPUEDES CREEK NEAR LOMPOC	369	SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO	342
SALT CREEK NEAR MECCA	42	SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC	373
Salton Sea Basin, diversions and storage in	39	SANTA YNEZ RIVER AT SOLVANG	361
SALTON SEA NEAR WESTMORLAND	40	Santa Ynez River Basin, diversion and storage in	341
Sampler blank	10	SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA	344
SAN ANTONIO CREEK NEAR CASMALIA	379	SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ	346
San Bernardino County, location of discharge and water-quality stations	30	SANTA YNEZ RIVER NEAR SANTA YNEZ	352
San Diego County, location of discharge and water-quality stations	31	SANTA YSABEL CREEK NEAR RAMONA	164
SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO ...	160	SANTIAGO CREEK AT MODJESKA	274
SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE	158	SANTIAGO CREEK AT SANTA ANA	276
San Gabriel and Los Angeles River Basins, diversions and storage in	281	Sea level, definition of	16
SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM ...	284	Sediment	9
SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK	282	Sediment, definition of	16
SAN JACINTO RIVER ABOVE STATE STREET, NEAR SAN JACINTO	254	Sequential samples	11
SAN JACINTO RIVER NEAR ELSINORE	259	SESPE CREEK NEAR FILLMORE	320
SAN JACINTO RIVER NEAR SAN JACINTO	250	SESPE CREEK NEAR WHEELER SPRINGS	318
SAN JOSE CREEK NEAR GOLETA	339	SILVERWOOD LAKE NEAR HESPERIA	90
SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO	211	SISQUOC RIVER NEAR GAREY	389
SAN LUIS REY RIVER AT OCEANSIDE	168	SISQUOC RIVER NEAR SISQUOC	386
SAN MATEO CREEK NEAR SAN CLEMENTE	207	SLED TRACK CANAL AT LANCASTER BOULEVARD, NEAR ROGERS LAKE	104
SAN TIMOTEO CREEK NEAR LOMA LINDA	228	SLOANS CANYON CREEK NEAR LOMPOC	404
SAN VICENTE RESERVOIR NEAR LAKESIDE	155	SNOW CREEK DIVERSION NEAR WHITE WATER	56
		SNOW CREEK NEAR WHITE WATER	54
		Sodium-adsorption-ratio, definition of	17
		Solute, definition of	17
		SOUTH DRAINAGE BISSELL/ROSAMOND HILLS NEAR EDWARDS AIR FORCE BASE	108

	Page		Page
South Drainage Bissell/Rosamond Hills		Trip blank	10
near Edwards Air Force Base	394	Turbidity, definition of	18
SOUTH FORK BISHOP CREEK BELOW SOUTH FORK			
DIVERSION DAM, NEAR BISHOP	122	U	
SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE,			
NEAR BISHOP	121	Upper Conway Ditch	136
SOUTH LAKE NEAR BISHOP	120		
SOUTHERN CALIFORNIA EDISON CO.'S CANAL		V	
NEAR MENTONE	219		
SOUTHERN CALIFORNIA EDISON CO.'S		VAIL LAKE NEAR TEMECULA	173
LYTLE CREEK CONDUIT	239	VENTURA CITY DIVERSION NEAR VENTURA	328
Southern California Edison's Canal		Ventura County, location of discharge and water-quality stations	33
below Powerplant #2, near Mentone	217	VENTURA RIVER NEAR VENTURA	326
SPECIAL NETWORKS AND PROGRAMS	2		
Specific conductance, definition of	17	W	
Spencer Canyon Creek near Fairmont	394		
Split Samples	11	WARM CREEK NEAR SAN BERNARDINO	235
Split sample	11	WARM SPRINGS CREEK NEAR MURRIETA	176
Splitter blank	10	Water Quality-Control Data	10
Stage-discharge relation, definition of	17	Water Temperature	9
Station manuscript, explanation of	5	Water year, definition of	18
Station-Identification Numbers	3	WATER-QUALITY MISCELLANEOUS SITES,	
Streamflow, definition of	17	ANALYSES OF SAMPLES COLLECTED AT	397
Strate, definition of	17	WATER-QUALITY PARTIAL-RECORD STATIONS,	
Summary statistics, explanation of	7	ANALYSES OF SAMPLES COLLECTED AT	405
Surface area, definition of	17	WAUGH LAKE NEAR JUNE LAKE	138
Subsicial bed material, definition of	17	WDR, definition of	18
Suspended sediment, definition of	16	Weighted average, definition of	18
Suspended, definition of	17	WEST BRANCH CUCAMONGA CHANNEL	
Suspended, recoverable, definition of	17	ABOVE ELY PERCOLATION BASINS, AT ONTARIO	264
Suspended, total, definition of	17	WEST FORK MOJAVE RIVER ABOVE MOJAVE	
Suspended-sediment concentration, definition of	16	RIVER FORKS RESERVOIR, NEAR HESPERIA	93
Suspended-sediment discharge, definition of	17	WEST FORK MOJAVE RIVER	
Suspended-sediment load, definition of	17	ABOVE SILVERWOOD LAKE, NEAR HESPERIA	86
SWETWATER RIVER NEAR DESCANSO	153	WEST FORK MOJAVE RIVER	
System for numbering miscellaneous sites (latitude and longitude)	4	BELOW SILVERWOOD LAKE, NEAR HESPERIA	91
		Wet mass, definition of	12
T		WHITewater RIVER AT INDIO	79
TIQUITZ CREEK NEAR PALM SPRINGS	68	WHITewater RIVER AT RANCHO MIRAGE	75
Tonnage, definition of	18	WHITewater RIVER AT WHITE WATER CUTOFF,	
TEMECULA CREEK NEAR AGUANGA	171	AT WHITE WATER	52
TESCAL CREEK ABOVE MAIN STREET, AT CORONA	260	WHITewater RIVER AT WINDY POINT,	
TEUPIS CANYON CREEK NEAR SANTA YNEZ	398	NEAR WHITE WATER	61
Topograph, definition of	18	WHITewater RIVER NEAR MECCA	81
Un-weighted average, definition of	18	WSP, definition of	18
YSA LAKE NEAR LEE VINING	144	Z	
Yield per acre-foot, definition of	18		
Yield per day, definition of	18	ZACA CREEK NEAR BUELLTON	366
Yield coliform bacteria, definition of	12	Zooplankton, definition of	16
Yield load, definition of	18		
Yield organism count, definition of	15		
Yield, definition of	18		
Yield, recoverable, definition of	18		
Yield-sediment discharge, definition of	17		
Yield-sediment load, definition of	17		

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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

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