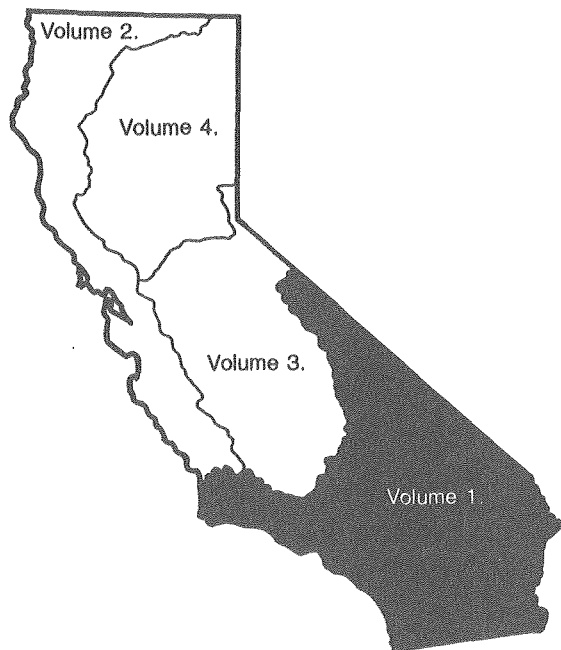


Water Resources Data California Water Year 1998

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

Water-Data Report CA-98-1



CALENDAR FOR WATER YEAR 1998

1997

OCTOBER

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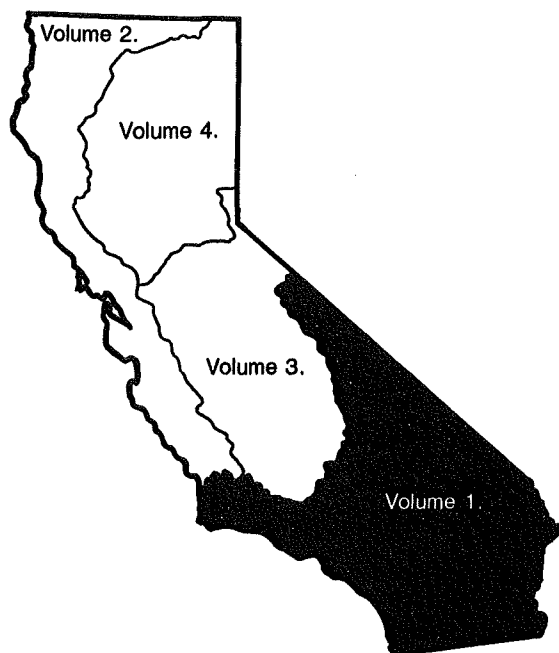
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Water Resources Data California Water Year 1998

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

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

Water-Data Report CA-98-1



U.S. DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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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.....	21
Surface-Water-Discharge and Surface-Water-Quality Records.....	37
Remark Codes.....	37
Discharge at Partial-Record Stations and Miscellaneous Sites.....	407
Crest-Stage Partial-Record Stations.....	407
Analyses of Samples Collected at Water-Quality Miscellaneous Partial-Record Stations.....	409
Index.....	423

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.....	25
	3. Inyo County.....	26
	4. Kern County.....	27
	5. Los Angeles County.....	28
	6. Mono County.....	29
	7. Orange County.....	30
	8. Riverside County.....	31
	9. San Bernardino County.....	32
	10. San Diego County.....	33
	11. Santa Barbara County.....	34
	12. Ventura County.....	35
13-20.	Schematic diagrams showing diversions and storage:	
	13. Salton Sea Basin.....	41
	14. Mojave River Basin.....	82
	15. Bishop Creek Basin.....	108
	16. Santa Margarita River Basin.....	164
	17. Santa Ana River Basin.....	211
	18. San Gabriel and Los Angeles River Basins.....	289
	19. Santa Clara River Basin.....	306
	20. Santa Ynez River Basin.....	351

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 39

SALTON SEA BASIN

Salton Sea near Westmorland (l) 10254005 42

Salt Creek near Mecca (d) 10254050 44

Alamo River at Drop No. 3, near Calipatria (d) 10254670 45

Alamo River near Niland (d) 10254730 47

New River at International Boundary, at Calexico (d) 10254970 48

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 83

West Fork Mojave River above Silverwood Lake, near Hesperia (d) 10260550 85

East Fork of West Fork Mojave River above Silverwood Lake, near Hesperia (d) 10260700 86

Silverwood Lake near Hesperia (l) 10260790 87

West Fork Mojave River below Silverwood Lake, near Hesperia (d) 10260820 88

West Fork Mojave River above Mojave River Forks Reservoir, near Hesperia (d) 10260950 90

Mojave River at Lower Narrows, near Victorville (d) 10261500 92

Mojave River at Barstow (d) 10262500 94

Mojave River at Afton (d) 10263000 95

ANTELOPE VALLEY

Big Rock Creek near Valyermo (d) 10263500 97

Sled Track Canal at Lancaster Boulevard, near Rogers Lake (dp) 10264636 99

Buckhorn Creek at East 120th Avenue, near Rogers Lake (d) 10264640 101

South Drainage Bissell/Rosamond Hills near Edwards Air Force Base (p) 10264646 102

Mojave Creek at Forbes Avenue, at Edwards Air Force Base (dp) 10264658 103

Rogers Lake Tributary at Edwards Air Force Base (d) 10264675 105

OWENS LAKE BASIN

Owens River:

Hot Creek at flume, near Mammoth (d) 10265150 106

Horton Creek:

McGee Creek:

McGee Creek Diversion near Bishop (d) 10268225 109

Birch Creek below Diversion, near Bishop (d) 10268282 110

South Fork Bishop Creek:

South Lake:

Green Creek Conduit outlet near Bishop (d) 10270680 111

South Lake near Bishop (l) 10270700 112

South Fork Bishop Creek below South Lake, near Bishop (d) 10270800 113

South Fork Bishop Creek below South Fork Diversion Dam, near Bishop (d) 10270830 114

Middle Fork Bishop Creek:

Lake Sabrina near Bishop (l) 10270870 115

Middle Fork Bishop Creek below Lake Sabrina, near Bishop (d) 10270872 116

Intake No. 2 Reservoir near Bishop (l) 10270875 117

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

ix

	Station No.	Page
THE GREAT BASIN—Continued		
OWENS LAKE BASIN—Continued		
Middle Fork Bishop Creek below Intake No. 2 Reservoir, near Bishop (d).....	10270877	118
Bishop Creek below Intake No. 3 Diversion Dam, near Bishop (d).....	10270885	119
Bishop Creek Powerhouse No. 2 Diversion (from Intake No. 2 Reservoir):		
Birch-McGee Diversion to Bishop Creek Powerplant No. 2, near Bishop (d)	10270900	120
Bishop Creek below Intake No. 4 Diversion Dam, near Bishop (d).....	10270940	121
Bishop Creek below Intake No. 5 Diversion Dam, near Bishop (d).....	10270970	122
Bishop Creek Powerhouse No. 6 Penstock:		
Abelour Ditch near Bishop (d).....	10270985	123
Bishop Creek above Powerplant No. 6, near Bishop (d)	10271200	124
MONO LAKE BASIN		
Mill Creek:		
Lundy Lake near Lee Vining (l).....	10287060	126
Mill Creek Flume below Lundy Lake, near Lee Vining (d).....	10287069	127
Rush Creek:		
Waugh Lake near June Lake (l).....	10287260	129
Gem Lake near June Lake (l)	10287280	130
Agnew Lake near June Lake (l).....	10287285	131
Rush Creek Flume below Agnew Lake, near June Lake (d).....	10287289	132
Lee Vining Creek:		
Saddlebag Lake near Lee Vining (l).....	10287650	134
Lee Vining Creek below Saddlebag Lake, near Lee Vining (d)	10287655	135
Tioga Lake near Lee Vining (l).....	10287700	136
Glacier Creek below Tioga Lake, near Lee Vining (d).....	10287720	137
Ellery Lake near Lee Vining (l).....	10287760	138
Lee Vining Creek below Rhinedollar Dam, near Lee Vining (d)	10287770	139
PACIFIC SLOPE BASINS IN CALIFORNIA		
TIJUANA RIVER BASIN		
Cottonwood Creek (head of Tijuana River):		
Cottonwood Creek above Tecate Creek, near Dulzura (d)	11012000	141
Tecate Creek:		
Campo Creek near Campo (d).....	11012500	143
OTAY RIVER BASIN		
Jamul Creek near Jamul (d)	11014000	145
SWEETWATER RIVER BASIN		
Sweetwater River near Descanso (d)	11015000	147
SAN DIEGO RIVER BASIN		
San Diego River:		
San Vicente Creek:		
San Vicente Reservoir near Lakeside (l)	11022100	149
Los Coches Creek near Lakeside (d)	11022200	150
San Diego River at Mast Road, near Santee (d)	11022480	152
San Diego River at Fashion Valley, at San Diego (d)	11023000	154
LOS PENASQUITOS CREEK BASIN		
Los Penasquitos Creek near Poway (d)	11023340	156
SAN DIEGUITO RIVER BASIN		
Santa Ysabel Creek (head of San Dieguito River):		
Santa Ysabel Creek near Ramona (d)	11025500	158
Santa Maria Creek near Ramona (d)	11028500	160
SAN LUIS REY RIVER BASIN		
San Luis Rey River at Oceanside (d).....	11042000	162
SANTA MARGARITA RIVER BASIN		
Temecula Creek (head of Santa Margarita River):		
Temecula Creek near Aguanga (d)	11042400	165
Vail Lake:		
Vail Lake near Temecula (l)	11042510	167
Pechanga Creek near Temecula (d)	11042631	168
Murrieta Creek:		
Murrieta Creek at Tenaja Road, near Murrieta (d).....	11042700	170
Warm Springs Creek near Murrieta (d).....	11042800	172
Santa Gertrudis Creek near Temecula (d)	11042900	174
Murrieta Creek at Temecula (d)	11043000	175
Santa Margarita River near Temecula (d).....	11044000	177
Rainbow Creek near Fallbrook (d).....	11044250	179
Santa Margarita River at Fallbrook Public Utility District sump, near Fallbrook (d)	11044300	181
Sandia Creek near Fallbrook (d).....	11044350	182

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>		
<u>SANTA MARGARITA RIVER BASIN—Continued</u>		
De Luz Creek near De Luz (d)	11044800	184
Fallbrook Creek near Fallbrook (d)	11045300	186
Santa Margarita River at Ysidora (d)	11046000	188
Santa Margarita River at mouth, near Oceanside (gct)	11046050	190
Santa Margarita River Estuary near Oceanside (ct)	331346117243401	197
<u>LAS FLORES CREEK BASIN</u>		
Las Flores Creek near Oceanside (d)	11046100	202
<u>SAN MATEO CREEK BASIN</u>		
San Mateo Creek near San Clemente (d)	11046300	203
Cristianitos Creek above San Mateo Creek, near San Clemente (d)	11046360	205
<u>SAN JUAN CREEK BASIN</u>		
San Juan Creek at La Novia Street Bridge, at San Juan Capistrano (d)	11046530	207
Arroyo Trabuco at San Juan Capistrano (d)	11047300	209
<u>SANTA ANA RIVER BASIN</u>		
Santa Ana River:		
Bear Creek:		
Big Bear Lake near Big Bear Lake (l)	11049000	212
Santa Ana River near Mentone (d)	11051500	213
Mill Creek:		
Mill Creek Power Canals Nos. 2 and 3 near Yucaipa (d)	11052500	216
Mill Creek near Mentone (d)	11055000	217
Plunge Creek near East Highlands (d)	11055500	218
City Creek near Highland (d)	11055800	221
San Timoteo Creek near Loma Linda (d)	11057500	224
Warm Creek Floodway:		
East Twin Creek near Arrowhead Springs (d)	11058500	225
Santa Ana River at E Street, near San Bernardino (ds)	11059300	227
Warm Creek near San Bernardino (d)	11060400	230
Lytle Creek near Fontana (d)	11062000	232
Cajon Creek:		
Lone Pine Creek near Keenbrook (d)	11063500	235
Cajon Creek below Lone Pine Creek, near Keenbrook (d)	11063510	237
Devil Canyon Creek near San Bernardino (d)	11063680	239
Lytle Creek at Colton (d)	11065000	241
Santa Ana River at MWD Crossing, near Arlington (dc)	11066460	242
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	245
Bautista Creek at head of flood control channel, near Hemet (d)	11070020	247
San Jacinto River above State Street, near San Jacinto (d)	11070150	249
Perris Valley storm drain at Nuevo Road, near Perris (d)	11070270	251
San Jacinto River near Elsinore (d)	11070500	252
Temescal Creek (continuation of San Jacinto River from Lake Elsinore):		
Temescal Creek above Main Street, at Corona (d)	11072100	253
Chino Creek at Schaefer Avenue, near Chino (dcs)	11073360	255
West Branch Cucamonga Channel above Ely Percolation Basins, at Ontario (d)	11073493	262
Cucamonga Creek near Mira Loma (d)	11073495	264
Santa Ana River below Prado Dam (dct)	11074000	266
Santa Ana River spreading diversion below Imperial Highway, near Anaheim (d)	11075620	271
Carbon Creek below Carbon Canyon Dam (d)	11075720	278
Santiago Creek at Modjeska (d)	11075800	279
Santiago Creek at Santa Ana (d)	11077500	281
Santa Ana River at Santa Ana (dcs)	11078000	283
<u>SAN GABRIEL RIVER BASIN</u>		
San Gabriel River below Santa Fe Dam, near Baldwin Park (d)	11085000	290
San Gabriel River above Whittier Narrows Dam (d)	11087020	292
Coyote Creek:		
Brea Creek below Brea Dam, near Fullerton (d)	11088500	294
Fullerton Creek below Fullerton Dam, near Brea (d)	11089500	296
<u>LOS ANGELES RIVER BASIN</u>		
Los Angeles River:		
Big Tujunga Creek below Hansen Dam (d)	11097000	298
Arroyo Seco near Pasadena (d)	11098000	300
Rio Hondo above Whittier Narrows Dam (d)	11101250	302
Rio Hondo below Whittier Narrows Dam (d)	11102300	304

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

xi

	Station No.	Page
<u>PACIFIC SLOPE BASINS IN CALIFORNIA—Continued</u>		
SANTA CLARA RIVER BASIN		
Santa Clara River:		
Castaic Creek:		
Callegas Creek at Camarillo State Hospital (d).....	11106550	307
Elderberry Forebay near Castaic (l)	11108092	316
Castaic Lake near Castaic (l)	11108133	317
Castaic Creek Release Flow below Castaic Lake, near Castaic (d)	11108134	318
Piru Creek below Buck Creek, near Pyramid Lake (d)	11109375	319
Pyramid Lake:		
Canada de Los Alamos above Pyramid Lake (d).....	11109395	320
North Portal Tehachapi Tunnel near Gorman (d)	11109396	321
Pyramid Lake near Gorman (l).....	11109520	322
Piru Creek below Pyramid Lake, near Gorman (d)	11109525	323
Piru Creek above Lake Piru (d)	11109600	324
Lake Piru near Piru (l)	11109700	326
Piru Creek below Santa Felicia Dam (d)	11109800	327
Sespe Creek near Fillmore (d)	11113000	329
Santa Clara River at Montalvo (d)	11114000	331
VENTURA RIVER BASIN		
Ventura River near Ventura (ds).....	11118500	333
CARPINTERIA CREEK BASIN		
Carpinteria Creek near Carpinteria (d)	11119500	338
MISSION CREEK BASIN		
Mission Creek at Rocky Nook Park, at Santa Barbara (d)	11119745	340
Mission Creek near Mission Street, at Santa Barbara (d).....	11119750	341
ATASCADERO CREEK BASIN		
Atascadero Creek:		
Maria Ygnacio Creek at University Drive, near Goleta (d)	11119940	343
Atascadero Creek near Goleta (d).....	11120000	345
SAN JOSE CREEK BASIN		
San Jose Creek near Goleta (d).....	11120500	347
San Jose Creek at Goleta (d).....	11120510	349
SANTA YNEZ RIVER BASIN		
Santa Ynez River at Jameson Lake, near Montecito (d).....	11121000	352
Santa Ynez River above Gibraltar Dam, near Santa Barbara (d)	11122000	353
Santa Ynez River below Gibraltar Dam, near Santa Barbara (d)	11123000	354
Santa Ynez River below Los Laureles Canyon, near Santa Ynez (dc).....	11123500	356
Lake Cachuma:		
Santa Cruz Creek near Santa Ynez (dc)	11124500	358
Lake Cachuma near Santa Ynez (lc).....	11125500	361
Santa Ynez River near Santa Ynez (dct)	11126000	363
Alamo Pintado Creek near Solvang (d).....	11128250	368
Alisal Creek:		
Alisal Reservoir near Solvang (l)	11128300	370
Santa Ynez River at Solvang (dct).....	11128500	371
Zaca Creek near Buellton (d)	11129800	376
Salsipuedes Creek near Lompoc (dc)	11132500	378
Santa Ynez River at Narrows, near Lompoc (dc).....	11133000	382
Miguelito Creek at Lompoc (d)	11134800	385
SAN ANTONIO CREEK BASIN		
San Antonio Creek at Los Alamos (d).....	11135800	387
San Antonio Creek near Casmalia (dc).....	11136100	389
SANTA MARIA RIVER BASIN		
Cuyama River (head of Santa Maria River):		
Cuyama River below Buckhorn Canyon, near Santa Maria (dc)	11136800	393
Sisquoc River near Sisquoc (dc).....	11138500	396
Sisquoc River near Garey (d)	11140000	400
Bradley Ditch near Donovan Road, at Santa Maria (d)	11140600	402
Santa Maria River (continuation of Cuyama River):		
Orcutt Creek near Orcutt (dc)	11141050	404

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 Geronio River near Banning	14.8	1976–81
10256300	San Geronio River at Banning	44.2	1981
10256400	San Geronio River near White Water	154	1966–73, 1975–78
10257710	Chino Canyon Creek near Palm Springs	3.88	1975–85
10257800	Long Creek near Desert Hot Springs	19.6	1963–71
10258030	Tahquitz Creek at Palm Springs	—	1983
10258100	Palm Canyon Creek Tributary near Anza	.47	1967–73
10259600	Cottonwood Wash near Cottonwood Spring	.71	1960–72
10259920	Wasteway No. 1 near Mecca	—	1966–81
10260200	Pipes Creek near Yucca Valley	15.1	1958–71
10260400	Cushenbury Creek near Lucerne Valley	6.36	1957–71
10260620	Houston Creek above Lake Gregory, at Crestline	.35	1979–93
10260630	Abondigas Creek above Lake Gregory, at Crestline	1.15	1979–93
10260650	Houston Creek below Lake Gregory, at Crestline	2.68	1979–93
10260820	West Fork Mojave River below Silverwood Lake	34.0	1981–83
10261000	West Fork Mojave River near Hesperia	70.3	1905–22, 1930–71
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	1938–41, 1947–86
11040200	Keys Creek Tributary at Valley Center	7.65	1970–83, 1991
11040500	San Luis Rey River at Bonsall	456	1912–15
11040700	San Luis Rey River below Moosa Canyon, near Bonsall	499	1984–85
11041000	San Luis Rey River near Bonsall	513	1930–79
11042490	Wilson Creek above Vail Lake, near Radec	122	1990–94
11042520	Temecula Creek at Nigger Canyon, near Temecula	320	1923–48
11042600	Temecula Creek below Vail Dam	320	1978
11044500	Santa Margarita River near Fallbrook	644	1925–80
11044600	Santa Margarita River Tributary near Fallbrook	.52	1962–65
11045000	Santa Margarita River near De Luz Station	705	1925–26
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
11047000	Arroyo Trabuco near San Juan Capistrano	35.7	1930–72, 1980–81
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
11056000	Santa Ana River near San Bernardino	306	1929–37, 1955–61
11056500	Little San Gorgonio River near Beaumont (REVISED RECORDS IN WDR CA-92-1)	1.74	1949–85
11057490	San Timoteo Creek at Loma Linda	125	1979–80
11058600	Waterman Canyon Creek near Arrowhead Springs	4.65	1912–14, 1920–85
11059000	Warm Creek Floodway at San Bernardino	75.1	1961–81
11059100	San Bernardino Water–Quality Control Plant at San Bernardino	—	1973–82
11060300	Lytle Creek at Channel, at San Bernardino	—	1929–30, 1932–57
11060500	Meeks and Daley Canal near Colton	—	1921–81
11062200	Fontana Union Water Co. Lytle Creek return flow channel near Fontana	—	1973–80
11062810	West San Bernardino County Water District Rialto Diversion near Fontana	—	1981
11063000	Cajon Creek near Keenbrook	40.6	1920–71, 1978–83
11064000	Lytle Creek (East Channel) at San Bernardino	—	1929–57
11065800	Warm Creek near Colton	198	1921–61
11065801	Warm Creek near Colton plus diversion	259	1920–61
11066050	Santa Ana River at Colton	740	1962–66
11066100	Lytle Creek West Channel at Colton	—	1929–45
11066440	Santa Ana River at Mission Boulevard, at Riverside	808	1971–82
11066478	Riverside Water–Quality Control Plant Weir No. 1	—	1973–81
11066479	Riverside Water–Quality Control Plant Weir No. 2	—	1973–81
11066480	Riverside Water–Quality Control Plant at Riverside Narrows, near Arlington	—	1966–81

DISCONTINUED GAGING STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Period of record
11066500	Santa Ana River at Riverside Narrows, near Arlington	853	1929-73
11066550	Sheehan Diversion at Riverside Narrows, near Arlington	—	1964-65, 1967-68
11066950	Day Creek Diversion near Etiwanda	—	1966-69, 1971
11067000	Day Creek near Etiwanda	4.56	1929-72
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	1961-68
11069300	South Fork San Jacinto River tributary near Valle Vista	2.20	1962-67
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
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
11105500	Malibu Creek at Crater Camp, near Calabasas	105	1982-88
11106000	Calleguas Creek at Camarillo	168	1929-31, 1955-58
11106400	Conejo Creek above Highway 101, near Camarillo	64	1973-83
11106500	Conejo Creek near Camarillo	69	1928-31
11107000	Honda Barranca near Somis	2.5	1955-63
11107500	Beardsley Wash near Somis	13	1954-58
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
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
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
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
11022100	San Vicente Reservoir near Lakeside	74.2	1947–61, 1973–98
11030020	Lake Hodges near Escondido	303	1945–68, 1972–93
11030700	Lake Wohlford near Escondido	7.96	1972–93
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
10264508	Somerset Creek at Palmdale	.50	P	1989–94
10264510	Inn Creek at Palmdale	.03	P	1989–94
10264530	Pine Creek near Palmdale	1.78	P	1989–94
10264550	City Ranch Creek near Palmdale	.39	P	1989–94
10264555	Estates Creek near Quartz Hill	.11	P	1989–94
10264605	Joshua Creek near Mojave	3.83	P	1989–94
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

DISCONTINUED WATER-QUALITY STATIONS—Continued

Station No.	Station name	Drainage area (mi ²)	Type of record	Period of record
11066480	Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington	—	C	1970–80, 1982
11066500	Santa Ana River at Riverside Narrows, near Arlington	853	C,T	1968–69
11067890	Santa Ana River at Prado Park, near Corona	1,010	T,S	1976–80
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	C,T	1968
11070240	Sunnymead Channel at Alessandro Boulevard near Sunnymead	13.3	P	1990–93
11070262	Perris Valley Storm Drain Lateral "B" near March Air Force Base	10.6	P	1991
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
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 1998
VOLUME 1—SOUTHERN GREAT BASIN FROM MEXICAN BORDER TO MONO LAKE BASIN,
AND PACIFIC SLOPE BASINS FROM TIJUANA RIVER TO SANTA MARIA RIVER

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

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 157 streamflow-gaging stations and 13 partial-record stations; (2) stage and content records for 21 lakes and reservoirs; (3) gage-height records for 1 station; (4) precipitation records for 3 stations; and (5) water-quality records for 22 streamflow-gaging stations and 14 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-98-1." 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, Timothy B. Jones, Director.
 Imperial Irrigation District, J.L. Flowers, Assistant General Manager, Water.
 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 Public Facilities and Resources Department, John W. Sibley, Director.
 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 Environmental Public Works Agency-Flood Control District, Ken A. Miller, Director.
 San Bernardino Valley Municipal Water District, G. Louis Fletcher, General Manager-Chief Engineer.
 San Diego, City of, Larry Gardner, Water Utilities Director.
 San Diego County Department of Public Works, Stephen Thunberg, 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, Debi Askew, Secretary.
 Santa Ynez River Water Conservation District, Bruce A. Wales, General Manager.
 Sweetwater Authority, Richard A. Reynolds, General Manager.
 United Water Conservation District, Frederick J. Gientke, General Manager.
 Ventura County Public Works Agency, Arthur Goulet, Director.

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

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

SPECIAL NETWORKS AND PROGRAMS

Hydrologic 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.rvares.er.usgs.gov/nawqa/nawqa_home.html

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1998 water year that began October 1, 1997, and ended September 30, 1998. 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).

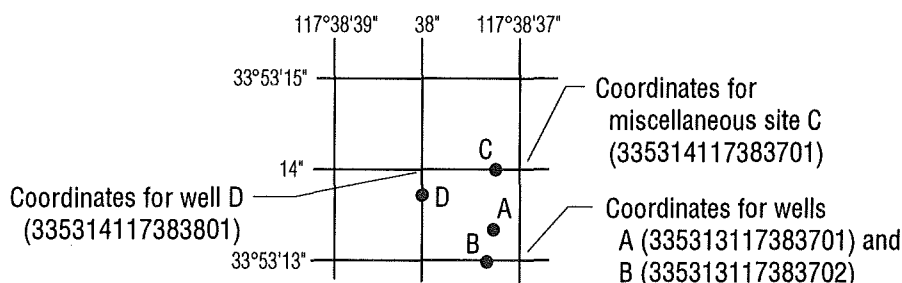


Figure 1. System for numbering miscellaneous sites (latitude and longitude).

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.

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

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

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

Data table of daily mean values

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

Statistics of monthly mean data

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

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

Summary statistics

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

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

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments 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 equivalent to 43,560 cubic feet, or about 326,000 gallons, or 1,233 cubic meters.

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

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

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

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

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 (1998) 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 bed load are included for some stations.

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

Cross-Sectional Data

Cross-sectional surveys of water temperature, pH, specific conductance, dissolved oxygen, and suspended sediment are done at all NASQAN 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 interpreted adequately 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 English (inch-pound) units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point.

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.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid.

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, while 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. This group includes coliforms that inhabit the intestines of warm-blooded animals and those that inhabit soils. 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. In the laboratory, these bacteria are defined as the organisms which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 1.0°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. In the laboratory, they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milligrams per liter of sample.

Fecal-streptococcal bacteria are bacteria found in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C ± 1.0°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.

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria which produce pink to red colonies with black or reddish-brown precipitate after incubation at 41°C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants.

bed load is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

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 inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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

Continuing-record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.
2. When water temperature records include observations taken one or more times daily.
3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

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 or cfs-day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, or 2,447 cubic meters.

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

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

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

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

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

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

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

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

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

Drainage area of a stream at a specific 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.

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream-bottom sediments. The ethyl-acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the stream-bottom sediments.

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 computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

High tide is the maximum height reached by each rising tide.

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

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

Low tide is the minimum height reached by each falling tide.

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.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This 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 substances (MBAS) are 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.

Microsiemens per centimeter ($\mu\text{S/cm}$, US/CM) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents 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 dry sediment per liter of water-sediment mixture.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. It is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic-invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

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

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.

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 computerized 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 particular 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 either 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 microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. 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 is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is 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 a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

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

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

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

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

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

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

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

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

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

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

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

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.

Bed load 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, bed load is considered to consist of particles in transit within 0.25 ft (0.076 m) of the streambed.

Bed load discharge (tons per day) is the quantity of sediment, as measured by dry weight, that moves past a section as bed load 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). The entire sample is used for the analysis.

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.

Suspended total residue at 105°C concentration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of the sample is used for the analysis.

Total sediment discharge or total sediment load (tons per day) is the sum of suspended-sediment discharge and the bed load discharge. It is the total quantity of sediment, as measured by dry mass or volume, 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 within soil and is an index of sodium or alkali hazard to the soil. Water ranges in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

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

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

Determinations of "suspended, recoverable" constituents are made either by 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.

Synoptic Studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

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 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 both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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 are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

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

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

Volatile Organic Compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

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, 1998, is called the "1998 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."

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS-TWRI Book 1, Chapter D1. 1975. 65 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.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS-TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS-TWRI Book 2, Chapter D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS-TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS-TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS-TWRI Book 2, Chapter F1. 1989. 97 pages.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS-TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS-TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS-TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS-TWRI Book 3. Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS-TWRI Book 3, Chapter A6. 1968. 13 pages.

- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS-TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS-TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the 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. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, 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.

Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed 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.

Section C. Sedimentation and Erosion Techniques

- 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 Thomas K. Edwards and G. Douglas Glysson: USGS-TWRI Book 3, Chapter C2. 1988. 80 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI Book 3, Chapter C3. 1972. 66 pages.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI Book 4, Chapter A2. 1968. 15 pages.

Section B. Surface Water

- 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.

Section D. Interrelated Phases of the Hydrologic Cycle

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI Book 4, Chapter D1. 1970. 17 pages.

Book 5. Laboratory Analysis

Section A. Water Analysis

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI Book 5, Chapter A1. 1989. 545 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.

Section C. Sediment Analysis

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI Book 5, Chapter C1. 1969. 58 pages.

Book 6. Modeling Techniques

Section A. Ground Water

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI Book 6, Chapter A1. 1988. 586 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. 1996. 125 pages.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI Book 7, Chapter C1. 1976. 116 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.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI Book 8, Chapter A1. 1968. 23 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.

Section B. Instruments for Measurement of Discharge

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI Book 8, Chapter B2. 1968. 15 pages.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS-TWRI Book 9, Chapter A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D.N. Myers and F.D. Wilde: USGS-TWRI Book 9, Chapter A7. 1997. 49 pages.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS-TWRI Book 9, Chapter A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS-TWRI Book 9, Chapter A9. 1998. 60 pages.



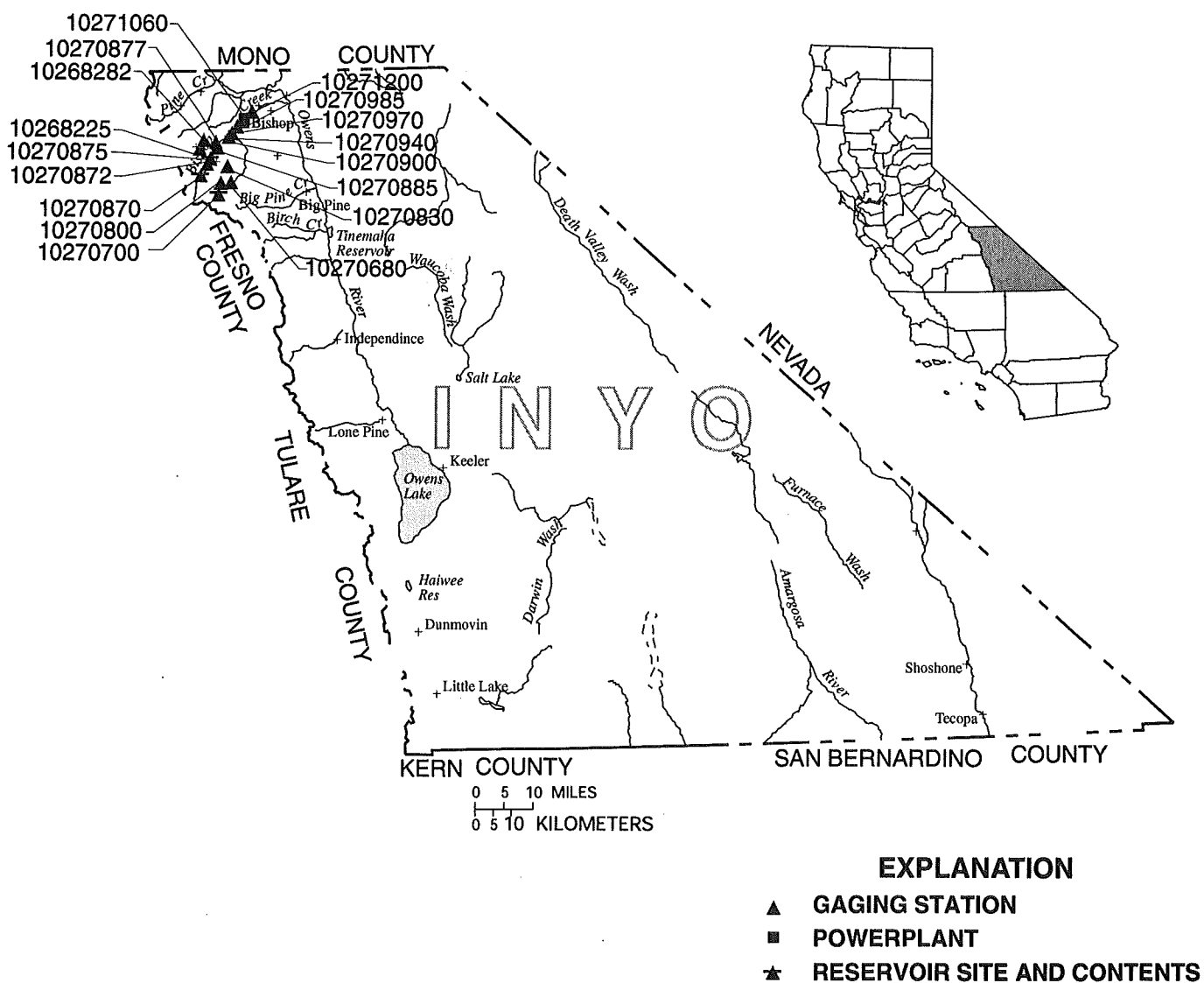
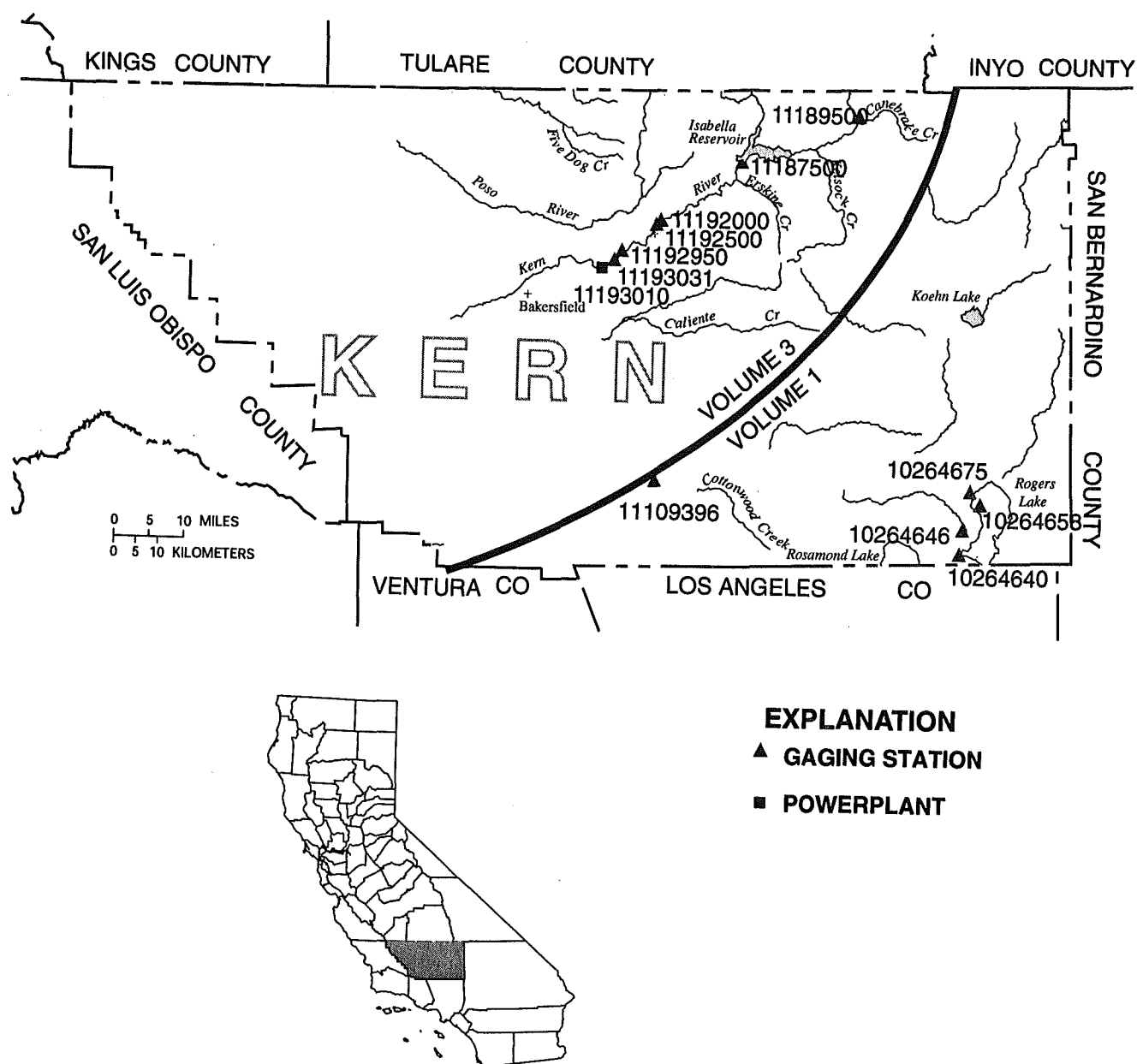
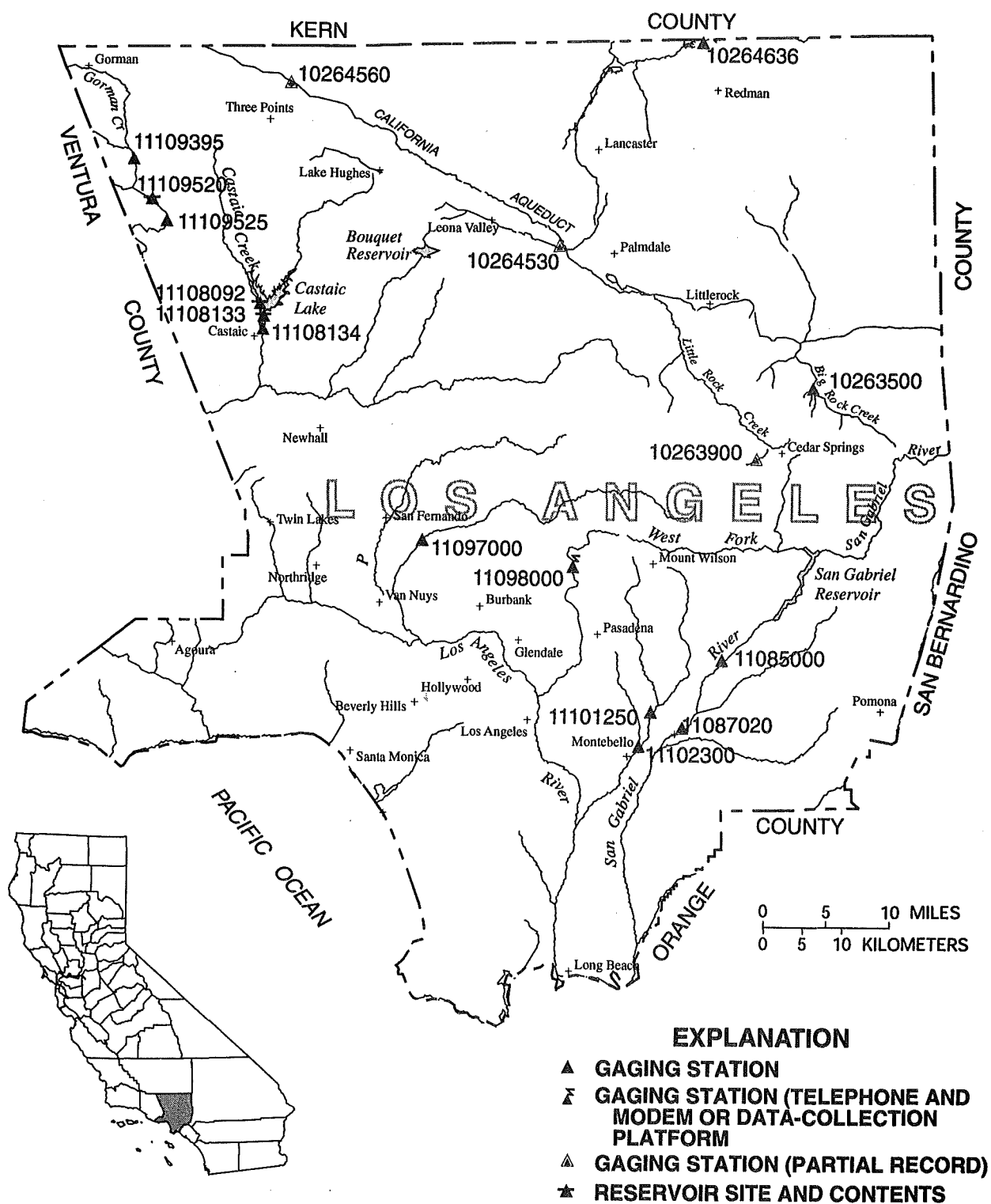


Figure 3. Location of discharge stations in Inyo County.





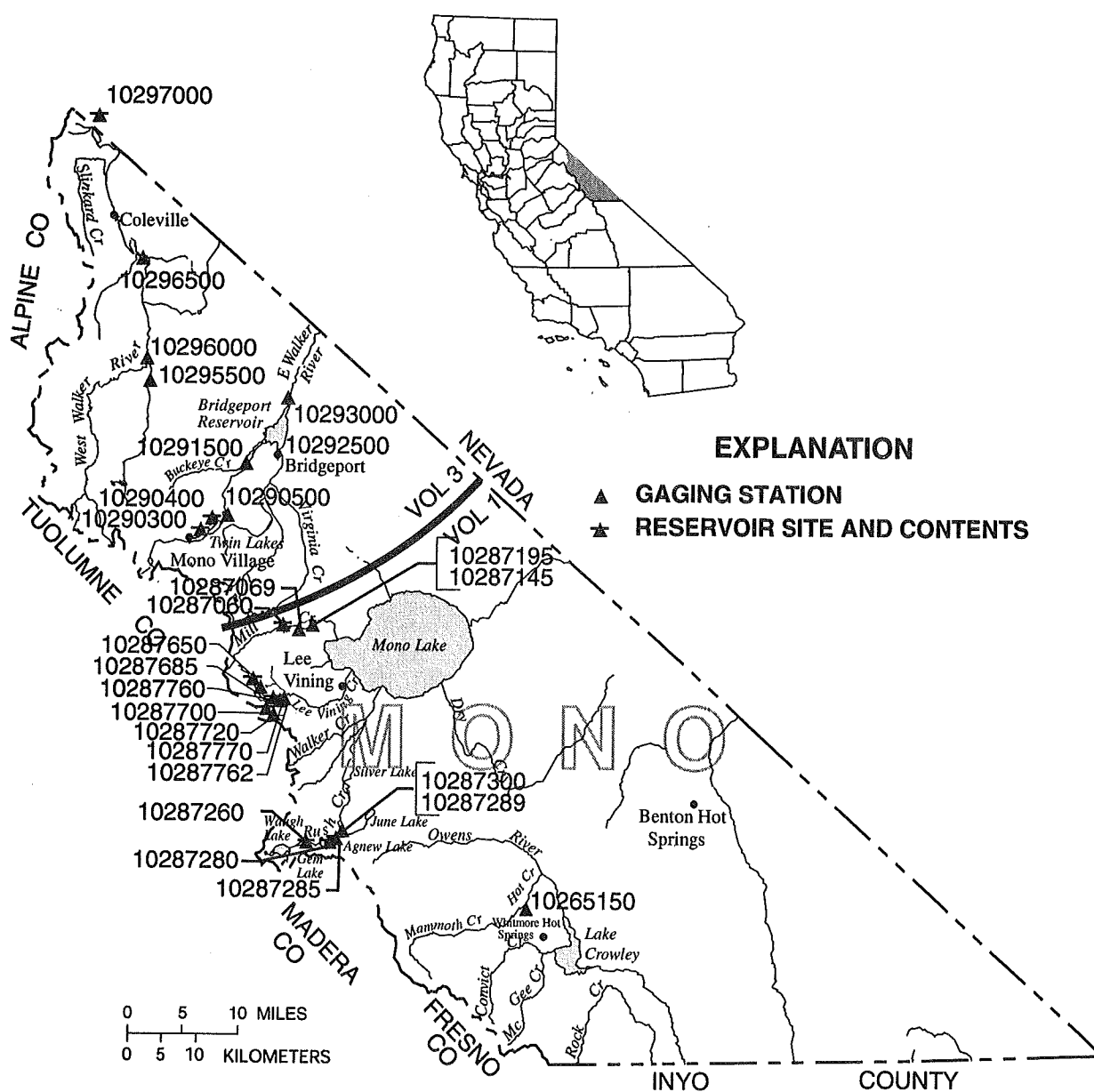


Figure 6. Location of discharge stations in Mono County.
(NOTE: Records for stations 10290300 through 10297000 published in volume 3.)

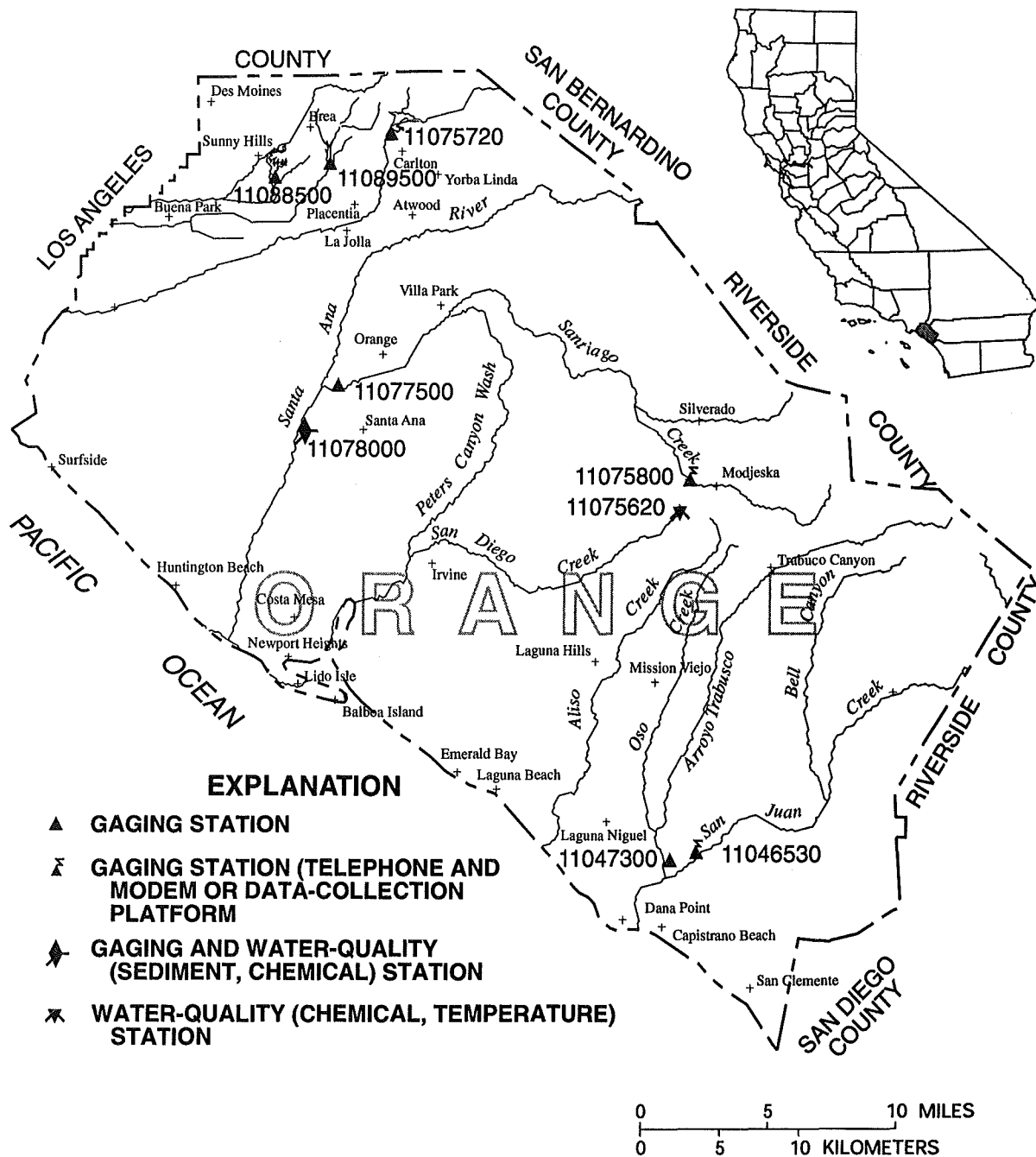


Figure 7. Location of discharge and water-quality stations in Orange County.

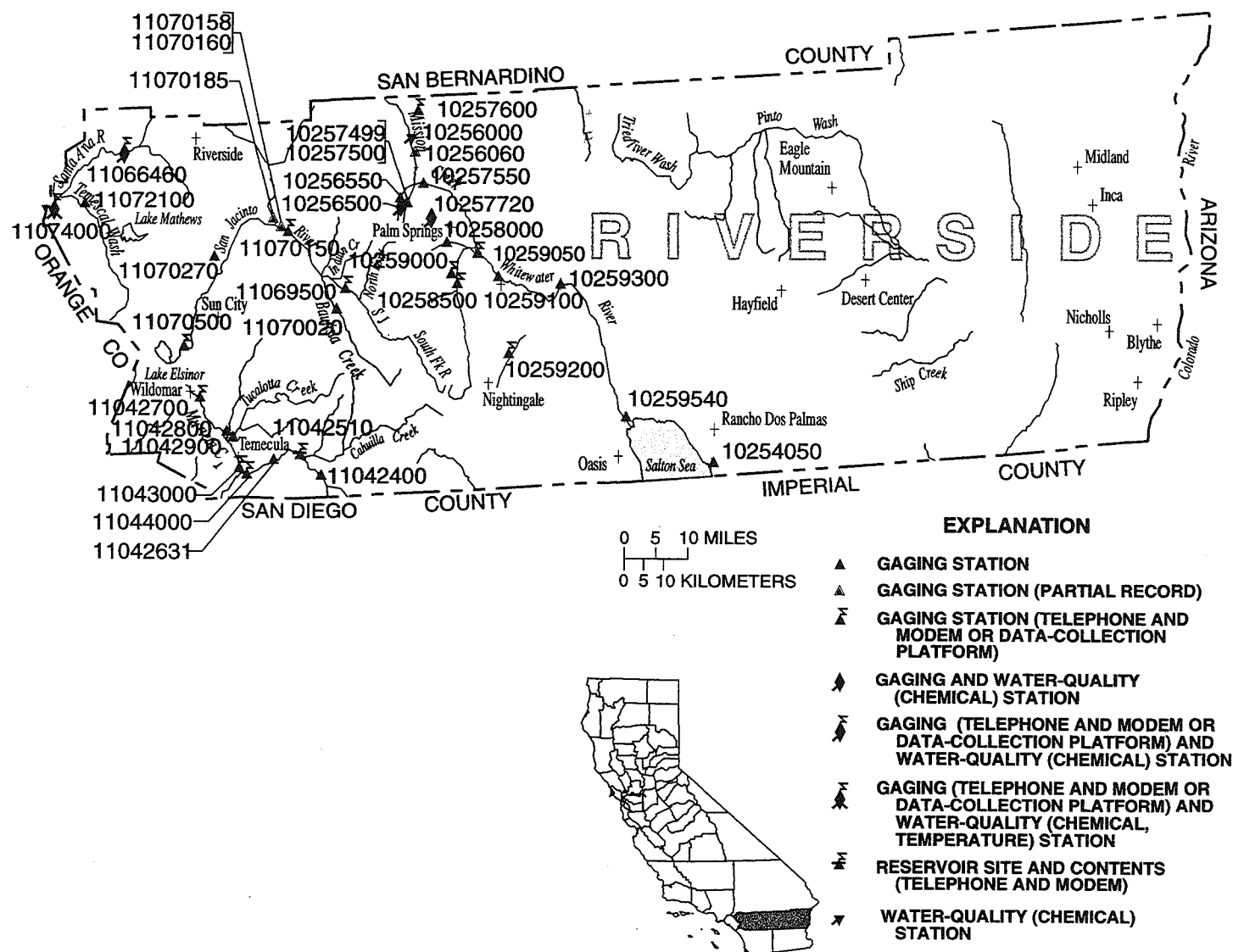


Figure 8. Location of discharge and water-quality stations in Riverside County.



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



- ▲ **GAGING STATION**
- ⚓ **GAGING (TIDE) AND WATER-QUALITY
(CHEMICAL, TEMPERATURE) STATION**
- 📶 **GAGING STATION (TELEPHONE AND
MODEM OR DATA-COLLECTION
PLATFORM)**
- ✖ **WATER-QUALITY (CHEMICAL,
TEMPERATURE) STATION**
- ★ **RESERVOIR SITE AND CONTENTS**

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

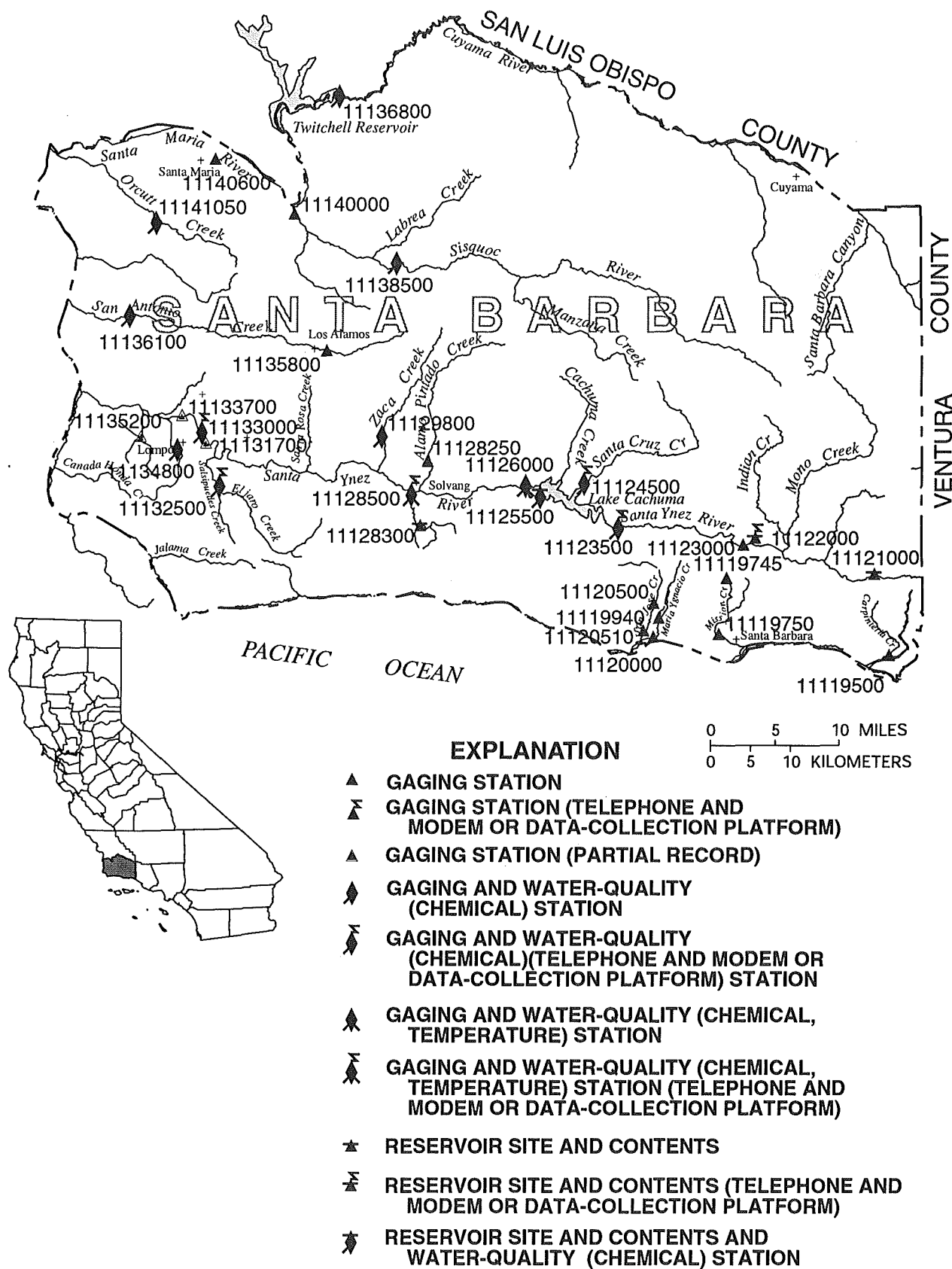


Figure 11. Location of discharge and water-quality stations in Santa Barbara County.

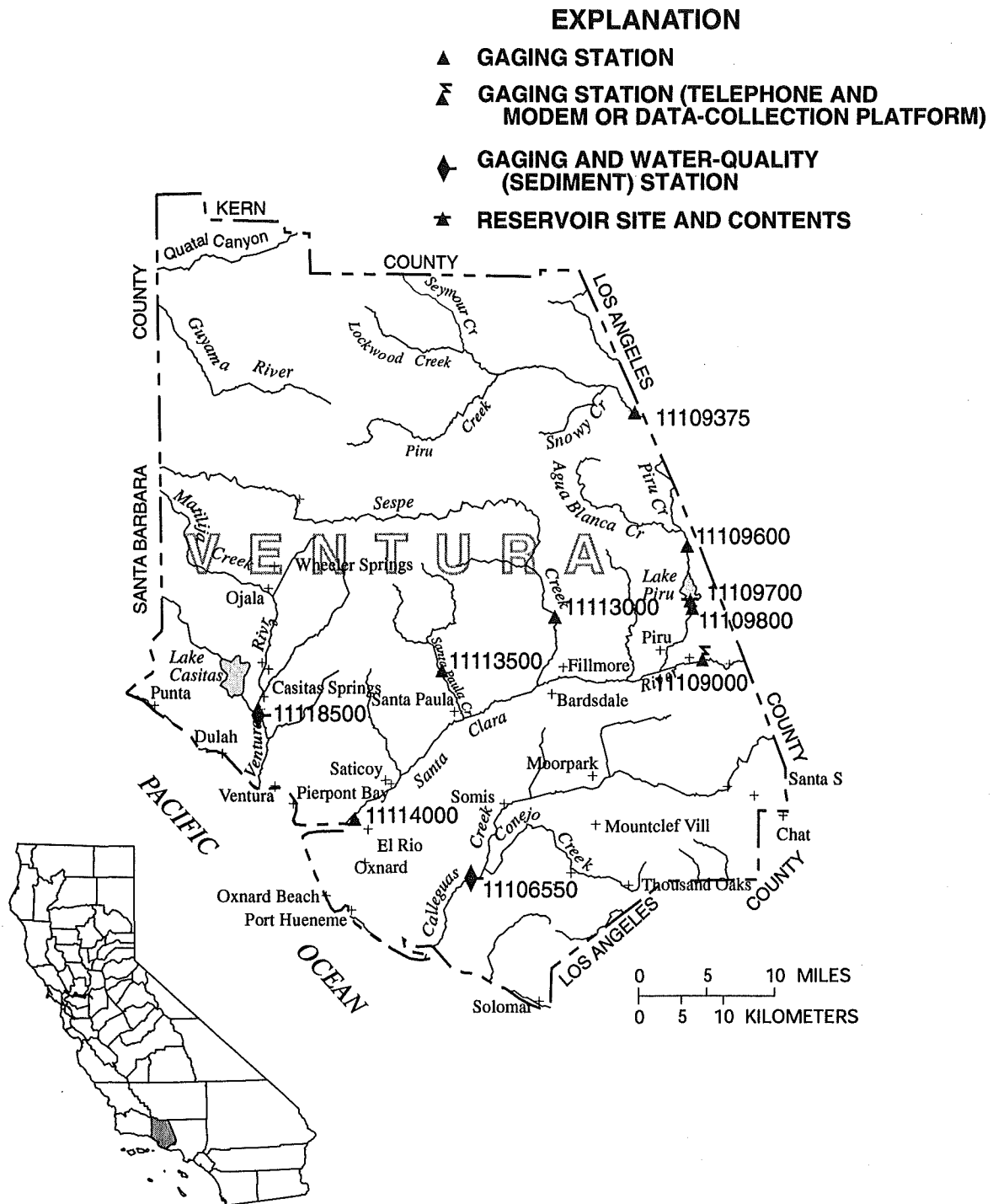


Figure 12. Location of discharge and water-quality stations in Ventura County.

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).

BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA

LOCATION.—Lat 35°14'33", long 115°17'58", in NW 1/4 NE 1/4 sec.6, T.13 N., R.16 E., San Bernardino County, Hydrologic Unit 15030102, on left bank 6.6 mi south of Ivanpah.

DRAINAGE AREA.—0.84 mi².

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

REVISED RECORDS.—WDR CA-82-1: 1979(M); WDR CA-96-1: Drainage area.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 814 ft³/s, Aug. 12, 1979, gage height, 5.75 ft, from rating curve extended above 2.5 ft³/s on basis of slope-conveyance studies; maximum gage height, 9.75 ft., July 15, 1996; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 10 ft³/s, from rating curve extended above 2.5 ft³/s on basis of slope-conveyance studies, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
July 20	0445	27	1.36	Sept. 6	1500	43	1.64
July 22	1500	33	1.48				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	.00	.00	.00	.00	e. 70	2.1	.00	.00	.00	.00	.00
2	.08	.00	.00	.00	.00	e. 45	3.4	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	e. 40	2.3	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	e. 35	1.4	.00	.00	.00	.00	2.5
5	.00	.00	.00	.00	.00	e. 30	1.4	.00	.00	.00	.00	1.1
6	.00	.00	.00	.00	.03	e. 29	1.2	.00	.00	.00	.00	3.1
7	.00	.00	.00	.00	.00	.13	1.1	.00	.00	.00	.00	.62
8	.00	.00	.00	.00	.13	.06	.95	.00	.00	.00	.00	.24
9	.00	.00	.00	.00	.00	.04	.83	.00	.00	.00	.00	.29
10	.00	.00	.00	.00	.00	.04	.77	.00	.00	.00	.00	.13
11	.00	.00	.00	.00	.00	.04	.77	.00	.00	.00	.00	.01
12	.00	.00	.00	.00	.00	.04	.72	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.08	.72	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.15	.67	.62	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.29	.77	.52	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.72	.38	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.14	.67	.29	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	1.1	.52	.29	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	1.5	.34	.20	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	1.1	.29	.20	.00	.00	1.6	.00	.00
21	.00	.00	.00	.00	.95	.34	.13	.00	.00	.20	.00	.00
22	.00	.00	.00	.00	1.4	.34	.08	.00	.00	1.6	.00	.00
23	.00	.00	.00	.00	2.9	.38	.04	.00	.00	1.3	.00	.00
24	.00	.00	.00	.00	2.9	.38	.02	.00	.00	1.3	.00	.00
25	.00	.00	.00	.00	1.6	1.5	.02	.00	.00	1.1	.00	.00
26	.00	.00	.00	.00	1.4	3.0	.01	.00	.00	1.0	.00	.00
27	.00	.00	.00	.00	1.4	2.6	.01	.00	.00	.33	.00	.00
28	.00	.00	.00	.00	.95	2.1	.00	.00	.00	.02	.00	.00
29	.00	.00	.00	.00	---	2.1	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	2.3	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.0	---	.00	---	.00	.00	---
TOTAL	0.19	0.00	0.00	0.00	17.94	23.94	20.47	0.00	0.00	8.45	0.00	7.99
MEAN	.006	.000	.000	.000	.64	.77	.68	.000	.000	.27	.000	.27
MAX	.11	.00	.00	.00	2.9	3.0	3.4	.00	.00	1.6	.00	3.1
MIN	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
AC-FT	.4	.00	.00	.00	36	47	41	.00	.00	17	.00	16

e Estimated.

THE GREAT BASIN

BRISTOL LAKE BASIN

10252550 CARUTHERS CREEK NEAR IVANPAH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.087	.032	.12	.20	.20	.33	.081	.001	.002	.15	.26	.032
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	11.64		78.98			
ANNUAL MEAN	.032		.22		.12	
HIGHEST ANNUAL MEAN					.36	1993
LOWEST ANNUAL MEAN					.001	1964
HIGHEST DAILY MEAN	2.6	Sep 25	3.4	Apr 2	80	Aug 12 1979
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 3	.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 3	.00	Oct 1 1963
INSTANTANEOUS PEAK FLOW			43	Sep 6	814	Aug 12 1979
INSTANTANEOUS PEAK STAGE			1.64	Sep 6	9.75	Jul 15 1996
ANNUAL RUNOFF (AC-FT)	23		157		89	
10 PERCENT EXCEEDS	.00		.79		.08	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

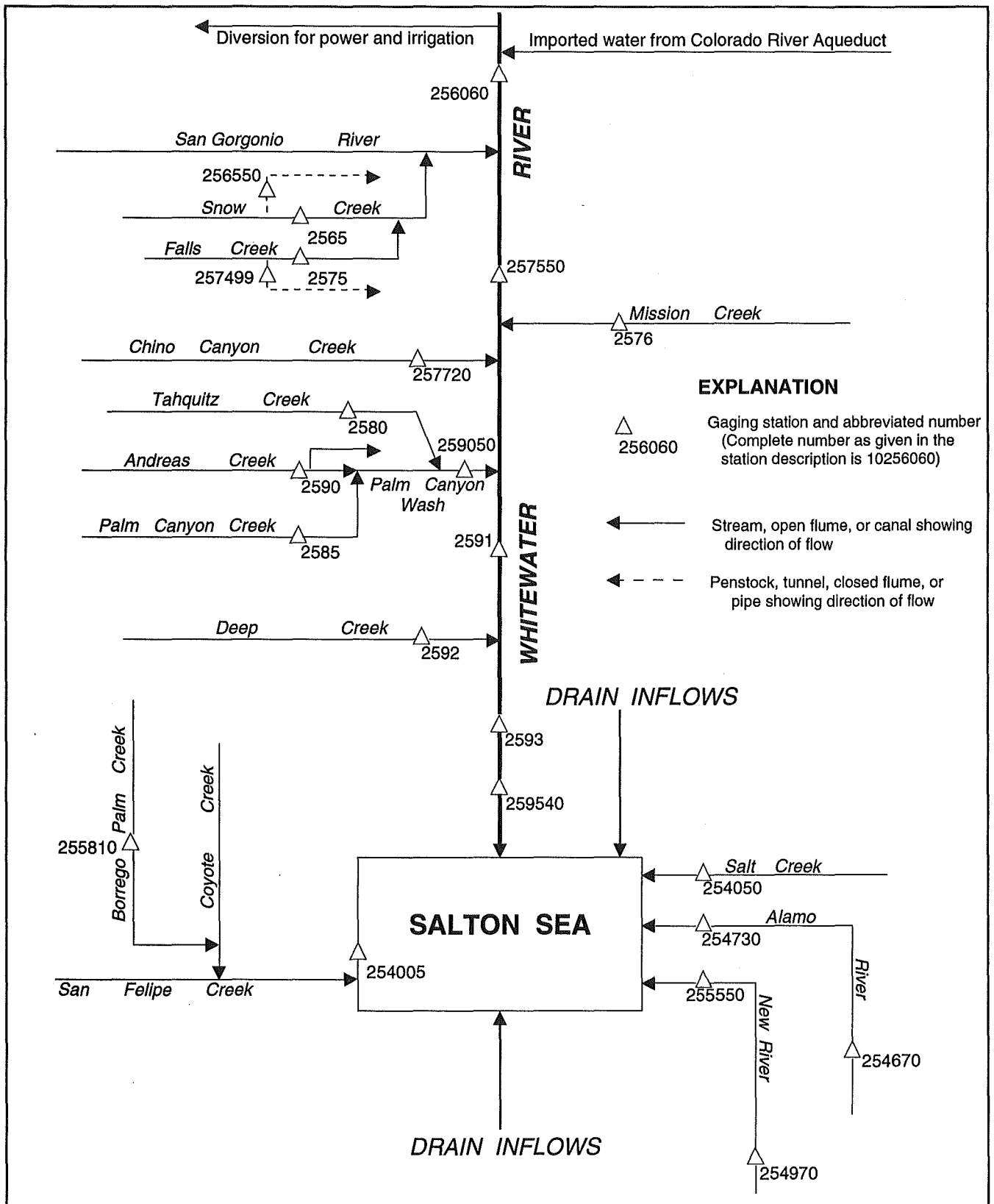


Figure 13. Diversions and storage in Salton Sea Basin.

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 Sandv 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, 226.9 ft below sea level, several days in April and May; minimum, 228.1 ft below sea level, several days in October and November.

[illegible]

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	152	153	89	116	129	142	107	134	113	121	105	97
New River	12880	12340	19230	15620	17870	20840	19640	14200	13010	13130	15740	11920
CAL YR 1997:	Alamo River		1,650 acre-ft			WTR YR 1998:		1,460 acre-ft				
CAL YR 1997:	New River		157,300 acre-ft			WTR YR 1998:		186,400 acre-ft				

10254050 SALT CREEK NEAR MECCA, CA

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

DRAINAGE AREA.—269 mi².

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

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

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.44	1.5	2.6	2.5	2.3	1.6	.11	.00	.00	.00	.00
2	.00	.40	1.5	2.6	2.6	2.3	1.5	.11	.00	.00	.00	.00
3	.00	.35	1.3	2.6	2.7	2.4	1.4	.11	.00	.00	.00	.00
4	.00	.27	1.3	2.7	4.0	2.4	1.5	.09	.00	.00	.00	.00
5	.00	.27	1.5	2.7	5.0	2.4	1.5	.09	.00	.00	.00	.00
6	.02	.33	1.6	2.5	3.2	2.4	1.3	.09	.00	.00	.00	.00
7	.04	.39	2.4	2.3	3.2	2.2	1.3	.10	.00	.00	.00	.00
8	.05	.46	3.5	2.4	4.1	2.0	1.2	.11	.00	.00	.00	.00
9	.04	.51	2.4	2.6	3.7	1.8	1.1	.11	.00	.00	.00	.00
10	.06	.57	1.8	3.2	3.5	1.8	1.1	.07	.00	.00	.00	.00
11	.10	.60	1.5	4.4	3.0	2.0	1.1	.03	.00	.00	.00	.00
12	.13	.68	1.2	3.6	2.8	1.9	1.2	.01	.00	.00	.00	.00
13	.15	.72	1.0	3.0	2.8	1.9	1.2	.01	.00	.00	.00	.00
14	.14	.74	1.2	2.9	2.8	2.0	1.1	.01	.00	.00	.00	.00
15	.15	.79	1.6	2.7	4.2	2.2	.92	.01	.00	.00	.00	.00
16	.18	.75	1.8	2.7	4.6	2.5	.86	.01	.00	.00	.00	.00
17	.21	.76	1.9	2.7	---	2.4	.78	.01	.00	.00	.00	.00
18	.23	.80	1.9	2.7	10	2.2	.73	.01	.00	.00	.00	.00
19	.25	.81	2.0	2.7	5.2	2.0	.65	.00	.00	.00	.00	.00
20	.26	.89	1.8	2.7	3.4	1.8	.61	.00	.00	.00	.00	.00
21	.27	1.0	1.6	2.4	3.3	1.7	.58	.00	.00	.00	.00	.00
22	.32	.97	1.8	2.2	2.9	1.7	.51	.00	.00	.00	.00	.00
23	1.1	.94	2.3	2.2	2.7	1.7	.42	.00	.00	.00	.00	.00
24	1.3	.93	2.0	2.2	2.8	1.6	.34	.00	.00	.00	.00	.00
25	.79	1.0	2.0	2.4	2.8	1.6	.33	.00	.00	.00	.00	.00
26	.60	1.2	2.0	2.4	2.7	1.6	.28	.00	.00	.00	.00	.00
27	.48	1.2	2.0	2.4	2.5	2.0	.23	.00	.00	.00	.00	.00
28	.48	1.1	2.1	2.5	2.4	1.9	.19	.00	.00	.00	.00	.00
29	.52	1.1	2.4	2.5	---	1.7	.15	.00	.00	.00	.00	.00
30	.43	1.3	2.5	2.5	---	1.7	.12	.00	.00	.00	.00	.00
31	.42	---	2.6	2.5	---	1.6	---	.00	---	.00	.00	---
TOTAL	8.75	22.27	58.0	82.5	---	61.7	25.80	1.09	0.00	0.00	0.00	0.00
MEAN	.28	.74	1.87	2.66	---	1.99	.86	.035	.000	.000	.000	.000
MAX	1.3	1.3	3.5	4.4	---	2.5	1.6	.11	.00	.00	.00	.00
MIN	.00	.27	1.0	2.2	---	1.6	.12	.00	.00	.00	.00	.00
AC-FT	17	44	115	164	---	122	51	2.2	.00	.00	.00	.00

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
HIGHEST DAILY MEAN	2830
LOWEST DAILY MEAN	.06
ANNUAL SEVEN-DAY MINIMUM	.07
INSTANTANEOUS PEAK FLOW	9900
INSTANTANEOUS PEAK STAGE	16.80
ANNUAL RUNOFF (AC-FT)	5050
10 PERCENT EXCEEDS	10
50 PERCENT EXCEEDS	4.6
90 PERCENT EXCEEDS	1.3

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

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

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

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

BIOLOGICAL DATA: Water years 1979–81.

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

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

SEDIMENT DATA: Water years 1979–94.

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

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

REMARKS.—Records excellent. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	575	751	584	457	673	715	888	938	848	731	829	607
2	543	746	582	392	573	798	883	963	789	739	852	635
3	541	702	593	484	585	836	936	941	759	792	758	644
4	583	715	615	503	687	813	876	912	780	770	762	656
5	633	766	644	437	495	828	889	911	761	800	782	662
6	598	770	659	448	457	822	855	919	791	745	749	640
7	599	774	642	525	479	812	875	918	759	756	805	621
8	614	699	527	559	469	777	841	943	731	796	803	594
9	695	711	468	557	517	813	861	927	730	821	772	605
10	787	699	486	595	403	781	934	909	755	808	772	670
11	739	689	533	550	396	795	956	890	741	819	712	645
12	792	685	539	465	435	868	921	882	716	792	684	596
13	825	670	585	474	449	910	799	874	758	743	646	624
14	810	684	592	500	430	971	852	878	747	804	663	630
15	811	671	579	471	544	1000	921	879	769	809	724	647
16	866	681	583	494	459	879	933	871	741	829	707	671
17	842	633	597	508	423	742	928	877	736	811	681	717
18	800	667	640	536	385	658	921	848	755	819	641	739
19	777	689	607	521	354	700	935	835	752	767	636	685
20	729	677	574	551	339	776	931	868	763	732	670	680
21	739	696	573	591	345	867	941	887	760	727	685	690
22	780	645	656	594	361	897	961	904	732	773	724	722
23	763	628	537	610	336	915	948	887	727	734	748	765
24	744	611	453	642	361	934	950	839	766	732	672	791
25	765	609	388	652	362	958	941	793	719	795	680	801
26	833	642	328	626	483	1030	931	780	740	811	690	840
27	821	643	347	655	602	963	934	797	715	779	699	867
28	782	569	374	693	645	952	947	837	713	809	712	858
29	770	535	408	734	---	936	959	831	684	782	734	840
30	805	560	432	739	---	877	926	817	688	788	677	818
31	801	---	473	678	---	893	---	826	---	789	617	---
TOTAL	22762	20217	16598	17241	13047	26516	27373	27181	22425	24202	22286	20960
MEAN	734	674	535	556	466	855	912	877	748	781	719	699
MAX	866	774	659	739	687	1030	961	963	848	829	852	867
MIN	541	535	328	392	336	658	799	780	684	727	617	594
AC-FT	45150	40100	32920	34200	25880	52590	54290	53910	44480	48000	44200	41570

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	781	667	548	524	599	825	961	842	701	700	710	728
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1980 - 1998			
ANNUAL TOTAL	270036				260808							
ANNUAL MEAN	740				715				716			
HIGHEST ANNUAL MEAN									833			
LOWEST ANNUAL MEAN									628			
HIGHEST DAILY MEAN	1290				1030				4670			
LOWEST DAILY MEAN	328				328				259			
ANNUAL SEVEN-DAY MINIMUM	390				351				277			
INSTANTANEOUS PEAK FLOW					1150				5980			
INSTANTANEOUS PEAK STAGE					2.83				(a) 7.20			
ANNUAL RUNOFF (AC-FT)	535600				517300				518500			
10 PERCENT EXCEEDS	940				913				931			
50 PERCENT EXCEEDS	744				734				705			
90 PERCENT EXCEEDS	562				485				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 except for periods of May 9 to July 23 and Sept. 10–17, which are poor. 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: Nov. 28 to Dec. 2 and June 6 to July 21.

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	667	935	724	563	771	855	1090	1130	1020	872	1000	729
2	625	875	710	505	672	949	1080	1140	1090	864	1040	768
3	616	829	696	549	674	1020	1150	1140	1140	921	974	802
4	655	846	737	593	826	1020	1120	1130	988	896	910	840
5	713	890	777	493	589	1020	1120	1110	954	921	919	832
6	712	915	797	479	533	996	1050	1120	1010	880	928	808
7	720	931	833	539	556	1020	1080	1100	1030	880	965	766
8	728	860	630	589	538	935	1040	1120	929	938	983	725
9	800	827	554	589	597	930	1060	1180	904	997	974	741
10	892	791	568	596	468	901	1150	1200	946	1030	974	849
11	891	826	629	642	450	915	1190	1200	988	1040	928	856
12	898	818	635	556	496	1010	1140	1190	988	988	904	795
13	970	783	676	568	543	1080	1020	1130	896	921	861	803
14	960	806	685	608	529	1180	1020	1080	880	929	843	810
15	946	791	658	594	629	1230	1110	1010	872	954	871	773
16	979	764	658	587	546	1090	1160	1020	980	954	886	810
17	1010	729	681	597	515	916	1180	1010	864	963	834	864
18	929	772	751	605	475	845	1180	997	864	980	807	887
19	892	804	742	591	423	841	1130	963	913	946	802	859
20	858	809	682	636	410	919	1170	1020	921	872	816	843
21	873	845	674	720	408	1010	1170	1110	921	e880	834	880
22	928	780	771	722	438	1050	1180	1160	913	e920	879	907
23	931	758	668	728	393	1060	1160	1170	888	e900	886	937
24	915	719	553	769	424	1160	1190	1070	904	906	864	937
25	930	732	480	779	461	1180	1170	1040	904	965	849	946
26	998	777	399	752	565	1230	1130	1140	888	992	868	983
27	970	762	417	754	733	1260	1110	980	833	974	880	1020
28	920	663	451	830	784	1220	1100	1010	841	1000	878	1020
29	907	625	480	858	---	1200	1130	1020	841	983	888	1020
30	930	644	548	869	---	1090	1150	997	825	965	812	992
31	948	---	604	832	---	1060	---	980	---	983	736	---
TOTAL	26711	23906	19868	20092	15446	32192	33730	33667	27935	29214	27593	25802
MEAN	862	797	641	648	552	1038	1124	1086	931	942	890	860
MAX	1010	935	833	869	826	1260	1190	1200	1140	1040	1040	1020
MIN	616	625	399	479	393	841	1020	963	825	864	736	725
AC-FT	52980	47420	39410	39850	30640	63850	66900	66780	55410	57950	54730	51180

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	945	761	641	639	756	976	1091	962	824	830	846	902
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1961 - 1998			
ANNUAL TOTAL	325907				316156							
ANNUAL MEAN	893				866				848			
HIGHEST ANNUAL MEAN									991			
LOWEST ANNUAL MEAN									680			
HIGHEST DAILY MEAN	1720				Sep 25				4500			
LOWEST DAILY MEAN	399				Dec 26				288			
ANNUAL SEVEN-DAY MINIMUM	475				Dec 24				323			
ANNUAL RUNOFF (AC-FT)	646400				627100				614400			
10 PERCENT EXCEEDS	1110				1130				1110			
50 PERCENT EXCEEDS	907				887				841			
90 PERCENT EXCEEDS	658				579				606			

e Estimated.

10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA

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

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

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

BIOLOGICAL DATA: Water years 1973–81.

SPECIFIC CONDUCTANCE: Water years 1974–81.

WATER TEMPERATURE: Water years 1974–81.

SEDIMENT DATA: Water years 1975–85.

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

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 833 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261	217	199	267	232	276	368	266	213	219	220	204
2	251	205	208	260	235	270	371	247	224	215	214	209
3	223	220	219	254	262	285	360	232	225	206	212	212
4	204	241	224	254	293	292	344	232	216	202	218	211
5	197	253	216	257	320	296	328	230	214	195	224	207
6	197	268	224	249	375	300	335	234	213	196	216	200
7	190	260	223	240	395	290	331	235	203	202	211	200
8	192	254	282	235	402	293	337	226	202	205	204	198
9	187	242	374	226	384	297	332	232	216	205	216	222
10	180	238	397	220	390	304	334	225	230	208	227	228
11	175	230	388	228	371	321	329	229	247	205	232	239
12	172	215	355	253	340	336	323	228	239	201	241	243
13	174	203	336	289	314	335	330	229	236	207	264	216
14	181	207	344	319	317	361	375	221	226	213	284	219
15	187	209	337	322	342	344	384	229	223	223	296	206
16	193	201	327	304	309	364	380	233	211	236	397	187
17	192	198	306	295	318	396	361	229	208	223	359	183
18	206	187	297	272	347	412	353	237	213	220	303	182
19	223	182	297	270	348	440	344	248	220	213	290	183
20	235	178	293	256	327	408	336	243	218	211	300	187
21	245	185	321	257	307	386	342	240	214	221	299	182
22	244	182	358	250	309	378	344	236	213	228	295	182
23	237	177	318	241	310	366	331	233	216	230	287	197
24	217	163	381	239	309	356	306	229	216	232	276	202
25	221	162	392	238	302	343	279	225	217	232	264	189
26	220	176	398	234	291	344	260	216	219	224	258	175
27	217	195	388	227	283	338	259	218	213	215	252	175
28	214	195	365	225	277	329	268	217	212	206	233	183
29	217	190	340	227	---	329	279	226	224	203	218	197
30	213	189	306	233	---	354	280	222	220	207	215	190
31	229	---	280	232	---	363	---	212	---	215	211	---
TOTAL	6494	6222	9693	7873	9009	10506	9903	7159	6561	6618	7936	6008
MEAN	209	207	313	254	322	339	330	231	219	213	256	200
MAX	261	268	398	322	402	440	384	266	247	236	397	243
MIN	172	162	199	220	232	270	259	212	202	195	204	175
AC-FT	12880	12340	19230	15620	17870	20840	19640	14200	13010	13130	15740	11920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	223	213	256	259	267	282	289	265	222	231	265	246
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1980 - 1998

ANNUAL TOTAL	79305	93982	
ANNUAL MEAN	217	257	251
HIGHEST ANNUAL MEAN			362
LOWEST ANNUAL MEAN			181
HIGHEST DAILY MEAN	560	Sep 25	440
LOWEST DAILY MEAN	108	Jan 1	162
ANNUAL SEVEN-DAY MINIMUM	116	Jan 1	175
INSTANTANEOUS PEAK FLOW			764
INSTANTANEOUS PEAK STAGE			14.22
ANNUAL RUNOFF (AC-FT)	157300	186400	182100
10 PERCENT EXCEEDS	283	354	367
50 PERCENT EXCEEDS	209	233	233
90 PERCENT EXCEEDS	156	195	158

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.

COOPERATION.—Gage height record provided by Imperial Irrigation District for the following dates: July 15–28.

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	639	684	536	540	593	671	850	829	638	620	702	628
2	607	714	534	517	574	681	879	817	654	637	696	603
3	620	710	537	544	595	736	918	816	654	627	664	582
4	620	695	545	532	585	705	926	784	681	626	660	583
5	607	672	556	534	564	742	902	759	667	637	696	603
6	583	667	576	559	563	753	824	771	674	676	729	617
7	603	691	587	584	595	788	857	770	665	681	717	608
8	604	688	562	614	645	752	915	787	657	688	713	596
9	634	662	542	630	684	758	929	783	647	690	710	592
10	648	631	563	637	656	811	928	758	634	692	742	581
11	620	625	628	595	633	794	918	815	662	701	788	576
12	593	630	681	530	632	839	906	828	637	700	725	592
13	583	617	688	526	622	870	841	768	641	674	688	621
14	586	600	640	534	623	884	801	754	636	666	684	602
15	619	599	625	544	646	935	835	734	625	663	714	571
16	615	574	652	558	630	858	888	767	612	678	687	602
17	653	585	626	567	628	800	911	776	583	689	704	585
18	659	595	628	603	607	770	942	759	613	706	744	580
19	666	578	613	609	574	825	931	745	630	682	747	598
20	668	571	613	601	577	834	877	738	620	693	743	621
21	655	564	634	596	601	888	915	736	642	702	727	639
22	668	571	626	610	600	949	905	755	615	715	711	601
23	694	540	624	650	582	904	919	726	620	686	702	584
24	700	554	615	649	603	909	912	708	608	702	684	603
25	677	558	554	635	615	901	899	698	624	724	687	605
26	669	528	566	608	636	931	871	710	605	726	705	614
27	665	491	603	629	662	943	842	661	619	706	697	629
28	669	486	612	657	679	926	829	673	648	726	688	654
29	680	528	625	627	---	871	816	668	615	701	674	672
30	681	540	617	616	---	841	831	653	611	681	656	640
31	675	---	604	614	---	844	---	657	---	683	640	---
TOTAL	19860	18148	18612	18249	17204	25713	26517	23203	19037	21178	21824	18182
MEAN	641	605	600	589	614	829	884	748	635	683	704	606
MAX	700	714	688	657	684	949	942	829	681	726	788	672
MIN	583	486	534	517	563	671	801	653	583	620	640	571
AC-FT	39390	36000	36920	36200	34120	51000	52600	46020	37760	42010	43290	36060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	641	563	546	562	597	678	727	661	590	595	613	620
MAX	837	760	707	795	789	829	953	853	763	808	913	807
(WY)	1953	1954	1963	1944	1944	1998	1993	1953	1953	1979	1977	1963
MIN	471	408	386	387	458	516	541	485	436	442	460	486
(WY)	1978	1965	1968	1978	1965	1965	1965	1964	1964	1964	1964	1970

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1943 - 1998

ANNUAL TOTAL	243312	247727	
ANNUAL MEAN	667	679	616
HIGHEST ANNUAL MEAN			741
LOWEST ANNUAL MEAN			484
HIGHEST DAILY MEAN	1020	Sep 27	3000
LOWEST DAILY MEAN	378	Jan 2	150
ANNUAL SEVEN-DAY MINIMUM	422	Jan 2	284
ANNUAL RUNOFF (AC-FT)	482600	491400	445900
10 PERCENT EXCEEDS	786	843	762
50 PERCENT EXCEEDS	667	656	605
90 PERCENT EXCEEDS	554	573	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)
Feb. 8	0845	47	3.12	Feb. 24	0830	26	3.03
Feb. 14	2215	154	3.67	Mar. 28	1200	44	3.15

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.98	.60	.71	6.0	15	2.3	1.3	.20	.00	.00
2	.00	.00	.87	.60	.71	5.2	14	2.3	1.2	.18	.00	.00
3	.00	.00	.75	.62	1.7	4.6	15	2.3	1.5	.16	.00	.00
4	.00	.00	.65	.72	4.1	3.9	15	2.3	1.5	.15	.00	.00
5	.00	.00	.65	.79	3.1	3.4	13	2.7	1.3	.14	.00	.00
6	.00	.00	1.1	.70	2.9	3.6	13	3.5	1.2	.12	.00	.00
7	.00	.00	1.6	.66	6.7	3.2	16	3.0	1.5	.12	.00	.00
8	.00	.00	3.9	.66	21	2.8	13	2.6	1.6	.11	.00	.00
9	.00	.00	2.4	.96	18	2.6	11	2.5	1.4	.09	.00	.00
10	.00	.03	1.5	5.3	7.3	2.4	9.7	2.4	1.3	.05	.00	.00
11	.00	.09	1.1	2.8	4.0	2.2	8.9	2.3	1.3	.04	.00	.00
12	.00	.13	.92	1.8	2.6	2.1	12	2.7	1.3	.03	.00	.00
13	.00	.18	.84	1.4	2.0	2.0	9.2	6.4	1.3	.02	.00	.00
14	.00	.21	.76	1.2	17	2.4	8.8	4.9	1.1	.02	.00	.00
15	.00	.25	.75	1.1	31	2.2	8.5	3.6	.91	.00	.00	.00
16	.00	.30	.72	1.0	9.5	2.0	7.2	3.0	.88	.00	.00	.00
17	.00	.31	.67	.96	9.4	1.9	6.2	2.7	.93	.00	.00	.00
18	.00	.34	.66	.82	7.3	1.8	5.2	2.4	.72	.00	.00	.00
19	.00	.36	.73	.78	5.8	1.7	4.4	2.1	.62	.00	.00	.00
20	.00	.38	.69	.76	6.1	1.6	4.0	2.1	.62	.00	.00	.00
21	.00	.39	.66	.71	4.5	1.5	3.7	2.0	.55	.00	.00	.00
22	.00	.40	.75	.70	4.5	1.4	3.4	2.0	.52	.00	.00	.00
23	.00	.41	.69	.66	5.6	1.3	3.2	1.8	.49	.00	.00	.00
24	.00	.42	.65	.65	18	1.4	3.2	1.7	.45	.00	.00	.00
25	.00	.44	.63	.63	13	1.6	3.1	1.7	.42	.00	.00	.00
26	.00	.57	.58	.61	10	4.6	3.0	1.9	.37	.00	.00	.00
27	.00	3.2	.61	.61	8.4	4.7	2.8	1.7	.33	.00	.00	.00
28	.00	1.5	.57	.60	7.0	20	2.6	1.6	.27	.00	.00	.00
29	.00	1.1	.59	.68	---	15	2.5	1.5	.23	.00	.00	.00
30	.00	1.0	.62	1.0	---	12	2.3	1.5	.21	.00	.00	.00
31	.00	---	.63	.75	---	15	---	1.4	---	.00	.00	---
TOTAL	0.00	12.01	29.22	31.83	231.92	136.1	238.9	76.9	27.32	1.43	0.00	0.00
MEAN	.000	.40	.94	1.03	8.28	4.39	7.96	2.48	.91	.046	.000	.000
MAX	.00	3.2	3.9	5.3	31	20	16	6.4	1.6	.20	.00	.00
MIN	.00	.00	.57	.60	.71	1.3	2.3	1.4	.21	.00	.00	.00
AC-FT	.00	24	58	63	460	270	474	153	54	2.8	.00	.00

10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.18	.34	.80	1.75	2.97	3.17	1.71	.72	.25	.20	.48	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL TOTAL	149.91		785.63			
ANNUAL MEAN	.41		2.15		1.05	
HIGHEST ANNUAL MEAN					7.61	
LOWEST ANNUAL MEAN					.009	
HIGHEST DAILY MEAN	6.2	Jan 13	31	Feb 15	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			154	Feb 14	2640	Aug 16 1979
INSTANTANEOUS PEAK STAGE			3.67	Feb 14	9.80	Aug 16 1979
ANNUAL RUNOFF (AC-FT)	297		1560		762	
10 PERCENT EXCEEDS	1.0		6.1		2.1	
50 PERCENT EXCEEDS	.08		.66		.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 current year.

SEDIMENT DATA: Water year 1972.

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

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		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 17...	1020	7.0	408	8.5	17.0	170	5	49	12	14	14
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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
NOV 17...	.5	4.9	198	4	169	32	3.4	1	16	246	236
DATE	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 17...	.33	.03	.50	<.02	<.1	.02	.03	<1	17.9	<3	3

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 1997 TO SEPTEMBER 1998

Date	Time	Discharge (ft ³ /s)
Oct. 8.....	1451	223
Nov. 5.....	1142	4.9
Nov. 17.....	0930	7.0
Dec. 4.....	1100	167
Jan. 7.....	1138	9.1
Feb. 11.....	0740	279
Mar. 10.....	0800	12
Apr. 11.....	1020	267
May 7.....	1300	532
June 3.....	1115	524
July 1.....	1048	30
Aug. 5.....	0855	671
Sept. 8.....	1002	31

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 29.9 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)
Dec. 7	2330	174	3.80	174
Feb. 8	0345	291	4.32	291
Feb. 14	1715	413	4.70	413
Feb. 24	0030	285	4.30	285
May 5	1845	179	3.89	179

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.00	9.9	e.60	8.4	16	e24	28	26	e15	e3.4	8.2
2	e2.2	.02	7.3	e2.1	e7.7	e13	e21	27	26	e15	e3.3	8.0
3	e3.7	.02	5.9	5.2	e12	e9.9	e20	28	27	e14	e3.2	8.0
4	3.6	.04	5.9	6.0	e14	e10	e20	29	26	e13	e3.0	8.3
5	3.7	.05	e6.7	3.0	e8.6	13	e19	73	24	e12	e3.1	8.3
6	2.1	.11	e9.8	.61	e15	22	e20	65	25	e11	e3.1	8.0
7	.98	.09	e37	.43	12	19	20	46	25	e9.9	e3.1	9.5
8	.88	.09	e53	.37	126	17	15	40	25	e9.5	e6.0	6.1
9	e.40	.14	e14	11	29	13	12	38	24	e9.1	e10	2.2
10	e.80	2.0	12	52	14	9.4	13	36	23	e8.7	e13	1.9
11	3.0	4.1	10	24	9.1	8.6	17	33	23	e8.3	12	1.6
12	3.1	4.4	7.3	16	6.7	8.5	25	38	23	e8.0	11	1.4
13	3.0	4.2	6.7	14	5.3	11	23	49	22	e7.6	11	1.3
14	1.2	6.2	6.8	e12	116	19	23	43	22	e7.3	6.4	1.2
15	.04	6.4	3.9	e6.6	86	17	22	40	25	e7.0	3.5	1.2
16	.10	5.2	1.8	4.6	29	16	16	37	28	e6.7	3.2	1.2
17	.00	2.6	e2.0	4.7	24	19	11	35	29	e6.4	3.0	1.1
18	.00	1.3	.22	3.7	15	16	11	30	25	e6.1	2.7	1.0
19	.00	1.1	.48	3.2	12	12	12	29	24	e5.8	2.5	.98
20	.00	.87	.62	2.9	12	11	16	29	25	e5.5	2.4	1.0
21	.00	.63	4.1	2.4	9.8	10	23	27	22	e5.3	2.3	1.1
22	.98	.56	6.5	2.1	67	12	28	27	22	e5.1	2.3	1.1
23	.00	.55	6.1	1.8	98	17	31	27	20	e4.8	2.4	1.1
24	.00	.53	5.9	1.6	107	24	30	28	19	e4.6	2.5	1.1
25	.00	.53	5.9	1.4	42	e44	26	30	19	e4.4	2.5	1.1
26	.00	7.8	e3.5	1.3	31	e43	22	31	21	e4.2	2.3	1.0
27	.00	20	e1.3	1.2	24	e31	20	29	20	e4.1	2.2	1.0
28	.00	12	e1.0	1.2	20	e43	21	28	19	e3.9	2.0	.99
29	.00	10	e1.0	5.1	---	e34	23	28	17	e3.8	2.2	.96
30	.08	9.3	e.80	9.4	---	e27	27	27	e16	e3.7	2.1	.96
31	.13	---	e.70	8.8	---	e24	---	26	---	e3.5	4.0	---
TOTAL	31.99	100.83	238.12	209.31	960.6	589.4	611	1081	692	233.3	135.7	90.89
MEAN	1.03	3.36	7.68	6.75	34.3	19.0	20.4	34.9	23.1	7.53	4.38	3.03
MAX	3.7	20	53	52	126	44	31	73	29	15	13	9.5
MIN	.00	.00	.22	.37	5.3	8.5	11	26	16	3.5	2.0	.96
AC-FT	63	200	472	415	1910	1170	1210	2140	1370	463	269	180

e Estimated.

10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.34	3.68	5.93	15.6	23.9	18.2	11.9	12.4	7.24	4.02	3.16	2.40
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1979 - 1998			
ANNUAL TOTAL	1274.56				4974.14							
ANNUAL MEAN	3.49				13.6				9.15			
HIGHEST ANNUAL MEAN									28.4			
LOWEST ANNUAL MEAN									2.21			
HIGHEST DAILY MEAN	92				126				909			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					413				1910			
INSTANTANEOUS PEAK STAGE					4.70				7.35			
ANNUAL RUNOFF (AC-FT)	2530				9870				6630			
10 PERCENT EXCEEDS	7.9				29				20			
50 PERCENT EXCEEDS	1.0				8.3				3.5			
90 PERCENT EXCEEDS	.09				.62				.21			

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	3.2	9.9	e4.9	8.4	16	e24	33	31	e21	e8.9	8.2
2	e4.0	3.2	7.3	e5.0	e7.7	e13	e21	32	31	e21	e8.8	8.0
3	e3.7	3.2	5.9	5.2	e12	e9.9	e20	33	32	e20	e8.7	8.0
4	3.6	3.2	5.9	6.0	e14	e10	e20	34	31	e19	e8.5	8.3
5	3.7	3.3	e6.7	5.8	e8.6	16	e19	76	29	e17	e8.6	8.3
6	3.6	3.3	e9.8	5.1	e15	22	e20	65	30	e16	e8.6	8.0
7	3.7	3.3	e37	5.3	12	19	20	46	30	e15	e8.6	9.5
8	3.6	3.3	e53	5.0	126	17	18	40	30	e15	e11	9.3
9	e3.1	3.3	e14	13	29	15	16	38	29	e15	e12	7.7
10	e3.0	3.4	12	52	14	14	17	36	28	e14	e13	7.2
11	3.0	4.1	10	24	9.1	13	20	33	28	e14	12	7.0
12	3.1	4.4	7.3	16	6.7	13	25	38	28	e14	11	6.9
13	3.0	4.2	6.7	14	5.3	14	23	49	27	e13	11	6.8
14	3.0	6.2	6.8	e12	116	19	23	43	27	e13	9.8	6.6
15	3.1	6.4	5.9	e9.4	86	17	22	40	30	e12	9.1	6.6
16	3.1	5.2	5.1	8.9	29	16	19	37	33	e12	8.8	6.6
17	3.3	4.5	e5.0	9.2	24	19	15	35	35	e12	8.6	6.5
18	3.2	4.5	5.2	8.2	15	18	15	33	31	e12	8.3	6.4
19	3.2	4.3	5.2	7.8	12	16	16	34	29	e11	7.9	6.6
20	3.3	4.1	4.9	7.4	12	15	20	34	30	e11	7.8	6.3
21	3.3	4.0	5.9	6.9	9.8	14	27	32	27	e11	7.7	6.4
22	4.2	4.0	6.5	6.7	67	16	32	32	27	e11	7.7	6.4
23	3.3	4.0	6.1	6.3	98	21	38	32	26	e10	7.7	6.4
24	3.2	3.9	5.9	6.0	107	28	35	33	24	e10	7.7	6.5
25	3.2	3.9	5.9	5.8	42	e46	31	35	25	e9.9	7.7	6.5
26	3.2	9.1	e5.5	5.7	31	e43	27	36	27	e9.7	7.4	6.5
27	3.2	20	e5.7	5.6	24	e31	25	34	26	e9.5	7.0	6.4
28	3.2	12	e5.4	5.6	20	e43	26	33	25	e9.3	6.9	6.4
29	3.2	10	e5.3	7.4	---	e34	26	33	23	e9.2	6.9	6.4
30	3.3	9.3	e5.1	9.4	---	e27	32	33	e22	e9.0	6.9	6.4
31	3.3	---	e5.0	8.8	---	e24	---	32	---	e8.9	7.5	---
TOTAL	104.7	160.8	285.9	298.4	960.6	638.9	692	1174	851	404.5	272.1	213.1
MEAN	3.38	5.36	9.22	9.63	34.3	20.6	23.1	37.9	28.4	13.0	8.78	7.10
MAX	4.8	20	53	52	126	46	38	76	35	21	13	9.5
MIN	3.0	3.2	4.9	4.9	5.3	9.9	15	32	22	8.9	6.9	6.3
AC-FT	208	319	567	592	1910	1270	1370	2330	1690	802	540	423

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.79	7.40	10.6	15.3	16.9	14.7	12.9	13.2	9.54	6.40	5.42	5.42
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1921 - 1998

ANNUAL TOTAL	2366.8	6056.0	
ANNUAL MEAN	6.48	16.6	
HIGHEST ANNUAL MEAN			10.3
LOWEST ANNUAL MEAN			33.0
HIGHEST DAILY MEAN	92	Jan 26	1969
LOWEST DAILY MEAN	3.0	Oct 10	1961
ANNUAL SEVEN-DAY MINIMUM	3.0	Oct 9	1961
INSTANTANEOUS PEAK FLOW		413	Feb 14
INSTANTANEOUS PEAK STAGE			9900
ANNUAL RUNOFF (AC-FT)	4690	12010	7500
10 PERCENT EXCEEDS	9.6	33	17
50 PERCENT EXCEEDS	5.1	10	5.8
90 PERCENT EXCEEDS	3.6	3.7	3.3

e Estimated.

10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	
NOV 18...	1145	a4.5	106	8.1	11.5	32	0	11	.94	8.7	36	
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 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)
NOV 18...	.7	2.1	62	0	51	1.0	1.5	<.1	20	81	76	
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 18...	.11	<.01	.06	<.02	<.1	<.01	<.01	<1	12.8	8	<1	

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 Aug. 29, 1931. Monthly and yearly discharges for 1922–31, published in WSP 1314. Discharge records for Falls Creek Diversion (station 10257499) since October 1994 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder, broad-crested weir, and crest-stage gage on creek, 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 6.5 ft³/s on basis of critical depth computations; maximum gage height, 6.24 ft, Feb. 14, 1998; minimum daily, 0.10 ft³/s, Sept. 11, 1997.

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

Date	Time	Creek only Discharge (ft ³ /s)	Creek only Gage height (ft)	Combined creek and diversion Discharge (ft ³ /s)
Feb. 14	1945	142	6.24	142
Feb. 24	0045	62	5.59	62

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.37	1.0	.01	.69	7.6	e2.7	2.8	3.4	e2.7	e1.6	1.6
2	.48	.41	.89	.16	.68	e5.6	e2.6	2.4	3.6	e2.6	e1.5	1.6
3	.49	.43	.71	.46	e2.8	e3.7	e2.5	2.5	3.9	e2.6	e1.4	1.6
4	.43	.42	.68	.49	e2.0	2.9	e2.5	2.5	3.3	e2.5	e1.4	1.7
5	.40	.45	e.75	.19	e1.3	2.0	e2.4	5.2	3.3	e2.7	1.5	1.7
6	.46	.49	e.95	.18	e9.0	2.9	e2.4	6.0	3.8	e2.6	1.7	1.6
7	.45	.51	e1.2	.28	e5.0	2.6	2.4	3.9	3.8	e2.6	1.7	1.6
8	.50	.56	e1.3	.15	e15	2.4	1.9	3.4	3.5	e2.5	2.0	1.6
9	.48	.52	e1.3	1.0	e7.0	1.9	1.6	3.6	3.4	e2.5	2.4	1.5
10	.41	.69	1.5	3.4	e3.2	1.1	1.6	3.8	3.2	e2.4	e2.2	1.5
11	.63	.93	1.3	1.8	e1.9	1.1	2.1	3.5	3.5	e2.3	e2.0	1.5
12	.54	.69	1.1	1.5	e1.8	1.1	2.9	4.2	3.6	e2.2	1.9	1.5
13	.49	.93	1.0	1.3	e1.7	1.3	2.6	6.9	3.1	e2.5	1.8	1.5
14	.44	1.2	.99	1.2	e34	2.7	2.6	5.3	3.3	e2.5	1.8	1.4
15	.39	.84	.90	.79	20	2.3	2.3	4.4	3.9	e2.4	1.8	1.4
16	.37	.77	.78	.75	9.6	2.2	1.7	4.4	4.4	e2.3	1.7	1.4
17	.34	.65	e.74	.72	8.3	2.4	1.3	4.2	4.1	e2.2	1.7	1.4
18	.32	.65	.16	.61	5.1	2.0	1.3	3.4	3.2	e2.2	e1.5	1.4
19	.29	.63	.26	.55	3.5	1.5	1.5	3.1	3.2	e2.1	e1.5	1.4
20	.38	.62	.11	.54	3.3	1.4	1.5	3.2	3.5	e2.1	e1.5	1.5
21	.39	.67	.60	.47	e3.0	1.4	2.4	2.9	3.0	e2.0	e1.4	1.5
22	.39	.60	.69	.45	7.0	1.5	3.3	2.7	2.8	e1.9	e1.4	1.5
23	.40	.63	.60	.39	12	2.1	3.6	2.8	2.9	e1.8	e1.6	1.5
24	.41	.64	.58	.34	26	2.8	3.2	3.1	2.5	e2.1	e1.7	1.5
25	.44	.56	.54	.28	13	e3.0	2.5	3.5	2.7	e2.1	e1.5	1.5
26	.46	1.0	.30	.24	11	e2.5	1.9	3.7	3.3	e2.0	e1.1	1.5
27	.48	1.5	.00	.24	9.6	e2.0	1.7	3.1	3.2	e1.9	.80	1.5
28	.45	.96	.00	.23	8.7	e3.8	1.7	3.0	3.0	e1.8	.74	1.5
29	.45	.76	.00	.68	---	e3.0	1.9	3.4	2.8	e1.7	.84	1.5
30	.42	.71	.00	.96	---	e2.8	2.4	3.8	e2.8	e1.6	.78	1.5
31	.40	---	.00	.72	---	e2.8	---	3.7	---	e1.7	1.1	---
TOTAL	13.48	20.79	20.93	21.08	226.17	78.4	67.0	114.4	100.0	69.1	47.56	45.4
MEAN	.43	.69	.68	.68	8.08	2.53	2.23	3.69	3.33	2.23	1.53	1.51
MAX	.63	1.5	1.5	3.4	34	7.6	3.6	6.9	4.4	2.7	2.4	1.7
MIN	.29	.37	.00	.01	.68	1.1	1.3	2.4	2.5	1.6	.74	1.4
AC-FT	27	41	42	42	449	156	133	227	198	137	94	90

e Estimated.

10257500 FALLS CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.16	1.44	1.85	1.93	2.42	2.12	2.16	2.01	1.50	1.06	.99	1.12
MAX	2.52	2.81	5.68	4.58	8.08	8.75	7.90	4.25	3.33	2.37	2.67	2.23
(WY)	1923	1923	1927	1995	1998	1995	1926	1926	1998	1926	1926	1926
MIN	.40	.69	.68	.68	.41	.15	.15	.13	.23	.30	.24	.53
(WY)	1995	1998	1998	1998	1997	1997	1997	1997	1996	1996	1997	1928

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1923 - 1998			
ANNUAL TOTAL	193.37				824.31							
ANNUAL MEAN	.53				2.26				1.67			
HIGHEST ANNUAL MEAN									2.77			
LOWEST ANNUAL MEAN									.69			
HIGHEST DAILY MEAN	21 Sep 25				34 Feb 14				50 Mar 5 1995			
LOWEST DAILY MEAN	.00 Apr 16				.00 Dec 27				.00 Apr 16 1997			
ANNUAL SEVEN-DAY MINIMUM	.00 Apr 13				.02 Dec 27				.00 Apr 13 1997			
INSTANTANEOUS PEAK FLOW					142 Feb 14				154 Jan 10 1995			
INSTANTANEOUS PEAK STAGE					6.24 Feb 14				6.24 Feb 14 1998			
ANNUAL RUNOFF (AC-FT)	384				1640				1210			
10 PERCENT EXCEEDS	1.0				3.7				2.9			
50 PERCENT EXCEEDS	.31				1.6				1.3			
90 PERCENT EXCEEDS	.02				.42				.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 1997 TO SEPTEMBER 1998
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	.37	1.0	.67	.69	7.6	e2.7	3.5	3.4	e2.7	e1.6	1.6
2	.48	.41	.89	.58	.68	e5.6	e2.6	3.1	3.6	e2.6	e1.5	1.6
3	.49	.43	.71	.46	e2.8	e3.7	e2.5	3.2	3.9	e2.6	e1.4	1.6
4	.43	.42	.68	.49	e2.0	3.2	e2.5	3.2	3.3	e2.5	e1.4	1.7
5	.40	.45	e.75	.58	e1.3	2.7	e2.4	5.5	3.3	e2.7	1.5	1.7
6	.46	.49	e.95	.60	e9.0	3.0	e2.4	6.0	3.8	e2.6	1.7	1.6
7	.45	.51	e1.2	.68	e5.0	2.6	2.4	3.9	3.8	e2.6	1.7	1.6
8	.50	.56	e1.3	.82	e15	2.4	2.3	3.4	3.5	e2.5	2.0	1.6
9	.48	.52	e1.3	1.2	e7.0	2.2	2.3	3.6	3.4	e2.5	2.4	1.5
10	.41	.69	1.5	3.4	e3.2	1.8	2.3	3.8	3.2	e2.4	e2.2	1.5
11	.63	.93	1.3	1.8	e1.9	1.8	2.6	3.5	3.5	e2.3	e2.0	1.5
12	.54	.69	1.1	1.5	e1.8	1.8	2.9	4.2	3.6	e2.2	1.9	1.5
13	.49	.93	1.0	1.3	e1.7	1.7	2.6	6.9	3.1	e2.5	1.8	1.5
14	.44	1.2	.99	1.2	e34	2.7	2.6	5.3	3.3	e2.5	1.8	1.4
15	.39	.84	.90	1.2	20	2.3	2.3	4.4	3.9	e2.4	1.8	1.4
16	.37	.77	.78	1.4	9.6	2.2	2.1	4.4	4.4	e2.3	1.7	1.4
17	.34	.65	e.74	1.4	8.3	2.4	2.0	4.2	4.1	e2.2	1.6	1.4
18	.32	.65	.52	1.3	5.1	2.3	1.8	3.8	3.2	e2.2	e1.5	1.4
19	.29	.63	.93	1.2	3.5	2.2	1.8	3.8	3.2	e2.1	e1.5	1.4
20	.38	.62	.78	1.2	3.3	2.1	2.2	3.9	3.5	e2.1	e1.5	1.5
21	.39	.67	.86	1.1	e3.0	2.1	3.1	3.6	3.0	e2.0	e1.4	1.5
22	.39	.60	.69	1.1	7.0	2.2	4.0	3.4	2.8	e1.9	e1.4	1.5
23	.40	.63	.60	1.1	12	2.8	4.3	3.5	2.9	e1.8	e1.6	1.5
24	.41	.64	.58	1.0	26	3.5	3.9	3.8	2.5	e2.1	e1.7	1.5
25	.44	.56	.54	.95	13	e3.3	3.2	4.2	2.7	e2.1	e1.5	1.5
26	.46	1.0	.60	.91	11	e2.5	2.6	4.4	3.3	e2.0	e1.4	1.5
27	.48	1.5	.67	.91	9.6	e2.0	2.4	3.8	3.2	e1.9	1.5	1.5
28	.45	.96	.66	.90	8.7	e3.8	2.4	3.7	3.0	e1.8	1.4	1.5
29	.45	.76	.67	1.0	---	e3.0	2.6	3.9	2.8	e1.7	1.5	1.5
30	.42	.71	.66	.96	---	e2.8	3.1	3.8	e2.8	e1.6	1.5	1.5
31	.40	---	.67	.72	---	e2.8	---	3.7	---	e1.7	1.6	---
TOTAL	13.48	20.79	26.52	33.63	226.17	87.1	78.9	125.4	100.0	69.1	51.0	45.4
MEAN	.43	.69	.86	1.08	8.08	2.81	2.63	4.05	3.33	2.23	1.65	1.51
MAX	.63	1.5	1.5	3.4	34	7.6	4.3	6.9	4.4	2.7	2.4	1.7
MIN	.29	.37	.52	.46	.68	1.7	1.8	3.1	2.5	1.6	1.4	1.4
AC-FT	27	41	53	67	449	173	156	249	198	137	101	90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.73	1.17	1.19	2.19	3.94	3.32	1.74	2.30	1.83	1.34	1.03	1.18
MAX	1.40	1.64	1.71	4.58	8.08	8.75	2.92	4.05	3.33	2.32	1.76	1.52
(WY)	1996	1997	1997	1995	1998	1995	1995	1998	1998	1995	1995	1995
MIN	.42	.69	.86	1.08	.61	.34	.31	.29	.29	.32	.24	.60
(WY)	1997	1998	1998	1998	1997	1997	1997	1997	1997	1997	1997	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1995 - 1998
ANNUAL TOTAL	221.64	877.49	
ANNUAL MEAN	.61	2.40	1.82
HIGHEST ANNUAL MEAN			2.99
LOWEST ANNUAL MEAN			.76
HIGHEST DAILY MEAN	21	Sep 25	34
LOWEST DAILY MEAN	.10	Sep 11	.29
ANNUAL SEVEN-DAY MINIMUM	.13	Sep 8	.35
INSTANTANEOUS PEAK FLOW			142
ANNUAL RUNOFF (AC-FT)	440	1740	1320
10 PERCENT EXCEEDS	1.1	3.9	3.4
50 PERCENT EXCEEDS	.38	1.8	1.2
90 PERCENT EXCEEDS	.20	.50	.27

e Estimated.

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 Metropolitan Water District.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	139	147	.06	.79	4.0	e167	369	482	197	427	46
2	225	140	145	.16	1.6	2.1	e167	411	465	.03	479	38
3	153	137	146	.65	11	.82	e170	417	463	.81	471	32
4	150	84	148	.10	17	.39	e175	421	476	.79	471	33
5	148	.00	144	1.5	70	.35	e175	e414	478	.34	472	29
6	148	.00	160	.33	185	2.7	e177	e420	473	242	473	29
7	154	.26	178	.34	244	1.7	187	e410	478	500	470	29
8	148	.06	181	.46	310	1.1	178	400	508	446	458	29
9	142	.33	168	10	190	e.90	173	403	547	348	467	67
10	137	.31	167	61	192	e.71	175	403	543	351	469	134
11	136	4.9	164	18	174	e1.4	181	443	524	345	462	163
12	139	99	163	8.5	86	e2.9	190	482	520	343	457	164
13	136	155	158	4.2	.00	5.8	265	492	524	343	292	167
14	132	163	157	3.6	108	16	e322	491	528	340	.00	167
15	129	161	157	35	79	3.2	301	476	523	241	.00	169
16	131	151	159	2.6	7.0	3.9	309	459	506	138	.00	171
17	130	147	161	3.0	5.8	8.0	296	453	525	136	.00	167
18	129	150	160	2.1	3.9	10	302	447	519	138	.00	164
19	129	142	154	.38	1.4	14	301	447	517	140	.00	165
20	129	147	153	1.1	2.4	14	303	452	520	140	.00	162
21	129	146	155	.49	.99	20	301	442	513	141	.00	168
22	129	144	155	2.0	80	20	305	179	544	e140	.00	315
23	126	143	157	.90	72	24	308	23	527	e142	.00	452
24	131	144	156	.22	195	14	306	27	542	143	.00	454
25	134	143	158	.10	73	e29	314	29	555	146	.00	419
26	134	149	159	.00	49	e29	323	277	543	146	.00	390
27	134	161	160	.14	25	e3.7	331	467	534	145	.00	393
28	135	158	157	.57	8.6	e40	321	476	543	147	.00	387
29	139	152	156	4.4	---	e23	315	478	537	148	.00	384
30	137	149	97	6.2	---	e71	319	483	536	337	.00	386
31	137	---	.02	1.9	---	e139	---	488	---	452	53	---
TOTAL	4458	3309.86	4680.02	170.00	2192.48	506.67	7657	12079	15493	6476.97	5921.00	5873
MEAN	144	110	151	5.48	78.3	16.3	255	390	516	209	191	196
MAX	268	163	181	61	310	139	331	492	555	500	479	454
MIN	126	.00	.02	.00	.00	.35	167	23	463	.03	.00	29
AC-FT	8840	6570	9280	337	4350	1000	15190	23960	30730	12850	11740	11650
a	11220	7790	10380	77	2410	498	14600	22720	28240	15130	13270	11920
b	103	83	103	88	73	47	124	285	2.8	393	355	1.4

e Estimated.

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

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

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	144	142	108	124	131	124	141	112	141	107	111	136
MAX	596	499	477	598	595	445	316	390	516	417	378	463
(WY)	1987	1987	1987	1987	1987	1987	1986	1998	1998	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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1985 - 1998		
ANNUAL TOTAL	47635.68			68817.00					
ANNUAL MEAN	131			189			135		
HIGHEST ANNUAL MEAN							308		
LOWEST ANNUAL MEAN							11.9		
HIGHEST DAILY MEAN	328			555			2600		
LOWEST DAILY MEAN	.00			.00			.00		
ANNUAL SEVEN-DAY MINIMUM	.84			.00			.00		
INSTANTANEOUS PEAK FLOW				688			2530		
INSTANTANEOUS PEAK STAGE				5.45			8.32		
ANNUAL RUNOFF (AC-FT)	94490			136500			98050		
10 PERCENT EXCEEDS	236			476			348		
50 PERCENT EXCEEDS	134			148			56		
90 PERCENT EXCEEDS	9.0			.35			.00		

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA

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

DRAINAGE AREA.—35.7 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)
Feb. 8	0345	17	2.07				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.22	.36	.45	.68	4.9	3.6	4.4	3.2	1.4	.87	2.4
2	.23	.20	.34	.47	.70	4.3	3.6	4.5	3.0	1.4	.81	2.3
3	.24	.21	.34	.48	1.1	3.7	3.7	4.5	3.0	1.4	.76	2.4
4	.24	.21	.35	.48	1.2	3.2	3.8	4.6	3.1	1.5	.70	2.5
5	.23	.21	.35	.49	1.0	3.1	3.9	5.1	2.9	1.4	.67	2.4
6	.23	.22	.79	.46	2.2	3.4	3.6	4.9	2.9	1.4	.75	2.3
7	.29	.23	1.2	.46	2.1	3.3	3.5	4.6	3.0	1.3	.74	2.3
8	.31	.24	1.2	.45	7.7	3.3	4.1	4.2	2.9	1.3	.80	2.2
9	.30	.25	.83	.71	3.7	3.4	4.1	4.0	2.7	1.2	.90	2.0
10	.28	.29	.66	1.0	3.1	3.8	4.1	3.9	2.6	1.2	1.2	2.0
11	.30	.29	.61	.74	2.8	4.2	3.8	3.8	2.6	1.1	.94	2.0
12	.31	.30	.52	.63	2.6	4.2	3.8	3.9	2.6	1.1	.97	2.0
13	.30	.38	.52	.51	2.6	4.2	3.8	5.0	2.6	1.1	1.3	2.0
14	.29	.37	.49	.50	5.3	4.0	3.9	4.3	2.5	1.1	1.3	1.9
15	.26	.35	.49	.48	5.0	4.0	4.0	3.9	2.3	1.0	1.3	1.7
16	.24	.35	.47	.46	2.8	4.1	4.2	3.6	2.3	.88	1.3	1.7
17	.23	.33	.47	.45	3.2	4.0	4.3	3.5	2.3	.88	1.3	1.6
18	.22	.33	.48	.46	2.9	3.9	4.3	3.6	2.1	.95	1.3	1.6
19	.22	.32	.45	.47	3.2	4.0	4.2	3.4	2.1	1.0	1.3	1.6
20	.24	.31	.47	.51	3.2	4.1	4.2	3.4	2.1	1.1	1.2	1.6
21	.26	.31	.65	.50	3.7	4.3	4.2	3.5	2.0	1.1	1.2	1.8
22	.25	.30	.69	.53	4.2	4.2	3.5	3.5	2.0	1.1	1.1	1.8
23	.24	.31	.63	.60	3.5	4.2	3.8	3.4	2.1	1.1	1.0	1.7
24	.27	.31	.64	.56	8.7	3.7	5.1	3.5	2.0	1.0	1.1	1.7
25	.27	.31	.59	.55	6.5	4.0	5.3	3.6	2.0	.95	1.1	1.7
26	.27	.33	.52	.56	6.2	4.8	4.6	3.5	1.8	.85	1.1	1.7
27	.27	.32	.45	.59	5.5	3.7	4.2	3.4	1.7	.77	1.1	1.7
28	.27	.31	.47	.59	5.3	5.3	4.0	3.4	1.6	.78	.98	1.6
29	.27	.32	.49	.73	---	4.9	4.0	3.5	1.6	.83	.97	1.6
30	.27	.34	.46	.70	---	3.9	4.1	3.3	1.5	.82	.93	1.6
31	.25	---	.45	.71	---	3.5	---	3.2	---	.89	1.2	---
TOTAL	8.08	8.77	17.43	17.28	100.68	123.6	121.3	120.9	71.1	33.90	32.19	57.4
MEAN	.26	.29	.56	.56	3.60	3.99	4.04	3.90	2.37	1.09	1.04	1.91
MAX	.31	.38	1.2	1.0	8.7	5.3	5.3	5.1	3.2	1.5	1.3	2.5
MIN	.22	.20	.34	.45	.68	3.1	3.5	3.2	1.5	.77	.67	1.6
AC-FT	16	17	35	34	200	245	241	240	141	67	64	114

10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.87	1.11	1.19	3.60	8.95	7.04	5.73	4.67	2.99	1.99	1.53	1.00
MAX	3.83	4.54	4.51	29.2	174	49.6	31.6	25.8	16.4	10.1	5.42	4.74
(WY)	1970	1984	1979	1980	1980	1980	1993	1993	1993	1980	1983	1993
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1968	1969	1969	1968	1968	1989	1968	1968	1968	1972	1968	1968

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1968 - 1998			
ANNUAL TOTAL	146.53				712.63							
ANNUAL MEAN	.40				1.95				3.36			
HIGHEST ANNUAL MEAN									28.3			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	1.5 Jan 26				8.7 Feb 24				540 Feb 18 1980			
LOWEST DAILY MEAN	.00 Jul 4				.20 Nov 2				.00 Oct 1 1967			
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 4				.21 Nov 1				.00 Oct 1 1967			
INSTANTANEOUS PEAK FLOW					17 Feb 8				1750 Aug 17 1983			
INSTANTANEOUS PEAK STAGE					2.07 Feb 8				6.40 Jan 25 1969			
ANNUAL RUNOFF (AC-FT)	291				1410				2430			
10 PERCENT EXCEEDS	1.0				4.2				6.4			
50 PERCENT EXCEEDS	.31				1.3				.67			
90 PERCENT EXCEEDS	.00				.29				.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 through June 22 and good thereafter. 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; maximum gage height, 10.32 ft, Feb. 14, 1998; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	.37	.59	.55	.83	5.4	3.5	1.3	2.2	.51	.04	.20
2	.55	.39	.54	.56	1.2	4.6	3.9	1.2	2.1	.50	.05	.13
3	.52	.48	.52	.61	2.0	4.3	3.8	1.1	2.4	.50	.05	.10
4	.55	.46	.59	.59	1.6	4.2	3.7	1.7	2.4	.48	.04	.12
5	.57	.46	.54	.62	1.3	4.0	3.9	2.3	.89	.45	.05	.13
6	.60	.48	1.3	.60	2.6	3.6	4.0	3.2	1.0	.43	.06	.11
7	.59	.53	1.8	.60	3.3	7.8	3.2	2.1	.82	.42	.05	.13
8	.58	.49	1.9	.56	8.0	3.6	2.8	1.9	.80	.40	.10	.13
9	.70	.48	1.4	.81	5.2	3.3	3.2	2.0	.77	.35	.21	.14
10	.58	.49	1.3	1.7	5.6	3.3	2.7	1.9	.71	.34	.47	.17
11	.60	.55	1.2	.98	5.2	3.1	2.7	2.5	.72	.32	.36	.19
12	.59	.52	1.2	.79	4.6	2.8	2.7	4.2	.72	.28	.32	.20
13	.57	.59	1.2	.89	3.7	2.9	2.5	3.0	.80	.23	.28	.20
14	.54	.58	1.2	.84	6.0	3.3	2.6	2.7	.80	.00	.27	.15
15	.53	.56	1.1	.86	5.9	2.6	2.4	2.9	.72	.02	.22	.00
16	.45	.57	1.1	.86	5.1	2.5	2.7	2.7	.55	.01	.21	.00
17	.49	.58	1.0	.77	6.1	2.5	2.4	2.7	.47	.00	.20	.00
18	.48	.59	1.0	.75	4.9	4.3	2.4	2.5	.40	.00	.22	.00
19	.49	.58	1.1	.79	4.6	2.5	2.2	1.4	.46	.30	.14	.00
20	.51	.50	1.1	.73	4.5	2.1	2.3	1.5	.56	.58	.00	.00
21	.52	.51	1.2	.78	4.2	2.1	2.0	1.7	.62	.52	.00	.01
22	.51	.46	1.1	.80	4.0	2.3	1.9	2.3	.75	.46	.00	.01
23	.50	.49	1.0	.79	4.1	2.4	2.1	2.1	.74	.47	.00	.00
24	.51	.48	1.1	.85	7.3	2.5	2.1	2.2	.67	.26	.00	.00
25	.54	.52	1.1	.76	7.4	2.7	2.0	2.8	.64	.00	.01	.00
26	.54	.71	1.4	.75	6.7	2.4	3.3	2.5	.59	.00	.00	.00
27	.54	.68	1.4	.73	6.3	2.2	3.5	3.0	.55	.00	.00	.00
28	.53	.61	1.3	.71	6.1	5.0	3.5	2.8	.50	.00	.00	.00
29	.53	.61	.73	.72	---	2.8	2.0	3.0	.50	.01	.00	.17
30	.48	.60	.59	.70	---	3.1	2.3	2.9	.52	.04	.00	.33
31	.39	---	.59	.70	---	3.7	---	2.5	---	.04	.08	---
TOTAL	16.70	15.92	33.19	23.75	128.33	103.9	84.3	72.6	26.37	7.92	3.43	2.62
MEAN	.54	.53	1.07	.77	4.58	3.35	2.81	2.34	.88	.26	.11	.087
MAX	.70	.71	1.9	1.7	8.0	7.8	4.0	4.2	2.4	.58	.47	.33
MIN	.39	.37	.52	.55	.83	2.1	1.9	1.1	.40	.00	.00	.00
AC-FT	33	32	66	47	255	206	167	144	52	16	6.8	5.2

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.33	.46	.56	2.09	2.98	2.38	1.48	.78	.29	.074	.11	.26
MAX	1.19	1.32	1.49	14.0	17.8	8.82	3.85	2.34	.88	.28	.65	1.38
(WY)	1994	1987	1994	1993	1993	1993	1993	1998	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1987 - 1998

ANNUAL TOTAL	173.48	"19.03		
ANNUAL MEAN	.48	1.42		.97
HIGHEST ANNUAL MEAN				4.02
LOWEST ANNUAL MEAN				.19
HIGHEST DAILY MEAN	3.7 Sep 25	8.0 Feb 8	49	Jan 17 1993
LOWEST DAILY MEAN	.00 Mar 19	.00 Jul 14	.00	Jun 15 1989
ANNUAL SEVEN-DAY MINIMUM	.00 Apr 26	.00 Aug 20	.00	Jun 15 1989
INSTANTANEOUS PEAK FLOW		27 Feb 14	153	Jan 7 1993
INSTANTANEOUS PEAK STAGE		10.32 Feb 14	10.32	Feb 14 1998
ANNUAL RUNOFF (AC-FT)	344	1030	705	
10 PERCENT EXCEEDS	1.1	3.6	2.4	
50 PERCENT EXCEEDS	.45	.71	.33	
90 PERCENT EXCEEDS	.05	.04	.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 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- PER 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 17...	1425	.58	213	8.4	12.0	76	0	26	2.5	11	22	
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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)
NOV 17...	.5	5.8	122	1	102	4.6	2.5	<.1	18	138	132	
DATE		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 17...	.19	<.01	<.05	<.02	<.1	<.01	<.01	<1	17.9	4	<1	

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA

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

DRAINAGE AREA.—16.9 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 except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 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)
Feb. 14	1945	106	6.57				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	.47	1.2	e1.2	1.7	11	12	32	54	e28	7.2	3.7
2	.77	.45	1.2	e1.1	1.7	10	12	33	56	e26	7.0	3.2
3	.72	.45	1.1	e1.2	2.6	10	12	36	e58	25	6.7	3.2
4	.67	.44	e1.1	e1.2	3.1	9.9	12	38	e56	23	6.3	3.4
5	.66	.44	e1.2	e1.2	2.2	9.5	11	46	e53	22	6.1	3.6
6	.64	.44	e1.3	e1.3	3.7	9.5	11	46	e54	21	6.2	3.2
7	.64	.45	e2.9	e1.3	6.2	8.7	11	39	e55	21	6.1	2.9
8	.69	.46	e7.5	1.2	19	8.2	11	37	e54	20	6.0	3.2
9	.69	.51	e3.6	1.4	10	8.0	11	39	e53	19	7.1	3.0
10	.66	.51	e2.9	5.4	7.4	7.8	12	40	e49	18	9.8	2.6
11	.58	.55	e2.5	3.7	6.1	7.8	12	40	e46	16	8.4	2.4
12	.58	.62	e2.5	2.6	5.1	8.0	12	41	e47	15	7.3	2.2
13	.63	.61	e2.1	2.2	4.7	8.3	12	37	e48	15	6.6	2.0
14	.59	1.0	e1.7	2.1	25	9.0	12	33	e46	14	6.3	1.9
15	.56	.85	e1.4	2.0	31	8.2	11	33	e46	13	5.9	1.8
16	.54	.75	e1.3	2.0	16	8.4	11	34	e46	13	5.5	1.7
17	.50	.69	e1.2	2.0	13	8.9	11	33	e45	12	5.2	1.7
18	.50	.66	e1.1	2.0	10	9.5	11	35	e42	12	4.9	1.5
19	.49	.65	e1.2	1.9	9.0	9.7	12	38	e39	12	4.6	1.5
20	.48	.65	e1.3	1.8	8.7	9.9	13	40	e37	12	4.3	1.5
21	.50	.63	e1.7	1.8	7.7	10	16	40	e35	11	4.1	1.5
22	.51	.61	e1.5	1.7	13	11	21	42	e36	11	3.9	1.6
23	.52	.61	e1.3	1.7	22	13	26	45	e32	11	3.8	1.6
24	.52	.62	e1.3	1.6	27	16	27	48	e32	10	4.0	1.6
25	.53	.62	e1.3	1.6	18	18	25	53	e30	9.6	3.9	1.5
26	.53	.62	e1.2	1.6	15	17	21	56	e30	9.1	3.6	1.5
27	.53	.88	e1.2	1.6	13	14	22	53	e29	8.7	3.3	1.6
28	.53	.89	e1.1	1.5	12	16	24	55	e29	8.4	3.0	1.6
29	.51	.87	e1.3	1.6	---	14	26	54	e28	8.2	2.9	1.6
30	.50	.96	e1.3	2.0	---	13	30	52	e28	7.7	2.7	1.5
31	.50	---	e1.3	1.8	---	12	---	53	---	7.5	3.4	---
TOTAL	18.10	18.96	54.8	57.3	313.9	334.3	470	1301	1293	459.2	166.1	65.8
MEAN	.58	.63	1.77	1.85	11.2	10.8	15.7	42.0	43.1	14.8	5.36	2.19
MAX	.83	1.0	7.5	5.4	31	18	30	56	58	28	9.8	3.7
MIN	.48	.44	1.1	1.1	1.7	7.8	11	32	28	7.5	2.7	1.5
AC-FT	36	38	109	114	623	663	932	2580	2560	911	329	131

e Estimated.

10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.57	1.76	3.52	6.31	7.77	8.76	11.3	14.7	7.68	2.47	1.03	.75
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1948 - 1998			
ANNUAL TOTAL	687.47				4552.46							
ANNUAL MEAN	1.88				12.5				5.53			
HIGHEST ANNUAL MEAN									32.9			
LOWEST ANNUAL MEAN									.088			
HIGHEST DAILY MEAN	26 Jan 26				58 Jun 3				1080 Jan 25 1969			
LOWEST DAILY MEAN	.00 Jul 9				.44 Nov 4				.00 Oct 1 1947			
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 9				.45 Nov 2				.00 Oct 1 1947			
INSTANTANEOUS PEAK FLOW					106 Feb 14				2900 Nov 22 1965			
INSTANTANEOUS PEAK STAGE					6.57 Feb 14				15.78 Sep 7 1981			
ANNUAL RUNOFF (AC-FT)	1360				9030				4010			
10 PERCENT EXCEEDS	4.3				39				12			
50 PERCENT EXCEEDS	1.1				6.2				1.0			
90 PERCENT EXCEEDS	.00				.62				.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)
Feb. 8	0430	1,260	5.10	Feb. 24	0400	363	3.66
Feb. 14	1945	2,320	6.00	Mar. 28	1330	146	2.83

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.15	1.3	23	48	11	3.4	.11	.00	.00
2	.00	.00	.00	.16	1.2	21	42	10	3.3	.08	.00	.00
3	.00	.00	.00	.18	2.4	18	39	10	3.5	.07	.00	.00
4	.00	.00	.00	.33	6.2	17	36	10	3.7	.07	.00	.00
5	.00	.00	.00	.57	3.9	16	31	11	3.3	.05	.00	.00
6	.00	.00	.00	.58	15	18	31	12	3.1	.03	.00	.00
7	.00	.00	.00	.52	35	15	31	11	3.0	.03	.00	.00
8	.00	.00	4.4	.49	e324	13	26	9.9	3.0	.02	.00	1.8
9	.00	.00	4.0	.87	72	13	24	9.5	2.8	.00	.00	.58
10	.00	.00	2.0	20	23	12	23	9.2	2.8	.00	.00	.00
11	.00	.00	1.4	8.1	14	11	24	8.9	2.7	.00	.00	.00
12	.00	.00	1.1	4.4	11	10	30	9.4	2.7	.00	.00	.00
13	.00	.00	.86	3.3	8.5	9.8	26	16	2.7	.00	.00	.00
14	.00	.00	.64	2.7	329	14	25	13	2.4	.00	.00	.00
15	.00	.00	.52	2.3	154	14	23	11	2.1	.00	.00	.00
16	.00	.00	.42	2.0	36	11	21	9.5	1.9	.00	.00	.00
17	.00	.00	.36	1.8	49	10	19	8.6	1.9	.00	.00	.00
18	.00	.00	.35	1.7	38	9.5	18	8.0	1.7	.00	.00	.00
19	.00	.00	.30	1.7	30	9.0	17	7.3	1.5	.00	.00	.00
20	.00	.00	.29	1.6	34	8.8	16	7.0	1.3	.00	.00	.00
21	.00	.00	.40	1.5	24	8.4	16	6.7	.99	.00	.00	.00
22	.00	.00	.52	1.4	41	8.0	16	6.4	.85	.00	.00	.00
23	.00	.00	.39	1.4	48	7.9	16	5.9	.84	.00	.00	.00
24	.00	.00	.36	1.4	141	7.6	16	5.4	.79	.00	.00	.00
25	.00	.00	.31	1.3	63	8.1	15	5.1	.66	.00	.00	.00
26	.00	.00	.28	1.2	42	12	14	4.9	.58	.00	.00	.00
27	.00	.00	.27	1.2	32	11	13	4.8	.50	.00	.00	.00
28	.00	.00	.19	1.1	26	64	12	4.4	.37	.00	.00	.00
29	.00	.00	.19	1.3	---	55	11	4.2	.21	.00	.00	.00
30	.00	.00	.15	1.6	---	44	11	4.0	.11	.00	.00	.00
31	.00	---	.14	1.4	---	45	---	3.7	---	.00	.00	---
TOTAL	0.00	0.00	19.84	68.25	1604.5	544.1	690	257.8	58.70	0.46	0.00	2.38
MEAN	.000	.000	.64	2.20	57.3	17.6	23.0	8.32	1.96	.015	.000	.079
MAX	.00	.00	4.4	20	329	64	48	16	3.7	.11	.00	1.8
MIN	.00	.00	.00	.15	1.2	7.6	11	3.7	.11	.00	.00	.00
AC-FT	.00	.00	39	135	3180	1080	1370	511	116	.9	.00	4.7

e Estimated.

10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.36	.84	3.88	8.95	19.9	19.6	7.59	2.31	.70	.76	.99	.86
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1930 - 1998			
ANNUAL TOTAL	220.65				3246.03							
ANNUAL MEAN	.60				8.89				5.51			
HIGHEST ANNUAL MEAN									47.4			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	18				329				2040			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					2320				7000			
INSTANTANEOUS PEAK STAGE					6.00				7.29			
ANNUAL RUNOFF (AC-FT)	438				6440				3990			
10 PERCENT EXCEEDS	1.7				23				6.7			
50 PERCENT EXCEEDS	.00				.52				.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 through Feb. 10 and poor thereafter. 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)
Feb. 8	0400	55	3.17	Feb. 14	1945	155	3.71

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.3	2.1	2.0	2.5	11	7.7	7.1	5.2	3.4	2.1	2.0
2	1.2	1.3	2.0	2.0	2.5	10	7.4	6.8	5.2	3.2	2.0	e1.9
3	1.2	1.3	2.0	2.1	3.6	9.6	7.4	7.0	5.3	3.0	2.0	e1.8
4	1.2	1.3	2.0	2.1	3.9	9.1	7.4	7.1	5.1	3.0	1.9	e1.8
5	1.2	1.4	2.0	2.2	3.1	8.7	7.4	9.4	5.0	3.0	1.9	e1.7
6	1.2	1.4	2.9	2.1	5.3	8.8	7.5	9.5	5.0	3.2	2.1	e1.8
7	1.3	1.4	6.7	2.1	6.8	8.2	7.5	8.0	5.0	3.2	2.0	e2.0
8	1.3	1.4	12	2.1	29	7.6	7.2	7.6	4.9	3.0	2.2	1.9
9	1.3	1.4	4.5	3.1	11	7.3	7.1	7.5	4.8	2.9	2.6	1.7
10	1.3	1.6	3.3	8.8	7.3	6.9	7.1	7.3	4.7	2.9	3.1	1.7
11	1.4	1.7	2.8	4.8	6.0	6.7	7.4	7.1	4.6	3.0	2.5	1.9
12	1.4	1.6	2.6	4.0	e5.0	6.5	7.9	7.5	4.6	3.0	2.4	1.9
13	1.4	2.2	2.5	3.7	e4.5	6.5	7.5	8.3	4.7	3.0	2.2	1.9
14	1.3	2.8	2.4	3.4	42	7.3	7.6	7.4	4.5	2.9	2.3	1.9
15	1.3	2.0	2.3	3.2	31	6.7	7.4	7.2	4.3	2.9	2.1	1.9
16	1.2	1.9	2.3	3.1	13	6.6	7.1	7.0	4.2	2.8	2.0	1.8
17	1.2	1.8	2.2	3.1	11	6.6	7.0	6.7	4.1	2.9	2.2	1.7
18	1.2	1.7	2.2	3.0	9.4	6.5	6.8	6.5	4.1	2.9	2.2	1.7
19	1.2	1.7	2.2	2.9	8.5	6.4	6.9	6.4	4.2	3.1	2.2	1.7
20	1.3	1.7	2.2	2.8	9.0	6.2	7.1	6.4	4.1	e2.8	2.2	1.7
21	1.4	1.7	2.3	2.7	8.0	6.1	7.4	6.3	4.0	e2.5	2.2	1.7
22	1.4	1.7	2.2	2.6	21	6.1	7.9	6.2	3.9	e2.5	1.9	1.7
23	1.4	1.7	2.2	2.6	23	6.5	8.1	6.1	3.9	e2.3	1.9	1.8
24	1.5	1.7	2.2	2.6	29	6.8	7.9	5.9	3.7	e2.3	2.0	1.8
25	1.4	1.7	2.1	2.5	19	7.3	7.6	5.9	3.6	e2.2	2.0	1.8
26	1.4	2.1	2.1	2.4	16	7.5	7.1	6.0	3.6	e2.3	2.1	1.9
27	1.4	2.9	2.1	2.4	14	6.8	7.0	6.0	3.5	e2.2	e2.0	2.0
28	1.4	2.2	2.1	2.4	12	11	7.0	5.9	3.4	e2.2	e2.0	2.0
29	1.4	2.0	2.1	2.7	---	8.4	7.1	5.7	3.3	e2.1	2.1	2.0
30	1.4	2.0	2.1	2.7	---	7.7	7.3	5.5	3.2	e2.1	2.0	2.0
31	1.3	---	2.0	2.5	---	7.6	---	5.4	---	e2.1	2.2	---
TOTAL	40.7	52.6	86.7	90.7	356.4	235.0	220.8	212.7	129.7	84.9	66.6	55.1
MEAN	1.31	1.75	2.80	2.93	12.7	7.58	7.36	6.86	4.32	2.74	2.15	1.84
MAX	1.5	2.9	12	8.8	42	11	8.1	9.5	5.3	3.4	3.1	2.0
MIN	1.2	1.3	2.0	2.0	2.5	6.1	6.8	5.4	3.2	2.1	1.9	1.7
AC-FT	81	104	172	180	707	466	438	422	257	168	132	109

e Estimated.

10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.36	2.19	3.13	4.82	5.82	6.09	4.49	3.11	2.00	1.43	1.41	1.29
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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1949 - 1998

ANNUAL TOTAL	693.20			1631.9					
ANNUAL MEAN	1.90			4.47			3.08		
HIGHEST ANNUAL MEAN							12.4		
LOWEST ANNUAL MEAN							.66		
HIGHEST DAILY MEAN	20	Jan 26		42	Feb 14		395	Dec 6	1966
LOWEST DAILY MEAN	.63	Aug 21		1.2	Oct 1		.00	Jun 27	1961
ANNUAL SEVEN-DAY MINIMUM	.66	Aug 20		1.2	Oct 1		.00	Jul 13	1963
INSTANTANEOUS PEAK FLOW				155			1960		
INSTANTANEOUS PEAK STAGE				3.71			7.11		
ANNUAL RUNOFF (AC-FT)	1370			3240			2230		
10 PERCENT EXCEEDS	3.0			7.8			5.6		
50 PERCENT EXCEEDS	1.5			2.9			1.7		
90 PERCENT EXCEEDS	.74			1.4			.60		

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,280 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	1.7	28	2.2	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	3.3	39	1.0	.00	.00
3	.00	.00	.00	.00	4.6	.00	.00	5.0	50	.65	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	12	39	.33	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	15	28	.00	.00	.00
6	.00	.00	.00	.00	2.7	.00	.00	21	30	.00	.00	.00
7	.00	.00	.00	.00	1.9	.00	.00	14	34	.00	.00	.00
8	.00	.00	.00	.00	141	.00	.00	9.9	31	.00	.00	.00
9	.00	.00	.00	.42	6.9	.00	.00	11	28	.00	.00	.00
10	.00	.00	.00	1.6	.00	.00	.00	19	27	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	23	20	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	25	25	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	22	28	.00	.00	.00
14	.00	.00	.00	.00	255	.00	.00	15	25	.00	.00	.00
15	.00	.00	.00	.00	92	.00	.00	14	26	.00	.00	.00
16	.00	.00	.00	.00	1.6	.00	.00	12	26	.00	.00	.00
17	.00	.00	.00	.00	7.2	.00	.00	9.9	26	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	8.9	23	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	11	21	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	10	19	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	12	15	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	18	17	.00	.00	.00
23	.00	.00	.00	.00	2.2	.00	.00	20	11	.00	.00	.00
24	.00	.00	.00	.00	35	.00	.00	26	11	.00	.00	.00
25	.00	.00	.00	.00	4.5	.00	.00	24	8.5	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	29	7.9	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	29	6.7	.00	.00	.00
28	.00	.00	.00	.00	.00	3.7	.00	29	5.4	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	35	3.7	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	40	3.6	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	43	---	.00	.00	---
TOTAL	0.00	0.00	0.00	2.02	554.60	3.70	0.00	567.7	662.8	4.18	0.00	0.00
MEAN	.000	.000	.000	.065	19.8	.12	.000	18.3	22.1	.13	.000	.000
MAX	.00	.00	.00	1.6	255	3.7	.00	43	50	2.2	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	1.7	3.6	.00	.00	.00
AC-FT	.00	.00	.00	4.0	1100	7.3	.00	1130	1310	8.3	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.002	.055	20.7	5.65	9.88	.35	1.96	2.01	.060	.45	.29
MAX	.000	.023	.45	202	35.3	93.3	3.81	18.3	22.1	.52	1.77	2.23
(WY)	1988	1997	1993	1993	1993	1995	1993	1998	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1988 - 1998

ANNUAL TOTAL	38.75	1795.00	
ANNUAL MEAN	.11	4.92	3.47
HIGHEST ANNUAL MEAN			20.4
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	25	Sep 25	1700
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00
INSTANTANEOUS PEAK FLOW			2090
INSTANTANEOUS PEAK STAGE			8.12
ANNUAL RUNOFF (AC-FT)	77	3560	2510
10 PERCENT EXCEEDS	.00	19	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA

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

DRAINAGE AREA.—588 mi².

PERIOD OF RECORD.—March 1989 to current year.

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

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 230 ft above sea level, from topographic map. Prior to Dec. 4, 1997, at datum 10.00 ft lower.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,060 ft³/s, Jan. 7, 1993, gage height, 5.93 ft, datum then in use, from rating curve extended above 1,460 ft³/s on basis of critical depth computations; maximum gage height, 8.09 ft (present datum), Feb. 14, 1998; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	.00	.00	.00	.00	.00	.12	.00	.00	.00
2	e.00	e.00	e.00	.00	.00	.00	.00	.00	.41	.00	.00	.00
3	e.00	e.00	e.00	.00	7.2	.00	.00	.00	1.0	.00	.00	.00
4	e.00	e.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
5	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	e.00	e.00	1.1	.00	3.3	.00	.00	.00	.00	.00	.00	.00
7	e.00	e.00	.00	.00	.27	.00	.00	.00	.00	.00	.00	.00
8	e.00	e.00	.00	.00	115	.00	.00	.00	.00	.00	.00	.00
9	e.00	e.00	.00	1.8	.67	.00	.00	.00	.00	.00	.00	.00
10	e.00	e.00	.00	2.8	.00	.00	.00	.00	.00	.00	.74	.00
11	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	e.00	e.00	.00	.00	123	.88	.00	.00	.00	.00	.00	.00
15	e.00	e.00	.00	.00	71	.00	.00	.00	.00	.00	.00	.00
16	e.00	e.00	.00	.00	.37	.00	.00	.00	.00	.00	.00	.00
17	e.00	e.00	.00	.00	3.8	.00	.00	.00	.00	.00	.00	.00
18	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	e.00	e.00	.00	.00	7.8	.00	.00	.00	.00	.00	.00	.00
25	e.00	e.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	e.00	e.00	.00	.00	.00	.01	.00	.07	.00	.00	.00	.00
27	e.00	e.00	.00	.00	.00	.00	.00	.60	.00	.00	.00	.00
28	e.00	e.00	.00	.00	.00	.76	.00	.92	.00	.00	.00	.00
29	e.00	e.00	.00	.00	---	.00	.00	.87	.00	.00	.00	.00
30	e.00	e.00	.00	.00	---	.00	.00	.06	.00	.00	.00	.00
31	e.00	---	.00	.00	---	.00	---	.52	---	.00	.00	---
TOTAL	0.00	0.00	1.10	4.60	332.48	1.65	0.00	3.04	1.53	0.00	0.74	0.00
MEAN	.000	.000	.035	.15	11.9	.053	.000	.098	.051	.000	.024	.000
MAX	.00	.00	1.1	2.8	123	.88	.00	.92	1.0	.00	.74	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	2.2	9.1	659	3.3	.00	6.0	3.0	.00	1.5	.00

e Estimated.

10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.004	.004	.036	36.5	8.20	8.37	.041	.038	.009	.005	.12	.20
MAX	.016	.021	.18	310	52.3	66.0	.21	.27	.051	.026	.78	1.30
(WY)	1993	1990	1993	1993	1993	1995	1993	1993	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1989 - 1998

ANNUAL TOTAL	13.86	345.14	
ANNUAL MEAN	.038	.95	4.48
HIGHEST ANNUAL MEAN			30.4
LOWEST ANNUAL MEAN			.002
HIGHEST DAILY MEAN	8.0 Sep 25	123 Feb 14	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		1100 Feb 14	9060 Jan 7 1993
INSTANTANEOUS PEAK STAGE		8.09 Feb 14	8.09 Feb 14 1998
ANNUAL RUNOFF (AC-FT)	27	685	3250
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

10259200 DEEP CREEK NEAR PALM DESERT, CA

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

DRAINAGE AREA.—30.6 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 except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,100 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)
Feb. 8	0930	86	3.16	Feb. 24	0615	32	2.36
Feb. 14	2030	787	4.69				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.02	.02	.23	.42	5.1	11	3.7	.82	.08	.00	.00
2	.05	.02	.02	.23	.43	4.5	9.2	3.5	.74	.08	.00	.00
3	.03	.03	.02	.24	.81	4.0	9.6	3.5	.71	.08	.00	.00
4	.02	.03	.02	.26	3.4	3.5	9.9	3.5	.74	.08	.01	.00
5	.03	.02	.02	.26	1.8	3.2	9.1	3.5	.68	.10	.01	.00
6	.02	.02	.04	.27	15	3.0	8.4	3.8	.62	.11	.03	.00
7	.02	.02	.05	.27	20	2.6	7.9	3.5	.60	1.4	.05	.00
8	.02	.02	.04	.29	40	2.2	7.0	3.1	.59	.27	.06	.00
9	.03	.02	.40	.31	16	1.9	6.6	2.9	.55	.15	.08	.00
10	.03	.02	.43	.61	8.0	1.8	6.9	2.6	.53	.09	.08	.00
11	.03	.02	.38	1.4	5.6	1.6	7.4	2.3	.50	.07	.06	.00
12	.02	.02	.36	.77	4.4	1.5	8.6	2.3	.47	.07	.06	.00
13	.03	.02	.34	.58	3.9	1.4	7.7	3.5	.47	.07	.05	.00
14	.03	.02	.32	.51	99	3.2	6.9	2.8	.43	.05	.05	.00
15	.02	.02	.30	.48	e56	4.2	6.1	2.7	.40	.04	.05	.00
16	.02	.02	.28	.47	e13	3.9	5.3	2.4	.35	.03	.05	.00
17	.03	.02	.27	.46	e12	4.1	4.7	2.1	.31	.03	.03	.00
18	.02	.02	.28	.45	e9.4	4.0	4.3	2.0	.29	.03	.02	.00
19	.02	.02	.26	.45	7.7	3.6	4.2	1.8	.27	.03	.00	.00
20	.02	.02	.26	.42	6.5	3.2	4.6	1.7	.25	.03	.00	.00
21	.02	.02	.26	.41	5.2	2.9	5.6	1.6	.22	.02	.00	.00
22	.02	.01	.26	.41	4.3	2.6	6.6	1.5	.20	.02	.00	.00
23	.02	.01	.25	.41	4.7	2.9	7.4	1.5	.18	.01	.00	.00
24	.02	.02	.25	.41	18	3.4	7.2	1.4	.15	.00	.00	.00
25	.01	.02	.24	.40	11	4.0	6.2	1.3	.14	.01	.00	.00
26	.02	.02	.23	.40	8.6	4.5	5.1	1.3	.12	.00	.00	.00
27	.02	.03	.23	.41	7.0	3.4	4.3	1.3	.11	.00	.00	.00
28	.01	.02	.21	.41	6.0	6.5	3.7	1.2	.10	.00	.00	.00
29	.00	.02	.23	.40	---	9.6	3.5	1.1	.08	.00	.00	.00
30	.02	.02	.23	.42	---	9.1	3.5	.99	.08	.00	.00	.00
31	.02	---	.23	.41	---	9.6	---	.89	---	.00	.00	---
TOTAL	0.73	0.61	6.73	13.45	388.16	121.0	198.5	71.28	11.70	2.95	0.69	0.00
MEAN	.024	.020	.22	.43	13.9	3.90	6.62	2.30	.39	.095	.022	.000
MAX	.06	.03	.43	1.4	99	9.6	11	3.8	.82	1.4	.08	.00
MIN	.00	.01	.02	.23	.42	1.4	3.5	.89	.08	.00	.00	.00
AC-FT	1.4	1.2	13	27	770	240	394	141	23	5.9	1.4	.00

e Estimated.

SALTON SEA BASIN

10259200 DEEP CREEK NEAR PALM DESERT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.24	.90	2.00	4.73	8.32	6.37	2.24	.89	.35	.82	1.03	1.33
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	88.83		815.80			
ANNUAL MEAN	.24		2.24		2.41	
HIGHEST ANNUAL MEAN					15.1	
LOWEST ANNUAL MEAN					.002	
HIGHEST DAILY MEAN	48	Jul 22	99	Feb 14	850	Sep 10 1976
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 29	.00	May 1 1962
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Jul 26	.00	May 1 1962
INSTANTANEOUS PEAK FLOW			787	Feb 14	7100	Sep 10 1976
INSTANTANEOUS PEAK STAGE			4.69	Feb 14	10.27	Aug 14 1984
ANNUAL RUNOFF (AC-FT)	176		1620		1750	
10 PERCENT EXCEEDS	.36		6.5		3.2	
50 PERCENT EXCEEDS	.02		.26		.06	
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)
Feb. 8	1515	329	7.91	Feb. 15	0200	836	8.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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	.22	.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	.03	.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	55	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	14	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.00	.17	.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	.22	.12	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	139	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	8.3	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.15	.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	.05	.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	218.62	0.12	0.00	0.00	0.00	0.00	0.17	0.00
MEAN	.000	.000	.000	.000	7.81	.004	.000	.000	.000	.000	.005	.000
MAX	.00	.00	.00	.00	139	.12	.00	.00	.00	.00	.17	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	434	.2	.00	.00	.00	.00	.3	.00

10259300 WHITEWATER RIVER AT INDIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.009	.084	2.45	22.7	14.1	4.96	.020	.011	.009	1.16	1.15	2.70
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1966 - 1998	
ANNUAL TOTAL	4.43		218.91			
ANNUAL MEAN	.012		.60		4.09	
HIGHEST ANNUAL MEAN					47.4	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	3.4	Sep 26	139	Feb 15	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			836	Feb 15	11400	Jan 25 1969
INSTANTANEOUS PEAK STAGE			8.28	Feb 15	14.41	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	8.8		434		2970	
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 through January and poor thereafter. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	51	56	60	87	75	80	72	73	57	71	71
2	81	52	67	65	81	80	65	83	64	55	79	71
3	81	75	59	58	84	76	64	72	67	61	71	83
4	69	61	56	57	102	80	66	66	74	64	65	112
5	64	49	56	60	86	73	78	71	66	65	62	121
6	71	45	59	75	80	83	83	76	59	63	53	122
7	56	45	65	81	82	76	79	79	59	61	53	103
8	53	46	62	96	82	76	74	75	60	61	50	92
9	55	61	60	83	163	77	79	74	59	61	57	100
10	50	60	54	96	150	77	83	79	71	64	71	92
11	50	61	59	93	84	64	91	76	64	90	60	77
12	62	62	61	86	69	65	75	69	56	74	68	76
13	59	68	54	82	73	70	74	81	59	78	66	75
14	62	74	56	74	e76	75	65	87	60	67	73	76
15	65	72	60	88	e85	86	66	94	60	59	79	80
16	66	54	56	77	---	73	68	85	56	68	68	85
17	65	54	64	68	e120	64	71	75	55	61	66	83
18	53	59	62	64	e82	56	69	70	51	61	61	91
19	57	57	64	67	75	52	60	63	51	80	59	83
20	59	57	63	59	73	61	73	65	43	79	58	86
21	51	51	68	63	66	63	70	70	48	74	61	93
22	54	53	73	64	67	54	85	68	55	70	47	99
23	59	56	60	70	75	47	87	62	60	76	49	90
24	59	65	61	66	76	55	91	62	50	76	71	65
25	58	64	57	67	73	69	85	65	49	71	65	62
26	59	54	52	63	82	66	78	55	52	75	52	66
27	57	51	54	71	82	66	79	53	69	77	61	65
28	50	52	54	85	82	64	67	64	55	78	64	60
29	47	61	55	86	---	62	69	70	52	71	62	60
30	43	54	63	84	---	57	69	58	56	73	67	64
31	47	---	57	80	---	70	---	78	---	71	67	---
TOTAL	1840	1724	1847	2288	---	2112	2243	2217	1753	2141	1956	2503
MEAN	59.4	57.5	59.6	73.8	---	68.1	74.8	71.5	58.4	69.1	63.1	83.4
MAX	81	75	73	96	---	86	91	94	74	90	79	122
MIN	43	45	52	57	---	47	60	53	43	55	47	60
AC-FT	3650	3420	3660	4540	---	4190	4450	4400	3480	4250	3880	4960

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
LOWEST ANNUAL MEAN	68.4
HIGHEST DAILY MEAN	2500
LOWEST DAILY MEAN	37
ANNUAL SEVEN-DAY MINIMUM	37
ANNUAL RUNOFF (AC-FT)	80380
10 PERCENT EXCEEDS	140
50 PERCENT EXCEEDS	108
90 PERCENT EXCEEDS	76

e Estimated.

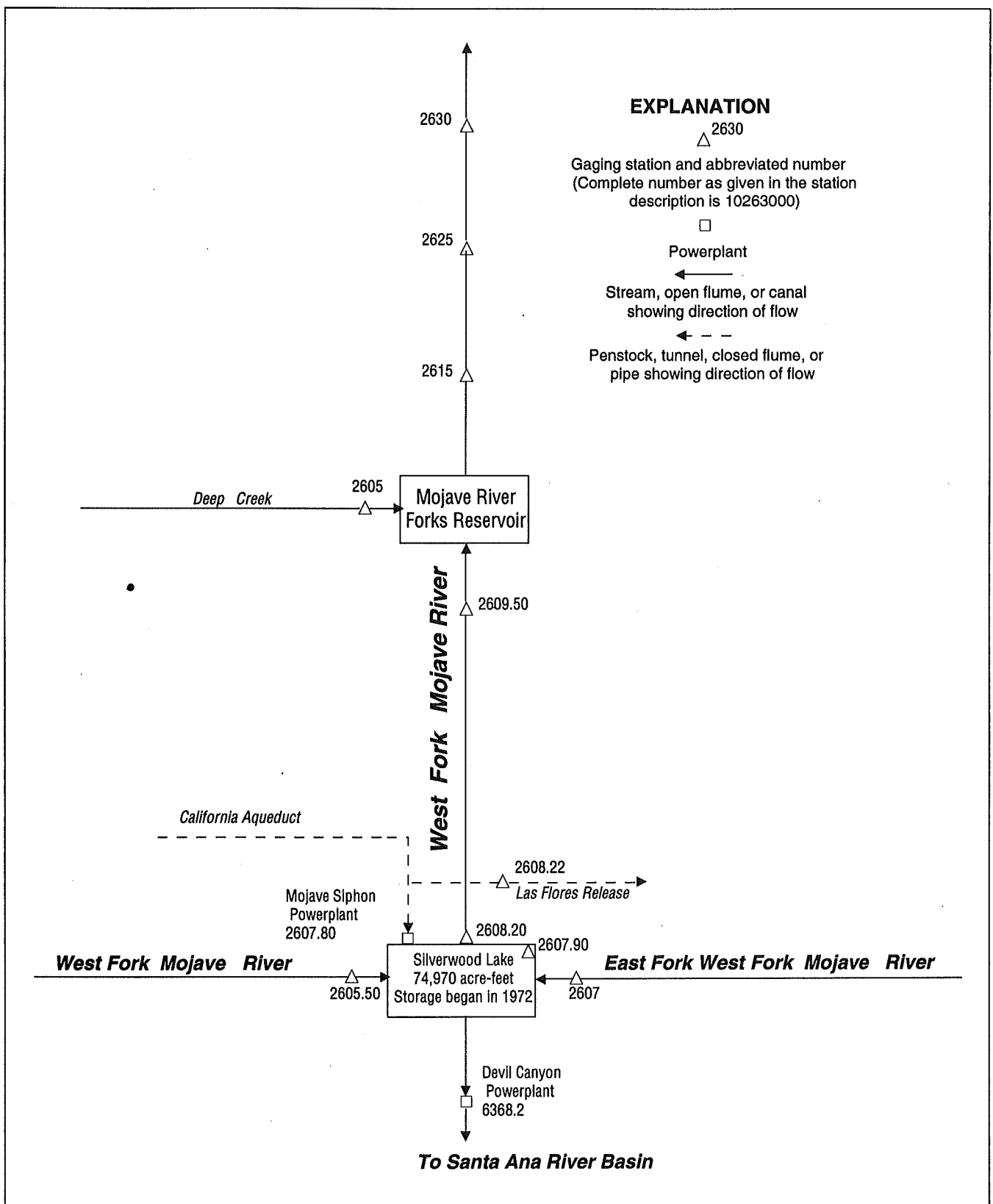


Figure 14. Diversions and storage in Mojave River Basin.

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 good. 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)
Jan. 10	0845	1,420	3.88	Mar. 25	1800	2,720	4.78
Feb. 8	0300	7,710	7.54	Apr. 23	0015	1,290	3.78
Feb. 15	0030	3,190	5.12	May 5	1915	3,750	5.49
Feb. 23	2,330	16,300	10.53	May 13	0030	1,840	4.19

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.8	13	9.8	21	253	278	336	132	35	11	15
2	2.0	3.7	13	9.8	19	240	252	289	128	34	11	14
3	1.8	3.6	12	9.8	32	249	289	324	125	32	9.9	12
4	1.8	3.6	11	11	82	240	360	325	120	31	9.1	12
5	1.8	3.7	9.7	13	54	214	313	1780	115	29	8.5	12
6	1.8	3.7	53	12	954	339	329	2020	111	28	8.1	12
7	2.2	3.8	147	11	1230	289	285	945	106	27	7.7	11
8	4.6	3.8	185	11	3390	174	206	351	102	27	7.5	11
9	6.5	3.8	66	11	486	167	205	322	100	26	7.4	10
10	4.1	3.9	36	522	199	150	239	291	95	25	7.7	9.1
11	3.6	4.3	24	143	137	160	309	296	92	23	9.5	8.4
12	3.5	9.3	18	75	111	178	375	484	91	22	13	8.1
13	3.7	6.7	15	57	97	178	289	1070	89	21	14	7.9
14	3.6	11	14	45	300	201	309	655	82	19	15	7.8
15	3.4	14	13	36	1190	182	319	577	79	19	13	7.6
16	3.3	9.5	12	33	229	209	257	418	76	19	11	7.5
17	3.3	7.8	11	36	156	185	183	397	75	18	10	7.5
18	3.2	6.9	11	32	117	222	193	355	71	16	9.4	7.2
19	3.1	6.3	11	31	100	226	239	321	68	16	8.8	7.0
20	3.1	6.2	10	44	102	222	330	283	64	16	8.5	6.9
21	3.1	6.0	11	31	87	218	482	255	59	17	8.1	7.1
22	3.1	6.0	11	26	500	222	660	236	55	18	7.8	7.3
23	3.2	6.0	10	22	5090	276	708	224	55	18	7.6	7.9
24	3.4	6.0	9.7	20	5030	326	473	212	54	17	7.4	8.0
25	3.4	5.9	9.4	19	1600	1060	351	208	52	16	7.1	7.7
26	3.5	7.3	9.0	18	830	942	292	209	49	14	7.2	7.4
27	3.5	50	8.7	16	498	487	279	188	46	14	7.2	7.8
28	3.6	24	9.1	15	326	916	289	175	43	13	7.1	8.1
29	3.6	16	9.2	15	---	460	304	240	40	12	6.6	8.1
30	3.7	13	9.5	33	---	365	321	211	37	11	7.4	8.1
31	3.8	---	9.7	26	---	344	---	141	---	11	8.7	---
TOTAL	100.5	259.6	791.0	1393.4	22967	9894	9718	14138	2411	644	282.3	271.5
MEAN	3.24	8.65	25.5	44.9	820	319	324	456	80.4	20.8	9.11	9.05
MAX	6.5	50	185	522	5090	1060	708	2020	132	35	15	15
MIN	1.8	3.6	8.7	9.8	19	150	183	141	37	11	6.6	6.9
AC-FT	199	515	1570	2760	45560	19620	19280	28040	4780	1280	560	539

MOJAVE RIVER BASIN

10260500 DEEP CREEK NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.23	19.6	56.6	136	216	220	146	66.3	18.0	5.79	3.25	3.64
MAX	42.0	606	843	2062	2028	1539	747	456	80.4	25.9	29.2	54.3
(WY)	1984	1966	1922	1993	1993	1978	1958	1998	1998	1969	1983	1976
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1905 - 1998

ANNUAL TOTAL	9449.71	62870.3	
ANNUAL MEAN	25.9	172	73.9
HIGHEST ANNUAL MEAN			411
LOWEST ANNUAL MEAN			3.06
HIGHEST DAILY MEAN	2480	Jan 26	5090
LOWEST DAILY MEAN	.54	Aug 14	1.8
ANNUAL SEVEN-DAY MINIMUM	.54	Aug 14	1.9
INSTANTANEOUS PEAK FLOW			16300
INSTANTANEOUS PEAK STAGE			10.53
ANNUAL RUNOFF (AC-FT)	18740		124700
10 PERCENT EXCEEDS	41		347
50 PERCENT EXCEEDS	6.0		22
90 PERCENT EXCEEDS	.75		3.8
			23.81
			53510
			144
			10
			1.0

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

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

DRAINAGE AREA.—3.22 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, 584 ft³/s, Feb. 23, 1998, gage height, 3.88 ft; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.14	.28	.92	17	14	5.8	8.8	3.2	.82	.29
2	.00	.00	.16	.27	.92	15	15	5.6	8.5	3.1	.77	.24
3	.00	.00	.16	.41	6.5	13	15	5.8	8.3	3	.73	.26
4	.00	.00	.16	.56	6	12	14	6.4	8.5	2.9	.7	.32
5	.00	.00	.17	.63	3.2	12	13	29	7.9	2.7	.67	.34
6	.00	.00	2	.50	19	23	13	50	7.4	2.6	.65	.29
7	.00	.00	1.9	.48	33	16	13	24	7.4	2.6	.63	.26
8	.00	.00	1.5	.48	43	14	12	17	7.6	2.5	.61	.24
9	.00	.00	.98	3.3	17	13	11	15	7.2	2.4	.56	.23
10	.00	.11	.76	12	9.7	12	11	14	6.7	2.3	.63	.23
11	.00	.09	.64	3.2	6.8	11	15	13	7	2.2	.58	.22
12	.00	.06	.57	2	5.3	11	15	27	6.9	1.9	.49	.21
13	.00	.07	.53	1.6	4.5	10	13	46	6.5	1.8	.55	.24
14	.00	.06	.48	1.3	8.8	11	12	32	6.1	1.8	.49	.18
15	.00	.05	.44	1.1	8.3	10	12	25	5.9	1.7	.44	.13
16	.00	.05	.43	1	6	8.8	11	22	5.9	1.6	.4	.13
17	.00	.05	.39	.93	7.7	8.1	10	20	5.6	1.5	.4	.13
18	.00	.04	.39	.86	6.4	7.5	9.3	18	5.2	1.5	.39	.13
19	.00	.04	.36	2.2	5.7	7	8.9	16	5	1.4	.37	.14
20	.00	.04	.35	1.5	7.3	6.4	8.5	15	4.8	1.4	.35	.18
21	.00	.04	.41	1.3	5.8	6.1	7.9	14	4.6	1.4	.32	.25
22	.00	.03	.35	1.2	19	5.7	7.5	13	4.6	1.4	.29	.28
23	.00	.03	.31	1.1	278	5.2	7.2	12	4.5	1.3	.25	.31
24	.00	.04	.31	1	117	5.3	7.2	12	4.4	1.2	.21	.32
25	.00	.04	.31	.92	43	17	7.4	12	4.2	1.1	.19	.35
26	.00	.11	.28	.87	30	13	7.2	12	4.1	1.1	.18	.37
27	.00	.08	.28	.82	24	16	7	11	3.9	1	.2	.41
28	.00	.07	.28	.78	20	32	6.5	10	3.8	.97	.17	.37
29	.00	.06	.28	1.1	---	20	6.4	10	3.6	.91	.15	.36
30	.00	.07	.28	1	---	15	6.1	9.7	3.4	.89	.13	.34
31	.00	---	.28	.98	---	14	---	9	---	.86	.23	---
TOTAL	0.00	1.23	15.88	45.67	742.84	387.1	316.1	531.3	178.3	56.23	13.55	7.75
MEAN	.000	.041	.51	1.47	26.5	12.5	10.5	17.1	5.94	1.81	.44	.26
MAX	.00	.11	2.0	12	278	32	15	50	8.8	3.2	.82	.41
MIN	.00	.00	.14	.27	.92	5.2	6.1	5.6	3.4	.86	.13	.13
AC-FT	.00	2.4	31	91	1470	768	627	1050	354	112	27	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.025	.12	1.77	4.97	13.6	6.98	4.57	6.17	2.12	.61	.15	.086
MAX	.065	.19	4.49	12.8	26.5	12.5	10.5	17.1	5.94	1.81	.44	.26
(WY) 1996	1997	1997	1997	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	.000	.041	.31	.66	5.40	2.03	1.03	.48	.13	.000	.000	.000
(WY) 1998	1998	1998	1996	1996	1997	1997	1997	1997	1997	1997	1996	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1996 - 1998			
ANNUAL TOTAL	676.70				2295.95							
ANNUAL MEAN	1.85				6.29				3.37			
HIGHEST ANNUAL MEAN									6.29			
LOWEST ANNUAL MEAN									1.63			
HIGHEST DAILY MEAN	78 Jan 26				278 Feb 23				278 Feb 23 1998			
LOWEST DAILY MEAN	.00 Jun 29				.00 Oct 1				.00 Jul 7 1996			
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 29				.00 Oct 1				.00 Jul 7 1996			
INSTANTANEOUS PEAK FLOW					584 Feb 23				584 Feb 23 1998			
INSTANTANEOUS PEAK STAGE					3.88 Feb 23				3.88 Feb 23 1998			
ANNUAL RUNOFF (AC-FT)	1340				4550				2440			
10 PERCENT EXCEEDS	4.9				15				8.9			
50 PERCENT EXCEEDS	.20				1.3				.39			
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, 1,440 ft³/s, Feb. 23, 1998, gage height, 6.92 ft; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.48	.56	4.4	37	51	22	25	9	2.2	.81
2	.00	.00	.35	.52	3.9	37	39	22	24	9.9	1.9	.53
3	.00	.00	.32	.69	23	33	40	23	24	9.2	1.9	.6
4	.00	.00	.28	1.1	24	30	38	35	24	8.2	1.7	.64
5	.00	.00	.28	1.4	15	29	35	131	23	7.6	1.7	.68
6	.00	.00	6.4	1.1	117	53	42	93	22	7.3	1.6	.6
7	.00	.00	4.5	.99	160	37	48	60	22	7	1.5	.52
8	.00	.00	4.1	.94	267	30	50	47	21	6.7	1.5	.48
9	.00	.00	1.8	6.6	74	27	49	41	21	6.5	1.5	.46
10	.00	.13	1.3	43	38	25	47	37	20	6.5	1.5	35
11	.00	.24	1.0	14	24	23	75	34	21	6	1.5	18
12	.00	.00	.91	8.8	16	21	106	116	22	5.7	1.3	5.5
13	.00	.40	.83	6.4	14	22	74	171	21	5.3	1.3	2.7
14	.00	.63	.81	4.9	40	28	64	107	19	4.8	1.3	1.6
15	.00	.16	.74	4.1	40	25	55	86	18	4.6	1.1	1
16	.00	.11	.73	3.5	25	23	48	74	18	4.3	1	.69
17	.00	.10	.67	3.0	25	21	42	61	17	4.3	1	.51
18	.00	.10	.65	2.7	21	20	39	52	16	4.1	.98	.43
19	.00	.11	.59	9.9	20	19	37	47	16	4.1	.86	.38
20	.00	.11	.56	7.0	24	18	35	43	15	4	.83	.38
21	.00	.11	.71	5.2	20	17	34	39	14	3.9	.79	.49
22	.00	.11	.66	4.2	89	15	33	37	14	4	.75	.51
23	.00	.11	.56	3.6	577	14	31	35	13	4	.71	.5
24	.00	.11	.56	3.2	461	14	29	33	12	3.7	.65	.52
25	.00	.12	.56	2.9	112	63	28	32	12	3.5	.63	.52
26	.00	2.4	.56	2.7	60	45	27	33	11	3.3	.54	.52
27	.00	1.7	.54	2.5	43	54	25	30	11	3	.47	.54
28	.00	.51	.56	2.2	37	198	24	28	10	2.7	.42	.54
29	.00	.38	.56	5.6	---	88	23	27	9.5	2.6	.4	.52
30	.00	.36	.56	6.0	---	60	23	27	9	2.5	.38	.53
31	.00	---	.56	4.7	---	53	---	26	---	2.4	.44	---
TOTAL	0.00	8.00	33.69	164.00	2374.3	1179	1291	1649	524.5	160.7	34.35	76.70
MEAN	.000	.27	1.09	5.29	84.8	38.0	43.0	53.2	17.5	5.18	1.11	2.56
MAX	.00	2.4	6.4	43	577	198	106	171	25	9.9	2.2	35
MIN	.00	.00	.28	.52	3.9	14	23	22	9.0	2.4	.38	.38
AC-FT	.00	16	67	325	4710	2340	2560	3270	1040	319	68	152

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.065	.91	3.69	12.0	40.3	20.7	16.3	18.4	6.02	1.73	.37	.85
MAX	.13	2.10	9.36	29.5	84.8	38.0	43.0	53.2	17.5	5.18	1.11	2.56
(WY)	1996	1997	1997	1997	1998	1998	1998	1998	1998	1998	1998	1998
MIN	.000	.27	.61	1.27	10.6	4.76	1.89	.65	.17	.001	.000	.000
(WY)	1998	1998	1996	1996	1997	1997	1997	1997	1997	1997	1996	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1996 - 1998			
ANNUAL TOTAL	1482.44				7495.24							
ANNUAL MEAN	4.06				20.5							
HIGHEST ANNUAL MEAN									9.94			
LOWEST ANNUAL MEAN									20.5			
HIGHEST DAILY MEAN	231				577				577			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					1440				1440			
INSTANTANEOUS PEAK STAGE					6.92				6.92			
ANNUAL RUNOFF (AC-FT)	2940				14870				7200			
10 PERCENT EXCEEDS	10				47				25			
50 PERCENT EXCEEDS	.36				4.3				.78			
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 (AT 2400 HOURS) FOR PERIOD OF RECORD.—Maximum contents, 74,521 acre-ft, Jan. 18, 1998, elevation, 3,354.54 ft; minimum, 38,006 acre-ft, Mar. 22, 1996, elevation, 3,310.24 ft.

EXTREMES (AT 2400 HOURS) FOR CURRENT YEAR.—Maximum contents, 74,521 acre-ft, Jan. 18, elevation, 3,354.54 ft; minimum, 62,525 acre-ft, Oct. 23, elevation, 3,341.62.

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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71435	67328	69173	69229	69998	69716	64344	67743	70308	72417	66091	69575
2	71558	66731	69033	69295	69932	69547	64740	68039	70809	72197	66210	69510
3	70841	66648	68996	69407	70073	69510	65228	68279	70761	72035	65863	69369
4	71273	67015	69369	69585	69876	69407	65727	68744	70761	72044	64939	68791
5	72360	67438	69444	69566	69641	69276	66027	70214	70799	72044	64165	69463
6	72878	68567	70111	69725	70355	69332	66374	71292	71188	71939	63878	69988
7	73080	70054	71064	69866	70951	69248	66529	72293	71150	71634	63655	70337
8	73032	70525	71501	69998	71606	69136	67033	72178	71150	71492	65400	70676
9	72188	70922	71606	70856	71435	68912	67254	72283	71121	71197	67070	70932
10	71397	71387	71235	71435	71121	68679	67595	72197	71026	70790	66795	71710
11	70412	71730	70979	71720	70771	68521	68382	72025	70922	70676	66474	71873
12	69557	71264	70544	71663	70440	68094	68912	73157	70686	70799	66447	72063
13	69313	71730	70799	71758	70271	67752	69257	73060	70705	70629	65618	72983
14	68958	71273	70365	72035	70337	67447	68707	72762	71045	69866	64336	72283
15	68614	71045	70487	72293	70337	66997	68753	72657	71378	69575	66082	72063
16	68391	70828	70525	72955	70035	66648	68735	72676	71311	69519	68354	72073
17	67190	70884	70469	73803	69904	66264	68958	72561	71321	69585	69819	72226
18	65754	70970	70393	74521	69566	65854	68996	72475	71710	69229	69810	71235
19	64434	70487	69894	74512	69220	65373	69173	72475	71720	68949	69885	71682
20	62969	70487	70469	74452	68977	65084	69443	72140	72054	68847	69304	71901
21	62836	70582	69988	73929	68670	64668	69416	71749	72235	68837	68874	71777
22	62605	70035	70535	73803	68865	64228	69463	71150	72016	68595	69566	72083
23	62525	69491	70525	73504	71444	64219	69425	70591	71653	68354	69014	72216
24	62791	69397	70469	73003	71425	64228	69173	70346	71930	67540	69145	71787
25	63932	69388	70412	72571	70799	64497	68493	70139	71787	68029	69164	71977
26	66292	68893	69894	72054	70327	64075	67927	69847	71644	67780	68977	72350
27	67715	68707	69894	71634	70148	64542	67715	69744	72159	67374	69070	72130
28	67687	68781	69285	71121	69960	65029	67429	69491	72274	67263	69201	71444
29	67374	68791	69266	70790	---	65264	67576	69248	72360	66804	69913	71387
30	67457	68558	69285	70535	---	64740	67780	69201	72417	66319	70082	71264
31	67346	---	69229	70318	---	64300	---	70242	---	66118	69379	---
MAX	73080	71730	71606	74521	71606	69716	69463	73157	72417	72417	70082	72983
MIN	62525	66648	68996	69229	68670	64075	64344	67743	70308	66118	63655	68791
a	3346.96	3348.27	3348.99	3350.15	3349.77	3343.61	3347.43	3350.07	3352.36	3345.62	3349.15	3351.15
b	-4165	+1212	+671	+1089	-358	-5660	+3480	+2462	+2175	-6299	+3261	+1885

CAL YR 1997 b +54252

WTR YR 1998 b +247

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

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

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

DRAINAGE AREA.—34.0 mi².

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

GAGE.—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 recording 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 10263682). 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	27	162	40	41	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	65	40	34	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	51	40	41	.00	.00	.00
4	.00	.00	.00	.00	20	.00	51	40	41	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	51	40	40	.00	.00	.00
6	.00	.00	.00	.00	37	.00	95	179	42	.00	.00	.00
7	.00	.00	.00	.00	92	.00	152	280	42	.00	.00	.00
8	.00	.00	.00	.00	174	.00	80	247	42	24	.00	.00
9	.00	.00	.00	.00	128	.00	74	123	41	33	.00	.00
10	.00	.00	.00	.00	151	.00	100	102	42	14	.00	.00
11	.00	.00	.00	.00	86	.00	100	100	40	.00	.00	.00
12	.00	.00	.00	20	16	67	100	145	41	.00	.00	.00
13	.00	.00	.00	18	.00	99	185	434	40	.00	.00	.00
14	.00	.00	.00	.00	.00	99	245	359	40	.00	.00	.00
15	.00	.00	.00	.00	.00	99	125	232	42	.00	.00	.00
16	.00	.00	.00	.00	.00	99	100	152	42	.00	.00	.00
17	.00	.00	.00	.00	.00	99	100	140	41	.00	.00	.00
18	.00	.00	.00	.00	20	99	100	101	40	.00	.00	.00
19	.00	.00	.00	.00	49	99	100	101	41	.00	.00	.00
20	.00	.00	.00	.00	50	90	90	101	38	.00	.00	.00
21	.00	.00	.00	.00	18	76	75	101	36	.00	.00	.00
22	.00	.00	.00	.00	31	75	60	101	20	.00	.00	.00
23	.00	.00	.00	.00	867	74	74	101	.00	.00	.00	.00
24	.00	.00	.00	.00	935	76	60	101	.00	.00	.00	.00
25	.00	.00	.00	.00	533	119	40	69	.00	.00	.00	.00
26	.00	.00	.00	.00	287	163	40	77	.00	.00	.00	.00
27	.00	.00	.00	.00	82	98	40	100	.00	.00	.00	.00
28	.00	.00	.00	.00	57	210	40	100	.00	.00	.00	.00
29	.00	.00	.00	.00	---	308	40	72	.00	.00	.00	.00
30	.00	.00	.00	.00	---	277	40	42	.00	.00	.00	.00
31	.00	---	.00	.00	---	228	---	42	---	.00	.00	---
TOTAL	0.00	0.00	0.00	38.00	3633.00	2581.00	2635	3902	867.00	71.00	0.00	0.00
MEAN	.0000	.0000	.0000	1.23	130	83.3	87.8	126	28.9	2.29	.0000	.0000
MAX	.00	.00	.00	20	935	308	245	434	42	33	.00	.00
MIN	.00	.00	.00	.00	.00	.00	40	40	.00	.00	.00	.00
AC-FT	.00	.00	.00	75	7210	5120	5230	7740	1720	141	.00	.00
a	26100	16690	14190	12050	367	10710	53430	44930	39800	39620	53780	38620
b	26110	16690	14190	12930	8650	18040	50820	42830	42390	46080	50740	37530
c	187	13	144	799	236	119	1350	1350	1320	1400	452	997

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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.060	.89	12.5	24.8	110	153	37.6	36.0	6.46	.88	2.50	.21
MAX	.19	4.03	50.8	73.9	403	739	87.8	126	28.9	2.65	14.6	1.18
(WY)	1983	1983	1983	1997	1983	1983	1998	1998	1998	1997	1997	1983
MIN	.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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1981 - 1998

ANNUAL TOTAL	4453.00		13727.00									
ANNUAL MEAN	12.2		37.6							31.7		
HIGHEST ANNUAL MEAN										118		1983
LOWEST ANNUAL MEAN										1.14		1981
HIGHEST DAILY MEAN	651	Jan 26		935	Feb 24					1990	Mar 3	1983
LOWEST DAILY MEAN	.00	Jan 1		.00	Oct 1					.00	Oct 1	1980
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 17		.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)	8830			27230						22980		
TOTAL FLOW (AC-FT) a	359200			350300								
TOTAL FLOW (AC-FT) b	437100			367000								
TOTAL FLOW (AC-FT) c	5030			8370								
10 PERCENT EXCEEDS	49			100						74		
50 PERCENT EXCEEDS	.00			.00						.02		
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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	11	123	229	2.4	49	11	4.6	6.6
2	.00	.00	.00	.00	11	53	73	2.1	44	12	5.2	6.5
3	.00	.00	.00	.00	27	42	43	2.8	61	11	6.3	6.6
4	.00	.00	.00	.02	40	34	39	3.2	63	10	3.9	e7.4
5	.00	.00	.00	1.0	24	28	34	94	62	10	.00	e7.0
6	.00	.00	23	.30	330	50	65	e408	61	9.7	.00	e6.8
7	.00	.00	18	1.1	405	28	140	e310	e51	9.4	.00	e6.4
8	.00	.00	13	2.5	1000	20	70	e270	e51	19	.00	e5.8
9	.00	.00	3.9	4.0	294	15	38	e240	e50	37	.00	e5.2
10	.00	.00	.00	61	219	12	67	e160	e50	27	.00	e4.5
11	.00	.00	.00	13	134	9.8	83	e155	50	10	.00	e3.2
12	.00	.00	.01	16	35	37	125	e140	50	9.7	.00	e2.8
13	.00	.00	.37	37	11	82	167	e610	52	11	.00	e2.4
14	.00	.00	.63	22	41	100	275	e490	51	8.7	.00	e2.2
15	.00	.00	.75	22	38	87	119	e395	53	8.4	.00	e2.0
16	.00	.00	.63	21	19	73	67	211	54	8.1	.00	e2.0
17	.00	.00	1.1	18	16	64	57	159	54	8.0	.00	e1.8
18	.00	.00	.29	18	16	56	55	129	53	8.1	.00	e1.8
19	.00	.00	.14	23	40	49	53	93	53	7.8	.00	e1.6
20	.00	.00	1.0	22	48	41	44	86	52	6.5	.00	e1.6
21	.00	.00	3.8	22	33	22	27	86	48	6.5	.00	e1.4
22	.00	.00	3.7	22	106	19	19	91	39	8.3	.00	e1.4
23	.00	.00	3.5	22	2510	17	20	122	14	8.2	.00	e1.2
24	.00	.00	3.1	22	2590	15	15	123	12	7.0	.00	e1.2
25	.00	.00	.42	22	1230	214	5.9	74	12	6.6	.00	e1.0
26	.00	.00	.18	21	818	225	5.4	63	12	6.4	.00	e1.0
27	.00	.00	.00	11	290	65	4.8	117	13	6.0	.31	e.98
28	.00	.00	.00	9.8	169	411	4.3	126	11	5.5	2.7	e.98
29	.00	.00	.00	11	---	493	3.6	107	11	5.3	4.2	e.96
30	.00	.00	.00	12	---	383	3.1	58	11	5.2	5.3	e.96
31	.00	---	.00	15	---	279	---	46	---	4.6	6.3	---
TOTAL	0.00	0.00	77.52	471.72	10505	3146.8	1951.1	4973.5	1247	312.0	38.81	95.28
MEAN	.000	.000	2.50	15.2	375	102	65.0	160	41.6	10.1	1.25	3.18
MAX	.00	.00	23	61	2590	493	275	610	63	37	6.3	7.4
MIN	.00	.00	.00	.00	11	9.8	3.1	2.1	11	4.6	.00	.96
AC-FT	.00	.00	154	936	20840	6240	3870	9860	2470	619	77	189

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.80	5.15	15.0	77.5	168	160	54.9	35.6	15.0	1.53	.60	.72
MAX	41.8	50.4	68.6	810	883	948	253	296	169	10.1	11.4	8.29
(WY)	1994	1993	1984	1993	1993	1983	1980	1978	1978	1998	1997	1993
MIN	.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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1975 - 1998

ANNUAL TOTAL	4988.10	22818.73	
ANNUAL MEAN	13.7	62.5	44.2
HIGHEST ANNUAL MEAN			183
LOWEST ANNUAL MEAN			.94
HIGHEST DAILY MEAN	951	2590	4900
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		7740	11300
INSTANTANEOUS PEAK STAGE		16.26	23.20
ANNUAL RUNOFF (AC-FT)	9890	45260	31990
10 PERCENT EXCEEDS	34	125	69
50 PERCENT EXCEEDS	.12	8.1	.00
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. See schematic diagram of Mojave River Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	5.4	17	15	16	e170	398	209	77	e11	3.9	20
2	2.1	5.5	16	15	16	e130	272	177	59	e10	4.2	13
3	2.2	5.7	16	15	76	103	213	167	40	e10	3.6	16
4	2.1	5.8	13	15	24	80	238	199	38	e9.5	2.2	14
5	2.0	5.7	10	14	17	68	266	225	35	e9.2	2.5	13
6	2.1	5.8	e387	15	34	76	295	209	27	e8.9	3.8	12
7	2.1	6.0	77	14	67	128	319	574	31	e8.5	5.4	11
8	2.1	5.9	36	14	1590	75	273	514	28	e8.3	7.3	12
9	2.2	6.4	18	15	383	37	260	367	21	e7.8	7.5	11
10	2.2	6.7	16	17	93	36	255	245	18	e7.8	12	9.5
11	2.3	6.6	16	16	46	39	250	222	16	e7.5	6.7	8.2
12	2.4	7.2	20	16	33	33	368	290	16	e7.2	6.1	9.4
13	2.6	7.9	20	16	28	38	348	820	e16	e7.0	6.4	9.6
14	2.7	9.5	20	16	25	84	412	825	16	e6.7	5.9	9.7
15	2.8	9.5	20	17	82	107	424	832	13	e6.6	5.1	7.0
16	2.9	8.7	16	17	81	95	284	477	e16	5.7	5.0	5.8
17	3.0	9.2	13	16	29	103	206	414	14	4.9	4.7	5.2
18	3.2	8.8	17	17	24	129	155	316	16	4.0	4.6	5.6
19	3.4	9.0	18	17	26	158	181	267	11	3.3	4.4	5.1
20	3.5	16	15	17	26	160	213	246	e11	3.8	4.4	6.3
21	4.0	17	16	17	20	150	295	228	11	e5.5	3.7	7.2
22	4.2	16	16	17	27	143	382	235	10	3.3	3.4	8.7
23	4.0	14	17	18	e1220	177	451	237	e12	5.2	4.0	8.5
24	4.1	15	16	17	e8000	209	362	211	e13	9.5	3.4	8.2
25	4.2	13	16	16	e1240	242	267	218	e14	4.6	3.5	8.2
26	4.3	17	15	17	e650	980	183	149	15	3.0	2.6	7.8
27	4.4	17	17	16	e350	623	172	168	e15	3.4	3.4	7.6
28	4.6	16	17	16	e230	570	161	158	15	4.4	4.4	7.6
29	4.9	16	16	16	---	535	184	185	e13	4.8	5.2	8.6
30	5.0	17	15	15	---	531	200	171	e11	3.3	5.7	8.7
31	5.2	---	14	16	---	455	---	114	---	3.3	95	---
TOTAL	98.9	309.3	956	495	14453	6464	8287	9669	648	198.0	240.0	284.5
MEAN	3.19	10.3	30.8	16.0	516	209	276	312	21.6	6.39	7.74	9.48
MAX	5.2	17	387	18	8000	980	451	832	77	11	95	20
MIN	2.0	5.4	10	14	16	33	155	114	10	3.0	2.2	5.1
AC-FT	196	613	1900	982	28670	12820	16440	19180	1290	393	476	564

e Estimated.

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.2	35.8	51.9	99.8	215	227	129	49.5	21.9	15.0	15.2	17.1
MAX	58.2	222	376	1487	2334	2229	1015	312	157	32.5	29.3	41.7
(WY)	1977	1966	1967	1993	1993	1938	1958	1998	1978	1969	1969	1976
MIN	3.19	10.3	13.5	16.0	18.2	12.6	11.6	6.78	3.64	1.90	1.60	1.63
(WY)	1998	1998	1995	1998	1991	1990	1990	1997	1997	1997	1997	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1931 - 1998	
ANNUAL TOTAL	4556.5		42102.7			
ANNUAL MEAN	12.5		115		74.4	
HIGHEST ANNUAL MEAN					402	
LOWEST ANNUAL MEAN					11.3	
HIGHEST DAILY MEAN	485	Jan 27	8000	Feb 24	21000	Feb 25 1969
LOWEST DAILY MEAN	1.4	Aug 20	2.0	Oct 5	.00	Sep 21 1995
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 18	2.1	Oct 1	.37	Sep 20 1995
INSTANTANEOUS PEAK FLOW			24000	Feb 24	70600	Mar 2 1938
INSTANTANEOUS PEAK STAGE			9.25	Feb 24	23.70	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	9040		83510		53900	
10 PERCENT EXCEEDS	19		277		55	
50 PERCENT EXCEEDS	7.2		16		27	
90 PERCENT EXCEEDS	1.6		3.8		11	

MOJAVE RIVER BASIN

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e6.0	.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	e77	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	290	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	e.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	e20	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	e20	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	e.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	4100	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	661	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	113	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	e13	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	e.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	4887.00	0.00	6.00	407.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.175	.000	.20	13.1	.000	.000	.000	.000
MAX	.00	.00	.00	.00	4100	.00	6.0	290	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	9690	.00	12	807	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.001	.36	3.46	25.5	98.4	114	41.8	5.52	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1931 - 1998

ANNUAL TOTAL	5300.00		
ANNUAL MEAN	14.5	23.7	
HIGHEST ANNUAL MEAN		202	1969
LOWEST ANNUAL MEAN		.000	1931
HIGHEST DAILY MEAN	4100	Feb 24	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	15200	Feb 24	64300 Mar 3 1938
INSTANTANEOUS PEAK STAGE	3.16	Feb 24	8.60 Mar 3 1938
ANNUAL RUNOFF (AC-FT)	10510		17170
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

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)
Feb. 25	1245	743	4.24	Sept. 4	1515	642	4.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.67	.74	.87	1.0	1.2	.89	.30	.17	.03	.00	.06
2	.39	.68	.73	.87	1.0	1.1	.69	.32	.15	.03	.00	.06
3	.36	.66	.67	.84	1.6	1.1	.68	.33	.14	.02	.00	.07
4	.38	.63	.65	.84	2.0	.98	.65	.33	.17	.01	.00	149
5	.35	.62	.74	.81	.96	.96	.66	.38	.20	.01	.00	10
6	.34	.63	.88	.80	1.0	.88	.66	.47	.17	.00	.00	.38
7	.31	.64	.89	.80	1.1	.77	.61	.41	.15	.00	.00	.28
8	.34	.63	.80	.84	1.3	.85	.59	.39	.18	.00	.00	.24
9	.33	.63	.72	.85	.87	.87	.60	.34	.18	.00	.00	.21
10	.34	.64	.70	1.0	.74	.88	.61	.34	.18	.00	.00	.19
11	.36	.63	.70	.95	.76	.89	.57	.35	.19	.00	4.7	.18
12	.39	.64	.70	.95	.74	.81	.55	.36	.17	.00	.20	.17
13	.36	.74	.70	.92	.76	.85	.50	.49	.19	.00	.04	.20
14	.39	.72	.64	.87	.95	1.2	.53	.52	.21	.00	.02	.20
15	.42	.64	.66	.91	1.0	1.0	.55	.44	.18	.00	.03	.19
16	.44	.64	.72	.88	.74	.90	.52	.39	.14	.00	.61	.16
17	.44	.64	.76	.87	1.5	.89	.50	.33	.12	.00	.07	.13
18	.44	.64	.77	.81	.86	.82	.51	.30	.16	.00	.04	.11
19	.48	.64	.76	.80	.71	.85	.50	.27	.14	.00	.04	.13
20	.51	.62	.74	.78	.98	.88	.47	.26	.11	.00	.05	.13
21	.53	.62	.81	.79	.64	.89	.44	.25	.09	1.7	.05	.14
22	.52	.64	.81	.80	.71	.79	.43	.25	.08	.13	.04	.17
23	.53	.63	.72	.84	.63	.75	.39	.25	.09	.08	.03	.18
24	.57	.64	.67	.84	118	.73	.34	.25	.09	.06	.02	.19
25	.59	.64	.67	.85	162	.85	.43	.25	.09	.03	.02	.20
26	.58	.67	.65	.89	30	1.0	.40	.23	.08	.01	.01	.17
27	.63	.71	.67	.94	2.0	.88	.36	.25	.08	.00	.00	.18
28	.66	.70	.70	.93	1.3	.91	.36	.26	.07	.00	.00	.20
29	.68	.74	.72	.96	---	.80	.35	.24	.05	.00	.00	.19
30	.63	.74	.74	.96	---	.73	.33	.22	.03	.00	.00	.20
31	.63	---	.82	.96	---	.75	---	.20	---	.00	.02	---
TOTAL	14.36	19.71	22.65	27.02	335.85	27.76	15.67	9.97	4.05	2.11	5.99	163.91
MEAN	.46	.66	.73	.87	12.0	.90	.52	.32	.14	.068	.19	5.46
MAX	.68	.74	.89	1.0	162	1.2	.89	.52	.21	1.7	4.7	149
MIN	.31	.62	.64	.78	.63	.73	.33	.20	.03	.00	.00	.06
AC-FT	28	39	45	54	666	55	31	20	8.0	4.2	12	325

MOJAVE RIVER BASIN

10263000 MOJAVE RIVER AT AFTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.77	.96	2.80	13.9	45.2	18.2	2.92	.68	.41	.62	1.38	.90
MAX	2.97	2.29	63.9	347	876	415	56.4	1.80	1.58	3.81	18.0	5.46
(WY)	1993	1981	1966	1969	1993	1978	1969	1931	1981	1997	1984	1998
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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1930 - 1998		
ANNUAL TOTAL	312.42			649.05					
ANNUAL MEAN	.86			1.78			7.17		
HIGHEST ANNUAL MEAN							100		
LOWEST ANNUAL MEAN							.22		
HIGHEST DAILY MEAN	105			162			10000		
LOWEST DAILY MEAN	.00			.00			.00		
ANNUAL SEVEN-DAY MINIMUM	.00			.00			.00		
INSTANTANEOUS PEAK FLOW				743			18000		
ANNUAL RUNOFF (AC-FT)	620			1290			5190		
10 PERCENT EXCEEDS	1.1			.93			1.6		
50 PERCENT EXCEEDS	.62			.52			.79		
90 PERCENT EXCEEDS	.00			.01			.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; maximum gage height, 7.70 ft Jan. 25, 1969; minimum daily, 0.70 ft³/s, Nov. 5, 1951.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	0500	169	2.88	Feb. 23	1930	1,660	5.07
Feb. 7	2300	162	2.87	Mar. 25	1300	207	3.07
Feb. 14	1830	77	2.54	May 5	1615	320	3.35

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.7	2.3	4.8	6.6	57	56	66	87	45	26	16
2	1.7	1.6	2.4	4.9	6.7	54	54	65	88	44	24	16
3	1.9	1.7	2.4	5.0	14	52	54	71	88	42	23	15
4	1.7	1.7	2.6	5.0	11	51	52	78	84	43	24	15
5	1.6	1.7	3.3	5.1	9.5	50	51	202	84	42	23	15
6	1.6	1.8	74	4.9	46	50	50	188	86	41	23	15
7	1.8	1.8	29	4.8	68	45	48	134	83	39	24	15
8	1.7	1.8	17	4.8	93	42	46	113	82	39	24	15
9	1.7	1.8	11	6.0	53	40	46	105	81	38	22	14
10	1.7	2.0	8.4	9.0	38	38	48	96	80	36	21	14
11	1.8	2.0	7.2	8.5	31	37	50	95	81	36	26	13
12	1.8	2.0	6.6	7.4	27	36	49	105	79	36	27	13
13	1.8	2.1	6.1	6.9	25	38	48	100	75	35	27	13
14	1.7	2.0	5.6	6.6	45	45	47	95	74	34	24	13
15	1.7	2.0	5.4	6.4	60	43	45	100	76	32	22	12
16	1.6	2.0	5.2	6.3	47	45	43	105	78	32	22	12
17	1.6	2.0	5.1	6.5	41	46	42	103	78	30	21	12
18	1.6	2.1	5.1	6.5	33	48	42	98	73	29	21	12
19	1.7	2.1	5.1	6.6	30	48	43	92	70	27	20	12
20	1.7	2.1	5.1	6.4	27	47	48	91	68	28	20	11
21	1.7	2.1	5.0	6.4	24	46	55	87	66	29	e19	11
22	1.7	2.1	4.8	6.3	48	49	65	85	64	29	e18	11
23	1.6	2.1	4.8	6.3	730	58	67	86	62	28	18	11
24	1.7	2.1	4.8	6.0	341	63	61	87	59	28	17	11
25	1.7	2.1	4.8	5.9	136	115	57	91	56	e27	17	11
26	1.7	2.5	4.8	5.9	90	109	55	94	51	e26	17	11
27	1.7	2.3	4.8	5.9	71	94	54	89	49	e25	16	11
28	1.7	2.3	4.8	5.9	61	84	55	88	47	e24	16	11
29	1.7	2.3	4.8	6.2	---	71	58	90	47	23	16	11
30	1.7	2.3	4.8	6.3	---	63	63	88	46	24	16	11
31	1.7	---	4.8	6.5	---	59	---	88	---	26	16	---
TOTAL	52.4	60.2	261.9	190.0	2212.8	1723	1552	3075	2142	1017	650	383
MEAN	1.69	2.01	8.45	6.13	79.0	55.6	51.7	99.2	71.4	32.8	21.0	12.8
MAX	1.9	2.5	74	9.0	730	115	67	202	88	45	27	16
MIN	1.4	1.6	2.3	4.8	6.6	36	42	65	46	23	16	11
AC-FT	104	119	519	377	4390	3420	3080	6100	4250	2020	1290	760

e Estimated.

ANTELOPE VALLEY

10263500 BIG ROCK CREEK NEAR VALYERMO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.12	7.41	10.5	18.8	31.7	38.6	31.4	28.5	19.4	11.2	8.02	6.36
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1923 - 1998

ANNUAL TOTAL	2386.2	13319.3	
ANNUAL MEAN	6.54	36.5	18.1
HIGHEST ANNUAL MEAN			90.9
LOWEST ANNUAL MEAN			1.91
HIGHEST DAILY MEAN	74	Dec 6	730
LOWEST DAILY MEAN	1.4	Oct 1	1.4
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 25	1.7
INSTANTANEOUS PEAK FLOW			1660
INSTANTANEOUS PEAK STAGE			5.07
ANNUAL RUNOFF (AC-FT)	4730	26420	13090
10 PERCENT EXCEEDS	12	86	38
50 PERCENT EXCEEDS	3.9	24	7.5
90 PERCENT EXCEEDS	1.7	1.8	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, except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 66 ft³/s, Mar. 14, 1998, gage-height, 2.95 ft; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
2	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
3	.00	e.00	e.00	e.00	e2.5	e.00	e.00	e.00	.00	.00	.00	.00
4	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
5	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
6	.00	e.00	e8.0	e.00	e2.0	e.00	e.00	e.00	.00	.00	.00	.00
7	.00	e.00	e.00	e.00	e2.0	e.00	e.00	e.00	.00	.00	.00	.00
8	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
9	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
10	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
11	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
12	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
13	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
14	.00	e.00	e.00	e.00	e.00	e20	e.00	e.00	.00	.00	.00	.00
15	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
16	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
17	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
18	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
19	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
20	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
21	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
22	.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
23	.00	e.00	e.00	e.00	e10	e.00	e.00	e.00	.00	.00	.00	.00
24	.00	e.00	e.00	e.00	e3.0	e.00	e.00	e.00	.00	.00	.00	.00
25	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
26	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
27	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
28	e.00	e.00	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00
29	e.00	e.00	e.00	e.00	---	e.00	e.00	e.00	.00	.00	.00	.00
30	e.00	e.00	e.00	e.00	---	e.00	e.00	e.00	.00	.00	.00	.00
31	e.00	---	e.00	e.00	---	e.00	---	e.00	---	.00	.00	---
TOTAL	0.00	0.00	8.00	0.00	19.50	20.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.26	.000	.70	.65	.000	.000	.000	.000	.000	.000
MAX	.00	.00	8.0	.00	10	20	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	16	.00	39	40	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	MEAN	.000	.070	.13	.000	.35	.32	.000	.000	.000	.000	.000
MAX	.000	.14	.26	.000	.70	.65	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1998	1997	1998	1998	1997	1996	1996	1996	1996	1996
MIN	.000	.000	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1998	1997	1997	1997	1997	1997	1996	1996	1996	1996	1996

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1996 - 1998

ANNUAL TOTAL	8.00	47.50	
ANNUAL MEAN	.022	.13	.071
HIGHEST ANNUAL MEAN			.13
LOWEST ANNUAL MEAN			.012
HIGHEST DAILY MEAN	8.0 Dec 6	20 Mar 14	20 Mar 14 1998
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Apr 11 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Apr 11 1996
INSTANTANEOUS PEAK FLOW		66 Mar 14	66 Mar 14 1998
INSTANTANEOUS PEAK STAGE		2.95 Mar 14	2.95 Mar 14 1998
ANNUAL RUNOFF (AC-FT)	16	94	52
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

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, 118 ft³/s, Feb. 23, 1998, gage-height 2.81 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
2	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
3	.00	e.00	e.00	e.00	e5.0	e.00	.00	.00	.00	.00	.00	.00
4	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.13
5	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
6	.00	e.00	e10	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
7	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
8	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
9	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
10	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
11	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
12	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
13	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
14	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
15	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
16	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
17	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
18	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
19	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
20	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
21	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
22	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
23	.00	e.00	e.00	e.00	e45	e.00	.00	.00	.00	.00	.00	.00
24	.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
25	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
26	e.00	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00
27	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
28	e.00	e.00	e.00	e.00	e.00	.00	.00	.00	.00	.00	.00	.00
29	e.00	e.00	e.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
30	e.00	e.00	e.00	e.00	---	.00	.00	.00	.00	.00	.00	.00
31	e.00	---	e.00	e.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	10.00	0.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
MEAN	.000	.000	.32	.000	1.79	.000	.000	.000	.000	.000	.000	.004
MAX	.00	.00	10	.00	45	.00	.00	.00	.00	.00	.00	.13
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	20	.00	99	.00	.00	.00	.00	.00	.00	.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

	1996	1997	1998	1996	1997	1998	1996	1997	1998	1996	1997	1998
MEAN	.001	.025	.20	.007	.89	.000	.000	.000	.000	.000	.000	.095
MAX	.003	.050	.32	.014	1.79	.000	.000	.000	.000	.000	.000	.28
(WY)	1997	1997	1998	1997	1998	1997	1997	1997	1996	1996	1996	1997
MIN	.000	.000	.069	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1998	1998	1997	1998	1997	1997	1997	1997	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1996 - 1998
ANNUAL TOTAL	18.87	60.13	
ANNUAL MEAN	.052	.16	.10
HIGHEST ANNUAL MEAN			.16 1998
LOWEST ANNUAL MEAN			.035 1997
HIGHEST DAILY MEAN	10 Dec 6	45 Feb 23	45 Feb 23 1998
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 May 10 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 May 10 1996
INSTANTANEOUS PEAK FLOW		118 Feb 23	118 Feb 23 1998
INSTANTANEOUS PEAK STAGE		2.81 Feb 23	2.81 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	37	119	72
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

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., and 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, 2.39 in., Feb. 23, 1998; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 2.39 in., Feb.23; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.04	.00	.01	.00	.00	.00	.00	.00
2	.00	.00	.01	.00	.06	.00	.00	.00	.00	.00	.00	.13
3	.00	.00	.00	.00	1.11	.00	.05	.00	.00	.00	.00	.00
4	.00	.00	.00	.17	.00	.00	.00	.04	.00	.00	.00	.76
5	.00	.00	.36	.00	.00	.06	.00	.54	.00	.00	.00	.00
6	.00	.00	.64	.00	.79	.00	.00	.03	.00	.00	.00	.00
7	.00	.00	.00	.00	.80	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.21	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.47	.00	.21	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.11	.00
12	.00	.00	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00
13	.00	.14	.00	.00	.00	.14	.08	.04	.00	.00	.00	.00
14	.00	.00	.00	.00	.10	.48	.01	.00	.00	.00	.00	.00
15	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.08	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.02	.26	.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	.70	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	2.39	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.93	.00	.00	.00	.00	.00	.00
26	.00	.15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.19	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.20	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.17	.00	.00	---	.00	.00	.00	.00	.00	.04	.00
31	.00	---	.00	.00	---	.32	---	.00	---	.00	.00	---
TOTAL	0.00	0.93	1.01	0.83	6.45	2.19	0.15	1.00	0.00	0.00	0.15	0.89

WTR YR 1998 TOTAL 13.60

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.—Maximum discharge 1.5 ft³/s, Feb. 23, 1998, gage-height, 0.65. No flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Maximum discharge 1.5 ft³/s, Feb.23, gage-height, 0.65. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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	.00	.00	e.00	e.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
6	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
23	.00	.00	.00	.00	.35	.00	.00	.00	.00	e.00	e.00	e.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	e.00	e.00	e.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	e.00	e.00	e.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	e.00	e.00	e.00
31	.00	---	.00	.00	---	.00	---	.00	---	e.00	e.00	---
TOTAL	0.00	0.00	0.03	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.001	.000	.013	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.03	.00	.35	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.06	.00	.7	.00	.00	.00	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.000	.006	.000	.000	.000	.000	.000	.000	.000
MAX	.000	.000	.001	.000	.013	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1998	1997	1998	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 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1996 - 1998
ANNUAL TOTAL	0.03	0.38	
ANNUAL MEAN	.000	.001	.001
HIGHEST ANNUAL MEAN			.001 1998
LOWEST ANNUAL MEAN			.000 1997
HIGHEST DAILY MEAN	.03 Dec 6	.35 Feb 23	.35 Feb 23 1998
LOWEST DAILY MEAN	.00 Jan 1	.00 Oct 1	.00 Mar 16 1996
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Mar 16 1996
INSTANTANEOUS PEAK FLOW		1.5 Feb 23	1.5 Feb 23 1998
INSTANTANEOUS PEAK STAGE		.65 Feb 23	.65 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	.06	.8	.4
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

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, 2.23 in., Feb. 23, 1998; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 2.23 in., Feb. 23; no rainfall for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	1.03	.00	.04	.00	.01	.00	.00	.00
4	.00	.00	.00	.04	.00	.00	.01	.02	.00	.00	.00	.78
5	.00	.00	.19	.00	.00	.09	.00	.53	.00	.00	.00	.16
6	.04	.00	.94	.00	.71	.00	.00	.00	.29	.00	.00	.00
7	.00	.00	.01	.00	.65	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.16	.00	.00	.00	.00	.00	.00	.00	.00
10	.02	.44	.03	.16	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.50	.00	.00	.00	.00	.00	.00	.00	.28	.00
12	.00	.00	.00	.00	.00	.00	.00	.35	.00	.00	.00	.00
13	.00	.04	.00	.00	.00	.06	.08	.03	.00	.00	.00	.00
14	.00	.00	.01	.00	.13	.44	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00	.00	.00
17	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.06	.08	.21	.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	.02	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.01	.00	.47	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	2.23	.00	.18	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.65	.00	.00	.00	.00	.01	.00
26	.00	.21	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00	.00	.00
28	.00	.08	.00	.00	.00	.12	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.15	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.15	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.21	---	.00	---	---	.01	---
TOTAL	0.06	0.92	1.75	0.59	5.68	1.65	0.32	0.94	0.30	---	0.30	0.94

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.

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 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 1997 TO SEPTEMBER 1998

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	.18	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04
5	.00	.00	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00
6	.00	.00	.22	.00	.15	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.25	.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	.01	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.39	.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	.01	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	e2.5	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.52	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.04	.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	---	.03	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.22	0.00	3.61	0.46	0.00	0.03	0.00	0.00	0.00	0.04
MEAN	.000	.000	.007	.000	.13	.015	.000	.001	.000	.000	.000	.001
MAX	.00	.00	.22	.00	2.5	.39	.00	.02	.00	.00	.00	.04
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.4	.00	7.2	.9	.00	.06	.00	.00	.00	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.005	.007	.023	.006	.002	.000	.000	.000	.000	.001
MAX	.003	.000	.028	.052	.13	.029	.018	.004	.001	.000	.002	.010
(WY)	1993	1989	1993	1993	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1989 - 1998

ANNUAL TOTAL	0.52	4.36	
ANNUAL MEAN	.001	.012	.004
HIGHEST ANNUAL MEAN			.012 1998
LOWEST ANNUAL MEAN			.000 1990
HIGHEST DAILY MEAN	.30 Sep 25	2.5 Feb 23	2.5 Feb 23 1998
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		7.5 Feb 23	11 Apr 14 1989
INSTANTANEOUS PEAK STAGE		4.56 Feb 23	4.82 Apr 14 1989
ANNUAL RUNOFF (AC-FT)	1.0	8.6	2.8
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

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)
Mar. 24	2145	83	1.62	July 11	0630	242	3.12

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	50	53	51	51	51	56	65	58	213	146	86
2	54	50	51	54	52	50	55	67	63	210	139	86
3	54	50	50	53	49	50	55	67	80	207	130	87
4	53	50	50	52	51	50	55	68	92	207	122	91
5	53	49	51	51	53	50	55	67	94	203	117	94
6	53	50	51	51	52	50	55	65	88	197	118	96
7	53	50	52	51	51	49	55	64	97	189	119	94
8	53	50	48	51	50	50	55	67	97	178	120	93
9	53	50	50	51	50	50	57	68	101	187	121	93
10	53	50	49	52	51	49	60	67	113	222	118	92
11	54	51	49	52	51	49	58	64	123	238	112	90
12	54	50	48	52	50	49	56	64	136	226	108	88
13	54	50	49	53	51	49	55	63	142	209	114	86
14	54	50	49	53	52	50	55	62	133	186	114	84
15	54	49	50	54	50	52	54	61	128	175	110	83
16	54	49	50	57	51	53	53	62	130	164	108	83
17	54	50	50	61	52	53	55	61	150	160	107	84
18	53	50	50	58	52	54	58	60	156	167	112	82
19	53	50	50	51	52	53	59	61	151	182	102	81
20	53	50	50	54	52	55	58	62	161	192	99	80
21	53	50	50	53	50	57	59	62	169	199	98	79
22	52	50	50	53	50	60	60	61	179	204	94	78
23	52	51	49	53	51	74	61	58	191	197	94	78
24	52	51	49	52	50	74	59	58	180	180	93	77
25	52	51	50	52	50	70	58	58	177	172	91	77
26	52	59	50	52	50	65	57	59	186	162	90	76
27	51	55	49	51	50	64	57	59	191	147	88	77
28	51	53	50	50	50	60	58	58	185	133	88	76
29	51	53	50	51	---	57	60	59	182	123	87	78
30	51	53	50	50	---	56	63	58	183	130	86	78
31	50	---	50	52	---	56	---	58	---	146	86	---
TOTAL	1638	1524	1547	1631	1424	1709	1711	1933	4116	5705	3331	2527
MEAN	52.8	50.8	49.9	52.6	50.9	55.1	57.0	62.4	137	184	107	84.2
MAX	55	59	53	61	53	74	63	68	191	238	146	96
MIN	50	49	48	50	49	49	53	58	58	123	86	76
AC-FT	3250	3020	3070	3240	2820	3390	3390	3830	8160	11320	6610	5010

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

MEAN	43.9	43.0	40.9	45.5	42.0	43.9	47.9	67.7	98.9	94.8	66.6	54.8
MAX	67.6	57.9	57.7	94.7	58.2	55.2	60.4	113	159	214	135	92.7
(WY)	1996	1997	1996	1997	1997	1997	1996	1996	1995	1995	1995	1995
MIN	31.8	32.4	29.6	31.9	32.7	35.0	35.4	38.4	44.5	38.4	35.6	32.6
(WY)	1995	1995	1993	1993	1993	1992	1992	1991	1992	1990	1994	1994

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1990 - 1998	
ANNUAL TOTAL	25932		28796			
ANNUAL MEAN	71.0		78.9		57.6	
HIGHEST ANNUAL MEAN					79.1	
LOWEST ANNUAL MEAN					37.5	
HIGHEST DAILY MEAN	309	Jan 3	238	Jul 11	309	Jan 3 1997
LOWEST DAILY MEAN	48	Dec 8	48	Dec 8	29	Nov 23 1992
ANNUAL SEVEN-DAY MINIMUM	49	Dec 8	49	Dec 8	29	Dec 8 1992
INSTANTANEOUS PEAK FLOW			242	Jul 11	433	Jan 2 1997
INSTANTANEOUS PEAK STAGE			3.12	Jul 11	4.38	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	51440		57120		41700	
10 PERCENT EXCEEDS	112		160		101	
50 PERCENT EXCEEDS	59		56		45	
90 PERCENT EXCEEDS	50		50		33	

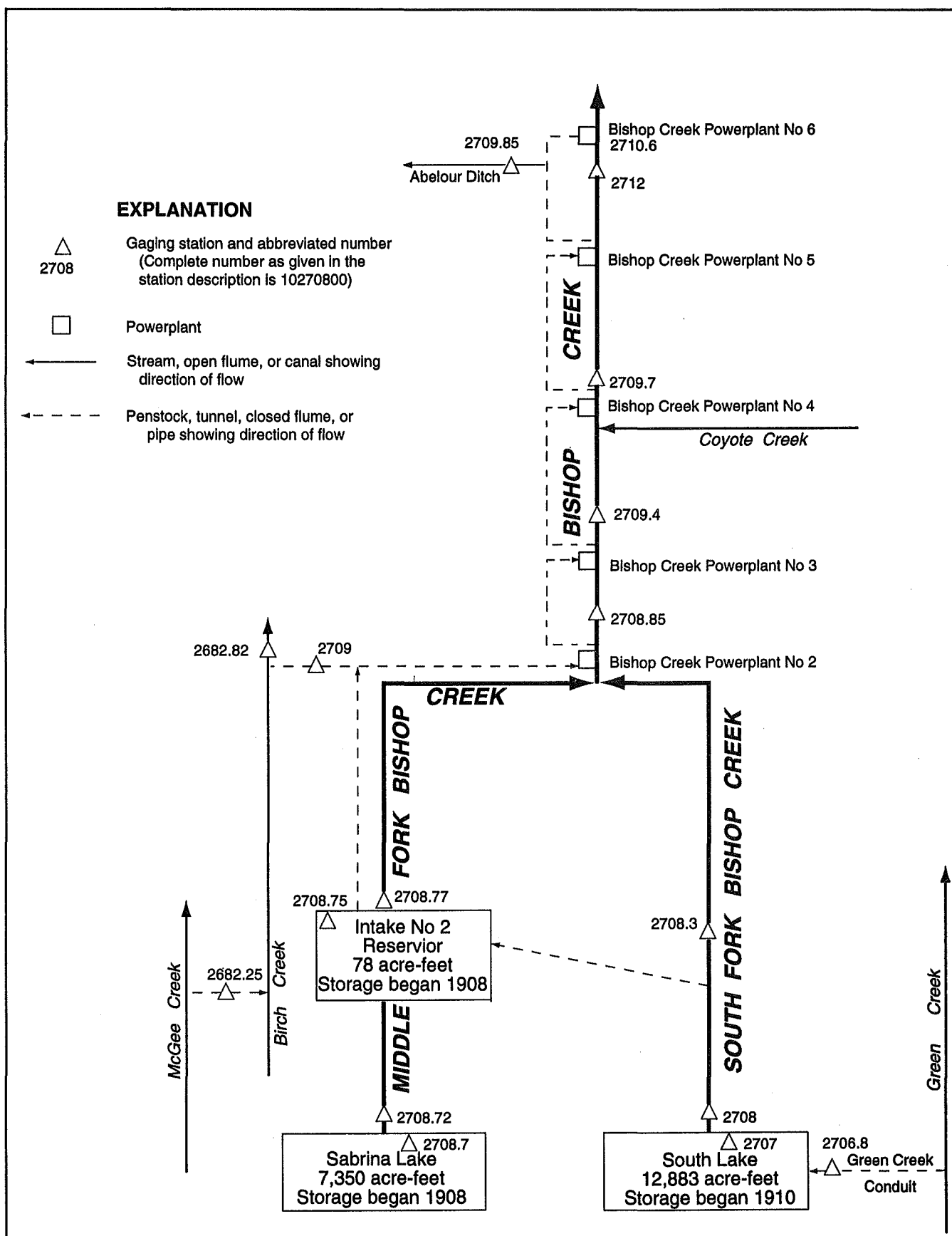


Figure 15. Diversions and storage in Bishop Creek Basin.

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	.51	---	---	---	---	---	---	---	12	11	9.7
2	5.9	.51	---	---	---	---	---	---	---	12	10	9.7
3	5.4	.26	---	---	---	---	---	---	---	12	10	10
4	5.0	---	---	---	---	---	---	---	---	12	10	10
5	4.5	---	---	---	---	---	---	---	---	12	10	11
6	4.1	---	---	---	---	---	---	---	---	12	11	11
7	3.2	---	---	---	---	---	---	---	---	12	12	12
8	2.0	---	---	---	---	---	---	---	---	12	13	12
9	1.7	---	---	---	---	---	---	---	---	13	12	11
10	1.7	---	---	---	---	---	---	---	---	14	11	11
11	1.6	---	---	---	---	---	---	---	---	14	10	10
12	1.5	---	---	---	---	---	---	---	---	14	9.8	9.9
13	1.4	---	---	---	---	---	---	---	---	14	9.9	9.6
14	1.4	---	---	---	---	---	---	---	---	14	10	9.3
15	1.3	---	---	---	---	---	---	---	---	14	9.9	9.0
16	1.2	---	---	---	---	---	---	---	---	14	9.7	8.7
17	1.2	---	---	---	---	---	---	---	---	14	9.3	8.4
18	1.1	---	---	---	---	---	---	---	---	14	9.1	8.0
19	1.0	---	---	---	---	---	---	---	---	14	8.9	7.7
20	.96	---	---	---	---	---	---	---	---	14	11	7.4
21	1.0	---	---	---	---	---	---	---	---	15	12	7.1
22	.95	---	---	---	---	---	---	---	---	15	12	6.7
23	.86	---	---	---	---	---	---	---	---	15	11	6.4
24	.80	---	---	---	---	---	---	---	---	15	11	6.1
25	1.2	---	---	---	---	---	---	---	---	15	11	5.7
26	.66	---	---	---	---	---	---	---	---	15	10	5.3
27	.64	---	---	---	---	---	---	---	---	15	10	4.9
28	.62	---	---	---	---	---	---	---	---	14	9.9	4.6
29	.63	---	---	---	---	---	---	---	---	13	9.8	4.1
30	.59	---	---	---	---	---	---	---	6.0	13	9.6	3.1
31	.55	---	---	---	---	---	---	---	---	12	9.6	---
TOTAL	60.76	---	---	---	---	---	---	---	---	420	323.5	249.4
MEAN	1.96	---	---	---	---	---	---	---	---	13.5	10.4	8.31
MAX	6.1	---	---	---	---	---	---	---	---	15	13	12
MIN	.55	---	---	---	---	---	---	---	---	12	8.9	3.1
AC-FT	121	---	---	---	---	---	---	---	---	833	642	495

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	e.42	.37	.43	.40	.38	.40	.41	.36	---	---	.43
2	.78	e.42	.39	.44	.41	.37	.40	.41	.36	---	---	.42
3	.52	e.42	.39	.41	.40	.38	.39	.40	.36	---	---	.42
4	.41	.43	.39	.40	.39	.38	.42	.40	.36	---	---	.42
5	.43	.45	.40	.43	.38	.36	.42	.40	.36	---	---	.44
6	.45	.46	.40	.42	.38	.37	.42	.40	.36	---	---	.45
7	.48	.44	.40	.42	.40	.38	.42	.40	.36	---	---	.56
8	.51	.44	.40	.43	.41	.38	.42	.42	.36	---	---	.68
9	.56	.44	.40	.42	.40	.38	.42	.41	.36	---	---	1.2
10	.51	.42	.40	.41	.40	.38	.42	.40	.36	---	---	2.3
11	.46	.41	.40	.41	.40	.38	.41	.40	.36	---	---	1.8
12	.58	.40	.41	.40	.40	.38	.41	.40	.36	---	---	1.8
13	.51	.41	.42	.40	.39	.38	.41	.38	.36	---	---	1.5
14	.43	.42	.42	.39	.38	.36	.41	.39	.38	---	---	1.3
15	.45	.41	.42	.40	.43	.38	.41	.39	.39	---	---	1.2
16	.46	.40	.42	.40	.40	.38	.41	.38	.38	---	---	.92
17	.44	.40	.41	.42	.39	.38	.41	.39	.38	---	---	.45
18	.42	.40	.40	.43	.38	.38	.40	.39	.38	---	---	.51
19	.42	.41	.40	.43	.38	.38	.41	.39	.38	---	---	.48
20	.41	.38	.42	.41	.38	.38	.41	.39	.38	---	.86	.45
21	.41	.38	.41	.41	.38	.38	.41	.38	.39	---	.62	.46
22	.41	.38	.40	.43	.38	.39	.40	.39	.45	---	.58	.47
23	---	.38	.42	.41	.38	.40	.39	.38	.49	---	.58	.46
24	---	.38	.41	.40	.38	.40	.40	.38	.76	---	.57	.46
25	---	.38	.41	.40	.38	.38	.40	.38	---	---	.56	.47
26	2.4	.38	.42	.42	.38	.38	.41	.35	---	---	.53	.65
27	2.4	.38	.42	.40	.38	.36	.42	.35	---	---	.50	.64
28	1.5	.40	.42	.39	.38	.39	.43	.35	---	---	.44	.42
29	e.42	.38	.42	.40	---	.38	.44	.36	---	---	.47	.43
30	e.42	.36	.43	.41	---	.38	.42	.36	---	---	.46	.43
31	e.42	---	.42	.40	---	.38	---	.36	---	---	.44	---
TOTAL	---	12.18	12.64	12.77	10.94	11.76	12.34	11.99	---	---	---	22.62
MEAN	---	.41	.41	.41	.39	.38	.41	.39	---	---	---	.75
MAX	---	.46	.43	.44	.43	.40	.44	.42	---	---	---	2.3
MIN	---	.36	.37	.39	.38	.36	.39	.35	---	---	---	.42
AC-FT	---	24	25	25	22	23	24	24	---	---	---	45

e Estimated.

10270680 GREEN CREEK CONDUIT OUTLET NEAR BISHOP, CA

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

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

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

REMARKS.—Records not computed for the winter months. Flow limited by size of diversion pipe from Green Creek. Water is used for power development downstream from South lake. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.29	---	---	---	---	---	---	---	6.3	3.6	2.3
2	.46	.28	---	---	---	---	---	---	---	6.2	3.4	2.3
3	.47	.23	---	---	---	---	---	---	---	6.3	3.3	2.3
4	.47	.09	---	---	---	---	---	---	---	6.3	3.3	2.6
5	.47	---	---	---	---	---	---	---	---	6.2	3.3	3.3
6	.37	---	---	---	---	---	---	---	---	6.1	3.3	3.4
7	.39	---	---	---	---	---	---	---	---	6.1	3.3	3.1
8	.37	---	---	---	---	---	---	---	---	6.1	3.4	2.9
9	.32	---	---	---	---	---	---	---	---	6.4	3.3	2.7
10	.34	---	---	---	---	---	---	---	---	6.5	3.1	2.6
11	.40	---	---	---	---	---	---	---	---	6.2	3.1	2.5
12	.45	---	---	---	---	---	---	---	---	6.2	3.0	2.3
13	.47	---	---	---	---	---	---	---	---	6.4	3.0	2.2
14	.47	---	---	---	---	---	---	---	---	6.2	3.0	2.1
15	.43	---	---	---	---	---	---	---	---	5.9	3.1	2.0
16	.41	---	---	---	---	---	---	---	---	5.9	3.3	2.0
17	.37	---	---	---	---	---	---	---	---	6.0	3.1	1.9
18	.37	---	---	---	---	---	---	---	---	6.1	3.0	1.8
19	.33	---	---	---	---	---	---	---	---	6.1	2.8	1.7
20	.31	---	---	---	---	---	---	---	---	5.9	2.6	1.6
21	.32	---	---	---	---	---	---	---	---	5.9	2.5	1.6
22	.31	---	---	---	---	---	---	---	---	5.9	2.3	1.6
23	.32	---	---	---	---	---	---	---	---	6.0	2.2	1.6
24	.32	---	---	---	---	---	---	---	---	5.9	2.1	1.5
25	.30	---	---	---	---	---	---	---	---	5.3	2.0	1.5
26	.29	---	---	---	---	---	---	---	---	4.8	2.1	1.4
27	.28	---	---	---	---	---	---	---	---	4.5	2.1	1.4
28	.27	---	---	---	---	---	---	---	---	4.3	2.1	1.4
29	.27	---	---	---	---	---	---	---	---	4.2	2.0	1.4
30	.26	---	---	---	---	---	---	---	2.5	4.1	2.1	1.4
31	.29	---	---	---	---	---	---	---	---	3.8	2.2	---
TOTAL	11.38	---	---	---	---	---	---	---	---	178.1	87.0	62.4
MEAN	.37	---	---	---	---	---	---	---	---	5.75	2.81	2.08
MAX	.48	---	---	---	---	---	---	---	---	6.5	3.6	3.4
MIN	.26	---	---	---	---	---	---	---	---	3.8	2.0	1.4
AC-FT	23	---	---	---	---	---	---	---	---	353	173	124

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, 13,002 acre-ft, Aug. 8, elevation, 9,751.00 ft; minimum, 860 acre-ft, Apr. 27, elevation, 9,637.67 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12011	9985	7958	6395	4842	3816	2113	e915	1399	6513	12527	12876
2	11979	9914	7915	6337	4817	3769	2047	926	1473	6806	12556	12886
3	11949	9826	7858	6279	4776	3724	1970	939	1546	7105	12613	12857
4	11910	9755	7797	6222	4732	3679	1899	954	1598	7367	12673	12891
5	11865	9685	7760	6166	4697	3633	e1822	e964	1660	7609	12739	12905
6	11793	9609	7712	6123	4667	3590	e1754	e975	1729	7844	12857	12908
7	11747	9537	7666	6072	4640	3554	e1680	e986	1818	8081	12959	12888
8	11684	9463	7619	6024	4608	3513	e1607	e997	1879	8393	13002	12864
9	11611	9395	7568	5968	4582	3470	e1541	e1008	1964	8668	12999	12838
10	11523	9321	7522	5917	4551	3430	e1476	e1019	2061	8963	12974	12806
11	11443	9252	7476	5869	4509	3393	e1399	e1030	2107	9193	12959	12742
12	11407	9187	7431	5816	4467	3351	e1330	1052	2204	9400	12967	12687
13	11352	9115	7382	5766	4434	3309	e1289	1060	2256	9610	12964	12618
14	11298	9044	7332	5719	4390	3265	e1261	1067	2320	9798	12960	12542
15	11245	8969	7280	5675	4348	3227	e1227	1072	2436	9993	12955	12489
16	11171	8913	7235	5627	4315	3183	e1198	1072	2531	10219	12959	12482
17	11110	8846	7185	5577	4270	3141	e1159	1078	2623	10468	12945	12469
18	11052	8775	7124	5530	4233	3095	e1126	1083	2718	10765	12934	12448
19	11001	8713	7070	5472	4194	3055	e1093	1090	2819	11034	12921	12429
20	10980	8643	7021	5427	4156	2995	e1055	1100	2914	11298	12903	12405
21	10958	8578	6959	5384	4115	2919	e1027	1107	3003	11579	12883	12383
22	10772	8515	6907	5337	4076	2849	e989	1121	3500	11843	12864	12361
23	10661	8447	6861	5289	4046	2772	e951	e1140	3972	12097	12826	12322
24	10586	8381	6797	5237	4010	2704	892	e1168	4363	12265	12824	12294
25	10528	8318	6745	5191	3975	2639	898	e1190	4738	12323	12850	12270
26	10468	8269	6700	5136	3936	2574	872	e1215	5117	12344	12858	12226
27	10393	8209	6655	5087	3899	2487	860	e1241	5430	12344	12853	12204
28	10316	8151	6636	5038	3854	2405	865	1262	5692	12373	12846	12172
29	10186	8085	6636	4980	---	2333	875	1280	5967	12422	12841	12141
30	10113	8010	6503	4936	---	2263	e902	1309	6240	12467	12855	12118
31	10057	---	6452	4884	---	2189	---	1343	---	12498	12865	---
MAX	12011	9985	7958	6395	4842	3816	2113	1343	6240	12498	13002	12908
MIN	10057	8010	6452	4884	3854	2189	860	915	1399	6513	12527	12118
a	9733.26	9719.70	9707.23	9692.54	9681.59	9660.17	9646.44	9705.33	9748.08	9750.21	9745.85	
b	-2010	-2047	-1558	-1568	-1030	-1665	-1287	+441	+4897	+6258	+367	-747
CAL YR 1997	MAX 13007	MIN 1089	b -2470									
WTR YR 1998	MAX 13002	MIN 860	b +51									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA

LOCATION.—Lat 37°10'38", long 118°33'44", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank near weir on Weir Lake, 0.3 mi downstream from South Lake, and 15.7 mi southwest of Bishop.

DRAINAGE AREA.—13.4 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	40	36	34	33	31	47	15	16	22	69	45
2	35	43	33	35	33	31	47	15	17	23	69	45
3	34	48	34	35	33	30	47	15	18	23	67	45
4	33	43	34	35	33	30	46	15	18	23	66	58
5	33	41	34	35	33	31	46	15	18	23	59	72
6	33	41	35	35	33	31	45	15	18	23	55	75
7	33	41	35	35	33	31	45	15	19	23	64	73
8	42	41	36	35	33	30	44	15	19	23	88	68
9	46	41	39	35	33	30	44	15	19	26	95	67
10	47	41	38	35	33	30	43	15	19	36	93	67
11	46	41	37	35	33	29	43	15	20	43	85	66
12	39	41	37	35	32	29	42	15	20	43	83	66
13	39	41	36	34	32	29	42	15	20	47	85	66
14	41	41	35	34	33	29	36	15	21	48	83	66
15	41	41	36	34	33	29	32	15	23	44	80	53
16	41	41	36	34	33	29	31	15	22	38	80	34
17	40	41	35	34	33	29	30	15	19	38	76	34
18	38	41	35	34	33	29	30	15	18	38	71	33
19	31	41	35	34	32	28	29	15	18	39	65	33
20	15	41	35	34	32	36	28	15	18	39	59	33
21	23	41	35	34	32	42	28	15	19	44	56	33
22	103	41	35	34	32	42	28	15	20	54	55	33
23	61	40	35	34	32	42	28	15	23	72	55	33
24	40	40	35	33	32	42	28	15	23	97	37	33
25	40	40	35	33	32	41	25	16	24	114	27	33
26	40	40	35	33	32	43	22	16	21	117	40	33
27	40	40	35	33	31	48	18	16	21	109	45	33
28	49	40	35	33	31	48	15	16	21	93	45	33
29	70	40	35	33	---	47	15	16	22	85	45	33
30	47	40	35	33	---	47	15	16	22	82	45	33
31	35	---	34	33	---	48	---	16	---	73	45	---
TOTAL	1289	1232	1095	1057	910	1091	1019	472	596	1602	1987	1429
MEAN	41.6	41.1	35.3	34.1	32.5	35.2	34.0	15.2	19.9	51.7	64.1	47.6
MAX	103	48	39	35	33	48	47	16	24	117	95	75
MIN	15	40	33	33	31	28	15	15	16	22	27	33
AC-FT	2560	2440	2170	2100	1800	2160	2020	936	1180	3180	3940	2830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	MEAN	25.1	20.5	21.8	24.8	32.4	31.7	26.3	22.1	18.6	37.1	45.4	34.7
MAX	41.6	41.1	35.3	35.8	54.2	61.6	57.4	36.7	28.8	61.4	87.7	47.6	
(WY)	1998	1998	1998	1993	1993	1997	1996	1996	1996	1995	1995	1998	
MIN	10.8	10.6	9.98	7.59	7.45	7.75	7.74	10.6	7.70	9.45	20.5	26.4	
(WY)	1991	1991	1991	1991	1991	1991	1992	1994	1991	1991	1991	1991	

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1991 - 1998	
ANNUAL TOTAL	13633		13779			
ANNUAL MEAN	37.4		37.8		28.4	
HIGHEST ANNUAL MEAN					38.7	
LOWEST ANNUAL MEAN					12.4	
HIGHEST DAILY MEAN	103	Oct 22	117	Jul 26	139	Jul 31 1995
LOWEST DAILY MEAN	14	Apr 11	15	Oct 20	6.7	Apr 4 1994
ANNUAL SEVEN-DAY MINIMUM	14	Apr 11	15	Apr 28	6.9	Apr 9 1991
INSTANTANEOUS PEAK FLOW			117	Jul 25	142	Jul 31 1995
INSTANTANEOUS PEAK STAGE			1.27	Jul 25	1.44	Jul 31 1995
ANNUAL RUNOFF (AC-FT)	27040		27330		20560	
10 PERCENT EXCEEDS	64		65		55	
50 PERCENT EXCEEDS	35		34		23	
90 PERCENT EXCEEDS	16		17		9.0	

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. Unpublished records prior to October 1994 available in files of Southern California Edison Co.

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

REMARKS.—Flow regulated by South Lake (station 10270700). Most of the water is diverted by South Fork Diversion Dam to Intake No. 2 Reservoir (station 10270875) for power development downstream. South Fork Diversion Dam spill bypasses this station. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.6	7.4	7.5	7.4	7.3	7.4	10	10	14	17	11
2	10	7.6	7.3	7.4	7.5	7.3	7.4	10	10	14	17	11
3	10	7.7	7.5	7.4	7.4	7.4	7.4	10	10	14	17	11
4	10	7.5	7.6	7.4	7.3	7.3	7.4	10	10	14	18	10
5	11	7.6	7.6	7.4	7.3	7.3	7.4	10	10	14	18	10
6	10	7.5	7.5	7.4	7.3	7.3	7.4	10	10	14	18	11
7	10	7.6	7.5	7.4	7.4	7.4	7.4	10	10	14	18	11
8	10	7.6	7.5	7.4	7.4	7.6	7.4	10	10	14	18	11
9	11	7.6	7.4	7.4	7.4	7.6	7.4	10	10	14	17	11
10	11	7.6	7.4	7.3	7.4	7.6	7.4	10	10	15	17	11
11	11	7.6	7.4	7.3	7.3	7.4	7.4	10	10	16	15	11
12	11	7.6	7.4	7.4	7.3	7.2	7.4	10	10	17	15	11
13	11	7.6	7.3	7.3	7.3	7.2	7.4	10	10	17	15	11
14	11	7.5	7.4	7.3	7.4	7.2	7.3	10	10	15	15	11
15	11	7.5	7.3	7.6	7.5	7.3	7.4	11	11	15	15	11
16	11	7.5	7.4	7.6	7.6	7.3	7.4	11	14	14	15	11
17	11	7.5	7.3	7.5	7.4	7.2	7.5	11	15	14	15	11
18	11	7.6	7.3	7.6	7.4	7.2	7.5	11	15	14	14	11
19	11	7.5	7.3	7.5	7.4	7.2	7.5	10	15	14	11	11
20	11	7.5	7.3	7.6	7.3	7.2	7.4	10	15	15	11	11
21	11	7.5	7.4	7.5	7.3	7.2	7.4	10	15	15	11	11
22	11	7.5	7.4	7.5	7.4	7.3	7.4	10	15	16	11	11
23	11	7.4	7.4	7.5	7.4	7.2	8.3	10	15	15	11	11
24	11	7.3	7.4	7.5	7.3	7.2	10	10	15	15	11	11
25	11	7.4	7.4	7.5	7.3	7.2	10	10	15	15	11	11
26	11	7.5	7.3	7.5	7.3	7.2	10	10	15	16	11	11
27	11	7.5	7.3	7.5	7.4	7.3	10	10	15	15	11	11
28	11	7.5	7.4	7.4	7.3	7.3	10	10	15	17	11	11
29	11	7.5	7.6	7.4	---	7.2	10	10	15	18	11	11
30	11	7.5	7.5	7.4	---	7.3	10	10	15	17	11	11
31	10	---	7.5	7.4	---	7.4	---	10	---	17	11	---
TOTAL	334	225.9	229.7	230.8	206.4	226.3	241.3	314	375	468	437	328
MEAN	10.8	7.53	7.41	7.45	7.37	7.30	8.04	10.1	12.5	15.1	14.1	10.9
MAX	11	7.7	7.6	7.6	7.6	7.6	10	11	15	18	18	11
MIN	10	7.3	7.3	7.3	7.3	7.2	7.3	10	10	14	11	10
AC-FT	662	448	456	458	409	449	479	623	744	928	867	651

WTR YR 1998 TOTAL 3616.4 MEAN 9.91 MAX 18 MIN 7.2 AC-FT 7170

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, 7,541 acre-ft, July 21, elevation, 9,132.60; minimum, 802 acre-ft, Apr. 28, elevation, 9091.98 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6445	4603	3762	3316	2637	2363	1620	831	1207	5490	7289	7241
2	6415	4537	3740	3296	2638	2344	1576	845	1282	5615	7243	7270
3	6387	4503	3724	3278	2634	2327	1542	863	1356	5741	7231	7283
4	6359	4475	3697	3255	2621	2303	1506	886	1388	5847	7248	7303
5	6329	4451	3691	e3233	2608	2283	1463	901	1433	5942	7266	7338
6	6296	4431	3691	3211	2618	2260	1424	913	1515	6020	7291	7367
7	6262	4405	3686	3188	2621	2237	1382	923	1583	6105	7311	7361
8	6232	4376	3682	3164	2621	2216	1343	930	1692	6229	7340	7338
9	6192	4349	3676	3144	2615	2188	1300	939	1781	6470	7336	7314
10	6155	4327	3661	3126	2612	2165	1256	946	1855	6642	7303	7285
11	6101	4299	3651	3105	2604	2139	1217	954	1905	6750	7262	7229
12	6064	4271	3636	3089	2587	2115	1175	956	1982	6836	7250	7161
13	6048	4243	3628	3068	2571	2092	1135	958	2032	6932	7239	7150
14	6007	4214	3616	3052	2566	2073	1096	954	2119	6926	7227	7134
15	5956	4185	3604	3039	2557	2047	1057	951	2278	7001	7215	7113
16	5922	4157	3586	3022	2540	2021	1013	954	2485	7097	7192	7090
17	5874	4126	3571	2997	2531	1996	979	948	2664	7210	7169	7065
18	5825	4099	3555	2981	2513	1972	954	944	2844	7354	7161	7038
19	5787	4084	3537	2963	2499	1947	926	946	3034	7459	7159	7022
20	5786	4057	3530	2943	2482	1924	911	954	3237	7518	7150	7011
21	5728	4031	3504	2915	2470	1900	889	960	3441	7541	7146	7001
22	5570	4004	3488	2892	2462	1882	886	964	3646	7535	7142	6990
23	5485	3974	3466	2868	2459	1860	843	979	3849	7535	7130	6978
24	5439	3943	3450	2841	2451	1844	834	1002	4054	7530	7123	6890
25	5395	3908	3435	2818	2439	1826	823	1041	4292	7488	7119	6936
26	5338	3903	e3420	2788	2425	1822	813	1063	4533	7447	7117	6955
27	5233	3873	e3405	2760	2403	1798	806	1080	4747	7424	7126	6936
28	5102	3844	e3390	2733	2385	1769	802	1091	4972	7416	7138	6928
29	4902	3814	3376	2714	---	1736	804	1106	5205	7406	7150	6926
30	4756	3782	3360	2684	---	1700	817	1118	5376	7385	7167	6917
31	4674	---	3340	2656	---	1658	---	1152	---	7350	7206	---
MAX	6445	4603	3762	3316	2638	2363	1620	1152	5376	7541	7340	7367
MIN	4674	3782	3340	2656	2385	1658	802	831	1207	5490	7117	6890
a	9116.98	9111.70	9109.02	9104.76	9103.02	9098.18	9092.10	9094.64	9121.02	9131.62	9130.88	9129.38
b	-1799	-892	-442	-684	-271	-727	-841	+335	+4224	+1974	-144	-289
CAL YR 1997	MAX	7526	MIN	756	b -691							
WTR YR 1998	MAX	7541	MIN	802	b +444							

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA

LOCATION.—Lat 37°12'50", long 118°36'34", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank 800 ft downstream from Lake Sabrina Dam and 15.6 mi southwest of Bishop.

DRAINAGE AREA.—16.7 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	47	23	19	21	21	30	20	22	119	121	48
2	29	42	19	19	21	21	30	20	22	121	116	49
3	29	29	19	19	21	20	28	20	22	118	101	57
4	29	23	19	18	21	20	31	20	22	117	96	69
5	29	21	19	19	21	20	32	21	22	118	97	77
6	28	20	18	19	21	20	32	21	22	119	102	81
7	28	20	18	18	21	20	31	21	23	120	112	82
8	30	22	18	18	21	20	31	21	23	118	113	80
9	31	22	18	18	21	20	31	21	23	118	111	81
10	31	22	18	18	21	20	30	21	29	120	113	79
11	31	22	18	18	21	20	30	21	33	121	113	79
12	31	22	18	18	21	20	30	21	33	122	105	78
13	31	24	18	18	21	20	30	21	34	123	106	43
14	31	22	17	18	21	20	30	21	34	124	104	43
15	31	22	17	18	21	20	30	21	34	125	101	43
16	33	22	17	18	21	20	30	21	35	126	100	43
17	35	22	17	19	21	20	21	21	36	127	91	43
18	35	22	17	22	21	20	21	21	36	127	78	41
19	30	22	17	22	21	20	21	21	37	149	69	36
20	16	22	17	22	21	20	21	21	37	191	64	31
21	36	22	17	22	20	20	21	21	37	244	55	29
22	91	22	17	22	21	19	21	21	38	233	50	29
23	52	22	17	21	21	19	20	21	38	225	50	28
24	33	23	17	21	21	19	20	21	37	222	45	26
25	33	26	17	21	21	19	20	21	38	203	44	26
26	39	26	17	21	21	22	20	21	45	172	45	25
27	62	29	17	21	21	26	20	21	49	152	42	25
28	78	27	17	21	21	26	20	21	51	143	42	25
29	112	27	18	21	---	26	20	21	61	139	42	25
30	84	27	19	21	---	30	20	21	93	133	45	25
31	52	---	19	21	---	30	---	21	---	124	45	---
TOTAL	1269	741	554	611	587	658	772	647	1066	4513	2518	1446
MEAN	40.9	24.7	17.9	19.7	21.0	21.2	25.7	20.9	35.5	146	81.2	48.2
MAX	112	47	23	22	21	30	32	21	93	244	121	82
MIN	16	20	17	18	20	19	20	20	22	117	42	25
AC-FT	2520	1470	1100	1210	1160	1310	1530	1280	2110	8950	4990	2870

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

MEAN	20.5	16.9	16.8	23.2	30.4	25.4	24.4	24.9	41.4	83.3	57.9	35.4
MAX	40.9	24.7	24.8	35.2	46.1	41.6	41.1	43.4	91.1	147	107	49.4
(WY)	1998	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1991 - 1998

ANNUAL TOTAL	14756	15382	
ANNUAL MEAN	40.4	42.1	33.4
HIGHEST ANNUAL MEAN			47.8
LOWEST ANNUAL MEAN			18.4
HIGHEST DAILY MEAN	140	Jun 21	244
LOWEST DAILY MEAN	14	Apr 6	16
ANNUAL SEVEN-DAY MINIMUM	14	Apr 6	17
INSTANTANEOUS PEAK FLOW			249
INSTANTANEOUS PEAK STAGE			2.04
ANNUAL RUNOFF (AC-FT)	29270	30510	24220
10 PERCENT EXCEEDS	81	112	66
50 PERCENT EXCEEDS	32	22	23
90 PERCENT EXCEEDS	17	19	9.8

10270875 INTAKE NO. 2 RESERVOIR NEAR BISHOP, CA

LOCATION.—Lat 38°14'53", long 118°34'53", in SE 1/4 SW 1/4 sec.16, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in outlet structure 50 ft upstream from Bishop Creek Dam on Middle Fork Bishop Creek and 13.0 mi southwest of Bishop.

DRAINAGE AREA.—31.6 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, 99 acre-ft, June 21, elevation, 8,100.54 ft; minimum, 30 acre-ft, Oct. 1, elevation, 8,093.68 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 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	70	64	70	68	68	73	72	71	89	88	81
2	31	68	68	70	69	66	72	68	70	89	88	81
3	30	68	70	69	67	66	70	66	68	89	87	82
4	31	66	70	68	66	66	68	65	68	89	87	85
5	31	66	73	69	66	68	80	65	69	89	87	87
6	31	67	70	69	68	68	83	67	72	90	88	86
7	31	67	68	69	64	67	83	67	66	90	90	86
8	42	69	68	69	67	66	83	69	66	91	89	85
9	53	69	68	68	68	66	79	69	73	91	89	84
10	63	71	70	68	67	66	72	69	70	92	89	84
11	68	69	68	67	66	66	71	72	69	91	88	84
12	66	68	68	68	66	65	69	70	69	92	88	83
13	68	71	70	67	66	65	70	67	64	92	88	79
14	67	70	71	67	67	65	69	68	76	91	88	79
15	68	71	70	68	66	66	70	70	83	91	88	75
16	70	71	69	66	67	66	69	69	83	91	87	74
17	68	68	70	67	66	66	69	69	81	92	86	73
18	71	66	69	67	67	66	70	70	82	92	84	73
19	69	67	68	66	68	69	69	73	82	94	84	71
20	69	66	68	67	67	70	71	68	83	97	83	76
21	68	66	67	67	69	67	70	70	83	99	81	72
22	84	66	69	67	66	69	71	70	83	99	81	75
23	70	66	70	66	69	68	68	69	83	99	80	71
24	68	66	69	65	68	67	68	71	83	99	77	70
25	68	67	67	66	68	68	68	70	85	96	74	69
26	70	63	68	69	66	70	68	66	85	93	79	70
27	73	68	68	68	67	71	67	67	84	92	79	69
28	82	68	67	68	68	71	68	69	85	92	79	71
29	85	67	68	68	---	65	73	68	87	91	79	71
30	71	67	70	68	---	68	73	68	89	90	80	70
31	70	---	70	67	---	71	---	69	---	89	80	---
MAX	85	71	73	70	69	71	83	73	89	99	90	87
MIN	30	63	64	65	64	65	67	65	64	89	74	69
a	8098.15	8097.91	8098.22	8097.89	8097.95	8098.27	8098.49	8098.11	8099.76	8099.74	8099.07	8098.20
b	+39	-3	+3	-3	+1	+3	+2	-4	+20	0	-9	-10

CAL YR 1997 MAX 92 MIN 30 b -1
WTR YR 1998 MAX 99 MIN 30 b +39

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	7.8	7.8	7.8	7.8	8.0	11	10	---	---	29
2	11	11	7.8	7.8	7.9	7.8	8.0	11	10	---	---	---
3	11	8.8	7.8	7.8	8.0	7.8	8.0	11	10	---	---	---
4	11	7.6	7.8	e7.8	7.9	7.8	8.0	11	10	---	---	---
5	11	7.6	7.9	e7.9	e7.8	7.8	8.3	10	10	---	---	---
6	10	7.6	8.0	e8.0	e7.9	7.9	---	10	10	---	---	---
7	11	7.6	8.0	8.0	8.0	7.8	---	10	10	---	---	---
8	11	7.6	7.8	8.0	8.0	7.8	---	10	10	---	---	---
9	11	7.6	e7.8	8.0	7.9	7.8	---	10	10	---	---	---
10	12	7.7	e7.8	8.0	7.8	7.8	8.7	10	10	---	---	---
11	12	7.8	7.8	8.0	7.9	7.8	8.0	10	10	---	---	---
12	11	7.8	7.7	8.0	7.8	7.8	8.0	10	10	---	---	---
13	12	7.8	7.6	8.0	7.8	7.8	8.0	10	10	---	---	22
14	12	7.8	7.8	8.0	7.9	7.8	8.0	10	10	---	---	16
15	12	7.8	8.0	8.0	e7.9	7.8	8.0	10	21	---	---	13
16	12	7.8	7.8	8.0	e7.8	7.8	8.0	10	---	---	---	10
17	12	7.8	7.8	8.0	7.8	7.8	8.0	10	---	---	---	10
18	16	9.3	7.8	8.0	7.8	7.8	8.0	10	---	---	---	10
19	12	8.0	7.8	7.9	7.8	7.8	8.0	10	---	---	---	10
20	11	7.8	7.8	7.8	7.8	8.0	8.5	10	---	---	---	11
21	12	7.8	7.8	8.0	7.9	8.0	9.0	10	---	---	---	11
22	---	7.8	e7.8	e8.0	7.9	8.0	9.0	10	---	---	---	13
23	---	7.7	7.8	8.0	e7.9	8.1	9.6	10	---	---	30	13
24	11	7.7	e7.8	7.8	e7.8	8.1	11	10	---	---	19	13
25	11	7.8	e7.8	7.8	7.8	8.1	11	10	---	---	10	13
26	11	7.9	e7.8	7.8	7.8	8.0	11	10	---	---	13	13
27	11	7.8	7.8	7.8	7.8	8.0	11	10	---	---	17	13
28	14	7.8	7.8	7.8	7.8	8.1	11	10	---	---	16	13
29	---	7.8	7.8	7.9	---	e8.0	11	10	---	---	15	13
30	---	7.8	7.8	7.9	---	8.0	11	10	---	---	20	13
31	11	---	7.8	7.8	---	8.0	---	10	---	---	24	---
TOTAL	---	241.7	242.2	245.4	220.0	244.7	---	314	---	---	---	---
MEAN	---	8.06	7.81	7.92	7.86	7.89	---	10.1	---	---	---	---
MAX	---	11	8.0	8.0	8.0	8.1	---	11	---	---	---	---
MIN	---	7.6	7.6	7.8	7.8	7.8	---	10	---	---	---	---
AC-FT	---	479	480	487	436	485	---	623	---	---	---	---

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	16	16	16	16	16	15	15	---	---	15
2	15	15	---	16	16	16	16	15	15	---	---	15
3	15	14	---	16	16	16	16	15	15	---	---	16
4	15	15	16	16	16	16	16	15	15	---	---	---
5	15	16	16	16	16	16	16	15	15	---	---	---
6	15	16	16	16	16	16	16	15	15	---	---	---
7	15	16	16	16	16	16	16	15	15	---	---	---
8	15	16	16	16	16	16	16	15	15	---	---	---
9	15	16	16	16	16	16	16	15	15	---	---	---
10	15	16	16	16	16	16	16	15	15	---	---	---
11	15	16	16	16	16	16	16	15	15	---	---	---
12	15	16	16	16	16	16	16	15	15	---	---	---
13	15	16	16	16	16	16	16	15	15	---	---	---
14	15	16	16	16	16	16	16	15	15	---	---	16
15	15	16	16	16	16	16	16	16	16	---	---	16
16	15	16	16	16	16	16	16	16	---	---	---	15
17	15	16	16	16	16	16	16	16	---	---	---	16
18	15	16	16	16	16	16	16	16	16	---	---	16
19	15	16	16	16	16	16	16	15	19	---	---	16
20	15	16	16	16	16	16	16	15	18	---	---	15
21	---	e16	16	16	16	16	16	15	---	---	---	16
22	---	16	16	16	16	16	16	15	---	---	---	15
23	---	16	16	16	16	16	16	15	---	---	---	15
24	---	16	16	16	16	16	16	15	---	---	---	15
25	---	16	16	16	16	16	16	15	---	---	15	15
26	---	16	16	16	16	16	16	15	---	---	14	15
27	---	16	16	18	16	16	16	15	---	---	e14	15
28	---	16	16	16	16	16	16	15	---	---	15	15
29	---	16	16	16	---	17	15	15	---	---	15	15
30	---	16	16	16	---	16	15	15	---	---	15	15
31	16	---	16	16	---	16	---	15	---	---	15	---
TOTAL	---	476	---	498	448	497	478	469	---	---	---	---
MEAN	---	15.9	---	16.1	16.0	16.0	15.9	15.1	---	---	---	---
MAX	---	16	---	18	16	17	16	16	---	---	---	---
MIN	---	14	---	16	16	16	15	15	---	---	---	---
AC-FT	---	944	---	988	889	986	948	930	---	---	---	---

e Estimated.

10270900 BIRCH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2, NEAR BISHOP, CA

LOCATION.—Lat 37°16'26", long 118°34'45", NW 1/4 NE 1/4 sec.9, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in conduit 100 ft upstream from penstock to Bishop Creek Powerplant No. 2 and 11.9 mi southwest of Bishop.

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

GAGE.—Acoustic-velocity meter. Elevation of gage is 7,950 ft above sea level, from topographic map.

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

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	6.9	6.1	5.7	5.1	4.9	4.6	5.4	4.7	24	33	30
2	14	6.8	6.0	5.5	5.2	4.9	4.6	5.3	4.7	32	32	31
3	14	6.7	6.0	5.5	5.1	4.9	4.5	5.1	4.8	27	33	31
4	13	6.5	6.0	5.4	5.1	4.9	4.5	5.0	4.6	33	37	32
5	12	6.4	6.1	5.4	5.1	4.8	4.4	4.9	4.7	35	36	33
6	12	6.4	6.1	5.4	5.1	4.8	4.4	4.7	4.7	38	37	33
7	11	6.5	6.1	5.4	5.2	4.8	4.4	4.9	4.7	39	38	33
8	9.5	6.4	6.0	5.4	5.1	4.8	4.4	5.0	4.7	36	38	31
9	9.3	6.4	5.9	5.4	5.0	4.8	4.5	4.8	5.1	35	38	30
10	9.4	6.6	5.8	5.4	5.1	4.8	4.6	4.7	5.0	39	36	26
11	9.1	6.6	5.8	5.4	5.0	4.8	4.5	4.7	5.0	30	35	25
12	9.0	6.5	5.8	5.4	5.0	4.8	4.5	4.6	5.4	37	35	23
13	9.0	6.5	5.8	5.3	5.0	4.8	4.4	4.6	5.0	40	36	23
14	8.9	6.4	5.9	5.3	5.0	4.8	4.4	4.5	5.0	36	36	22
15	8.8	6.4	5.8	5.5	5.1	4.8	4.4	4.6	6.1	35	36	21
16	8.8	6.4	5.8	5.4	5.0	4.8	4.4	4.5	7.7	31	35	21
17	6.7	6.4	5.8	5.4	5.0	4.9	4.5	4.5	7.6	38	34	21
18	6.0	6.4	5.8	5.4	4.9	4.9	4.7	4.5	8.0	41	33	20
19	6.3	6.5	5.7	5.3	4.9	4.9	5.1	4.6	8.7	38	32	20
20	6.3	6.3	5.8	5.2	4.9	4.9	5.5	4.5	9.7	34	35	19
21	6.5	6.3	5.7	5.2	5.0	4.9	5.8	4.5	11	39	35	18
22	4.3	6.3	5.6	5.1	4.9	5.3	5.7	4.5	12	37	34	18
23	5.9	6.1	5.6	5.2	5.0	5.7	5.4	4.6	13	45	33	17
24	6.2	6.1	5.6	5.1	4.9	5.0	5.1	4.6	14	37	32	17
25	6.5	6.1	5.5	5.2	4.9	4.8	4.9	4.7	13	32	31	16
26	6.2	6.3	5.5	5.3	4.9	4.9	5.0	4.6	12	19	31	16
27	6.1	5.8	5.5	5.1	4.9	4.8	5.2	4.5	12	25	30	15
28	6.6	6.2	5.6	5.1	4.9	4.7	5.3	4.6	11	38	27	15
29	7.1	6.2	5.6	5.1	---	4.6	5.5	4.5	10	38	26	14
30	7.1	6.2	5.6	5.1	---	4.6	5.6	4.5	19	36	26	13
31	7.0	---	5.6	5.1	---	4.6	---	4.6	---	34	30	---
TOTAL	266.6	191.6	179.5	164.7	140.3	150.7	144.8	145.6	242.9	1078	1040	684
MEAN	8.60	6.39	5.79	5.31	5.01	4.86	4.83	4.70	8.10	34.8	33.5	22.8
MAX	14	6.9	6.1	5.7	5.2	5.7	5.8	5.4	19	45	38	33
MIN	4.3	5.8	5.5	5.1	4.9	4.6	4.4	4.5	4.6	19	26	13
AC-FT	529	380	356	327	278	299	287	289	482	2140	2060	1360

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	6.4	5.9	5.3	5.6	e5.3	6.2	6.6	5.7	---	---	---
2	5.7	6.4	14	5.3	5.6	e5.3	6.1	6.6	5.7	---	---	---
3	6.2	6.3	6.7	5.1	5.6	e5.3	6.1	6.6	5.7	---	---	---
4	6.4	6.1	6.0	5.2	5.5	e5.3	6.1	6.5	5.7	---	---	---
5	6.4	6.1	6.0	5.2	5.6	e5.3	6.1	6.5	5.7	---	---	---
6	6.4	6.1	---	5.2	e5.6	e5.3	6.1	5.8	5.7	---	---	---
7	6.4	6.1	19	5.2	e5.6	e5.3	6.1	6.2	5.7	---	---	---
8	6.4	6.1	6.2	5.2	e5.6	e5.3	6.1	6.2	5.7	---	---	---
9	6.4	6.0	6.6	5.2	e5.6	e5.3	6.1	6.3	5.7	---	---	---
10	6.4	6.0	6.0	5.2	e5.6	e5.3	6.2	6.3	5.7	---	---	---
11	6.4	5.8	6.0	5.2	e5.6	e5.3	6.3	6.0	5.7	---	---	---
12	6.4	6.3	6.0	5.2	e5.6	e5.3	6.3	5.7	7.4	---	---	---
13	6.4	6.0	6.0	5.2	e5.6	e5.3	6.3	5.5	6.5	---	---	---
14	6.4	5.9	6.0	5.2	e5.6	e5.3	6.3	5.5	5.7	---	---	---
15	6.5	5.8	6.0	5.2	e5.5	e5.3	6.3	5.5	---	---	---	---
16	6.6	5.8	6.0	5.2	e5.5	e5.3	6.3	5.5	---	---	---	8.8
17	6.6	5.8	6.0	5.2	e5.5	e5.3	6.3	5.5	---	---	---	8.2
18	6.6	6.2	6.0	5.3	e5.5	e5.3	6.5	5.5	---	---	---	8.9
19	6.6	5.9	6.0	5.3	e5.5	e5.3	6.4	5.5	---	---	---	8.2
20	---	6.0	6.0	5.2	e5.4	e5.3	6.4	5.5	---	---	---	8.3
21	17	6.0	6.0	5.5	e5.4	5.9	6.4	5.5	---	---	---	8.3
22	---	6.0	6.0	5.4	e5.4	5.9	6.4	5.5	---	---	---	8.7
23	---	6.0	6.0	5.5	e5.4	5.9	6.5	5.5	---	---	---	8.7
24	6.2	6.0	6.0	5.6	e5.4	6.0	6.3	5.5	---	---	---	8.6
25	6.3	6.0	6.0	5.5	e5.4	6.1	6.3	5.5	---	---	9.6	9.1
26	6.3	6.0	6.1	5.5	e5.3	6.3	6.3	5.5	---	---	15	9.3
27	17	6.0	6.1	5.7	e5.3	6.3	6.4	5.5	---	---	20	9.1
28	---	6.0	6.1	5.5	e5.3	6.3	6.5	5.5	---	---	19	9.3
29	---	6.0	5.9	5.6	---	6.3	6.5	5.5	---	---	18	11
30	---	6.0	5.3	5.7	---	6.3	6.6	5.7	---	---	---	9.3
31	7.2	---	5.2	5.5	---	6.3	---	5.7	---	---	---	---
TOTAL	---	181.1	---	165.3	154.1	173.6	188.8	180.2	---	---	---	---
MEAN	---	6.04	---	5.33	5.50	5.60	6.29	5.81	---	---	---	---
MAX	---	6.4	---	5.7	5.6	6.3	6.6	6.6	---	---	---	---
MIN	---	5.8	---	5.1	5.3	5.3	6.1	5.5	---	---	---	---
AC-FT	---	359	---	328	306	344	374	357	---	---	---	---

e Estimated.

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

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

DRAINAGE AREA.—100 mi².

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

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

REMARKS.—No records computed above 30 ft³/s. Flow regulated by Intake No. 5 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 5. Water is used for power development downstream. See schematic diagram of Bishop Creek Basin.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	19	19	18	19	---	---	---	---	---	25
2	19	19	18	19	19	19	---	---	---	---	---	28
3	19	19	18	19	19	19	---	---	---	---	---	---
4	19	19	18	19	19	19	---	---	---	---	---	---
5	19	19	18	19	19	19	---	---	---	---	---	---
6	18	19	19	19	19	19	---	28	---	---	---	---
7	18	19	19	18	19	19	---	26	---	---	---	---
8	18	19	19	18	19	19	---	23	---	---	---	---
9	18	19	19	18	19	19	---	29	---	---	---	---
10	18	19	19	18	19	19	---	27	---	---	---	---
11	18	19	19	18	19	19	---	24	---	---	---	---
12	18	19	19	18	19	19	---	26	---	---	---	---
13	19	19	19	18	19	19	---	21	---	---	---	---
14	18	19	19	18	19	19	30	19	---	---	---	---
15	18	19	19	18	19	19	23	20	---	---	---	---
16	18	19	19	18	19	19	22	23	---	---	---	20
17	18	19	19	18	19	19	19	20	---	---	---	20
18	18	23	19	18	19	19	19	22	---	---	---	20
19	18	21	19	18	19	19	21	25	---	---	---	20
20	---	18	19	18	19	19	22	30	---	---	---	20
21	---	18	19	18	19	19	29	24	---	---	---	20
22	---	18	19	19	19	19	---	27	---	---	---	20
23	---	18	19	18	19	19	---	30	---	---	---	19
24	---	18	19	18	19	19	28	---	---	---	---	19
25	19	18	19	18	19	23	25	---	---	---	23	20
26	20	19	19	18	19	---	22	---	---	---	22	19
27	---	19	19	18	19	---	22	30	---	---	20	20
28	---	18	19	18	19	---	20	---	---	---	20	20
29	---	19	19	18	---	---	22	---	---	---	20	19
30	---	19	19	18	---	---	---	---	---	---	21	20
31	25	---	19	18	---	---	---	---	---	---	20	---
TOTAL	---	569	585	565	531	---	---	---	---	---	---	---
MEAN	---	19.0	18.9	18.2	19.0	---	---	---	---	---	---	---
MAX	---	23	19	19	19	---	---	---	---	---	---	---
MIN	---	18	18	18	18	---	---	---	---	---	---	---
AC-FT	---	1130	1160	1120	1050	---	---	---	---	---	---	---

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.1	1.9	1.8	1.9	1.9	2.1	2.0	2.0	2.0	2.1	2.3
2	2.2	2.0	2.0	1.8	1.9	1.9	2.2	2.0	1.9	2.3	2.0	2.3
3	2.2	2.0	1.9	1.8	1.9	1.9	2.2	1.9	1.8	2.2	2.1	2.3
4	2.2	2.1	1.9	1.8	2.1	2.0	2.2	2.0	1.9	2.2	2.0	2.3
5	2.2	2.1	1.9	1.9	2.2	2.0	2.3	2.0	1.9	1.7	2.0	2.4
6	2.2	2.1	1.9	1.9	2.2	2.0	2.3	1.9	1.9	2.0	2.0	2.4
7	2.2	2.1	1.9	1.8	2.1	1.9	2.2	2.0	1.7	2.5	2.0	2.4
8	2.2	2.1	1.8	1.8	2.1	1.9	2.2	2.0	2.0	2.5	1.6	2.3
9	2.1	2.1	1.8	1.8	2.0	1.9	2.1	2.0	2.2	2.3	1.3	2.3
10	2.1	2.1	1.8	1.8	1.9	1.9	2.0	2.0	1.9	2.1	2.0	2.3
11	2.1	2.1	1.8	1.8	1.8	1.9	2.1	2.1	2.1	1.6	2.5	2.3
12	2.2	2.0	1.9	1.7	1.8	1.9	2.1	2.1	2.2	2.3	2.4	2.3
13	2.2	1.9	2.1	1.8	1.8	1.9	2.0	2.1	2.2	2.3	2.4	2.3
14	2.2	1.9	2.1	1.8	1.8	1.9	2.0	2.2	2.0	2.2	2.4	2.2
15	2.2	2.0	2.1	1.8	1.9	1.9	2.1	2.2	2.0	2.4	2.4	2.2
16	2.2	2.0	2.1	1.8	1.9	1.9	2.1	2.1	2.0	2.3	2.3	2.3
17	2.1	1.9	2.1	1.8	1.9	1.9	2.2	2.1	2.2	2.4	2.3	2.2
18	2.2	1.9	2.1	1.8	1.9	1.9	2.2	2.1	2.2	2.3	2.3	2.2
19	2.2	1.9	2.1	1.7	1.9	1.9	2.2	2.1	2.2	2.3	2.3	2.1
20	2.1	1.8	2.1	1.8	1.9	1.9	2.1	2.1	2.0	2.3	2.2	2.2
21	1.9	1.8	2.1	1.7	1.9	1.8	2.1	2.1	1.8	2.0	2.2	2.1
22	2.0	1.9	2.1	1.7	1.9	1.8	2.0	2.2	2.0	2.4	2.2	2.2
23	2.1	1.9	2.1	2.0	1.9	2.0	2.0	2.1	2.3	2.3	2.1	2.3
24	2.5	1.9	2.1	2.0	1.9	2.3	2.0	2.1	2.3	2.3	2.1	2.3
25	2.4	1.9	2.1	2.0	1.9	2.3	2.1	2.0	2.3	2.0	2.1	2.3
26	2.6	1.8	2.4	2.0	1.9	2.2	2.2	2.0	2.2	1.9	2.2	2.3
27	2.3	1.9	2.1	2.0	1.9	2.0	2.1	2.1	2.1	2.1	2.2	2.3
28	2.0	1.8	2.1	2.0	1.9	2.0	2.2	2.1	1.9	2.1	2.2	2.3
29	2.1	1.8	2.0	2.0	---	2.0	2.1	2.1	1.7	2.1	2.2	2.1
30	2.1	1.8	1.9	2.0	---	2.0	2.1	2.1	1.8	2.0	2.2	2.3
31	2.1	---	1.9	2.0	---	1.9	---	2.1	---	2.0	2.3	---
TOTAL	67.6	58.7	62.2	57.4	54.1	60.6	63.8	64.0	60.7	67.4	66.6	68.1
MEAN	2.18	1.96	2.01	1.85	1.93	1.95	2.13	2.06	2.02	2.17	2.15	2.27
MAX	2.6	2.1	2.4	2.0	2.2	2.3	2.3	2.2	2.3	2.5	2.5	2.4
MIN	1.9	1.8	1.8	1.7	1.8	1.8	2.0	1.9	1.7	1.6	1.3	2.1
AC-FT	134	116	123	114	107	120	127	127	120	134	132	135

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	MEAN	2.02	1.81	1.88	1.93	1.92	1.94	2.03	2.12	2.17	2.21	2.26	2.22
MAX	2.19	2.20	2.01	2.30	2.11	2.06	2.41	2.42	2.47	2.62	2.73	2.52	2.52
(WY)	1994	1994	1998	1997	1997	1997	1996	1995	1993	1995	1996	1995	1995
MIN	1.87	1.04	1.77	1.75	1.70	1.70	1.86	1.88	1.90	1.91	1.85	1.89	1.89
(WY)	1991	1997	1993	1992	1991	1991	1991	1991	1992	1992	1991	1991	1991

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1991 - 1998		
ANNUAL TOTAL	766.7			751.2					
ANNUAL MEAN	2.10			2.06			2.04		
HIGHEST ANNUAL MEAN							2.19		
LOWEST ANNUAL MEAN							1.85		
HIGHEST DAILY MEAN							3.3		
LOWEST DAILY MEAN	2.9			Jan 6			May 7 1995		
ANNUAL SEVEN-DAY MINIMUM	1.4			Sep 3			.43		
ANNUAL RUNOFF (AC-FT)	1.8			Nov 24			.45		
10 PERCENT EXCEEDS	1520			1490			1480		
50 PERCENT EXCEEDS	2.3			2.3			2.5		
90 PERCENT EXCEEDS	2.1			2.1			2.0		
	1.9			1.8			1.8		

10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA

LOCATION.—Lat 37°21'00", long 118°27'42", in SE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank adjacent to Powerplant No. 6 tailrace and 3.8 mi west of Bishop.

DRAINAGE AREA.—104 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, 453 ft³/s, July 23, 1998, gage height, 3.77 ft; no flow on many days in July and August 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	13	1.7	2.3	.33	1.4	.66	.39	.88	161	164	33
2	3.6	14	1.7	2.2	1.3	1.5	.74	.37	1.4	158	152	35
3	3.8	12	1.9	2.0	2.1	1.5	.61	.37	.89	158	143	41
4	3.7	3.9	1.7	2.0	65	1.5	.57	1.6	.50	152	134	79
5	3.4	3.1	1.7	e2.0	81	1.5	.40	3.3	.42	151	133	118
6	3.4	2.3	1.7	e2.0	59	1.4	.40	3.2	.35	152	137	121
7	3.4	2.3	1.7	2.0	22	1.5	.38	2.8	.33	160	161	110
8	3.4	44	1.7	2.0	22	1.5	.39	2.6	.54	167	191	98
9	3.2	1.2	1.5	2.0	17	1.5	.83	2.2	1.1	179	189	94
10	2.6	2.0	.60	1.8	3.0	1.5	1.8	1.7	2.7	201	178	86
11	2.3	1.8	.39	1.7	2.6	1.5	1.7	1.7	2.4	212	168	81
12	3.8	1.7	.36	1.7	2.5	1.5	1.7	1.5	13	200	158	77
13	2.7	1.2	.34	1.7	2.0	1.2	1.5	1.5	10	204	164	53
14	2.6	1.2	.34	1.7	2.1	1.2	1.3	1.4	1.5	202	158	40
15	2.6	1.2	.35	1.7	2.0	1.2	1.2	1.3	17	190	151	36
16	2.6	1.2	.34	1.7	2.0	1.2	.92	1.1	55	176	143	11
17	2.6	1.1	1.1	1.7	1.7	1.2	.74	.99	53	188	123	2.1
18	2.6	1.1	2.0	1.7	1.7	1.2	.73	.74	45	201	100	1.3
19	2.3	.81	1.8	1.5	1.7	1.2	.61	.64	49	218	81	.39
20	35	.48	1.7	1.2	1.7	1.2	.61	.58	55	247	71	1.5
21	22	1.4	1.6	1.9	1.7	1.2	.61	.46	60	338	58	.40
22	128	2.5	1.5	.42	1.7	1.2	.61	.46	60	356	49	.32
23	135	2.6	2.0	.34	1.8	1.2	.46	.47	65	396	45	.28
24	45	2.6	1.3	.34	1.5	1.2	.46	.47	62	420	26	.28
25	39	2.6	1.3	.32	1.5	1.4	.43	.42	67	407	11	.26
26	45	2.3	1.2	.32	1.5	2.4	.43	.43	79	333	17	.25
27	108	2.0	1.2	.31	1.5	.62	.44	.45	76	279	21	.26
28	137	2.0	1.1	.31	1.5	.46	.43	.41	75	259	20	.55
29	198	1.8	1.2	.31	---	.36	.43	.42	84	233	21	2.1
30	175	1.7	1.1	.31	---	.35	.42	.44	114	218	25	.67
31	34	---	1.8	.31	---	.38	---	.41	---	188	29	---
TOTAL	1159.3	131.09	39.92	41.79	305.43	38.17	22.51	34.82	1052.01	7104	3221	1123.66
MEAN	37.4	4.37	1.29	1.35	10.9	1.23	.75	1.12	35.1	229	104	37.5
MAX	198	44	2.0	2.3	81	2.4	1.8	3.3	114	420	191	121
MIN	2.3	.48	.34	.31	.33	.35	.38	.37	.33	151	11	.25
AC-FT	2300	260	79	83	606	76	45	69	2090	14090	6390	2230
a	4900	5970	5430	5470	4450	5880	6270	6320	8530	8820	8970	8030

e Estimated.

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 - 1998, BY WATER YEAR (WY)

MEAN	6.15	3.15	1.60	6.58	2.48	2.42	2.91	8.69	35.5	90.6	45.3	8.17
MAX	37.4	14.9	5.34	38.6	10.9	7.54	15.9	29.9	86.7	240	171	37.5
(WY)	1998	1994	1996	1997	1998	1994	1996	1996	1997	1995	1995	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1991 - 1998	
ANNUAL TOTAL	9458.63		14273.70			
ANNUAL MEAN	25.9		39.1		18.0	
HIGHEST ANNUAL MEAN					43.2	
LOWEST ANNUAL MEAN					.34	
HIGHEST DAILY MEAN	198	Oct 29	420	Jul 24	420	Jul 24 1998
LOWEST DAILY MEAN	.34	Dec 13	.25	Sep 26	.00	Jul 27 1992
ANNUAL SEVEN-DAY MINIMUM	.39	Dec 10	.29	Sep 21	.00	Jul 27 1992
INSTANTANEOUS PEAK FLOW			453	Jul 23	453	Jul 23 1998
INSTANTANEOUS PEAK STAGE			3.77	Jul 23	3.77	Jul 23 1998
ANNUAL RUNOFF (AC-FT)	18760		28310		13010	
ANNUAL DIVERSION (AC-FT) a	84670		79050			
10 PERCENT EXCEEDS	106		158		60	
50 PERCENT EXCEEDS	2.3		1.8		1.5	
90 PERCENT EXCEEDS	.61		.41		.15	

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, 4,191 acre-ft, July 22, 1998, elevation, 7,808.40 ft; minimum, 440 acre-ft, Apr. 19, 1993, elevation, 7,773.08 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 4,191 acre-ft, July 22, elevation, 7,808.40 ft; minimum, 482 acre-ft, May 19, elevation, unknown.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 17, 1981)

7,766.43	0	7,790	2,001
7,770	213	7,800	3,126
7,780	1,027	7,810	4,406

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2459	2156	1978	1974	1923	1944	1654	830	796	3760	4125	3189
2	2453	2144	1980	1975	1938	1941	1598	831	840	3868	4125	e3185
3	2445	2139	1980	1973	1947	1937	1544	835	861	4002	4122	e3185
4	2437	2133	1980	1973	1942	1933	1487	833	876	4096	4125	e3186
5	2429	2128	1985	1970	1937	1927	1432	836	887	4158	4129	e3187
6	2420	2128	1986	1964	1945	1914	1375	831	934	4166	4150	e3186
7	2414	2123	1995	1963	1953	1893	1318	820	975	4167	4142	e3185
8	2408	2119	1998	1960	1961	1871	1260	793	1029	4179	4154	e3184
9	2400	2114	1997	1957	1962	1856	1201	760	1088	4180	4125	e3190
10	2392	2112	1997	1954	1965	1835	1145	721	1173	4179	4119	e3207
11	2384	2108	1996	1954	1961	1819	1088	684	1205	4170	4111	e3219
12	2375	2102	1997	1957	1959	1801	1031	638	1243	4159	4105	e3248
13	2364	2093	1996	1956	1955	1784	974	587	1272	4161	4104	e3290
14	2355	2082	1998	1957	1969	1763	915	562	1312	4158	4096	e3350
15	2344	2066	1999	1969	1963	1748	884	556	1425	4154	4089	e3384
16	2335	2053	1998	1968	1963	1734	867	541	1604	4166	4084	e3356
17	2324	2025	1997	1963	1962	1721	849	535	1759	4163	4072	e3269
18	2316	1992	1998	1968	1960	1709	831	e506	1908	4170	4044	e3154
19	2304	1964	1998	1967	1962	1700	816	e482	2020	4172	4010	e2976
20	2296	1959	1996	1966	1955	1691	805	484	2158	4178	3973	e2930
21	2286	1954	1996	1961	1962	1682	801	503	2311	4190	3917	e2897
22	2275	1956	1995	1955	1962	1688	809	518	2486	4191	3827	e2878
23	2263	1956	1992	1952	1963	1697	820	538	2638	4162	3759	e2866
24	2253	1953	1991	1946	1962	1728	827	560	2759	4170	3683	e2854
25	2239	1954	1990	1945	1960	1741	833	597	2919	4153	3612	e2843
26	2230	1980	1988	1942	1955	1743	815	628	3062	4146	3543	e2831
27	2218	1975	1983	1931	1951	1747	818	670	3196	4163	3469	e2816
28	2208	1975	1982	1927	1947	1749	e823	690	3339	4138	3410	e2808
29	2195	1978	1979	1929	---	1746	e829	710	3497	4153	3337	e2793
30	2185	1978	1977	1924	---	1740	e837	734	3644	4142	3272	e2783
31	2168	---	1973	1921	---	1706	---	759	---	4129	3216	---
MAX	2459	2156	1999	1975	1969	1944	1654	836	3644	4191	4154	3384
MIN	2168	1953	1973	1921	1923	1682	801	482	796	3760	3216	2783
a	7791.57	7789.78	7789.73	7789.23	7789.48	7787.13		7776.94	7804.19	7807.93	7800.74	
b	-361	-190	-5	-52	+26	-241	-869	-78	+2885	+485	-913	-433

CAL YR 1997 MAX 4164 MIN 904 b -456

WTR YR 1998 MAX 4191 MIN 482 b +254

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

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

LOCATION.—Lat 38°01'59", long 119°12'56", in SE 1/4 NE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 20 ft upstream from Deer Creek, 70 ft downstream from road culvert, 1,400 ft downstream from Lundy Lake Dam, and 7.5 mi northwest of Lee Vining.

DRAINAGE AREA.—18.1 mi².

PERIOD OF RECORD.—October 1990 to current year. 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, 154 ft³/s, July 21, 1998, gage height, 2.65 ft; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.3	.79	.70	.53	.53	.29	.00	.00	24	17	3.7
2	2.4	1.3	.79	.70	.53	.53	.25	.00	.00	25	13	3.5
3	2.3	1.3	.79	.70	.53	.50	.17	.00	.00	26	15	3.4
4	2.2	1.2	.79	.70	.53	.45	.12	.00	.00	27	18	3.4
5	2.2	1.2	.79	.70	.53	.45	.07	.00	.00	53	20	3.4
6	2.2	1.2	.79	.70	.53	.52	.01	.00	.00	75	31	3.4
7	2.2	1.2	.79	.70	.53	.53	.00	.00	.00	92	36	3.4
8	2.1	1.2	.79	.70	.53	.53	.00	.00	.00	109	36	3.4
9	2.0	1.2	.79	.70	.53	.47	.00	.00	.00	129	18	3.4
10	2.0	1.2	.79	.70	.53	.45	.00	.00	.00	126	9.4	3.4
11	2.0	1.1	.79	.62	.58	.45	.00	.00	.00	106	6.9	3.4
12	2.0	1.1	.79	.62	.61	.45	.00	.00	.00	87	6.7	3.4
13	2.0	2.2	.79	.61	.61	.45	.00	.00	.00	85	7.3	3.4
14	1.9	4.9	.72	.61	.61	.45	.00	.00	.00	86	9.7	3.4
15	1.9	4.9	.70	.61	.61	.45	.00	.00	.00	74	8.0	3.4
16	1.9	4.6	.70	.61	.61	.38	.00	.00	.00	77	7.5	3.3
17	1.9	12	.70	.61	.61	.38	.00	.00	.00	91	7.7	3.2
18	1.8	16	.70	.62	.61	.38	.00	.00	.00	108	6.7	3.0
19	1.7	8.4	.70	.70	.61	.38	.00	.00	.03	109	6.6	3.0
20	1.7	1.1	.70	.70	.61	.38	.00	.00	.21	110	6.3	3.0
21	1.7	.96	.70	.64	.53	.34	.00	.00	.37	137	6.3	2.9
22	1.6	.88	.70	.61	.53	.34	.00	.00	.53	109	6.2	2.8
23	1.6	.80	.70	.61	.53	.48	.00	.00	.74	82	6.0	2.8
24	1.5	.79	.70	.61	.53	.53	.00	.00	.95	80	6.0	2.8
25	1.5	.79	.70	.61	.53	.45	.00	.00	1.2	73	6.0	2.7
26	1.5	.79	.70	.61	.53	.39	.00	.00	1.5	55	5.6	2.6
27	1.4	.79	.70	.61	.53	.35	.00	.00	2.2	46	5.2	2.6
28	1.4	.79	.70	.57	.53	.31	.00	.00	2.9	42	4.7	2.6
29	1.4	.79	.70	.53	---	.31	.00	.00	3.5	43	4.5	2.6
30	1.3	.79	.70	.53	---	.31	.00	.00	14	44	4.3	2.5
31	1.3	---	.70	.53	---	.31	---	.00	---	30	4.0	---
TOTAL	57.0	76.77	22.89	19.77	15.61	13.23	0.91	0.00	28.13	2360	345.6	93.8
MEAN	1.84	2.56	.74	.64	.56	.43	.030	.000	.94	76.1	11.1	3.13
MAX	2.4	16	.79	.70	.61	.53	.29	.00	14	137	36	3.7
MIN	1.3	.79	.70	.53	.53	.31	.00	.00	.00	24	4.0	2.5
AC-FT ^a	113	152	45	39	31	26	1.8	.00	56	4680	685	186
a	0	0	0	0	0	0	0	0	5.3	243	407	5.6
b	887	602	501	544	514	995	2070	2190	3340	3820	3690	1940

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 - 1998, BY WATER YEAR (WY)

MEAN	1.55	1.07	.62	1.38	.50	.15	.010	.25	12.1	30.1	8.10	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1991 - 1998	
ANNUAL TOTAL	2301.56		3033.71			
ANNUAL MEAN	6.31		8.31		4.96	
HIGHEST ANNUAL MEAN					14.1	
LOWEST ANNUAL MEAN					.69	
HIGHEST DAILY MEAN	91	Jun 20	137	Jul 21	137	Jul 21 1998
LOWEST DAILY MEAN	.00	Mar 8	.00	Apr 7	.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 8	.00	Apr 7	.00	Oct 1 1990
INSTANTANEOUS PEAK FLOW			154	Jul 21	154	Jul 21 1998
INSTANTANEOUS PEAK STAGE			2.65	Jul 21	2.65	Jul 21 1998
ANNUAL RUNOFF (AC-FT)	4570		6020		3590	
ANNUAL DIVERSION (AC-FT) a	1370		661			
ANNUAL DIVERSION (AC-FT) b	26010		21100			
10 PERCENT EXCEEDS	16		18		7.5	
50 PERCENT EXCEEDS	2.2		.70		.53	
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, 5,433 acre-ft, Aug. 5, elevation, 9,416.45 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	12	5304	5400	5048
2	.00	.00	.00	.00	.00	.00	.00	1.1	26	5332	5401	5047
3	.00	.00	.00	.00	.00	.00	.00	2.7	43	5308	5403	5048
4	.00	.00	.00	.00	.00	.00	.00	2.2	77	5306	5428	5054
5	.00	.00	.00	.00	.00	.00	.00	2.7	113	e5300	5433	5079
6	.00	.00	.00	.00	.00	.00	.00	8.3	187	e5300	5430	5111
7	.00	.00	.00	.00	.00	.00	.00	11	231	e5300	5401	5116
8	.00	.00	.00	.00	.00	.00	.00	13	293	e5300	5375	5122
9	.00	.00	.00	.00	.00	.00	.00	10	367	e5300	5353	5398
10	.00	.00	.00	.00	.00	.00	.00	12	455	e5300	5370	5157
11	.00	.00	.00	.00	.00	.00	.00	13	405	e5300	5383	4858
12	.00	.00	.00	.00	.00	.00	.00	17	463	e5300	5377	4538
13	.00	.00	.00	.00	.00	.00	.00	26	431	e5300	5362	4212
14	.00	.00	.00	.00	.00	.00	.00	34	616	e5300	5368	3862
15	.00	.00	.00	.00	.00	.00	.00	35	987	e5320	5356	3661
16	.00	.00	.00	.00	.00	.00	.00	27	1529	e5320	5319	3585
17	.00	.00	.00	.00	.00	.00	.00	36	1937	e5320	5301	3568
18	.00	.00	.00	.00	.00	.00	.00	38	2267	e5320	5314	3565
19	.00	.00	.00	.00	.00	.00	.00	24	2610	e5320	5306	3571
20	.00	.00	.00	.00	.00	.00	.00	11	2963	e5320	5286	3565
21	.00	.00	.00	.00	.00	.00	.00	12	3338	e5320	5260	3539
22	.00	.00	.00	.00	.00	.00	.00	16	3707	e5340	5225	3511
23	.00	.00	.00	.00	.00	.00	.00	4.7	4082	e5340	5192	3481
24	.00	.00	.00	.00	.00	.00	.00	4.0	4370	e5340	5151	3458
25	.00	.00	.00	.00	.00	.00	.00	3.2	4769	e5340	5116	3441
26	.00	.00	.00	.00	.00	.00	.00	6.7	5096	e5340	5081	3437
27	.00	.00	.00	.00	.00	.00	.00	17	5265	e5340	5155	3445
28	.00	.00	.00	.00	.00	.00	.00	38	5327	e5340	5085	3447
29	.00	.00	.00	.00	---	.00	.00	18	5319	5377	5028	3453
30	.00	.00	.00	.00	---	.00	.00	24	5308	5388	5037	3476
31	.00	---	.00	.00	---	.00	---	11	---	5390	5047	---
MAX	.00	.00	.00	.00	.00	.00	.00	38	5327	5390	5433	5398
MIN	.00	.00	.00	.00	.00	.00	.00	.00	12	5300	5028	3437
a	9370.13	9370.74	9370.31	9370.61	9370.77	9371.18	9373.74	9377.87	9415.78	9416.22	9414.36	9405.18
b	0	0	0	0	0	0	0	+11	+5297	+82	-343	-1571
CAL YR 1997	MAX 5552	MIN .00	b 0									
WTR YR 1998	MAX 5433	MIN .00	b +3476									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287280 GEM LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37°45'07", long 119°08'25", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house 100 ft downstream from left abutment of dam on Rush Creek and 4.0 mi southwest of town of June Lake.

DRAINAGE AREA.—22.0 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, 17,491 acre-ft, July 20, elevation, 9,052.56 ft; minimum, 1,186 acre-ft, May 14, elevation, 8,984.13 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13475	10056	7738	6469	5307	4687	2639	1699	1942	10962	16699	16013
2	13333	9969	7686	6444	5333	4656	2566	1716	2106	11640	16769	15921
3	13192	9879	7623	6410	5327	4624	2509	1687	2246	12285	16853	15833
4	13049	9792	7569	6361	5292	4581	2446	1651	2272	12862	16937	15741
5	12893	9735	7560	6318	5259	4530	2376	1618	2376	13432	17030	15695
6	12745	9658	e7518	6270	5274	4461	2309	1548	2582	14036	17157	15695
7	12590	9574	e7479	6228	5270	4379	2236	1401	2794	14524	17270	15695
8	12425	9478	e7441	6179	5255	4293	2168	1291	3009	15017	17346	15695
9	12293	9397	7423	6141	5224	4203	2098	1224	3249	15562	17357	15695
10	12141	9317	7383	6098	5202	4125	2031	1213	3498	15916	17340	15695
11	11990	9234	7346	6064	5174	4039	1958	1206	3726	16102	17329	16104
12	11850	9148	7299	6031	5156	3959	1883	1204	3974	16255	17355	16307
13	11707	9061	7246	5986	5136	3877	1812	1206	4201	16427	17372	16497
14	11629	8984	7206	5956	5145	3797	1735	1186	4517	16578	17360	16707
15	11529	8894	7186	5925	5108	3709	1654	1208	4832	16682	17346	16791
16	11462	8807	7163	5898	5079	3631	1570	1250	5105	16847	17338	16738
17	11400	8723	7121	5849	5053	3551	1481	1250	5338	17106	17326	16615
18	11331	8636	7082	5840	5018	3472	1500	1250	5583	17340	17239	16461
19	11259	8564	7041	5800	4998	3393	1500	1274	5840	17443	17157	16313
20	11182	8473	6999	5762	4959	3314	1506	1304	6116	17491	17075	16213
21	11123	8394	6955	5723	4950	3237	1512	1342	6415	17482	16996	16149
22	11054	8318	6923	5683	4918	3172	1546	1388	6717	17445	16901	16015
23	10980	8225	6873	5648	4907	3110	1579	1477	7006	17391	16814	15885
24	10911	8141	6829	5605	4875	3090	1632	1592	7369	17349	16718	15758
25	10842	8068	6786	5572	4836	3046	1662	1774	7728	17284	16618	15623
26	10771	8089	6740	5530	4798	2979	1662	1825	8044	17168	16528	15499
27	10703	8000	6694	5487	4759	2938	1641	1816	8385	17016	16475	15373
28	10627	7931	6653	5443	4730	2879	1635	1896	8986	16862	16369	15241
29	10488	7865	6604	5426	---	2816	1689	1889	9678	16699	16282	15123
30	10324	7799	6556	5382	---	2758	1670	1833	10327	16592	16193	14989
31	10151	---	6515	5340	---	2694	---	1842	---	16648	16110	---
MAX	13475	10056	7738	6469	5333	4687	2639	1896	10327	17491	17372	16791
MIN	10151	7799	6515	5340	4730	2694	1481	1186	1942	10962	16110	14989
a	9025.12	9015.42	9009.86	9004.60	9001.80	8992.00	8986.72	8987.63	9025.82	9049.57	9047.64	9043.57
b	-3420	-2352	-1284	-1175	-610	-2036	-1024	+172	+8485	+6321	-538	-1121

CAL YR 1997 MAX 17309 MIN 1253 b +666

WTR YR 1998 MAX 17491 MIN 1186 b +1418

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287285 AGNEW LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37°45'30", long 119°07'52", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in boat house at left abutment of dam on Rush Creek and 3.3 mi southwest of town of June Lake.

DRAINAGE AREA.—23.3 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, 857 acre-ft, July 21, elevation, 8,497.06 ft; minimum, 26 acre-ft, Mar. 6–11, elevation, 8,471.12 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 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	752	141	26	27	26	27	26	33	34	753	809	783
2	750	137	26	26	26	26	26	33	41	789	809	782
3	749	131	26	27	26	26	26	34	49	815	809	781
4	748	126	26	27	26	26	26	34	55	817	808	780
5	745	122	26	27	27	26	26	34	60	817	807	780
6	741	118	26	27	26	26	26	34	70	817	804	780
7	740	112	26	27	26	26	26	33	82	845	803	780
8	738	107	26	27	26	26	26	33	93	847	814	780
9	737	103	26	27	26	26	26	31	107	848	817	780
10	736	98	26	27	27	26	27	31	126	849	816	780
11	734	93	26	27	27	26	27	31	145	849	814	782
12	734	89	26	27	27	26	27	29	166	849	815	782
13	732	84	27	27	26	26	26	28	184	849	817	781
14	685	79	26	27	26	26	26	28	209	848	816	780
15	640	75	26	27	26	26	26	29	244	848	816	779
16	552	70	26	27	26	26	26	27	279	848	815	778
17	500	65	27	27	26	26	26	28	309	849	812	777
18	467	61	27	27	26	26	26	29	336	850	809	775
19	434	57	26	26	26	26	27	29	364	853	807	773
20	401	52	27	26	26	29	31	28	394	855	804	771
21	368	48	26	26	26	30	32	28	427	857	802	770
22	335	44	26	26	26	34	33	29	458	853	800	769
23	302	40	26	27	26	34	31	29	493	851	799	768
24	269	35	26	27	26	32	31	31	523	849	796	766
25	237	32	26	27	27	32	31	30	559	848	793	765
26	206	31	26	27	27	31	31	30	593	848	791	765
27	184	29	26	27	27	31	31	30	625	848	791	765
28	167	26	26	27	27	30	31	31	657	848	789	764
29	157	26	26	26	---	28	32	30	690	847	788	763
30	151	26	26	26	---	28	33	30	721	811	786	762
31	146	---	27	26	---	27	---	31	---	808	785	---
MAX	752	141	27	27	27	34	33	34	721	857	817	783
MIN	146	26	26	26	26	26	26	27	34	753	785	762
a	8475.94	8471.13	8471.15	8471.14	8471.15	8471.15	8471.41	8471.33	8493.61	8495.83	8495.25	8494.68
b	-607	-120	+1	-1	+1	0	+6	-2	+690	+87	-23	-23

CAL YR 1997 MAX 822 MIN 26 b -4
WTR YR 1998 MAX 857 MIN 26 b +9

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.2	2.4	e.60	e.70	e.95	1.3	4.3	4.4	1.6	4.3	1.8
2	1.7	3.2	1.5	e.55	e.70	e.95	1.2	4.3	4.5	1.7	4.3	1.8
3	1.6	3.2	1.1	e.50	e.70	e.95	.99	4.3	4.5	4.6	4.1	1.8
4	1.6	3.2	.90	e.50	e.70	e.95	.98	4.2	4.4	16	4.2	1.8
5	1.6	3.2	.92	e.50	e.70	e.95	e1.0	4.2	4.5	17	4.3	1.9
6	1.9	3.2	1.2	e.50	e.70	e.95	e1.0	4.2	4.6	18	4.5	1.9
7	1.6	3.2	.55	e.50	e.70	e.95	e1.0	4.2	4.6	82	4.5	1.9
8	1.6	3.1	.14	e.50	e.70	e1.0	e1.0	4.2	4.5	172	8.5	1.9
9	1.8	3.1	.25	e.50	e.70	e1.0	e1.0	4.1	4.6	184	20	2.4
10	1.6	3.1	.94	e.50	e.70	e1.0	e.97	e4.1	2.8	191	20	1.9
11	1.6	3.1	e.94	e.50	e.80	e1.0	e.92	4.1	1.2	189	15	1.9
12	1.6	3.1	e.94	e.50	e.80	e1.0	e.92	4.1	1.3	189	12	1.9
13	1.6	3.0	e.94	e.50	e.80	e1.0	e.92	e4.1	1.3	190	14	1.9
14	1.8	3.0	e.94	e.50	e.80	e1.0	e.88	4.0	1.3	191	19	1.9
15	2.1	e3.0	e.94	e.65	e.80	e1.0	e.84	3.4	1.4	190	17	1.8
16	1.8	e3.0	e.94	e.65	e.80	e1.0	e.84	3.1	1.3	192	16	1.8
17	1.8	3.0	e.94	e.65	e.80	e1.5	e.84	2.9	1.4	194	12	1.8
18	1.8	3.0	e.88	e.65	e.80	e1.5	e.84	2.7	1.4	197	6.0	1.8
19	1.8	2.9	e.88	e.65	e.80	e1.5	e.84	2.8	1.4	233	3.1	1.8
20	1.8	2.8	e.88	e.65	e.80	e1.5	e.92	3.0	1.4	253	2.7	1.8
21	2.2	2.9	e.88	e.65	e.90	e1.5	e2.1	e3.3	1.4	295	2.5	1.8
22	2.2	2.8	e.88	e.65	e.90	e1.8	e3.1	3.4	1.4	266	2.3	1.8
23	2.1	2.7	e.88	e.65	e.90	2.0	4.0	3.6	1.5	236	2.0	1.8
24	1.9	2.7	e.79	e.72	e.90	3.0	3.8	4.0	1.5	221	2.3	1.8
25	1.9	e2.7	e.79	e.75	e.90	4.3	3.2	4.2	1.5	207	2.5	1.8
26	1.8	e2.7	e.67	e.77	e.90	e4.3	2.7	4.3	1.5	195	2.0	1.9
27	1.8	e2.7	e.67	e.77	e.90	e3.9	2.5	e4.2	1.6	192	1.9	1.8
28	1.8	2.9	e.67	e.77	e.90	e3.3	2.7	4.2	1.6	191	1.9	1.8
29	2.4	2.9	e.67	e.76	---	e2.9	3.2	4.3	1.6	190	1.9	1.8
30	3.2	2.7	e.60	e.69	---	e2.3	4.0	4.4	1.6	125	1.9	1.8
31	3.2	---	e.60	e.69	---	e1.8	---	4.4	---	5.6	1.9	---
TOTAL	58.9	89.3	27.22	18.92	22.20	52.75	50.50	120.6	72.0	4829.5	218.6	55.6
MEAN	1.90	2.98	.88	.61	.79	1.70	1.68	3.89	2.40	156	7.05	1.85
MAX	3.2	3.2	2.4	.77	.90	4.3	4.0	4.4	4.6	295	20	2.4
MIN	1.6	2.7	.14	.50	.70	.95	.84	2.7	1.2	1.6	1.9	1.8
AC-FT	117	177	54	38	44	105	100	239	143	9580	434	110
a	3930	2410	1940	1930	1720	2480	2300	3560	5580	5710	5400	5130

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 - 1998, BY WATER YEAR (WY)

MEAN	1.81	1.64	.78	1.08	.77	.89	1.41	1.13	17.2	56.6	12.9	.84
MAX	3.06	3.67	1.37	4.72	1.59	1.70	2.99	3.89	81.8	218	89.8	1.85
(WY)	1996	1996	1995	1997	1997	1998	1996	1998	1995	1995	1995	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1991 - 1998	
ANNUAL TOTAL	1061.04		5616.09			
ANNUAL MEAN	2.91		15.4		8.17	
HIGHEST ANNUAL MEAN					33.6	1995
LOWEST ANNUAL MEAN					.41	1994
HIGHEST DAILY MEAN	23	May 30	295	Jul 21	397	Jul 30 1995
LOWEST DAILY MEAN	.14	Dec 8	.14	Dec 8	.00	Oct 27 1990
ANNUAL SEVEN-DAY MINIMUM	.67	Dec 25	.50	Jan 3	.00	Mar 12 1991
INSTANTANEOUS PEAK FLOW			321	Jul 21	441	Jul 30 1995
INSTANTANEOUS PEAK STAGE			3.83	Jul 21	4.90	Jul 30 1995
ANNUAL RUNOFF (AC-FT)	2100		11140		5920	
ANNUAL DIVERSION (AC-FT) a	45140		42060			
10 PERCENT EXCEEDS	7.2		9.9		4.5	
50 PERCENT EXCEEDS	2.1		1.8		.69	
90 PERCENT EXCEEDS	.94		.70		.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.—4.43 mi², revised.

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, 6,730 acre-ft, Sept. 13, elevation, unknown; minimum, 663 acre-ft, May 22, elevation, 10,052.40 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5698	5182	4745	4322	3640	3148	2066	794	716	2962	6110	e6590
2	5668	5160	4726	4322	3669	3124	1998	798	754	3080	6141	e6610
3	5645	5148	4712	4307	3688	3095	1940	798	785	3201	6171	e6629
4	5630	5123	4692	4303	3656	3067	1881	798	796	3314	6200	e6644
5	5618	5109	4690	4289	3629	3049	1822	798	817	3425	6243	e6663
6	5613	5077	4676	4261	3633	3034	1771	800	856	3538	6300	e6681
7	5595	5079	4690	4233	3647	2999	1710	794	890	3667	6354	e6699
8	5580	5060	4690	4195	3638	2973	1652	787	936	3822	6395	e6710
9	5568	5040	4680	4165	3610	2944	1595	781	971	3988	6416	e6715
10	5565	5031	4661	4134	3579	2914	1545	773	1021	4127	6434	e6717
11	5550	5016	4642	4125	3561	2886	1497	762	1050	4251	6460	e6723
12	5530	4999	4628	4123	3538	2860	1443	758	1085	4345	6480	e6725
13	5511	4987	4602	4090	3506	2829	1400	747	1110	4463	6514	e6730
14	5493	4970	4606	4071	3517	2803	1352	733	1163	4559	6540	e6717
15	5473	4953	4594	4099	3493	2771	1305	720	1250	4654	6577	e6696
16	5461	4928	4575	4083	3470	2747	1253	722	1362	4760	6603	e6683
17	5443	4909	4561	4037	3443	2719	1202	705	1439	4887	6626	e6673
18	5426	4877	4554	4034	3410	2691	1151	694	1537	5016	6644	e6668
19	5409	4892	4528	4018	3401	2663	1105	679	1632	5131	e6629	e6660
20	5404	4870	4509	3990	3365	2637	1060	675	1731	5285	e6629	e6652
21	5379	4853	4509	3955	3368	2607	1021	671	1834	5424	e6629	e6647
22	5361	4808	4489	3920	3343	2581	984	663	1940	5525	e6629	e6637
23	5342	4824	4461	3893	3339	2535	957	667	2033	5625	e6629	e6631
24	5332	4798	4461	3854	3308	2520	915	665	2118	5715	e6610	e6621
25	5307	4786	4440	3822	3277	2471	882	690	2239	5780	e6590	e6613
26	5288	4827	4418	3797	3248	2405	834	705	2355	5838	e6582	e6605
27	5273	4808	4394	3758	3215	2353	788	699	2465	5894	e6574	e6595
28	5258	4791	4380	3729	3181	2304	743	705	2588	5949	e6568	e6584
29	5236	4774	4366	3720	---	2239	709	703	2715	6006	e6566	e6577
30	5212	4764	4350	3683	---	2170	800	694	2840	6051	e6564	e6566
31	5197	---	4329	3654	---	2116	---	694	---	6085	e6571	---
MAX	5698	5182	4745	4322	3688	3148	2066	800	2840	6085	6644	6730
MIN	5197	4764	4329	3654	3181	2116	709	663	716	2962	6110	6566
a	10073.34	10071.56	10069.73	10066.81	10064.70	10059.73	10053.12	10052.56	10063.14	10076.89		
b	-498	-433	-435	-675	-473	-1065	-1316	-106	+2146	+3245	+486	-5
CAL YR 1997	MAX 6379	MIN 769		b -1648								
WTR YR 1998	MAX 6730	MIN 663	b +871									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287655 LEE VINING CREEK BELOW SADDLEBAG LAKE, NEAR LEE VINING, CA

LOCATION.—Lat 37°57'52", long 119°16'20", in SE 1/4 SE 1/4 sec 12, T.1 N., R.24 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 500 ft downstream from Saddleback Lake Dam and 8.1 mi west of Lee Vining.

DRAINAGE AREA.—4.43 mi².

PERIOD OF RECORD.—October 1997 to September 1998.

GAGE.—Water-stage recorder. Elevation of gage is 10,050 ft above sea level (from topographic map).

REMARKS.—Flow regulated by Saddleback Lake (station 10287650) 500 ft upstream.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33 ft³/s, Mar. 23, 1998, gage height, 2.99 ft; minimum daily, 8.3 ft³/s, May 22–24, 1998.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	10	9.6	8.7	e15	e12	29	9.0	8.9	10	10	10
2	9.2	10	9.6	8.7	e15	e12	29	9.6	9.2	10	9.9	10
3	9.2	10	9.6	8.7	e15	e12	29	9.7	9.6	11	9.6	10
4	9.2	10	9.5	8.7	e15	e12	28	9.6	9.7	11	9.6	10
5	9.2	10	9.5	8.7	e15	e12	28	9.6	9.9	11	9.7	10
6	9.2	10	9.5	14	e15	e12	27	9.5	10	10	9.6	10
7	9.2	9.9	9.5	18	e14	e12	27	9.6	10	10	9.7	10
8	9.2	10	9.5	e18	e14	e12	26	9.6	10	10	9.8	10
9	9.1	9.9	9.5	e17	e14	e12	26	9.5	10	10	9.7	10
10	9.1	9.9	9.5	e17	e14	e12	25	9.4	10	11	9.8	10
11	9.1	9.9	9.2	e17	e14	e11	25	9.3	10	11	9.9	10
12	9.2	9.8	9.1	e17	e14	e11	25	9.3	11	11	9.9	10
13	9.1	9.8	9.1	e17	e14	e11	24	9.1	11	11	9.9	10
14	9.1	9.8	9.1	e17	e14	e11	24	9.0	11	11	10	10
15	9.1	9.8	9.1	e17	e14	e11	23	8.9	12	10	9.9	10
16	9.1	9.7	9.1	e17	e14	e11	23	8.8	12	9.3	9.9	10
17	9.1	9.7	9.1	e17	e13	e11	22	8.8	12	9.5	9.9	10
18	9.1	9.7	9.0	e17	e13	e11	22	8.6	13	9.5	10	10
19	9.0	9.7	9.0	e16	e13	e11	21	8.5	13	9.5	9.9	10
20	9.0	9.7	9.0	e16	e13	e11	21	8.4	14	9.8	10	10
21	9.0	9.7	9.0	e16	e13	e10	20	8.4	14	10	9.9	10
22	9.0	9.7	9.0	e16	e13	e10	20	8.3	14	10	9.9	10
23	9.0	9.7	9.0	e16	e13	e21	19	8.3	15	10	9.9	10
24	9.0	9.6	8.9	e16	e13	33	19	8.3	15	9.8	9.8	10
25	8.9	9.6	8.9	e16	e13	32	18	8.4	12	9.9	9.9	10
26	8.9	9.6	8.8	e16	e13	32	18	8.7	9.2	9.9	9.9	10
27	8.9	9.6	8.8	e16	e12	32	17	8.7	9.4	10	10	10
28	8.9	9.6	8.8	e16	e12	31	16	8.7	9.6	10	10	10
29	8.9	9.6	8.8	e15	---	31	16	8.8	9.9	10	10	10
30	8.9	9.6	8.8	e15	---	30	11	8.7	10	10	9.9	10
31	9.6	---	8.7	e15	---	30	---	8.7	---	10	10	---
TOTAL	281.7	293.6	283.6	468.5	384	522	678	277.8	334.4	315.2	305.9	300
MEAN	9.09	9.79	9.15	15.1	13.7	16.8	22.6	8.96	11.1	10.2	9.87	10.0
MAX	9.6	10	9.6	18	15	33	29	9.7	15	11	10	10
MIN	8.9	9.6	8.7	8.7	12	10	11	8.3	8.9	9.3	9.6	10
AC-FT	559	582	563	929	762	1040	1340	551	663	625	607	595

SUMMARY STATISTICS

FOR 1998 WATER YEAR

ANNUAL TOTAL	4444.7
ANNUAL MEAN	12.2
HIGHEST DAILY MEAN	33 Mar 24
LOWEST DAILY MEAN	8.3 May 22
ANNUAL SEVEN-DAY MINIMUM	8.4 May 19
INSTANTANEOUS PEAK FLOW	33 Mar 23
INSTANTANEOUS PEAK STAGE	2.99 Mar 23
ANNUAL RUNOFF (AC-FT)	8820
10 PERCENT EXCEEDS	18
50 PERCENT EXCEEDS	10
90 PERCENT EXCEEDS	8.9

e Estimated.

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, 1,265 acre-ft, Aug. 17–19, elevation, 9,650.42 ft; minimum, 122 acre-ft, Jan. 1, elevation, 9,629.77 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1044	336	126	122	129	125	131	141	165	1053	1057	1255
2	1027	316	125	125	136	125	129	142	184	1064	1021	1243
3	1007	299	125	125	138	125	129	143	200	1068	987	1236
4	988	281	125	127	135	125	128	143	206	1068	978	1228
5	970	263	125	127	132	127	127	143	221	1061	999	1220
6	953	249	127	126	136	127	128	142	248	1064	1028	1212
7	935	235	127	127	138	127	128	139	273	1079	1062	1201
8	917	219	131	125	138	126	127	137	302	1110	1090	1192
9	901	205	130	126	134	126	126	138	334	1143	1113	1191
10	887	194	127	127	133	125	125	137	366	1150	1135	1183
11	869	183	126	129	131	125	126	137	380	1130	1157	1171
12	853	171	126	133	131	125	126	136	392	1112	1180	1158
13	836	161	123	131	130	125	126	136	408	1101	1202	1146
14	811	152	127	131	135	124	127	134	456	1079	1224	1133
15	779	143	127	137	133	124	127	133	535	1083	1245	1126
16	747	134	126	134	131	124	125	136	633	1108	1260	1128
17	716	129	125	131	131	124	125	134	691	1136	1265	1133
18	686	127	125	132	129	123	125	133	751	1158	1265	1135
19	656	129	124	132	130	124	125	133	817	1174	1265	1135
20	629	127	124	131	129	124	126	135	878	1203	1263	1135
21	600	126	123	129	131	124	128	136	940	1214	1262	1135
22	572	125	125	128	131	124	132	136	993	1215	1260	1135
23	546	125	124	127	132	126	135	139	1016	1217	1259	1133
24	520	124	125	127	131	133	134	143	1011	1230	1259	1133
25	494	126	125	126	129	135	133	148	1024	1228	1258	1133
26	468	133	124	125	128	133	131	152	1017	1214	1259	1135
27	444	130	123	125	127	134	130	148	1012	1198	1259	1136
28	421	129	123	125	126	134	131	149	1030	1180	1259	1135
29	398	128	123	127	---	132	133	148	1048	1157	1259	1137
30	376	127	123	127	---	130	138	146	1051	1128	1258	e1138
31	356	---	122	127	---	130	---	151	---	1093	1256	---
MAX	1044	336	131	137	138	135	138	152	1051	1230	1265	1255
MIN	356	124	122	122	126	123	125	133	165	1053	978	1126
a	9634.99	9629.91	9629.78	9629.90	9629.87	9629.98	9630.16	9630.46	9647.36	9647.99	9650.30	
b	-708	-229	-5	+5	-1	+4	+8	+13	+900	+42	+163	-118

CAL YR 1997 MAX 1276 MIN 116 b -4
WTR YR 1998 MAX 1265 MIN 122 b +74

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

10287720 GLACIER CREEK BELOW TIOGA LAKE, NEAR LEE VINING, CA

LOCATION.—Lat 37°56'10", long 119°13'48", in SE 1/4 SE 1/4 sec.19, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank 300 ft downstream from Tioga Lake Dam and 7.3 mi west of Lee Vining.

DRAINAGE AREA.—3.67 mi².

PERIOD OF RECORD.—October 1997 to September 1998. Unpublished records prior to October 1997 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 9,620 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Tioga Lake (station 10287700) 300 ft upstream.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 86 ft³/s, June 24, 1998, gage height, 2.50 ft; minimum daily, 1.0 ft³/s, Mar. 3, 1998.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	1.8	e1.3	e1.3	1.1	1.7	3.7	6.5	60	36	10
2	12	12	1.8	e1.4	e1.6	1.1	1.7	4.3	7.3	61	35	13
3	12	11	1.7	e1.5	e1.7	1.0	1.5	4.3	8.0	61	35	15
4	12	11	1.6	e1.6	e1.8	1.1	1.5	4.5	8.2	61	20	15
5	12	11	1.6	e1.6	e1.8	1.1	1.5	4.5	8.2	61	7.1	15
6	11	10	1.6	e1.7	1.8	1.1	1.5	4.5	8.7	61	4.8	15
7	11	9.6	e1.7	1.7	2.2	1.1	1.5	4.2	9.4	61	2.6	15
8	11	9.3	e2.1	1.6	2.9	1.1	1.5	4.0	11	62	2.6	15
9	11	8.9	2.1	1.4	2.5	1.1	1.4	3.6	11	62	2.6	14
10	11	8.5	1.9	e1.4	1.8	1.1	1.4	3.6	12	63	2.6	14
11	11	8.0	1.8	e1.4	1.7	1.1	1.4	3.4	12	63	2.6	14
12	11	7.6	1.7	e1.5	1.6	1.1	1.4	3.3	13	62	2.6	14
13	11	7.1	1.7	e1.5	1.5	1.1	1.4	3.3	13	61	2.6	14
14	14	6.7	e1.7	e1.5	1.6	1.1	1.4	3.2	13	61	2.6	14
15	18	6.2	e1.7	e1.6	1.9	1.1	1.4	3.0	15	42	2.6	11
16	18	5.6	1.7	e1.6	1.7	1.1	1.4	3.1	17	35	4.5	5.9
17	18	4.9	1.7	e1.6	1.6	1.1	1.4	3.1	18	38	9.6	4.5
18	17	3.5	1.6	e1.6	1.4	1.1	1.3	3.1	18	39	10	4.4
19	17	2.2	1.6	e1.7	1.3	1.1	1.3	3.2	19	39	10	4.3
20	17	2.1	1.6	1.7	1.3	1.1	1.3	3.3	20	40	9.9	4.3
21	17	1.8	1.5	1.6	1.4	1.1	1.3	3.7	20	41	9.1	4.2
22	16	1.8	e1.5	1.4	1.5	1.1	1.6	3.8	23	41	8.4	4.2
23	16	1.7	1.4	1.3	1.5	1.1	2.0	4.2	34	39	7.9	4.2
24	15	1.7	1.4	1.1	1.5	e1.1	2.1	4.6	50	36	7.5	4.2
25	15	1.6	1.4	1.1	1.4	e1.1	2.1	5.4	58	36	7.3	4.2
26	14	e2.2	1.4	1.1	1.4	e1.3	2.1	6.0	60	36	7.3	4.2
27	14	2.6	1.4	1.1	1.3	1.9	2.1	6.0	60	36	7.1	4.2
28	14	2.4	1.4	1.1	1.2	2.0	2.0	5.7	60	36	6.9	4.2
29	13	2.2	1.4	e1.1	---	1.9	2.1	5.8	60	36	6.7	4.2
30	13	1.9	1.4	1.2	---	1.8	2.8	5.8	61	36	6.8	4.2
31	12	---	1.3	1.1	---	1.7	---	5.8	---	36	7.6	---
TOTAL	425	177.1	50.2	44.1	46.2	38.0	49.1	130.0	734.3	1502	287.9	273.4
MEAN	13.7	5.90	1.62	1.42	1.65	1.23	1.64	4.19	24.5	48.5	9.29	9.11
MAX	18	12	2.1	1.7	2.9	2.0	2.8	6.0	61	63	36	15
MIN	11	1.6	1.3	1.1	1.2	1.0	1.3	3.0	6.5	35	2.6	4.2
AC-FT	843	351	100	87	92	75	97	258	1460	2980	571	542

SUMMARY STATISTICS

FOR 1998 WATER YEAR

ANNUAL TOTAL	3757.3
ANNUAL MEAN	10.3
HIGHEST DAILY MEAN	63 Jul 10
LOWEST DAILY MEAN	1.0 Mar 3
ANNUAL SEVEN-DAY MINIMUM	1.1 Mar 1
INSTANTANEOUS PEAK FLOW	86 Jun 24
INSTANTANEOUS PEAK STAGE	2.50 Jun 24
ANNUAL RUNOFF (AC-FT)	7450
10 PERCENT EXCEEDS	36
50 PERCENT EXCEEDS	3.5
90 PERCENT EXCEEDS	1.3

e Estimated.

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, 605 acre-ft, July 8, elevation, 9,494.32 ft; minimum, 386 acre-ft, Sept. 20, elevation, 9,490.71 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

9,485	96	9,493	522
9,489	290	9,497	780

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	428	433	428	451	433	445	445	454	459	576	491	450
2	428	433	430	450	437	442	440	448	462	583	493	453
3	428	433	434	446	438	437	437	433	448	576	497	458
4	426	434	440	442	438	429	433	423	421	574	477	465
5	424	433	434	440	442	434	431	421	433	569	453	463
6	425	434	418	448	436	433	430	415	458	579	449	451
7	428	430	401	449	435	445	429	423	446	589	449	445
8	433	429	394	445	428	448	439	424	444	605	425	438
9	437	428	392	444	442	449	444	427	462	598	418	451
10	442	433	391	445	446	451	448	424	476	578	418	435
11	440	431	389	444	445	451	452	424	463	565	428	431
12	434	430	390	444	449	440	446	422	448	571	e451	425
13	431	430	398	441	445	431	440	418	437	569	462	422
14	439	428	407	437	441	428	436	422	498	560	461	420
15	443	430	415	431	437	433	440	431	558	550	467	419
16	442	431	421	439	442	437	443	445	569	561	473	410
17	440	431	426	433	440	442	444	452	549	573	e449	401
18	437	431	431	437	441	447	446	458	555	569	e432	397
19	436	424	435	435	445	453	449	465	555	563	418	387
20	435	424	440	441	444	460	458	467	557	595	409	386
21	434	423	444	433	438	468	467	458	560	564	401	389
22	430	425	445	428	434	483	475	453	561	545	404	392
23	429	425	448	432	444	481	468	456	556	551	404	396
24	429	423	445	439	449	465	445	458	583	546	406	401
25	433	425	442	434	450	445	430	458	586	528	409	409
26	435	403	440	431	446	434	435	432	569	520	414	419
27	436	409	439	433	447	441	447	413	573	517	415	428
28	437	416	441	437	447	455	458	414	585	520	416	431
29	437	421	444	432	---	457	463	412	586	520	424	436
30	435	425	446	440	---	452	457	415	577	508	445	438
31	434	---	449	433	---	450	---	437	---	496	456	---
MAX	443	434	449	451	450	483	475	467	586	605	497	465
MIN	424	403	389	428	428	428	429	412	421	496	401	386
a	9491.53	9491.38	9491.79	9491.52	9491.76	9491.81	9491.93	9491.58	9493.87	9492.57	9491.92	9491.60
b	+7	-9	+24	-16	+14	+3	+7	-20	+140	-81	-40	-18

CAL YR 1997 MAX 677 MIN 389 b -2
WTR YR 1998 MAX 605 MIN 386 b +11

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).

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 1997 TO SEPTEMBER 1998
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	122	1.1	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	131	.99	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	134	1.7	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	123	1.5	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	113	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	120	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	139	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	167	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	179	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	143	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	106	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	104	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	106	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	95	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	45	74	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	105	74	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	81	101	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	68	102	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	77	94	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	77	116	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	84	140	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	86	79	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	88	66	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	126	66	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	137	46	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	120	28	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	109	24	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	130	21	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	139	25	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	133	19	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	4.6	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1605.00	2861.6	5.29	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	53.5	92.3	.17	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	139	179	1.7	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	4.6	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	3180	5680	10	.00
a	1660	1100	623	1080	1430	1920	1840	1910	4950	5470	3370	1740

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 - 1998, BY WATER YEAR (WY)

MEAN	1.72	.15	.000	2.41	.74	.64	1.85	6.83	29.9	30.8	1.31	.12
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1991 - 1998

ANNUAL TOTAL	3048.44			4471.89								
ANNUAL MEAN	8.35			12.3						6.40		
HIGHEST ANNUAL MEAN										17.3		1995
LOWEST ANNUAL MEAN										.27		1994
HIGHEST DAILY MEAN	245	Jan 3		179	Jul 9					271	Jul 9	1995
LOWEST DAILY MEAN	.00	Jan 7		.00	Oct 1					.00	Oct 1	1990
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 7		.00	Oct 1					.00	Oct 1	1990
INSTANTANEOUS PEAK FLOW				226	Jul 8					310	Jul 9	1995
INSTANTANEOUS PEAK STAGE				3.98	Jul 8					5.52	Mar 22	1993
ANNUAL RUNOFF (AC-FT)	6050			8870						4640		
ANNUAL DIVERSION (AC-FT) a	38400			27100								
10 PERCENT EXCEEDS	31			70						10		
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.

PACIFIC SLOPE BASINS IN CALIFORNIA
TIJUANA RIVER BASIN

141

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 good below 200 ft³/s and fair above. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.10	.37	70	237	23	7.2	1.7	.00	.00
2	.00	.00	.00	.10	.35	60	187	23	6.2	1.6	.00	.00
3	.00	.00	.00	.10	7.5	53	138	23	5.7	1.6	.00	.00
4	.00	.00	.00	.24	49	46	116	23	6.0	1.8	.00	.00
5	.00	.00	.00	.26	26	38	99	28	6.1	2.0	.00	.00
6	.00	.00	.18	.16	35	41	86	34	5.8	1.8	.00	.00
7	.00	.00	.00	.12	43	43	95	33	6.0	1.4	.00	.00
8	.00	.00	.23	.11	162	31	79	29	7.2	1.2	.00	.00
9	.00	.00	.13	.36	140	25	64	28	7.2	1.1	.00	.00
10	.00	.00	.06	2.3	61	23	57	27	11	.85	.00	.00
11	.00	.00	.01	2.8	35	21	60	25	8.1	.70	.00	.00
12	.00	.00	.00	2.1	24	19	161	26	8.8	.66	.00	.00
13	.00	.00	.00	1.8	20	18	105	50	7.1	.64	.00	.00
14	.00	.00	.00	1.7	181	23	86	41	5.5	.62	.00	.00
15	.00	.00	.00	1.4	365	28	110	29	5.3	.54	.00	.00
16	.00	.00	.00	1.8	136	22	100	24	5.4	.45	.00	.00
17	.00	.00	.00	1.6	226	20	76	21	5.6	.35	.00	.00
18	.00	.00	.00	1.2	158	19	65	18	4.8	.27	.00	.00
19	.00	.00	.00	1.3	100	17	55	15	4.3	.20	.00	.00
20	.00	.00	.00	.99	122	16	64	14	3.8	.16	.00	.00
21	.00	.00	1.2	.81	97	15	161	12	3.5	.18	.00	.00
22	.00	.00	1.9	.53	75	14	181	11	3.2	.24	.00	.00
23	.00	.00	.65	.45	73	14	161	11	2.9	.28	.00	.00
24	.00	.00	.45	.41	264	14	128	10	2.9	.25	.00	.00
25	.00	.00	.31	.36	207	19	46	11	2.8	.21	.00	.00
26	.00	.00	.24	.30	138	50	39	12	2.5	.15	.00	.00
27	.00	.00	.20	.30	110	47	34	11	2.5	.05	.00	.00
28	.00	.00	.20	.30	88	142	30	11	2.5	.00	.00	.00
29	.00	.00	.15	.82	---	305	26	9.9	2.3	.00	.00	.00
30	.00	.00	.13	1.1	---	215	24	8.9	2.0	.00	.00	.00
31	.00	---	.10	.48	---	140	---	7.9	---	.00	.00	---
TOTAL	0.00	0.00	6.14	26.40	2943.22	1608	2870	649.7	154.2	21.00	0.00	0.00
MEAN	.000	.000	.20	.85	105	51.9	95.7	21.0	5.14	.68	.000	.000
MAX	.00	.00	1.9	2.8	365	305	237	50	11	2.0	.00	.00
MIN	.00	.00	.00	.10	.35	14	24	7.9	2.0	.00	.00	.00
AC-FT	.00	.00	12	52	5840	3190	5690	1290	306	42	.00	.00

PACIFIC SLOPE BASINS IN CALIFORNIA
TIJUANA RIVER BASIN

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.18	.78	2.49	19.3	53.7	72.2	36.7	13.0	4.68	1.45	1.12	1.13
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1937 - 1998	
ANNUAL TOTAL	226.78		8278.66			
ANNUAL MEAN	.62		22.7		17.1	
HIGHEST ANNUAL MEAN					243	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	57	Jan 13	365	Feb 15	8430	Feb 21 1980
LOWEST DAILY MEAN	.00	Apr 14	.00	Oct 1	.00	Oct 1 1936
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 25	.00	Oct 1	.00	Oct 1 1936
INSTANTANEOUS PEAK FLOW			1220	Feb 14	11700	Feb 21 1980
INSTANTANEOUS PEAK STAGE			6.71	Feb 14	11.15	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	450		16420		12390	
10 PERCENT EXCEEDS	1.2		77		11	
50 PERCENT EXCEEDS	.00		.45		.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 good. Peaks are attenuated by small conservation reservoir 1 mi upstream since August 1956. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,580 ft³/s, Jan. 16, 1993, gage height, 6.86 ft, from rating curve extended above 340 ft³/s; no flow for part of some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	e.06	.20	.23	1.2	14	53	13	6.6	2.3	1.0	.64
2	.00	e.06	.19	.23	1.1	13	35	13	6.1	2.3	.98	.61
3	.03	e.06	.18	.24	2.8	12	27	12	5.8	2.3	.94	.70
4	.05	e.06	.18	.26	19	11	24	12	6.3	2.2	.89	.73
5	.05	e.06	.18	.26	8.3	10	23	13	6.4	2.1	.88	.70
6	.05	.07	.47	.25	7.7	14	23	14	6.2	2.1	.87	.61
7	.06	.08	.33	.24	13	13	24	14	6.0	2.0	.84	.60
8	.07	.09	.32	.25	31	10	22	e14	7.3	2.0	.82	.60
9	.06	.09	.28	.27	42	8.9	19	e15	8.3	2.1	1.0	.61
10	.06	.11	.26	.30	13	7.9	19	e15	7.3	2.0	1.0	.60
11	.07	.12	.23	.29	8.1	7.0	22	e15	7.0	1.9	.88	.59
12	.06	.12	.21	.27	5.8	6.6	47	e16	7.7	1.8	.81	.58
13	.05	.17	.22	.27	4.9	6.5	29	e17	7.5	2.1	.80	.56
14	.04	.16	.22	.27	62	11	25	e15	6.4	2.1	.79	.56
15	.03	.15	.22	.27	163	13	36	e15	5.7	2.0	.73	.55
16	.03	.15	.22	.29	26	10	28	14	5.4	1.9	.81	.55
17	.02	.15	.21	.33	33	9.9	23	13	5.1	1.7	.79	.54
18	e.03	.14	.23	.37	25	8.5	22	12	4.5	1.5	.76	.56
19	e.03	.14	.22	.42	16	6.9	20	12	4.3	1.5	.73	.58
20	e.03	.15	.21	.59	28	6.6	19	11	4.1	1.6	.72	.63
21	e.03	.14	.35	.58	19	6.7	17	11	4.0	2.1	.72	.65
22	e.04	.14	.30	.51	16	6.4	15	11	3.7	2.0	.69	.67
23	e.04	.14	.28	.49	17	6.3	15	10	3.4	1.9	.64	.67
24	e.04	.14	.28	.49	70	6.0	15	9.7	3.2	1.7	.65	.68
25	e.04	.14	.27	.49	35	8.2	15	9.7	3.1	1.5	.65	.67
26	e.04	.19	.26	.47	22	21	15	11	3.0	1.3	.66	.73
27	e.05	.20	.26	.48	18	16	14	11	2.7	1.2	.67	.69
28	e.05	.18	.25	.48	16	77	14	9.9	2.5	1.2	.63	.66
29	e.05	.17	.25	.58	---	108	13	8.7	2.4	1.1	.61	.66
30	e.05	.21	.24	1.4	---	48	13	8.0	2.3	1.1	.60	.66
31	e.05	---	.23	1.2	---	31	---	7.1	---	1.1	.59	---
TOTAL	1.30	3.84	7.75	13.07	723.9	534.4	686	382.1	154.3	55.7	24.15	18.84
MEAN	.042	.13	.25	.42	25.9	17.2	22.9	12.3	5.14	1.80	.78	.63
MAX	.07	.21	.47	1.4	163	108	53	17	8.3	2.3	1.0	.73
MIN	.00	.06	.18	.23	1.1	6.0	13	7.1	2.3	1.1	.59	.54
AC-FT	2.6	7.6	15	26	1440	1060	1360	758	306	110	48	37

e Estimated.

TIJUANA RIVER BASIN

11012500 CAMPO CREEK NEAR CAMPO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.81	1.48	2.60	5.76	8.22	12.0	7.62	3.62	1.84	.97	.89	.67
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1937 - 1998			
ANNUAL TOTAL	575.04				2605.35							
ANNUAL MEAN	1.58				7.14				3.85			
HIGHEST ANNUAL MEAN									39.6			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	66				163				745			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.03				.00			
INSTANTANEOUS PEAK FLOW					652				1580			
INSTANTANEOUS PEAK STAGE					4.02				6.86			
ANNUAL RUNOFF (AC-FT)	1140				5170				2790			
10 PERCENT EXCEEDS	4.4				19				9.4			
50 PERCENT EXCEEDS	.19				1.1				.10			
90 PERCENT EXCEEDS	.00				.07				.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 fair. No regulation upstream from station. Water is diverted from Cottonwood Creek at Barrett Lake (station 11011000) via San Diego and Dulzura Conduit into Dulzura Creek, a tributary to Jamul Creek, and is included in discharge for this station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 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)
Feb. 8	2400	1,250	4.25	Feb. 24	1200	1,650	4.50
Feb. 14	2245	3,200	5.68	Mar. 29	1645	730	3.96
Feb. 17	0930	1,880	4.68	Apr. 12	0845	176	3.36

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	37	33	34	7.0	75	335	49	33	27	42	1.7
2	20	36	32	35	6.0	67	201	49	33	28	42	1.3
3	43	36	32	35	16	53	133	48	32	28	42	1.1
4	46	36	31	36	37	41	111	48	32	27	42	.84
5	46	36	30	35	13	33	96	49	33	27	42	.57
6	46	36	12	34	17	39	89	51	33	27	42	.26
7	43	36	12	34	25	32	88	49	33	26	42	.21
8	42	36	8.3	39	224	27	73	49	34	26	42	.19
9	41	36	6.9	42	306	25	61	49	32	26	42	.19
10	40	36	5.8	43	58	22	52	48	13	27	42	.15
11	40	36	5.1	41	31	20	57	47	9.0	36	42	.15
12	40	36	4.4	40	20	18	116	49	25	36	42	.11
13	40	37	3.9	40	15	17	77	58	31	36	42	.08
14	39	35	3.6	39	449	23	70	50	31	36	42	.05
15	39	35	3.3	40	741	21	98	48	31	35	42	.05
16	39	34	12	40	130	18	77	46	31	35	42	.01
17	39	34	19	33	642	18	66	45	31	35	42	.00
18	39	34	31	33	182	16	59	44	30	35	42	3.8
19	39	34	33	33	110	14	56	42	30	36	42	5.7
20	39	34	33	33	174	13	51	41	30	36	42	5.8
21	39	34	40	33	113	12	47	39	29	36	42	6.1
22	39	33	37	33	94	12	45	38	29	36	42	2.7
23	39	33	35	32	87	11	54	37	29	36	42	6.9
24	39	33	35	32	1030	9.7	58	36	29	42	42	23
25	38	33	35	32	341	15	58	36	28	43	42	29
26	38	35	34	32	173	43	57	38	28	42	37	38
27	38	34	35	32	124	29	55	37	28	42	11	40
28	37	33	34	32	91	267	54	35	28	42	4.5	40
29	37	33	35	34	---	437	52	34	28	42	19	40
30	37	33	34	31	---	233	50	34	27	42	6.1	40
31	37	---	34	9.3	---	141	---	33	---	42	2.5	---
TOTAL	1196	1044	739.3	1071.3	5256.0	1801.7	2496	1356	870.0	1070	1130.1	287.96
MEAN	38.6	34.8	23.8	34.6	188	58.1	83.2	43.7	29.0	34.5	36.5	9.60
MAX	46	37	40	43	1030	437	335	58	34	43	42	40
MIN	18	33	3.3	9.3	6.0	9.7	45	33	9.0	26	2.5	.00
AC-FT	2370	2070	1470	2120	10430	3570	4950	2690	1730	2120	2240	571

11014000 JAMUL CREEK NEAR JAMUL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.30	8.40	9.58	17.6	20.2	29.8	19.2	14.8	14.8	12.5	10.9	8.38
MAX	40.2	45.6	62.5	415	188	254	101	49.1	49.6	51.7	44.4	37.4
(WY)	1948	1946	1946	1993	1998	1995	1958	1954	1952	1995	1995	1947
MIN	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1940 - 1998			
ANNUAL TOTAL	12205.24				18318.36							
ANNUAL MEAN	33.4				50.2				14.2			
HIGHEST ANNUAL MEAN									55.2			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	46				1030				2320			
LOWEST DAILY MEAN	.22				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.75				.06				.00			
INSTANTANEOUS PEAK FLOW					3200				5870			
INSTANTANEOUS PEAK STAGE					5.68				7.59			
ANNUAL RUNOFF (AC-FT)	24210				36330				10260			
10 PERCENT EXCEEDS	44				66				38			
50 PERCENT EXCEEDS	38				36				.30			
90 PERCENT EXCEEDS	4.8				8.7				.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)
Feb. 4	1015	105	6.33	Mar. 28	1245	1,280	8.35
Feb. 8	0515	375	7.09	Apr. 12	1130	447	7.26
Feb. 14	2215	2,580	9.70	May 13	0200	114	6.05
Feb. 24	1215	513	7.40				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.08	.21	1.3	52	217	57	32	9.9	2.6	.74
2	.00	.00	.03	.23	1.2	47	196	54	31	9.5	2.4	.83
3	.00	.00	.03	.29	6.6	43	199	52	31	9.3	2.3	1.2
4	.00	.00	.03	.62	44	43	185	51	31	8.8	2.1	1.1
5	.00	.00	.05	.39	14	43	152	59	29	8.3	2.1	1.1
6	.00	.00	.26	.25	15	61	147	61	27	8.0	1.9	.83
7	.00	.00	.64	.20	22	54	156	51	27	7.8	1.8	.69
8	.00	.00	1.3	.20	178	46	121	48	26	7.7	1.8	.62
9	.00	.00	.29	.67	153	42	104	44	26	7.2	1.9	.55
10	.00	.00	.18	1.8	38	38	95	41	24	6.8	2.5	.50
11	.00	.00	.20	1.5	20	36	116	40	24	6.4	2.3	.45
12	.00	.00	.24	1.3	15	33	281	47	24	6.1	2.0	.38
13	.00	.00	.26	1.3	13	32	156	93	23	5.8	2.0	.36
14	.00	.00	.26	1.1	441	37	159	73	21	5.6	1.8	.34
15	.00	.00	.28	1.1	373	35	228	60	20	5.4	1.7	.33
16	.00	.00	.26	1.5	84	30	186	53	19	5.3	1.6	.32
17	.00	.00	.28	1.3	153	29	150	48	19	4.9	1.6	.27
18	.00	.00	.37	1.2	82	26	131	46	17	4.7	1.5	.25
19	.00	.00	.34	1.4	50	24	120	44	16	4.4	1.4	.26
20	.00	.00	.28	1.3	61	23	111	42	16	4.8	1.4	.32
21	.00	.00	1.2	1.2	41	22	104	41	15	6.5	1.3	.37
22	.00	.00	1.1	1.1	42	21	99	41	14	5.4	1.2	.40
23	.00	.00	.74	1.0	63	19	94	40	14	4.8	1.1	.43
24	.00	.00	.66	1.1	343	19	90	39	14	4.4	1.0	.49
25	.00	.00	.48	.95	173	24	88	40	13	4.0	.97	.46
26	.00	.00	.38	.94	106	82	83	43	13	3.6	.95	.45
27	.00	.02	.36	.95	77	86	75	41	12	3.3	.94	.61
28	.00	.00	.32	.94	61	564	69	38	11	3.1	.86	.59
29	.00	.00	.28	1.3	---	280	64	36	11	2.9	.80	.58
30	.00	.10	.25	1.5	---	184	60	35	10	2.8	.74	.60
31	.00	---	.22	1.4	---	165	---	33	---	2.7	.69	---
TOTAL	0.00	0.12	11.65	30.24	2671.1	2240	4036	1491	610	180.2	49.25	16.42
MEAN	.000	.004	.38	.98	95.4	72.3	135	48.1	20.3	5.81	1.59	.55
MAX	.00	.10	1.3	1.8	441	564	281	93	32	9.9	2.6	1.2
MIN	.00	.00	.03	.20	1.2	19	60	33	10	2.7	.69	.25
AC-FT	.00	.2	23	60	5300	4440	8010	2960	1210	357	98	33

SWEETWATER RIVER BASIN

11015000 SWEETWATER RIVER NEAR DESCANSO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.20	1.50	4.78	13.2	30.0	39.9	20.8	8.30	3.20	.90	.48	.33
MAX	3.53	24.0	83.5	304	336	382	138	68.5	25.5	8.68	8.45	6.16
(WY)	1984	1966	1967	1993	1980	1983	1983	1983	1983	1980	1983	1978
MIN	.000	.000	.000	.000	.000	.042	.010	.000	.000	.000	.000	.000
(WY)	1957	1957	1957	1961	1961	1961	1961	1961	1959	1957	1957	1957

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1957 - 1998			
ANNUAL TOTAL	503.12				11335.98							
ANNUAL MEAN	1.38				31.1				10.2			
HIGHEST ANNUAL MEAN									71.2			
LOWEST ANNUAL MEAN									.004			
HIGHEST DAILY MEAN	55 Jan 13				564 Mar 28				2500 Feb 20 1980			
LOWEST DAILY MEAN	.00 Jun 20				.00 Oct 1				.00 Oct 1 1956			
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 20				.00 Oct 1				.00 Oct 1 1956			
INSTANTANEOUS PEAK FLOW					2580 Feb 14				8600 Mar 5 1995			
INSTANTANEOUS PEAK STAGE					9.70 Feb 14				13.22 Mar 5 1995			
ANNUAL RUNOFF (AC-FT)	998				22480				7390			
10 PERCENT EXCEEDS	3.5				91				14			
50 PERCENT EXCEEDS	.08				2.3				.33			
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 September 1998 (discontinued). 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, 85,390 acre-ft, Sept. 30, elevation, 645.43 ft; minimum, 52,370 acre-ft, Oct. 9, elevation, 610.60 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 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52400	53800	54240	57170	63110	78330	80000	80280	78180	78700	80830	82840
2	52400	53760	54230	57260	63360	78490	80240	80130	78100	78740	80950	82880
3	52400	53720	54280	57380	63890	78620	80400	79980	78030	78800	81010	82960
4	52400	53660	54420	57510	64380	78730	80500	79840	77970	78930	81110	83010
5	52400	53630	54600	57540	64690	78840	80640	79730	77890	79090	81190	83080
6	52400	53690	54830	57520	65130	78900	80790	79610	77820	79160	81260	83160
7	52390	53740	55050	57540	65540	78810	80930	79480	77760	79210	81360	83270
8	52390	53730	55140	57700	67080	78760	81000	79360	77680	79250	81440	83330
9	52400	53720	55140	57980	67770	78690	81060	79200	77600	79300	81560	83400
10	52500	53780	55100	58290	68230	78590	81030	79050	77580	79330	81640	83490
11	52580	53820	55080	58510	68620	78460	81110	78910	77600	79370	81680	83590
12	52650	53850	55050	58740	68960	78320	81400	78840	77560	79400	81700	83700
13	52680	53950	55060	58960	69280	78270	81470	78960	77520	79430	81700	83770
14	52750	54020	55040	59170	70550	78170	81550	78990	77470	79500	81720	83880
15	52860	54070	55030	59380	71540	78060	81720	78990	77480	79600	81730	83940
16	52950	54100	55030	59600	72100	77970	81800	78980	77550	79660	81750	84030
17	53050	54170	55030	59800	73400	77880	81820	78970	77630	79700	81780	84110
18	53140	54210	55170	60000	73810	77780	81800	78930	77690	79760	81910	84170
19	53230	54220	55340	60190	74060	77670	81740	78900	77750	79850	81970	84250
20	53310	54260	55500	60370	74510	77550	81670	78860	77840	79910	82020	84380
21	53420	54290	55670	60560	74730	77480	81590	78810	77930	79960	82050	84490
22	53490	54270	55830	60780	74990	77380	81490	78770	78030	80030	82120	84590
23	53470	54250	55990	60960	75350	77270	81380	78730	78110	80110	82230	84700
24	53470	54220	56140	61190	76820	77180	81260	78680	78180	80190	82300	84810
25	53520	54210	56270	61420	77360	77230	81140	78640	78250	80290	82350	84920
26	53600	54250	56430	61650	77670	77370	81020	78590	78340	80390	82420	85030
27	53680	54250	56590	61870	77950	77440	80890	78530	78430	80450	82500	85120
28	53820	54240	56730	62120	78160	78200	80740	78470	78520	80520	82590	85230
29	53860	54230	56890	62390	---	78910	80580	78400	78590	80580	82670	85340
30	53830	54260	57000	62640	---	79160	80430	78320	78660	80680	82740	85380
31	53820	---	57090	62870	---	79410	---	78240	---	80780	82810	---
MAX	53860	54290	57090	62870	78160	79410	81820	80280	78660	80780	82810	85380
MIN	52390	53630	54230	57170	63110	77180	80000	78240	77470	78700	80830	82840
a	612.31	612.82	616.06	622.50	638.40	639.62	640.63	638.48	638.89	640.97	642.96	645.42
b	+1430	+440	+2830	+5780	+15290	+1250	+1020	-2190	+420	+2120	+2030	+2570
CAL YR 1997	MAX 68490	MIN 52390	b	-1240								
WTR YR 1998	MAX 85380	MIN 52390	b	+32990								

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,090 ft³/s, Mar. 5, 1995, gage height, 9.74 ft, from rating curve extended above 209 ft³/s on basis of critical-depth computations; minimum daily, 0.04 ft³/s, Oct. 26, 31, Nov. 2, 3, 5, and 6, 1997.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2115	114	4.50	Feb. 20	0100	104	4.39
Jan. 29	1345	91	4.19	Feb. 24	0130	357	6.72
Feb. 3	1645	208	5.58	Mar. 28	0800	148	4.93
Feb. 8	0430	819	8.89	Mar. 31	2400	122	4.61
Feb. 14	2030	364	6.76	Apr. 15	0415	134	4.77
Feb. 17	0815	294	6.29				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	e.05	1.7	.59	.96	10	54	6.3	3.2	1.7	.85	.58
2	.08	e.04	.67	1.2	.93	8.3	19	6.2	3.4	1.9	.77	.58
3	.09	e.04	.51	4.9	66	7.7	16	6.2	3.5	2.1	.71	.73
4	.09	e.05	.48	11	37	8.3	14	5.8	3.5	2.0	.70	.78
5	e.09	e.04	.48	1.8	2.2	7.8	13	12	3.7	1.8	.73	.94
6	e.08	e.04	15	.90	14	13	13	12	3.8	1.7	.75	.76
7	e.10	.05	4.9	.84	2.7	6.6	12	6.3	3.7	1.5	.78	.70
8	e.08	.05	6.5	.80	120	6.0	9.9	7.8	3.0	1.5	.73	.70
9	e.08	.05	1.3	6.1	23	6.1	9.1	5.6	3.1	1.4	.84	.72
10	e.07	.53	.82	11	8.7	5.7	8.7	5.2	3.0	1.4	.92	.65
11	e.08	.14	.66	2.2	6.1	7.4	23	5.1	5.4	1.2	.75	.60
12	e.07	.14	.66	1.4	4.7	6.5	16	16	4.1	1.2	.67	.56
13	e.08	2.8	.68	1.7	4.0	6.0	10	13	3.5	1.3	.63	.66
14	e.07	1.1	.71	1.1	75	10	10	5.8	3.0	1.3	.63	.73
15	e.06	.62	.70	1.2	38	7.3	41	5.3	2.7	1.2	.69	.75
16	e.06	.20	.70	2.3	13	9.0	13	5.0	3.6	1.0	.74	.73
17	e.06	.20	.66	1.1	71	6.4	12	4.9	4.3	1.0	.75	.69
18	e.05	.21	1.5	1.0	26	5.2	11	4.7	2.8	.99	.69	.66
19	e.06	.20	.74	1.7	14	4.9	11	4.5	2.7	1.1	.70	.55
20	e.06	.23	.59	1.2	33	4.5	10	4.6	3.0	1.2	.70	.56
21	e.06	.25	13	.95	13	5.1	9.6	4.4	3.3	1.2	.65	.53
22	e.05	.25	1.6	.91	13	7.3	9.0	4.9	3.0	1.1	.63	.58
23	e.06	.23	.86	.89	21	5.2	8.6	5.2	3.9	1.1	.59	.50
24	e.05	.23	.76	.88	108	5.9	8.4	4.9	3.1	1.3	.66	.49
25	e.05	.24	.66	.83	29	23	8.2	4.9	4.0	1.3	.67	.54
26	e.04	5.1	.63	.81	20	31	7.7	5.1	3.5	1.1	.67	.68
27	e.05	5.3	.64	.83	16	11	7.3	4.0	2.9	1.0	.62	.64
28	e.05	.50	.62	.80	12	50	7.0	4.5	3.1	1.1	.61	.61
29	e.05	.43	.63	11	---	41	6.7	4.7	2.2	1.0	.57	.55
30	e.05	10	.62	1.6	---	16	6.7	4.9	1.9	.96	.56	.51
31	e.04	---	.59	1.1	---	21	---	3.8	---	.96	.55	---
TOTAL	2.04	29.31	60.57	74.63	792.29	363.2	404.9	193.6	99.9	40.61	21.51	19.26
MEAN	.066	.98	1.95	2.41	28.3	11.7	13.5	6.25	3.33	1.31	.69	.64
MAX	.10	10	15	11	120	50	54	16	5.4	2.1	.92	.94
MIN	.04	.04	.48	.59	.93	4.5	6.7	3.8	1.9	.96	.55	.49
AC-FT	4.0	58	120	148	1570	720	803	384	198	81	43	38

e Estimated.

11022200 LOS COCHES CREEK NEAR LAKESIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.47	1.22	1.89	5.21	6.48	6.53	3.04	1.52	.86	.41	.27	.29
MAX	1.37	4.58	6.09	40.2	28.3	31.1	13.5	6.25	3.67	1.31	.69	.64
(WY)	1988	1984	1985	1993	1998	1995	1998	1998	1995	1995	1998	1998
MIN	.066	.17	.32	.66	1.09	.78	.45	.25	.16	.096	.079	.077
(WY)	1998	1993	1990	1989	1989	1989	1989	1984	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1984 - 1998	
ANNUAL TOTAL	392.59		2101.82			
ANNUAL MEAN	1.08		5.76		2.33	
HIGHEST ANNUAL MEAN					6.77	
LOWEST ANNUAL MEAN					.50	
HIGHEST DAILY MEAN	44	Jan 12	120	Feb 8	248	Mar 5 1995
LOWEST DAILY MEAN	.04	Oct 26	.04	Oct 26	.04	Oct 26 1997
ANNUAL SEVEN-DAY MINIMUM	.04	Oct 31	.04	Oct 31	.04	Oct 31 1997
INSTANTANEOUS PEAK FLOW			819	Feb 8	1090	Mar 5 1995
INSTANTANEOUS PEAK STAGE			8.89	Feb 8	9.74	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	779		4170		1690	
10 PERCENT EXCEEDS	1.6		13		3.9	
50 PERCENT EXCEEDS	.28		1.3		.56	
90 PERCENT EXCEEDS	.06		.09		.16	

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

LOCATION.—Lat 32°50'25", long 117°01'30", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, near right bank at Mast Road Bridge, 0.7 mi upstream from Old Mission Dam site, 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.6	17	9.8	12	116	778	25	12	8.0	6.9	6.5
2	2.1	1.5	12	16	12	86	330	23	12	8.0	7.3	6.0
3	2.0	1.4	11	41	578	70	196	23	12	7.8	6.8	11
4	2.0	1.4	9.6	93	539	59	150	23	12	8.0	7.6	6.0
5	2.0	1.4	7.8	17	183	48	112	62	12	8.2	7.9	6.3
6	1.9	1.3	157	12	226	150	93	113	12	8.4	7.0	6.0
7	2.2	1.4	69	12	153	72	108	38	12	8.7	7.1	5.4
8	1.8	1.4	67	11	1650	63	66	34	13	8.2	7.1	5.3
9	1.7	1.5	19	154	686	55	50	29	13	8.2	7.2	5.5
10	1.7	6.2	11	203	261	48	40	27	13	8.2	7.5	5.6
11	2.1	9.6	11	61	145	44	220	24	12	9.2	7.3	5.0
12	1.7	6.0	10	42	92	42	140	137	14	9.7	6.7	4.8
13	1.7	84	8.5	49	62	44	61	132	12	9.1	7.4	4.9
14	1.5	32	7.5	31	877	65	48	38	11	8.8	7.1	5.3
15	1.5	11	8.1	36	814	40	429	33	11	8.6	6.7	5.4
16	1.5	8.1	8.6	63	344	40	140	32	11	8.5	6.6	5.5
17	1.4	6.8	7.9	25	1200	39	116	32	11	8.9	6.4	5.3
18	1.5	6.3	23	18	561	38	95	27	10	8.5	6.1	5.2
19	1.5	6.0	12	23	288	36	76	22	9.9	8.6	6.4	5.3
20	1.5	5.6	11	13	626	34	59	20	10	8.5	6.3	5.2
21	1.5	5.0	128	12	262	30	51	19	9.9	8.9	6.5	5.2
22	2.5	4.6	22	12	214	26	45	18	9.7	8.7	6.4	5.3
23	2.0	4.3	14	12	229	24	41	16	9.3	7.9	6.6	5.2
24	2.0	4.4	14	11	1490	23	37	15	9.0	7.9	6.6	5.2
25	1.9	5.0	13	11	550	268	35	14	9.1	7.9	6.5	5.0
26	1.6	81	12	11	295	384	34	14	9.0	8.1	6.5	5.4
27	1.5	22	10	10	203	130	32	14	8.8	7.3	6.4	5.3
28	1.7	11	9.3	10	151	642	30	14	8.8	6.6	6.3	5.0
29	1.6	9.2	9.6	88	---	682	28	13	8.6	6.3	6.2	4.8
30	2.3	78	9.9	16	---	350	26	13	8.3	7.2	6.4	4.7
31	1.7	---	10	13	---	252	---	13	---	7.3	6.7	---
TOTAL	55.8	419.0	739.8	1135.8	12703	4000	3666	1057	325.4	254.2	210.5	166.6
MEAN	1.80	14.0	23.9	36.6	454	129	122	34.1	10.8	8.20	6.79	5.55
MAX	2.5	84	157	203	1650	682	778	137	14	9.7	7.9	11
MIN	1.4	1.3	7.5	9.8	12	23	26	13	8.3	6.3	6.1	4.7
AC-FT	111	831	1470	2250	25200	7930	7270	2100	645	504	418	330

11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.12	5.80	21.1	32.9	96.0	82.6	49.4	18.3	4.86	3.08	2.77	1.90
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1912 - 1998	
ANNUAL TOTAL	4468.63		24733.1			
ANNUAL MEAN	12.2		67.8		26.3	
HIGHEST ANNUAL MEAN					219	
LOWEST ANNUAL MEAN					.002	
HIGHEST DAILY MEAN	368	Jan 12	1650	Feb 8	27300	Feb 16 1927
LOWEST DAILY MEAN	.26	Sep 1	1.3	Nov 6	.00	Jun 19 1912
ANNUAL SEVEN-DAY MINIMUM	.29	Aug 27	1.4	Nov 2	.00	Jun 19 1912
INSTANTANEOUS PEAK FLOW			5450	Feb 8	45400	Feb 16 1927
INSTANTANEOUS PEAK STAGE			12.47	Feb 8	18.10	Feb 16 1927
ANNUAL RUNOFF (AC-FT)	8860		49060		19040	
10 PERCENT EXCEEDS	23		152		29	
50 PERCENT EXCEEDS	2.7		11		1.4	
90 PERCENT EXCEEDS	.47		2.2		.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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	1.6	74	14	23	144	838	39	20	10	6.9	4.1
2	5.3	1.8	43	16	20	124	345	37	20	9.7	7.1	4.3
3	4.5	1.6	23	34	588	105	208	36	19	9.6	6.9	9.1
4	4.0	1.4	18	106	1050	92	164	35	19	9.0	6.7	7.5
5	3.5	1.2	15	80	337	77	133	53	19	8.8	6.5	6.8
6	3.0	1.3	110	39	272	126	114	107	19	8.5	6.1	7.3
7	2.7	1.4	260	27	311	103	115	84	18	8.5	5.9	7.4
8	2.5	1.5	144	22	3280	66	111	47	19	8.4	5.7	7.4
9	2.3	1.7	66	147	1170	59	82	41	19	8.2	6.5	6.8
10	2.1	9.2	39	510	355	54	74	37	19	8.2	7.1	6.1
11	2.0	29	27	151	216	49	123	35	18	8.2	7.0	5.5
12	1.9	9.1	21	59	162	45	273	51	18	8.4	7.0	5.1
13	1.9	65	19	54	127	44	106	236	20	8.5	6.9	4.9
14	1.8	69	17	46	811	69	81	86	20	9.5	6.8	4.7
15	1.4	44	15	46	1690	53	456	45	19	9.5	7.0	4.6
16	1.5	25	15	155	444	43	173	37	17	9.2	6.8	4.4
17	1.4	17	14	59	1660	41	115	35	17	9.0	6.3	4.3
18	1.5	14	14	31	638	40	94	34	16	9.2	6.3	4.7
19	1.6	11	18	58	307	37	80	32	16	9.2	5.9	4.9
20	1.6	9.6	17	32	682	38	69	28	15	9.0	5.4	4.8
21	1.6	8.3	80	24	313	36	63	25	14	8.8	5.0	4.7
22	1.7	7.7	124	20	232	36	57	25	13	8.8	4.4	5.4
23	1.8	7.4	47	18	285	33	52	25	13	8.8	4.6	5.7
24	2.0	6.5	28	17	2360	31	50	24	12	9.1	4.8	4.7
25	2.1	6.1	22	16	664	233	48	24	12	9.1	4.6	4.5
26	2.1	36	19	16	308	496	45	24	11	8.8	3.6	4.8
27	2.1	63	18	15	219	150	43	22	11	8.3	3.0	5.3
28	1.9	41	17	14	173	557	42	21	11	8.1	3.7	5.6
29	1.8	23	16	92	---	540	41	21	10	7.9	4.2	5.8
30	1.7	56	15	92	---	348	41	20	10	7.5	4.4	6.1
31	1.6	---	14	37	---	205	---	19	---	7.0	4.2	---
TOTAL	73.3	570.4	1369	2047	18697	4074	4236	1385	484	270.8	177.3	167.3
MEAN	2.36	19.0	44.2	66.0	668	131	141	44.7	16.1	8.74	5.72	5.58
MAX	6.4	69	260	510	3280	557	838	236	20	10	7.1	9.1
MIN	1.4	1.2	14	14	20	31	41	19	10	7.0	3.0	4.1
AC-FT	145	1130	2720	4060	37090	8080	8400	2750	960	537	352	332

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.68	29.5	46.2	109	128	160	50.9	19.3	7.51	3.27	2.61	3.67
MAX	31.2	144	143	683	668	777	242	135	21.3	8.93	9.47	20.0
(WY)	1987	1986	1985	1993	1998	1983	1983	1983	1983	1983	1983	1986
MIN	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1982 - 1998			
ANNUAL TOTAL	7983.44				33551.1							
ANNUAL MEAN	21.9				91.9				46.8			
HIGHEST ANNUAL MEAN									125			
LOWEST ANNUAL MEAN									11.5			
HIGHEST DAILY MEAN	921				3280				4760			
LOWEST DAILY MEAN	.27				1.2				.00			
ANNUAL SEVEN-DAY MINIMUM	.34				1.4				.00			
INSTANTANEOUS PEAK FLOW					7090				9430			
INSTANTANEOUS PEAK STAGE					12.80				13.47			
ANNUAL RUNOFF (AC-FT)	15840				66550				33930			
10 PERCENT EXCEEDS	45				206				92			
50 PERCENT EXCEEDS	3.7				18				7.5			
90 PERCENT EXCEEDS	.73				3.3				.73			

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 good. Flow partly regulated by several conservation reservoirs upstream from station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,750 ft³/s, Feb. 21, 1980, gage height, 10.26 ft, from rating curve extended above 1,400 ft³/s; maximum gage height, 10.92 ft, Jan. 4, 1995; no flow at times in 1968, 1972, 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)
Dec. 6	2030	625	5.36	Feb. 20	0245	1,140	6.62
Jan. 10	0015	1,030	6.38	Feb. 24	0130	2,730	9.09
Jan. 29	1345	550	5.14	Mar. 28	0915	937	6.16
Feb. 3	1800	1,270	6.89	Apr. 1	0030	802	5.82
Feb. 8	0415	3,280	9.71	May 5	1730	444	4.78
Feb. 14	2000	2,730	9.08	May 12	2130	459	4.84
Feb. 17	0800	2,740	9.10				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.2	18	2.0	4.5	51	332	15	8.6	2.8	2.8	3.3
2	2.8	2.3	3.7	5.1	3.9	43	114	15	8.7	2.9	2.9	3.1
3	3.1	3.3	2.6	18	477	38	69	17	8.2	3.1	2.8	22
4	2.9	2.2	2.3	32	396	32	58	16	8.4	2.8	3.1	3.5
5	2.6	2.2	2.0	17	73	28	42	85	10	2.5	3.2	3.6
6	2.8	2.4	116	3.5	462	60	52	50	8.6	3.0	3.6	3.2
7	4.4	2.7	133	2.8	194	26	34	12	15	2.5	3.5	3.3
8	2.9	2.6	137	2.6	1210	22	28	44	14	2.4	3.1	3.4
9	2.9	2.3	16	220	297	20	25	13	7.8	2.8	5.0	3.0
10	2.9	31	6.2	410	102	18	23	11	6.7	2.4	11	2.7
11	14	25	4.7	39	63	16	113	10	6.6	2.7	3.4	2.5
12	3.4	3.5	3.7	12	44	15	141	81	15	2.5	2.9	2.5
13	2.6	54	3.1	49	33	15	38	119	7.4	2.4	3.1	2.9
14	2.5	13	2.8	11	683	29	47	23	5.6	2.9	3.2	3.0
15	2.3	8.4	2.7	13	333	15	81	13	5.1	2.9	3.3	2.9
16	2.3	2.3	3.3	45	117	16	34	11	5.5	3.0	3.2	2.7
17	2.7	2.1	2.9	8.0	749	17	28	11	5.4	2.8	3.6	2.8
18	3.7	2.3	4.0	5.7	202	14	24	10	4.7	2.6	4.3	3.4
19	4.2	1.9	12	31	104	13	22	10	4.5	2.5	3.8	3.3
20	4.5	2.0	3.1	7.7	381	13	21	9.6	4.4	2.6	3.4	3.2
21	3.6	2.2	15	5.2	103	13	19	9.4	5.8	3.3	3.5	3.6
22	3.9	1.8	32	4.3	109	10	20	9.7	3.8	3.8	3.2	3.4
23	2.8	1.7	4.2	3.9	174	9.8	18	9.4	3.7	3.5	2.9	3.2
24	3.3	1.8	2.9	3.5	972	9.5	20	9.2	3.5	3.3	3.4	3.2
25	3.3	1.9	2.5	3.5	197	130	18	12	3.6	3.4	3.2	3.6
26	2.0	112	2.2	3.3	122	157	17	11	3.4	3.4	3.3	3.4
27	2.0	83	2.2	3.2	85	53	16	9.6	3.4	3.3	3.7	3.8
28	2.2	4.4	2.2	3.1	65	308	16	9.3	3.6	3.5	3.3	3.4
29	2.3	2.6	2.5	129	---	346	16	9.2	3.5	3.5	3.4	8.4
30	2.1	52	2.6	17	---	99	15	8.7	3.0	3.3	3.0	6.3
31	2.1	---	2.3	5.9	---	99	---	8.2	---	3.0	3.3	---
TOTAL	102.1	431.1	549.7	1116.3	7755.4	1735.3	1501	681.3	197.5	91.4	111.4	122.6
MEAN	3.29	14.4	17.7	36.0	277	56.0	50.0	22.0	6.58	2.95	3.59	4.09
MAX	14	112	137	410	1210	346	332	119	15	3.8	11	22
MIN	2.0	1.7	2.0	2.0	3.9	9.5	15	8.2	3.0	2.4	2.8	2.5
AC-FT	203	855	1090	2210	15380	3440	2980	1350	392	181	221	243

11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.57	5.84	9.32	25.4	34.8	35.2	9.27	3.23	1.55	1.05	.99	1.56
MAX	7.09	28.7	51.6	233	277	213	50.0	22.0	6.58	2.95	3.59	13.9
(WY)	1997	1986	1966	1993	1998	1983	1998	1998	1998	1998	1998	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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1965 - 1998		
ANNUAL TOTAL	4397.8			14395.1					
ANNUAL MEAN	12.0			39.4			10.7		
HIGHEST ANNUAL MEAN							39.4		
LOWEST ANNUAL MEAN							.80		
HIGHEST DAILY MEAN	449	Jan 12		1210	Feb 8		1400	Mar 1	1978
LOWEST DAILY MEAN	1.6	Jul 3		1.7	Nov 23		.00	May 16	1968
ANNUAL SEVEN-DAY MINIMUM	1.8	Jul 3		1.9	Nov 19		.00	Jul 18	1977
INSTANTANEOUS PEAK FLOW				3280	Feb 8		4750	Feb 21	1980
INSTANTANEOUS PEAK STAGE				9.71	Feb 8		10.92	Jan 4	1995
ANNUAL RUNOFF (AC-FT)	8720			28550			7760		
10 PERCENT EXCEEDS	.14			100			12		
50 PERCENT EXCEEDS	3.0			4.5			1.4		
90 PERCENT EXCEEDS	2.0			2.5			.25		

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 above 1 ft³/s and fair below. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.01	.33	.47	3.0	53	183	31	23	11	2.9	.38
2	.00	.01	.25	.45	2.6	47	155	31	22	10	2.6	.42
3	.01	.01	.23	.55	15	42	103	31	21	10	2.4	.41
4	.01	.01	.20	1.1	73	39	91	30	23	10	2.1	.70
5	.01	.02	.22	1.1	32	35	81	42	23	9.4	2.0	.84
6	.01	.02	1.7	.86	36	53	75	59	23	8.8	1.6	.62
7	.01	.02	2.3	.72	89	40	83	44	23	8.3	.81	.39
8	.01	.02	2.0	.72	243	33	76	37	24	8.5	.74	.39
9	.00	.03	1.9	7.5	164	30	61	39	23	8.4	1.4	.72
10	.00	.04	1.3	151	52	28	56	36	22	7.9	2.6	.84
11	.01	.04	.78	40	33	26	62	33	24	7.5	3.0	.59
12	.00	.04	.65	14	25	25	174	42	26	7.0	2.2	.60
13	.00	.07	.56	8.6	20	24	82	168	24	6.8	1.5	.43
14	.01	.06	.48	6.1	386	29	90	98	21	6.3	1.3	.44
15	.01	.06	.47	4.9	356	27	87	59	20	5.8	1.4	.55
16	.01	.06	.49	5.9	89	25	70	48	20	5.1	1.6	.45
17	.01	.08	.49	4.8	168	24	60	43	20	4.9	1.5	.35
18	.01	.09	.75	4.1	81	22	55	38	18	4.3	1.1	.43
19	.01	.10	.92	4.2	52	21	51	35	17	4.2	1.1	.45
20	.00	.12	.72	3.8	76	18	48	33	17	4.1	.83	.45
21	.00	.14	1.1	3.3	48	18	44	31	16	4.7	.61	.49
22	.01	.15	1.2	2.9	97	18	42	31	15	5.1	.63	.70
23	.01	.17	.96	2.7	230	17	41	30	15	5.1	.69	.49
24	.01	.21	.85	2.5	597	17	40	30	14	4.9	.77	.67
25	.01	.23	.80	2.3	165	25	41	30	14	4.8	.69	.98
26	.01	.94	.72	2.2	98	83	40	37	13	4.0	.73	1.2
27	.01	2.6	.72	2.1	75	90	36	34	13	3.6	.62	.98
28	.01	.33	.63	2.1	62	516	34	28	12	3.2	.55	.82
29	.01	.25	.65	3.8	---	291	32	27	12	3.0	.53	.61
30	.02	.54	.71	4.7	---	166	31	27	11	3.3	.53	.82
31	.02	---	.57	3.8	---	115	---	25	---	3.3	.47	---
TOTAL	0.25	6.47	25.65	293.27	3367.6	1997	2124	1307	569	193.3	41.50	18.21
MEAN	.008	.22	.83	9.46	120	64.4	70.8	42.2	19.0	6.24	1.34	.61
MAX	.02	2.6	2.3	151	597	516	183	168	26	11	3.0	1.2
MIN	.00	.01	.20	.45	2.6	17	31	25	11	3.0	.47	.35
AC-FT	.5	13	51	582	6680	3960	4210	2590	1130	383	82	36

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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.50	2.11	5.39	16.0	43.3	44.7	20.5	8.67	3.65	1.15	.70	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1955 - 1998

ANNUAL TOTAL	1100.74	9943.25	
ANNUAL MEAN	3.02	27.2	12.1
HIGHEST ANNUAL MEAN			131 1980
LOWEST ANNUAL MEAN			.000 1961
HIGHEST DAILY MEAN	199 Jan 13	597 Feb 24	6190 Feb 21 1980
LOWEST DAILY MEAN	.00 May 29	.00 Oct 1	.00 Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 9	.00 Oct 7	.00 Oct 1 1954
INSTANTANEOUS PEAK FLOW		2930 Feb 14	10700 Feb 21 1980
INSTANTANEOUS PEAK STAGE		8.20 Feb 14	14.25 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	2180	19720	8750
10 PERCENT EXCEEDS	6.3	74	14
50 PERCENT EXCEEDS	.07	4.2	.11
90 PERCENT EXCEEDS	.00	.02	.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 measurements at gage heights 4.56 ft and 14.39 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft³/s, or maximum, from rating curve extended above 955 ft³/s on basis of slope-area measurement at gage height 14.39 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 8	0645	693	4.22	Mar. 28	1215	713	4.26
Feb. 14	2200	1,340	5.28	Apr. 1	0800	342	3.44
Feb. 17	0945	1,060	4.87	Apr. 12	0845	356	3.48
Feb. 24	0430	1,100	4.93				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.17	.64	.47	35	285	13	8.2	1.1	.03	.02
2	.00	.00	.08	.38	.38	31	148	13	7.8	1.0	.02	.01
3	.00	.00	.08	.29	37	30	85	13	7.5	1.1	.02	.02
4	.00	.00	.06	.63	74	27	77	13	8.1	1.0	.02	.06
5	.00	.00	.25	.67	9.7	23	62	24	8.3	1.1	.02	.03
6	.00	.00	.30	.22	103	35	60	62	8.6	.95	.34	.04
7	.00	.00	.63	1.1	74	26	74	27	9.2	.75	.04	.03
8	.00	.00	2.7	.38	272	18	58	20	9.5	.49	.10	.03
9	.00	.00	.26	4.3	119	16	44	19	9.2	.93	.35	.02
10	.00	.00	.12	47	25	15	38	17	8.8	.42	.38	.02
11	.00	.00	.06	7.1	12	14	73	15	9.5	.34	.24	.03
12	.00	.00	.04	1.3	10	13	230	23	9.8	.33	.26	.02
13	.00	.00	.04	.97	9.5	13	85	116	9.8	.36	.47	.01
14	.00	.00	.06	.90	307	16	74	53	8.8	.49	.08	.01
15	.00	.00	.07	1.8	302	16	92	28	8.6	.45	.07	.02
16	.00	.00	.08	2.1	56	13	63	21	9.1	.52	.05	.01
17	.00	.00	.07	.59	377	13	47	17	8.4	.56	.06	.09
18	.00	.00	.13	.45	80	12	40	15	6.1	.34	.08	.33
19	.00	.00	.17	.56	38	11	34	14	5.2	.18	.06	.03
20	.00	.04	.14	.64	118	9.9	31	14	5.0	.31	.06	.03
21	.00	.07	.29	1.6	44	9.2	27	12	5.4	.49	.03	.04
22	.00	.06	.52	1.8	40	8.6	24	13	5.4	.74	.04	.05
23	.00	.03	.20	1.3	79	8.1	23	12	3.5	.19	.02	.04
24	.00	.04	.10	.38	654	8.6	22	12	3.0	.89	.02	.05
25	.00	.08	.08	.30	141	26	20	12	3.0	.18	.02	.05
26	.00	.19	.09	.24	74	90	19	13	3.7	.06	.02	.07
27	.00	.42	.28	.73	54	43	17	11	2.5	.04	.01	.05
28	.00	.14	1.0	1.2	42	361	15	10	2.7	.03	.01	.03
29	.00	.08	1.3	4.0	---	316	15	9.4	2.2	.03	.00	.09
30	.00	.11	1.5	2.3	---	114	13	9.4	1.8	.04	.02	.02
31	.00	---	.19	.71	---	70	---	8.8	---	.04	.02	---
TOTAL	0.00	1.26	11.06	86.58	3152.05	1441.4	1895	659.6	198.7	15.45	2.96	1.35
MEAN	.000	.042	.36	2.79	113	46.5	63.2	21.3	6.62	.50	.095	.045
MAX	.00	.42	2.7	47	654	361	285	116	9.8	1.1	.47	.33
MIN	.00	.00	.04	.22	.38	8.1	13	8.8	1.8	.03	.00	.01
AC-FT	.00	2.5	22	172	6250	2860	3760	1310	394	31	5.9	2.7

11028500 SANTA MARIA CREEK NEAR RAMONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.051	.44	1.38	24.2	26.0	26.8	6.78	2.35	.58	.074	.10	.034
MAX	.45	10.9	26.5	545	443	288	63.2	31.0	7.66	1.28	4.03	.22
(WY)	1987	1966	1967	1916	1980	1983	1998	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1913 - 1998	
ANNUAL TOTAL	312.30		7465.41			
ANNUAL MEAN	.86		20.5		7.44	
HIGHEST ANNUAL MEAN					78.2	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	63	Jan 13	654	Feb 24	4960	Jan 27 1916
LOWEST DAILY MEAN	.00	May 23	.00	Oct 1	.00	Dec 17 1912
ANNUAL SEVEN-DAY MINIMUM	.00	May 29	.00	Oct 1	.00	Dec 17 1912
INSTANTANEOUS PEAK FLOW			1340	Feb 14	15200	Feb 21 1980
INSTANTANEOUS PEAK STAGE			5.28	Feb 14	14.39	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	619		14810		5390	
10 PERCENT EXCEEDS	1.2		55		3.3	
50 PERCENT EXCEEDS	.01		.63		.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 left bank 1.9 mi upstream from bridge on Interstate Highway 5, 2.4 mi upstream from mouth, and 1.9 mi northeast of Oceanside.

DRAINAGE AREA.—557 mi².

PERIOD OF RECORD.—April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942, October 1946 to current year. Discharge measurements only Oct. 1, 1992, to Aug. 16, 1993, and Nov. 10, 1997, to Apr. 28, 1998.

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. Gage out of operation for channel work from Nov. 10, 1997, to Apr. 28, 1998 (see table on following page). 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.

EXTREMES FOR CURRENT YEAR.—Maximum discharge and gage height for the 1998 water year probably occurred on Feb. 23, but are unknown, due to channel construction. No flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	---	---	---	---	---	112	78	e32	9.6	2.9
2	e.00	e.00	---	---	---	---	---	108	74	e31	9.4	2.8
3	e.00	e.00	---	---	---	---	---	108	69	e30	9.1	3.0
4	e.00	e.00	---	---	---	---	---	113	64	e29	9.0	2.9
5	e.00	e.00	---	---	---	---	---	135	61	e28	8.8	2.8
6	e.00	e.00	---	---	---	---	---	186	61	e26	8.3	2.7
7	e.00	e.00	---	---	---	---	---	174	59	e24	8.5	2.7
8	e.00	e.00	---	---	---	---	---	142	58	23	8.0	2.8
9	e.00	e.00	---	---	---	---	---	132	57	22	7.6	e2.7
10	e.00	e.00	---	---	---	---	---	129	55	21	7.4	e2.8
11	e.00	---	---	---	---	---	---	122	54	20	7.2	e2.8
12	e.00	---	---	---	---	---	---	144	55	19	6.6	e2.9
13	e.00	---	---	---	---	---	---	429	54	19	6.3	e2.9
14	e.00	---	---	---	---	---	---	405	52	18	6.2	e3.0
15	e.00	---	---	---	---	---	---	256	50	18	5.9	e3.1
16	e.00	---	---	---	---	---	---	181	49	17	5.7	e3.2
17	e.00	---	---	---	---	---	---	158	49	16	5.6	e3.2
18	e.00	---	---	---	---	---	---	150	46	16	6.0	e3.3
19	e.00	---	---	---	---	---	---	142	45	15	5.5	e3.4
20	e.00	---	---	---	---	---	---	129	43	14	4.8	e3.5
21	e.00	---	---	---	---	---	---	124	41	14	4.6	e3.5
22	e.00	---	---	---	---	---	---	121	39	14	4.5	e3.6
23	e.00	---	---	---	---	---	---	115	38	14	4.4	e3.7
24	e.00	---	---	---	---	---	---	111	38	14	4.2	e3.7
25	e.00	---	---	---	---	---	---	107	36	13	4.0	e3.8
26	e.00	---	---	---	---	---	---	105	34	12	3.8	e3.9
27	e.00	---	---	---	---	---	---	102	33	12	3.5	e4.0
28	e.00	---	---	---	---	---	---	97	33	11	3.4	e4.2
29	e.00	---	---	---	---	---	115	91	33	11	3.2	e4.4
30	e.00	---	---	---	---	---	111	86	e33	11	3.0	e4.5
31	e.00	---	---	---	---	---	---	82	---	10	2.9	---
TOTAL	0.00	---	---	---	---	---	---	4596	1491	574	187.0	98.7
MEAN	.000	---	---	---	---	---	---	148	49.7	18.5	6.03	3.29
MAX	.00	---	---	---	---	---	---	429	78	32	9.6	4.5
MIN	.00	---	---	---	---	---	---	82	33	10	2.9	2.7
AC-FT	.00	---	---	---	---	---	---	9120	2960	1140	371	196

e Estimated.

11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.71	8.82	20.5	46.8	102	139	55.5	29.3	14.6	7.51	5.69	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

WATER YEARS 1930 - 1998

ANNUAL MEAN	35.7	
HIGHEST ANNUAL MEAN	415	1980
LOWEST ANNUAL MEAN	.000	1931
HIGHEST DAILY MEAN	11300	Mar 3 1938
LOWEST DAILY MEAN	.00	Oct 1 1929
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1929
INSTANTANEOUS PEAK FLOW	25700	Jan 16 1993
INSTANTANEOUS PEAK STAGE	21.70	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	25890	
10 PERCENT EXCEEDS	57	
50 PERCENT EXCEEDS	1.4	
90 PERCENT EXCEEDS	.00	

DISCHARGE MEASUREMENTS, NOVEMBER 1997 TO APRIL 1998

Date	Time	Discharge (ft ³ /s)	Date	Time	Discharge (ft ³ /s)
Nov. 10	0900	0	Feb. 8	1300	361
Dec. 4	1300	0	Feb. 24	1215	6,250
Dec. 6	0950	4.20	Mar. 3	1115	396
Dec. 19	0920	9.58	Mar. 12	1040	170
Jan. 5	1007	10.9	Apr. 6	1300	381
Feb. 3	1600	87.8			

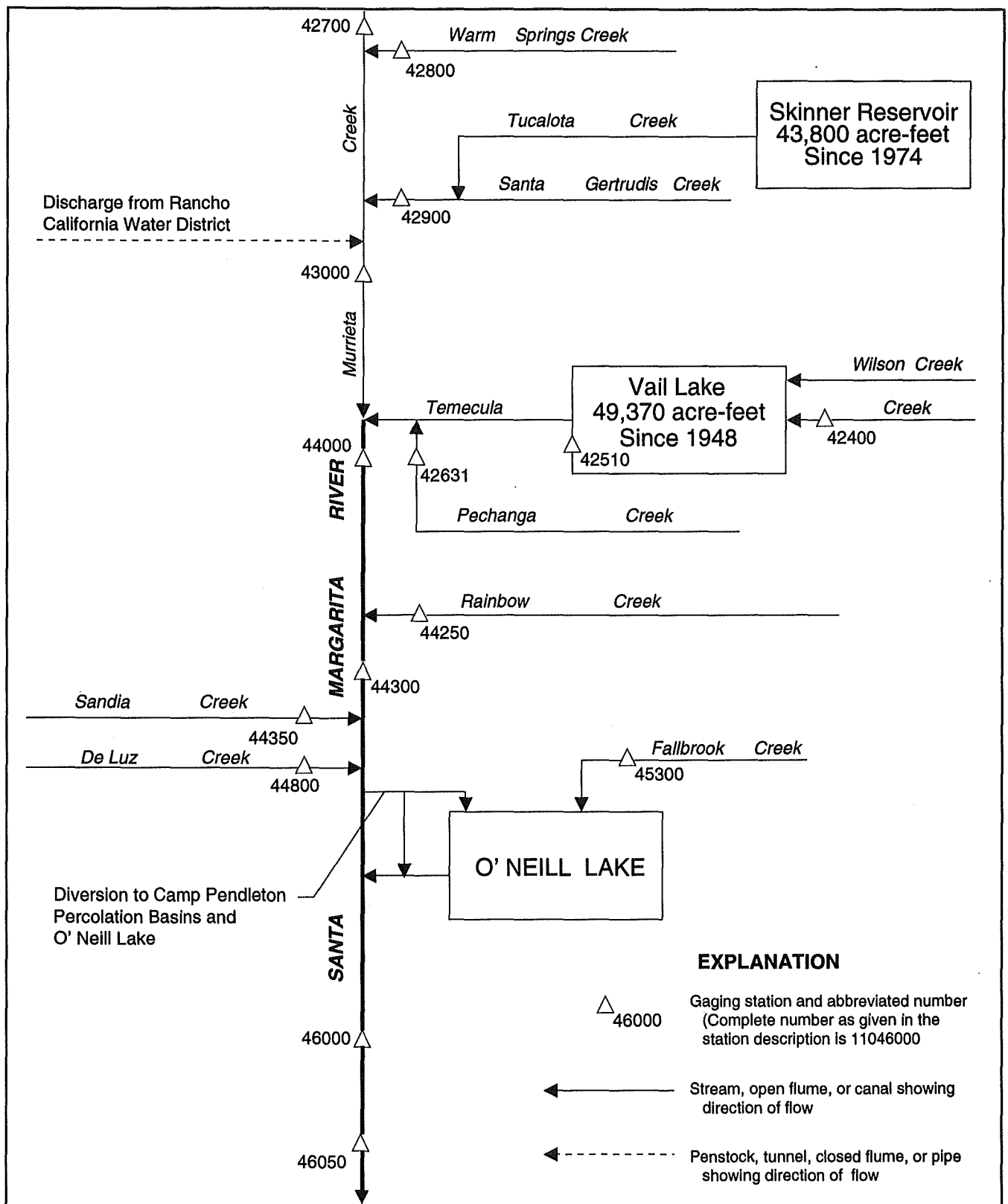


Figure 16. Diversions and storage in Santa Margarita River Basin.

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 except for estimated daily discharges, which are fair. No regulation upstream from station. Pumping upstream from station for irrigation of less than 1,000 acres. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,100 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)
Feb. 8	0400	151	3.30	Mar. 28	0915	365	3.88
Feb. 14	2015	684	4.58	May 13	0030	280	3.62
Feb. 24	0145	929	5.00				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	3.8	3.3	5.1	28	63	15	15	7.3	2.1	2.4
2	2.1	2.1	3.4	3.4	4.9	26	50	15	15	7.1	2.0	2.2
3	2.2	2.0	3.1	3.7	12	e22	44	15	15	7.2	1.8	2.6
4	2.3	1.9	2.9	4.2	29	e20	41	15	15	6.9	1.7	3.0
5	2.3	1.9	3.2	4.2	19	18	37	28	15	6.5	1.7	3.0
6	2.4	1.9	4.4	4.3	27	22	36	30	14	6.8	1.8	2.9
7	2.2	1.9	5.6	4.1	35	18	42	23	14	6.1	1.7	2.3
8	2.1	2.0	10	3.9	60	16	35	20	15	5.4	1.6	1.9
9	2.2	2.1	8.1	4.5	55	15	32	19	15	5.2	2.1	2.0
10	2.2	2.1	5.0	30	28	13	31	18	14	5.0	3.3	2.0
11	2.3	3.1	3.6	18	20	12	35	17	14	4.7	3.4	2.0
12	2.2	3.7	3.3	12	16	11	71	40	14	4.3	3.1	1.9
13	1.9	2.0	3.2	9.4	14	11	45	113	14	4.1	2.6	1.8
14	1.8	2.0	3.1	7.6	99	11	39	56	13	3.8	2.3	1.7
15	1.8	2.1	2.8	6.6	81	10	34	37	13	3.4	2.0	1.7
16	2.0	2.0	2.8	6.3	34	9.9	31	31	13	3.3	2.0	1.8
17	2.0	1.7	3.0	5.8	51	9.7	28	28	13	3.0	2.0	1.8
18	1.9	1.5	3.4	5.7	35	9.3	27	25	12	2.9	2.0	1.8
19	1.9	1.6	4.7	5.6	28	8.5	25	23	11	2.9	1.9	1.8
20	2.3	1.9	3.9	5.5	32	8.2	24	22	11	2.9	1.9	2.0
21	2.4	1.9	4.1	5.2	25	7.9	22	21	10	3.1	1.8	2.1
22	2.2	1.8	4.4	4.7	58	7.6	21	20	9.6	3.3	1.8	2.1
23	2.3	1.9	3.7	4.7	79	7.2	20	19	9.4	3.5	1.7	2.4
24	2.5	1.8	3.6	4.7	378	7.3	19	19	9.4	3.2	1.5	2.4
25	2.3	1.7	3.6	4.6	114	12	19	19	9.3	3.0	1.5	2.4
26	2.1	3.7	3.5	4.5	60	25	18	19	9.1	2.6	1.5	2.5
27	1.8	12	3.6	4.3	41	22	17	18	8.9	2.3	1.6	2.6
28	2.0	6.8	3.5	4.2	33	159	17	17	8.5	2.2	1.6	2.6
29	2.0	4.1	3.4	4.7	---	81	16	17	7.9	2.1	1.5	2.6
30	2.3	3.7	3.3	6.1	---	50	15	17	7.3	2.1	1.5	2.6
31	2.2	---	3.3	5.3	---	42	---	16	---	2.2	1.7	---
TOTAL	66.0	81.1	123.3	201.1	1473.0	719.6	954	792	364.4	128.4	60.7	66.9
MEAN	2.13	2.70	3.98	6.49	52.6	23.2	31.8	25.5	12.1	4.14	1.96	2.23
MAX	2.5	12	10	30	378	159	71	113	15	7.3	3.4	3.0
MIN	1.8	1.5	2.8	3.3	4.9	7.2	15	15	7.3	2.1	1.5	1.7
AC-FT	131	161	245	399	2920	1430	1890	1570	723	255	120	133

e Estimated.

SANTA MARGARITA RIVER BASIN

11042400 TEMECULA CREEK NEAR AGUANGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.53	3.47	5.80	18.0	28.1	22.3	11.7	5.31	2.79	1.61	1.37	1.34
MAX	7.94	47.9	66.0	361	266	105	87.3	25.5	13.1	8.19	9.40	6.93
(WY)	1984	1966	1967	1993	1980	1991	1958	1998	1980	1980	1983	1980
MIN	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1957 - 1998			
ANNUAL TOTAL	1509.6				5030.5							
ANNUAL MEAN	4.14				13.8				8.51			
HIGHEST ANNUAL MEAN									56.1			
LOWEST ANNUAL MEAN									.28			
HIGHEST DAILY MEAN	53				378				3600			
LOWEST DAILY MEAN	1.0				1.5				.00			
ANNUAL SEVEN-DAY MINIMUM	1.2				1.5				.00			
INSTANTANEOUS PEAK FLOW					929				8100			
INSTANTANEOUS PEAK STAGE					5.00				14.60			
ANNUAL RUNOFF (AC-FT)	2990				9980				6160			
10 PERCENT EXCEEDS	6.8				32				12			
50 PERCENT EXCEEDS	2.2				4.7				1.7			
90 PERCENT EXCEEDS	1.4				1.9				.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 observed, 1,038 acre-ft, Oct. 31, 1960, elevation, 1,379.44 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 29,300 acre-ft, May 16, 17, elevation, 1,448.63 ft; minimum observed, 18,510 acre-ft, Nov. 1, elevation, 1,433.55 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table dated Dec. 22, 1953)

1,390	2,400	1,420	11,400	1,450	30,420
1,400	4,530	1,430	16,390	1,460	39,280
1,410	7,560	1,440	22,780	1,475	54,940

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18860	18560	18680	18960	19500	24290	26610	28570	28410	27690	26150	24920
2	18850	18560	18690	18970	19520	24340	26790	28570	28390	27660	26100	24880
3	18840	18570	18690	18990	19580	24420	26920	28570	28390	27600	26050	24860
4	18830	18570	18690	19000	19670	24530	27050	28570	28390	27550	26010	24840
5	18830	18560	18690	19020	19710	24570	27170	28590	e28400	27510	25970	24800
6	18820	18560	18760	19030	19790	24630	27290	28660	e28410	27460	25920	24760
7	18800	18560	18790	19030	19950	24680	27420	28670	e28420	27410	25880	24740
8	18790	18550	18810	19030	20230	24700	27530	28680	e28430	27360	25840	24700
9	18780	18550	18820	19080	20480	24730	27600	28690	e28430	27320	25800	24670
10	18770	18560	18830	19130	20560	24760	27690	28690	28410	27250	25790	24620
11	18760	18560	18810	19180	20600	24770	27790	28700	28390	27210	25750	24590
12	18710	18560	18810	19210	20630	24790	27980	28800	28370	27160	25700	24540
13	18700	18570	18810	19240	20680	24810	28070	29140	28340	27100	25670	24510
14	18690	18580	18810	19260	20820	24850	28160	29260	28320	27050	25630	24470
15	18680	18570	18830	19280	21260	24860	28260	29290	28290	26980	25590	24420
16	18680	18580	18830	19300	21380	24880	28310	29300	28270	26940	25540	24390
17	18660	18580	18840	19310	21600	24890	28360	29280	28230	26880	25510	24360
18	18650	18580	18860	19330	21770	24920	28400	29250	28190	26820	25460	24320
19	18640	18570	e18860	19350	21800	24920	28420	29210	28160	26770	25410	24280
20	18640	18580	e18870	19360	21850	24930	28460	29180	28150	26720	25360	24260
21	18640	18580	e18900	19380	21850	24930	28500	29130	28100	26670	25320	24230
22	18630	18580	18890	19380	22030	24930	28530	29090	28060	26620	25270	24190
23	18630	18580	18890	19390	22490	24930	28540	29030	28020	26580	25240	24160
24	18630	18580	18910	19410	23660	24950	28550	28970	27980	26530	25200	24130
25	18610	18590	18920	19410	23990	25010	28560	28930	27940	26480	25160	24080
26	18590	18640	18920	19430	24140	25060	28570	28890	27900	26430	25130	24050
27	18580	18660	18930	19430	24230	25140	28570	28820	27850	26400	25080	24020
28	18570	18660	18930	19450	24270	25700	28580	28750	27820	26350	25030	24000
29	18570	18660	18930	19460	---	26040	28570	28660	27780	26310	25000	23970
30	18560	18680	18940	19480	---	26210	28580	28560	27740	26250	24970	23950
31	18560	---	18940	19480	---	26390	---	28460	---	26200	24960	---
MAX	18860	18680	18940	19480	24270	26390	28580	29300	28430	27690	26150	24920
MIN	18560	18550	18680	18960	19500	24290	26610	28460	27740	26200	24960	23950
a	1433.64	1433.82	1434.25	1435.10	1442.09	1444.92	1447.74	1447.59	1446.67	1444.67	1443.03	1441.65
b	-310	+120	+260	+540	+4790	+2120	+2190	-120	-720	-1540	-1240	-1010

CAL YR 1997 MAX 21120 MIN 18550 b -1330
WTR YR 1998 MAX 29300 MIN 18550 b +5080

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11042631 PECHANGA CREEK NEAR TEMECULA, CA

LOCATION.—Lat 33°28'06", long 117°07'40", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank on upstream side of Highway S-16 Bridge, 0.4 mi upstream from Temecula Creek, and 2.1 mi southeast of Temecula.

DRAINAGE AREA.—13.8 mi².

PERIOD OF RECORD.—October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,010 ft above sea level, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,120 ft³/s, Jan. 16, 1993, gage height, 8.12 ft, from rating curve extended above 400 ft³/s on basis of step-backwater analysis; no flow for many days each year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 9	0145	62	3.38	Feb. 24	0230	315	4.31
Feb. 14	1800	73	3.45				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	7.8	8.3	.63	.19	.00	.00	.00
2	.00	.00	.00	.00	.00	6.8	6.0	.74	.09	.00	.00	.00
3	.00	.00	.00	.00	.92	5.2	4.8	.76	.07	.00	.00	.00
4	.00	.00	.00	.00	.08	1.0	4.9	.65	.02	.00	.00	.00
5	.00	.00	.00	.00	.00	.71	5.2	4.4	.00	.00	.00	.00
6	.00	.00	1.1	.00	.71	4.8	4.0	1.7	.00	.00	.00	.00
7	.00	.00	.03	.00	.33	2.7	6.5	1.4	.04	.00	.00	.00
8	.00	.00	.00	.00	6.1	2.1	4.2	1.6	.03	.00	.00	.00
9	.00	.00	.00	.91	8.6	1.1	2.0	.58	.00	.00	.00	.00
10	.00	.00	.00	1.5	.08	1.6	1.9	.38	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	1.3	3.6	.48	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.82	2.6	4.3	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.61	1.8	3.1	.00	.00	.00	.00
14	.00	.00	.00	.00	14	.59	1.8	1.5	.00	.00	.00	.00
15	.00	.00	.00	.00	5.5	.55	1.9	1.7	.00	.00	.00	.00
16	.00	.00	.00	.00	3.5	.47	1.9	.82	.00	.00	.00	.00
17	.00	.00	.00	.00	14	.54	1.7	.58	.00	.00	.00	.00
18	.00	.00	.00	.00	1.8	1.4	1.9	.54	.00	.00	.00	.00
19	.00	.00	.00	.00	1.6	.59	1.5	.26	.00	.00	.00	.00
20	.00	.00	.00	.00	1.5	.44	1.3	.20	.00	.00	.00	.00
21	.00	.00	.00	.00	.89	.34	1.5	.16	.00	.00	.00	.00
22	.00	.00	.00	.00	48	.36	1.3	.13	.00	.00	.00	.00
23	.00	.00	.00	.00	65	.36	1.3	.09	.00	.00	.00	.00
24	.00	.00	.00	.00	90	.27	1.3	.04	.00	.00	.00	.00
25	.00	.00	.00	.00	14	3.1	1.7	.09	.00	.00	.00	.00
26	.00	.00	.00	.00	9.0	3.1	.90	.13	.00	.00	.00	.00
27	.00	.00	.00	.00	12	5.0	.99	.17	.00	.00	.00	.00
28	.00	.00	.00	.00	9.5	12	.80	.16	.00	.00	.00	.00
29	.00	.00	.00	.00	---	7.6	.68	.14	.00	.00	.00	.00
30	.00	.00	.00	.00	---	4.7	.68	.24	.00	.00	.00	.00
31	.00	---	.00	.00	---	5.3	---	.18	---	.00	.00	---
TOTAL	0.00	0.00	1.13	2.41	307.11	83.25	78.95	27.85	0.44	0.00	0.00	0.00
MEAN	.000	.000	.036	.078	11.0	2.69	2.63	.90	.015	.000	.000	.000
MAX	.00	.00	1.1	1.5	90	12	8.3	4.4	.19	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.27	.68	.04	.00	.00	.00	.00
AC-FT	.00	.00	2.2	4.8	609	165	157	55	.9	.00	.00	.00

11042631 PECHANGA CREEK NEAR TEMECULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.008	.032	6.27	3.71	2.91	.46	.20	.052	.022	.017	.001
MAX	.003	.050	.15	63.4	24.4	16.5	2.63	.95	.51	.23	.18	.006
(WY)	1988	1997	1993	1993	1993	1995	1998	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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1988 - 1998		
ANNUAL TOTAL	5.39			501.14					
ANNUAL MEAN	.015			1.37			1.13		
HIGHEST ANNUAL MEAN							8.27		
LOWEST ANNUAL MEAN							.000		
HIGHEST DAILY MEAN	2.7 Jan 26			90 Feb 24			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				315 Feb 24			3120 Jan 16 1993		
INSTANTANEOUS PEAK STAGE				4.31 Feb 24			8.12 Jan 16 1993		
ANNUAL RUNOFF (AC-FT)	11			994			819		
10 PERCENT EXCEEDS	.00			2.9			.43		
50 PERCENT EXCEEDS	.00			.00			.00		
90 PERCENT EXCEEDS	.00			.00			.00		

11042700 MURRIETA CREEK AT TENAJA ROAD, NEAR MURRIETA, CA

LOCATION.—Lat 33°33'20", long 117°13'50", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank at Tenaja Road crossing and 1.0 mi northwest of Murrieta.

DRAINAGE AREA.—30.0 mi².

PERIOD OF RECORD.—October 1997 to September 1998.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,105 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. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,390 ft³/s, Feb. 23, 1998, gage height, 10.35 ft, from rating curve extended above 304 ft³/s; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 130 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)
Dec. 6	1415	499	7.33	Feb. 17	0715	596	7.42
Jan. 9	2130	210	6.69	Feb. 23	2315	3,390	10.35
Feb. 3	1230	163	6.57	Mar. 25	1730	141	6.51
Feb. 8	0200	1,410	8.49	Mar. 28	1130	149	6.53
Feb. 14	1900	680	7.55				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	18	50	.00	e1.0	.00	.00	.00
2	.00	.00	.00	.00	.00	17	22	.00	e.90	.00	.00	.00
3	.00	.00	.00	.00	50	21	13	.00	.95	.00	.00	.00
4	.00	.00	.00	.00	26	14	14	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	9.4	13	17	34	.79	.00	.00	.00
6	.00	.00	96	.00	93	26	8.9	16	.94	.00	.00	.00
7	.00	.00	10	.00	54	e20	6.3	11	1.0	.00	.00	.00
8	.00	.00	.00	.00	291	e19	6.2	10	.19	.00	.00	.00
9	.00	.00	.00	29	66	e18	7.5	8.9	.21	.00	.00	.00
10	.00	.00	.00	60	22	e18	4.9	9.5	.00	.00	.00	.00
11	.00	.00	.00	.00	19	17	15	.87	.00	.00	.00	.00
12	.00	.00	.00	.00	17	13	27	17	.00	.00	.00	.00
13	.00	.00	.00	.00	15	12	8.1	51	.00	.00	.00	.00
14	.00	.00	.00	.00	158	13	7.6	31	.25	.00	.00	.00
15	.00	.00	.00	.00	80	5.4	5.8	17	.52	.00	.00	.00
16	.00	.00	.00	.00	29	1.5	3.3	13	1.9	.00	.00	.00
17	.00	.00	.00	.00	225	5.7	5.6	e13	1.1	.00	.00	.00
18	.00	.00	.00	.00	54	6.3	5.2	e12	.00	.00	.00	.00
19	.00	.00	.00	.00	26	3.6	5.7	13	.12	.00	.00	.00
20	.00	.00	.00	.00	45	4.4	8.5	e9.5	.08	.00	.00	.00
21	.00	.00	.00	.00	21	4.5	8.4	e6.0	.00	.00	.00	.00
22	.00	.00	.00	.00	208	3.5	5.6	e4.0	.00	.00	.00	.00
23	.00	.00	.00	.00	530	3.0	5.1	e3.0	.00	.00	.00	.00
24	.00	.00	.00	.00	480	.00	5.5	e2.5	.00	.00	.00	.00
25	.00	.00	.00	.00	92	33	1.9	e2.0	.00	.00	.00	.00
26	.00	.00	.00	.00	54	8.2	.29	e1.5	.00	.00	.00	.00
27	.00	.00	.00	.00	36	1.2	.01	e1.3	.00	.00	.00	.00
28	.00	.00	.00	.00	29	54	.00	e1.2	.00	.00	.00	.00
29	.00	.00	.00	.00	---	25	.00	e1.1	.00	.00	.00	.00
30	.00	.00	.00	.00	---	5.4	.18	e1.1	.00	.00	.00	.00
31	.00	---	.00	.00	---	11	---	e1.0	---	.00	.00	---
TOTAL	0.00	0.00	106.00	89.00	2729.40	414.70	268.58	291.47	9.95	0.00	0.00	0.00
MEAN	.000	.000	3.42	2.87	97.5	13.4	8.95	9.40	.33	.000	.000	.000
MAX	.00	.00	96	60	530	54	50	51	1.9	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	210	177	5410	823	533	578	20	.00	.00	.00

e Estimated.

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

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	3.42	2.87	97.5	13.4	8.95	9.40	.33	.000	.000	.000
MAX	.000	.000	3.42	2.87	97.5	13.4	8.95	9.40	.33	.000	.000	.000
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	.000	.000	3.42	2.87	97.5	13.4	8.95	9.40	.33	.000	.000	.000
(WY)	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998	1998

SUMMARY STATISTICS

FOR 1998 WATER YEAR

ANNUAL TOTAL	3909.10
ANNUAL MEAN	10.7
HIGHEST DAILY MEAN	530 Feb 23
LOWEST DAILY MEAN	.00 Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1
INSTANTANEOUS PEAK FLOW	3390 Feb 23
INSTANTANEOUS PEAK STAGE	10.35 Feb 23
ANNUAL RUNOFF (AC-FT)	7750
10 PERCENT EXCEEDS	20
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.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. Base flows at station may be affected by construction activities at Domenigoni Reservoir at times. 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)
Dec. 6	1300	280	4.85	Feb. 24	0115	3,340	7.59
Jan. 9	2145	382	5.07	Mar. 6	0545	63	4.32
Feb. 3	1300	112	4.54	Mar. 25	1530	112	4.54
Feb. 8	0500	1,720	6.48	Apr. 1	1330	78	4.44
Feb. 14	2200	497	5.24	May 13	1315	52	4.31
Feb. 17	1215	707	5.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	e.00	.00	.00	18	42	.00	1.5	.00	.00	.00
2	.00	.00	.00	.05	.00	16	17	.00	1.8	.00	.00	.00
3	.00	.00	.00	.18	25	12	9.7	.00	.01	.00	.00	.00
4	.00	.00	.00	.52	4.6	10	8.8	.00	.01	.91	.00	.00
5	.00	.00	.00	.38	.96	7.8	18	1.4	.00	3.0	.00	.00
6	.00	.00	51	.16	23	23	8.1	1.8	.02	5.4	.00	.00
7	.00	.00	4.8	.03	21	19	12	.21	.14	5.3	.00	.00
8	.00	.00	.44	.02	491	21	7.1	.00	3.3	.92	.00	.00
9	.00	.00	.01	37	42	12	8.6	.00	5.1	.00	.00	.00
10	.00	.26	.00	27	11	20	5.9	.00	.57	.00	.00	.00
11	.00	.14	.00	.57	7.1	11	12	.00	.64	.00	.00	.00
12	.00	.00	.00	.00	5.4	16	4.6	4.5	6.4	.00	.00	.00
13	.00	.79	.00	.02	3.6	12	.90	12	6.5	.00	.00	.00
14	.00	.12	.04	.00	106	12	3.0	9.0	9.2	.00	.00	.00
15	.00	.00	.06	.00	90	19	4.1	10	7.1	.00	.00	.00
16	.00	.00	.03	.01	5.7	12	4.4	11	2.3	.00	.00	.00
17	.00	.00	.01	.00	259	11	5.8	8.8	.08	.00	.00	.00
18	.00	.00	.21	.00	31	8.1	3.4	8.8	.00	.00	.00	.00
19	.00	.00	.04	.04	8.0	7.6	3.8	2.8	.90	.00	.00	.00
20	.00	.00	.01	.00	36	13	3.6	1.5	12	.00	.00	.00
21	.00	.00	.04	.00	10	4.9	2.8	.12	14	.00	.00	.00
22	.00	.00	.00	.00	339	5.6	.14	1.6	9.3	.00	.00	.00
23	.00	.00	.02	.00	480	13	.00	1.0	5.7	.00	.00	.00
24	.00	.00	.01	.00	1120	4.6	.00	6.0	1.3	.00	.00	.00
25	.00	.00	.00	.00	50	18	.00	4.3	.02	.00	.00	.00
26	.00	1.0	.03	.00	43	3.9	.00	3.6	.01	.00	.00	.00
27	.00	.49	.00	.00	28	3.1	.00	3.1	.02	.83	.00	.00
28	.00	e.00	.00	.00	20	12	.00	1.1	.02	2.7	.00	.00
29	.00	e.00	.00	.10	---	12	.00	.05	.00	3.0	.00	.00
30	.00	e.00	.00	.00	---	16	.00	.00	.00	.05	.00	.00
31	.00	---	.00	.00	---	15	---	.01	---	.00	.00	---
TOTAL	0.00	2.80	56.75	66.08	3260.36	388.6	185.74	92.69	87.94	22.11	0.00	0.00
MEAN	.000	.093	1.83	2.13	116	12.5	6.19	2.99	2.93	.71	.000	.000
MAX	.00	1.0	51	37	1120	23	42	12	14	5.4	.00	.00
MIN	.00	.00	.00	.00	.00	3.1	.00	.00	.00	.00	.00	.00
AC-FT	.00	5.6	113	131	6470	771	368	184	174	44	.00	.00

e Estimated.

11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.079	.15	.61	26.0	23.3	13.3	.90	.51	.29	.071	.000	.008
MAX	.46	.68	2.27	226	116	74.0	6.19	2.99	2.93	.71	.002	.091
(WY)	1993	1997	1993	1993	1998	1991	1998	1998	1998	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1988 - 1998			
ANNUAL TOTAL	188.25				4163.07							
ANNUAL MEAN	.52				11.4				5.35			
HIGHEST ANNUAL MEAN									27.6			
LOWEST ANNUAL MEAN									.063			
HIGHEST DAILY MEAN	51				1120				2070			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					3340				5570			
INSTANTANEOUS PEAK STAGE					7.59				8.59			
ANNUAL RUNOFF (AC-FT)	373				8260				3880			
10 PERCENT EXCEEDS	.10				13				1.6			
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 poor. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.80	.06	.00	.00	15	55	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	15	7.8	.00	.00	.00	.00	.00
3	.00	.00	.00	2.0	67	16	1.3	.00	.00	.00	.00	.00
4	.00	.00	.00	2.1	26	22	.00	.00	.00	.00	.00	.00
5	.29	.00	.00	.44	.53	28	6.4	14	.00	.00	.00	.00
6	.00	.00	125	.00	26	48	7.0	14	.00	.00	.00	.00
7	.00	.00	7.4	.00	6.2	e40	2.0	.00	.00	.00	.00	.00
8	.00	.00	3.6	.00	212	e34	.00	.00	.00	.00	.00	.00
9	.00	.00	3.9	94	20	e34	4.7	.00	.00	.00	.00	.00
10	.00	.70	2.3	96	.00	e29	7.7	.00	.00	.00	.00	.00
11	.00	.00	.00	3.1	.00	32	21	.00	.00	.00	.00	.00
12	.00	.00	.64	3.4	.00	24	30	14	.00	.00	.00	.00
13	.00	6.3	.08	.70	.01	29	e15	9.1	.00	.00	.00	.00
14	.00	.49	.00	.00	133	e23	e12	3.5	.00	.00	.00	.00
15	.00	.00	.00	.00	22	e27	e10	13	.00	.00	.00	.00
16	.00	.00	.49	.00	1.5	e16	.00	e10	.00	.00	.00	.00
17	.00	.00	.00	.00	178	e23	.00	e9.0	.00	.00	.00	.00
18	.00	.00	8.6	.00	11	e23	.00	e7.5	.00	.00	.00	.00
19	.00	.00	.81	1.2	9.9	e19	.00	e5.0	.00	.00	.00	.00
20	.00	.00	.00	.00	30	2.8	.00	.77	.00	.00	.00	.00
21	.00	.00	.00	.00	9.3	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	247	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	445	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	664	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	2.0	19	11	.00	.00	.00	.00	.00	.00
26	.00	11	.00	2.9	19	2.0	.00	.00	.00	.00	.00	.00
27	.00	10	.00	.97	16	.03	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	15	19	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	3.6	---	40	.00	.00	.00	.00	.00	.00
30	.00	3.8	.06	.00	---	17	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	46	---	.00	---	.00	.00	---
TOTAL	0.29	33.09	152.94	212.41	2177.44	634.83	179.90	99.87	0.00	0.00	0.00	0.00
MEAN	.009	1.10	4.93	6.85	77.8	20.5	6.00	3.22	.000	.000	.000	.000
MAX	.29	11	125	96	664	48	55	14	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.6	66	303	421	4320	1260	357	198	.00	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.021	.32	.92	17.1	16.7	14.3	7.42	3.64	.006	.008	.000	.069
MAX	.12	1.94	4.93	108	77.8	50.7	46.7	28.3	.044	.035	.000	.67
(WY)	1994	1997	1998	1993	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1988 - 1998

ANNUAL TOTAL	589.89	3490.77	
ANNUAL MEAN	1.62	9.56	4.99
HIGHEST ANNUAL MEAN			23.2
LOWEST ANNUAL MEAN			.006
HIGHEST DAILY MEAN	125	Dec 6	664
LOWEST DAILY MEAN	.00	Jan 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 28	.00
INSTANTANEOUS PEAK FLOW			3740
INSTANTANEOUS PEAK STAGE			4.36
ANNUAL RUNOFF (AC-FT)	1170	6920	3620
10 PERCENT EXCEEDS	.59	19	7.0
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

11043000 MURRIETA CREEK AT TEMECULA, CA

LOCATION.—Lat 33°28'47", long 117°08'35", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on right bank 0.4 mi upstream from confluence with Temecula Creek, 1.0 mi south of Temecula, and 12 mi downstream from Skinner Reservoir on Tualota Creek.

DRAINAGE AREA.—222 mi².

PERIOD OF RECORD.—October 1924 to current year. Prior to September 1930 monthly discharges only, published in WSP 1315-B.

REVISED RECORDS.—WSP 1345: 1952. WSP 1635: 1932, 1937. WSP 1928: Drainage area. WDR CA-93-1: 1991 (P), 1992 (M).

GAGE.—Water-stage recorder. Concrete control since Aug. 30, 1981. Elevation of gage is 970 ft above sea level, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.—Records poor except for daily discharges in February and March, which are fair. 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)
Dec. 6	1300	2,580	6.41	Mar. 25	1715	535	3.34
Jan. 9	2245	3,740	7.62	Apr. 1	0130	511	3.28
Feb. 3	1715	1,040	4.44	Apr. 5	2015	221	2.49
Feb. 8	0300	8,960	11.05	Apr. 11	1730	249	2.58
Feb. 14	1930	4,360	8.03	May 5	1615	519	3.43
Feb. 23	2400	16,700	14.50	May 12	2145	535	3.47
Mar. 6	0615	369	2.91				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	.08	2.9	.32	.25	76	287	6.8	.15	2.4	2.4	2.7
2	.94	.07	.25	.29	.25	67	68	5.2	1.8	2.4	2.4	2.7
3	1.0	.09	.21	3.4	333	60	40	8.7	1.3	2.4	2.4	2.7
4	1.4	.09	.24	2.3	98	55	36	6.0	2.0	2.4	2.4	2.6
5	1.8	.08	.30	6.7	6.9	51	68	164	2.2	2.4	2.4	2.4
6	1.9	.08	753	.20	279	130	45	54	2.2	2.4	2.4	2.4
7	2.1	.08	85	.19	154	56	29	12	2.4	2.4	2.5	2.4
8	2.0	.08	20	.17	2130	49	19	7.9	2.4	2.4	2.6	2.6
9	2.0	.08	2.1	330	258	47	22	5.7	2.4	2.4	2.7	2.7
10	1.8	.23	2.3	399	32	48	25	4.9	2.4	2.4	2.7	2.7
11	1.8	.14	1.1	9.2	14	47	80	3.6	2.4	2.4	2.6	2.7
12	2.0	.11	.31	1.7	13	46	76	105	2.4	2.4	2.5	2.7
13	2.0	1.1	.19	2.0	14	54	28	194	2.4	2.4	2.4	2.7
14	2.0	7.7	.18	.84	908	47	25	57	2.4	2.4	2.5	2.7
15	2.2	.14	.16	1.3	360	43	20	23	2.4	2.4	2.7	2.7
16	2.5	.10	.14	2.0	50	42	11	16	2.4	2.4	2.7	2.7
17	1.9	.10	.12	2.0	1070	43	12	13	2.4	2.4	2.7	2.7
18	1.4	.09	6.2	1.8	123	42	11	11	2.4	2.4	2.7	2.7
19	1.9	.09	3.5	3.5	52	27	9.4	9.1	2.4	2.4	2.7	2.7
20	2.2	.10	.54	1.4	183	13	8.3	4.0	2.4	2.4	2.7	2.7
21	2.5	.09	.70	1.3	50	8.5	9.1	1.0	2.4	2.4	2.7	2.7
22	2.7	.09	.83	1.3	1800	7.4	6.8	1.4	2.4	2.4	2.7	2.7
23	2.6	.09	.87	1.1	3080	8.8	9.9	3.0	2.4	2.4	2.6	2.7
24	2.3	.08	.86	.82	4000	9.1	7.1	8.9	2.4	2.4	2.7	2.7
25	1.5	.09	1.0	.56	364	132	9.2	6.1	2.4	2.4	2.7	2.7
26	1.4	6.4	1.0	.44	187	55	11	2.0	2.4	2.4	2.7	2.7
27	1.7	20	.82	.37	121	22	9.4	1.0	2.4	2.4	2.7	2.7
28	1.7	1.0	.45	.26	91	204	12	.52	2.4	2.4	2.7	2.7
29	1.7	.10	.38	8.6	---	138	11	.07	2.4	2.4	2.7	2.7
30	.61	.38	.40	1.5	---	73	8.4	.08	2.4	2.4	2.7	2.7
31	.07	---	.42	.33	---	66	---	.09	---	2.4	2.7	---
TOTAL	54.92	38.95	886.47	784.89	15771.40	1766.8	1013.6	735.06	67.25	74.4	80.7	79.9
MEAN	1.77	1.30	28.6	25.3	563	57.0	33.8	23.7	2.24	2.40	2.60	2.66
MAX	2.7	20	753	399	4000	204	287	194	2.4	2.4	2.7	2.7
MIN	.07	.07	.12	.17	.25	7.4	6.8	.07	.15	2.4	2.4	2.4
AC-FT	109	77	1760	1560	31280	3500	2010	1460	133	148	160	158

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
LOWEST ANNUAL MEAN	.39
HIGHEST DAILY MEAN	7200
LOWEST DAILY MEAN	.02
ANNUAL SEVEN-DAY MINIMUM	.03
INSTANTANEOUS PEAK FLOW	17500
INSTANTANEOUS PEAK STAGE	13.80
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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.40	1.70	4.04	69.1	102	70.6	11.3	5.63	1.53	1.20	1.25	1.99
MAX	3.28	11.1	28.6	818	838	420	85.4	44.2	4.96	2.48	3.05	10.6
(WY)	1988	1997	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1974 - 1998

ANNUAL TOTAL	3046.19	21354.34	
ANNUAL MEAN	8.35	58.5	22.3
HIGHEST ANNUAL MEAN			121
LOWEST ANNUAL MEAN			1.02
HIGHEST DAILY MEAN	753	Dec 6	4000
LOWEST DAILY MEAN	.07	Mar 25	.07
ANNUAL SEVEN-DAY MINIMUM	.08	Oct 31	.08
INSTANTANEOUS PEAK FLOW			16700
INSTANTANEOUS PEAK STAGE			14.50
ANNUAL RUNOFF (AC-FT)	6040	42360	16130
10 PERCENT EXCEEDS	5.4	67	9.5
50 PERCENT EXCEEDS	2.2	2.4	.93
90 PERCENT EXCEEDS	.25	.21	.14

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	1.0	3.6	1.5	1.4	75	514	e9.0	3.1	4.1	3.7	7.7
2	3.2	1.0	1.5	1.5	1.4	64	88	e8.0	5.0	5.1	3.7	3.7
3	3.1	1.0	1.4	3.3	559	58	45	e9.0	4.0	6.6	3.7	4.7
4	3.1	1.0	1.4	4.0	120	54	37	e8.0	2.9	6.3	3.7	8.3
5	4.6	1.0	1.3	7.0	11	53	106	223	2.9	6.3	3.6	1.9
6	4.3	1.0	816	1.6	409	162	70	72	3.3	4.0	3.6	1.6
7	3.1	1.0	87	1.6	159	66	47	16	3.2	1.7	3.5	1.5
8	3.0	1.1	33	1.6	1970	60	26	9.8	3.7	3.4	3.5	2.4
9	3.0	1.1	5.8	358	367	57	25	e8.0	5.9	4.8	3.5	3.5
10	3.0	1.6	2.8	562	44	57	25	e7.0	4.7	3.3	4.3	3.5
11	3.0	1.5	2.4	20	20	54	90	e6.0	3.8	1.6	3.2	3.5
12	3.0	1.2	1.8	4.2	14	51	76	226	5.1	1.6	2.9	3.4
13	3.0	3.2	1.7	3.1	13	61	29	310	7.5	5.0	2.8	3.4
14	3.0	10	1.6	2.0	911	53	29	87	8.9	12	2.7	3.4
15	2.9	1.5	1.6	1.8	434	51	25	43	11	8.3	2.8	3.7
16	3.0	1.3	1.6	1.8	61	51	14	33	8.6	5.7	2.8	4.2
17	3.0	1.2	1.5	1.7	1260	52	14	27	3.0	5.8	2.8	4.2
18	2.9	1.2	7.3	1.6	127	48	13	24	2.0	4.8	3.0	4.2
19	3.0	1.2	11	3.2	60	26	11	21	2.0	2.7	3.0	4.1
20	3.0	1.2	1.6	1.7	199	12	10	12	2.0	1.9	3.0	4.1
21	3.0	1.2	2.2	1.5	57	8.6	8.9	4.6	3.7	1.8	2.9	4.0
22	3.0	1.2	1.6	1.5	1630	8.6	e8.0	3.8	7.1	1.6	2.9	3.9
23	3.0	1.2	1.6	1.5	3030	10	e9.0	6.0	7.1	2.1	2.9	3.9
24	3.0	1.2	1.6	1.5	e4200	8.8	e8.0	7.7	6.5	3.4	3.3	3.7
25	2.9	1.2	1.5	1.5	e400	221	e10	7.8	2.6	3.8	3.6	3.8
26	2.8	9.4	1.6	1.4	e230	66	e13	11	2.0	3.8	3.7	3.9
27	2.9	30	1.6	1.4	e150	28	e11	8.6	1.9	4.0	3.7	3.8
28	2.9	3.2	1.5	1.4	88	438	e14	7.2	1.9	3.9	3.6	3.8
29	3.3	1.5	1.5	9.3	---	230	e13	4.2	2.9	3.8	3.6	3.7
30	2.2	2.4	1.5	3.0	---	95	e10	3.5	6.0	3.9	3.5	3.8
31	1.1	---	1.5	1.5	---	94	---	2.9	---	3.9	5.9	---
TOTAL	94.2	86.8	1003.6	1008.7	16525.8	2373.0	1398.9	1226.1	134.3	131.0	105.4	115.3
MEAN	3.04	2.89	32.4	32.5	590	76.5	46.6	39.6	4.48	4.23	3.40	3.84
MAX	4.6	30	816	562	4200	438	514	310	11	12	5.9	8.3
MIN	1.1	1.0	1.3	1.4	1.4	8.6	8.0	2.9	1.9	1.6	2.7	1.5
AC-FT	187	172	1990	2000	32780	4710	2770	2430	266	260	209	229

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
LOWEST ANNUAL MEAN	6.22
HIGHEST DAILY MEAN	19900
LOWEST DAILY MEAN	.90
ANNUAL SEVEN-DAY MINIMUM	.99
INSTANTANEOUS PEAK FLOW	25000
INSTANTANEOUS PEAK STAGE	14.60
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
LOWEST ANNUAL MEAN	2.96
HIGHEST DAILY MEAN	7730
LOWEST DAILY MEAN	.30
ANNUAL SEVEN-DAY MINIMUM	.67
INSTANTANEOUS PEAK FLOW	14600
INSTANTANEOUS PEAK STAGE	15.32
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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.06	4.56	6.75	94.7	132	90.7	15.2	8.75	3.22	2.49	2.66	3.34
MAX	10.8	32.8	32.4	1255	1105	438	85.6	46.6	6.87	4.55	9.99	13.9
(WY)	1994	1986	1998	1993	1980	1978	1980	1980	1978	1980	1993	1976
MIN	1.25	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1974 - 1998

ANNUAL TOTAL	4150.5	24203.1	
ANNUAL MEAN	11.4	66.3	30.1
HIGHEST ANNUAL MEAN			183
LOWEST ANNUAL MEAN			2.17
HIGHEST DAILY MEAN	816	Dec 6	4200
LOWEST DAILY MEAN	1.0	Nov 1	1.0
ANNUAL SEVEN-DAY MINIMUM	1.0	Nov 1	1.0
INSTANTANEOUS PEAK FLOW			17900
INSTANTANEOUS PEAK STAGE			14.96
ANNUAL RUNOFF (AC-FT)	8230		48010
10 PERCENT EXCEEDS	7.3		80
50 PERCENT EXCEEDS	3.1		3.8
90 PERCENT EXCEEDS	1.6		1.5

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 except for estimated daily discharges, which are poor. 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, 8.35 ft, Feb. 23, 1998; 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)
Dec. 6	1300	175	4.55	Feb. 17	0645	269	5.05
Jan. 10	0330	179	4.57	Feb. 23	2300	1,330	8.35
Feb. 3	1230	186	4.61	Mar. 28	0730	166	4.60
Feb. 8	0130	455	5.90	May 12	1930	183	4.59
Feb. 14	1900	704	6.80				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.85	2.2	.66	.96	16	35	e3.5	2.1	.95	.40	1.1
2	1.2	.94	.90	.74	.88	15	16	e3.6	2.4	.91	.37	.71
3	1.3	e.82	.68	1.3	46	14	14	e3.4	2.1	.99	.37	.91
4	1.5	e.70	.62	1.8	8.7	14	13	e3.2	2.2	.93	.32	2.7
5	1.7	e.60	.99	1.2	4.3	13	12	e7.0	1.8	.81	.30	.93
6	.88	e.50	19	.62	23	19	12	e5.2	2.3	.63	.31	.95
7	1.3	e.40	6.3	.49	8.8	13	11	e4.9	2.4	.86	.30	.60
8	1.2	.37	4.6	.47	107	12	9.6	3.7	2.2	.80	.29	.51
9	.73	.50	2.2	22	56	11	9.5	4.1	2.5	.74	.28	.52
10	.96	2.7	1.5	41	12	11	8.9	3.8	2.3	.61	.50	.56
11	.82	1.0	1.2	2.3	9.5	9.9	17	3.6	3.2	.55	.41	.54
12	.70	.50	1.3	1.6	7.0	10	15	33	3.2	.84	.30	.57
13	.59	2.1	1.6	1.4	5.9	11	10	25	2.8	.90	.26	.73
14	.62	.78	1.5	1.2	139	11	9.5	9.7	2.5	.69	.25	.71
15	.59	.45	1.3	1.2	33	9.3	8.0	7.2	2.1	.50	.26	.57
16	.82	.46	1.3	1.4	15	9.6	7.2	5.8	2.9	.47	.27	.52
17	.83	.43	1.3	.85	90	9.2	6.9	5.3	2.5	.50	.28	.95
18	1.1	.33	2.3	.91	17	7.8	6.5	4.8	2.2	1.4	.27	.79
19	.81	.33	1.5	1.6	15	7.7	6.0	3.8	2.2	1.1	.26	.72
20	.76	.32	.78	1.1	24	7.2	5.8	4.2	2.4	.63	.26	.68
21	1.1	.36	1.1	1.0	13	6.6	5.8	3.3	1.5	.53	.23	.78
22	1.1	.40	1.0	.88	242	6.0	5.2	3.3	1.9	.64	.23	.60
23	1.0	.33	.71	.85	293	5.9	5.2	3.1	2.1	.59	.23	.83
24	.89	.34	.62	.81	333	6.1	4.4	2.9	1.5	.57	.23	.74
25	.73	.38	.64	.76	70	13	4.0	3.4	1.3	.57	.25	.56
26	.80	8.9	.68	1.0	36	14	4.0	4.8	1.3	.48	.28	.58
27	.81	9.2	.74	.88	21	15	3.8	2.8	1.2	.52	.26	.66
28	.70	1.1	.94	.91	17	46	3.8	2.4	1.1	.46	.23	.54
29	.68	.86	.82	5.0	---	20	3.3	2.5	.95	.45	.22	.82
30	.99	4.2	.67	1.3	---	15	3.7	2.3	.95	.49	.21	.76
31	.82	---	.76	1.1	---	17	---	2.1	---	.44	.20	---
TOTAL	29.53	41.15	61.75	98.33	1648.04	395.3	276.1	177.7	62.10	21.55	8.83	23.14
MEAN	.95	1.37	1.99	3.17	58.9	12.8	9.20	5.73	2.07	.70	.28	.77
MAX	1.7	9.2	19	41	333	46	35	33	3.2	1.4	.50	2.7
MIN	.59	.32	.62	.47	.88	5.9	3.3	2.1	.95	.44	.20	.51
AC-FT	59	82	122	195	3270	784	548	352	123	43	18	46

e Estimated.

SANTA MARGARITA RIVER BASIN

11044250 RAINBOW CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.55	.93	1.23	16.9	17.1	12.8	3.47	1.61	.85	.44	.38	.53
MAX	.95	3.40	2.72	97.3	58.9	55.4	9.20	5.73	2.07	.90	.75	1.25
(WY)	1998	1997	1997	1993	1998	1995	1998	1998	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1990 - 1998			
ANNUAL TOTAL	748.55				2843.52							
ANNUAL MEAN	2.05				7.79				5.10			
HIGHEST ANNUAL MEAN									14.4			
LOWEST ANNUAL MEAN									1.03			
HIGHEST DAILY MEAN	135				333				800			
LOWEST DAILY MEAN	.05				.20				.04			
ANNUAL SEVEN-DAY MINIMUM	.05				.24				.04			
INSTANTANEOUS PEAK FLOW					1330				8000			
INSTANTANEOUS PEAK STAGE					8.35				8.35			
ANNUAL RUNOFF (AC-FT)	1480				5640				3690			
10 PERCENT EXCEEDS	3.9				14				6.7			
50 PERCENT EXCEEDS	.64				1.2				.70			
90 PERCENT EXCEEDS	.07				.39				.19			

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 except for estimated daily discharges, which are poor. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	3.5	10	9.7	e3.2	e120	e600	16	17	11	7.6	6.5
2	6.7	3.1	7.3	9.7	e3.1	e110	e130	e16	17	9.4	7.0	7.3
3	6.3	2.8	4.2	13	e900	e105	e65	e15	16	9.8	6.5	5.4
4	5.8	1.9	3.3	15	e200	e100	e60	e15	14	11	5.9	9.7
5	6.4	1.6	3.2	20	e25	e96	e65	e250	12	13	5.7	8.2
6	6.1	1.9	697	14	e500	e200	e90	e82	13	11	4.9	4.2
7	6.2	1.9	218	7.3	e220	e120	e88	e26	14	9.4	5.2	3.3
8	6.0	2.1	63	4.9	e2500	e85	42	e21	15	6.3	4.8	2.5
9	5.6	2.5	27	33	e500	e78	30	e17	16	7.0	5.0	2.5
10	5.1	3.4	11	1200	e110	e75	30	e16	17	8.9	5.3	3.3
11	4.7	7.4	6.6	73	e52	e70	42	e15	17	8.1	5.4	3.5
12	4.6	4.7	5.0	e30	45	e68	127	e75	16	6.8	3.9	3.8
13	4.0	5.4	4.9	e8.4	39	e76	60	e400	15	6.9	3.2	3.7
14	3.5	12	4.4	e6.0	1280	e70	51	169	17	6.0	3.1	3.6
15	3.5	12	4.0	e4.2	645	e67	49	91	20	6.3	3.3	3.4
16	3.8	5.2	3.8	e3.8	111	e62	37	73	22	5.7	3.3	3.6
17	3.8	4.2	3.7	e3.7	1400	e64	31	59	18	6.7	3.6	4.9
18	4.5	3.7	4.2	e3.5	192	e60	30	55	12	7.3	3.6	5.2
19	4.7	3.3	17	e6.8	100	e40	27	49	9.2	7.2	3.6	4.8
20	4.9	3.3	7.2	e5.0	146	e34	23	46	8.4	6.6	3.5	5.1
21	5.1	3.3	4.5	e3.5	80	e35	19	32	8.5	6.2	3.2	5.2
22	5.9	3.5	4.7	e3.3	2440	e29	15	27	11	6.9	3.0	5.4
23	5.9	3.4	3.8	e3.3	e3500	e27	13	27	14	6.6	3.6	5.4
24	6.2	3.3	3.6	e3.4	e4800	e26	13	27	13	6.2	3.1	5.7
25	6.1	3.3	3.5	e3.4	e1000	e300	12	33	11	7.8	3.1	5.7
26	5.2	9.5	3.4	e3.2	e350	e95	26	34	7.7	8.9	3.2	6.8
27	4.9	39	3.4	e3.0	e200	e44	36	34	8.2	8.0	3.3	6.7
28	4.6	21	3.3	e3.1	e130	e525	27	26	7.8	7.1	3.1	6.1
29	4.5	7.1	3.2	e19	---	e265	18	23	7.4	7.5	2.8	6.1
30	5.0	7.0	3.1	e10	---	e139	24	19	7.0	7.2	2.9	6.4
31	4.7	---	8.0	e6.0	---	e115	---	19	---	6.9	2.9	---
TOTAL	160.5	186.3	1149.3	1532.2	21471.3	3300	1880	1807	401.2	243.7	128.6	154.0
MEAN	5.18	6.21	37.1	49.4	767	106	62.7	58.3	13.4	7.86	4.15	5.13
MAX	6.7	39	697	1200	4800	525	600	400	22	13	7.6	9.7
MIN	3.5	1.6	3.1	3.0	3.1	26	12	15	7.0	5.7	2.8	2.5
AC-FT	318	370	2280	3040	42590	6550	3730	3580	796	483	255	305

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.78	7.32	14.5	222	237	135	28.4	20.3	9.37	5.58	4.94	5.34
MAX	15.7	24.4	37.1	1462	860	490	70.4	58.3	25.1	11.4	10.1	9.03
(WY)	1994	1997	1998	1993	1993	1991	1993	1998	1993	1993	1993	1993
MIN	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1990 - 1998

ANNUAL TOTAL	6081.8	32414.1	
ANNUAL MEAN	16.7	88.8	
HIGHEST ANNUAL MEAN			57.3
LOWEST ANNUAL MEAN			220
HIGHEST DAILY MEAN	778	Jan 26	14300
LOWEST DAILY MEAN	1.2	Jun 11	5.99
ANNUAL SEVEN-DAY MINIMUM	2.1	Jun 9	.00
INSTANTANEOUS PEAK FLOW			.05
INSTANTANEOUS PEAK STAGE			15.89
ANNUAL RUNOFF (AC-FT)	12060	64290	41480
10 PERCENT EXCEEDS	19	110	60
50 PERCENT EXCEEDS	5.5	8.0	6.6
90 PERCENT EXCEEDS	2.6	3.3	2.4

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 good. No regulation or diversion upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,100 ft³/s, Jan. 16, 1993, gage height, 17.60 ft, site and datum then in use, from floodmarks (may have been affected by backwater from the Santa Margarita River); no flow for many days in summer of 1996.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft³/s (revised), 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)
Dec. 6	1345	274	3.33	Feb. 23	2345	2,590	8.15
Jan. 9	2330	674	4.34	Mar. 25	1545	142	2.94
Feb. 3	1315	102	2.80	Apr. 1	0300	85	2.67
Feb. 8	0200	1,260	5.63	May 12	1945	162	3.00
Feb. 14	1945	479	3.86	Sept. 7	0715	142	2.94
Feb. 17	0730	326	3.47				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.90	3.6	3.3	5.9	67	55	16	12	6.8	1.4	1.7
2	.47	.64	2.8	3.4	5.3	62	33	16	11	6.9	2.2	1.9
3	.40	.74	2.6	5.3	36	53	27	16	11	7.7	3.2	3.2
4	.42	.66	2.5	5.1	23	49	26	16	12	7.5	3.2	4.8
5	.57	.60	2.5	4.4	13	47	25	31	11	6.8	3.7	4.4
6	.65	.78	42	3.8	32	54	27	26	11	6.7	3.5	3.9
7	.63	.78	14	3.8	30	43	28	20	11	6.3	3.5	9.6
8	.55	.68	9.0	3.6	281	39	26	19	12	6.2	3.3	4.6
9	.47	.70	6.4	57	69	39	24	19	11	5.8	3.0	4.1
10	.42	1.5	5.1	74	27	39	23	18	11	6.1	3.5	3.6
11	.45	2.7	4.4	19	21	39	30	18	13	5.7	3.6	3.1
12	.59	2.2	4.2	11	19	26	28	39	12	5.6	3.1	2.7
13	.43	3.9	4.1	9.0	17	24	23	50	11	5.9	2.9	2.3
14	.25	4.0	3.9	7.9	139	26	22	23	10	5.4	3.1	2.8
15	.13	2.7	3.9	7.3	70	22	22	18	10	5.4	2.7	2.5
16	.13	2.6	3.8	7.3	28	21	21	16	10	5.4	2.9	2.4
17	.12	2.5	3.7	6.8	138	21	20	16	9.9	5.1	3.5	2.4
18	.27	2.4	4.0	6.7	47	19	20	15	8.9	4.5	3.5	2.4
19	.26	2.4	4.1	7.8	35	18	19	15	8.3	4.3	3.2	2.5
20	.42	2.5	3.7	6.8	41	18	19	15	8.1	4.6	3.2	2.6
21	.83	2.4	4.0	6.4	27	17	19	15	7.6	4.7	3.1	2.8
22	.74	2.2	4.0	5.9	398	16	18	14	7.4	5.1	2.4	2.9
23	.74	2.1	3.8	6.2	589	16	18	14	7.4	5.1	2.2	2.7
24	.70	2.2	5.3	6.5	546	15	17	14	7.4	4.8	2.2	2.7
25	.69	2.3	3.7	6.2	143	34	18	14	6.9	4.6	2.1	2.8
26	.74	4.1	3.5	5.8	100	22	17	14	7.2	3.9	2.1	2.9
27	1.4	5.4	3.4	5.9	84	19	16	13	5.9	4.1	2.2	2.9
28	1.4	3.0	3.3	5.8	71	38	16	12	6.9	4.4	2.0	3.1
29	1.5	2.6	3.3	12	---	36	17	13	7.0	4.2	1.4	3.2
30	1.8	3.1	3.3	7.4	---	25	17	12	6.7	4.0	1.3	2.8
31	1.4	---	3.3	6.3	---	27	---	11	---	3.9	1.5	---
TOTAL	20.67	65.28	171.2	327.7	3035.2	991	691	568	284.6	167.5	84.7	96.3
MEAN	.67	2.18	5.52	10.6	108	32.0	23.0	18.3	9.49	5.40	2.73	3.21
MAX	1.8	5.4	42	74	589	67	55	50	13	7.7	3.7	9.6
MIN	.12	.60	2.5	3.3	5.3	15	16	11	5.9	3.9	1.3	1.7
AC-FT	41	129	340	650	6020	1970	1370	1130	565	332	168	191

11044350 SANDIA CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.31	2.14	3.55	41.3	38.2	28.9	12.2	7.31	4.61	2.24	1.26	1.08
MAX	2.27	3.46	8.12	237	128	79.8	28.0	18.3	9.49	5.40	2.73	3.21
(WY)	1994	1997	1997	1993	1993	1995	1995	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1990 - 1998	
ANNUAL TOTAL	2200.25		6503.15			
ANNUAL MEAN	6.03		17.8		11.9	
HIGHEST ANNUAL MEAN					36.8	1993
LOWEST ANNUAL MEAN					2.65	1990
HIGHEST DAILY MEAN	224	Jan 26	589	Feb 23	2000	Jan 16 1993
LOWEST DAILY MEAN	.04	Sep 24	.12	Oct 17	.00	Jul 26 1996
ANNUAL SEVEN-DAY MINIMUM	.16	Aug 4	.23	Oct 14	.00	Aug 14 1996
INSTANTANEOUS PEAK FLOW			2590	Feb 23	5100	Jan 16 1993
INSTANTANEOUS PEAK STAGE			8.15	Feb 23	17.60	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	4360		12900		8620	
10 PERCENT EXCEEDS	16		33		20	
50 PERCENT EXCEEDS	2.2		5.9		2.8	
90 PERCENT EXCEEDS	.27		1.4		.60	

SANTA MARGARITA RIVER BASIN

11044800 DE LUZ CREEK NEAR DE LUZ, CA

LOCATION.—Lat 33°25'11", long 117°19'15", in SW 1/4 SE 1/4 sec. 5, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank 4.85 mi upstream from mouth and 1.2 mi south of De Luz.

DRAINAGE AREA.—33.0 mi².

PERIOD OF RECORD.—October 1992 to current year.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 270 ft above sea level, from topographic map. February 1951 to September 1965 and October 1989 to September 1991, at site 4.2 mi downstream (published as 11044900, De Luz Creek near Fallbrook).

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,700 ft³/s, Jan. 16, 1993, gage height, 15.13 ft, on basis of flow-over-road computation; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft³/s, or maximum, from rating curve extended above 385 ft³/s on basis of flow-over-road computation:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	1300	110	5.12	Feb. 23	2245	6,610	12.94
Jan. 9	2230	289	5.72	Mar. 25	1430	230	5.32
Feb. 3	1915	153	5.23	Mar. 28	0800	315	5.58
Feb. 8	0145	3,350	10.18	May 5	1200	191	5.50
Feb. 14	1830	1,170	7.53	May 12	1815	174	5.44
Feb. 17	0745	534	6.38				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	1.0	1.1	1.8	109	127.	e17	17	e6.4	e3.3	e.74
2	.00	.00	.72	1.0	1.7	89	74	e16	19	e6.6	e3.1	e.60
3	.00	.00	1.1	1.2	61	78	60	e15	18	e7.0	e3.0	e.66
4	.00	.00	1.0	1.4	51	68	53	e15	13	e6.8	e3.0	e.80
5	.00	.00	.63	1.3	16	61	50	98	13	e6.2	e3.4	e1.5
6	.00	.00	27	1.4	129	70	50	92	12	e5.7	e3.3	e1.3
7	.00	.00	13	1.2	109	54	49	67	11	e5.6	e3.2	e1.2
8	.00	.00	6.7	1.1	556	46	46	61	10	e5.6	e3.0	e1.1
9	.00	.00	4.2	37	147	41	43	54	12	e5.7	e2.8	e1.0
10	.00	.00	2.2	80	84	39	40	52	14	e5.8	e3.2	e.95
11	.00	.00	1.7	13	69	36	e42	42	12	e5.4	e3.3	e.90
12	.00	.00	1.8	6.0	59	34	e38	73	11	e5.3	e3.0	e.84
13	.00	.00	1.6	3.6	53	33	e36	100	12	e5.4	e2.7	e.83
14	.00	.00	1.6	2.8	277	34	e34	64	11	e5.1	e2.7	e.82
15	.00	.00	1.1	2.6	198	30	e33	46	8.8	e5.0	e2.6	e.82
16	.00	.00	1.2	2.4	117	30	e31	39	9.1	e4.9	e2.8	e.81
17	.00	.00	1.3	2.1	279	29	e29	32	8.2	e4.7	e3.1	e.80
18	.00	.00	1.4	1.8	160	27	e28	26	10	e4.5	e3.0	e.79
19	.00	.00	1.2	2.1	114	24	e27	27	8.8	e4.4	e2.9	e.78
20	.00	.00	1.3	2.2	126	24	e25	17	7.5	e4.4	e2.6	e.76
21	.00	.00	1.5	2.1	96	21	e24	19	9.6	e4.5	e2.0	e.75
22	.00	.00	1.5	1.9	630	20	e23	18	6.6	e4.7	e1.8	e.73
23	.00	.00	1.3	1.7	1380	18	e22	18	e6.4	e4.6	e1.6	e.73
24	.00	.00	1.5	1.6	1360	20	e21	14	e6.6	e4.5	e1.4	e.72
25	.00	.00	1.5	1.5	395	78	e20	18	e6.8	e4.2	e1.3	e.72
26	.00	.00	1.4	1.5	260	71	e20	16	e7.0	e4.1	e1.2	e.71
27	.00	.00	1.3	1.5	187	58	e19	16	e6.7	e4.0	e1.1	e.71
28	.00	.00	1.3	1.4	142	154	e18	15	e6.6	e3.8	e1.0	e.70
29	.00	.00	1.1	4.8	---	145	e18	21	e6.4	e3.7	e.90	e.70
30	.00	.47	1.0	2.5	---	75	e17	17	e6.3	e3.5	e.85	e.70
31	.00	---	1.1	1.8	---	68	---	21	---	e3.3	e.78	---
TOTAL	0.00	0.47	86.25	187.6	7058.5	1684	1117	1146	306.4	155.4	73.93	25.17
MEAN	.000	.016	2.78	6.05	252	54.3	37.2	37.0	10.2	5.01	2.38	.84
MAX	.00	.47	27	80	1380	154	127	100	19	7.0	3.4	1.5
MIN	.00	.00	.63	1.0	1.7	18	17	14	6.3	3.3	.78	.60
AC-FT	.00	.9	171	372	14000	3340	2220	2270	608	308	147	50

e Estimated.

11044800 DE LUZ CREEK NEAR DE LUZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.34	.77	3.25	91.7	96.3	51.7	16.1	10.3	4.13	1.56	.63	.26
MAX	1.07	1.40	10.1	365	252	189	37.2	37.0	10.2	5.01	2.38	.84
(WY)	1993	1997	1997	1993	1998	1995	1998	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1993 - 1998	
ANNUAL TOTAL	1966.82		11840.72			
ANNUAL MEAN	5.39		32.4		22.7	
HIGHEST ANNUAL MEAN					53.9	1993
LOWEST ANNUAL MEAN					2.69	1996
HIGHEST DAILY MEAN	314	Jan 26	1380	Feb 23	3220	Jan 16 1993
LOWEST DAILY MEAN	.00	Jun 24	.00	Oct 1	.00	Aug 1 1994
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 24	.00	Oct 1	.00	Aug 1 1994
INSTANTANEOUS PEAK FLOW			6610	Feb 23	9700	Jan 16 1993
INSTANTANEOUS PEAK STAGE			12.94	Feb 23	15.13	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	3900		23490		16450	
10 PERCENT EXCEEDS	12		69		41	
50 PERCENT EXCEEDS	.25		4.1		1.5	
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. Slight regulation by two small storage reservoirs upstream from station. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 895 ft³/s, Feb. 23, 1998, gage height, 9.73 ft, from rating curve extended above 140 ft³/s on basis of culvert computation; no flow for many days in some years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	1445	133	2.84	Feb. 14	2015	785	8.94
Feb. 3	1445	131	2.82	Feb. 17	0815	311	4.92
Feb. 8	0300	425	6.02	Feb. 23	2245	895	9.73

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.16	.06	2.3	.56	1.2	8.1	42	1.8	1.2	1.1	.53	.18
2	.14	.03	.94	.59	1.0	7.0	11	1.7	1.2	1.1	.54	.20
3	.22	.02	.82	1.2	36	6.1	6.2	2.6	1.1	1.1	.53	.30
4	.22	.03	.83	1.9	15	5.8	6.7	2.1	1.1	1.1	.51	.31
5	.21	.04	.84	2.1	3.2	5.4	5.1	9.2	1.1	1.1	.51	.40
6	.18	.04	23	.94	16	14	8.7	5.4	1.1	1.0	.51	.44
7	.16	.05	7.8	.82	12	5.7	8.3	2.6	1.1	.99	.51	.48
8	.13	.05	11	.82	75	4.5	4.9	2.0	1.1	1.0	.54	.50
9	.10	.05	2.5	9.2	48	4.5	4.0	1.9	1.1	.98	.51	.49
10	.12	.09	1.2	28	5.1	4.1	3.6	1.8	1.1	.97	.51	.49
11	.08	.43	.96	3.1	3.4	3.7	9.2	1.8	1.2	.96	.49	.49
12	.10	.54	.96	1.4	2.9	3.5	12	8.0	2.0	.96	.46	.48
13	.08	.61	.96	1.5	2.6	3.6	4.3	19	1.6	.96	.40	.48
14	.04	.60	.96	1.3	146	5.3	3.9	5.0	1.1	.91	.39	.43
15	.03	.65	.96	1.1	29	3.7	4.9	2.5	1.1	.82	.41	.38
16	.02	.91	.93	1.8	7.4	3.4	3.4	2.0	1.1	.78	.39	.40
17	.02	.89	.90	1.2	96	3.4	3.1	2.0	1.3	.78	.34	.40
18	.03	.82	.88	.96	10	3.2	2.9	1.8	1.2	.75	.33	.40
19	.05	.82	.96	1.7	6.8	3.0	2.7	1.8	1.2	.70	.33	.42
20	.06	.82	.89	1.3	19	2.9	2.6	1.7	1.2	.69	.32	.42
21	.06	.82	.82	.97	5.7	2.8	2.3	1.6	1.1	.65	.31	.42
22	.07	.82	.98	.82	99	2.7	2.3	1.9	1.1	.59	.30	.41
23	.06	.82	.83	.75	128	2.6	2.2	1.8	1.1	.59	.27	.40
24	.07	.82	.82	.81	182	2.5	1.9	1.8	1.0	.59	.27	.39
25	.05	.82	.82	.82	22	8.9	1.9	2.1	1.1	.59	.26	.39
26	.04	1.3	.82	.84	14	19	1.9	3.4	1.0	.59	.26	.42
27	.04	14	.82	.82	11	5.0	1.8	2.8	.83	.59	.27	.43
28	.05	1.5	.53	.82	9.0	30	1.7	2.6	.96	.59	.27	.43
29	.06	1.0	.51	4.8	---	15	1.7	2.7	.96	.59	.25	.43
30	.07	1.1	.59	2.7	---	8.5	1.7	2.5	1.0	.63	.22	.44
31	.06	---	.59	1.1	---	5.2	---	1.9	---	.55	.18	---
TOTAL	2.78	30.55	68.72	76.74	1006.3	203.1	168.9	101.8	34.35	25.30	11.92	12.25
MEAN	.090	1.02	2.22	2.48	35.9	6.55	5.63	3.28	1.15	.82	.38	.41
MAX	.22	14	23	28	182	30	42	19	2.0	1.1	.54	.50
MTN	.02	.02	.51	.56	1.0	2.5	1.7	1.6	.83	.55	.18	.18
AC-FT	5.5	61	136	152	2000	403	335	202	68	50	24	24

e Estimated.

11045300 FALLBROOK CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.13	1.11	1.42	6.76	10.1	7.35	2.58	1.49	.72	.35	.18	.14
MAX	.29	3.35	3.20	18.5	35.9	23.8	5.63	3.28	1.50	.82	.41	.41
(WY)	1996	1997	1997	1995	1998	1995	1998	1998	1995	1998	1995	1998
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1994 - 1998			
ANNUAL TOTAL	563.05				1742.71							
ANNUAL MEAN	1.54				4.77				2.66			
HIGHEST ANNUAL MEAN									4.77			
LOWEST ANNUAL MEAN									.97			
HIGHEST DAILY MEAN	97				182				256			
LOWEST DAILY MEAN	.02				.02				.00			
ANNUAL SEVEN-DAY MINIMUM	.02				.04				.00			
INSTANTANEOUS PEAK FLOW					895				895			
INSTANTANEOUS PEAK STAGE					9.73				9.73			
ANNUAL RUNOFF (AC-FT)	1120				3460				1920			
10 PERCENT EXCEEDS	2.2				8.4				3.6			
50 PERCENT EXCEEDS	.44				.99				.59			
90 PERCENT EXCEEDS	.02				.16				.03			

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. Auxiliary gage 2.2 mi upstream with crest-stage gage and steel drop structure (diversion dam). 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. Diversions to O'Neill Lake and to groundwater recharge basins are made at point 2.2 mi upstream by Camp Pendleton personnel. Regulated return flows from O'Neill Lake can occur at times, as can unregulated spills. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 44,000 ft³/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 20.47 ft; no flow for all or part of most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	14	16	e16	543	684	57	54	17	e5.5	e4.7
2	.00	.00	14	17	e15	472	486	48	49	19	e5.6	e6.0
3	.00	.00	12	21	135	417	358	48	53	18	e5.5	e7.3
4	.00	.00	11	25	594	376	296	51	55	19	e5.2	e8.0
5	.00	.00	12	25	117	299	243	117	49	18	e5.2	e7.2
6	.00	.00	193	23	140	394	312	279	43	15	e5.1	e6.9
7	.00	.00	582	18	712	288	290	129	44	14	e5.0	e6.0
8	.00	.00	110	11	e3500	236	235	97	49	12	e4.9	e5.5
9	.00	.00	50	20	e1070	210	194	82	45	11	e5.1	5.8
10	.00	.00	24	e1250	352	181	179	76	44	9.7	e5.5	5.9
11	.00	.00	15	e118	183	161	192	69	45	10	e5.0	5.7
12	.00	.00	12	e70	116	159	346	90	45	11	e4.4	5.5
13	.00	.00	12	e25	84	165	205	477	41	10	e4.5	4.5
14	.00	.00	13	e23	e1180	176	185	366	36	9.0	e4.3	4.8
15	.00	.68	13	e18	e1530	150	172	249	36	7.7	e4.3	5.1
16	.00	12	11	e17	547	142	147	200	44	8.9	e4.2	3.1
17	.00	9.9	e10	e17	2400	132	127	159	43	8.6	e4.4	2.9
18	.00	9.9	11	e16	1030	97	113	128	35	7.5	e4.4	6.8
19	.00	10	16	e18	515	88	106	112	29	8.0	e4.4	7.2
20	.00	11	28	e17	676	73	94	96	27	7.6	e4.3	8.0
21	.00	11	21	e16	355	63	97	96	28	7.1	e4.2	7.6
22	.00	10	24	e16	3250	55	95	87	28	7.3	e4.1	7.5
23	.00	8.4	22	e16	4510	52	90	79	28	8.3	e4.3	6.6
24	.00	8.1	14	e15	e6420	46	82	73	28	6.9	e4.2	7.2
25	.00	8.9	11	e15	1490	118	71	79	25	7.3	e4.1	11
26	.00	12	9.4	e15	983	376	75	87	24	6.2	e4.1	13
27	.00	19	10	e14	822	124	71	76	19	e6.1	e4.1	12
28	.00	34	10	e13	667	515	55	71	18	e6.0	e4.0	8.0
29	.00	23	9.8	e40	---	584	54	62	17	e5.7	e4.0	9.9
30	.00	17	9.3	e25	---	449	57	58	16	e5.4	e3.9	9.8
31	.00	---	9.7	e20	---	285	---	57	---	e5.4	e3.9	---
TOTAL	0.00	204.88	1313.2	1970	33409	7426	5711	3755	1097	312.7	141.7	209.5
MEAN	.000	6.83	42.4	63.5	1193	240	190	121	36.6	10.1	4.57	6.98
MAX	.00	34	582	1250	6420	584	684	477	55	19	5.6	13
MIN	.00	.00	9.3	11	15	46	54	48	16	5.4	3.9	2.9
AC-FT	.00	406	2600	3910	66270	14730	11330	7450	2180	620	281	416

e Estimated.

SANTA MARGARITA RIVER BASIN

189

11046000 SANTA MARGARITA RIVER AT YSIDORA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.31	6.31	30.9	58.5	152	190	58.9	11.8	3.21	.54	.29	.88
MAX	13.3	65.8	141	532	1002	1730	465	101	28.7	3.15	2.30	13.5
(WY)	1942	1945	1941	1943	1937	1938	1941	1941	1941	1936	1935	1939
MIN	.000	.000	.000	.000	1.32	1.18	1.33	.000	.000	.000	.000	.000
(WY)	1924	1924	1948	1948	1925	1925	1925	1948	1923	1923	1923	1923

SUMMARY STATISTICS

WATER YEARS 1923 - 1948

ANNUAL MEAN	43.3
HIGHEST ANNUAL MEAN	169
LOWEST ANNUAL MEAN	.77
HIGHEST DAILY MEAN	15500
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	33600
INSTANTANEOUS PEAK STAGE	18.00
ANNUAL RUNOFF (AC-FT)	31390
10 PERCENT EXCEEDS	53
50 PERCENT EXCEEDS	1.6
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1980, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.007	1.31	4.30	69.8	153	84.3	26.3	3.84	.65	.17	.036	.030
MAX	.23	41.7	71.7	749	2249	1071	379	52.7	12.1	3.14	.80	.67
(WY)	1970	1966	1967	1978	1980	1978	1958	1980	1979	1979	1980	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1949	1949	1949	1949	1950	1950	1949	1949	1949	1949	1949	1949

SUMMARY STATISTICS

WATER YEARS 1949 - 1980

ANNUAL MEAN	27.9
HIGHEST ANNUAL MEAN	282
LOWEST ANNUAL MEAN	.000
HIGHEST DAILY MEAN	18000
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	24000
INSTANTANEOUS PEAK STAGE	18.80
ANNUAL RUNOFF (AC-FT)	20250
10 PERCENT EXCEEDS	4.4
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.15	16.1	30.8	205	214	196	54.7	26.8	10.8	3.27	3.01	1.63
MAX	39.3	62.0	124	2261	1296	896	202	121	36.6	10.1	31.6	6.98
(WY)	1984	1984	1984	1993	1993	1995	1983	1998	1998	1998	1983	1998
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1981 - 1998

ANNUAL TOTAL	12252.36	55549.98	
ANNUAL MEAN	33.6	152	63.3
HIGHEST ANNUAL MEAN			337
LOWEST ANNUAL MEAN			4.59
HIGHEST DAILY MEAN	1760	Jan 26	6420
LOWEST DAILY MEAN	.00	Jun 11	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 11	.00
INSTANTANEOUS PEAK FLOW			18400
INSTANTANEOUS PEAK STAGE			12.41
ANNUAL RUNOFF (AC-FT)	24300	110200	45840
10 PERCENT EXCEEDS	56	348	80
50 PERCENT EXCEEDS	4.3	17	7.5
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, 2.06 ft, July 26, 1998.

EXTREMES FOR CURRENT YEAR.—Maximum recorded gage height, 8.96 ft, Feb. 24; minimum recorded gage height, 2.06 ft, July 26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.39	4.35	7.15	4.25	7.65	4.55	7.19	4.30	7.47	5.69	---	---
2	6.73	4.54	7.19	4.25	7.33	4.51	6.77	4.31	6.52	5.68	---	---
3	6.83	4.51	7.03	4.24	6.66	4.41	6.29	4.32	7.24	5.93	---	---
4	6.67	4.59	6.69	4.20	6.12	4.34	5.98	4.27	7.72	5.03	---	---
5	6.82	4.74	6.21	4.16	6.09	4.40	6.14	4.22	7.14	4.33	---	---
6	6.74	4.80	5.93	4.16	6.80	4.51	6.07	4.15	6.60	4.19	---	---
7	6.70	4.79	5.70	4.16	6.65	5.09	6.19	4.13	7.68	4.58	---	---
8	5.82	4.62	5.60	4.33	6.64	4.73	6.74	4.16	7.70	4.85	---	---
9	5.69	4.47	5.91	4.42	6.63	4.61	7.04	4.21	7.15	4.75	---	---
10	5.76	4.45	6.68	4.50	6.68	4.45	7.48	4.62	6.84	4.29	---	---
11	6.22	4.58	7.55	4.59	6.69	4.32	7.27	4.66	6.55	4.04	---	---
12	6.01	4.43	7.87	4.54	6.94	4.24	7.27	4.38	6.31	3.92	---	---
13	6.23	4.40	8.17	4.54	7.27	4.25	7.12	4.30	5.87	3.83	---	---
14	6.60	4.33	8.08	4.36	7.40	4.25	7.17	4.76	6.12	3.81	---	---
15	7.23	4.27	7.87	4.32	7.37	4.32	6.40	4.84	6.13	5.13	---	---
16	7.61	4.20	7.41	4.28	7.18	4.29	5.89	4.80	5.63	4.66	---	---
17	7.75	4.20	6.88	4.25	6.60	4.24	5.15	4.71	6.03	4.89	---	---
18	7.68	4.22	6.10	4.19	6.41	4.27	5.01	4.72	5.89	4.82	---	---
19	7.37	4.23	5.39	4.15	5.80	4.25	5.07	4.68	5.13	4.59	---	---
20	6.84	4.20	5.15	4.14	5.17	4.17	5.53	4.68	5.40	4.69	---	---
21	6.25	4.19	4.74	4.10	5.56	4.16	5.83	5.06	5.41	4.38	---	---
22	5.65	4.13	5.02	4.04	6.43	4.32	5.50	4.91	6.77	4.38	---	---
23	5.39	4.09	5.28	4.03	5.72	4.27	5.74	4.76	7.03	5.86	---	---
24	5.56	4.09	5.70	4.07	6.01	4.24	6.23	4.72	8.96	4.82	---	---
25	5.55	4.15	6.07	4.17	6.48	4.27	6.93	4.66	6.38	3.55	---	---
26	5.59	4.13	6.70	4.28	6.44	4.22	7.79	4.78	6.21	3.14	---	---
27	5.89	4.16	7.10	4.52	6.73	4.15	7.78	5.04	---	---	---	---
28	6.13	4.22	7.18	4.61	7.14	4.24	7.85	5.10	---	---	---	---
29	6.41	4.24	7.07	4.46	7.53	4.26	7.59	5.14	---	---	---	---
30	6.93	4.27	7.30	4.46	7.63	4.31	7.91	5.09	---	---	---	---
31	7.07	4.26	---	---	7.46	4.29	6.84	5.36	---	---	---	---
MONTH	7.75	4.09	8.17	4.03	7.65	4.15	7.91	4.13	---	---	---	---

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	6.21	2.27	5.11	3.33	5.36	2.53	5.53	2.69	5.51	5.40
2	---	---	5.57	2.30	5.17	3.39	5.59	2.89	6.04	2.53	5.73	5.51
3	---	---	5.08	2.28	5.23	3.24	5.87	2.91	6.60	2.70	6.13	5.73
4	---	---	5.02	2.28	5.44	3.14	6.09	2.64	6.90	2.82	6.41	6.13
5	---	---	5.42	2.38	5.80	3.11	6.30	2.45	7.07	2.90	6.58	6.41
6	---	---	5.55	2.81	5.95	3.05	6.53	2.34	7.23	2.92	6.60	6.57
7	5.14	2.87	5.67	2.61	6.19	2.94	6.69	2.28	7.44	2.92	6.64	6.60
8	5.13	2.75	5.80	2.44	6.55	2.76	6.99	2.26	7.14	2.83	6.68	6.63
9	5.35	---	6.06	2.35	6.64	2.67	7.10	2.25	6.93	2.69	6.73	6.66
10	5.57	---	6.14	2.31	6.78	2.56	6.94	2.23	6.56	2.75	6.75	6.71
11	6.32	---	6.37	2.28	6.67	2.50	6.68	2.20	6.43	2.85	6.82	6.74
12	5.62	2.85	6.51	2.28	6.30	2.47	6.41	2.19	6.18	3.01	6.79	6.75
13	5.45	---	6.20	2.76	6.33	2.44	6.29	2.19	6.11	3.06	6.79	6.75
14	5.42	---	5.83	3.17	6.27	2.73	6.00	2.24	6.16	3.12	6.80	6.76
15	5.27	---	5.76	2.90	5.65	2.87	5.70	2.28	6.23	3.06	6.81	6.77
16	5.18	---	5.76	2.77	5.25	2.84	6.00	2.42	6.47	3.05	6.81	6.78
17	4.93	---	5.43	2.68	5.39	2.87	6.33	2.52	6.75	3.21	6.83	6.80
18	4.68	---	4.93	2.54	5.73	2.82	6.62	2.40	7.04	3.41	6.85	6.81
19	4.49	---	4.89	2.45	6.32	2.86	6.89	2.26	6.98	3.60	6.87	6.82
20	4.65	---	5.40	2.40	6.75	2.77	7.21	2.21	6.83	3.68	6.87	6.83
21	4.93	---	5.96	2.34	7.07	2.63	7.31	2.13	6.65	3.75	6.88	6.84
22	5.37	---	6.56	2.30	7.34	2.48	7.38	2.07	6.48	3.80	6.90	6.85
23	5.98	2.37	6.80	2.28	7.55	2.37	7.20	2.08	6.19	3.91	6.90	6.84
24	6.66	2.36	7.15	2.27	7.38	2.37	6.94	2.08	6.12	4.03	6.91	6.86
25	7.00	2.32	7.29	2.27	6.85	2.29	6.50	2.09	5.67	4.22	6.91	6.87
26	7.18	2.30	7.11	2.29	6.47	2.27	6.26	2.06	5.08	4.67	6.91	6.87
27	7.09	2.32	6.83	2.27	6.29	2.23	5.94	2.08	5.18	5.08	6.93	6.89
28	6.88	2.29	6.56	2.25	5.84	2.19	5.45	2.21	5.24	5.17	6.95	6.90
29	6.56	2.26	6.35	2.22	5.38	2.28	5.26	2.49	5.28	5.22	6.95	6.90
30	6.35	2.24	5.97	2.22	4.97	2.37	5.29	2.75	5.34	5.27	6.95	6.91
31	---	---	5.65	2.85	---	---	5.27	2.82	5.41	5.33	---	---
MONTH	---	---	7.29	2.22	7.55	2.19	7.38	2.06	7.44	2.53	6.95	5.40

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, 119 microsiemens, Feb. 24, 1998.

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, 52,500 microsiemens, Aug. 23; minimum recorded, 119 microsiemens, Feb. 24.

pH: Maximum recorded, 9.2 standard units, Sept. 1, 2; minimum recorded, 6.9 standard units, Mar. 15.

WATER TEMPERATURE: Maximum recorded, 31.0°C, Sept. 16, 17; minimum recorded, 10.0°C, Mar. 30.

DISSOLVED OXYGEN: Maximum recorded, 19.7 mg/L, Sept. 13; minimum recorded, 0.3 mg/L, Sept. 3, 7, 8.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	47900	38700	51200	37000	43800	42800	48800	37700	50500	44500	337	310
2	48700	37000	51200	38500	43700	42900	48100	37800	49800	46600	357	337
3	49300	36700	51100	40100	43600	42500	47500	37800	51000	32500	371	357
4	48900	39800	51000	36900	43300	42400	47400	36400	42400	652	383	371
5	50100	39300	50900	34300	43100	41600	48400	36400	41400	818	390	383
6	47600	35500	50700	34300	41600	39500	47900	32000	47000	1300	407	373
7	49000	35000	50000	35500	39900	38000	47600	39600	40800	576	414	407
8	47900	41600	50300	38800	39000	36300	47900	36900	687	290	485	410
9	47900	40500	49400	40500	36600	30500	48100	41000	525	398	557	464
10	47100	41800	50000	38600	32600	31800	47300	507	543	523	2330	525
11	49100	33400	50900	39100	32300	31500	42200	530	559	523	28500	1210
12	49900	35600	51000	39900	32000	31000	44800	1060	784	547	40500	1350
13	49700	38300	51000	14000	32100	30700	45400	1610	1170	739	37600	1340
14	49800	39000	51200	37000	31600	30800	45100	37400	1480	1120	29600	1240
15	49900	39600	51200	36200	33700	31200	44700	36800	1380	211	29400	1310
16	50100	38900	50700	37000	37600	33700	44400	40900	1370	1210	34200	1300
17	50100	37600	50700	---	37800	36900	40900	37100	1230	388	34200	1200
18	49800	39300	50900	---	37500	36700	37300	32100	711	538	29000	1140
19	49400	39600	48900	---	37300	29500	32400	15700	703	689	31800	1160
20	49200	38000	45900	---	30100	29400	41800	15000	703	666	32100	1230
21	49200	37500	45900	---	30100	29600	40100	36100	933	669	13300	1240
22	50200	37600	42500	---	29800	28800	43000	23100	968	340	35900	1470
23	49600	42100	46200	---	29600	28600	48200	37300	429	140	34200	1620
24	50400	42600	50400	---	47800	29100	49400	35600	361	119	45200	2300
25	49900	38500	50400	---	48000	42500	50900	35600	212	178	48400	3280
26	50700	38800	50700	---	48000	41100	50900	36400	273	212	35800	817
27	50800	37400	44800	43800	48000	40500	49800	44800	292	273	47400	1060
28	50000	39700	44500	43600	48300	43400	50900	43400	310	292	43700	564
29	50500	38300	44400	43500	48700	41800	49600	43400	---	---	40700	564
30	50300	39700	43900	43000	49200	43000	50700	46200	---	---	44800	726
31	50400	37100	---	---	48400	39500	50400	46900	---	---	44200	853
MONTH	50800	33400	51200	---	49200	28600	50900	507	51000	119	48400	310

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	44200	548	45600	255	---	---	45800	11900	47800	36200	46600	44500
2	759	582	37300	496	---	---	46200	14400	48300	35800	47400	44000
3	859	759	39600	420	---	---	46500	14700	48600	35700	48300	44300
4	1020	814	44800	1270	---	---	46700	17600	48900	37800	48800	46900
5	1990	844	46000	1880	---	---	46500	7860	48900	39900	48500	45800
6	4460	792	38700	738	---	---	46700	9800	48700	41800	48300	45700
7	1840	786	43300	983	---	---	46000	8810	49300	42500	47700	45600
8	29800	880	45800	1310	---	---	45800	11600	49200	41400	47100	44800
9	44900	996	46200	1540	---	---	45900	13100	49400	42200	46200	43400
10	46100	1050	46300	1430	---	---	46200	14000	48800	40000	45800	43600
11	46200	1150	46400	797	---	---	46100	17900	48900	41300	46500	43900
12	28500	748	46000	383	---	---	46100	18400	51200	41700	45300	43500
13	42400	833	44900	664	---	---	45900	15400	48800	42700	44700	43200
14	44800	937	29900	725	---	---	45800	17300	49100	42300	49500	47800
15	44800	948	29900	855	---	---	45700	17300	48900	40800	48800	47000
16	2420	979	---	---	---	---	44900	25600	48700	39300	48300	46000
17	5600	1250	---	---	---	---	45100	29100	49100	42900	47300	45200
18	2470	968	---	---	---	---	45600	25700	49800	41600	46600	44500
19	2180	1000	---	---	---	---	46500	22000	48800	39400	47300	44000
20	2100	1160	---	---	---	---	46500	19700	51200	40200	48800	45700
21	43000	1120	---	---	---	---	46300	21000	52000	39000	48500	45800
22	45600	1270	---	---	---	---	48300	10200	52400	38000	48300	29900
23	46200	1360	---	---	---	---	48900	6880	52500	41600	30500	29600
24	47700	1540	---	---	---	---	48500	11800	49700	40800	30100	28700
25	47900	1240	---	---	---	---	49000	8860	49500	41200	29100	27700
26	48000	1170	---	---	---	---	49400	5640	49200	41100	30600	28800
27	48100	1180	---	---	---	---	50200	31500	49200	41300	30700	29400
28	48200	472	---	---	---	---	48500	27000	49500	47800	31400	29500
29	48200	308	---	---	45400	9090	48700	25200	48800	47000	32500	30500
30	47600	219	---	---	45800	7070	47900	35400	48300	46000	32400	31300
31	---	---	---	---	---	---	49000	33400	47300	45200	---	---
MONTH	48200	219	---	---	---	---	50200	5640	52500	35700	49500	27700

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	8.2	8.2	8.2	7.8	8.1	7.9	7.3	7.2
2	---	---	---	---	8.2	8.0	8.3	7.8	8.1	7.9	7.2	7.2
3	---	---	---	---	8.1	8.1	8.2	7.9	8.1	7.7	7.2	7.0
4	---	---	---	---	8.1	8.0	8.4	7.9	8.0	7.7	7.0	7.0
5	---	---	---	---	8.1	8.0	8.1	7.9	8.1	7.8	7.0	7.0
6	---	---	---	---	8.1	8.1	8.1	7.9	8.0	7.9	7.8	7.0
7	---	---	---	---	8.1	8.0	8.1	8.0	8.0	7.8	7.4	7.1
8	---	---	---	---	8.1	8.0	8.0	7.9	8.4	7.6	7.3	7.0
9	---	---	---	---	8.1	8.0	8.0	7.6	8.2	8.1	7.8	7.2
10	---	---	---	---	8.1	8.0	8.0	7.5	8.4	8.2	7.9	7.3
11	---	---	---	---	8.1	8.0	8.1	7.5	8.4	8.1	7.6	7.0
12	---	---	---	---	8.1	8.0	8.0	7.8	8.3	8.0	7.7	7.1
13	---	---	---	---	8.1	7.9	8.0	7.8	8.1	7.8	7.7	7.1
14	---	---	---	---	8.0	7.9	8.0	7.8	7.9	7.7	7.7	7.0
15	---	---	---	---	8.0	7.9	8.0	7.7	7.7	7.4	7.7	6.9
16	---	---	---	---	8.0	7.9	7.9	7.8	7.6	7.6	7.8	7.1
17	---	---	---	---	8.0	7.9	7.8	7.7	7.6	7.3	7.8	7.1
18	---	---	---	---	8.0	7.9	7.7	7.5	7.5	7.4	7.7	7.3
19	---	---	---	---	8.2	8.0	7.8	7.5	7.4	7.4	8.1	7.1
20	---	---	---	---	8.2	8.2	8.1	7.7	7.4	7.4	8.1	7.8
21	---	---	---	---	8.2	8.2	8.3	7.9	7.9	7.4	8.1	7.7
22	---	---	---	---	8.3	8.1	8.3	7.9	7.9	7.6	8.0	7.8
23	---	---	---	---	8.3	8.2	8.4	8.2	7.9	7.6	8.0	7.6
24	---	---	---	---	8.3	8.1	8.4	8.2	7.9	7.6	8.0	7.7
25	---	---	---	---	8.3	8.1	8.3	8.1	7.6	7.5	8.0	7.7
26	---	---	---	---	8.3	8.1	8.2	8.1	7.6	7.4	7.9	7.6
27	---	---	8.3	8.2	8.3	8.1	8.3	8.1	7.5	7.4	7.9	7.7
28	---	---	8.3	8.1	8.2	8.1	8.2	8.1	7.4	7.3	7.9	7.7
29	---	---	8.3	8.1	8.2	8.0	8.2	7.9	---	---	7.9	7.5
30	---	---	8.3	8.1	8.2	7.9	8.1	7.9	---	---	7.9	7.7
31	---	---	---	---	8.2	7.8	8.1	7.9	---	---	7.9	7.8
MONTH	---	---	---	---	8.3	7.8	8.4	7.5	8.4	7.3	8.1	6.9
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.7	8.3	7.8	---	---	8.5	7.6	8.6	7.9	9.2	8.6
2	7.8	7.7	8.4	7.8	---	---	8.7	7.9	8.5	7.8	9.2	8.5
3	7.9	7.8	8.4	7.8	---	---	8.5	7.7	8.5	7.9	9.0	8.3
4	7.9	7.9	8.3	7.8	---	---	8.6	7.6	8.4	8.0	8.4	8.2
5	7.9	7.8	8.4	7.8	---	---	8.8	7.7	8.5	8.0	8.6	8.2
6	8.0	7.8	8.0	7.4	---	---	8.8	7.7	8.6	8.1	8.5	8.2
7	7.9	7.9	8.2	7.7	---	---	8.6	7.7	8.6	8.1	8.3	8.1
8	8.0	7.7	8.1	7.8	---	---	8.6	7.7	8.6	8.0	8.1	8.0
9	8.1	7.6	8.3	7.7	---	---	8.5	7.7	8.4	7.9	8.2	7.9
10	8.1	7.8	8.3	7.8	---	---	8.4	7.7	8.4	7.9	8.5	7.9
11	8.0	7.7	8.5	7.6	---	---	8.3	7.6	8.3	7.9	8.6	7.9
12	7.9	7.7	8.4	7.8	---	---	8.2	7.7	8.3	8.0	8.5	8.2
13	7.9	7.6	8.1	7.7	---	---	8.3	7.8	8.4	8.0	8.6	7.6
14	8.0	7.6	8.1	7.7	---	---	8.3	7.8	8.4	8.0	8.6	7.7
15	8.0	7.6	---	---	---	---	8.3	7.8	8.4	7.9	8.6	8.0
16	8.6	7.7	---	---	---	---	8.3	7.9	8.3	7.9	8.8	8.3
17	8.6	7.7	---	---	---	---	8.4	7.9	8.1	7.9	8.9	8.5
18	8.7	7.8	---	---	---	---	8.3	7.9	8.3	8.0	9.1	8.5
19	8.7	7.7	---	---	---	---	8.2	7.9	8.4	8.1	9.0	8.0
20	8.7	7.7	---	---	---	---	8.3	7.9	8.4	8.1	8.6	8.0
21	8.7	7.8	---	---	---	---	8.5	7.9	8.4	8.0	8.7	8.3
22	8.3	8.0	---	---	---	---	8.4	7.8	8.4	8.0	8.8	8.1
23	8.3	8.0	---	---	---	---	8.5	7.8	8.3	8.0	8.3	7.9
24	8.3	8.0	---	---	---	---	8.6	7.6	8.4	8.0	8.1	7.8
25	8.3	8.0	---	---	---	---	8.8	7.8	8.3	8.2	9.1	7.9
26	8.2	8.0	---	---	---	---	8.8	7.8	8.3	8.1	9.0	8.5
27	8.3	7.9	---	---	---	---	8.8	7.7	8.2	8.1	8.8	8.5
28	8.2	7.9	---	---	---	---	8.7	7.8	8.4	7.9	9.0	8.6
29	8.3	7.9	---	---	---	---	8.6	7.9	8.8	8.2	9.0	8.5
30	8.3	7.9	---	---	8.7	7.8	8.6	7.9	9.0	8.5	9.0	8.3
31	---	---	---	---	---	---	8.6	8.0	9.0	8.6	---	---
MONTH	8.7	7.6	---	---	---	---	8.8	7.6	9.0	7.8	9.2	7.6

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	26.00	22.00	22.00	19.50	20.50	19.00	16.50	12.00	17.50	15.00	17.00	12.50
2	26.00	22.50	22.50	20.00	20.50	19.50	16.50	14.50	18.00	17.00	17.00	14.00
3	26.50	23.00	21.50	18.00	20.00	19.50	17.00	15.50	18.00	15.00	16.50	14.00
4	24.50	23.00	21.50	17.00	20.00	19.00	17.50	15.50	15.00	12.00	18.00	14.00
5	24.00	22.50	22.00	18.50	19.50	18.50	15.50	14.00	15.00	12.00	17.00	13.50
6	24.00	21.50	22.50	19.00	19.50	18.50	15.00	12.50	16.00	12.00	17.50	13.50
7	21.50	18.50	22.50	20.00	19.50	18.50	14.50	12.00	15.00	11.50	17.00	10.50
8	23.00	20.00	23.00	20.00	19.00	18.00	15.00	12.00	14.00	13.00	19.00	11.00
9	23.50	20.50	21.50	18.00	19.00	17.50	16.00	14.00	14.50	14.00	20.00	12.00
10	24.00	19.50	21.00	18.50	18.50	18.00	16.00	13.00	14.50	13.50	20.50	12.50
11	21.50	16.50	20.00	18.00	18.50	18.00	16.00	12.50	15.00	14.00	21.00	13.00
12	20.50	15.50	20.00	17.00	18.00	17.00	16.00	11.50	15.00	14.50	20.50	13.00
13	20.50	15.50	19.00	15.00	17.50	17.00	16.50	13.00	15.00	14.50	18.50	15.00
14	21.00	16.50	19.00	14.00	17.50	16.00	16.50	15.00	15.00	15.00	18.50	13.50
15	21.00	17.50	19.50	17.50	17.00	15.50	16.50	15.50	15.00	14.00	21.00	12.00
16	21.00	17.00	19.50	16.00	16.50	15.50	17.00	16.50	14.50	13.50	18.50	16.00
17	21.00	17.50	20.00	13.00	15.50	14.50	17.50	17.00	14.50	13.50	21.50	14.00
18	21.00	17.50	20.00	11.50	15.50	11.50	18.00	17.50	14.00	13.00	23.00	15.00
19	21.00	17.00	19.00	11.00	16.00	11.00	18.00	16.00	14.00	13.00	23.00	14.50
20	21.00	18.50	21.00	15.00	16.00	15.00	16.00	15.00	14.50	13.50	21.00	14.00
21	20.50	18.00	21.00	14.50	16.00	15.50	16.50	15.50	15.00	13.50	22.50	14.50
22	21.50	17.00	20.50	13.50	17.00	16.00	16.50	15.00	14.00	13.00	24.00	13.50
23	22.00	18.50	19.50	11.50	17.00	16.00	16.00	14.50	14.50	13.50	24.50	15.50
24	22.00	18.50	18.50	12.00	16.50	14.00	16.00	14.50	13.50	12.00	24.00	16.50
25	21.00	17.00	18.00	14.00	14.50	11.00	16.50	15.00	14.00	11.50	18.50	14.50
26	19.50	16.50	19.00	15.50	13.50	11.00	17.00	14.50	15.00	11.50	17.50	13.50
27	19.00	16.50	20.50	18.50	13.50	10.50	17.00	15.50	15.50	11.50	18.50	14.50
28	18.50	17.00	21.00	19.50	14.50	11.00	17.00	15.00	16.50	12.00	15.50	12.00
29	19.00	17.00	20.50	19.50	15.50	11.00	17.00	15.50	---	---	15.00	11.00
30	19.00	17.50	20.50	19.50	16.00	13.50	17.50	15.00	---	---	18.00	10.00
31	21.50	17.00	---	---	16.50	14.00	17.00	16.00	---	---	18.00	11.00
MONTH	26.50	15.50	23.00	11.00	20.50	10.50	18.00	11.50	18.00	11.50	24.50	10.00

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	15.00	11.50	26.50	14.00	---	---	25.00	21.00	26.00	22.50	29.50	26.50
2	18.00	11.50	25.00	16.00	---	---	24.50	21.50	25.50	22.00	29.00	26.50
3	20.50	12.50	29.00	18.50	---	---	24.00	21.50	24.50	20.00	28.00	25.00
4	20.00	12.50	28.50	19.50	---	---	24.50	21.50	23.00	18.50	25.00	24.00
5	21.00	12.50	24.00	19.50	---	---	26.50	21.00	23.00	18.00	26.00	24.00
6	19.00	13.00	26.50	18.50	---	---	28.50	19.50	23.00	18.50	26.00	24.00
7	20.50	13.00	27.00	17.50	---	---	29.50	20.50	23.50	18.00	26.00	25.00
8	22.00	12.50	26.00	18.50	---	---	30.00	20.00	24.00	19.50	26.50	25.50
9	23.00	13.00	24.00	18.50	---	---	28.50	19.50	25.00	19.00	27.00	25.50
10	23.00	13.50	27.50	14.50	---	---	28.50	19.00	27.00	19.00	27.50	26.00
11	18.50	13.50	25.00	15.00	---	---	28.50	18.00	27.00	19.50	28.00	26.50
12	20.50	13.00	20.50	13.00	---	---	25.00	18.00	27.50	21.50	27.00	25.00
13	20.00	12.50	20.50	14.50	---	---	24.00	18.50	25.50	20.00	27.00	25.50
14	22.50	13.50	23.50	15.00	---	---	25.50	18.50	25.00	20.00	28.00	25.50
15	22.00	13.00	26.00	16.00	---	---	25.00	19.00	25.50	21.00	29.50	26.50
16	20.00	12.50	---	---	---	---	25.00	19.00	26.50	22.00	31.00	27.50
17	20.50	14.00	---	---	---	---	25.50	20.00	26.00	20.00	31.00	28.50
18	20.50	13.50	---	---	---	---	25.00	20.50	27.00	21.50	30.50	27.50
19	21.50	13.00	---	---	---	---	25.00	20.50	26.00	21.00	30.00	26.50
20	19.50	13.00	---	---	---	---	25.50	21.00	26.00	21.00	26.50	25.00
21	28.00	15.00	---	---	---	---	26.00	20.50	26.50	21.00	26.50	25.00
22	21.50	17.00	---	---	---	---	23.50	19.00	26.00	20.00	26.00	21.50
23	25.50	16.00	---	---	---	---	24.00	18.50	25.50	20.00	22.50	21.50
24	26.00	16.00	---	---	---	---	25.00	18.50	25.50	20.50	22.50	22.00
25	25.50	15.50	---	---	---	---	27.50	19.00	26.00	22.00	23.00	20.00
26	25.50	11.50	---	---	---	---	27.00	19.50	27.50	22.50	22.00	16.00
27	26.50	12.00	---	---	---	---	27.50	20.00	27.00	22.50	19.50	16.00
28	26.50	11.50	---	---	---	---	26.50	20.00	27.00	24.50	18.50	13.00
29	27.50	14.50	---	---	---	---	24.50	20.00	28.50	25.50	16.50	12.00
30	24.00	16.00	---	---	25.00	20.50	25.50	21.50	29.50	26.50	16.00	13.50
31	---	---	---	---	---	---	26.00	22.00	29.50	27.50	---	---
MONTH	28.00	11.50	---	---	---	---	30.00	18.00	29.50	18.00	31.00	12.00

SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	7.3	5.3	10.4	4.6	10.6	5.4	---	---
2	---	---	---	---	7.2	5.3	11.3	4.8	8.0	4.9	---	---
3	---	---	---	---	7.1	5.3	8.8	4.7	7.9	5.2	---	---
4	---	---	---	---	6.3	5.3	13.8	4.9	11.3	6.2	---	---
5	---	---	---	---	6.1	5.4	9.9	6.2	11.8	7.2	---	---
6	---	---	---	---	6.3	5.3	10.9	6.5	11.3	6.7	---	---
7	---	---	---	---	6.3	5.3	9.4	6.0	11.8	9.1	---	---
8	---	---	---	---	6.4	4.3	8.3	6.1	---	---	---	---
9	---	---	---	---	5.4	4.4	8.3	4.9	---	---	---	---
10	---	---	---	---	5.5	4.2	10.9	4.6	---	---	---	---
11	---	---	---	---	5.7	4.1	10.7	8.0	---	---	---	---
12	---	---	---	---	6.0	4.6	10.7	7.3	---	---	---	---
13	---	---	---	---	6.0	4.8	9.8	6.3	---	---	---	---
14	---	---	---	---	6.2	4.8	8.4	5.5	---	---	---	---
15	---	---	---	---	6.2	5.1	8.0	4.3	---	---	---	---
16	---	---	---	---	6.2	4.7	7.2	5.5	---	---	---	---
17	---	---	---	---	6.5	4.5	7.2	5.7	---	---	---	---
18	---	---	---	---	6.6	5.6	6.5	4.3	---	---	---	---
19	---	---	---	---	6.7	5.3	6.4	4.2	---	---	---	---
20	---	---	---	---	6.9	5.2	8.2	5.3	---	---	---	---
21	---	---	---	---	6.8	5.7	10.7	5.8	---	---	10.3	7.3
22	---	---	---	---	6.9	4.9	12.0	6.5	11.1	10.5	10.1	6.6
23	---	---	---	---	7.4	5.5	11.7	7.2	---	---	9.8	6.7
24	---	---	---	---	9.6	5.6	10.3	6.9	---	---	9.4	6.2
25	---	---	---	---	10.9	7.2	9.0	6.8	---	---	9.4	6.7
26	---	---	---	---	14.2	7.2	9.4	6.7	---	---	9.0	7.3
27	---	---	8.4	5.4	14.4	6.7	9.6	5.9	---	---	9.3	6.9
28	---	---	8.0	5.5	9.9	6.2	9.5	5.0	---	---	10.1	7.3
29	---	---	8.6	5.6	10.4	5.7	8.3	5.0	---	---	9.9	7.6
30	---	---	7.9	5.4	9.2	5.4	8.7	5.1	---	---	9.9	6.9
31	---	---	---	---	9.6	4.5	8.4	5.6	---	---	9.4	7.0
MONTH	---	---	---	---	14.4	4.1	13.8	4.2	---	---	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.9	7.3	11.2	5.4	---	---	15.2	4.6	8.8	2.7	7.2	---
2	10.1	8.0	9.9	5.0	---	---	16.9	4.9	8.1	2.2	9.2	---
3	9.7	7.5	11.6	4.6	---	---	14.6	3.5	6.9	2.1	8.4	.3
4	9.3	7.5	11.7	4.3	---	---	16.1	4.6	7.1	2.1	2.8	.6
5	9.8	7.3	8.0	3.9	---	---	18.3	4.1	10.6	2.1	5.8	.6
6	9.9	7.7	7.0	5.3	---	---	15.6	3.8	9.4	2.1	4.2	.6
7	9.5	7.3	8.4	5.3	---	---	15.7	4.1	9.5	2.4	1.2	.3
8	10.0	6.9	8.9	5.8	---	---	14.1	3.2	8.0	---	2.4	.3
9	9.9	6.3	9.5	6.0	---	---	13.7	3.0	4.4	---	4.6	.5
10	9.9	5.8	9.8	5.8	---	---	11.7	---	2.8	---	15.4	.9
11	10.7	6.1	10.3	5.7	---	---	9.4	---	1.6	---	19.4	---
12	9.7	6.8	9.8	5.8	---	---	7.3	---	1.0	---	19.6	---
13	9.6	5.9	8.6	5.8	---	---	6.7	---	1.0	---	19.7	---
14	10.1	5.8	9.2	6.9	---	---	5.6	---	1.2	---	12.6	---
15	10.4	4.8	---	---	---	---	4.7	---	2.2	---	18.5	6.4
16	6.4	1.4	---	---	---	---	3.7	---	3.4	---	19.1	8.1
17	6.4	---	---	---	---	---	4.5	---	3.8	---	13.8	5.3
18	4.4	---	---	---	---	---	3.6	---	4.4	---	9.1	1.8
19	5.5	---	---	---	---	---	4.6	---	4.5	---	11.2	1.8
20	6.8	---	---	---	---	---	6.6	---	5.5	---	4.8	2.2
21	11.1	---	---	---	---	---	8.6	---	6.2	---	7.9	2.6
22	10.2	---	---	---	---	---	9.8	---	5.0	---	11.1	3.0
23	7.7	5.2	---	---	---	---	9.9	---	4.3	---	---	---
24	7.9	5.3	---	---	---	---	9.8	---	3.4	---	---	---
25	8.2	5.5	---	---	---	---	5.5	---	1.5	---	11.6	2.4
26	9.4	4.5	---	---	---	---	6.3	---	1.0	---	12.0	4.4
27	9.1	4.5	---	---	---	---	19.3	---	6.6	---	11.4	4.4
28	7.4	4.5	---	---	---	---	16.7	5.1	11.2	1.9	13.8	4.7
29	8.8	4.3	---	---	---	---	14.7	4.9	16.9	4.9	11.8	4.6
30	8.5	5.7	---	---	18.3	5.3	11.5	4.4	17.5	6.5	11.1	3.7
31	---	---	---	---	---	---	9.9	4.2	12.2	3.5	---	---
MONTH	11.1	---	---	---	---	---	19.3	---	17.5	---	---	---

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA

LOCATION.—Lat 33°13'46", long 117°24'34", in SE 1/4 SW 1/4 sec.9, T.11 S., R.5W., San Diego County, Hydrologic Unit18070302, on tidal flat of the Santa Margarita River on Camp Joseph H. Pendleton Naval Reservation, 0.6 mi west of Interstate Highway 5, and 3.0 mi northwest of Oceanside.

DRAINAGE AREA.—Not determined.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: November 1993 to current year.

pH: November 1993 to current year.

WATER TEMPERATURE: November 1993 to current year.

DISSOLVED OXYGEN: November 1993 to current year.

INSTRUMENTATION.—Water-quality monitor since November 1993.

REMARKS.—Interruptions in record at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 58,700 microsiemens, July 2, 1998; minimum recorded, 236 microsiemens, Feb. 25, 1998.

pH: Maximum recorded, 9.3 standard units, July 2–3, 1997, and Feb. 23, 1998; minimum recorded, 6.0 standard units, Nov. 23, 1994, Apr. 24, 1995.

WATER TEMPERATURE: Maximum recorded, 35.0°C, Aug. 14, 1996; minimum recorded, 2.0°C, Nov. 19, 21, 1994.

DISSOLVED OXYGEN: Maximum recorded, 21.1 mg/L, Apr. 18, 1997; minimum recorded, 0.0 mg/L, many days during period of record.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 58,700 microsiemens, July 2; minimum recorded, 236 microsiemens, Feb. 25.

pH: Maximum recorded, 9.3 standard units, Feb. 23; minimum recorded, 6.4 standard units, Dec. 10.

WATER TEMPERATURE: Maximum recorded, 33.0°C, July 8–9, 19; minimum recorded, 3.5°C, Dec. 10.

DISSOLVED OXYGEN: Maximum recorded, 15.8 mg/L, July 19; minimum recorded, 0.0 mg/L, Feb. 2.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	51900	51100	52600	51600	50000	---	55700	---	50000	22600	44000	2300
2	52300	50800	52400	51800	50300	---	49300	---	50000	48100	36500	2360
3	51800	50200	52800	51500	---	---	37100	---	51400	44100	33900	2330
4	52200	50700	52900	51400	---	---	33300	---	48900	31000	46100	22100
5	52600	50500	53000	50700	50000	---	---	---	42300	32400	37900	10100
6	51100	50300	52000	49600	50000	38400	---	44300	51000	25400	12400	3240
7	51900	51100	51200	49700	48100	15600	---	25800	49600	6440	8380	3750
8	52200	50100	51400	50000	---	---	---	24900	31600	1780	8750	5200
9	53300	48400	51400	50500	---	---	---	36900	14100	2020	21400	2280
10	51400	48200	51300	50300	---	---	---	---	14700	2220	14600	3530
11	51300	49900	51500	---	---	---	56600	---	14800	1980	18200	5320
12	53200	50000	53600	---	---	---	52500	---	13600	1510	14300	2250
13	53900	52200	53600	---	---	---	50900	---	14300	1590	38100	2250
14	54400	51500	51800	---	---	---	36000	---	14900	1610	43600	11000
15	53200	51800	52000	---	---	---	24900	---	10300	2370	38000	8860
16	53300	52100	52800	---	---	---	40300	---	9120	1850	35500	6880
17	53400	51900	---	---	---	---	59800	---	8030	1810	37100	11300
18	54100	52000	---	---	---	---	49800	---	8010	1810	39500	3340
19	54300	52600	---	---	52900	48500	45300	---	10500	2020	12900	2110
20	55000	52500	---	---	53700	52300	45300	---	9800	2170	26800	2300
21	54200	51700	---	---	53700	52000	44000	---	46100	1910	36400	21900
22	53300	50900	---	---	52700	51100	43100	---	45600	2290	34900	18100
23	52700	51300	---	---	51600	50700	46600	---	52700	3440	28900	1860
24	52700	50900	---	---	52200	50800	48600	---	46700	1350	23700	1860
25	52600	51200	---	---	52800	51800	49800	---	43200	236	26700	4620
26	52900	51000	50400	37700	58000	21500	50000	---	42400	1980	33000	1940
27	52500	50700	48700	46300	55900	53700	50300	---	46900	2320	50400	3770
28	52200	51400	49000	48200	57000	55500	49800	---	44500	2310	49800	4760
29	52500	51800	49700	48900	57200	55900	55100	42000	---	---	23200	4230
30	52600	51400	49900	49200	57000	53700	53400	---	---	---	24200	1870
31	52400	51500	---	---	55500	54200	52400	---	---	---	30600	1780
MONTH	55000	48200	---	---	---	---	---	---	52700	236	50400	1780

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	30600	2230	47500	37100	49300	42800	58000	15300	51600	---	---	---
2	14700	3090	47400	40900	45100	39200	58700	15300	51600	---	---	---
3	31900	3310	49400	45400	41500	33000	58200	54600	51900	---	57400	---
4	28000	3860	49700	6800	47700	29900	58000	47700	51900	---	52700	51500
5	20600	3930	50500	30200	48600	38700	56400	45000	52200	---	51800	50700
6	22200	5730	50300	29100	48700	37400	56300	53600	52000	48700	50700	49100
7	17300	2760	47600	21700	50900	35400	56700	53600	51800	48200	49300	48400
8	27000	4090	49400	35200	50800	43800	57200	53600	51700	48000	49200	48600
9	40500	2580	50200	38700	51000	45100	57800	53900	51400	47800	49200	48700
10	43900	3730	50200	44800	50900	48000	57000	53900	51200	47400	49500	48500
11	44000	5100	51900	43800	51200	47500	58000	53200	51000	47100	49800	48900
12	43500	2380	50800	19200	50800	47300	56800	52400	50300	---	50600	49300
13	27700	3180	48900	21100	50500	46900	55400	52700	50200	---	50200	49700
14	33000	2450	30200	15700	49900	46200	55200	52200	51000	---	50300	49800
15	33600	2920	22200	13200	48500	42200	55000	51700	50800	---	50600	49500
16	24700	5200	17600	9050	48700	40800	55000	51300	51100	---	50600	49400
17	23100	2360	17600	8960	47100	40800	54100	51000	51200	---	50000	49200
18	24900	9930	16500	12500	48000	42800	54000	50900	51600	---	49700	48900
19	22000	2360	36500	15100	49400	43300	53600	51600	52900	---	49900	45700
20	21000	8000	44000	15100	50100	---	54100	19000	53900	---	46500	43700
21	35400	20100	52100	35400	51400	---	53700	51200	52800	---	52500	31300
22	44200	30400	52600	10200	52700	---	52800	51200	53600	---	51600	50800
23	46900	36800	57600	6930	52700	---	52300	50500	52800	---	51900	51100
24	48600	40100	58000	33000	56000	49700	52700	50400	52400	---	51700	51100
25	49500	45000	56000	18200	56600	53700	57500	---	50300	---	51800	50300
26	50000	46300	54700	11000	---	54200	52800	---	51500	---	51400	50000
27	50500	8690	54800	23000	57300	54100	52700	---	53200	---	51400	49400
28	50500	47200	53700	49900	56300	53200	51000	---	58300	---	50700	48600
29	50000	44500	52500	48800	57500	53900	51900	---	57500	---	49300	48400
30	48600	38500	51700	45100	58400	42000	52100	---	---	---	49000	47500
31	---	---	49800	45500	---	---	51600	48600	---	---	---	---
MONTH	50500	2230	58000	6800	---	---	58700	---	---	---	---	---

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	7.8	7.8	7.6	8.4	7.8	8.2	7.8	8.2	8.0	8.2	7.5
2	8.2	7.6	7.8	7.7	8.2	7.9	8.2	7.8	8.1	7.8	8.2	7.5
3	8.2	7.7	7.8	7.4	8.1	7.4	8.2	7.8	8.1	7.9	8.2	7.6
4	8.0	7.7	7.8	7.6	7.8	6.7	8.3	7.7	8.2	7.4	8.0	7.7
5	7.9	7.6	7.8	7.6	7.4	6.8	8.4	7.9	8.0	7.4	8.1	7.6
6	7.9	7.5	7.9	7.4	8.3	7.1	8.5	8.0	8.1	7.8	8.4	7.8
7	8.1	7.4	7.9	7.4	8.3	6.8	8.4	8.1	8.6	7.9	8.2	7.8
8	8.1	7.5	8.1	7.2	8.1	7.5	8.5	8.1	8.6	7.7	8.1	7.8
9	8.1	7.5	8.1	7.4	8.5	7.0	8.5	8.0	8.0	7.5	8.2	7.8
10	8.1	7.4	7.9	7.6	8.4	6.4	8.1	7.7	7.9	7.6	8.0	7.6
11	8.1	7.7	7.9	7.4	7.4	6.5	8.1	7.6	8.0	7.5	8.0	7.6
12	8.3	7.3	7.9	7.6	7.7	6.7	8.1	7.6	8.3	7.5	8.1	7.5
13	8.2	7.0	7.9	7.4	8.3	7.1	8.1	7.6	8.1	7.5	8.1	7.5
14	7.5	6.7	8.0	7.5	8.5	7.2	8.1	7.7	8.4	7.6	8.0	7.6
15	7.8	6.9	8.0	7.6	8.2	7.9	8.0	7.6	8.7	7.6	8.1	7.6
16	8.0	7.1	7.8	7.7	8.2	7.8	8.0	7.7	8.7	7.6	8.1	7.5
17	8.0	7.6	7.8	7.5	8.2	7.3	7.9	7.5	8.1	7.5	8.1	7.5
18	8.1	7.8	7.7	7.1	7.9	7.4	8.0	7.5	8.3	7.5	8.0	7.4
19	8.1	7.6	7.8	7.4	8.3	7.9	8.0	7.6	8.1	7.6	8.1	7.4
20	8.0	7.6	8.0	7.8	8.3	8.1	8.1	7.7	8.5	7.5	8.2	7.5
21	8.0	7.6	7.9	7.5	8.3	8.2	8.1	7.8	8.3	7.6	8.3	7.6
22	8.2	7.4	7.9	7.2	8.3	8.1	8.2	7.8	9.0	7.6	8.3	7.6
23	8.0	7.4	8.1	7.4	8.3	8.1	8.3	7.9	9.3	7.4	8.2	7.3
24	8.1	7.6	8.1	7.7	8.3	8.2	8.3	8.0	8.9	7.3	8.1	7.3
25	8.1	7.4	8.1	7.7	8.4	8.2	8.3	7.8	8.1	7.3	8.0	7.6
26	8.0	7.0	8.1	7.8	8.4	8.2	8.2	7.9	8.2	7.4	7.9	7.5
27	8.1	7.1	8.4	8.0	8.4	8.2	8.2	7.8	8.3	7.5	8.2	7.6
28	8.1	7.4	8.3	8.0	8.4	8.2	8.2	7.9	8.3	7.5	8.3	7.9
29	8.2	7.0	8.4	7.9	8.3	8.1	8.1	7.9	---	---	8.3	7.8
30	8.3	7.7	8.4	8.2	8.2	8.0	8.4	7.9	---	---	8.2	7.7
31	8.2	7.0	---	---	8.2	7.8	8.2	7.9	---	---	8.3	7.7
MONTH	8.3	6.7	8.4	7.1	8.5	6.4	8.5	7.5	9.3	7.3	8.4	7.3
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	7.7	8.3	7.5	8.1	7.6	8.8	7.9	8.5	7.9	8.3	8.0
2	8.0	7.6	8.3	7.5	8.3	7.5	8.9	7.9	8.6	7.9	8.1	7.9
3	8.1	7.7	8.3	7.4	8.4	7.6	8.7	7.8	8.6	7.8	8.2	8.0
4	8.1	7.6	8.5	7.6	8.6	7.6	8.6	7.8	8.8	7.5	8.2	8.0
5	8.3	7.8	8.4	7.7	8.4	7.5	8.6	7.8	8.9	7.5	8.2	8.1
6	8.6	7.9	8.1	7.5	8.5	7.5	8.9	7.8	8.8	7.5	8.1	7.9
7	8.5	7.9	8.4	7.4	8.5	7.9	8.9	7.7	8.7	7.4	8.0	7.6
8	8.4	7.9	8.3	7.5	8.5	7.7	8.8	7.6	8.3	7.4	7.7	7.4
9	8.4	7.7	8.3	7.6	8.8	7.5	8.8	7.5	8.4	7.5	7.4	7.3
10	8.3	7.6	8.3	7.3	8.8	7.6	8.9	7.4	8.4	7.5	7.4	7.3
11	8.3	7.7	8.4	7.5	8.8	7.6	8.9	7.5	8.4	7.4	7.4	7.3
12	8.3	7.9	8.4	7.5	8.8	7.5	8.7	7.5	8.3	7.5	7.4	7.3
13	8.4	7.8	8.6	7.8	8.9	7.7	8.8	7.4	8.3	7.7	7.4	7.1
14	8.2	7.7	8.7	7.6	8.9	7.8	8.6	7.4	8.3	7.6	7.1	7.1
15	8.6	7.8	8.8	7.6	8.9	7.9	8.3	7.4	8.4	7.7	7.1	7.1
16	8.9	8.1	8.7	7.7	8.8	8.0	8.5	7.4	8.4	7.7	7.2	7.1
17	9.0	8.1	8.9	7.9	8.9	8.0	8.7	7.4	8.6	7.7	7.2	7.1
18	8.9	8.3	9.0	8.0	8.8	8.1	8.2	7.4	8.7	7.8	7.2	7.0
19	8.8	8.2	8.6	7.9	8.7	8.0	8.7	7.3	8.5	7.8	7.3	7.0
20	8.9	8.0	---	---	8.7	7.9	8.7	7.2	8.6	7.7	7.9	7.3
21	8.6	7.7	8.5	7.8	8.8	7.7	8.6	7.2	8.6	7.8	8.3	7.6
22	8.4	7.7	8.2	7.5	8.8	7.6	8.6	7.2	8.6	7.9	8.2	7.5
23	8.3	7.5	8.2	7.5	8.7	7.6	8.6	7.3	8.3	7.8	7.7	7.3
24	8.3	7.6	8.1	7.2	8.6	7.6	8.6	7.3	8.3	7.8	7.8	7.4
25	8.3	7.6	8.1	7.2	8.5	7.6	8.7	7.3	8.2	7.8	7.9	7.4
26	8.3	7.5	8.2	7.5	8.7	7.6	8.8	7.3	8.1	7.7	8.5	7.4
27	8.3	7.5	8.2	7.1	8.8	7.7	8.8	7.4	8.4	7.6	8.7	7.2
28	8.3	7.6	8.2	7.5	8.7	7.7	8.8	7.6	8.5	7.9	8.7	7.4
29	8.3	7.5	8.2	7.5	8.8	7.7	8.8	7.7	8.3	7.8	8.7	7.8
30	8.3	7.6	8.1	7.4	8.9	7.8	8.7	7.8	8.2	7.8	8.6	7.7
31	---	---	8.3	7.3	---	---	8.6	7.8	8.2	7.9	---	---
MONTH	9.0	7.5	---	---	8.9	7.5	8.9	7.2	8.9	7.4	8.7	7.0

SANTA MARGARITA RIVER BASIN

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	27.5	23.0	22.0	17.0	19.5	13.5	16.5	11.5	19.0	15.5	22.0	12.0
2	27.0	23.0	22.5	17.5	18.5	12.0	16.0	13.0	18.5	16.5	22.5	14.0
3	27.5	23.0	21.5	16.5	18.0	10.5	16.0	14.0	18.0	13.5	20.5	14.0
4	25.0	23.0	20.5	16.5	18.0	10.5	16.5	13.5	14.5	11.5	23.0	14.5
5	25.0	23.0	21.0	17.0	17.0	10.5	15.5	11.5	16.0	13.5	22.5	15.0
6	24.5	22.0	22.0	17.5	17.0	14.5	13.5	9.0	16.0	14.5	18.5	13.0
7	22.0	19.0	21.5	18.5	18.0	14.5	13.5	8.5	16.0	13.0	18.5	10.0
8	24.0	17.5	21.5	18.5	16.0	9.5	14.0	11.0	20.0	13.5	23.0	11.5
9	23.5	19.0	20.5	17.0	19.0	5.0	15.0	12.5	20.0	12.5	23.5	13.5
10	24.0	18.5	19.5	16.5	19.0	3.5	16.5	14.5	18.0	11.5	24.5	14.0
11	20.5	17.0	20.5	15.5	18.5	8.5	17.0	16.0	17.5	13.5	25.0	13.5
12	22.5	15.5	19.0	13.5	17.5	5.5	17.5	16.5	17.0	13.5	23.0	13.5
13	23.5	15.5	19.0	15.0	16.0	5.5	18.0	17.0	17.0	14.0	19.5	15.5
14	23.0	16.5	19.5	13.5	16.0	6.5	18.0	15.5	15.5	14.0	20.0	13.0
15	23.5	16.5	22.0	13.0	17.0	7.5	17.5	16.5	18.0	11.0	23.5	13.0
16	24.0	17.0	18.5	11.5	17.0	6.5	18.5	17.5	19.0	9.5	21.0	15.5
17	25.5	17.5	19.0	10.5	15.5	6.5	19.5	18.0	16.0	10.5	26.5	16.0
18	25.0	18.5	19.0	9.5	13.0	8.0	20.5	19.0	20.0	9.0	25.5	17.5
19	24.0	18.0	19.5	9.5	13.5	8.5	20.0	19.0	15.5	9.5	25.0	17.5
20	22.5	19.5	21.0	13.5	14.0	8.0	19.0	17.0	18.5	10.5	23.5	16.0
21	22.0	18.0	22.5	11.5	11.5	10.5	18.0	17.5	18.5	9.5	24.0	14.5
22	23.0	18.0	25.5	12.0	12.5	10.0	18.0	13.5	16.0	13.5	26.5	13.5
23	23.0	20.0	20.5	10.5	12.0	9.0	17.5	16.0	18.0	12.0	27.5	16.5
24	23.5	20.0	19.5	10.5	12.5	9.5	17.5	16.0	17.5	12.0	25.0	16.5
25	22.0	18.5	19.0	13.0	11.0	8.5	17.5	15.5	18.5	10.5	18.5	14.5
26	22.0	16.0	17.5	15.0	11.0	7.5	17.5	15.0	21.0	10.5	21.0	13.5
27	21.0	15.0	18.5	15.5	11.0	7.0	18.0	14.5	20.0	11.5	19.0	13.5
28	20.5	15.5	17.5	15.0	12.0	7.5	18.0	14.5	20.5	11.5	16.5	11.5
29	21.5	16.0	17.0	13.5	14.5	9.5	17.0	15.0	---	---	16.5	9.5
30	22.0	16.0	17.0	15.5	17.5	11.5	20.0	14.0	---	---	23.0	9.5
31	21.0	16.5	---	---	17.5	13.0	17.0	15.0	---	---	22.5	12.5
MONTH	27.5	15.0	25.5	9.5	19.5	3.5	20.5	8.5	21.0	9.0	27.5	9.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	22.0	10.0	25.0	16.0	30.5	21.0	29.5	21.0	30.5	22.5	28.5	25.5
2	24.5	11.5	28.0	16.0	31.0	23.0	28.5	22.0	29.0	22.5	28.5	27.0
3	23.0	12.0	30.0	19.0	30.0	21.0	28.0	21.5	26.5	22.0	28.5	27.5
4	23.5	12.0	30.0	20.5	29.5	21.0	28.0	21.5	27.0	20.5	28.0	25.5
5	23.0	12.0	24.5	19.0	28.0	19.0	30.5	22.5	28.5	20.5	26.5	25.5
6	19.0	13.0	27.5	18.5	26.5	19.5	31.5	20.5	27.5	20.5	26.5	25.0
7	21.0	12.5	28.0	19.5	27.5	16.5	32.5	22.5	27.5	20.0	26.0	25.0
8	22.0	13.0	27.5	19.0	28.0	18.5	33.0	22.0	27.0	20.0	26.0	25.0
9	25.0	14.0	25.5	18.0	30.0	17.0	33.0	21.5	28.5	19.0	26.5	25.0
10	25.0	14.0	28.5	16.0	27.5	18.5	32.0	20.5	32.5	21.0	26.0	25.0
11	17.5	14.0	26.5	17.0	26.5	18.5	32.5	20.5	31.5	22.0	26.0	25.0
12	22.0	12.0	19.5	14.5	26.5	18.0	29.0	20.5	31.5	22.0	25.5	23.5
13	22.0	13.0	23.0	15.0	28.0	17.0	29.0	20.5	30.0	22.5	24.5	24.0
14	24.0	12.5	27.5	17.5	28.5	17.0	29.5	20.0	30.0	23.0	25.0	24.5
15	23.0	12.0	27.0	14.0	26.0	20.5	27.0	20.5	30.5	23.5	24.5	24.0
16	24.0	13.0	27.5	16.0	23.0	19.5	28.0	21.0	30.0	24.0	24.5	23.0
17	26.0	13.5	27.0	15.0	27.5	19.0	31.5	21.5	30.0	23.5	23.5	23.0
18	26.0	16.0	27.5	15.0	27.5	18.5	27.0	23.0	32.0	23.0	23.5	23.0
19	27.0	14.0	28.0	15.5	29.5	21.5	33.0	22.0	32.0	21.5	25.0	23.5
20	25.5	15.0	---	---	28.5	20.5	31.5	22.5	31.5	20.0	25.5	23.0
21	26.0	16.0	26.5	18.5	30.0	20.5	29.5	21.5	32.0	20.0	24.5	22.0
22	21.0	17.0	29.0	17.5	29.5	17.0	26.0	21.5	32.0	21.0	24.0	21.5
23	25.5	15.5	29.0	18.0	30.5	19.0	27.5	20.5	32.5	22.5	23.5	22.5
24	26.0	15.5	29.5	18.0	31.5	19.0	27.5	20.5	31.5	24.0	23.5	19.5
25	26.0	14.5	29.5	18.0	31.0	19.5	30.5	21.0	30.5	23.5	22.0	21.0
26	26.5	12.5	27.5	17.0	32.0	20.5	30.5	21.5	30.0	24.5	22.5	20.0
27	27.0	13.5	28.0	13.5	30.5	22.0	32.5	21.0	29.0	24.0	22.0	19.0
28	25.5	13.5	28.0	16.0	27.0	21.5	30.5	21.5	28.5	24.0	22.0	19.0
29	27.0	15.5	25.5	17.5	31.0	19.5	28.0	21.5	28.5	25.5	21.5	19.0
30	23.0	17.5	28.0	19.0	30.0	21.0	29.0	21.5	29.0	26.5	22.0	19.5
31	---	---	27.0	15.5	---	---	29.5	21.5	29.5	27.5	---	---
MONTH	27.0	10.0	---	---	32.0	16.5	33.0	20.0	32.5	19.0	28.5	19.0

331346117243401 SANTA MARGARITA RIVER ESTUARY, NEAR OCEANSIDE, CA—Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.8	2.6	7.4	2.1	9.5	2.9	6.7	3.3	4.8	.3	8.8	.3
2	6.8	2.5	6.9	2.4	9.8	4.7	7.6	3.2	2.7	.0	7.5	1.2
3	9.5	2.7	6.8	2.0	10.1	5.6	7.7	2.8	2.9	.5	7.4	.3
4	7.0	2.6	6.0	1.8	10.1	6.6	9.3	1.9	6.5	1.1	6.8	1.3
5	6.6	1.9	6.7	1.3	10.1	6.5	9.7	3.5	3.6	.1	6.0	1.1
6	7.0	1.8	8.1	.8	8.9	5.6	10.5	4.9	4.6	.1	7.3	1.0
7	8.5	3.1	6.7	1.3	7.1	4.7	8.7	4.8	6.4	1.1	9.0	.2
8	9.9	1.8	6.3	2.1	10.5	6.4	12.7	4.7	7.5	3.0	7.5	.2
9	9.3	2.9	8.1	3.4	12.0	6.3	8.9	3.3	6.0	2.5	7.3	1.5
10	8.7	2.9	5.3	3.5	12.7	5.3	5.8	1.0	7.1	2.1	6.1	.3
11	8.6	4.4	8.3	2.8	10.8	6.5	4.4	.9	6.6	1.4	5.4	.2
12	9.8	2.9	8.7	3.6	11.7	7.1	5.3	.9	6.9	.4	6.0	.2
13	10.1	3.2	6.4	2.5	11.9	6.6	4.8	.8	7.2	.5	5.5	.4
14	9.1	3.4	8.5	3.3	11.2	5.8	6.2	2.3	9.4	.9	6.7	.4
15	8.6	3.1	9.4	3.3	11.2	6.3	4.6	.8	9.6	1.4	6.8	.4
16	7.7	2.7	9.6	4.6	11.3	6.3	4.6	1.1	8.4	1.1	7.5	.2
17	5.7	2.1	10.2	5.5	11.6	6.5	3.7	.7	8.1	1.7	5.9	.8
18	5.6	1.4	10.3	5.7	11.0	7.4	4.9	.8	6.6	.7	4.3	.4
19	6.2	1.3	10.5	7.3	10.9	5.5	5.1	.8	7.0	.5	4.4	.3
20	6.1	.9	9.4	8.0	7.5	5.1	4.4	1.4	7.6	.5	5.0	.6
21	7.0	.9	10.1	7.8	7.5	4.6	6.0	1.5	12.9	.3	5.1	.4
22	6.2	.6	9.8	7.4	7.0	4.5	8.2	2.2	12.4	.8	5.4	.7
23	5.9	1.6	10.1	6.4	7.3	4.5	7.7	1.8	14.3	.6	5.0	.2
24	6.7	.9	10.3	5.4	7.4	5.2	7.3	2.5	14.3	.2	4.3	.4
25	7.5	.8	9.9	5.3	7.6	4.8	6.6	.9	12.1	.4	5.3	.2
26	8.5	1.2	9.5	4.3	7.4	5.5	5.3	.9	14.0	.9	5.7	.6
27	8.5	1.9	5.4	3.6	8.5	5.2	5.7	.9	11.2	.7	7.6	1.3
28	7.3	2.3	6.3	3.1	8.3	4.5	6.3	1.5	12.0	.3	15.1	5.3
29	8.1	1.8	6.5	4.6	6.7	3.7	4.7	1.1	---	---	12.5	3.5
30	7.0	2.5	5.8	3.5	6.9	3.1	6.9	.7	---	---	10.8	4.2
31	7.6	1.8	---	---	5.6	2.5	4.0	.8	---	---	10.9	4.1
MONTH	10.8	.6	10.5	.8	12.7	2.5	12.7	.7	14.3	.0	15.1	.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.4	4.9	6.4	1.4	7.8	1.3	10.0	3.0	7.2	2.2	3.6	1.9
2	8.3	2.8	6.6	1.5	6.7	1.2	9.8	3.0	9.1	2.3	2.9	1.5
3	8.2	3.7	6.1	1.2	7.6	1.5	8.2	3.1	9.4	2.6	---	---
4	7.2	3.3	6.5	1.0	10.4	2.2	9.5	3.3	11.8	3.0	---	---
5	8.1	3.4	5.3	1.3	10.3	2.2	8.3	3.2	12.4	2.7	---	---
6	9.0	3.0	4.4	.9	10.3	2.9	9.1	3.2	12.2	3.3	---	---
7	9.4	3.8	8.4	.9	9.8	3.4	10.1	3.1	11.3	3.0	---	---
8	8.2	2.8	5.8	.9	9.1	2.0	9.8	3.7	10.3	2.9	---	---
9	8.6	2.5	6.9	.9	13.7	2.1	9.0	3.4	10.6	3.1	---	---
10	8.3	2.4	7.7	.9	10.9	2.2	10.9	4.0	9.4	3.7	---	---
11	7.5	2.2	8.2	.9	13.3	2.3	11.9	3.8	9.3	3.3	---	---
12	8.8	3.5	6.7	1.4	12.8	3.6	11.5	3.4	8.8	3.4	---	---
13	10.3	2.8	8.5	1.1	11.4	5.1	12.1	4.1	8.1	3.5	---	---
14	7.7	2.9	9.9	1.8	13.4	3.2	10.6	3.7	9.7	3.6	---	---
15	9.8	3.3	9.4	2.7	12.8	3.1	10.2	3.5	9.9	3.9	---	---
16	7.9	3.0	9.9	2.4	11.8	3.5	12.1	3.4	11.5	4.5	---	---
17	7.9	2.3	8.8	3.1	13.1	3.7	13.7	3.4	11.3	3.9	---	---
18	5.9	1.8	8.7	2.0	12.6	3.4	9.9	3.5	11.8	4.2	---	---
19	7.0	1.8	---	---	10.4	3.5	15.8	3.6	11.6	4.2	---	---
20	8.3	1.8	---	---	12.0	4.2	14.5	3.8	10.7	4.3	---	---
21	12.3	1.8	9.3	.2	14.8	4.5	12.7	3.5	10.3	4.6	---	---
22	10.9	1.7	6.5	.3	15.0	3.8	12.5	3.7	9.5	4.7	---	---
23	6.8	1.5	8.6	.5	14.4	3.9	12.3	3.6	9.2	4.7	---	---
24	7.0	1.3	10.1	.3	12.8	4.3	10.4	3.8	9.8	4.7	---	---
25	6.9	1.2	9.4	.3	9.0	2.8	11.6	4.0	8.2	5.0	---	---
26	6.4	1.6	5.7	1.5	8.2	2.9	12.4	3.8	8.5	4.9	---	---
27	6.0	1.0	7.5	1.0	9.0	2.9	13.9	3.4	8.0	1.1	---	---
28	5.4	1.2	5.9	.5	9.9	2.9	11.0	2.3	10.1	1.2	---	---
29	5.2	1.0	5.2	1.0	9.6	3.3	10.1	2.3	6.8	1.2	10.7	2.7
30	6.3	1.0	5.7	1.1	10.8	3.0	8.2	2.0	7.3	1.4	9.8	2.4
31	---	---	6.5	1.0	---	---	7.4	2.3	5.9	1.3	---	---
MONTH	13.4	1.0	---	---	15.0	1.2	15.8	2.0	12.4	1.1	---	---

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 fair. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	.08	.31	.34	1.1	60	82	6.0	3.4	1.3	1.2	.94
2	.64	.08	.22	.26	.35	55	38	6.0	2.9	1.2	1.2	1.0
3	.60	.09	.24	.18	32	53	26	6.0	2.7	1.2	1.2	1.2
4	.53	.09	.37	.18	10	48	22	6.0	2.5	1.3	1.2	1.1
5	.49	.08	.39	.20	.98	44	19	27	2.5	1.3	1.2	1.1
6	.49	.08	.45	.34	6.1	49	20	15	2.5	1.1	1.2	1.2
7	.45	.07	.67	.40	3.2	33	19	9.3	3.0	1.1	1.4	1.2
8	.49	.05	.69	.39	153	30	15	7.5	3.3	1.1	1.6	1.1
9	.43	.10	.43	1.1	80	27	15	6.9	3.1	1.1	1.5	1.2
10	.38	.11	.43	6.6	10	24	13	7.3	3.1	1.1	1.2	1.2
11	.35	.11	.36	.34	8.6	21	20	7.8	3.3	1.1	1.2	1.2
12	.30	.12	.36	.34	8.3	18	27	19	3.5	1.3	1.2	1.2
13	.29	.12	.41	.33	8.3	18	15	37	3.0	1.2	1.2	1.2
14	.24	.09	.43	.30	432	42	14	23	2.3	1.4	1.2	1.1
15	.21	.08	.43	.35	150	18	14	9.4	2.2	1.4	1.2	1.2
16	.21	.13	.44	.38	31	16	11	8.1	2.7	1.4	1.2	1.2
17	.21	.16	.49	.36	440	14	10	7.0	2.8	1.4	1.2	1.2
18	.21	.16	.48	.38	68	12	9.5	6.2	2.1	1.4	1.1	1.2
19	.19	.18	.43	.38	41	10	9.2	6.3	2.2	1.4	1.1	1.2
20	.21	.19	.43	.41	71	9.9	8.8	5.3	1.7	1.4	1.1	1.2
21	.18	.19	.43	.43	27	8.8	8.3	5.3	1.5	1.4	1.1	1.1
22	.14	.21	.38	.38	406	9.0	7.7	5.4	1.4	1.4	1.1	1.1
23	.18	.21	.38	.38	544	8.9	6.9	5.1	1.5	1.4	1.1	1.2
24	.19	.23	.38	.40	1050	8.5	7.0	5.1	1.5	1.4	1.1	1.2
25	.19	.24	.41	.43	223	18	6.6	4.8	1.5	1.3	1.1	1.1
26	.17	.25	.43	.39	136	35	6.3	4.9	1.5	1.3	1.1	1.2
27	.13	.27	.43	.33	90	15	6.2	4.4	1.4	1.3	1.1	1.2
28	.12	.27	.39	.29	65	38	6.1	4.5	1.5	1.2	1.0	1.1
29	.12	.30	.38	.73	---	49	6.0	4.3	1.5	1.2	.94	1.1
30	.10	.30	.35	.34	---	26	6.0	3.8	1.4	1.2	.94	1.0
31	.08	---	.37	.60	---	23	---	3.8	---	1.2	.94	---
TOTAL	9.09	4.64	12.79	18.26	4095.93	841.1	474.6	277.5	69.5	39.5	36.12	34.44
MEAN	.29	.15	.41	.59	146	27.1	15.8	8.95	2.32	1.27	1.17	1.15
MAX	.64	.30	.69	6.6	1050	60	82	37	3.5	1.4	1.6	1.2
MIN	.08	.05	.22	.18	.35	8.5	6.0	3.8	1.4	1.1	.94	.94
AC-FT	18	9.2	25	36	8120	1670	941	550	138	78	72	68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.037	.24	.77	4.27	7.11	9.64	2.17	.40	.13	.094	.086	.11
MAX	.46	4.81	12.9	35.6	146	143	29.3	8.95	2.32	1.27	1.17	1.15
(WY)	1996	1966	1967	1995	1998	1978	1958	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1952 - 1998

ANNUAL TOTAL	867.54	5913.47	
ANNUAL MEAN	2.38	16.2	2.07
HIGHEST ANNUAL MEAN			17.9
LOWEST ANNUAL MEAN			.006
HIGHEST DAILY MEAN	224	Jan 26	1050
LOWEST DAILY MEAN	.05	Nov 8	.05
ANNUAL SEVEN-DAY MINIMUM	.08	Nov 2	.08
INSTANTANEOUS PEAK FLOW			3830
INSTANTANEOUS PEAK STAGE			9.44
ANNUAL RUNOFF (AC-FT)	1720	11730	1500
10 PERCENT EXCEEDS	1.6	26	.56
50 PERCENT EXCEEDS	.50	1.2	.00
90 PERCENT EXCEEDS	.21	.21	.00

11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA

LOCATION.—Lat 33°28'15", long 117°28'20", in SE 1/4 NE 1/4 sec.23, T.8 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on left bank 0.4 mi downstream from mouth of Devil Canyon and 8.6 miles northeast of San Clemente.

DRAINAGE AREA.—80.8 mi².

PERIOD OF RECORD.—October 1952 to September 1967, October 1993 to current year. Discharge records for October 1967 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 405 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,500 ft³/s, Feb. 23, 1998, gage height, 12.83 ft, on basis of slope-area measurement of peak flow; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge 9,240 ft³/s, gage height 11.12 ft, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum, from rating curve extended above 167 ft³/s on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	1730	171	4.47	Feb. 17	0915	1,190	6.68
Jan. 10	1000	176	4.49	Feb. 23	2315	12,500	12.83
Feb. 3	1815	449	5.35	Mar. 28	0930	823	5.62
Feb. 8	0330	3,250	8.83	Apr. 12	0115	278	4.42
Feb. 14	1915	3,310	8.88	May 13	1645	284	4.42

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.36	1.5	6.2	218	329	44	30	11	3.8	.65
2	.00	.00	.32	1.5	5.3	189	223	44	29	11	3.6	.65
3	.00	.00	.28	2.0	141	167	182	44	28	11	3.5	.86
4	.00	.00	.27	2.7	184	150	166	43	28	11	3.3	1.2
5	.00	.00	.27	2.7	55	134	149	67	27	11	3.1	1.4
6	.00	.00	27	2.5	153	164	151	68	26	9.9	3.1	1.6
7	.00	.00	37	2.3	198	130	150	48	26	9.1	3.1	1.5
8	.00	.00	16	2.1	994	111	124	44	27	8.7	3.1	1.3
9	.00	.00	8.4	3.5	279	102	112	41	27	8.3	2.8	1.2
10	.00	.00	5.2	76	136	93	104	38	25	7.9	2.6	1.1
11	.00	.00	3.5	38	92	86	119	37	26	7.5	2.5	1.0
12	.00	.00	2.8	14	70	80	207	57	27	7.4	2.4	1.0
13	.00	.00	2.3	9.9	57	77	129	193	25	7.3	2.1	.91
14	.00	.00	2.0	7.7	711	88	117	127	22	7.1	2.0	.99
15	.00	.00	1.7	6.5	495	76	116	81	21	6.7	2.0	1.0
16	.00	.02	1.6	6.2	182	72	101	67	21	6.2	2.0	1.0
17	.00	.11	1.5	5.5	522	69	93	60	22	5.8	1.9	.96
18	.00	.13	1.8	4.9	224	64	86	54	20	5.5	1.9	.91
19	.00	.13	2.3	5.4	160	60	80	49	18	5.2	2.0	.91
20	.00	.13	2.0	5.0	231	57	75	45	17	5.2	1.9	.91
21	.00	.14	1.8	4.5	145	54	70	44	16	5.2	1.8	.96
22	.00	.14	1.8	4.1	1120	52	66	42	16	5.2	1.6	1.2
23	.00	.14	1.5	3.8	2480	49	63	41	15	5.5	1.3	1.3
24	.00	.14	1.5	3.6	3150	47	62	40	15	5.5	1.1	1.4
25	.00	.15	1.5	3.4	803	106	60	40	15	5.3	1.0	1.5
26	.00	1.0	1.5	3.2	467	135	57	41	14	5.2	1.0	1.7
27	.00	3.4	1.5	3.1	333	92	53	38	14	4.6	1.0	1.8
28	.00	.73	1.5	3.0	263	431	50	35	13	4.2	.99	1.9
29	.00	.40	1.4	5.2	---	381	48	34	13	4.0	.89	1.8
30	.00	.36	1.5	6.9	---	218	46	33	12	3.8	.76	1.8
31	.00	---	1.5	5.9	---	176	---	31	---	3.8	.66	---
TOTAL	0.00	7.12	133.60	246.6	13656.5	3928	3388	1670	635	215.1	64.80	36.41
MEAN	.000	.24	4.31	7.95	488	127	113	53.9	21.2	6.94	2.09	1.21
MAX	.00	3.4	37	76	3150	431	329	193	30	11	3.8	1.9
MIN	.00	.00	.27	1.5	5.3	47	46	31	12	3.8	.66	.65
AC-FT	.00	14	265	489	27090	7790	6720	3310	1260	427	129	72

11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.078	3.78	11.7	19.4	42.1	38.0	27.0	6.58	2.38	.71	.17	.093
MAX	1.05	69.4	164	131	488	371	270	53.9	21.2	6.94	2.09	1.21
(WY)	1996	1966	1967	1995	1998	1995	1958	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1953 - 1998

ANNUAL TOTAL	2535.87	23981.13	
ANNUAL MEAN	6.95	65.7	12.5
HIGHEST ANNUAL MEAN			65.7
LOWEST ANNUAL MEAN			.019
HIGHEST DAILY MEAN	445	Jan 26	3150
LOWEST DAILY MEAN	.00	Jun 1	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 1	.00
INSTANTANEOUS PEAK FLOW			12500
INSTANTANEOUS PEAK STAGE			12.83
ANNUAL RUNOFF (AC-FT)	5030		47570
10 PERCENT EXCEEDS	13		149
50 PERCENT EXCEEDS	.27		5.5
90 PERCENT EXCEEDS	.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. Gages and culverts destroyed by flood on Feb. 23, 1998. Elevation of gage is 90 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,800 ft³/s, estimated, Feb. 23, 1998, on basis of slope-area measurement of peak flow; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 16, 1952, reached a discharge of 1,800 ft³/s, gage height 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:

Combined Discharge (north and south channels) (ft ³ /s)			Combined Discharge (north and south channels) (ft ³ /s)		
Date	Time		Date	Time	
Dec. 6	2115	223	Feb. 23	e2330	e5,800
Feb. 3	1145	467	Mar. 28	unknown	unknown
Feb. 8	unknown	unknown	Apr. 12	unknown	unknown
Feb. 14	unknown	unknown	May 13	unknown	unknown
Feb. 17	unknown	unknown			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e1.9	e48	e150	e7.6	e3.2	e.48	e.00	e.00
2	.00	.00	.00	e.84	e.00	e35	e100	e7.3	e3.1	e.45	e.00	e.00
3	.00	.00	.00	.00	e108	e28	e66	e7.0	e3.0	e.45	e.00	e.00
4	.00	.00	.00	.00	e21	e27	e63	e6.9	e2.9	e.40	e.00	e.00
5	.00	.00	.00	.00	e7.6	e25	e59	e15	e2.8	e.30	e.00	e.00
6	.00	.00	36	.00	e55	e35	e54	e10	e2.7	e.25	e.00	e.00
7	.00	.00	e6.1	.00	e34	e28	e49	e8.9	e2.6	e.15	e.00	e.00
8	.00	.00	.00	.00	e417	e23	e43	e7.8	e2.6	e.05	e.00	e.00
9	.00	.00	.00	.91	e64	e20	e36	e6.7	e2.7	e.00	e.00	e.00
10	.00	.00	.00	e5.1	e17	e16	e30	e6.3	e2.5	e.00	e.00	e.00
11	.00	.00	.00	e.02	e8.8	e13	e25	e6.2	e2.6	e.00	e.00	e.00
12	.00	.00	.00	.00	e6.3	e12	e40	e9.0	e2.5	e.00	e.00	e.00
13	.00	.00	.00	.00	e6.8	e12	e30	e27	e2.4	e.00	e.00	e.00
14	.00	.00	.00	.00	e525	e13	e18	e10	e2.2	e.00	e.00	e.00
15	.00	.00	.00	.00	e462	e11	e15	e7.3	e2.1	e.00	e.00	e.00
16	.00	.00	.00	.00	e264	e10	e14	e6.7	e1.8	e.00	e.00	e.00
17	.00	.00	.00	.00	e490	e10	e14	e6.6	e1.8	e.00	e.00	e.00
18	.00	.00	.00	.00	e122	e9.8	e13	e6.3	e1.6	e.00	e.00	e.00
19	.00	.00	.00	.00	e75	e9.7	e12	e6.2	e1.5	e.00	e.00	e.00
20	.00	.00	.00	.00	e150	e9.5	e12	e6.0	e1.4	e.00	e.00	e.00
21	.00	.00	.00	.00	e67	e9.3	e11	e5.9	e1.3	e.00	e.00	e.00
22	.00	.00	.00	.00	e677	e9.2	e11	e5.8	e1.2	e.00	e.00	e.00
23	.00	.00	.00	.00	e1250	e9.0	e10	e5.7	e1.2	e.00	e.00	e.00
24	.00	.00	.00	.00	e1400	e8.9	e10	e5.3	e1.1	e.00	e.00	e.00
25	.00	.00	.00	.00	e450	e30	e9.4	e5.1	e1.0	e.00	e.00	e.00
26	.00	.00	.00	.00	e130	e75	e8.8	e4.9	e1.0	e.00	e.00	e.00
27	.00	.17	.00	.00	e90	e30	e8.7	e4.7	e.90	e.00	e.00	e.00
28	.00	.00	.00	.00	e67	e175	e8.6	e4.5	e.75	e.00	e.00	e.00
29	.00	.00	.00	e.99	---	e90	e8.2	e4.2	e.60	e.00	e.00	e.00
30	.00	.04	.00	e.00	---	e67	e7.7	e3.9	e.53	e.00	e.00	e.00
31	.00	---	.00	e8.7	---	e63	---	e3.5	---	e.00	e.00	---
TOTAL	0.00	0.21	42.10	16.56	6966.40	961.4	936.4	228.3	57.58	2.53	0.00	0.00
MEAN	.000	.007	1.36	.53	249	31.0	31.2	7.36	1.92	.082	.000	.000
MAX	.00	.17	36	8.7	1400	175	150	27	3.2	.48	.00	.00
MIN	.00	.00	.00	.00	.00	8.9	7.7	3.5	.53	.00	.00	.00
AC-FT	.00	.4	84	33	13820	1910	1860	453	114	5.0	.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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.005	.10	.59	8.63	55.1	32.0	8.49	2.20	.50	.033	.000	.000
MAX	.026	.51	1.58	24.6	249	128	31.2	7.36	1.92	.084	.000	.000
(WY)	1997	1997	1997	1995	1998	1995	1998	1998	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1994 - 1998			
ANNUAL TOTAL	621.82				9211.48							
ANNUAL MEAN	1.70				25.2				8.69			
HIGHEST ANNUAL MEAN									25.2			
LOWEST ANNUAL MEAN									.066			
HIGHEST DAILY MEAN	221				1400				1400			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					5800				5800			
ANNUAL RUNOFF (AC-FT)	1230				18270				6300			
10 PERCENT EXCEEDS	.38				35				7.7			
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 fair except for estimated daily discharges, which are poor. No regulation upstream from station. Capistrano Water Co. diverts water 2.0 mi upstream. Various amounts of diverted water reach station as irrigation return flow. October 1928 to September 1969 and October 1969 to September 1985, data published as San Juan Creek near San Juan Capistrano (station 11046500) and San Juan Creek at San Juan Capistrano (station 11046550), which are located approximately 1.9 mi upstream and 1.0 mi downstream, respectively. Data for these sites are roughly equivalent.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,600 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 above 3,510 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	2245	562	12.67	Feb. 23	2345	18,300	17.02
Feb. 3	1530	1,370	12.81	Mar. 25	1215	570	12.01
Feb. 8	0245	5,520	14.53	Apr. 1	0015	523	11.95
Feb. 14	2130	3,080	13.67	May 13	0915	768	11.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	14	3.2	19	e267	251	46	33	17	5.8	2.2
2	.00	.00	28	3.0	12	e265	191	46	31	16	5.9	2.0
3	.00	.00	21	4.5	252	e258	189	45	28	15	5.5	3.6
4	.00	.00	10	6.2	150	e249	191	45	27	15	5.2	3.6
5	.00	.00	7.2	6.6	65	e245	193	109	28	13	4.8	3.8
6	.00	.00	142	4.5	90	e241	198	141	25	11	4.9	3.8
7	.00	.00	125	4.2	153	e203	197	85	27	9.5	5.2	3.9
8	.00	.00	36	3.9	1700	e189	195	75	29	10	4.7	3.8
9	.00	.00	24	6.0	525	e182	186	72	28	9.0	4.9	3.7
10	.00	.00	15	58	252	e157	184	70	28	8.8	5.1	3.6
11	.00	.00	e11	33	121	e124	121	65	29	7.9	4.2	3.2
12	.00	.00	e8.5	15	105	e98	146	86	34	9.4	4.1	3.1
13	.00	2.6	e7.5	13	105	e107	116	323	31	9.2	4.2	2.9
14	.00	1.8	e6.3	9.3	812	e147	112	237	27	7.8	4.0	3.2
15	.00	2.8	e4.7	7.7	875	e86	103	169	25	7.8	3.6	2.9
16	.00	2.1	e3.3	7.6	405	e84	96	143	25	7.5	3.6	2.8
17	.00	1.9	e2.3	6.5	440	e86	89	133	26	7.3	3.9	3.0
18	.00	1.6	e8.3	5.9	242	e82	83	125	25	7.0	3.5	3.3
19	.00	1.7	e9.7	11	202	e79	79	117	24	7.5	3.4	3.1
20	.00	1.8	e3.4	7.2	296	72	77	109	23	7.0	3.3	3.0
21	.00	1.8	e2.1	5.9	152	66	73	103	24	6.7	3.1	3.3
22	.00	2.0	e1.7	6.1	2410	60	71	93	24	7.1	2.9	3.2
23	.00	2.1	e1.6	5.8	4020	55	69	83	23	7.4	2.8	3.3
24	.00	2.2	e1.3	5.8	5610	53	68	71	22	7.3	3.1	3.3
25	.00	2.1	.90	5.8	2000	205	63	65	22	6.5	2.8	3.3
26	.00	11	2.1	5.8	1050	173	61	60	20	7.3	2.8	3.6
27	.00	12	3.5	5.8	e478	163	59	54	20	7.1	2.5	3.9
28	.00	2.1	3.6	5.7	e296	213	55	50	21	7.0	2.3	3.9
29	.00	3.3	4.3	20	---	192	53	46	20	6.0	2.1	3.9
30	.00	8.6	4.0	11	---	183	49	41	16	5.8	2.1	3.7
31	.00	---	3.7	20	---	199	---	36	---	5.8	2.4	---
TOTAL	0.00	63.50	516.00	314.0	22837	4783	3618	2943	765	276.7	118.7	99.9
MEAN	.000	2.12	16.6	10.1	816	154	121	94.9	25.5	8.93	3.83	3.33
MAX	.00	12	142	58	5610	267	251	323	34	17	5.9	3.9
MIN	.00	.00	.90	3.0	12	53	49	36	16	5.8	2.1	2.0
AC-FT	.00	126	1020	623	45300	9490	7180	5840	1520	549	235	198

e Estimated.

11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.41	2.01	5.34	74.7	124	89.4	23.1	13.2	4.41	1.53	.68	.56
MAX	2.41	9.45	16.8	590	816	663	121	94.9	25.5	8.93	3.83	3.33
(WY)	1996	1997	1997	1993	1998	1995	1998	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1986 - 1998

ANNUAL TOTAL	5941.19	36334.80	
ANNUAL MEAN	16.3	99.5	27.8
HIGHEST ANNUAL MEAN			106
LOWEST ANNUAL MEAN			.61
HIGHEST DAILY MEAN	1270	Jan 26	5610
LOWEST DAILY MEAN	.00	Jul 12	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 5	.00
INSTANTANEOUS PEAK FLOW			18300
INSTANTANEOUS PEAK STAGE			17.02
ANNUAL RUNOFF (AC-FT)	11780		72070
10 PERCENT EXCEEDS	29		191
50 PERCENT EXCEEDS	2.5		9.0
90 PERCENT EXCEEDS	.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 except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft³/s, Feb. 23, 1998, gage height, 19.81 ft, from rating curve extended above 1,600 ft³/s; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 800 ft³/s (revised), or maximum, from rating curve extended above 1,600 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	1045	6,410	17.59	Mar. 14	0130	1,340	13.27
Jan. 10	0145	1,520	13.48	Mar. 25	1330	3,980	15.81
Feb. 3	1030	2,170	14.18	Mar. 28	0500	1,010	12.88
Feb. 8	0100	7,970	18.59	Mar. 31	2315	1,260	13.18
Feb. 14	1715	3,080	15.05	May 5	1545	897	12.73
Feb. 17	0630	1,470	13.42	May 13	1015	809	12.61
Feb. 23	2100	10,000	19.81				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	.96	25	e5.6	75	117	315	18	29	13	5.6	4.2
2	1.8	.85	9.7	e5.6	42	114	111	18	29	12	5.5	4.4
3	2.9	.69	6.7	e10	697	107	80	19	28	12	5.2	28
4	1.9	.71	6.3	e20	159	96	68	30	27	12	4.9	32
5	1.9	.86	5.0	e12	e45	80	58	245	26	11	4.9	8.1
6	2.0	1.1	e1990	e9.0	330	193	70	167	26	11	5.1	6.4
7	2.1	1.0	e414	e7.9	380	130	52	37	27	10	5.2	5.8
8	1.8	.93	e68	e6.2	1260	126	55	32	33	11	5.0	5.9
9	2.0	.99	e9.9	155	254	107	51	33	27	10	4.9	6.0
10	1.7	35	e6.0	344	105	106	50	40	27	9.3	5.2	5.2
11	2.4	22	e5.4	21	86	86	134	40	32	7.4	4.8	5.2
12	1.4	3.4	e5.3	11	69	78	80	167	37	7.4	4.5	5.1
13	1.1	133	e5.2	36	51	87	64	228	28	7.5	4.5	5.1
14	.99	27	e5.1	9.1	979	327	62	75	23	7.2	5.5	5.0
15	.88	5.8	e5.1	10	315	82	60	64	22	6.5	5.8	5.0
16	.66	5.0	e5.1	14	189	70	58	57	21	6.9	4.6	5.0
17	.60	4.4	e5.0	7.7	397	67	60	50	21	6.7	4.3	4.8
18	.58	4.9	e118	7.2	73	63	54	40	20	6.7	4.6	4.4
19	.60	4.8	e41	53	144	61	48	35	18	6.6	4.9	4.2
20	.75	5.3	e11	9.1	324	46	35	34	17	6.5	4.6	4.2
21	.98	4.0	e31	9.1	128	46	30	31	16	6.6	4.2	4.4
22	1.0	5.3	e13	8.4	1500	44	28	31	16	6.4	4.0	4.2
23	.96	4.9	e8.5	8.3	2560	40	24	31	17	6.3	4.2	3.9
24	1.0	4.9	e6.9	8.5	2000	43	25	31	16	6.2	4.5	3.8
25	1.1	4.0	e5.8	8.4	571	801	24	31	15	6.1	4.6	3.8
26	.64	190	e5.7	8.4	350	173	22	33	15	6.0	4.5	3.8
27	.75	170	e6.0	8.4	218	51	20	30	14	5.7	5.3	3.9
28	.81	11	e5.9	8.7	156	298	19	30	13	6.1	4.8	3.8
29	.83	7.5	e5.8	133	---	122	19	31	12	6.2	4.5	3.7
30	.90	93	e5.8	41	---	89	19	29	12	5.5	4.6	3.9
31	.92	---	e5.7	121	---	160	---	27	---	5.9	4.7	---
TOTAL	40.45	753.29	2846.9	1116.6	13457	4010	1795	1764	664	247.7	149.5	193.2
MEAN	1.30	25.1	91.8	36.0	481	129	59.8	56.9	22.1	7.99	4.82	6.44
MAX	2.9	190	1990	344	2560	801	315	245	37	13	5.8	32
MIN	.58	.69	5.0	5.6	42	40	19	18	12	5.5	4.0	3.7
AC-FT	80	1490	5650	2210	26690	7950	3560	3500	1320	491	297	383

e Estimated.

11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.28	11.9	23.3	20.4	52.3	23.7	10.8	6.54	2.93	1.52	1.58	2.62
MAX	12.7	37.8	91.8	120	481	129	59.8	56.9	22.1	7.99	8.90	7.81
(WY)	1988	1997	1998	1997	1998	1998	1998	1998	1998	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1973 - 1998

ANNUAL TOTAL	8902.13	27037.64		
ANNUAL MEAN	24.4	74.1		
HIGHEST ANNUAL MEAN			13.2	
LOWEST ANNUAL MEAN			74.1	1998
HIGHEST DAILY MEAN	1990	Dec 6	2560	Feb 23
LOWEST DAILY MEAN	.46	Sep 7	.58	Oct 18
ANNUAL SEVEN-DAY MINIMUM	.57	Sep 3	.72	Oct 15
INSTANTANEOUS PEAK FLOW			10000	Feb 23
INSTANTANEOUS PEAK STAGE			19.81	Feb 23
ANNUAL RUNOFF (AC-FT)	17660		53630	
10 PERCENT EXCEEDS	39		138	
50 PERCENT EXCEEDS	3.7		11	
90 PERCENT EXCEEDS	.76		2.1	

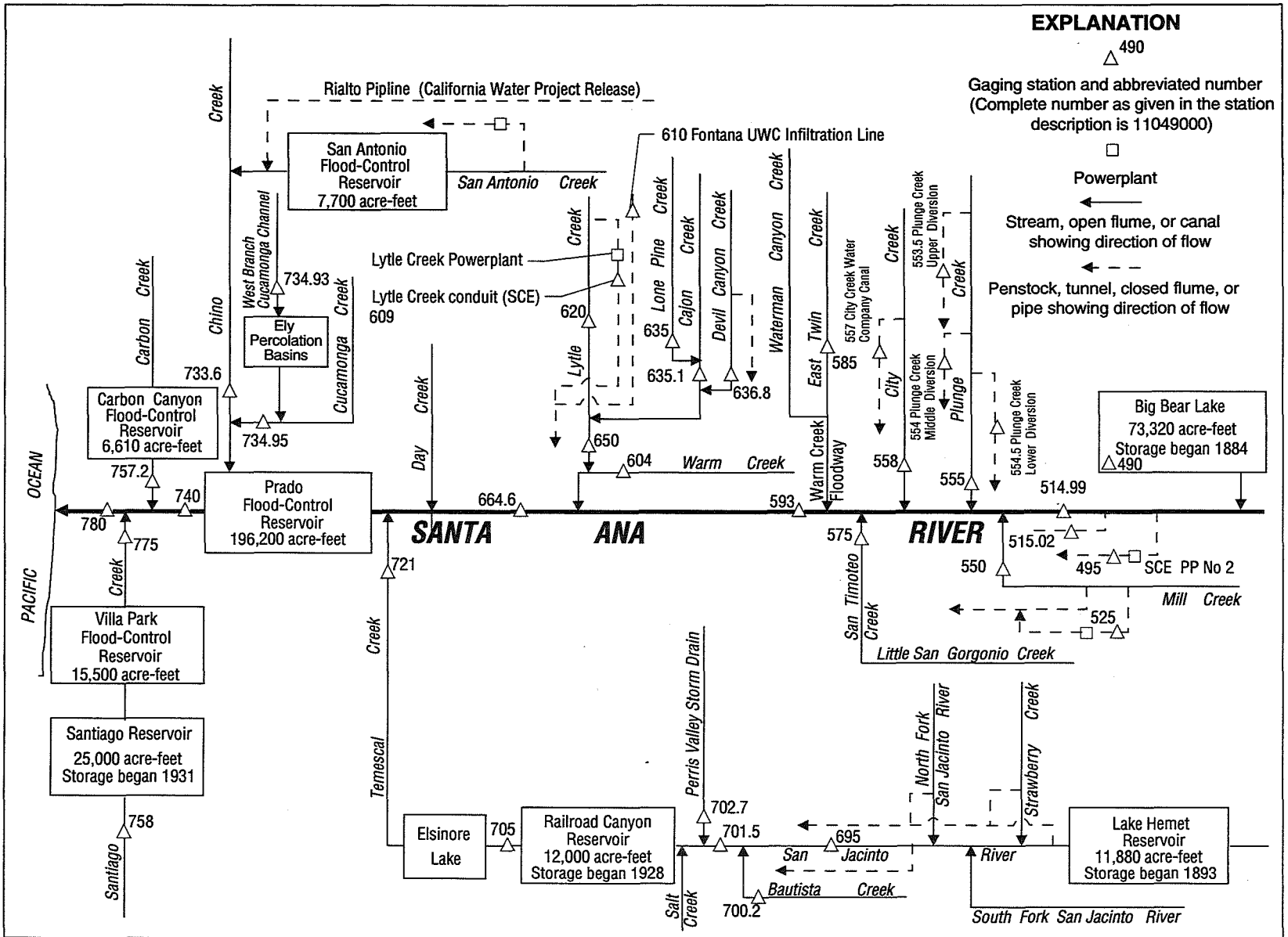


Figure 17. Diversions and storage in Santa Ana River Basin.

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, 10,650 acre-ft was released. Between November 1997 and February 1998, 543 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, 73,220 acre-ft, May 26; minimum contents observed, 57,220 acre-ft, Nov. 10.

MONTHEND CONTENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

Date	Contents (acre-ft)	Change in Contents (acre-ft)
Sept.30.	58,400	—
Oct. 31.	57,550	−850
Nov. 30.	57,760	+210
Dec. 31.	58,030	+270
CAL YR 1997.	—	−3,580
Jan. 31.	58,990	+960
Feb. 28.	64,180	+5,190
Mar. 31.	69,210	+5,030
Apr. 30.	72,360	+3,150
May 31.	72,260	−100
June 30.	72,770	+510
July 31.	71,960	−810
Aug. 31.	71,190	−770
Sept. 30.	70,370	−820
WTR YR 1998.	—	+11,970

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 except for estimated daily discharges, which are poor. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	.58	30	2.1	34	e197	165	241	315	86	e44	123
2	5.7	.55	19	2.1	34	e170	171	329	188	87	e43	110
3	2.2	.54	4.7	2.2	72	e160	220	336	174	87	e39	118
4	1.2	.49	4.1	2.4	93	127	221	329	155	85	e37	90
5	.84	.52	10	2.9	58	84	208	478	150	83	e37	85
6	.71	.48	54	2.4	109	134	224	812	143	82	e37	81
7	18	.59	61	2.3	201	97	284	677	129	81	e37	78
8	20	.46	78	2.2	577	79	238	397	131	79	e37	72
9	3.2	.45	e20	19	208	72	223	432	120	79	e37	59
10	2.3	.59	e15	145	133	66	221	404	117	76	e39	42
11	2.1	2.0	e.00	74	91	68	230	398	117	75	e41	38
12	1.6	1.9	e.00	55	46	64	252	576	125	75	e58	34
13	1.3	18	e.00	39	29	63	228	1120	129	74	114	32
14	1.1	38	e.00	20	213	65	219	1140	128	72	101	31
15	.87	18	e.00	12	329	67	208	475	123	71	96	31
16	.77	1.9	e.00	7.4	167	81	167	303	115	70	85	28
17	.68	.91	e3.0	6.6	164	78	147	317	111	68	79	25
18	.63	.39	e1.0	6.4	132	60	139	313	106	68	59	20
19	.62	.10	e.00	7.9	110	52	137	288	102	68	43	19
20	.64	.56	e.00	6.7	119	50	139	258	101	77	36	19
21	.63	.94	e2.0	6.3	102	49	155	244	98	101	34	19
22	.62	.85	e3.0	5.9	664	48	180	244	95	76	33	e19
23	.64	.80	e6.1	5.8	992	56	202	353	91	73	32	e17
24	.69	.78	3.0	5.7	1330	70	195	349	91	70	32	e11
25	.63	.92	3.0	5.6	483	139	200	364	89	67	25	e10
26	.49	19	3.6	5.4	323	209	181	403	91	66	18	e10
27	2.3	41	3.5	5.2	232	207	176	533	90	65	18	e9.6
28	.84	32	3.2	5.2	e200	483	187	437	89	e58	16	e9.1
29	.71	29	2.9	7.7	---	291	197	435	86	e48	13	e9.1
30	.69	29	2.3	18	---	211	203	429	85	e47	13	9.5
31	.66	---	2.1	33	---	148	---	409	---	e45	30	---
TOTAL	81.86	241.30	334.50	521.4	7245	3745	5917	13823	3684	2259	1363	1258.3
MEAN	2.64	8.04	10.8	16.8	259	121	197	446	123	72.9	44.0	41.9
MAX	20	41	78	145	1330	483	284	1140	315	101	114	123
MIN	.49	.10	.00	2.1	29	48	137	241	85	45	13	9.1
AC-FT	162	479	663	1030	14370	7430	11740	27420	7310	4480	2700	2500

e Estimated.

SANTA ANA RIVER BASIN

11051500 SANTA ANA RIVER NEAR MENTONE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.75	8.62	25.5	42.3	83.7	96.7	64.9	49.9	22.4	11.8	6.52	6.65
MAX	77.8	206	536	646	1052	1405	413	446	278	174	124	134
(WY)	1970	1966	1967	1993	1980	1938	1969	1998	1969	1969	1969	1969
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1915 - 1998

ANNUAL TOTAL	5682.78		40473.36									
ANNUAL MEAN	15.6		111							33.9		
HIGHEST ANNUAL MEAN										283		1969
LOWEST ANNUAL MEAN										.012		1961
HIGHEST DAILY MEAN	959	Jan 26				1330	Feb 24		15500		Mar 2	1938
LOWEST DAILY MEAN	.00	Dec 11				.00	Dec 11		.00		Nov 21	1932
ANNUAL SEVEN-DAY MINIMUM	.10	Aug 25				.43	Dec 11		.00		Nov 21	1932
INSTANTANEOUS PEAK FLOW						3010	Feb 24		52300		Mar 2	1938
INSTANTANEOUS PEAK STAGE									14.30		Mar 2	1938
ANNUAL RUNOFF (AC-FT)	11270					80280			24550			
10 PERCENT EXCEEDS	27					289			77			
50 PERCENT EXCEEDS	2.5					61			1.8			
90 PERCENT EXCEEDS	.48					.78			.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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	26	33	e36	34	e197	232	e339	351	e168	e108	126
2	40	26	36	e36	34	e170	235	e427	221	e169	e106	119
3	29	20	35	e36	72	e160	290	e434	218	e169	e101	e136
4	27	19	32	e36	93	e162	294	e384	206	e167	e98	e114
5	26	21	25	e38	69	e147	281	e478	199	e162	e98	e108
6	27	20	55	e37	121	e197	299	e812	199	e161	e97	e106
7	32	26	61	e37	201	e160	363	e677	201	e160	e96	e102
8	37	25	79	e37	577	e142	315	e397	204	e158	e96	e96
9	32	25	e39	e38	208	e135	299	e432	203	e158	e96	83
10	30	27	e38	e145	134	e129	297	e418	204	e155	e101	86
11	38	30	e35	e74	115	e131	307	e427	204	e154	e105	82
12	33	28	e40	e55	105	e127	330	e605	211	e151	e115	79
13	30	47	e40	e59	96	e126	305	e1130	215	e150	115	77
14	28	71	e39	e56	265	e128	297	e1140	214	e148	102	76
15	28	49	e38	e52	329	e130	288	e475	207	e147	98	77
16	27	31	e37	e47	167	e133	243	e303	198	e138	90	74
17	27	29	e39	e47	164	e146	214	e317	194	e136	89	74
18	27	27	e36	e46	133	e128	194	e313	190	e136	97	71
19	27	27	e35	e48	123	e120	197	e310	187	e136	91	71
20	28	29	e35	e47	146	e133	218	e301	187	e145	89	72
21	26	30	e41	e44	121	e132	246	e287	183	e176	86	73
22	25	29	e39	e43	673	e131	277	e288	182	e146	84	e72
23	28	29	e41	e42	992	e139	297	e397	178	e143	82	e75
24	29	28	37	e41	1330	e115	288	e393	174	e140	82	e77
25	28	28	35	e41	483	e139	295	e408	171	e137	85	e77
26	28	37	35	e40	323	e209	273	e454	173	e136	84	e77
27	29	45	36	e40	232	e207	268	e574	172	e130	83	e76
28	28	35	37	e42	e200	e483	285	e478	170	e125	83	e74
29	28	32	e37	e45	---	e341	301	e480	167	e115	84	e73
30	28	32	e36	e34	---	e275	e303	473	e167	e113	84	74
31	27	---	e36	33	---	212	---	451	---	e110	85	---
TOTAL	917	928	1217	1452	7540	5284	8331	14802	5950	4539	2910	2577
MEAN	29.6	30.9	39.3	46.8	269	170	278	477	198	146	93.9	85.9
MAX	40	71	79	145	1330	483	363	1140	351	176	115	136
MIN	25	19	25	33	34	115	194	287	167	110	82	71
AC-FT	1820	1840	2410	2880	14960	10480	16520	29360	11800	9000	5770	5110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.8	45.5	58.8	92.2	125	138	118	103	75.0	63.9	57.3	54.6
MAX	122	219	538	1439	1052	1402	413	477	277	175	124	137
(WY)	1984	1966	1967	1916	1980	1938	1969	1998	1969	1922	1969	1969
MIN	10.4	12.5	14.4	19.0	18.3	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1912 - 1998			
ANNUAL TOTAL	18079				56447							
ANNUAL MEAN	49.5				155				81.5			
HIGHEST ANNUAL MEAN									366			
LOWEST ANNUAL MEAN									18.6			
HIGHEST DAILY MEAN	966				Jan 26				16000			
LOWEST DAILY MEAN	16				Jul 4				5.3			
ANNUAL SEVEN-DAY MINIMUM	17				Aug 24				8.1			
INSTANTANEOUS PEAK FLOW					3010				Feb 24			
ANNUAL RUNOFF (AC-FT)	35860				112000				52300			
10 PERCENT EXCEEDS	90				319				59070			
50 PERCENT EXCEEDS	32				108				139			
90 PERCENT EXCEEDS	20				29				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 1998. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	e13	e3.0	e11	1.2	5.4	e24	e1.0	13	22	22	.07
2	13	e13	8.0	e11	1.1	e5.5	e24	e1.0	23	22	22	.93
3	13	e13	9.1	e11	.99	e1.0	e24	e1.0	21	22	22	1.0
4	13	e13	8.9	e11	1.0	e1.0	e20	e1.0	23	22	22	.92
5	13	e12	6.2	e11	7.6	e8.0	e20	e1.0	23	22	22	.92
6	13	e11	.71	e11	9.9	e19	e20	e1.0	22	22	22	.93
7	14	e11	.78	e11	1.1	e19	e25	e1.0	20	22	22	.86
8	13	e11	.80	e11	1.2	e19	e25	e1.0	21	22	22	.95
9	13	e11	6.4	e4.9	4.0	e19	e25	e1.0	23	22	14	12
10	13	e6.0	12	e1.0	7.3	e22	e25	e12	23	22	.47	22
11	13	e1.0	13	e1.0	7.3	e25	e25	e23	23	22	1.1	22
12	13	e1.0	13	e1.0	7.5	e25	e25	e23	23	22	4.5	22
13	13	e1.0	14	e6.4	7.6	e25	e25	e23	23	22	1.1	22
14	12	e1.0	14	e13	7.3	e25	e25	e23	23	22	.97	22
15	12	e1.0	13	e13	1.1	e18	e25	e23	23	22	1.1	23
16	12	e1.0	14	e13	1.2	e18	e25	e23	23	21	.94	22
17	12	e6.0	14	e13	1.1	e15	e25	e23	23	21	3.0	23
18	12	e11	14	e13	11	e1.0	e25	e23	23	20	1.0	23
19	12	e11	13	e13	20	e1.0	e25	e22	23	20	7.6	23
20	13	e11	13	e13	20	e1.0	e25	e22	23	20	19	23
21	e13	e11	14	e13	20	e1.0	e10	e22	23	20	22	23
22	e13	e11	12	e13	12	e1.0	e1.0	e22	23	20	22	22
23	e13	e11	12	e13	1.3	e1.0	e1.0	e22	23	20	22	22
24	e13	e11	12	e13	1.4	e1.0	e1.0	e21	22	20	22	23
25	e13	e11	12	e13	1.2	e1.0	e1.0	e9.0	22	22	22	22
26	e13	e4.0	12	e13	3.1	e1.0	e1.0	e1.0	23	22	22	22
27	e13	e1.0	6.7	e13	5.0	e1.0	e1.0	e1.0	23	21	22	22
28	e13	e1.0	6.9	e13	5.1	e1.0	e1.0	e1.0	22	20	22	22
29	e13	e1.0	e11	16	---	e1.0	e1.0	e1.0	23	21	22	22
30	e13	e1.0	e11	10	---	e12	e1.0	e1.0	23	22	23	22
31	e13	---	e11	1.2	---	e24	---	e1.0	---	22	15	---
TOTAL	398	222.0	311.49	324.5	168.59	317.9	501.0	351.0	669	662	466.78	487.58
MEAN	12.8	7.40	10.0	10.5	6.02	10.3	16.7	11.3	22.3	21.4	15.1	16.3
MAX	14	13	14	16	20	25	25	23	23	22	23	23
MIN	12	1.0	.71	1.0	.99	1.0	1.0	1.0	13	20	.47	.07
AC-FT	789	440	618	644	334	631	994	696	1330	1310	926	967

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.9	15.9	15.7	15.9	16.4	19.0	21.8	22.1	21.4	18.9	17.5	16.8
MAX	26.8	23.5	23.9	26.6	27.8	30.1	33.3	31.8	28.7	29.2	30.3	27.9
(WY)	1981	1979	1979	1979	1979	1979	1995	1995	1979	1980	1980	1978
MIN	9.77	7.40	9.86	7.90	6.02	10.3	15.6	11.3	12.4	11.5	9.10	3.01
(WY)	1988	1998	1989	1995	1998	1998	1977	1998	1989	1989	1989	1997

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1974 - 1998

ANNUAL TOTAL	4785.69	4879.84	
ANNUAL MEAN	13.1	13.4	
HIGHEST ANNUAL MEAN			26.2
LOWEST ANNUAL MEAN			12.6
HIGHEST DAILY MEAN	18	Feb 19	25
LOWEST DAILY MEAN	.00	Sep 5	.07
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 5	.80
ANNUAL RUNOFF (AC-FT)	9490	9680	13180
10 PERCENT EXCEEDS	18	23	27
50 PERCENT EXCEEDS	15	13	18
90 PERCENT EXCEEDS	4.2	1.0	11

e Estimated.

LOCATION.—Lat 34°04'40", long 117°05'54", in SE 1/4 SW 1/4 sec.16, T.1 S., R.2 W., San Bernardino County, Hydrologic Unit 18070203, at Garnet Street Bridge, 1.55 mi upstream from mouth, and 1.5 mi northeast of Mentone.

EXTREMES FOR CURRENT YEAR.—Maximum discharge observed, 124 ft³/s, June 3; minimum discharge observed, 0.40 ft³/s, Oct. 4.

DAILY INSTANTANEOUS VALUES

[illegible]

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 except for estimated daily discharges, which are poor. No regulation upstream from station. Diversion from Alder Creek to Upper Plunge Creek area was active 1904–67. Diversions for irrigation are made at sites 0.5 mi (station 11055450), 1.0 mi (station 11055400), and 2.5 mi (station 11055350) upstream from streamflow station. Water has been diverted upstream from station for irrigation during entire period of record. For combined discharge of Plunge Creek and diversions, see station 11055501. No flow in lower diversion since May 29, 1966. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 5,340 ft³/s, Mar. 2, 1938, on basis of slope-area measurement of peak flow; maximum recorded gage height, 7.41 ft, Nov. 29, 1970; no flow at times in some years.

Combined creek and diversions: Maximum discharge, 4,770 ft³/s, Dec. 6, 1966; no flow Nov. 12, 1964, Sept. 29, 1965, Aug. 4, 1987, several days in November 1988, September 1991, many days in 1992.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum, from rating curve extended above 356 ft³/s on basis of slope-conveyance measurement at gage height 7.41 ft:

Date	Time	Creek only		Combined creek and diversions	
		Discharge (ft ³ /s)	Gage height (ft)	Discharge (ft ³ /s)	
Jan. 10	0630	240	4.36	240	
Feb. 8	0230	384	4.68	384	
Feb. 14	1915	208	4.16	208	
Feb. 24	0030	1,450	6.20	1,450	
Mar. 28	0600	281	4.42	281	
May 5	1630	243	4.31	243	
May 12	1945	358	4.62	359	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.41	e5.1	3.1	4.8	51	60	23	21	8.4	2.9	1.8
2	.14	.42	e5.0	3.1	4.8	46	57	21	20	8.4	2.8	8.1
3	.15	.44	e4.9	3.4	25	44	56	21	20	8.5	2.7	5.1
4	.18	.47	e4.9	3.8	22	40	55	23	21	8.4	2.5	3.6
5	.16	.49	e4.8	3.4	14	39	50	110	20	8.3	2.5	3.7
6	.14	.34	e27	2.1	65	63	56	108	19	8.3	2.4	3.6
7	e30	.34	e25	2.4	33	52	72	73	19	7.7	2.4	3.0
8	e4.0	.63	e13	2.5	136	46	61	52	18	7.1	2.4	2.1
9	2.1	1.0	e9.0	9.1	53	42	59	38	18	6.9	2.7	1.3
10	1.9	5.3	5.8	82	51	39	59	34	17	6.5	2.8	1.0
11	2.0	4.3	4.7	12	36	36	63	32	18	6.1	2.7	.88
12	1.8	2.7	4.4	6.9	26	35	73	95	18	5.9	2.3	.80
13	1.6	5.0	4.1	5.2	21	34	59	e156	17	5.8	2.5	.76
14	1.6	5.0	3.8	5.4	65	33	56	e108	16	5.7	2.6	.74
15	1.5	2.9	3.6	5.8	84	31	55	e76	15	5.4	2.3	.68
16	1.4	2.6	3.5	5.4	50	32	50	e66	15	5.0	2.3	.63
17	1.3	2.5	3.4	5.8	49	26	47	e56	15	4.5	2.3	.59
18	.32	2.4	3.3	6.1	34	21	46	e61	14	5.3	2.3	.55
19	.25	2.3	3.2	9.8	28	19	47	e53	13	5.5	2.1	.55
20	.27	2.3	3.3	7.7	52	18	48	e50	13	4.6	2.0	.76
21	.36	1.9	4.0	7.4	37	17	48	e44	12	4.4	2.0	1.0
22	.40	.84	3.4	6.8	162	16	46	e42	12	4.2	1.9	1.1
23	.48	.79	3.3	6.4	334	16	43	e38	11	4.1	1.8	1.0
24	.76	.90	3.3	6.1	503	16	39	e36	11	3.9	1.7	1.2
25	.39	1.0	3.3	5.7	162	48	36	32	11	3.5	1.6	1.4
26	.32	e18	3.3	5.5	105	41	33	31	11	3.3	1.6	1.4
27	.34	e8.0	3.3	5.3	70	59	30	29	10	3.2	1.6	1.4
28	.39	e5.6	3.2	5.0	52	166	28	26	9.7	3.0	1.5	1.2
29	.42	e5.2	3.1	8.1	---	85	26	25	9.5	3.0	1.4	1.1
30	.44	e5.1	3.1	6.8	---	61	24	23	9.0	3.1	1.4	1.1
31	.44	---	3.2	5.2	---	54	---	22	---	3.1	1.5	---
TOTAL	55.80	89.17	178.3	253.3	2278.6	1326	1482	1604	453.2	171.1	67.5	52.14
MEAN	1.80	2.97	5.75	8.17	81.4	42.8	49.4	51.7	15.1	5.52	2.18	1.74
MAX	30	18	27	82	503	166	73	156	21	8.5	2.9	8.1
MIN	.14	.34	3.1	2.1	4.8	16	24	21	9.0	3.0	1.4	.55
AC-FT	111	177	354	502	4520	2630	2940	3180	899	339	134	103

e Estimated.

11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.28	1.94	6.60	12.9	22.4	23.0	13.0	4.26	1.11	.32	.17	.34
MAX	3.47	44.7	106	170	224	176	74.2	51.7	15.1	5.52	4.87	10.9
(WY)	1984	1966	1967	1993	1969	1938	1958	1998	1998	1998	1983	1978
MIN	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1919 - 1998			
ANNUAL TOTAL	2552.21				8011.11							
ANNUAL MEAN	6.99				21.9				7.16			
HIGHEST ANNUAL MEAN									42.5			
LOWEST ANNUAL MEAN									.050			
HIGHEST DAILY MEAN	360				503				1840			
LOWEST DAILY MEAN	.00				.14				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.39				.00			
INSTANTANEOUS PEAK FLOW					1450				5340			
INSTANTANEOUS PEAK STAGE					6.20				7.41			
ANNUAL RUNOFF (AC-FT)	5060				15890				5180			
10 PERCENT EXCEEDS	18				56				14			
50 PERCENT EXCEEDS	1.1				5.8				.18			
90 PERCENT EXCEEDS	.00				.78				.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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	1.2	e5.1	3.1	4.8	51	60	24	23	11	5.0	3.4
2	1.0	1.1	e5.7	3.1	4.8	46	57	22	22	11	4.9	9.9
3	1.0	1.2	e6.1	3.4	25	44	56	23	22	10	4.7	6.1
4	1.0	1.2	e6.1	3.8	22	40	55	26	23	10	4.4	4.6
5	1.0	1.4	e5.3	3.9	14	39	50	111	22	9.7	4.4	4.7
6	1.0	1.3	e27	3.2	65	63	56	108	21	9.5	4.3	4.5
7	e30	1.3	e25	3.1	e33	52	72	73	21	9.3	4.2	3.9
8	e4.0	1.3	e13	2.9	e136	46	61	52	20	8.9	4.2	3.5
9	2.1	1.7	e9.0	9.1	e53	42	59	38	20	8.6	4.5	3.4
10	1.9	5.7	5.8	82	e51	39	59	34	19	8.4	4.8	3.2
11	2.0	4.3	4.7	12	e36	36	63	32	20	7.8	4.7	2.9
12	1.8	2.7	4.4	6.9	e26	35	73	95	19	7.5	4.3	2.8
13	1.6	5.0	4.1	5.2	21	34	59	e156	19	7.4	4.7	2.8
14	1.6	5.0	3.8	5.4	65	33	56	e108	18	7.2	4.8	2.7
15	1.5	2.9	3.6	5.8	84	31	55	e76	17	7.1	4.5	2.7
16	1.4	2.6	3.5	5.4	50	32	50	e66	17	6.7	4.6	2.7
17	1.7	2.5	3.4	5.8	49	26	47	e56	17	6.3	4.6	2.6
18	1.3	2.4	3.3	6.1	34	21	46	e61	16	6.6	4.6	2.6
19	1.2	2.3	3.2	9.8	28	19	47	e53	15	6.8	4.3	2.7
20	1.4	2.3	3.3	7.7	52	18	48	e50	15	6.6	4.2	3.1
21	1.5	2.5	4.0	7.4	37	17	48	e44	14	6.9	4.0	3.5
22	1.4	2.0	3.4	6.8	162	16	46	e42	14	6.7	3.6	3.6
23	1.3	2.0	3.3	6.4	334	16	43	e38	13	6.5	3.4	3.5
24	1.8	2.1	3.3	6.1	505	16	39	e36	13	6.3	3.4	3.7
25	1.5	2.2	3.3	5.7	162	48	36	34	13	5.9	3.3	3.9
26	1.3	e19	3.3	5.5	105	41	33	33	13	5.5	3.3	3.9
27	1.3	e8.0	3.3	5.3	70	59	30	31	12	5.4	3.3	3.8
28	1.3	e5.7	3.2	5.0	52	166	28	28	12	5.1	3.1	3.6
29	1.4	e5.2	3.1	8.1	---	85	26	27	12	5.0	3.0	3.4
30	1.3	e5.1	3.1	6.8	---	61	25	25	11	5.2	2.9	3.4
31	1.3	---	3.2	5.2	---	54	---	24	---	5.2	2.9	---
TOTAL	74.70	103.2	181.9	256.0	2280.6	1326	1483	1626	513	230.1	126.9	111.1
MEAN	2.41	3.44	5.87	8.26	81.5	42.8	49.4	52.5	17.1	7.42	4.09	3.70
MAX	30	19	27	82	505	166	73	156	23	11	5.0	9.9
MIN	.80	1.1	3.1	2.9	4.8	16	25	22	11	5.0	2.9	2.6
AC-FT	148	205	361	508	4520	2630	2940	3230	1020	456	252	220

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.41	3.49	7.73	17.9	24.4	25.2	14.5	7.72	3.72	1.90	1.35	1.49
MAX	7.23	45.2	106	170	224	126	79.0	52.5	17.1	7.44	7.43	14.1
(WY)	1984	1966	1967	1993	1969	1978	1958	1998	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1951 - 1998

ANNUAL TOTAL	2827.90	8312.50	
ANNUAL MEAN	7.75	22.8	9.19
HIGHEST ANNUAL MEAN			44.4
LOWEST ANNUAL MEAN			1.00
HIGHEST DAILY MEAN	360	Jan 26	505
LOWEST DAILY MEAN	.29	Sep 30	.80
ANNUAL SEVEN-DAY MINIMUM	.62	Aug 25	1.2
INSTANTANEOUS PEAK FLOW			1450
ANNUAL RUNOFF (AC-FT)	5610		16490
10 PERCENT EXCEEDS	18		56
50 PERCENT EXCEEDS	2.3		6.8
90 PERCENT EXCEEDS	.75		2.0

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 poor. 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)	Gage height (ft)
Oct. 7	unknown	unknown	unknown	unknown	unknown
Jan. 10	0530	321	5.53	321	
Feb. 8	0115	997	6.97	997	
Feb. 23	2215	2,110	8.62	2,110	
Mar. 28	0550	646	5.91	646	
Apr. 6	2230	119	4.73	119	
May 5	1545	185	4.96	190	
May 12	2145	242	5.17	248	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.57	1.7	3.2	3.9	6.3	54	63	30	37	18	e6.0	4.1
2	.76	1.6	3.4	4.1	5.8	47	67	30	35	18	e5.8	4.1
3	1.2	1.7	4.0	4.3	30	42	70	31	35	18	e5.8	4.1
4	1.1	1.7	4.0	4.7	38	38	68	33	34	17	e5.6	4.3
5	1.1	1.7	3.8	4.6	14	35	63	83	30	16	e5.6	4.5
6	1.2	1.7	21	4.2	76	e51	72	56	29	15	e5.5	4.3
7	e50	1.8	21	4.0	136	e36	83	40	29	15	e5.4	4.0
8	3.5	1.9	20	3.9	e355	e32	70	33	28	15	e5.3	4.0
9	2.9	2.0	e9.3	7.0	e80	e30	65	31	30	14	e5.3	4.0
10	2.3	2.5	e9.5	75	e49	e27	61	29	30	15	e5.1	4.0
11	2.1	2.6	6.7	34	37	24	66	27	30	14	e5.0	3.9
12	1.9	2.2	5.5	18	33	22	73	65	30	14	e5.0	3.8
13	1.7	2.8	5.1	21	29	21	68	121	29	14	5.0	3.9
14	1.7	2.7	4.9	29	45	e21	66	99	27	13	5.1	3.9
15	1.7	2.1	4.5	14	48	e21	63	83	27	13	4.3	3.9
16	1.7	2.0	4.3	8.8	36	e20	58	76	27	13	4.3	3.8
17	1.8	1.9	4.3	8.0	43	e20	54	69	26	12	4.5	3.8
18	1.9	2.0	4.2	7.3	32	e19	51	63	23	e10	4.3	3.8
19	1.9	2.2	4.2	10	27	e18	48	59	22	e8.0	4.1	3.8
20	2.1	2.3	4.0	7.0	42	e18	46	54	21	e7.8	4.0	4.2
21	2.2	2.3	4.7	6.3	32	17	44	54	21	e7.7	3.9	4.7
22	2.2	2.4	4.3	6.1	158	17	41	53	21	e7.6	3.9	4.8
23	2.3	2.3	4.1	5.8	441	16	40	51	22	e7.6	3.8	4.7
24	2.6	2.2	4.0	5.7	e457	16	39	50	22	e7.4	3.7	4.7
25	2.6	2.1	3.9	5.5	e177	48	38	48	21	e7.2	3.8	4.8
26	2.6	7.8	3.9	5.3	111	45	36	48	21	e7.1	3.9	4.7
27	2.5	5.2	3.9	5.2	78	58	35	43	20	e7.0	4.0	4.7
28	2.2	3.5	3.7	5.2	65	220	33	41	19	e6.8	3.9	4.4
29	2.0	3.7	3.7	7.6	---	90	32	42	19	e6.6	3.8	4.4
30	1.9	4.0	3.7	8.6	---	66	31	40	19	e6.5	3.9	4.3
31	1.8	---	3.7	6.5	---	58	---	39	---	e6.2	3.8	---
TOTAL	108.03	76.6	190.5	340.6	2681.1	1247	1644	1621	784	357.5	143.4	126.4
MEAN	3.48	2.55	6.15	11.0	95.8	40.2	54.8	52.3	26.1	11.5	4.63	4.21
MAX	50	7.8	21	75	457	220	83	121	37	18	6.0	4.8
MIN	.57	1.6	3.2	3.9	5.8	16	31	27	19	6.2	3.7	3.8
AC-FT	214	152	378	676	5320	2470	3260	3220	1560	709	284	251

e Estimated.

11055800 CITY CREEK NEAR HIGHLAND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.08	3.42	8.71	17.1	31.5	29.9	18.3	7.67	2.94	1.13	.62	.65
MAX	8.48	43.4	89.5	199	451	219	148	52.3	26.1	11.7	9.56	5.70
(WY)	1984	1966	1967	1993	1969	1938	1926	1998	1998	1980	1983	1976
MIN	.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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1920 - 1998

ANNUAL TOTAL	3764.13			9320.13					
ANNUAL MEAN	10.3			25.5			10.1		
HIGHEST ANNUAL MEAN							75.3		
LOWEST ANNUAL MEAN							.46		
HIGHEST DAILY MEAN	634	Jan 26		457	Feb 24		3360	Feb 25 1969	
LOWEST DAILY MEAN	.18	Sep 8		.57	Oct 1		.00	Jul 18 1920	
ANNUAL SEVEN-DAY MINIMUM	.19	Sep 5		1.7	Oct 31		.00	Jul 18 1920	
INSTANTANEOUS PEAK FLOW				2110	Feb 23		7000	Feb 25 1969	
INSTANTANEOUS PEAK STAGE				8.62	Feb 23		9.39	Feb 25 1969	
ANNUAL RUNOFF (AC-FT)	7470			18490			7340		
10 PERCENT EXCEEDS	20			63			20		
50 PERCENT EXCEEDS	3.0			8.0			1.3		
90 PERCENT EXCEEDS	.31			2.2			.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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	1.7	3.2	3.9	6.3	54	63	30	37	18	e9.5	6.8
2	.76	1.6	3.4	4.1	5.8	47	67	30	35	18	e9.0	6.9
3	e1.2	1.7	4.0	4.3	30	42	70	31	35	18	e8.9	6.9
4	e1.1	1.7	4.0	4.7	38	38	68	34	35	17	e8.4	7.1
5	e1.1	1.7	3.8	4.6	14	35	63	87	33	16	e8.3	7.8
6	e1.2	1.7	21	4.2	76	e51	72	57	32	16	e8.2	7.1
7	e50	1.8	21	4.0	136	e36	83	43	32	16	e8.0	6.2
8	e3.5	1.9	20	3.9	e355	e32	70	37	31	16	e7.9	5.9
9	e2.9	2.0	e9.3	7.0	e80	e30	65	35	31	14	e7.8	5.9
10	e2.3	2.5	e9.5	75	e49	e27	61	33	30	15	e8.3	5.8
11	e2.1	2.6	6.7	34	37	24	66	31	30	14	e8.0	5.4
12	e1.9	2.2	5.5	18	33	22	73	70	30	14	e7.9	5.1
13	e1.7	2.8	5.1	21	29	21	68	126	29	14	8.5	5.1
14	e1.7	2.7	4.9	29	45	e21	66	103	27	13	8.6	5.0
15	e1.7	2.1	4.5	14	48	e21	63	85	27	13	7.3	4.9
16	e1.7	2.0	4.3	8.8	36	e20	58	77	27	13	7.1	4.7
17	e1.8	1.9	4.3	8.0	43	e20	54	70	26	12	7.2	4.6
18	e1.9	2.0	4.2	7.3	32	e19	51	64	24	e12	7.1	4.4
19	e1.9	2.2	4.2	10	27	e18	48	62	24	e12	6.7	4.5
20	e2.1	2.3	4.0	7.0	42	e18	46	58	23	e12	6.4	5.4
21	e2.2	2.3	4.7	6.3	32	17	44	56	23	e12	6.0	6.6
22	e2.2	2.4	4.3	6.1	158	17	41	53	22	e12	5.6	6.8
23	e2.3	2.3	4.1	5.8	441	16	40	51	22	e12	5.3	6.7
24	e2.6	2.2	4.0	5.7	e457	16	39	50	22	e11	5.0	6.7
25	e2.6	2.1	3.9	5.5	e177	48	38	48	21	e11	5.1	7.0
26	e2.6	7.8	3.9	5.3	111	45	36	48	21	e11	5.2	7.0
27	e2.5	5.2	3.9	5.2	78	58	35	46	20	e10	5.2	6.9
28	e2.2	3.5	3.7	5.2	65	220	33	43	19	e10	4.9	6.4
29	2.0	3.7	3.7	7.6	---	90	32	42	19	e10	4.7	6.4
30	1.9	4.0	3.7	8.6	---	66	31	40	19	e10	4.8	6.4
31	1.8	---	3.7	6.5	---	58	---	39	---	e9.8	4.7	---
TOTAL	108.22	76.6	190.5	340.6	2681.1	1247	1644	1679	806	411.8	215.6	182.4
MEAN	3.49	2.55	6.15	11.0	95.8	40.2	54.8	54.2	26.9	13.3	6.95	6.08
MAX	50	7.8	21	75	457	220	83	126	37	18	9.5	7.8
MIN	.76	1.6	3.2	3.9	5.8	16	31	30	19	9.8	4.7	4.4
AC-FT	215	152	378	676	5320	2470	3260	3330	1600	817	428	362

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.19	4.72	9.14	18.1	32.6	31.2	19.9	10.3	5.57	2.70	1.68	1.62
MAX	10.2	44.1	89.9	199	451	221	148	54.2	26.9	13.3	11.0	7.05
(WY)	1984	1966	1967	1993	1969	1938	1926	1998	1998	1998	1983	1983
MIN	.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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1924 - 1998

ANNUAL TOTAL	3776.47	9582.82	
ANNUAL MEAN	10.3	26.3	
HIGHEST ANNUAL MEAN			11.5
LOWEST ANNUAL MEAN			77.8
HIGHEST DAILY MEAN	634	Jan 26	3360
LOWEST DAILY MEAN	.18	Sep 10	.00
ANNUAL SEVEN-DAY MINIMUM	.20	Sep 6	.00
INSTANTANEOUS PEAK FLOW			7000
ANNUAL RUNOFF (AC-FT)	7490	2110	8360
10 PERCENT EXCEEDS	20	63	20
50 PERCENT EXCEEDS	3.0	11	3.8
90 PERCENT EXCEEDS	.41	2.2	.41

e Estimated.

11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA

LOCATION.—Lat 34°03'41", long 117°16'00", in NW 1/4 NE 1/4 (Revised) sec.26, T.1 S., R.4 W., San Bernardino County, Hydrologic Unit 18070203, on left bank 1,500 ft upstream from Redlands Boulevard Bridge and 0.6 mi northwest of Loma Linda.

DRAINAGE AREA.—125 mi².

PERIOD OF RECORD.—October 1954 to September 1965, February 1968 to September 1975, April 1979 to current year. Discharge measurements only, October 1997 to September 1998.

GAGE.—Water-stage recorder. Elevation of gage is 1,040 ft above sea level, from topographic map. Prior to April 1979, water-stage recorder at site 0.45 mi downstream at different datum. Prior to Dec. 7, 1997, at site 0.25 mi downstream at different datum.

REMARKS.—Indeterminate stage-discharge relationship. Channel is a trapezoidal concrete floodway; records for low and medium flows prior to Dec. 7, 1997, are not equivalent (channel concrete-lined since Dec. 7, 1997). 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.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	Date	Time	Discharge (ft ³ /s)
	Oct. 1	1130	0
	Dec. 7	0727	3.45
	Feb. 24	1525	127
	Feb. 24	1545	105
	May 14	0745	22.1
	May 21	1530	0.58

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

WATER YEARS 1955 - 1997

ANNUAL TOTAL	
ANNUAL MEAN	3.22
HIGHEST ANNUAL MEAN	21.7 1969
LOWEST ANNUAL MEAN	.74 1987
HIGHEST DAILY MEAN	3500 Feb 25 1969
LOWEST DAILY MEAN	.00 Feb 4 1968
ANNUAL SEVEN-DAY MINIMUM	.00 Apr 15 1969
INSTANTANEOUS PEAK FLOW	15000 Feb 25 1969
INSTANTANEOUS PEAK STAGE	8.20 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	2330
10 PERCENT EXCEEDS	1.9
50 PERCENT EXCEEDS	.60
90 PERCENT EXCEEDS	.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)
Dec. 7	2245	46	2.58	Mar. 28	0520	259	3.83
Jan. 10	0230	98	3.06	Apr. 6	2215	73	2.89
Feb. 8	0200	220	3.68	May 5	1430	248	3.79
Feb. 14	1715	72	2.88	May 12	1905	155	3.39
Feb. 23	2130	unknown	6.90				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.2	1.3	2.5	2.7	3.4	26	35	13	21	11	6.4	4.7
2	e1.3	1.2	2.3	2.6	3.2	e25	35	13	21	12	6.2	4.5
3	e1.3	1.3	2.2	3.1	14	e22	34	14	21	12	5.6	4.8
4	e1.3	1.1	2.1	3.6	13	e20	32	20	22	12	5.6	5.4
5	e1.3	1.1	2.4	3.2	4.5	18	30	e72	19	12	5.4	5.3
6	e1.4	1.0	19	2.7	30	24	36	e50	19	11	5.6	4.4
7	e3.1	.69	16	2.6	49	18	41	e28	19	12	5.4	4.3
8	2.2	1.1	15	2.6	77	17	35	26	19	11	5.5	4.1
9	2.3	1.4	5.7	11	40	15	32	27	18	11	5.5	4.2
10	2.5	2.9	3.9	36	25	13	30	25	18	10	5.8	4.0
11	2.6	1.4	3.4	9.5	18	11	33	24	19	10	6.0	3.8
12	2.4	1.1	3.2	6.3	13	11	35	46	19	10	6.1	3.7
13	2.0	5.5	3.0	5.0	9.0	13	34	56	17	9.7	7.4	3.8
14	1.9	2.7	2.9	4.1	23	14	34	48	16	9.4	6.9	3.4
15	1.7	1.7	2.7	3.7	21	11	32	42	15	9.2	6.0	3.5
16	1.5	1.5	2.7	3.3	13	11	29	38	16	8.9	6.1	3.2
17	1.5	1.4	2.6	3.0	23	9.8	27	36	16	8.3	6.2	3.3
18	1.5	1.3	2.5	2.9	16	8.6	25	34	15	8.4	6.4	3.0
19	1.6	1.3	2.4	8.5	13	7.6	24	32	14	8.5	6.0	3.4
20	1.6	1.3	2.4	4.1	20	7.1	23	30	14	8.4	5.8	4.0
21	1.9	1.2	3.5	3.5	13	6.6	21	29	13	8.5	5.7	4.2
22	1.7	1.1	2.7	3.2	56	6.3	20	28	13	8.1	5.6	4.2
23	1.8	1.2	2.7	3.0	e170	6.2	20	28	13	8.2	5.4	3.9
24	2.0	1.2	2.6	2.6	e200	6.0	19	26	12	7.9	5.2	4.1
25	1.8	1.2	2.5	2.5	e80	21	18	26	12	7.7	5.3	4.1
26	1.7	7.8	2.7	2.5	52	18	17	26	12	7.1	5.2	4.3
27	1.6	4.6	2.9	2.5	37	34	15	24	12	6.5	5.4	4.1
28	1.5	2.8	2.8	2.9	30	111	15	23	11	6.5	5.0	3.9
29	1.5	2.4	2.6	5.6	---	45	14	22	11	6.4	4.9	4.0
30	1.4	2.7	2.5	4.5	---	35	14	22	11	6.6	4.9	4.2
31	1.3	---	2.6	3.8	---	32	---	21	---	6.4	5.1	---
TOTAL	54.4	58.49	129.0	157.1	1066.1	623.2	809	949	478	284.7	177.6	121.8
MEAN	1.75	1.95	4.16	5.07	38.1	20.1	27.0	30.6	15.9	9.18	5.73	4.06
MAX	3.1	7.8	19	36	200	111	41	72	22	12	7.4	5.4
MIN	1.2	.69	2.1	2.5	3.2	6.0	14	13	11	6.4	4.9	3.0
AC-FT	108	116	256	312	2110	1240	1600	1880	948	565	352	242

e Estimated.

11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.50	2.52	4.89	8.01	12.6	13.8	8.30	5.05	2.97	1.71	1.29	1.18
MAX	11.4	20.3	43.6	95.7	102	101	38.3	30.6	15.9	9.40	11.9	4.94
(WY)	1984	1966	1967	1993	1993	1991	1978	1998	1998	1983	1983	1983
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1921 - 1998	
ANNUAL TOTAL	2152.51		4908.39			
ANNUAL MEAN	5.90		13.4		5.28	
HIGHEST ANNUAL MEAN					23.1	1993
LOWEST ANNUAL MEAN					.85	1961
HIGHEST DAILY MEAN	317	Jan 26	200	Feb 24	795	Feb 25 1969
LOWEST DAILY MEAN	.64	Aug 2	.69	Nov 7	.10	Aug 23 1929
ANNUAL SEVEN-DAY MINIMUM	.69	Aug 1	1.1	Nov 2	.11	Jul 11 1964
INSTANTANEOUS PEAK FLOW			(a)	Feb 23	3710	Jan 29 1980
INSTANTANEOUS PEAK STAGE			6.90	Feb 23	8.35	Jan 29 1980
ANNUAL RUNOFF (AC-FT)	4270		9740		3820	
10 PERCENT EXCEEDS	11		32		9.6	
50 PERCENT EXCEEDS	2.5		6.5		2.0	
90 PERCENT EXCEEDS	.82		1.6		.51	

(a) Instantaneous peak discharge for 1998 water year is unknown but is known to have occurred on Feb. 23.

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. 7	unknown	unknown	unknown	Feb. 23	2330	21,100	7.70
Nov. 26	1245	1,820	4.93	Mar. 6	0030	1,280	5.10
Dec. 6	1145	2,060	4.71	Mar. 13	1530	1,420	5.17
Jan. 10	unknown	unknown	unknown	Mar. 28	unknown	unknown	unknown
Feb. 3	1400	3,750	5.44	Mar. 31	2345	2,000	5.35
Feb. 8	0115	10,600	6.51	May 5	1545	1,950	5.33
Feb. 14	unknown	unknown	unknown	May 13	unknown	unknown	unknown
Feb. 17	0715	1,550	5.23	Sept. 2	1445	1,670	5.28
Feb. 20	0030	1,820	5.34				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	e7.0	87	341	e275	e300	46	e4.4	203
2	.00	.00	.00	.00	e4.0	53	154	e350	e260	43	e4.3	258
3	.00	.00	.00	.00	e801	e29	e158	e390	e250	39	e4.4	196
4	.00	.00	.00	56	e120	e24	e150	e430	e205	42	e4.3	168
5	.00	.00	.00	e7.0	e75	e35	e140	821	e165	45	e4.5	156
6	.00	.00	e517	e5.0	e729	281	e170	e460	e162	36	e4.5	146
7	e144	.00	355	e2.0	743	38	e260	e440	e160	e32	e4.6	142
8	10	.00	323	e1.0	2370	31	205	e450	e153	e17	e4.4	117
9	.00	.00	e18	353	411	e28	169	e230	e145	e15	e17	73
10	.00	45	e15	e1700	119	e25	166	e228	e138	e12	100	64
11	.00	5.8	e14	e110	62	e21	218	e265	e132	e12	75	50
12	.00	.00	e14	e40	55	e23	224	e700	e130	e11	96	50
13	.00	44	e13	e25	e33	129	191	e1750	e115	e11	195	48
14	.00	6.3	e13	e15	e600	91	188	e1400	e105	e11	169	45
15	.00	.00	e11	e10	429	e60	176	e683	e100	e10	163	44
16	.00	.00	e10	e6.0	116	e38	161	e413	e100	e9.5	153	42
17	.00	.00	e8.0	e3.0	425	e25	126	e300	e98	e9.0	156	41
18	.00	.00	e5.0	e2.0	162	e19	105	e295	e85	e8.5	141	35
19	.00	.00	e1.5	e20	172	e16	103	e280	e78	e8.0	96	31
20	.00	.00	.00	e7.0	457	e15	117	e255	e75	e8.0	85	29
21	.00	.00	3.3	e4.0	142	e13	146	e260	70	e7.0	74	34
22	.00	.00	.00	e2.0	2520	e13	198	e245	68	e6.5	75	31
23	.00	.00	.00	e1.5	3720	e12	252	e230	57	e6.5	67	35
24	.00	.00	.00	e1.0	5050	e13	e275	e250	57	e6.0	61	37
25	.00	.00	.00	e1.0	391	194	e270	e280	50	e5.5	60	40
26	.00	164	.00	e.50	337	188	e235	e285	47	e5.5	55	34
27	.00	60	.00	e.30	208	189	e205	e290	49	e5.0	41	32
28	.00	.00	.00	e.20	150	e1150	e190	e260	44	e4.5	32	32
29	.00	.00	.00	e105	---	e290	e200	e275	e47	e4.5	29	27
30	.00	3.5	.00	e14	---	184	e220	e260	e48	e4.5	30	35
31	.00	---	.00	e10	---	234	---	e270	---	e4.4	45	---
TOTAL	154.00	328.60	1320.80	2501.50	20408.0	3548	5713	13320	3493	484.9	2050.4	2275
MEAN	4.97	11.0	42.6	80.7	729	114	190	430	116	15.6	66.1	75.8
MAX	144	164	517	1700	5050	1150	341	1750	300	46	195	258
MIN	.00	.00	.00	.00	4.0	12	103	228	44	4.4	4.3	27
AC-FT	305	652	2620	4960	40480	7040	11330	26420	6930	962	4070	4510

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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.9	35.7	34.2	127	328	61.7	63.5	143	38.8	5.21	22.0	27.6
MAX	38.1	56.2	42.6	230	729	114	190	430	116	15.6	66.1	75.8
(WY)	1996	1997	1998	1997	1998	1998	1998	1998	1998	1998	1998	1998
MIN	4.97	11.0	27.7	70.0	7.57	.10	.000	.000	.000	.000	.000	.000
(WY)	1998	1998	1997	1996	1997	1997	1997	1996	1996	1996	1996	1996

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1996 - 1998

ANNUAL TOTAL	9367.78	55597.20	
ANNUAL MEAN	25.7	152	73.9
HIGHEST ANNUAL MEAN			152
LOWEST ANNUAL MEAN			28.3
HIGHEST DAILY MEAN	1900	5050	5050
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		21100	21100
INSTANTANEOUS PEAK STAGE		7.70	7.70
ANNUAL RUNOFF (AC-FT)	18580	110300	53510
10 PERCENT EXCEEDS	25	292	185
50 PERCENT EXCEEDS	.00	40	.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 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE,	TEMPER- ATURE WATER (DEG C) (00010)	SEDI-	SEDI-	SED.	SED.	SED.
		INST.		MENT,	MENT,	SUSP.	SUSP.	SUSP.
		CUBIC		SUS-	CHARGE,	FALL	FALL	FALL
		FEET		PENDE	SUS-	% FINER	% FINER	% FINER
PER	(MG/L)	PENDE	(T/DAY)	(70337)	(70338)	(70339)		
SECOND	(80154)	(80155)						
(00061)								
DEC								
06...	1555	783	13.5	12000	25400	19	25	35
JAN								
30...	1305	14	19.0	399	15	--	--	--
FEB								
03...	1315	3110	15.0	8350	70100	8	13	18
17...	1125	632	12.5	1690	2880	--	--	--
23...	1410	847	14.0	2690	6150	--	--	--
MAY								
06...	0845	784	13.0	3330	7050	5	6	8
14...	1215	1450	15.5	3140	12300	4	6	8
JUN								
03...	1005	266	16.5	1480	1060	--	--	--
22...	1330	85	29.0	293	67	--	--	--
JUL								
01...	0945	58	22.0	299	47	--	--	--
SEP								
01...	1135	199	25.0	2180	1170	40	50	63

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.24	2.3	1.3	2.4	2.8	108	12	16	4.3	.99	1.2
2	.31	.23	3.4	1.3	2.1	3.6	38	11	16	5.1	.99	1.0
3	.28	.25	1.8	2.0	136	3.8	41	11	15	4.4	1.3	1.0
4	.32	.32	1.4	19	20	5.9	34	55	14	4.2	.98	1.2
5	.35	.34	1.6	2.0	4.8	29	28	142	14	4.0	1.1	1.0
6	.35	.25	153	1.3	157	93	43	21	16	3.3	1.3	1.0
7	9.3	.23	26	1.3	120	8.2	18	25	18	2.5	.80	1.0
8	.27	.24	8.8	1.3	151	5.5	24	24	19	2.4	.97	1.1
9	.23	.23	4.3	97	6.7	5.6	30	20	18	2.4	1.0	1.2
10	.29	28	2.3	98	13	6.1	28	12	18	2.0	.85	2.7
11	2.7	1.5	1.5	2.3	12	7.6	63	11	20	2.0	1.1	3.4
12	.17	.39	1.1	1.3	8.1	8.0	34	88	18	2.0	.83	3.9
13	.25	13	1.4	2.0	6.9	36	54	133	8.1	1.8	2.3	1.8
14	.25	.90	1.2	2.4	138	26	46	59	6.9	3.2	.65	1.1
15	.26	.36	1.2	2.0	4.6	7.5	32	29	7.6	2.6	.61	.97
16	.29	.32	1.2	1.8	4.8	7.8	29	24	8.9	2.1	.59	1.0
17	.37	.32	1.3	1.5	48	8.8	26	20	7.4	1.1	.58	1.2
18	.29	.36	1.4	1.6	8.4	8.6	27	19	5.1	.75	.84	1.6
19	.32	.32	1.4	34	35	8.4	27	18	5.7	.87	1.3	.90
20	.32	.65	1.6	3.0	71	6.3	27	19	5.4	1.4	1.4	1.0
21	.41	.38	10	2.6	11	8.3	26	18	4.3	2.1	.73	1.1
22	.31	.84	1.5	1.8	196	11	24	15	7.1	2.3	1.1	3.2
23	.31	.53	1.4	1.6	278	11	24	15	9.0	3.2	.77	2.8
24	.32	.56	1.3	1.6	91	11	26	15	9.0	2.8	1.3	2.1
25	.21	.56	1.3	1.6	4.2	114	25	16	6.8	2.9	.76	2.4
26	.20	53	1.3	1.6	3.6	59	22	16	5.6	2.3	.77	2.1
27	.26	5.2	1.3	1.6	3.0	116	20	15	5.5	1.9	.77	1.1
28	.27	.66	1.3	1.6	2.5	124	18	17	5.2	1.4	1.4	1.5
29	.28	.58	1.5	34	---	11	16	15	5.8	1.3	.96	1.0
30	.24	1.9	1.4	5.2	---	12	14	16	4.5	1.1	1.8	2.7
31	.23	---	1.3	3.0	---	66	---	15	---	1.1	6.1	---
TOTAL	20.24	112.66	241.8	332.6	1539.1	831.8	972	926	319.9	74.82	36.94	49.27
MEAN	.65	3.76	7.80	10.7	55.0	26.8	32.4	29.9	10.7	2.41	1.19	1.64
MAX	9.3	53	153	98	278	124	108	142	20	5.1	6.1	3.9
MIN	.17	.23	1.1	1.3	2.1	2.8	14	11	4.3	.75	.58	.90
AC-FT	40	223	480	660	3050	1650	1930	1840	635	148	73	98

11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1972, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	2.77	4.73	4.68	4.19	1.15	1.82	.033	.000	.000	.003	.006
MAX	.49	13.1	14.0	32.7	29.6	4.35	11.5	.24	.000	.003	.026	.050
(WY)	1970	1966	1972	1969	1969	1970	1965	1969	1965	1968	1967	1965
MIN	.000	.000	.41	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1965	1969	1969	1972	1967	1972	1966	1965	1965	1965	1965	1966

SUMMARY STATISTICS

WATER YEARS 1965 - 1972

ANNUAL MEAN	1.61
HIGHEST ANNUAL MEAN	5.16 1969
LOWEST ANNUAL MEAN	.33 1968
HIGHEST DAILY MEAN	488 Jan 25 1969
LOWEST DAILY MEAN	.00 Oct 1 1964
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1964
INSTANTANEOUS PEAK FLOW	2200 Jan 25 1969
INSTANTANEOUS PEAK STAGE	5.55 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1170
10 PERCENT EXCEEDS	.00
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.94	9.96	12.3	18.9	39.8	36.7	14.7	13.0	9.61	8.49	8.29	7.75
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1975 - 1998

ANNUAL TOTAL	1727.48	5457.13	
ANNUAL MEAN	4.73	15.0	15.5
HIGHEST ANNUAL MEAN			70.5 1978
LOWEST ANNUAL MEAN			1.91 1977
HIGHEST DAILY MEAN	153 Dec 6	278 Feb 23	3400 Mar 1 1978
LOWEST DAILY MEAN	.09 Aug 3	.17 Oct 12	.00 Nov 29 1974
ANNUAL SEVEN-DAY MINIMUM	.10 Aug 2	.24 Oct 25	.00 Dec 7 1974
INSTANTANEOUS PEAK FLOW		(a) 1,390 Feb 8	8500 Mar 4 1978
INSTANTANEOUS PEAK STAGE		(a) 2.62 Feb 8	4.88 Mar 4 1978
ANNUAL RUNOFF (AC-FT)	3430	10820	11220
10 PERCENT EXCEEDS	7.5	34	28
50 PERCENT EXCEEDS	.85	2.7	6.0
90 PERCENT EXCEEDS	.20	.33	.09

(a) Peak of year occurred on Feb. 8 and Feb. 23, 1998.

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. WDR CA-98-1: 1969(M).

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, 25,200 ft³/s, Mar. 2, 1938, gage height, unknown, on basis of slope-area measurement of peak flow; maximum gage height, 15.0 ft, Jan. 25, 1969; no flow at times most years.

Combined creek and diversions: Maximum discharge, 25,200 ft³/s, Mar. 2, 1938; 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)
Feb. 7	2345	446	3.81	451
Feb. 23	1845	3,480	8.93	3,490

REVISIONS.—The maximum discharge for water year 1969 has been revised to unknown. This supersedes the figure previously published in the report for 1969.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.00	11	.24	15	e155	86	63	111	96	81	40
2	.77	.00	1.4	.28	15	e130	84	61	112	98	76	43
3	.52	.00	1.1	.55	37	e110	82	61	113	105	73	49
4	.40	.00	.97	1.3	33	103	76	64	110	109	74	54
5	.26	.00	7.9	1.7	30	104	80	126	108	110	71	54
6	.47	.00	74	1.2	83	96	87	163	109	112	e72	57
7	1.6	.00	48	.91	101	86	89	107	110	118	e70	50
8	1.0	.00	37	.77	160	83	85	92	100	116	e68	44
9	.82	.00	21	30	86	e82	83	82	93	117	e66	44
10	.84	8.9	14	61	64	e80	83	66	94	122	e65	44
11	.72	27	12	33	50	e76	91	59	95	114	64	42
12	.63	22	13	28	35	e71	88	92	104	112	69	42
13	.46	27	7.2	16	26	e71	86	111	108	116	66	41
14	.36	14	7.0	3.9	73	74	84	103	106	115	70	41
15	.23	2.2	5.3	2.3	84	74	83	93	105	117	77	40
16	.02	1.5	2.6	1.4	71	77	79	88	105	116	73	39
17	.02	.85	2.5	1.1	59	79	76	80	106	123	72	39
18	.02	.38	2.2	.92	43	76	73	86	101	121	72	40
19	.00	.23	2.0	1.3	42	75	71	106	102	122	70	39
20	.00	.05	1.8	.75	42	73	71	108	103	120	68	39
21	.00	.05	1.8	.68	37	71	73	106	104	118	67	39
22	.00	.00	2.2	.60	123	69	77	105	101	100	59	39
23	.00	.00	1.8	.53	e850	69	79	105	101	88	52	40
24	.00	.00	1.6	.46	422	70	77	106	98	e87	45	39
25	.00	.00	1.5	.40	229	113	71	109	96	e88	46	38
26	.00	14	1.3	.35	e218	99	68	115	96	88	47	38
27	.00	21	1.2	.29	e208	93	68	115	94	85	45	39
28	.00	18	1.1	.27	e180	105	63	113	93	81	44	39
29	.00	18	.78	4.4	---	84	63	115	90	77	e43	39
30	.00	20	.46	11	---	75	62	114	93	74	e42	38
31	.00	---	.30	16	---	78	---	112	---	74	42	---
TOTAL	10.14	195.16	286.01	221.60	3416	2701	2338	3026	3061	3239	1949	1269
MEAN	.33	6.51	9.23	7.15	122	87.1	77.9	97.6	102	104	62.9	42.3
MAX	1.6	27	74	61	850	155	91	163	113	123	81	57
MIN	.00	.00	.30	.24	15	69	62	59	90	74	42	38
AC-FT	20	387	567	440	6780	5360	4640	6000	6070	6420	3870	2520

e Estimated.

11062000 LYTLE CREEK NEAR FONTANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.92	7.58	10.1	26.8	43.2	53.8	30.2	20.8	15.4	11.4	7.78	6.06
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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1919 - 1998		
ANNUAL TOTAL	3206.96			21711.91					
ANNUAL MEAN	8.79			59.5			19.9		
HIGHEST ANNUAL MEAN							177		
LOWEST ANNUAL MEAN							.000		
HIGHEST DAILY MEAN	194	Jan 26		850	Feb 23		8950	Mar 2	1938
LOWEST DAILY MEAN	.00	May 5		.00	Oct 19		.00	Oct 1	1918
ANNUAL SEVEN-DAY MINIMUM	.00	May 17		.00	Oct 19		.00	Oct 1	1918
INSTANTANEOUS PEAK FLOW				(a) 3480	Feb 23		25200	Mar 2	1938
INSTANTANEOUS PEAK STAGE				8.93	Feb 23		15.00	Jan 25	1969
ANNUAL RUNOFF (AC-FT)	6360			43070			14390		
10 PERCENT EXCEEDS	27			112			46		
50 PERCENT EXCEEDS	.36			64			.00		
90 PERCENT EXCEEDS	.00			.28			.00		

(a) Portion of peak flow (341 ft³/s, estimated) broke out of channel upstream and bypassed gage.

11062001 LYTLE CREEK NEAR FONTANA, CA—Continued

LYTLE CREEK, SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CREEK CONDUIT, AND
FONTANA WATER CO.'S INFILTRATION LINE DIVERSION

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	17	e18	19	e21	e160	106	83	e111	e96	111	70
2	18	17	22	18	21	e142	106	81	e112	e98	106	72
3	19	17	22	19	43	e130	102	81	e113	e105	103	71
4	17	17	21	19	39	124	96	84	e110	e109	104	75
5	16	17	25	20	37	125	100	139	e108	e110	101	75
6	17	17	e82	19	90	116	107	e163	e109	e112	e102	78
7	20	17	53	18	106	107	109	109	e110	e118	e100	71
8	18	18	42	19	166	104	105	104	113	e118	e98	65
9	18	17	33	46	91	e102	103	102	113	e120	e96	65
10	18	28	33	68	69	e101	103	86	114	e125	e95	65
11	19	34	33	e39	e58	e96	111	79	115	e124	94	63
12	18	e26	29	34	e48	e92	108	112	114	e123	99	63
13	17	32	28	28	e46	e91	106	130	e108	e126	96	62
14	16	25	26	28	e88	95	104	122	e106	e125	100	62
15	16	22	24	26	90	95	103	113	e105	e127	107	61
16	16	22	25	25	e83	98	99	108	e105	e125	103	60
17	17	21	25	25	e79	101	96	100	e106	e133	101	60
18	17	19	22	25	e64	97	93	106	e101	e131	102	61
19	17	19	23	25	e64	96	91	126	e102	e133	100	60
20	18	19	23	24	e64	95	91	128	e103	e129	98	60
21	18	18	22	23	e47	92	93	126	e104	e128	97	60
22	18	18	22	23	129	91	97	125	e101	e117	89	60
23	18	18	21	24	e855	90	99	125	e101	113	82	61
24	18	18	21	22	427	91	97	126	e98	e111	75	60
25	18	18	21	22	235	127	91	129	e96	e115	76	59
26	18	30	20	22	e224	105	88	135	e96	114	77	59
27	17	27	21	22	e213	98	88	125	e94	114	75	60
28	17	23	19	20	e187	111	83	e113	e93	111	74	60
29	17	23	19	25	---	89	83	e115	e90	107	e73	60
30	17	25	18	26	---	87	82	e114	e93	104	e72	59
31	17	---	18	e27	---	99	---	e112	---	104	72	---
TOTAL	543	639	831	800	3684	3247	2940	3501	3144	3625	2878	1917
MEAN	17.5	21.3	26.8	25.8	132	105	98.0	113	105	117	92.8	63.9
MAX	20	34	82	68	855	160	111	163	115	133	111	78
MIN	16	17	18	18	21	87	82	79	90	96	72	59
AC-FT	1080	1270	1650	1590	7310	6440	5830	6940	6240	7190	5710	3800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.5	28.5	31.1	56.9	69.3	79.7	57.3	47.7	39.8	33.7	30.6	28.0
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1899 - 1998			
ANNUAL TOTAL	9455				27749							
ANNUAL MEAN	25.9				76.0				44.2			
HIGHEST ANNUAL MEAN									194			
LOWEST ANNUAL MEAN									10.7			
HIGHEST DAILY MEAN	194				855				8960			
LOWEST DAILY MEAN	11				16				2.6			
ANNUAL SEVEN-DAY MINIMUM	14				17				4.0			
INSTANTANEOUS PEAK FLOW					3490				25200			
ANNUAL RUNOFF (AC-FT)	18750				55040				32060			
10 PERCENT EXCEEDS	45				124				79			
50 PERCENT EXCEEDS	20				83				26			
90 PERCENT EXCEEDS	16				18				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 fair. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,180 ft³/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; maximum recorded gage height, 10.70 ft, Jan. 25, 1969; no flow Aug. 6–8, Sept. 29, 30, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 80 ft³/s, or maximum, from rating curve extended above 322 ft³/s on basis of slope-conveyance measurement at gage height 9.07 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 7	2315	250	3.90	Feb. 23	1800	507	5.23

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.58	.68	.58	.47	6.4	2.4	3.1	2.0	1.5	1.3	1.4
2	.58	.55	.63	.58	.47	5.6	2.4	3.0	2.0	1.5	1.3	1.3
3	.57	.47	.58	.69	4.5	5.0	2.9	3.0	2.0	1.5	1.4	1.3
4	.55	.47	.58	.64	1.7	4.3	3.1	3.1	2.0	1.4	1.4	1.3
5	.56	.48	.58	.58	1.2	3.7	2.9	3.8	2.0	1.4	1.4	1.3
6	.58	.55	6.7	.58	19	3.3	2.9	5.5	2.0	1.5	1.4	1.3
7	.58	.58	2.1	.58	20	2.8	2.9	2.6	2.1	1.5	1.3	1.3
8	.58	.58	1.1	.52	18	2.6	2.9	2.6	2.0	1.4	1.3	1.3
9	.58	.58	.93	1.8	1.8	2.4	3.1	2.6	1.9	1.4	1.2	1.2
10	.58	.68	.80	3.3	1.3	2.1	3.1	2.4	1.8	1.4	1.2	1.1
11	.58	.62	.80	1.1	.92	2.0	3.7	2.3	1.8	1.3	1.2	1.1
12	.58	.58	.83	.98	1.0	1.8	3.3	3.1	1.8	1.4	1.3	1.1
13	.58	.65	.91	.92	1.0	1.8	3.3	6.9	1.7	1.3	1.3	1.1
14	.58	.68	.92	.92	6.8	1.8	3.1	2.1	1.6	1.2	1.3	1.1
15	.58	.68	.92	.92	2.2	1.8	3.3	2.2	1.6	1.3	1.2	1.1
16	.58	.68	.80	.92	1.7	2.0	3.4	2.4	1.8	1.3	1.4	1.1
17	.58	.63	.80	.84	2.1	2.0	3.3	2.4	1.8	1.3	1.4	1.1
18	.53	.58	.80	.80	1.6	2.0	3.3	2.2	1.8	1.2	1.4	1.1
19	.52	.58	.80	.80	1.6	2.0	3.2	2.1	2.0	1.2	1.4	1.1
20	.49	.58	.80	.80	1.7	2.1	3.1	2.3	1.9	1.2	1.4	.96
21	.58	.58	.89	.80	1.4	2.1	3.1	2.3	1.8	1.2	1.4	.92
22	.57	.61	.86	.71	6.8	2.1	3.1	2.3	1.7	1.2	1.4	.92
23	.58	.64	.80	.68	143	2.3	3.2	2.3	1.8	1.3	1.4	.92
24	.58	.68	.75	.68	63	2.3	3.2	2.3	1.8	1.2	1.4	.92
25	.58	.68	.68	.68	26	7.3	3.1	2.4	1.7	1.1	1.4	.92
26	.58	.79	.68	.68	14	2.9	3.3	2.4	1.7	1.2	1.4	.92
27	.58	.68	.68	.59	10	2.1	3.6	2.5	1.7	1.3	1.4	.92
28	.58	.68	.68	.58	8.1	2.2	3.5	2.4	1.6	1.3	1.4	.99
29	.58	.68	.58	.64	---	2.0	3.3	2.4	1.7	1.3	1.4	1.0
30	.58	.70	.58	.58	---	2.0	3.1	2.4	1.6	1.2	1.3	1.1
31	.58	---	.58	.57	---	2.3	---	2.3	---	1.2	1.3	---
TOTAL	17.71	18.50	30.82	26.04	361.36	87.1	94.1	85.7	54.7	40.7	41.7	33.19
MEAN	.57	.62	.99	.84	12.9	2.81	3.14	2.76	1.82	1.31	1.35	1.11
MAX	.58	.79	6.7	3.3	143	7.3	3.7	6.9	2.1	1.5	1.4	1.4
MIN	.49	.47	.58	.52	.47	1.8	2.4	2.1	1.6	1.1	1.2	.92
AC-FT	35	37	61	52	717	173	187	170	108	81	83	66

SANTA ANA RIVER BASIN

11063500 LONE PINE CREEK NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.99	1.20	1.90	2.37	4.20	4.61	2.08	1.67	1.35	1.13	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1920 - 1998	
ANNUAL TOTAL	342.91		891.62			
ANNUAL MEAN	.94		2.44		1.98	
HIGHEST ANNUAL MEAN					11.4	
LOWEST ANNUAL MEAN					.11	
HIGHEST DAILY MEAN	6.7	Dec 6	143	Feb 23	1480	Mar 2 1938
LOWEST DAILY MEAN	.47	Nov 3	.47	Nov 3	.00	Aug 6 1965
ANNUAL SEVEN-DAY MINIMUM	.53	Oct 31	.53	Oct 31	.06	Aug 2 1965
INSTANTANEOUS PEAK FLOW			507	Feb 23	6180	Mar 2 1938
INSTANTANEOUS PEAK STAGE			5.23	Feb 23	10.70	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	680		1770		1430	
10 PERCENT EXCEEDS	1.5		3.2		4.1	
50 PERCENT EXCEEDS	.80		1.3		.60	
90 PERCENT EXCEEDS	.58		.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. Concrete control installed Oct. 1, 1987. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,700 ft³/s, Feb. 8, 1993, gage height, 8.48 ft, from rating curve extended above 180 ft³/s on basis of slope-area measurement at gage height 8.48 ft; minimum daily, 1.7 ft³/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft³/s, or maximum, from rating curve extended above 373 ft³/s on basis of slope-area measurement at gage height 8.48 ft:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 7	2315	1,650	6.78	Feb. 23	1900	3,960	7.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.6	4.4	4.7	6.4	63	33	17	12	7.9	6.4	5.8
2	4.0	3.5	4.1	4.8	6.5	57	30	17	12	8.0	6.3	5.5
3	3.7	3.4	4.1	5.6	59	48	29	17	12	8.0	6.3	5.4
4	3.4	3.5	4.1	6.3	23	39	26	17	12	7.8	6.0	5.7
5	3.4	3.5	4.1	5.7	13	34	25	24	12	7.6	5.9	5.7
6	3.6	3.6	76	5.3	136	32	25	38	11	7.4	6.0	5.3
7	3.7	3.7	27	5.3	166	27	25	20	12	7.3	6.1	5.2
8	3.6	3.8	9.5	5.3	186	22	23	18	11	7.1	6.0	5.2
9	3.6	3.7	6.8	21	33	19	23	17	11	7.0	5.9	5.3
10	3.5	5.1	5.9	46	16	17	24	16	11	6.9	6.3	5.3
11	3.6	4.3	5.5	14	14	14	29	15	11	6.8	6.1	5.3
12	3.5	4.0	5.1	10	12	13	25	20	11	6.6	6.0	5.2
13	3.4	4.6	5.1	8.7	11	13	24	44	11	6.5	6.0	4.9
14	3.4	4.0	5.2	8.1	32	14	23	26	10	6.4	5.9	4.9
15	3.3	3.9	5.0	7.6	25	13	21	20	10	6.3	5.5	4.9
16	3.3	3.8	4.8	7.4	24	13	21	19	11	6.1	5.7	4.9
17	3.4	3.9	4.7	7.1	30	13	20	18	10	6.0	5.7	4.9
18	3.4	3.8	4.7	6.9	25	12	19	16	9.8	6.0	5.6	5.0
19	3.5	3.8	4.7	7.1	25	12	18	15	9.7	5.9	5.5	4.9
20	3.7	3.9	4.7	6.8	27	12	18	15	9.8	5.9	5.4	4.9
21	3.7	3.8	4.9	6.5	24	12	18	15	9.7	6.0	5.3	4.8
22	3.6	3.8	4.7	6.4	50	12	19	14	9.4	6.4	5.2	4.9
23	3.8	3.7	4.8	6.3	1100	12	19	14	9.5	6.3	5.1	4.9
24	3.7	3.8	5.0	6.2	445	10	19	14	9.4	6.2	5.1	4.9
25	3.6	3.8	4.9	6.0	109	39	18	14	9.3	5.9	5.0	4.9
26	3.5	5.1	4.8	6.0	88	33	18	14	9.3	5.7	5.1	4.9
27	3.6	4.2	4.8	6.0	79	29	18	14	9.2	5.5	5.1	4.7
28	3.7	4.1	4.7	6.0	69	38	18	13	8.8	5.6	5.0	4.5
29	3.7	4.0	4.7	8.2	---	34	18	13	8.5	6.1	4.9	4.6
30	3.6	4.4	4.7	6.6	---	30	17	13	8.1	6.4	4.9	4.6
31	3.6	---	4.7	6.4	---	31	---	13	---	6.5	6.0	---
TOTAL	110.7	118.1	248.2	264.3	2833.9	767	663	560	310.5	204.1	175.3	151.9
MEAN	3.57	3.94	8.01	8.53	101	24.7	22.1	18.1	10.4	6.58	5.65	5.06
MAX	4.0	5.1	76	46	1100	63	33	44	12	8.0	6.4	5.8
MIN	3.3	3.4	4.1	4.7	6.4	10	17	13	8.1	5.5	4.9	4.5
AC-FT	220	234	492	524	5620	1520	1320	1110	616	405	348	301

11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.50	5.93	9.61	20.9	25.6	17.2	10.5	8.45	6.33	5.26	4.92	5.84
MAX	14.8	13.2	26.5	134	121	51.5	27.7	18.1	15.8	16.0	15.1	24.5
(WY)	1984	1984	1972	1993	1993	1995	1993	1998	1993	1993	1993	1976
MIN	2.00	1.97	2.05	2.33	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1972 - 1998	
ANNUAL TOTAL	2428.9		6407.0			
ANNUAL MEAN	6.65		17.6		10.4	
HIGHEST ANNUAL MEAN					35.5	
LOWEST ANNUAL MEAN					3.80	
HIGHEST DAILY MEAN	76	Dec 6	1100	Feb 23	1100	Feb 23 1998
LOWEST DAILY MEAN	3.2	Aug 5	3.3	Oct 15	1.7	Sep 5 1989
ANNUAL SEVEN-DAY MINIMUM	3.3	Aug 30	3.4	Oct 12	1.8	Sep 2 1989
INSTANTANEOUS PEAK FLOW			3960	Feb 23	6700	Feb 8 1993
INSTANTANEOUS PEAK STAGE			7.74	Feb 23	8.48	Feb 8 1993
ANNUAL RUNOFF (AC-FT)	4820		12710		7550	
10 PERCENT EXCEEDS	12		27		16	
50 PERCENT EXCEEDS	4.9		6.4		5.9	
90 PERCENT EXCEEDS	3.5		3.7		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 and concrete control. Elevation of gage is 2,080 ft above sea level, from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi downstream at different datum. December 1919 to July 1969, at site 0.4 mi downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi downstream at different datum.

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation upstream from station. City of San Bernardino diverts upstream from station at times for municipal supply. No diversion since June 1993. Natural flow affected by pumping along creek. 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; maximum gage height, 8.40 ft, Mar. 4, 1978; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft³/s, or maximum, from rating curve extended above 158 ft³/s:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 10	0115	51	5.75	Feb. 24	0030	427	6.61
Feb. 8	0100	126	6.02	Mar. 28	0030	76	5.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.23	1.6	1.7	3.5	e17	15	10	11	8.2	2.6	2.2
2	.18	.21	.95	1.7	3.5	e15	15	10	11	8.2	2.6	2.4
3	.21	.21	.92	2.5	7.0	e14	15	11	11	8.3	2.5	2.7
4	.20	.21	.87	3.0	7.0	13	14	12	11	7.8	2.4	3.2
5	.22	.22	.68	2.3	5.4	13	14	18	10	6.8	2.4	3.1
6	.28	.23	5.7	1.3	20	18	16	15	10	6.6	2.4	2.7
7	2.7	.24	5.1	1.1	21	13	16	13	10	6.5	2.4	2.4
8	1.5	.24	4.1	.93	41	12	15	12	10	6.7	2.4	2.4
9	.24	.24	3.1	4.9	16	11	15	12	10	7.1	2.2	2.5
10	.25	2.4	1.6	13	12	11	14	12	9.9	6.7	2.1	2.4
11	1.8	4.1	1.5	5.9	11	11	15	11	10	5.4	2.2	2.4
12	1.5	3.8	1.4	4.6	9.8	10	15	17	10	5.2	2.2	2.4
13	1.2	6.2	1.3	4.3	9.3	10	15	26	10	5.3	2.2	2.1
14	1.3	2.8	1.2	3.1	15	11	15	21	9.7	5.1	2.2	1.9
15	1.3	1.9	1.1	2.3	12	10	14	16	9.6	5.2	2.1	1.9
16	1.3	1.7	1.0	2.2	10	9.8	14	15	9.9	5.1	2.1	1.9
17	1.4	1.1	.97	2.1	12	9.4	13	14	9.7	5.1	2.1	1.7
18	1.5	.53	1.3	2.0	10	9.1	13	14	9.5	5.0	2.1	1.5
19	1.6	.43	1.1	6.3	10	8.8	12	13	9.3	4.9	2.1	1.5
20	1.9	.38	1.0	4.0	11	8.6	12	13	9.1	5.0	2.1	1.4
21	2.2	.35	1.4	3.2	9.8	8.4	11	13	9.0	4.4	2.0	1.7
22	2.2	.34	1.3	3.1	43	8.4	11	13	8.6	3.6	1.9	2.3
23	2.4	.36	1.2	3.1	114	8.4	11	13	8.5	3.3	2.1	2.4
24	2.4	.37	1.2	3.1	113	8.4	11	12	8.4	3.3	2.1	2.5
25	2.2	.38	1.3	3.0	e52	11	11	12	8.4	3.0	2.1	2.5
26	1.9	2.4	1.2	3.0	e35	10	11	12	8.4	2.8	2.1	2.5
27	2.0	2.8	1.3	2.9	e26	17	11	12	8.3	2.6	2.1	2.3
28	1.9	2.4	1.2	2.9	e20	36	11	12	8.2	2.6	2.0	2.2
29	1.1	2.3	1.4	4.2	---	17	10	11	8.1	2.7	2.0	2.2
30	.32	2.4	1.6	3.8	---	15	9.9	11	8.2	2.7	2.0	2.2
31	.26	---	1.6	3.6	---	15	---	11	---	2.7	2.1	---
TOTAL	39.63	41.47	51.19	105.13	659.3	389.3	394.9	417	284.8	157.9	67.9	67.5
MEAN	1.28	1.38	1.65	3.39	23.5	12.6	13.2	13.5	9.49	5.09	2.19	2.25
MAX	2.7	6.2	5.7	13	114	36	16	26	11	8.3	2.6	3.2
MIN	.17	.21	.68	.93	3.5	8.4	9.9	10	8.1	2.6	1.9	1.4
AC-FT	79	82	102	209	1310	772	783	827	565	313	135	134

e Estimated.

11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.35	.96	1.78	3.75	6.97	7.58	4.48	2.28	1.03	.56	.36	.34
MAX	3.36	12.9	14.0	44.4	108	72.9	28.3	15.2	9.49	5.09	3.83	3.33
(WY)	1984	1966	1967	1993	1980	1938	1978	1983	1998	1998	1993	1976
MIN	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1920 - 1998			
ANNUAL TOTAL	1527.01				2676.02							
ANNUAL MEAN	4.18				7.33				2.49			
HIGHEST ANNUAL MEAN									16.1			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	87 Jan 26				114 Feb 23				556 Jan 25 1969			
LOWEST DAILY MEAN	.00 Aug 8				.17 Oct 1				.00 Sep 23 1921			
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 8				.22 Nov 1				.00 Sep 23 1921			
INSTANTANEOUS PEAK FLOW					427 Feb 24				3720 Jan 25 1969			
INSTANTANEOUS PEAK STAGE					6.61 Feb 24				8.40 Mar 4 1978			
ANNUAL RUNOFF (AC-FT)	3030				5310				1810			
10 PERCENT EXCEEDS	11				15				5.5			
50 PERCENT EXCEEDS	1.5				3.8				.19			
90 PERCENT EXCEEDS	.00				1.1				.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 and estimated daily discharges, 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	e.00	4.9	.00	.00	13	2.7	3.3
2	.00	.00	.00	.00	.00	e.00	.00	.00	.00	8.0	3.0	3.1
3	.00	.00	.00	.00	105	e.00	.22	.00	.00	9.1	2.2	3.1
4	.00	.00	.00	5.1	3.1	.00	.00	2.9	.00	9.0	1.9	3.1
5	.00	.00	.00	.00	.00	4.9	.00	29	.00	7.5	11	3.1
6	.00	.00	87	.00	236	10	.00	4.0	.00	5.4	5.8	2.5
7	.00	.00	3.8	.00	86	.00	.00	.00	.00	9.1	7.0	2.5
8	.00	.00	.00	.00	315	.00	.00	.00	.00	4.8	3.8	2.0
9	.00	.00	.00	65	.00	.00	.00	.00	.00	3.9	4.5	1.2
10	.00	13	.00	94	.00	.00	.00	.00	.00	2.8	11	1.2
11	.07	.00	.00	.00	.00	.00	3.6	.00	.00	6.2	10	.91
12	.00	.00	.00	.00	.00	.00	.00	28	.90	8.2	9.4	.65
13	.00	8.3	.00	.00	.00	.80	1.6	80	1.8	9.2	8.2	.65
14	.00	.00	.00	.00	81	4.4	.00	.00	1.7	14	8.4	.18
15	.00	.00	.00	.00	.00	.00	.00	.00	1.7	14	4.3	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	1.3	13	5.5	.00
17	.00	.00	.00	.00	14	.00	.00	.00	1.2	13	3.4	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	1.2	19	3.3	.00
19	.00	.00	.00	1.8	9.7	.00	.00	.00	1.2	14	4.2	.00
20	.00	.00	.00	.00	6.8	.00	.00	.00	1.2	12	3.7	.00
21	.00	.00	.97	.00	.00	.00	.00	.00	1.2	9.8	4.2	.00
22	.00	.00	.00	.00	169	.00	.00	.00	1.4	8.5	4.7	.00
23	.00	.00	.00	.00	1440	.00	.00	.00	1.7	7.8	3.1	.00
24	.00	.00	.00	.00	e701	.00	.00	.00	1.3	7.3	3.1	.00
25	.00	.00	.00	.00	e5.0	15	.00	.00	1.5	8.3	3.5	.00
26	.00	26	.00	.00	e1.0	1.7	.00	.00	2.6	6.2	5.2	.00
27	.00	.22	.00	.00	e.00	18	.00	.00	3.0	5.4	3.2	.00
28	.00	.00	.00	.00	e.00	57	.00	.00	4.7	5.9	3.1	.00
29	.00	.00	.00	14	---	.00	.00	.00	7.0	3.3	3.1	.00
30	.00	.60	.00	.00	---	.00	.00	.00	15	4.4	3.1	.00
31	.00	---	.00	.00	---	13	---	.00	---	2.9	3.2	---
TOTAL	0.07	48.12	91.77	179.90	3172.60	124.80	10.32	143.90	51.60	265.0	152.8	27.49
MEAN	.002	1.60	2.96	5.80	113	4.03	.34	4.64	1.72	8.55	4.93	.92
MAX	.07	26	87	94	1440	57	4.9	80	15	19	11	3.3
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.8	1.9	.00
AC-FT	.1	95	182	357	6290	248	20	285	102	526	303	55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.79	4.76	8.00	20.7	32.0	20.7	4.43	4.38	2.44	1.38	.88	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1958 - 1998			
ANNUAL TOTAL	652.04				4268.37							
ANNUAL MEAN	1.79				11.7				8.33			
HIGHEST ANNUAL MEAN									65.4			
LOWEST ANNUAL MEAN									.008			
HIGHEST DAILY MEAN	225				Jan 26				5040			
LOWEST DAILY MEAN	.00				Jan 1				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				Jan 28				.00			
INSTANTANEOUS PEAK FLOW					5060				Feb 23			
INSTANTANEOUS PEAK STAGE					6.70				Feb 23			
ANNUAL RUNOFF (AC-FT)	1290				8470				6040			
10 PERCENT EXCEEDS	.00				9.7				4.2			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

e Estimated.

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA

LOCATION.—Lat 33°58'07", long 117°26'51", in NE 1/4 SW 1/4 sec.30, T.2 S., R.5 W., Riverside County, Hydrologic Unit 18070203, on left bank at MWD pipeline crossing, 0.8 mi downstream from Union Pacific Railroad Bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.

DRAINAGE AREA.—852 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1970 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 685 ft above sea level, from topographic map. Prior to Apr. 15, 1985, water-stage recorder at site 300 ft upstream on left bank at different datum. From Apr. 15, 1985, to Sept. 30, 1985, water-stage recorder near right bank (atop pier 9 of MWD pipeline crossing), at same site and datum. From Oct. 1, 1985, to June 16, 1993, water-stage recorder and crest-stage gage on right bank at same site and datum.

REMARKS.—Records poor. Flow partly regulated by Big Bear Lake (station 11049000). 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, 31,300 ft³/s, Feb. 24, 1998, gage height, 14.69 ft, on basis of area-velocity study; maximum gage height, 20.23 ft, site and datum then in use, Mar. 4, 1978; minimum daily, 15 ft³/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge since at least 1927, 100,000 ft³/s, Mar. 2, 1938, on basis of slope-area measurement at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft³/s, on basis of slope-conveyance study at site 8.2 mi upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,500 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	1700	1,610	8.22	Feb. 24	0100	31,300	14.69
Dec. 6	1330	4,990	9.80	Mar. 6	0430	1,640	7.17
Jan. 10	0530	4,700	9.63	Mar. 13	1830	2,260	7.40
Feb. 3	1600	4,550	9.54	Mar. 28	0815	7,410	8.64
Feb. 8	0330	12,500	11.77	Apr. 1	0215	2,600	7.57
Feb. 14	2000	5,910	9.65	May 5	1615	3,670	8.66
Feb. 17	0845	2,180	8.02	May 13	unknown	e3,920	8.78
Feb. 20	0245	1,760	7.79	Sept. 2	1900	1,970	8.16

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	77	94	109	95	e241	e600	390	375	120	95	159
2	91	76	81	104	100	e173	443	467	324	109	96	291
3	112	80	73	107	1290	147	382	534	313	103	95	299
4	99	75	74	136	590	139	390	578	276	102	94	185
5	104	79	79	103	201	133	345	1160	256	103	104	152
6	102	82	1820	92	1340	627	326	e590	248	e101	107	151
7	286	81	619	96	1300	252	383	e575	254	e97	111	140
8	110	85	539	94	4000	158	340	e600	255	e83	107	136
9	86	77	187	567	739	127	297	346	249	e76	119	e117
10	90	204	150	1820	362	123	308	343	245	e85	160	e115
11	88	92	144	469	228	124	353	379	241	e75	138	e105
12	76	73	136	253	161	129	356	759	240	e74	136	e100
13	79	191	125	168	132	274	291	e2330	226	e79	186	e102
14	77	128	120	123	1380	382	310	e1810	216	81	e188	e97
15	77	99	121	99	850	151	290	e1080	209	91	e182	102
16	82	87	111	87	355	128	252	587	214	97	e154	86
17	69	86	108	78	649	117	244	374	206	85	149	83
18	72	87	99	80	217	119	251	371	196	97	152	82
19	76	93	98	100	158	118	239	357	187	95	124	84
20	76	99	90	88	704	113	259	322	185	96	122	87
21	76	89	105	90	177	111	273	329	181	96	124	86
22	72	86	93	86	3360	110	326	312	176	101	127	87
23	74	86	98	83	5450	102	e370	281	166	100	113	87
24	76	95	97	83	10800	106	395	305	159	104	114	87
25	72	93	99	89	1130	381	383	337	145	103	118	91
26	78	375	98	85	725	394	339	358	139	e101	113	89
27	78	352	102	84	435	327	300	356	134	e102	108	82
28	79	80	94	86	324	e1940	288	322	131	105	106	82
29	80	74	92	404	---	e450	305	335	123	97	106	104
30	77	78	102	146	---	e300	332	292	125	101	108	103
31	76	---	105	98	---	e380	---	334	---	96	106	---
TOTAL	2769	3359	5953	6107	37252	8376	9970	17513	6394	2955	3862	3571
MEAN	89.3	112	192	197	1330	270	332	565	213	95.3	125	119
MAX	286	375	1820	1820	10800	1940	600	2330	375	120	188	299
MIN	69	73	73	78	95	102	239	281	123	74	94	82
AC-FT	5490	6660	11810	12110	73890	16610	19780	34740	12680	5860	7660	7080

e Estimated.

11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	58.3	77.5	103	243	299	334	148	122	78.1	51.3	51.1	52.4
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1970 - 1998			
ANNUAL TOTAL	52255				108081							
ANNUAL MEAN	143				296				135			
HIGHEST ANNUAL MEAN									416			
LOWEST ANNUAL MEAN									29.0			
HIGHEST DAILY MEAN	3730				10800				11500			
LOWEST DAILY MEAN	60				69				15			
ANNUAL SEVEN-DAY MINIMUM	65				74				16			
INSTANTANEOUS PEAK FLOW					31300				31300			
INSTANTANEOUS PEAK STAGE					14.69				20.23			
ANNUAL RUNOFF (AC-FT)	103600				214400				97880			
10 PERCENT EXCEEDS	135				457				210			
50 PERCENT EXCEEDS	88				123				59			
90 PERCENT EXCEEDS	70				80				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 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT					
02...	0920	93	881	23.0	555
10...	1445	93	871	23.5	533
NOV					
04...	0800	81	890	17.0	551
14...	1115	106	830	19.5	519
DEC					
01...	1145	101	799	17.5	496
17...	0740	104	860	12.0	555
JAN					
05...	1050	99	807	14.5	495
16...	1015	89	872	17.5	556
FEB					
03...	0840	109	815	14.5	501
10...	1710	325	509	16.0	312
MAR					
02...	1545	173	837	20.5	547
16...	1400	122	876	17.5	540
APR					
01...	1245	464	425	14.5	266
13...	1100	279	567	16.0	356
MAY					
04...	1210	574	406	21.0	253
14...	1330	e1810	312	17.5	193
JUN					
04...	1150	286	501	20.5	295
17...	1030	208	739	22.5	460
JUL					
02...	1200	106	890	26.5	546
14...	1025	87	965	24.5	590
AUG					
04...	1405	99	886	30.0	540
18...	1035	161	590	22.5	367
SEP					
02...	0920	168	583	24.0	365
16...	0945	83	843	22.0	530

e Estimated.

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA

LOCATION.—Lat 33°44'17", long 116°49'59", in SE 1/4 NE 1/4 sec.13, T.5 S., R.1 E., Riverside County, Hydrologic Unit 18070202, on left bank 0.6 mi downstream from bridge on State Highway 74, 1.5 mi downstream from North Fork San Jacinto River, 7.8 mi southeast of San Jacinto, and 9.5 mi downstream from Lake Hemet.

DRAINAGE AREA.—142 mi².

PERIOD OF RECORD.—October 1920 to February 1927, March 1927 to September 1991, October 1996 to current year. River only records for October 1969 to September 1980 and October 1981 to September 1991 are at site upstream of Lake Hemet Municipal Water District's lower canal and are equivalent to other records if lower canal diversion is deducted from flow past station. Records of lower canal diversion are available at Lake Hemet Municipal Water District. Combined records of river and diversions are equivalent for October 1948 to September 1981. Combined records of river and diversion for October 1981 to September 1990, published in WDR CA-82-1 to WDR CA-90-1, are not equivalent due to diversion for municipal supply upstream of gages beginning in 1982. Monthly discharge only for October 1920 and July to September 1926 are published in WSP 1315-B.

REVISED RECORDS.—WSP 881: 1938. WSP 1635: 1950. WSP 1928: Drainage area. WDR CA-97-1: Date of peak discharge for Water Year 1991.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 1,910 ft above sea level, from topographic map. From 1927 to 1991 gage operated at various locations and datums approximately 0.6 mi upstream. See WDR CA-91-1 for further description.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts 4.5 mi upstream from station. Several other small diversions in the basin. Diversions upstream from station began prior to 1920. See schematic of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—(River only) Maximum discharge, 45,000 ft³/s, Feb. 16, 1927, on basis of slope area measurement of peak flow. No flow for several months in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft³/s, or maximum, from rating curve extended above 275 ft³/s on basis of critical depth computations:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 8	0530	571	4.05	Mar. 28	0945	633	4.15
Feb. 14	2400	920	4.45	May 7	1945	981	4.53
Feb. 22	1515	1,120	4.64	May 13	2000	542	4.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.16	3.1	3.3	18	155	299	151	121	28	.10	3.2
2	.16	.16	3.2	3.4	10	120	319	137	110	29	.09	1.2
3	.13	.15	3.2	3.8	50	105	295	133	114	28	.09	.25
4	.12	.15	2.8	5.0	97	105	291	134	116	27	.09	.13
5	.10	.15	2.7	6.7	112	107	267	269	112	23	.09	.11
6	.14	.12	3.5	4.5	114	181	280	278	111	22	.09	.10
7	.15	.12	18	4.1	206	167	253	289	117	17	.09	.09
8	.12	.12	191	5.0	182	115	223	226	119	17	.07	.09
9	.12	.10	21	24	117	126	228	207	112	16	6.8	.09
10	.11	.17	35	303	52	128	222	186	111	17	13	.09
11	.14	1.1	22	155	24	132	231	154	98	16	6.5	.09
12	.17	.69	7.3	81	e18	136	309	193	97	15	23	.09
13	.15	2.6	4.0	61	18	138	246	399	89	12	11	.07
14	.14	5.7	5.1	81	120	129	236	338	86	11	4.7	.13
15	.13	2.6	5.0	160	295	115	231	263	84	8.9	.57	.08
16	.12	1.7	4.9	151	207	123	232	250	85	7.7	.34	.06
17	.14	1.4	4.7	84	143	122	225	231	84	5.1	.21	.06
18	.14	1.3	4.8	73	219	118	224	229	78	4.2	.15	.10
19	.13	1.2	4.9	79	226	117	226	234	74	3.8	.12	.20
20	.15	1.1	4.4	65	213	116	229	203	69	2.2	.11	.28
21	.16	1.0	5.0	41	91	113	232	172	64	.26	.10	.43
22	.22	.97	4.5	10	209	113	238	160	61	.21	.09	.10
23	.21	.94	3.8	7.3	412	122	217	149	58	.44	.07	.09
24	.23	.93	4.0	7.5	409	125	192	147	49	.30	.06	.09
25	.22	.93	4.0	7.6	294	e185	199	153	53	.16	.07	.09
26	.20	1.7	3.9	5.2	201	266	176	172	46	.46	.06	.09
27	.15	1.7	3.8	4.7	200	273	165	153	40	.57	.06	.09
28	.17	4.7	3.5	4.9	167	492	165	152	37	.24	.05	.09
29	.17	2.8	3.3	13	---	354	162	144	31	.26	.04	.09
30	.16	2.4	3.4	36	---	286	153	134	28	.20	.13	.09
31	.17	---	3.3	20	---	289	---	129	---	.13	1.2	---
TOTAL	4.77	38.86	393.1	1510.0	4424	5173	6965	6169	2454	313.13	69.14	7.76
MEAN	.15	1.30	12.7	48.7	158	167	232	199	81.8	10.1	2.23	.26
MAX	.23	5.7	191	303	412	492	319	399	121	29	23	3.2
MIN	.10	.10	2.7	3.3	10	105	153	129	28	.13	.04	.06
AC-FT	9.5	77	780	3000	8780	10260	13820	12240	4870	621	137	15

e Estimated.

11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.71	4.23	15.5	19.9	56.8	68.8	50.0	23.3	6.59	1.28	1.15	1.23
MAX	14.2	164	283	230	1039	743	312	224	81.8	13.0	13.6	23.1
(WY)	1980	1966	1967	1969	1980	1938	1941	1983	1998	1979	1983	1983
MIN	.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 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1921 - 1998			
ANNUAL TOTAL	3115.89				27521.76							
ANNUAL MEAN	8.54				75.4				20.4			
HIGHEST ANNUAL MEAN									156			
LOWEST ANNUAL MEAN									.075			
HIGHEST DAILY MEAN	191 Dec 8				492 Mar 28				7590 Feb 21 1980			
LOWEST DAILY MEAN	.00 May 31				.04 Aug 29				.00 Oct 1 1920			
ANNUAL SEVEN-DAY MINIMUM	.00 Jun 4				.06 Aug 23				.00 Oct 1 1920			
INSTANTANEOUS PEAK FLOW					1120 Feb 22				45000 Feb 16 1927			
INSTANTANEOUS PEAK STAGE					4.64 Feb 22							
ANNUAL RUNOFF (AC-FT)	6180				54590				14750			
10 PERCENT EXCEEDS	34				229				42			
50 PERCENT EXCEEDS	.28				13				.16			
90 PERCENT EXCEEDS	.00				.10				.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 and concrete control. Elevation of gage is 2,080 ft above sea level, from topographic map. Prior to October 1988 at datum 10.00 ft lower.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Minor diversion upstream from station for irrigation. 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)
Feb. 14	2015	131	1.56	Mar. 28	unknown	unknown	unknown
Feb. 17	0445	131	1.56	Apr. 8	0530	159	1.64
Feb. 24	0815	358	2.11	Apr. 12	1530	173	1.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e45	.00	.00	.00	.00	e.00
2	e.00	.00	.00	.00	.00	.00	19	.00	.00	.00	.00	e.00
3	e.00	.00	.00	.00	e.00	.00	6.9	.07	.00	.00	.00	e.00
4	e.00	.00	.00	.12	e.03	.00	.45	.00	.00	.00	.00	e.00
5	e.00	.00	.00	.00	e.00	.00	.32	1.2	.00	.00	.00	e.00
6	e.00	.00	.00	.00	e.00	2.3	.25	.60	.00	.00	.00	e.00
7	e.00	.00	.00	.00	e.00	.00	.03	.00	.00	.00	.00	e.00
8	e.00	.00	.00	.00	e1.9	.00	15	.00	.00	.00	.00	e.00
9	.00	.00	.00	1.0	e2.3	.00	.00	.00	.00	.00	.00	e.00
10	.00	.00	.00	1.4	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	2.7	.00	.00	.00	.18	.00
12	.00	.00	.00	.00	.00	.00	12	3.8	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	11	.00	.00	.00	.00
14	.00	.00	.00	.00	15	.00	.03	.15	.00	.00	.00	.00
15	.00	.00	.00	e.00	2.1	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	e.00	2.3	.08	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	19	.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	.78	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.86	.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	7.9	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	11	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	221	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	109	3.4	.10	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	10	2.6	.00	1.1	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.29	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	e125	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	e82	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	e30	.00	.00	.00	.00	e.00	.00
31	.00	---	.00	.00	---	e20	---	.00	---	.00	e.00	---
TOTAL	0.00	0.00	0.00	2.52	403.17	265.67	101.78	17.92	0.00	0.00	0.18	0.00
MEAN	.000	.000	.000	.081	14.4	8.57	3.39	.58	.000	.000	.006	.000
MAX	.00	.00	.00	1.4	221	125	45	11	.00	.00	.18	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	5.0	800	527	202	36	.00	.00	.4	.00

e Estimated.

11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.006	.019	.019	3.77	3.88	4.30	.53	.073	.001	.001	.067	.046
MAX	.061	.21	.12	31.1	22.3	26.4	3.39	.58	.011	.010	.55	.50
(WY)	1997	1997	1988	1993	1993	1995	1998	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1988 - 1998			
ANNUAL TOTAL	39.95				791.24							
ANNUAL MEAN	.11				2.17				1.05			
HIGHEST ANNUAL MEAN									4.35			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	9.5 Jan 26				221 Feb 24				298 Jan 16 1993			
LOWEST DAILY MEAN	.00 Jan 1				.00 Oct 1				.00 Oct 1 1987			
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 27				.00 Oct 1				.00 Oct 1 1987			
INSTANTANEOUS PEAK FLOW					358 Feb 24				1310 Jan 16 1993			
INSTANTANEOUS PEAK STAGE					2.11 Feb 24				3.53 Jan 16 1993			
ANNUAL RUNOFF (AC-FT)	79				1570				759			
10 PERCENT EXCEEDS	.00				.27				.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 400 ft upstream from State Street Bridge, 5.5 mi downstream from confluence with Bautista Creek, and 2.5 mi northwest of San Jacinto.

DRAINAGE AREA.—252 mi².

PERIOD OF RECORD.—October 1996 to current year.

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, 1,570 ft³/s, Feb. 23, 1998, gage height, 4.53 ft, from rating curve extended above 880 ft³/s; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—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)
Feb. 8	0700	595	3.43	Apr. 3	0715	617	3.65
Feb. 14	2330	574	3.81	Apr. 14	2045	337	3.57
Feb. 23	0200	1,570	4.53	May 7	2145	532	3.72
Mar. 28	1130	639	3.67	May 13	2100	617	3.72

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	49	256	23	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	37	318	23	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	21	360	11	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	21	292	1.9	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	17	341	75	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	30	313	211	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	20	193	163	.00	.00	.00	.00
8	.00	.00	.00	.00	e211	3.1	197	42	.00	.00	.00	.00
9	.00	.00	.00	.00	e60	.00	157	50	.00	.00	.00	.00
10	.00	.00	.00	.00	e22	.00	173	61	.00	.00	.00	.00
11	.00	.00	.00	.00	e5.0	.00	178	40	.00	.00	.00	.00
12	.00	.00	.00	.00	e.00	.00	180	92	.00	.00	.00	.00
13	.00	.00	.00	.00	e.00	.00	127	396	.00	.00	.00	.00
14	.00	.00	.00	.00	e110	.00	183	271	.00	.00	.00	.00
15	.00	.00	.00	.00	219	.00	128	220	.00	.00	.00	.00
16	.00	.00	.00	.00	e75	.00	94	243	.00	.00	.00	.00
17	.00	.00	.00	.00	e67	.00	81	220	.00	.00	.00	.00
18	.00	.00	.00	.00	e80	.00	84	136	.00	.00	.00	.00
19	.00	.00	.00	.00	e45	.00	86	82	.00	.00	.00	.00
20	.00	.00	.00	.00	e30	.00	171	60	.00	.00	.00	.00
21	.00	.00	.00	.00	e20	.00	179	28	.00	.00	.00	.00
22	.00	.00	.00	.00	e250	.00	124	8.3	.00	.00	.00	.00
23	.00	.00	.00	.00	e500	.00	116	3.3	.00	.00	.00	.00
24	.00	.00	.00	.00	880	.00	26	.06	.00	.00	.00	.00
25	.00	.00	.00	.00	549	.00	40	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	156	.00	41	12	.00	.00	.00	.00
27	.00	.00	.00	.00	66	.00	33	2.8	.00	.00	.00	.00
28	.00	.00	.00	.00	67	274	29	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	269	28	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	271	18	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	326	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	3412.00	1338.10	4546	2475.36	0.00	0.00	0.00	0.00
MEAN	.0000	.0000	.0000	.0000	122	43.2	152	79.9	.0000	.0000	.0000	.0000
MAX	.00	.00	.00	.00	880	326	360	396	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	18	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	6770	2650	9020	4910	.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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.000	.000	.040	60.9	21.6	75.8	39.9	.000	.000	.000	.000
MAX	.000	.000	.000	.081	122	43.2	152	79.9	.000	.000	.000	.000
(WY)	1997	1997	1997	1997	1998	1998	1998	1998	1997	1997	1997	1997
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1997	1997	1997	1998	1997	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1997 - 1998			
ANNUAL TOTAL	2.50				11771.46							
ANNUAL MEAN	.007				32.3				16.1			
HIGHEST ANNUAL MEAN									32.3			
LOWEST ANNUAL MEAN									.007			
HIGHEST DAILY MEAN	2.5 Jan 26				880 Feb 24				880 Feb 24 1998			
LOWEST DAILY MEAN	.00 Jan 1				.00 Oct 1				.00 Oct 1 1996			
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1				.00 Oct 1				.00 Oct 1 1996			
INSTANTANEOUS PEAK FLOW					1570 Feb 23				1570 Feb 23 1998			
INSTANTANEOUS PEAK STAGE					4.53 Feb 23				4.53 Feb 23 1998			
ANNUAL RUNOFF (AC-FT)	5.0				23350				11680			
10 PERCENT EXCEEDS	.00				125				21			
50 PERCENT EXCEEDS	.00				.00				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA

LOCATION.—Lat 33°48'04", long 117°12'19", in SW 1/4 SW 1/4 sec.21, T.4 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank 1.9 mi northeast of Perris and 2.0 mi upstream from San Jacinto River.

DRAINAGE AREA.—93.3 mi².

PERIOD OF RECORD.—October 1969 to September 1975, October 1989 to September 1997 (see REMARKS).

PRECIPITATION DATA: Water years 1990–97.

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.—Gage not operated during 1998 water year (see COOPERATION). Some regulation by percolation basins upstream from station. Some pumping for irrigation upstream from station. See schematic diagram of Santa Ana River Basin.

COOPERATION.—Station to be operated by Riverside County Flood Control and Water Conservation District, under general supervision of the U.S. Geological Survey, but no data was collected during 1998 water year.

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.

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.26	1.3	.98	.83	60	31	.88	.72	.21	.11	.00
2	.19	.22	1.2	.98	.83	51	45	.90	.77	.24	.05	.00
3	.29	.26	1.1	.99	6.1	38	19	.95	.78	.27	.01	.00
4	.56	.26	1.0	1.0	7.0	28	7.1	.96	.76	.29	.00	.02
5	.29	.28	1.0	1.0	2.2	21	4.0	1.1	.76	.25	.00	.24
6	.29	.29	.25	1.0	3.5	22	2.7	1.1	.72	.20	.00	.10
7	.29	.29	7.7	1.0	91	37	2.1	1.1	.76	.26	.00	.03
8	.29	.35	2.8	.98	718	21	1.7	1.3	.77	.21	.00	.01
9	.29	.37	1.8	1.1	328	16	1.4	1.1	.70	.13	.00	.04
10	.29	.40	1.7	5.6	133	13	1.2	1.1	.69	.09	.61	.11
11	.33	.47	1.4	1.5	72	8.9	1.4	1.1	.77	.04	.39	.23
12	.33	.48	1.3	1.2	53	6.9	1.6	1.2	.80	.09	.45	.28
13	.29	.77	1.1	1.1	6.6	5.9	2.2	3.8	.69	.12	.29	.35
14	.26	.89	1.1	1.1	37	11	1.9	.87	.62	.05	.19	.35
15	.22	.74	3.8	1.1	276	9.2	1.5	.47	.59	.02	.11	.19
16	.26	.74	1.9	1.0	158	6.7	1.3	13	.65	.00	.09	.07
17	.22	.72	1.0	1.0	235	5.2	1.2	4.7	.67	.02	.14	.10
18	.22	.69	.98	1.0	215	5.1	1.1	2.2	.54	.00	.19	.15
19	.26	.69	1.1	1.0	106	3.1	1.1	1.4	.49	.00	.16	.11
20	.29	.69	.98	1.0	114	2.4	1.1	1.1	.52	.00	.12	.12
21	.33	.69	.98	.98	116	2.1	1.1	.99	.52	.08	.10	.18
22	.33	.69	1.0	.93	157	2.0	1.0	.90	.46	.11	.06	.21
23	.37	.69	1.6	.91	543	1.7	.99	.84	.45	.10	.01	.19
24	.37	.69	1.0	.88	3710	1.6	1.0	.81	.45	.14	.00	.21
25	.37	.69	1.0	.83	279	3.1	1.0	.78	.42	.24	.00	.18
26	.33	1.0	.98	.83	125	5.2	1.0	.74	.41	.10	.00	.21
27	.33	1.3	.98	.83	90	14	1.0	.71	.39	.04	.00	.26
28	.33	1.0	.98	.83	72	22	.90	.68	.34	.02	.00	.32
29	.37	.98	.98	.85	---	65	.86	.68	.25	.02	.00	.38
30	.29	1.2	.98	.83	---	36	.83	.69	.22	.26	.00	.41
31	.29	---	.98	.83	---	8.8	---	.67	---	.21	.00	---
TOTAL	9.33	18.79	70.72	35.16	7655.06	532.9	139.28	181.48	17.68	3.81	3.08	5.05
MEAN	.30	.63	2.28	1.13	273	17.2	4.64	5.85	.59	.12	.099	.17
MAX	.56	1.3	.25	5.6	3710	65	45	.87	.80	.29	.61	.41
MIN	.16	.22	.98	.83	.83	1.6	.83	.67	.22	.00	.00	.00
AC-FT	19	37	140	70	15180	1060	276	360	35	7.6	6.1	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.59	.76	5.10	36.1	90.4	73.3	23.7	5.64	.79	.60	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1916 - 1998

ANNUAL TOTAL	1671.75	8672.34	
ANNUAL MEAN	4.58	23.8	17.5
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	685	Jan 27	14000
LOWEST DAILY MEAN	.00	Jun 18	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 18	.00
INSTANTANEOUS PEAK FLOW		5980	16000
INSTANTANEOUS PEAK STAGE		11.48	11.80
ANNUAL RUNOFF (AC-FT)	3320	17200	12670
10 PERCENT EXCEEDS	2.4	21	4.1
50 PERCENT EXCEEDS	.37	.78	.10
90 PERCENT EXCEEDS	.00	.07	.00

11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA

LOCATION.—Lat 33°53'21", long 117°33'43", in La Sierra Grant, Riverside County, Hydrologic Unit 18070203, on right bank 500 ft upstream from Main Street Bridge in Corona and 1.5 mi upstream from topographic boundary of Prado Flood Control Basin.

DRAINAGE AREA.—224 mi², excludes 768 mi² above Lake Elsinore.

PERIOD OF RECORD.—October 1980 to July 1983, February 1984 to current year. December 1967 to September 1974, water-stage recorder at site 1.2 mi downstream at different datum (published as station 11072200, Temescal Creek at Corona).

GAGE.—Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 600 ft above sea level, from topographic map. October 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow regulated by several small storage reservoirs. Many diversions upstream from station for irrigation. Water discharged to channel from Arlington Desalter at times since September 1990; records for water years 1981 to 1990 and 1991 to current year are not equivalent. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,720 ft³/s, Mar. 1, 1983, gage height, 11.67 ft, site and datum then in use, on basis of slope-conveyance study; minimum daily, 0.27 ft³/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 8,850 ft³/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site (station 11072200) 1.2 mi downstream on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.9	e10	12	2.4	1.6	148	124	e16	e30	15	5.2	14
2	12	e9.7	8.6	2.7	1.3	112	87	e15	e29	17	6.1	18
3	12	e9.5	8.4	4.1	282	76	91	e15	e29	15	10	15
4	13	e9.3	8.3	17	13	47	83	e14	e28	15	16	14
5	11	e9.1	8.4	2.9	3.4	32	81	186	e29	16	10	14
6	11	e9.1	602	3.6	254	63	75	27	e28	16	15	12
7	12	e9.1	74	3.5	300	28	71	19	e27	17	17	13
8	11	e9.2	8.5	3.0	691	25	63	15	e25	16	5.7	12
9	12	e9.0	1.9	74	187	26	57	15	e25	16	12	6.1
10	12	40	1.7	187	77	24	56	15	e25	16	16	12
11	12	14	2.0	2.4	44	19	e54	18	e23	16	18	12
12	13	12	1.6	2.1	28	17	e54	51	e24	18	7.2	11
13	13	76	2.0	3.0	17	24	e53	126	e24	22	4.3	12
14	e13	11	1.8	1.8	543	86	e52	e72	e23	21	7.3	12
15	e13	8.3	2.1	1.9	351	30	e50	e65	e23	22	12	11
16	e12	9.0	2.1	2.0	128	30	e46	e60	e21	23	13	13
17	e12	9.0	2.1	1.7	282	31	e45	e56	e20	19	14	14
18	e12	8.9	30	1.7	130	31	e41	e52	e19	15	15	13
19	e11	9.6	2.6	5.5	119	28	e37	e47	e20	14	12	9.8
20	e11	13	2.0	1.5	146	27	e32	e45	e19	13	12	9.1
21	e12	8.7	5.8	1.7	66	27	e29	e40	e18	13	13	13
22	e12	12	2.1	1.6	561	27	e26	e38	e17	14	11	11
23	e11	12	1.9	1.6	895	26	e24	e36	e17	17	11	10
24	e11	13	1.9	2.0	2090	27	e22	e35	e17	22	11	10
25	e11	16	1.8	1.6	684	182	e20	e35	e18	21	11	12
26	e11	87	1.8	1.5	392	78	e20	e34	e18	12	11	11
27	e11	30	1.9	1.5	251	80	e19	e33	e17	6.8	11	10
28	e11	10	2.0	1.6	185	230	e20	e32	e17	9.9	11	9.8
29	e11	9.3	2.1	40	---	104	e19	e32	e16	12	10	9.3
30	e10	36	2.3	1.4	---	77	e18	e31	e16	15	10	10
31	e10	---	2.2	7.4	---	185	---	e30	---	7.0	12	---
TOTAL	358.9	528.8	807.9	385.7	8722.3	1947	1469	1305	662	491.7	349.8	353.1
MEAN	11.6	17.6	26.1	12.4	312	62.8	49.0	42.1	22.1	15.9	11.3	11.8
MAX	13	87	602	187	2090	230	124	186	30	23	18	18
MIN	9.9	8.3	1.6	1.4	1.3	17	18	14	16	6.8	4.3	6.1
AC-FT	712	1050	1600	765	17300	3860	2910	2590	1310	975	694	700

e Estimated.

11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1990, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.62	15.1	23.8	23.0	14.5	40.9	13.1	12.0	9.35	7.15	6.45	6.99
MAX	16.1	55.9	126	116	25.5	237	39.3	43.7	30.0	10.9	13.4	11.3
(WY)	1986	1981	1981	1981	1981	1983	1983	1983	1983	1985	1990	1985
MIN	2.36	4.67	2.53	7.01	7.42	6.26	4.02	3.77	1.12	1.20	1.79	1.09
(WY)	1985	1987	1982	1989	1982	1990	1989	1982	1982	1982	1982	1981

SUMMARY STATISTICS

WATER YEARS 1981 - 1990

ANNUAL MEAN	12.4	
HIGHEST ANNUAL MEAN	33.7	1981
LOWEST ANNUAL MEAN	6.10	1987
HIGHEST DAILY MEAN	1720	Mar 1 1983
LOWEST DAILY MEAN	.27	Sep 25 1981
ANNUAL SEVEN-DAY MINIMUM	.56	Sep 23 1981
INSTANTANEOUS PEAK FLOW	4720	Mar 1 1983
INSTANTANEOUS PEAK STAGE	11.67	Mar 1 1983
ANNUAL RUNOFF (AC-FT)	8990	
10 PERCENT EXCEEDS	27	
50 PERCENT EXCEEDS	6.1	
90 PERCENT EXCEEDS	2.7	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.5	15.2	17.9	54.5	119	89.0	44.5	28.2	16.7	13.8	12.1	12.2
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	12.4	15.4	11.2	2.89	3.24	7.33	3.56	6.98	7.08
(WY)	1996	1996	1995	1998	1997	1997	1991	1992	1992	1994	1994	1995

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1991 - 1998

ANNUAL TOTAL	5758.9		17381.2									
ANNUAL MEAN	15.8		47.6							35.8		
HIGHEST ANNUAL MEAN										81.8		1995
LOWEST ANNUAL MEAN										14.2		1992
HIGHEST DAILY MEAN	602	Dec 6				2090	Feb 24			2090	Feb 24	1998
LOWEST DAILY MEAN	1.6	Dec 12				1.3	Feb 2			.34	Jul 3	1992
ANNUAL SEVEN-DAY MINIMUM	1.9	Dec 9				1.6	Jan 22			.89	Jan 13	1992
INSTANTANEOUS PEAK FLOW						3660	Feb 24			3660	Feb 24	1998
INSTANTANEOUS PEAK STAGE						6.54	Feb 24			6.54	Feb 24	1998
ANNUAL RUNOFF (AC-FT)	11420					34480				25950		
10 PERCENT EXCEEDS	14					80				65		
50 PERCENT EXCEEDS	11					15				13		
90 PERCENT EXCEEDS	8.1					2.2				4.2		

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.

WATER-DISCHARGE RECORDS

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 fair above 10 ft³/s and poor 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 2,880 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	3.7	2.6	1.8	2.8	6.2	23	3.4	e65	3.6	28	3.8
2	264	6.1	1.9	1.8	2.8	6.5	6.4	4.4	e41	4.1	28	21
3	280	3.6	1.8	23	349	6.2	15	4.5	e35	3.4	27	2.9
4	207	3.8	1.7	108	8.3	6.2	8.0	52	e45	3.4	27	2.7
5	7.2	3.5	3.2	3.2	3.7	21	5.3	108	e39	3.2	16	2.8
6	4.0	3.4	535	2.2	360	47	4.2	35	33	2.9	2.4	2.6
7	3.7	2.7	30	2.1	700	6.1	4.3	4.2	34	3.1	2.4	2.5
8	4.1	3.5	5.3	1.8	215	5.2	3.8	3.2	36	3.0	2.2	2.5
9	2.5	4.1	2.8	648	19	5.2	3.7	2.8	36	3.0	2.1	2.5
10	2.9	81	2.5	143	4.3	5.1	3.3	2.6	36	3.0	2.2	2.4
11	3.0	4.7	2.1	5.0	3.8	4.2	33	2.6	26	3.0	2.1	2.5
12	2.2	4.3	2.6	3.6	3.8	4.1	4.1	93	5.7	2.6	2.2	2.5
13	4.1	70	2.3	3.7	3.3	17	15	137	3.7	2.6	2.1	2.4
14	3.9	3.4	2.1	2.7	380	46	3.5	13	3.3	2.7	2.1	2.5
15	3.0	2.5	2.1	2.9	9.4	4.8	3.7	4.2	3.1	2.6	2.2	2.5
16	5.6	2.9	2.2	2.8	13	7.5	3.2	42	3.4	2.8	2.2	2.4
17	3.0	1.7	2.0	3.1	82	5.0	3.1	53	3.3	2.7	2.5	2.3
18	2.8	1.8	30	2.7	4.8	4.3	3.4	8.7	3.2	2.8	2.3	2.3
19	3.2	2.1	2.4	42	78	4.3	3.6	e3.5	3.2	2.9	2.1	2.4
20	3.6	2.4	1.7	3.2	23	4.3	3.8	e15	3.1	2.5	2.1	2.8
21	3.0	2.1	15	2.6	4.8	4.3	2.4	e57	3.0	15	2.1	2.8
22	3.5	2.1	2.0	2.7	460	4.3	2.9	e79	3.1	27	2.1	2.7
23	3.3	2.4	1.8	2.5	673	4.8	2.7	e80	3.1	28	2.0	2.4
24	2.7	2.3	1.6	2.9	211	5.0	3.3	e82	3.3	27	2.0	2.6
25	2.5	1.8	1.8	2.8	12	241	3.0	e84	3.4	29	2.2	2.4
26	3.1	160	2.0	4.1	9.1	9.2	3.5	e83	3.3	28	2.3	2.4
27	2.2	6.1	2.0	2.8	7.4	24	3.5	e57	3.1	28	2.3	2.5
28	3.0	1.8	1.5	3.0	6.7	96	3.6	e58	3.0	29	2.2	2.5
29	3.9	1.6	1.6	85	---	6.7	3.6	e60	3.2	30	2.1	2.4
30	3.6	34	2.2	3.4	---	6.2	4.1	e65	3.2	31	2.1	2.6
31	4.4	---	1.9	2.9	---	26	---	e67	---	29	5.9	---
TOTAL	1056.0	425.4	669.7	1121.3	3650.0	643.7	186.0	1364.1	489.7	360.9	186.5	95.6
MEAN	34.1	14.2	21.6	36.2	130	20.8	6.20	44.0	16.3	11.6	6.02	3.19
MAX	280	160	535	648	700	241	33	137	65	31	28	21
MIN	2.2	1.6	1.5	1.8	2.8	4.1	2.4	2.6	3.0	2.5	2.0	2.3
AC-FT	2090	844	1330	2220	7240	1280	369	2710	971	716	370	190

e Estimated.

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.7	16.2	27.9	35.1	38.9	31.4	10.2	14.5	21.1	21.5	17.5	15.6
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1970 - 1998	
ANNUAL TOTAL	25590.50		10248.9			
ANNUAL MEAN	70.1		28.1		21.9	
HIGHEST ANNUAL MEAN					92.4	1974
LOWEST ANNUAL MEAN					3.24	1970
HIGHEST DAILY MEAN	535	Dec 6	700	Feb 7	2060	Mar 1 1978
LOWEST DAILY MEAN	.74	Jan 10	1.5	Dec 28	.00	May 21 1977
ANNUAL SEVEN-DAY MINIMUM	1.1	Feb 20	1.8	Dec 23	.02	Oct 28 1977
INSTANTANEOUS PEAK FLOW			6030	Feb 7	12700	Feb 27 1983
INSTANTANEOUS PEAK STAGE			8.16	Feb 7	10.32	Feb 27 1983
ANNUAL RUNOFF (AC-FT)	50760		20330		15870	
10 PERCENT EXCEEDS	199		59		82	
50 PERCENT EXCEEDS	20		3.4		1.1	
90 PERCENT EXCEEDS	1.2		2.1		.32	

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—November 1997 to September 1998.

CHEMICAL DATA: November 1997 to September 1998.

SEDIMENT DATA: November 1997 to September 1998.

REMARKS.—Chemical data collected for the National Water-Quality Assessment Program (NAWQA).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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-AIRE (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CAC03 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
NOV 06...	1630	2.4	900	8.70	24.0	20.0	748	8.50	96	300	200	78	
FEB 03...	0930	1730	40.0	7.80	12.5	13.0	736	11.4	112	11	--	3.5	
DATE		MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD 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)	
NOV 06...	24	65	32	2	4.4	99	6	91	180	110	.5	27	
FEB 03...	.40	1.9	26	.3	1.2	13.0	--	11.0	2.5	1.4	<.1	.68	
DATE		SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	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)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00665)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	
NOV 06...	581	547	.79	.18	1.7	.35	2.4	2.3	.03	.03	.03	5	
FEB 03...	26	21	.04	.02	.52	.55	1.7	.8	.42	.13	.13	20	
DATE		ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
NOV 06...	<1	2	54	<1	<1	2	<1	10	4	<1	3	15	
FEB 03...	<1	<1	5	<1	<1	<1	<1	4	24	<1	8	<1	

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)
NOV 06...	2	2	<1	4	4	5.6	.2	<.132	<.088	<.052	<.064	<.128
FEB 03...	1	<1	<1	22	<1	6.6	8.7	<.132	<.088	<.052	<.064	<.128
DATE	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	1,2,3- TRI- CHLORO BENZENE WAT, WH REC (UG/L) (77613)	1,3-DI- CHLORO- PROPANE WAT, WH TOTAL (UG/L) (77173)	2BUTENE TRANS-1 4-DI- CHLORO CHLORO RECOVER (UG/L) (73547)	2-HEXA- NONE WATER WHOLE TOTAL (UG/L) (77103)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	123-TRI CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRO- LEIN TOTAL (UG/L) (34210)	ACRYLO- NITRILE TOTAL (UG/L) (34215)
NOV 06...	<.072	<.268	<.136	<.532	<.232	<1.38	<1.49	<.156	<.14	10.8	--	<2.45
FEB 03...	<.072	<.268	<.136	<.532	<.232	<1.38	<1.49	<.156	<.14	19.7	<500	<2.45
DATE	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	BENZENE 123-TRI METHYL- WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 124-TRI METHYL WATER UNFLTRD RECOVER (UG/L) (77222)	BENZENE 135-TRI METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE N-BUTYL WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)	BENZENE TOTAL (UG/L) (34030)
NOV 06...	<.376	<.108	<.1	<.248	<.112	<.088	<.372	<.084	<.096	<.096	<.192	<.064
FEB 03...	<.376	<.108	<.1	<.248	E.041	<.088	<.372	<.084	<.096	<.096	<.192	E.036
DATE	BROMO- BENZENE WATER, WHOLE TOTAL (UG/L) (81555)	BROMO- DI- CHLORO- METHANE WATER WHOLE (UG/L) (32101)	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM WATER UNFLTRD TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE WATER UNFLTRD TOTAL (UG/L) (34301)	CHLORO- BROMO- METHANE WATER UNFLTRD TOTAL (UG/L) (32105)	CHLORO- ETHANE WATER UNFLTRD TOTAL (UG/L) (34311)	CHLORO- FORM WATER UNFLTRD TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)
NOV 06...	<.072	<.096	<.2	<.208	<.16	<.176	<.056	<.364	<.24	<.104	<.076	<.184
FEB 03...	<.072	<.096	<.2	<.208	<.16	<.176	<.056	<.364	<.24	E.022	<.076	<.184
DATE	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER TERT- ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL ETHYL WATER UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL WATER UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)
NOV 06...	<.428	<.1	<.192	<.196	<.264	<.088	<.724	<.34	<.108	<.224	<.06	<.064
FEB 03...	<.428	<.1	<.192	<.196	<.264	<.088	<.724	<.34	<.108	<.224	E.02	<.064

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)	ISO- DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)	META/ XYLENE WATER UNFLTRD REC (UG/L) (85795)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (UG/L) (73570)	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (UG/L) (81597)	METH- ACRYLO- NITRITE WATER UNFLTRD RECOVER (UG/L) (81593)	METHANE BROMO- CHLORO- WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL ISO- BUTYL KETONE WAT. WH. TOTAL (UG/L) (78133)
NOV 06...	<2.30	<.284	<.48	<.064	<.128	<.556	<.7	<1.14	<.088	<1.22	<.152	<.748
FEB 03...	<2.30	<.284	<.48	<.064	E.069	<.556	<.7	<1.14	<.088	<1.22	<.152	E.3
DATE	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	METHYL- ETHYL- KETONE WATER WHOLE TOTAL (UG/L) (81595)	O- CHLORO- TOLUENE WATER NAPHTH- ALENE TOTAL (UG/L) (34696)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77275)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	PREH- NITENE WATER UNFLTRD RECOVER (UG/L) (49999)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)
NOV 06...	.695	<.296	<.508	<.764	<3.3	<.5	<.084	<.128	<.22	<.46	<.392	<.084
FEB 03...	.996	<.296	<.508	<.764	<3.3	E.09	<.084	E.04	E.014	<.46	<.392	E.023
1												
DATE	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE ETHENE TOTAL (UG/L) (34010)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	2,4-D, DIS- SOLVED REC (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,4,5-T DIS- SOLVED REC (UG/L) (39742)
NOV 06...	<.076	<.2	<.112	E.059	<.064	<.268	<.076	<.184	<.224	<.035	<.035	<.035
FEB 03...	E.021	<.2	<.112	E.13	<.064	<.268	<.076	<.184	<.224	<.15	<.24	<.035
DATE	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS- SOLVED REC (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)
NOV 06...	<.003	<.014	<.002	<.035	<.002	<.016	<.016	<.021	<.002	.0057	<.002	<.014
FEB 03...	<.003	<.014	<.002	<.035	<.002	<.55	<.1	<.021	<.002	<.001	<.002	<.014
DATE	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- AMBEN, WATER, FLTRD, GF 0.7U REC (UG/L) (49307)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED REC (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
NOV 06...	<.035	<.035	<.002	<.003	<.003	<.011	<.035	.0089	<.05	<.004	<.017	E.00062
FEB 03...	<.035	<.035	<.002	E.349	<.003	<.42	<.48	.0328	<.23	<.004	<.017	.0060

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U (UG/L) (38442)	DICHLOR- BENIL, WATER, FLTRD, GF 0.7U (UG/L) (49303)	DICHLOR PROP, WATER, FLTRD, GF 0.7U (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U (UG/L) (49301)	DISUL- FOTON WATER, FLTRD 0.7 U (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U (UG/L) (49300)	DNOC WAT,FLT GF 0.7U (UG/L) (49299)	EPTC WATER FLTRD 0.7 U (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
NOV 06...	E.0065	16	<.035	<.02	<.032	<.001	<.035	<.017	E30	<.035	<.002	<.004
FEB 03...	<.002	.256	<.035	<1.2	<.032	<.001	<.035	<.017	E24	<.42	<.0250	<.004
DATE	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U (UG/L) (38811)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U GF (UG/L) (49296)	
NOV 06...	<.003	<.013	<.035	<.003	<.004	<.002	<.005	<.05	<.035	<.026	<.017	
FEB 03...	<.003	<.013	<.035	<.003	.0099	<.002	.0671	<.17	<.14	<.026	<.017	
DATE	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U (UG/L) (49294)	NORFLUR AZON, WATER, FLTRD, GF 0.7U (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U GF (UG/L) (38866)	P, P' DDE DISSOLV (UG/L) (34653)	
NOV 06...	<.001	<.006	<.002	<.004	<.004	<.003	<.015	<.024	<.019	<.018	<.006	
FEB 03...	<.001	<.006	E.0024	<.004	<.004	<.003	<.015	<.024	<.31	<.018	<.006	
DATE	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U (UG/L) (49291)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	
NOV 06...	<.004	<.004	<.004	<.005	<.002	<.05	E.0112	<.003	<.004	<.013	<.007	
FEB 03...	<.004	<.004	<.004	<.005	<.002	<.05	.182	<.003	<.004	<.013	<.007	
DATE	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS- SOLVED (UG/L) (39762)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	
NOV 06...	<.035	<.035	<.021	.0154	<.010	<.007	<.013	<.002	<.001	<.05	<.002	
FEB 03...	<.035	<.035	<.021	.0211	<.010	<.007	<.013	<.002	<.001	<.25	E.0027	

11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 06...	1630	2.4	20.0	--	--	--
FEB 03...	0930	1730	13.0	235	1100	74

11073493 WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA

LOCATION.—Lat 34°02'15", long 117°37'09", in SE 1/4 SW 1/4 sec.33, T.1 S., R.7 W., San Bernardino County, Hydrologic Unit 18070203, on right bank and 700 ft upstream from northwest corner of westernmost of Ely Percolation Basins in Ontario.

DRAINAGE AREA.—6.01 mi².

PERIOD OF RECORD.—October 1996 to current year.

GAGE.—Water-stage recorder and concrete-lined flood control channel. Elevation of gage is 850 ft above sea level, from topographic map.

REMARKS.—Records 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, 1,330 ft³/s, Feb. 7, 1998, gage height, 4.09 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)
Dec. 6	0500	365	2.48	Feb. 14	1645	938	3.53
Jan. 9	2345	1,190	3.89	Feb. 23	1900	1,140	3.82
Feb. 3	1015	525	2.82	Mar. 25	1300	423	2.61
Feb. 7	2300	1,330	4.09				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	3.0	3.7	2.5	4.1	2.9	20	2.7	1.6	1.5	4.0	2.8
2	.30	2.6	2.6	3.1	4.4	3.2	3.1	2.7	2.5	.44	3.8	8.2
3	.28	3.0	2.5	8.1	107	4.1	3.0	2.9	2.7	2.6	3.6	4.1
4	.29	3.1	2.5	20	7.3	3.7	6.0	8.2	2.7	2.6	3.1	1.6
5	.41	2.2	2.7	7.6	2.7	9.5	3.5	40	2.8	2.7	.56	.49
6	.46	2.2	99	2.3	98	23	4.1	19	2.9	2.9	.29	.45
7	.65	2.4	11	2.9	149	3.9	3.1	4.4	2.8	2.7	.37	.39
8	.78	2.4	4.1	2.6	80	3.5	2.7	3.5	3.3	1.8	.26	.31
9	.42	2.4	1.2	147	9.0	3.6	5.6	3.6	4.3	1.5	.29	1.5
10	.62	25	.16	48	3.7	3.4	7.2	3.7	4.4	1.7	.33	2.7
11	.68	6.7	.96	1.2	4.2	3.8	22	3.9	4.3	1.9	.38	2.8
12	.40	3.1	2.4	.77	4.3	4.2	9.6	55	4.1	2.0	.40	3.2
13	2.4	16	2.4	.74	4.7	5.0	12	56	4.0	2.1	.64	3.6
14	3.9	7.1	2.4	1.0	98	22	3.7	17	3.0	2.3	.41	2.9
15	2.8	3.4	2.7	.50	8.3	1.2	3.4	4.1	1.7	2.1	.58	3.5
16	1.2	3.4	3.0	.71	2.6	4.8	2.9	3.5	1.8	2.0	.67	2.9
17	1.5	1.2	2.5	.54	27	2.6	3.0	3.7	1.9	2.1	.80	.93
18	2.4	2.6	2.5	1.7	3.6	2.6	2.9	3.4	1.9	2.1	.86	.68
19	2.3	2.3	2.1	8.4	16	2.8	2.2	3.2	1.9	2.4	1.1	.51
20	3.1	2.3	2.1	3.4	19	3.2	2.3	3.1	1.8	2.5	.54	.88
21	3.6	2.4	4.8	4.1	1.4	3.5	3.3	3.3	1.8	2.5	1.5	1.6
22	3.6	2.4	.85	2.8	119	3.6	2.8	2.8	1.7	2.5	3.6	1.4
23	4.3	2.3	1.9	2.2	234	3.9	2.7	2.8	3.3	2.7	3.6	1.9
24	3.3	2.4	2.0	3.5	60	3.8	3.1	3.0	3.5	2.6	3.3	1.8
25	1.6	4.2	1.9	2.4	3.0	61	3.2	2.6	2.4	2.4	2.8	1.9
26	1.3	35	2.0	.25	2.6	13	2.8	3.5	2.5	2.5	3.0	2.3
27	2.0	4.7	2.2	2.3	3.7	8.0	2.4	3.2	2.5	2.5	2.7	2.3
28	1.9	3.4	2.0	3.6	3.2	40	2.3	3.1	2.6	3.8	2.6	2.0
29	1.7	2.7	2.1	20	---	3.0	2.3	3.3	2.4	4.0	2.8	3.0
30	3.1	8.6	2.3	3.7	---	.54	2.3	2.9	2.3	4.3	2.6	2.1
31	2.9	---	2.4	3.6	---	20	---	2.3	---	4.2	3.5	---
TOTAL	54.56	164.5	176.97	311.51	1079.8	273.34	149.5	276.4	81.4	75.94	54.98	64.74
MEAN	1.76	5.48	5.71	10.0	38.6	8.82	4.98	8.92	2.71	2.45	1.77	2.16
MAX	4.3	35	99	147	234	61	22	56	4.4	4.3	4.0	8.2
MIN	.28	1.2	.16	.25	1.4	.54	2.2	2.3	1.6	.44	.26	.31
AC-FT	108	326	351	618	2140	542	297	548	161	151	109	128

11073493 WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.39	6.85	7.87	15.2	20.1	5.07	3.27	4.77	1.53	1.30	.98	2.17
MAX	3.02	8.22	10.0	20.3	38.6	8.82	4.98	8.92	2.71	2.45	1.77	2.19
(WY)	1997	1997	1997	1997	1998	1998	1998	1998	1998	1998	1998	1997
MIN	1.76	5.48	5.71	10.0	1.59	1.33	1.56	.62	.34	.16	.18	2.16
(WY)	1998	1998	1998	1998	1997	1997	1997	1997	1997	1997	1997	1998

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1997 - 1998			
ANNUAL TOTAL	1263.77				2763.64							
ANNUAL MEAN	3.46				7.57				5.87			
HIGHEST ANNUAL MEAN									7.57			
LOWEST ANNUAL MEAN									4.16			
HIGHEST DAILY MEAN	129				234				234			
LOWEST DAILY MEAN	.00				.16				.00			
ANNUAL SEVEN-DAY MINIMUM	.01				.33				.01			
INSTANTANEOUS PEAK FLOW					1330				1330			
INSTANTANEOUS PEAK STAGE					4.09				4.09			
ANNUAL RUNOFF (AC-FT)	2510				5480				4250			
10 PERCENT EXCEEDS	4.1				9.2				8.1			
50 PERCENT EXCEEDS	1.2				2.8				2.1			
90 PERCENT EXCEEDS	.08				.70				.22			

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 except for discharges below 100 ft³/s and estimated daily discharges, which are poor. Channel is a trapezoidal concrete floodway; records for low and medium flows prior to July 31, 1977, are not equivalent (channel concrete lined since July 31, 1977). Chino Basin Municipal Water District Tertiary Plant No. 1 began discharging effluent 1.5 mi upstream from station on May 8, 1985. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,100 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	32	39	e30	32	27	133	e40	e33	e31	e30	e29
2	30	37	34	64	35	25	65	e39	e33	e30	e30	e29
3	28	e35	29	128	613	29	e60	e38	e31	e30	e28	28
4	27	e33	28	148	60	33	e70	e42	e31	e30	e27	25
5	31	e32	28	33	36	62	e58	e150	e31	e30	e27	22
6	34	e30	541	32	727	101	e65	e90	e33	e29	25	22
7	48	e30	119	29	999	43	e50	e75	e33	e29	26	24
8	32	e32	63	29	692	e39	e42	e70	e34	e30	30	30
9	35	44	37	686	67	e37	e45	e60	e32	e30	45	28
10	39	167	28	423	48	e37	e46	e52	e32	e30	25	27
11	38	33	28	39	37	e38	e188	e49	e29	e31	27	23
12	37	35	33	31	33	e36	e70	e190	e30	e33	25	24
13	e36	122	29	25	30	e38	e166	e200	e30	e32	28	27
14	e35	32	28	e28	602	e104	e50	e80	e32	e30	29	29
15	e33	28	30	e30	41	e39	e49	e75	e32	e30	e29	26
16	e32	31	29	e30	40	e37	e47	e63	e31	e30	e28	24
17	e30	36	31	e29	108	e33	e45	e58	e33	e30	e27	25
18	e30	31	33	e30	32	e34	e45	e52	e33	e32	e27	26
19	e31	e30	33	e50	96	e35	e45	e49	e33	e31	e28	24
20	e32	e31	35	e35	77	e32	e44	e46	e34	e33	e28	27
21	e32	e32	55	e34	30	e33	e43	e45	e33	e32	e27	34
22	e38	e32	30	e34	849	e33	e42	e44	e33	e31	e27	33
23	e36	e31	21	e33	2080	e34	e42	e40	e34	e31	e27	30
24	e35	e31	34	e34	873	e35	e43	e40	e33	e30	e28	29
25	e35	e32	30	e34	153	341	e43	e40	e34	e31	e28	31
26	e33	204	33	33	65	67	e41	e39	e34	e31	e27	25
27	e33	42	e31	36	37	139	e42	e40	e33	e31	e27	36
28	e32	29	e30	39	29	327	e41	e39	e33	e30	e28	35
29	e32	32	e30	138	---	73	e40	e37	e32	e30	e28	31
30	e34	58	e31	34	---	57	e40	e36	e32	e30	e27	31
31	36	---	e30	28	---	162	---	e34	---	e29	e28	---
TOTAL	1043	1404	1610	2406	8521	2160	1800	1952	971	947	871	834
MEAN	33.6	46.8	51.9	77.6	304	69.7	60.0	63.0	32.4	30.5	28.1	27.8
MAX	48	204	541	686	2080	341	188	200	34	33	45	36
MIN	27	28	21	25	29	25	40	34	29	29	25	22
AC-FT	2070	2780	3190	4770	16900	4280	3570	3870	1930	1880	1730	1650

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
LOWEST ANNUAL MEAN	.16
HIGHEST DAILY MEAN	2600
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	9100
INSTANTANEOUS PEAK STAGE	7.08
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
LOWEST ANNUAL MEAN	1.51
HIGHEST DAILY MEAN	2530
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	16100
INSTANTANEOUS PEAK STAGE	7.85
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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.8	37.4	44.6	82.9	96.4	66.4	35.8	31.0	31.1	29.0	29.8	35.3
MAX	52.9	65.7	83.0	265	304	198	60.0	63.0	57.1	46.2	51.8	52.0
(WY)	1988	1997	1993	1993	1998	1995	1998	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1986 - 1998

ANNUAL TOTAL	16516	24519	
ANNUAL MEAN	45.2	67.2	
HIGHEST ANNUAL MEAN			71.4
LOWEST ANNUAL MEAN			26.6
HIGHEST DAILY MEAN	772	Jan 26	2080
LOWEST DAILY MEAN	21	Dec 23	21
ANNUAL SEVEN-DAY MINIMUM	29	Dec 10	25
INSTANTANEOUS PEAK FLOW			9280
INSTANTANEOUS PEAK STAGE			5.17
ANNUAL RUNOFF (AC-FT)	32760	48630	33350
10 PERCENT EXCEEDS	44	76	55
50 PERCENT EXCEEDS	34	33	31
90 PERCENT EXCEEDS	30	28	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 excellent except for discharges above 2,500 ft³/s and estimated daily discharges, which are fair. 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 2,880 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	206	510	224	264	2840	1780	520	632	519	366	219
2	444	204	584	260	259	1610	860	519	680	537	357	249
3	481	218	387	282	552	559	652	520	571	532	367	344
4	459	202	219	301	1490	559	521	522	513	527	341	298
5	274	202	227	385	533	547	521	687	513	522	257	311
6	206	203	484	315	1760	996	523	1340	513	517	224	293
7	215	203	2280	282	5030	785	523	1770	514	511	219	261
8	299	205	999	281	5650	523	523	931	508	507	217	264
9	205	211	523	230	5620	521	523	828	497	492	212	245
10	211	256	504	1830	3880	515	523	824	498	477	223	242
11	233	376	500	975	504	514	524	654	499	473	250	236
12	212	353	494	554	497	515	519	871	500	469	294	224
13	203	288	488	516	496	514	519	5040	499	472	222	220
14	196	399	487	484	1490	515	520	2790	493	483	305	219
15	191	385	481	472	5850	512	520	1090	494	456	263	214
16	189	335	476	463	1360	510	520	713	497	405	275	210
17	187	322	471	458	2120	510	519	714	496	431	279	209
18	186	285	401	454	996	509	519	654	500	427	275	207
19	190	213	427	451	504	508	518	538	501	421	267	211
20	146	150	479	449	1660	507	517	537	503	414	247	211
21	61	184	471	444	524	504	516	529	503	409	236	232
22	50	203	458	469	3800	504	518	523	503	402	225	e160
23	124	208	437	475	5970	503	518	524	502	392	220	e106
24	294	211	378	462	6170	504	517	524	500	380	242	e270
25	285	215	203	452	6120	787	518	525	492	371	241	252
26	267	240	248	439	6150	532	519	527	489	367	218	214
27	252	296	224	421	4390	518	520	563	486	378	194	222
28	231	301	263	390	2890	2600	521	813	480	384	174	224
29	206	297	211	239	---	738	521	674	489	389	181	237
30	210	295	198	269	---	703	522	551	491	393	190	249
31	214	---	241	270	---	804	---	553	---	378	191	---
TOTAL	7323	7666	14753	13996	76529	23266	17334	28368	15356	13835	7772	7053
MEAN	236	256	476	451	2733	751	578	915	512	446	251	235
MAX	481	399	2280	1830	6170	2840	1780	5040	680	537	367	344
MIN	50	150	198	224	259	503	516	519	480	367	174	106
AC-FT	14530	15210	29260	27760	151800	46150	34380	56270	30460	27440	15420	13990

e Estimated.

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	102	131	199	318	404	394	244	174	143	116	92.7	88.1
MAX	344	322	709	3543	2733	2556	1101	915	736	446	352	372
(WY)	1984	1997	1967	1993	1998	1980	1980	1998	1983	1998	1983	1997
MIN	22.4	33.5	39.5	49.2	49.8	54.3	43.3	35.2	29.0	17.7	14.8	16.2
(WY)	1962	1963	1963	1963	1961	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998	
ANNUAL TOTAL	126696		233251			
ANNUAL MEAN	347		639		199	
HIGHEST ANNUAL MEAN					789	
LOWEST ANNUAL MEAN					36.4	
HIGHEST DAILY MEAN	4820	Jan 26	6170	Feb 24	6440	Feb 23 1980
LOWEST DAILY MEAN	50	Oct 22	50	Oct 22	2.4	Jul 29 1978
ANNUAL SEVEN-DAY MINIMUM	135	Oct 17	135	Oct 17	3.0	Sep 24 1973
INSTANTANEOUS PEAK FLOW			6790	May 13	7440	Feb 21 1980
INSTANTANEOUS PEAK STAGE			6.94	May 13	7.29	Jan 19 1993
ANNUAL RUNOFF (AC-FT)	251300		462700		144400	
10 PERCENT EXCEEDS	471		841		343	
50 PERCENT EXCEEDS	297		472		114	
90 PERCENT EXCEEDS	212		210		38	

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, 1,130 microsiemens, Dec. 24, 25; minimum recorded, 228 microsiemens, Feb. 3.

WATER TEMPERATURE: Maximum recorded, 29.5°C, Aug. 30; minimum recorded, 8.5°C, Dec. 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT					
02...	1155	443	624	23.0	375
24...	1510	293	926	20.0	570
NOV					
03...	0915	282	925	17.5	589
21...	1430	185	942	18.0	589
DEC					
01...	1630	625	810	15.0	495
JAN					
02...	0900	290	1000	13.0	622
21...	1215	443	840	15.0	533
FEB					
02...	1215	257	880	14.0	537
27...	1310	2910	399	12.0	249
MAR					
03...	0830	561	525	12.0	310
25...	1310	512	915	16.0	569
APR					
01...	1505	971	712	14.5	446
21...	1230	515	750	16.5	466
MAY					
01...	1330	520	819	18.5	504
20...	1235	538	520	17.0	324
JUN					
04...	1705	515	649	19.5	374
16...	1300	495	710	19.5	436
JUL					
01...	0810	490	804	21.5	483
17...	1145	433	910	24.5	551
AUG					
03...	1235	387	974	26.0	580
14...	1215	312	839	26.5	524
SEP					
01...	1040	207	938	25.0	606
17...	0955	211	953	21.5	596
23...	1345	48	1070	21.0	678

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	696	628	910	871	937	730	1050	952	891	696	468	413
2	708	580	900	871	911	732	1040	958	934	840	527	444
3	594	582	987	869	1040	911	1000	665	953	228	578	514
4	594	570	927	901	993	935	998	411	441	263	614	553
5	951	570	924	896	967	948	762	451	552	441	652	598
6	951	922	924	906	965	243	1020	762	656	481	697	588
7	963	815	930	909	386	275	1040	961	481	349	768	649
8	977	793	935	909	499	368	991	946	418	281	802	727
9	948	901	953	912	550	400	985	240	365	318	899	756
10	930	904	947	356	623	484	442	240	554	351	937	817
11	924	861	840	523	636	511	388	285	569	462	918	828
12	915	880	920	840	729	587	439	347	646	527	895	829
13	919	889	972	553	802	630	509	408	705	630	880	809
14	944	913	624	569	808	683	550	412	799	513	894	825
15	957	916	870	623	753	706	664	511	590	430	887	843
16	941	902	1020	833	852	715	687	600	622	477	886	841
17	921	884	913	896	899	787	663	584	578	487	898	865
18	905	887	927	898	944	849	743	584	669	484	888	839
19	891	852	916	885	994	856	747	625	716	640	893	844
20	908	825	938	893	977	865	864	709	713	602	869	813
21	1000	908	951	920	921	889	903	805	716	625	887	837
22	1070	935	966	937	929	889	869	809	693	492	913	860
23	1090	894	975	944	981	897	865	775	492	379	924	861
24	934	881	974	957	1130	981	877	777	419	333	949	833
25	905	880	989	971	1130	890	889	805	350	330	925	834
26	946	897	1000	380	956	889	950	860	377	350	1010	853
27	939	910	694	613	959	884	984	938	405	377	968	857
28	953	911	742	625	1000	928	991	971	430	395	863	812
29	921	890	824	640	1020	959	972	557	---	---	855	545
30	919	885	933	762	1030	957	633	555	---	---	576	521
31	915	881	---	---	1020	948	727	559	---	---	667	565
MONTH	1090	570	1020	356	1130	243	1050	240	953	228	1010	413
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	817	644	825	807	661	634	818	791	944	906	965	848
2	797	631	828	799	654	631	819	787	969	905	960	826
3	657	621	836	802	661	637	819	788	978	939	842	727
4	692	638	837	808	664	641	845	771	1000	954	815	800
5	728	690	826	777	660	641	843	808	982	922	822	799
6	736	679	817	529	667	638	857	802	988	966	845	809
7	741	715	547	462	671	647	849	787	1010	972	900	838
8	755	728	501	473	695	662	847	795	1020	985	857	830
9	772	745	527	471	705	675	855	817	1020	988	848	815
10	780	755	540	495	715	692	860	820	1050	1020	849	816
11	781	749	566	527	712	697	859	818	1060	1030	861	825
12	763	729	578	522	704	690	878	817	1040	900	865	840
13	759	731	565	498	698	686	884	851	936	887	873	842
14	761	723	517	412	711	687	893	820	887	829	877	851
15	793	743	458	406	720	705	898	863	836	775	946	871
16	799	765	459	428	711	701	908	876	784	759	1000	888
17	801	776	495	449	718	701	916	883	778	752	968	933
18	803	763	509	485	723	707	923	897	781	768	945	926
19	783	760	529	494	739	719	930	908	787	768	960	930
20	775	735	551	505	760	730	930	913	827	772	943	904
21	759	737	570	529	759	739	930	905	828	802	930	897
22	761	725	596	536	777	748	981	902	810	792	1010	833
23	743	730	625	572	779	756	988	940	819	793	1100	783
24	739	723	651	587	797	764	990	941	811	798	996	901
25	742	729	678	631	813	784	989	929	847	800	1000	965
26	793	739	679	639	820	799	977	916	855	830	1020	968
27	868	792	681	647	826	806	970	906	903	844	1030	971
28	899	858	687	644	834	806	958	919	986	902	1010	982
29	889	839	679	647	821	799	949	907	990	937	1010	964
30	863	809	668	647	813	798	941	911	970	938	983	954
31	---	---	665	641	---	---	935	910	968	933	---	---
MONTH	899	621	837	406	834	631	990	771	1060	752	1100	727
YEAR	1130	228										

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	25.0	22.5	20.0	17.0	15.0	14.5	16.0	13.0	14.0	13.5	12.5	12.0				
2	24.5	23.0	21.0	18.0	15.0	14.0	15.5	13.0	14.5	14.0	13.0	12.0				
3	24.5	22.5	21.0	17.5	16.5	14.0	16.5	14.5	14.5	12.0	12.5	12.0				
4	24.5	22.0	21.0	18.0	16.0	13.5	15.5	12.5	12.5	11.5	12.5	12.0				
5	24.5	22.5	20.5	17.5	15.5	14.0	13.5	12.0	13.0	12.0	12.5	12.5				
6	24.0	22.5	20.5	18.0	15.5	11.5	14.0	11.5	13.5	12.5	13.0	12.5				
7	22.5	21.0	20.5	18.5	12.5	12.0	14.5	11.0	13.0	12.0	13.5	13.0				
8	22.0	19.0	19.5	18.0	13.5	12.5	15.0	12.0	13.0	12.5	13.5	13.0				
9	22.5	19.5	20.0	17.0	13.5	12.5	15.5	13.0	12.5	12.5	14.0	13.0				
10	21.5	19.0	19.0	17.0	13.0	12.0	14.0	13.0	13.0	12.5	14.5	13.5				
11	20.5	18.5	17.5	16.5	12.0	11.0	13.0	13.0	13.5	12.5	14.0	14.0				
12	19.5	17.0	18.5	17.0	11.5	11.0	13.5	13.0	13.5	13.0	14.5	14.0				
13	19.5	17.0	18.0	16.0	11.5	10.5	13.5	13.0	14.0	13.5	14.5	14.0				
14	21.0	17.5	16.0	15.5	11.5	11.0	14.0	13.0	14.5	13.5	14.5	14.0				
15	22.0	18.5	16.5	15.5	12.0	11.0	14.0	13.5	14.0	13.5	15.0	14.5				
16	22.5	18.5	17.5	16.0	12.5	11.5	14.0	13.5	13.5	12.5	15.0	14.5				
17	22.0	18.5	18.0	15.5	12.0	11.5	14.0	13.5	13.5	13.0	15.0	14.5				
18	21.5	18.5	18.0	15.0	12.0	11.5	14.5	14.0	13.0	12.5	15.5	15.0				
19	21.5	18.0	18.5	15.5	12.0	11.0	15.0	14.0	13.0	12.5	15.5	15.0				
20	21.0	19.5	19.5	18.0	11.5	11.0	15.5	15.0	13.0	12.5	15.5	15.0				
21	20.5	19.0	19.0	16.5	11.5	11.0	15.0	14.5	13.0	12.5	15.5	15.0				
22	20.5	18.5	18.5	16.5	11.0	10.5	15.0	14.0	13.5	12.5	16.0	15.5				
23	20.5	19.0	18.0	15.0	11.0	10.5	14.0	14.0	13.5	13.0	16.0	15.5				
24	20.5	19.5	17.5	15.5	13.0	11.0	14.0	13.5	13.5	12.0	16.0	15.5				
25	20.0	18.0	17.5	16.0	13.0	10.0	14.0	13.5	12.0	11.5	17.0	16.0				
26	18.0	16.5	17.0	15.5	12.0	8.5	14.5	13.5	12.0	11.5	16.5	16.0				
27	18.0	16.5	15.5	14.5	12.0	9.0	15.0	14.0	12.0	12.0	16.5	16.0				
28	18.5	16.0	15.0	14.0	13.0	10.5	16.0	14.5	12.5	12.0	16.5	15.5				
29	19.0	16.5	14.0	13.5	15.0	12.0	16.0	14.5	---	---	16.0	14.0				
30	19.5	17.0	14.5	14.0	16.0	13.5	15.0	14.0	---	---	14.0	13.5				
31	20.0	17.0	---	---	16.5	14.0	14.5	14.0	---	---	14.0	13.5				
MONTH	25.0	16.0	21.0	13.5	16.5	8.5	16.5	11.0	14.5	11.5	17.0	12.0				
		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER				
1	14.5	14.0	19.0	18.5	19.5	19.0	22.0	21.5	25.0	24.0	29.0	24.5				
2	14.0	13.5	19.0	18.5	19.5	19.0	22.5	22.0	26.0	24.5	28.5	25.0				
3	13.5	13.5	19.0	19.0	19.5	19.0	22.5	22.0	27.0	25.5	29.0	25.0				
4	14.0	13.5	19.5	19.0	19.5	19.0	22.5	22.0	28.0	25.0	27.5	25.5				
5	14.0	13.5	20.0	19.5	20.0	19.5	22.5	22.5	27.5	24.0	25.5	24.5				
6	14.0	13.5	20.0	19.5	20.0	19.5	23.0	22.5	28.0	23.5	26.5	23.5				
7	14.5	14.0	19.5	18.5	19.5	19.5	23.0	22.5	28.5	24.0	27.0	23.5				
8	15.0	14.5	19.0	18.5	20.0	19.5	23.0	22.5	28.5	23.5	27.0	23.0				
9	15.0	14.5	19.0	18.5	19.5	19.5	23.5	23.0	28.0	23.5	26.0	23.5				
10	15.0	15.0	19.0	18.5	19.5	19.0	23.5	23.0	28.5	25.0	26.0	22.5				
11	15.5	15.0	19.0	18.5	19.5	19.0	24.0	23.0	29.0	24.5	26.0	22.0				
12	15.5	15.0	19.0	18.5	19.5	19.0	24.0	23.5	29.0	24.5	25.5	21.5				
13	15.5	15.0	19.0	16.5	19.5	19.0	24.0	23.5	29.0	24.5	25.5	21.5				
14	15.5	15.5	16.5	16.0	19.5	19.0	24.0	23.5	29.0	24.5	25.0	21.5				
15	15.5	15.5	16.0	15.0	19.5	19.0	24.5	23.5	28.5	24.0	25.5	21.5				
16	16.0	15.5	16.0	15.5	19.5	19.0	24.5	24.0	28.0	24.0	25.5	21.5				
17	16.0	15.5	16.5	16.0	20.0	19.5	24.5	24.0	27.0	23.5	25.0	21.5				
18	16.0	15.5	17.0	16.5	20.0	19.5	25.0	24.5	27.0	22.5	25.0	20.5				
19	16.0	16.0	17.0	16.5	20.0	19.5	25.0	24.5	26.5	22.0	24.5	21.0				
20	16.5	16.0	17.5	16.5	20.5	20.0	25.0	24.5	26.5	22.0	23.0	21.5				
21	16.5	16.0	17.5	17.0	20.5	20.0	25.0	24.5	27.0	22.0	22.0	21.0				
22	16.5	16.0	18.0	17.5	20.5	20.0	25.0	24.5	27.5	22.0	22.5	20.5				
23	16.5	16.5	18.0	17.5	21.0	20.0	25.0	24.5	28.0	23.0	21.5	20.5				
24	17.0	16.5	18.5	18.0	21.0	20.5	25.0	24.0	28.0	23.0	21.5	19.5				
25	17.0	16.5	18.5	18.0	21.0	20.5	25.0	24.0	27.5	23.0	22.0	20.0				
26	17.5	17.0	19.0	18.5	21.0	20.5	25.0	24.5	27.0	22.5	21.5	19.5				
27	18.0	17.0	19.0	18.5	21.5	20.5	25.5	24.5	27.0	22.0	22.0	19.5				
28	18.0	17.5	19.5	19.0	21.5	21.0	26.0	25.5	27.0	22.5	22.0	19.0				
29	18.5	18.0	19.0	19.0	21.5	21.0	26.5	26.0	28.0	23.5	21.5	19.5				
30	18.5	18.0	19.5	19.0	21.5	21.5	26.5	25.5	29.5	25.0	22.0	18.5				
31	---	---	19.5	19.0	---	---	25.5	25.0	28.5	25.0	---	---				
MONTH	18.5	13.5	20.0	15.0	21.5	19.0	26.5	21.5	29.5	22.0	29.0	18.5				
YEAR	29.5	8.5														

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY, NEAR ANAHEIM, CA

LOCATION.—Lat 33°51'23", long 117°48'00", in NW 1/4 NW 1/4 sec. 2, T.2 S., R.9 W., in Canon De Santa Ana, Orange County, Hydrologic Unit 18070203, on diversion channel, 100 ft downstream from diversion point, 0.1 mi south of La Palma Ave., 0.6 mi west of Imperial Highway, and 7.8 mi east of Anaheim.

DRAINAGE AREA.—1,550 mi², excludes 768 mi² above Lake Elsinore.

PERIOD OF DAILY RECORD.—July 1974 to December 1985, November 1996 to March 1998.

SPECIFIC CONDUCTANCE: November 1996 to March 1998.

pH: November 1996 to March 1998.

WATER TEMPERATURE: November 1996 to March 1998.

INSTRUMENTATION.—YSI 3800 water-quality monitor since November 1996.

REMARKS.—Interruption in record due to malfunction of recording equipment. This station was temporarily discontinued Mar. 31, 1998; it will be reactivated Oct. 1, 1999.

EXTREMES FOR PERIOD OF RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,120 microsiemens, Oct. 24, 1997; minimum recorded, 264 microsiemens, Feb. 7, 1998.

pH: Maximum recorded, 8.9 standard units, Mar. 26, Oct. 27–Nov. 1, 1997; minimum recorded, 6.9 standard units, Jul. 25, 26, 29, Aug. 4, 5, 1997.

WATER TEMPERATURE: Maximum recorded, 28.5°C, May 30, Aug. 4–6, Sept. 5, 1997; minimum recorded 9.5°C, Dec. 26, 27, 1997.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,120 microsiemens, Oct. 24; minimum recorded, 264 microsiemens, Feb. 7.

pH: Maximum recorded, 8.9 standard units, Oct. 27–Nov. 1; minimum recorded, 7.5 standard units, Feb. 23.

WATER TEMPERATURE: Maximum recorded, 25.5°C, Oct. 1, 5; minimum recorded 9.5°C, Dec. 26, 27.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
(NOT PREVIOUSLY PUBLISHED)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	782	694	1000	954	683	640	1040	936
2	---	---	---	---	805	720	1020	782	705	683	1050	1000
3	---	---	---	---	882	774	884	608	749	705	1060	1040
4	---	---	---	---	888	840	648	530	799	749	1050	1030
5	---	---	---	---	914	762	721	605	840	799	1060	1030
6	---	---	---	---	974	838	754	704	859	832	1040	1030
7	---	---	---	---	938	808	852	754	881	840	1040	1010
8	---	---	---	---	995	924	919	852	912	881	1030	1010
9	---	---	---	---	1020	356	984	919	923	908	1020	994
10	---	---	---	---	800	538	981	956	938	904	1010	974
11	---	---	---	---	726	524	968	948	951	888	986	958
12	---	---	---	---	732	582	966	628	937	908	980	964
13	---	---	---	---	582	552	784	545	927	905	998	970
14	---	---	---	---	840	566	545	496	946	925	978	966
15	---	---	---	---	786	644	---	---	953	935	982	964
16	---	---	---	---	716	662	---	---	950	936	996	970
17	---	---	---	---	741	668	566	546	945	929	990	966
18	---	---	---	---	860	741	590	564	954	938	994	974
19	---	---	---	---	908	852	656	590	952	938	1010	982
20	---	---	---	---	946	890	670	509	954	934	1030	981
21	---	---	---	---	1030	932	677	393	966	944	1000	980
22	---	---	750	---	1050	458	716	666	978	952	1010	990
23	---	---	560	524	684	432	721	459	1000	956	1010	988
24	---	---	588	542	863	570	713	650	995	954	1010	974
25	---	---	669	574	1010	863	---	---	1020	976	994	968
26	---	---	670	544	1060	1010	---	---	1020	992	984	950
27	---	---	642	544	1010	566	---	---	1060	978	988	948
28	---	---	715	642	804	704	---	---	1070	1030	990	960
29	---	---	718	670	798	682	573	527	---	---	990	962
30	---	---	764	630	882	770	577	528	---	---	998	966
31	---	---	---	---	958	872	640	577	---	---	988	958
MONTH	---	---	---	---	1060	356	---	---	1070	640	1060	936

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY, NEAR ANAHEIM, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
(NOT PREVIOUSLY PUBLISHED)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1030	962	862	830	820	798	---	---	808	756	698	678
2	984	966	885	828	820	802	---	---	808	760	724	672
3	982	932	958	846	820	800	---	---	802	772	698	676
4	984	938	848	818	826	800	---	---	794	770	696	682
5	982	962	838	812	816	802	---	---	790	715	694	678
6	992	968	830	808	816	780	---	---	715	698	716	676
7	998	948	830	794	830	784	---	---	706	690	701	672
8	984	962	838	802	826	784	---	---	700	684	692	670
9	1010	974	848	814	802	784	---	---	694	680	---	---
10	1000	970	852	828	792	763	---	---	698	680	---	---
11	1010	978	848	820	776	733	---	---	700	688	701	673
12	1020	992	846	820	740	688	---	---	698	688	701	688
13	1030	1000	840	816	698	628	---	---	710	688	701	685
14	1030	1000	837	816	---	---	---	---	708	694	716	680
15	1020	996	840	816	---	---	812	790	702	690	729	677
16	1030	1000	820	782	---	---	808	788	704	688	726	704
17	1030	1010	816	802	---	---	808	788	702	686	716	685
18	1030	1010	828	806	---	---	822	784	726	692	724	696
19	1030	1000	832	812	---	---	804	782	718	696	704	665
20	1030	1000	836	810	---	---	804	776	710	688	669	646
21	1030	990	832	806	---	---	800	774	698	682	656	629
22	1040	992	840	806	---	---	796	778	698	678	641	612
23	1040	1000	834	810	---	---	804	780	694	672	616	595
24	1020	871	828	802	---	---	806	778	692	674	600	548
25	884	868	866	802	---	---	792	746	694	670	709	269
26	872	860	844	816	---	---	798	746	690	672	819	541
27	862	844	854	802	---	---	794	776	698	672	874	751
28	858	834	820	790	---	---	790	770	698	676	753	712
29	842	828	818	800	---	---	790	770	694	674	717	706
30	850	828	814	794	---	---	808	768	696	678	719	706
31	---	---	818	796	---	---	806	776	700	682	---	---
MONTH	1040	828	958	782	---	---	---	---	808	670	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	706	687	992	954	800	708	1030	982	---	---	---	---
2	728	655	988	946	803	782	992	964	---	---	---	---
3	668	633	1020	944	908	803	1020	949	---	---	742	---
4	659	637	979	960	944	908	949	776	---	---	781	739
5	994	642	980	958	956	936	946	666	616	---	797	734
6	1010	973	978	952	---	---	1020	668	---	---	---	---
7	1020	908	974	950	---	---	1040	985	635	264	---	---
8	991	871	967	946	634	---	1030	984	512	336	914	860
9	1000	883	964	944	610	596	1020	332	---	---	969	891
10	990	965	974	762	625	610	---	---	---	---	---	---
11	985	919	944	454	832	576	---	---	677	---	---	---
12	965	934	924	856	706	640	454	413	762	647	---	---
13	973	949	938	642	836	686	493	428	823	732	---	---
14	978	958	712	624	836	736	576	472	---	---	---	---
15	977	953	894	648	846	750	650	517	---	---	---	---
16	980	950	1010	858	834	754	681	643	---	---	---	---
17	978	952	1010	814	854	776	693	631	---	---	---	---
18	989	947	960	832	862	730	722	619	---	---	---	---
19	1000	960	972	950	984	834	739	594	833	---	---	---
20	1090	1000	982	848	948	846	841	737	---	---	---	---
21	1110	---	976	812	942	856	891	833	855	---	---	---
22	---	---	952	926	908	868	925	618	---	---	---	---
23	---	---	938	914	936	873	920	734	620	383	---	---
24	1120	936	944	902	1020	920	922	819	538	426	---	---
25	966	932	936	916	1100	1010	939	812	528	469	---	---
26	972	944	932	642	1070	1000	1020	927	482	469	---	---
27	994	966	688	610	1030	1000	1070	1010	499	---	---	---
28	1010	970	653	630	1000	976	---	1030	---	---	---	---
29	1020	974	674	653	1020	993	---	---	---	---	---	---
30	994	954	708	672	1050	1010	---	---	---	---	---	---
31	990	956	---	---	1010	980	---	---	---	---	---	---
MONTH	---	---	1020	454	---	---	---	---	---	---	---	---

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY, NEAR ANAHEIM, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
(NOT PREVIOUSLY PUBLISHED)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	---	---	---	---	7.9	7.8	7.9	7.9	7.7	7.6	8.6	8.3
2	---	---	---	---	7.9	7.8	7.9	7.8	7.7	7.6	8.5	8.2
3	---	---	---	---	8.0	7.9	8.0	7.8	7.7	7.7	8.7	8.3
4	---	---	---	---	8.0	7.9	8.0	7.9	7.8	7.7	8.7	8.3
5	---	---	---	---	8.0	7.9	8.0	7.9	7.8	7.7	8.7	8.3
6	---	---	---	---	8.1	7.9	8.1	8.0	7.8	7.8	8.7	8.3
7	---	---	---	---	8.1	7.8	8.1	8.0	7.8	7.8	8.7	8.4
8	---	---	---	---	8.1	7.8	8.1	8.0	8.0	7.8	8.6	8.4
9	---	---	---	---	8.3	8.0	8.2	8.0	8.0	7.8	8.6	8.3
10	---	---	---	---	8.2	8.0	8.1	7.9	7.9	7.8	8.5	8.3
11	---	---	---	---	8.0	7.7	8.1	8.0	8.0	7.8	8.5	8.3
12	---	---	---	---	8.0	7.8	8.0	7.9	8.0	7.9	8.5	8.3
13	---	---	---	---	8.0	7.9	8.0	7.8	8.2	7.9	8.3	8.2
14	---	---	---	---	8.2	7.9	8.0	7.8	8.3	8.0	8.3	8.1
15	---	---	---	---	8.3	8.1	7.9	7.8	8.1	7.9	8.2	8.1
16	---	---	---	---	8.2	8.1	8.0	7.7	8.1	7.9	8.2	8.1
17	---	---	---	---	8.2	8.0	8.1	8.0	8.2	8.0	8.3	8.1
18	---	---	---	---	8.1	8.0	8.1	8.1	8.6	8.0	8.2	8.1
19	---	---	---	---	8.1	8.0	8.1	8.1	8.7	8.3	8.2	8.1
20	---	---	---	---	8.1	8.0	8.1	8.0	8.7	8.1	8.4	8.1
21	---	---	---	---	8.1	8.0	8.1	8.0	8.8	8.1	8.4	8.3
22	---	---	7.9	7.3	8.1	7.8	8.1	8.0	8.9	8.2	8.3	8.1
23	---	---	7.9	7.8	8.1	7.8	8.0	7.7	8.9	8.2	8.2	8.1
24	---	---	7.9	7.9	8.1	8.0	7.9	7.7	8.7	8.3	8.4	8.2
25	---	---	7.9	7.9	8.1	8.0	7.7	7.5	8.7	8.3	8.7	8.2
26	---	---	8.0	7.9	8.1	7.9	7.6	7.4	8.8	8.2	8.9	8.5
27	---	---	8.0	7.9	8.1	7.8	7.9	7.6	8.7	8.2	8.6	8.3
28	---	---	8.0	7.9	8.0	7.8	8.0	7.4	8.8	8.3	8.3	8.2
29	---	---	8.0	7.9	7.9	7.8	7.7	7.5	---	---	8.4	8.2
30	---	---	7.9	7.9	7.9	7.8	7.6	7.5	---	---	8.3	8.2
31	---	---	---	---	7.9	7.8	7.6	7.5	---	---	8.4	8.2
MONTH	---	---	---	---	8.3	7.7	8.2	7.4	8.9	7.6	8.9	8.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	8.4	8.2	8.1	7.9	8.5	7.9	---	---	7.6	7.1	8.1	7.6
2	8.4	7.9	8.3	7.9	8.5	8.0	---	---	7.7	7.0	8.3	7.8
3	8.2	7.9	8.1	7.9	8.5	7.9	---	---	7.6	7.0	8.2	7.8
4	8.2	8.0	8.1	7.8	8.4	7.9	---	---	7.7	6.9	8.2	7.7
5	8.2	7.9	8.1	7.8	8.5	7.9	---	---	7.5	6.9	8.2	7.8
6	8.3	8.0	8.1	7.8	8.4	7.9	---	---	7.4	7.0	8.1	7.7
7	8.3	8.0	8.1	7.8	8.2	8.0	---	---	7.3	7.0	8.1	7.7
8	8.3	8.0	8.2	7.8	8.4	8.1	---	---	7.3	7.0	8.3	7.9
9	8.2	7.9	8.2	7.8	8.4	8.1	---	---	7.5	7.0	---	---
10	8.3	7.9	8.2	7.9	8.5	8.0	---	---	7.3	7.1	---	---
11	8.3	7.9	8.2	7.9	8.6	7.9	---	---	7.3	7.1	8.5	8.0
12	8.3	7.9	8.3	7.9	8.5	8.0	---	---	7.5	7.1	8.5	8.0
13	8.3	7.9	8.3	7.9	8.5	8.0	---	---	7.6	7.2	8.4	8.0
14	8.3	7.8	8.3	7.9	---	---	---	---	7.7	7.3	8.4	8.0
15	8.3	7.8	8.3	7.9	---	---	8.7	8.3	7.8	7.5	8.3	7.9
16	8.3	7.8	8.2	7.9	---	---	8.7	8.2	7.8	7.5	8.2	7.9
17	8.4	7.8	8.2	7.8	---	---	8.5	7.9	7.9	7.5	8.4	8.0
18	8.4	7.9	8.2	7.9	---	---	8.2	7.7	7.8	7.5	8.3	8.0
19	8.1	7.9	8.1	7.9	---	---	7.9	7.5	7.9	7.5	8.5	8.0
20	8.3	7.8	8.2	7.9	---	---	7.9	7.4	7.8	7.4	8.6	8.1
21	8.2	7.8	8.4	7.9	---	---	7.6	7.2	7.7	7.4	8.5	8.1
22	8.2	7.7	8.5	7.9	---	---	7.3	7.1	7.7	7.4	8.5	8.0
23	8.2	7.7	8.5	8.0	---	---	7.6	7.1	7.9	7.5	8.5	8.0
24	8.0	7.8	8.6	8.0	---	---	7.5	7.1	7.9	7.5	8.4	8.0
25	8.1	7.8	8.6	8.0	---	---	7.4	6.9	7.9	7.5	8.1	7.8
26	8.1	7.8	8.6	8.1	---	---	7.5	6.9	7.9	7.4	7.8	7.6
27	8.1	7.8	8.6	8.0	---	---	7.5	7.0	8.0	7.6	7.9	7.7
28	8.1	7.8	8.5	7.9	---	---	7.3	7.0	8.2	7.7	8.0	7.7
29	8.0	7.8	8.6	8.0	---	---	7.3	6.9	8.2	7.7	8.2	7.9
30	8.1	7.8	8.6	8.0	---	---	7.6	7.0	8.1	7.7	8.2	8.0
31	---	---	8.6	8.0	---	---	7.7	7.1	8.1	7.6	---	---
MONTH	8.4	7.7	8.6	7.8	---	---	---	---	8.2	6.9	---	---

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	8.0	8.9	8.4	8.0	7.9	8.4	8.2	8.5	8.4	---	---
2	8.1	8.0	8.8	8.2	8.1	8.0	8.5	8.3	8.5	8.4	---	---
3	8.2	8.0	8.7	7.9	8.3	8.0	8.4	8.0	---	---	---	---
4	8.2	8.0	8.0	7.9	8.2	8.1	8.1	7.9	---	---	7.7	7.6
5	8.4	8.0	8.1	8.0	8.3	7.8	8.0	7.9	---	---	7.6	7.6
6	8.4	8.1	8.1	8.1	---	---	8.6	7.9	---	---	---	---
7	8.4	8.2	8.1	8.0	---	---	8.7	8.5	8.0	7.8	---	---
8	8.3	7.9	8.1	7.9	---	---	8.7	8.6	7.9	7.7	7.7	7.6
9	8.3	8.1	8.3	8.0	7.9	7.8	8.7	8.4	---	---	7.7	7.6
10	8.4	8.3	8.3	8.0	8.0	7.8	---	---	---	---	---	---
11	8.4	8.2	8.4	7.7	8.3	7.9	---	---	---	---	---	---
12	8.5	8.2	8.5	8.4	8.4	8.3	8.3	8.2	8.1	8.0	---	---
13	8.4	8.2	8.5	8.2	8.4	8.3	8.3	8.2	8.0	8.0	---	---
14	8.4	8.2	8.3	8.2	8.4	8.2	8.4	8.2	---	---	---	---
15	8.4	8.2	8.3	8.2	8.3	8.2	8.3	8.3	---	---	---	---
16	8.5	8.1	8.5	8.3	8.4	8.3	8.3	8.2	---	---	---	---
17	8.6	8.3	8.6	8.5	8.4	8.3	8.2	8.1	---	---	---	---
18	8.5	8.2	8.6	8.5	8.4	8.1	8.1	7.9	---	---	---	---
19	8.4	8.2	8.6	8.4	8.4	8.1	8.0	7.9	8.0	7.6	---	---
20	8.4	8.1	8.5	8.3	8.4	8.3	8.2	8.0	---	---	---	---
21	8.3	7.9	8.6	8.3	8.3	8.2	8.3	8.2	---	---	---	---
22	---	---	8.6	8.4	8.3	8.2	8.3	8.1	---	---	---	---
23	---	---	8.6	8.4	8.2	8.1	8.3	8.1	7.6	7.5	---	---
24	8.6	8.4	8.5	8.4	8.3	8.1	8.3	8.1	7.6	7.6	---	---
25	8.7	8.4	8.5	8.3	8.3	8.1	8.4	8.1	7.7	7.6	---	---
26	8.8	8.4	8.5	7.8	8.3	8.1	8.5	8.2	7.7	7.6	---	---
27	8.9	8.5	7.8	7.7	8.3	8.2	8.4	8.2	---	---	---	---
28	8.9	8.5	7.8	7.7	8.4	8.2	8.4	8.2	---	---	---	---
29	8.9	8.5	7.9	7.7	8.4	8.1	8.6	8.2	---	---	---	---
30	8.9	8.5	7.9	7.7	8.4	8.2	8.6	8.5	---	---	---	---
31	8.9	8.5	---	---	8.4	8.2	8.6	8.3	---	---	---	---
MONTH	---	---	8.9	7.7	---	---	---	---	---	---	---	---

11075620 SANTA ANA RIVER SPREADING DIVERSION BELOW IMPERIAL HIGHWAY, NEAR ANAHEIM, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
(NOT PREVIOUSLY PUBLISHED)

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	---	---	---	---	14.5	12.0	18.0	16.0	16.5	13.5	17.5	12.5
2	---	---	---	---	14.5	12.0	18.5	17.0	16.5	14.0	17.5	12.5
3	---	---	---	---	14.0	11.5	18.5	16.5	16.5	13.5	17.5	13.0
4	---	---	---	---	14.0	11.5	17.0	15.5	16.5	13.5	18.5	14.0
5	---	---	---	---	14.0	12.5	16.5	14.5	16.5	13.5	19.0	14.0
6	---	---	---	---	16.5	13.5	15.0	12.0	16.5	13.0	19.5	14.0
7	---	---	---	---	16.5	14.0	13.0	11.0	16.0	13.0	19.5	14.0
8	---	---	---	---	16.5	14.0	13.0	10.5	16.0	12.5	19.5	14.0
9	---	---	---	---	15.5	14.0	14.0	11.0	16.5	13.0	21.0	15.0
10	---	---	---	---	15.5	14.5	14.5	12.5	15.0	13.0	22.0	16.0
11	---	---	---	---	15.5	14.0	15.0	12.5	16.5	13.0	21.5	16.5
12	---	---	---	---	16.5	15.0	14.0	12.5	15.0	13.0	21.0	16.5
13	---	---	---	---	16.0	15.0	13.0	10.5	16.0	11.5	21.0	16.0
14	---	---	---	---	16.5	13.5	11.5	10.5	17.0	12.5	21.5	16.5
15	---	---	---	---	14.0	12.0	12.0	11.0	16.5	12.5	21.5	16.5
16	---	---	---	---	14.0	12.0	12.5	---	16.5	13.5	20.0	17.0
17	---	---	---	---	14.0	11.5	13.0	10.5	16.0	12.5	21.0	16.5
18	---	---	---	---	13.0	10.5	13.5	10.5	17.5	12.5	22.0	16.5
19	---	---	---	---	13.0	10.5	13.5	11.0	17.5	13.0	23.0	17.0
20	---	---	---	---	12.5	10.5	12.5	11.0	17.5	13.5	23.5	17.5
21	---	---	---	---	12.5	10.5	13.0	11.0	18.0	14.0	22.5	17.5
22	---	---	---	---	14.5	11.5	13.0	12.0	18.0	13.5	22.5	17.5
23	---	---	19.0	16.5	14.5	12.5	14.0	12.5	17.5	13.5	20.5	17.5
24	---	---	18.5	16.0	14.0	12.5	14.0	12.5	16.0	12.5	21.5	17.5
25	---	---	18.0	16.0	15.0	12.5	14.0	---	16.5	12.5	22.5	17.5
26	---	---	18.0	15.5	14.0	12.5	---	---	17.0	12.5	22.5	18.0
27	---	---	16.0	14.0	14.0	13.5	---	---	15.0	13.5	22.5	18.0
28	---	---	15.5	13.5	15.5	13.5	16.0	---	17.0	13.0	21.0	18.0
29	---	---	15.5	13.0	16.5	14.0	16.0	14.0	---	---	22.0	18.0
30	---	---	15.0	12.5	16.0	14.5	16.5	14.0	---	---	20.0	17.5
31	---	---	---	---	17.0	15.0	17.0	14.0	---	---	21.0	17.5
MONTH	---	---	---	---	17.0	10.5	---	---	18.0	11.5	23.5	12.5

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	20.5	16.0	23.5	19.0	28.0	23.0	---	---	27.5	22.0	26.0	23.0
2	21.0	15.0	23.5	19.0	27.0	22.5	---	---	27.5	22.0	26.5	23.0
3	19.5	14.5	24.0	19.0	28.0	22.0	---	---	28.0	23.0	27.0	24.0
4	18.5	15.0	24.0	19.5	26.5	22.0	---	---	28.5	23.5	28.0	24.5
5	19.0	15.5	24.5	19.5	27.0	22.0	---	---	28.5	24.0	28.5	25.0
6	21.0	16.0	24.5	20.0	26.0	22.0	---	---	28.5	24.5	27.5	24.5
7	21.0	16.5	25.0	19.5	23.0	21.0	---	---	28.0	24.5	27.0	23.5
8	21.5	17.0	25.5	20.0	25.0	21.0	---	---	27.5	24.0	26.5	23.5
9	20.0	17.0	26.0	20.5	26.5	21.5	---	---	27.0	23.5	---	---
10	20.5	16.0	26.0	21.0	27.0	22.0	---	---	25.5	22.5	---	---
11	21.5	16.0	25.5	21.0	27.0	21.5	---	---	26.0	22.5	26.5	23.0
12	21.5	16.5	25.5	21.0	23.5	20.5	---	---	26.0	22.5	26.0	23.0
13	22.5	17.0	26.0	21.5	23.5	20.0	---	---	26.0	22.5	26.0	23.0
14	22.5	17.5	26.5	22.0	---	---	---	---	26.5	23.0	25.0	22.5
15	23.0	18.0	27.0	22.0	---	---	26.5	22.5	26.0	23.0	25.5	22.5
16	23.5	18.5	27.0	22.5	---	---	27.0	22.5	23.5	22.5	25.0	23.0
17	24.0	19.0	25.5	22.0	---	---	28.0	23.0	26.0	22.5	25.0	23.0
18	24.0	19.0	24.5	21.5	---	---	28.0	23.0	26.0	22.5	24.0	22.0
19	21.0	18.5	23.0	21.0	---	---	27.5	22.5	27.5	23.5	24.5	21.5
20	24.0	18.5	25.0	21.0	---	---	27.0	22.0	28.0	24.0	24.0	21.0
21	25.0	20.0	26.0	21.0	---	---	25.5	22.0	27.5	24.0	24.0	21.0
22	25.5	20.5	26.0	21.5	---	---	24.0	22.0	26.0	23.5	24.5	21.5
23	25.0	20.0	26.0	21.0	---	---	27.5	22.0	27.0	23.5	24.5	22.0
24	23.0	18.5	25.5	21.5	---	---	27.0	22.5	27.5	24.0	23.5	22.0
25	23.0	18.0	25.0	21.0	---	---	27.0	22.5	27.0	23.5	23.5	22.0
26	23.5	18.5	26.0	21.0	---	---	27.0	22.0	26.5	23.0	24.5	22.5
27	24.0	19.0	27.5	21.5	---	---	26.0	21.5	26.5	23.0	25.0	22.5
28	23.0	19.0	27.5	21.5	---	---	25.0	21.5	26.5	23.0	25.5	23.0
29	21.0	19.0	28.0	22.5	---	---	25.0	21.5	26.5	23.0	25.5	23.5
30	23.0	19.0	28.5	23.0	---	---	26.5	21.5	26.0	23.0	26.0	23.5
31	---	---	28.0	23.0	---	---	27.0	21.5	26.5	23.0	---	---
MONTH	25.5	14.5	28.5	19.0	---	---	---	---	28.5	22.0	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	25.5	23.5	21.0	17.0	16.0	13.5	17.5	14.0	15.0	12.5	---	---
2	25.0	23.0	22.0	18.0	15.5	14.0	15.5	13.5	15.0	13.5	---	---
3	25.0	23.0	21.5	18.0	16.0	14.0	16.5	14.0	---	---	14.0	---
4	24.5	22.5	21.5	18.0	16.5	14.0	15.0	13.0	---	---	15.5	13.0
5	25.5	22.5	21.0	18.0	15.5	14.0	14.0	11.5	14.0	---	15.0	12.5
6	23.5	21.0	21.0	18.0	---	---	14.5	11.0	---	---	---	---
7	23.5	19.5	21.0	18.5	---	---	14.0	11.0	13.0	12.5	---	---
8	22.5	19.0	20.5	18.0	14.0	---	13.5	12.0	13.5	12.5	16.5	12.5
9	22.5	19.0	20.5	17.5	14.0	12.0	14.5	13.0	---	---	17.0	13.0
10	22.5	19.0	18.5	17.5	13.0	11.5	---	---	---	---	---	---
11	21.0	17.5	17.5	16.5	12.5	10.5	14.0	---	14.5	---	---	---
12	20.5	16.5	19.0	16.5	12.5	10.5	13.5	12.5	15.0	13.0	---	---
13	19.5	15.5	16.5	16.0	12.5	10.0	15.0	13.0	15.5	13.0	---	---
14	20.5	16.0	17.0	14.5	12.5	10.5	15.0	12.5	---	---	---	---
15	22.5	18.0	17.0	14.5	13.5	11.5	14.5	13.0	---	---	---	---
16	23.0	18.5	18.0	15.0	13.5	11.0	16.0	13.5	---	---	---	---
17	23.0	18.5	18.0	15.5	13.5	11.0	16.0	13.0	---	---	---	---
18	22.5	18.0	18.0	15.5	13.0	11.5	16.0	14.0	15.5	---	---	---
19	22.5	18.5	18.0	15.5	13.5	11.0	16.0	13.5	14.0	---	---	---
20	21.5	19.0	20.0	16.5	13.0	10.5	16.0	13.5	---	---	---	---
21	21.5	18.0	19.5	16.0	12.5	10.5	16.0	13.5	15.0	---	---	---
22	---	---	18.5	16.0	12.5	10.0	16.0	13.0	14.0	12.0	---	---
23	---	---	18.5	15.0	12.5	10.0	15.5	12.5	14.0	12.5	---	---
24	21.5	18.0	17.5	15.5	12.5	10.5	15.5	12.5	14.0	12.0	---	---
25	19.0	15.5	17.5	16.0	12.5	10.0	15.5	12.5	13.0	12.0	---	---
26	19.5	15.5	17.0	15.5	12.0	9.5	15.5	12.5	13.0	12.0	---	---
27	19.0	14.5	17.0	14.0	13.0	9.5	16.0	13.0	13.5	---	---	---
28	19.0	15.0	16.5	13.5	13.5	10.0	16.0	13.5	---	---	---	---
29	20.0	15.5	15.5	13.0	14.5	11.5	16.0	13.5	---	---	---	---
30	20.5	16.0	15.0	14.0	17.0	13.0	16.5	13.5	---	---	---	---
31	21.0	16.5	---	---	16.5	14.5	15.0	12.5	---	---	---	---
MONTH	---	---	22.0	13.0	---	---	---	---	---	---	---	---

11075720 CARBON CREEK BELOW CARBON CANYON DAM, CA

LOCATION.—Lat 33°54'48", long 117°50'30", in SW 1/4 NE 1/4 sec.17, T.3 S., R.9 W., Orange County, Hydrologic Unit 18070106, on right wall of outlet channel 250 ft downstream from toe of Carbon Canyon Dam and 2.4 mi northwest of Yorba Linda.

DRAINAGE AREA.—19.5 mi².

PERIOD OF RECORD.—October 1961 to current year.

REVISED RECORDS.—WDR CA-88-1: 1983(M).

GAGE.—Water-stage recorder and concrete-lined flood control channel. Datum of gage is 396.35 ft, 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.42	11	21	5.2	3.0	1.6	.96	.00
2	.00	.00	.00	.00	.40	9.7	7.2	4.8	3.0	1.6	1.1	.00
3	.00	.00	.00	.00	25	9.1	5.6	4.7	2.6	1.7	1.1	.00
4	.00	.00	.00	.00	19	8.5	6.5	7.5	1.7	1.7	.97	.00
5	.00	.00	.00	.00	8.1	8.1	6.7	13	1.7	1.6	1.9	.00
6	.00	.01	2.7	.00	14	20	5.0	11	1.8	1.5	.61	.02
7	.00	.00	2.9	.00	31	9.5	4.3	6.4	1.8	1.4	.51	.10
8	.00	.00	.99	.00	115	10	4.3	5.8	1.8	1.2	.47	.15
9	.00	.00	.03	15	29	10	4.3	5.2	1.8	1.0	.39	.29
10	.00	.02	.00	27	11	9.3	4.3	4.5	1.8	1.0	.37	.37
11	.00	.00	.00	4.8	6.1	9.7	4.9	4.3	2.0	1.0	.33	.37
12	.00	.00	.00	2.1	5.0	7.4	3.0	15	2.0	1.2	.28	.46
13	.00	.08	.00	4.8	4.2	6.7	2.9	57	2.0	1.1	.28	.42
14	.00	.03	.00	2.5	47	12	3.6	11	2.0	1.5	.23	.38
15	.00	.00	.00	.57	65	5.7	4.2	8.0	2.0	1.3	.21	.45
16	.00	.00	.00	.34	15	5.2	4.7	7.1	2.0	.96	.23	.47
17	.00	.00	.00	.28	20	5.2	5.1	6.0	2.0	.79	.17	.47
18	.00	.00	.10	.28	8.1	5.1	5.0	5.3	2.0	.50	.22	.56
19	.00	.00	.00	.50	7.6	5.1	4.8	4.7	2.0	.57	.21	.58
20	.00	.00	.00	.45	22	5.0	5.6	4.0	2.0	.41	.18	.58
21	.00	.00	.00	.31	7.4	4.3	7.1	3.8	2.0	.41	.15	.74
22	.01	.00	.00	.14	79	4.6	7.9	4.0	2.0	.59	.10	.75
23	.00	.00	.00	.05	228	5.2	8.0	4.0	2.0	.62	.07	.55
24	.00	.00	.00	.01	362	4.6	8.1	4.0	2.0	.60	.06	.51
25	.00	.00	.00	.00	53	34	8.0	3.9	1.9	.46	.05	.53
26	.00	.11	.00	.00	27	11	7.5	3.6	1.9	.59	.04	.56
27	.00	.08	.00	.06	18	8.6	6.6	3.4	1.9	.39	.05	.44
28	.00	.06	.00	.07	13	17	5.5	3.2	1.7	.36	.02	.40
29	.00	.01	.00	1.8	---	8.0	5.4	3.0	1.7	.33	.02	.49
30	.00	.05	.00	.83	---	6.6	5.4	3.1	1.7	.62	.02	.48
31	.00	---	.00	.59	---	9.8	---	2.9	---	.80	.00	---
TOTAL	0.01	0.45	6.72	62.48	1240.32	286.0	182.5	229.4	59.8	29.40	11.30	11.12
MEAN	.000	.015	.22	2.02	44.3	9.23	6.08	7.40	1.99	.95	.36	.37
MAX	.01	.11	2.9	27	362	34	21	57	3.0	1.7	1.9	.75
MIN	.00	.00	.00	.00	.40	4.3	2.9	2.9	1.7	.33	.00	.00
AC-FT	.02	.9	13	124	2460	567	362	455	119	58	22	22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.060	.22	.54	2.78	5.83	4.96	.79	.42	.16	.072	.027	.022
MAX	.73	1.94	6.36	32.4	46.9	36.2	6.08	7.40	1.99	.95	.36	.37
(WY)	1996	1997	1967	1993	1980	1983	1998	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1962 - 1998

ANNUAL TOTAL	468.28	2119.50	
ANNUAL MEAN	1.28	5.81	1.30
HIGHEST ANNUAL MEAN			7.27
LOWEST ANNUAL MEAN			.004
HIGHEST DAILY MEAN	87	Jan 26	362
LOWEST DAILY MEAN	.00	Mar 27	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 25	.00
INSTANTANEOUS PEAK FLOW			573
INSTANTANEOUS PEAK STAGE			4.48
ANNUAL RUNOFF (AC-FT)	929	4200	942
10 PERCENT EXCEEDS	3.3	9.7	.73
50 PERCENT EXCEEDS	.00	.75	.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 daily discharges in February, March, and April, 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, 12.03 ft, Feb. 23, 1998; 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)
Dec. 6	1030	426	7.02	Feb. 23	e2100	6,200	12.03
Feb. 8	0100	1,030	8.43	Mar. 25	1245	104	5.44
Feb. 14	1900	403	7.11	Mar. 31	2215	104	5.30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.55	7.0	131	53	e13	13	4.3	.39	.00
2	.00	.00	.00	.42	6.4	149	51	e12	12	4.2	.30	.00
3	.00	.00	.00	.60	29	114	52	e12	12	4.3	.21	.00
4	.00	.00	.00	.81	46	63	48	e12	12	4.3	.13	.00
5	.00	.00	.00	.78	32	53	44	33	11	4.0	.07	.00
6	.00	.00	94	.58	54	52	40	32	11	3.7	.05	.00
7	.00	.00	30	.49	60	40	36	31	11	3.5	.03	.00
8	.00	.00	17	.39	413	38	33	29	10	3.3	.01	.00
9	.00	.00	12	2.4	162	36	31	28	10	3.1	.00	.00
10	.00	.00	8.8	26	105	34	30	29	10	3.1	.00	.00
11	.00	.00	7.1	14	77	31	31	28	11	3.0	.01	.00
12	.00	.00	5.6	9.3	65	30	30	33	11	2.8	.01	.00
13	.00	.00	4.5	9.1	56	29	27	67	10	2.6	.00	.00
14	.00	.00	3.7	7.7	151	32	26	58	9.6	2.4	.00	.00
15	.00	.00	3.3	7.8	150	27	25	47	9.0	2.1	.00	.00
16	.00	.00	3.0	7.5	87	27	23	39	8.8	2.0	.00	.00
17	.00	.00	2.7	6.8	81	25	22	33	8.8	1.8	.06	.00
18	.00	.00	4.3	6.6	51	24	20	26	8.2	1.5	.04	.00
19	.00	.00	3.5	8.7	54	22	19	23	7.9	1.3	.02	.00
20	.00	.00	2.7	7.5	67	22	18	22	7.5	1.3	.01	.00
21	.00	.00	3.1	6.3	49	21	17	21	7.3	1.3	.01	.00
22	.00	.00	2.4	5.6	1040	20	17	19	7.0	1.5	.00	.00
23	.00	.00	2.0	5.5	e1900	19	18	18	6.7	1.3	.00	.00
24	.00	.00	2.0	5.3	e3200	19	17	16	6.5	1.3	.00	.00
25	.00	.00	1.8	5.3	e2190	33	16	19	6.0	1.2	.00	.00
26	.00	.04	1.7	5.1	e770	21	e15	19	5.6	.95	.00	.00
27	.00	.00	1.5	4.9	e280	20	e14	17	5.4	.74	.00	.00
28	.00	.00	1.0	4.3	e120	55	e14	16	5.1	.58	.00	.00
29	.00	.00	.83	6.6	---	44	e13	15	4.8	.51	.00	.00
30	.00	.00	.73	6.2	---	37	e13	14	4.5	.75	.00	.00
31	.00	---	.61	6.3	---	44	---	14	---	.48	.00	---
TOTAL	0.00	0.04	219.87	179.42	11302.4	1312	813	795	262.7	69.21	1.35	0.00
MEAN	.000	.001	7.09	5.79	404	42.3	27.1	25.6	8.76	2.23	.044	.000
MAX	.00	.04	94	26	3200	149	53	67	13	4.3	.39	.00
MIN	.00	.00	.00	.39	6.4	19	13	12	4.5	.48	.00	.00
AC-FT	.00	.08	436	356	22420	2600	1610	1580	521	137	2.7	.00

e Estimated.

11075800 SANTIAGO CREEK AT MODJESKA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.20	1.82	5.76	17.8	41.0	24.2	6.89	3.76	1.58	.43	.14	.074
MAX	5.00	33.5	97.4	179	404	137	33.7	27.0	8.76	2.84	1.68	1.07
(WY)	1984	1966	1967	1993	1998	1978	1983	1983	1998	1983	1983	1983
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1962 - 1998	
ANNUAL TOTAL	1467.43		14954.99			
ANNUAL MEAN	4.02		41.0		8.46	
HIGHEST ANNUAL MEAN					47.2	
LOWEST ANNUAL MEAN					.21	
HIGHEST DAILY MEAN	188	Jan 26	3200	Feb 24	3590	Feb 24 1969
LOWEST DAILY MEAN	.00	Apr 18	.00	Oct 1	.00	Oct 1 1961
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 21	.00	Oct 1	.00	Oct 1 1961
INSTANTANEOUS PEAK FLOW			6200	Feb 23	6520	Feb 25 1969
INSTANTANEOUS PEAK STAGE			12.03	Feb 23	12.03	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	2910		29660		6130	
10 PERCENT EXCEEDS	9.9		48		11	
50 PERCENT EXCEEDS	.00		4.3		.30	
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 except for estimated daily discharges, which are poor. Flow regulated since December 1931 by Santiago Reservoir, capacity, 25,000 acre-ft; since January 1963 by Villa Park flood-control reservoir, capacity, 15,500 acre-ft, and affected by intervening gravel pits. Diversions upstream from station by Irvine Company and Serrano and Carpenter Irrigation Districts. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,600 ft³/s, Feb. 25, 1969, gage height, 9.10 ft, site and datum then in use; maximum gage height, 11.57 ft, Jan. 4, 1995; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	177	7.5	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	18	4.8	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	73	3.4	2.0	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	61	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	115	.00	36	.00	.00	.00	.00
6	.00	.00	288	.00	31	143	3.2	18	.00	.00	.00	.00
7	.00	.00	1.6	.00	100	72	5.2	.41	.00	.00	.00	.00
8	.00	.00	.00	.00	34	19	5.1	.00	.00	.00	.00	.00
9	.00	.00	.00	23	e.42	9.8	5.0	.00	.00	.00	.00	.00
10	.00	.00	.00	25	e.00	4.4	1.9	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	e.00	5.0	.30	.00	.00	.00	1.5	.00
12	.00	.00	.00	.00	e.00	4.2	.00	15	.00	.00	1.3	.00
13	.00	20	.00	.00	e.00	1.3	.00	45	.00	.00	.00	.00
14	.00	.00	.00	.00	e80	13	.00	5.6	.00	.00	.00	.00
15	.00	.00	.00	.00	e25	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	e.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	e25	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	33	.00	e.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	e35	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	e50	.00	3.0	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	e.00	.00	5.0	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	e70	.00	5.0	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	e120	.00	3.4	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	e2800	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	e2330	100	.00	.00	.00	.00	.00	.00
26	.00	30	.00	.00	e1650	2.8	.00	.00	.00	.00	.00	.00
27	.00	.49	.00	.00	e680	4.6	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	237	7.1	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	17	---	4.7	.00	.00	.00	.00	.00	.00
30	.00	1.9	.00	.00	---	4.7	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	26	---	.00	---	.00	.00	---
TOTAL	0.00	52.39	322.60	65.00	8340.42	796.00	51.40	120.01	0.00	0.00	2.80	0.00
MEAN	.0000	1.75	10.4	2.10	298	25.7	1.71	3.87	.0000	.0000	.090	.0000
MAX	.00	30	288	25	2800	177	7.5	45	.00	.00	1.5	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	104	640	129	16540	1580	102	238	.00	.00	5.6	.00

e Estimated.

11077500 SANTIAGO CREEK AT SANTA ANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.079	.37	2.20	5.64	9.28	29.7	7.56	.32	.002	.000	.000	.053
MAX	2.61	3.03	9.71	62.3	94.6	329	159	3.85	.050	.000	.000	1.20
(WY)	1935	1945	1937	1952	1937	1938	1941	1941	1941	1931	1931	1939
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1936	1952	1931	1932	1931	1931	1931	1931	1931

SUMMARY STATISTICS

WATER YEARS 1931 - 1963

ANNUAL MEAN	4.60	
HIGHEST ANNUAL MEAN	40.0	1941
LOWEST ANNUAL MEAN	.067	1961
HIGHEST DAILY MEAN	2320	Mar 3 1938
LOWEST DAILY MEAN	.00	Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1 1930
INSTANTANEOUS PEAK FLOW	4400	Mar 2 1938
INSTANTANEOUS PEAK STAGE	9.85	Jan 16 1952
ANNUAL RUNOFF (AC-FT)	3330	
10 PERCENT EXCEEDS	.40	
50 PERCENT EXCEEDS	.00	
90 PERCENT EXCEEDS	.00	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.19	1.86	2.23	12.3	43.5	24.5	.60	.16	.011	.017	.058	.10
MAX	4.29	7.80	10.4	259	616	253	4.52	3.87	.24	.58	1.60	1.59
(WY)	1984	1983	1998	1993	1969	1978	1965	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1964 - 1998

ANNUAL TOTAL	523.67		9750.62	
ANNUAL MEAN	1.43		26.7	6.93
HIGHEST ANNUAL MEAN				71.7
LOWEST ANNUAL MEAN				.18
HIGHEST DAILY MEAN	288	Dec 6	2800	Feb 24
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 4	.00	Oct 1
INSTANTANEOUS PEAK FLOW			3300	Feb 24
INSTANTANEOUS PEAK STAGE			11.34	Feb 24
ANNUAL RUNOFF (AC-FT)	1040		19340	5020
10 PERCENT EXCEEDS	.00		14	.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 through Feb. 23 and poor thereafter. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, and 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	3.9	.00	.20	e3020	1160	99	147	40	.99	.00
2	.00	.00	.00	.00	.00	e1630	346	110	208	53	.72	.00
3	.00	.00	.00	1.5	1170	e550	e330	125	201	81	.77	.00
4	.00	.00	.00	5.1	1380	e390	e240	141	72	70	.11	.00
5	.00	.00	.00	.36	285	e450	e170	984	61	69	.89	.00
6	.00	.00	2280	.00	712	e1140	e165	1170	57	77	2.3	.00
7	.00	.00	1550	.00	4680	e860	e168	1700	60	70	1.2	3.4
8	.00	.00	728	.00	4630	e350	e150	921	53	65	.21	5.8
9	.00	.00	92	258	6950	e300	e148	713	25	60	.00	.00
10	.00	2.5	.73	901	6460	e250	e160	692	19	49	.00	.00
11	.00	.00	.02	865	605	e175	e165	613	12	48	.58	.00
12	.00	.00	.00	2.2	196	165	e158	796	29	51	12	.00
13	.00	81	.00	14	172	167	e155	4280	37	54	.00	.00
14	.00	17	.00	2.4	2310	424	e150	2860	33	58	.00	.00
15	.00	.00	.00	.00	5740	187	e140	1350	18	67	.00	.00
16	.00	.00	.00	.00	2270	180	e138	674	39	38	.00	.00
17	.00	.00	.00	.00	1630	173	e130	630	32	3.4	.00	.00
18	.00	.00	322	.00	1010	153	e125	624	32	.00	.00	.00
19	.00	.00	18	8.4	294	106	e110	437	29	.00	.00	.00
20	.00	.28	.00	.00	1290	69	e100	289	22	.00	.00	.00
21	.00	.00	.89	.00	338	87	e105	130	17	.00	.00	.00
22	.00	.00	.00	.00	3170	91	e110	151	18	.03	.00	.00
23	.00	.00	.00	.00	5930	82	e115	151	18	.00	.00	.00
24	.00	.00	.00	.00	e8770	84	e120	157	12	.00	.00	.00
25	.00	.00	.00	.00	e8200	1250	e130	153	11	.00	.00	.00
26	.00	210	.00	.00	e7800	370	e125	116	16	.22	.00	.00
27	.00	38	.00	.00	e5100	26	e115	107	18	1.1	.00	16
28	.00	.26	.00	.00	e3100	1370	e110	264	18	1.3	.00	11
29	.00	.00	.00	103	---	451	e105	529	16	1.5	.00	11
30	.00	54	.00	2.1	---	135	95	156	20	1.5	.00	14
31	.00	---	.00	.22	---	439	---	145	---	1.5	.00	---
TOTAL	0.00	403.04	4995.54	2163.28	84192.20	15124	5538	21267	1350	960.55	19.77	61.20
MEAN	.000	13.4	161	69.8	3007	488	185	686	45.0	31.0	.64	2.04
MAX	.00	210	2280	901	8770	3020	1160	4280	208	81	12	16
MIN	.00	.00	.00	.00	.00	26	95	99	11	.00	.00	.00
AC-FT	.00	799	9910	4290	167000	30000	10980	42180	2680	1910	39	121

e Estimated.

SANTA ANA RIVER BASIN

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
LOWEST ANNUAL MEAN	.000
HIGHEST DAILY MEAN	20300
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	46300
INSTANTANEOUS PEAK STAGE	10.20
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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.43	12.2	37.8	177	281	258	64.3	28.7	8.89	.96	1.97	1.47
MAX	179	154	428	3962	3014	2342	889	686	433	31.0	102	40.6
(WY)	1984	1984	1985	1993	1980	1969	1980	1998	1983	1998	1983	1986
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1940 - 1998

ANNUAL TOTAL	16946.85	136074.58	
ANNUAL MEAN	46.4	373	72.0
HIGHEST ANNUAL MEAN			612
LOWEST ANNUAL MEAN			.006
HIGHEST DAILY MEAN	3530	Jan 26	8770
LOWEST DAILY MEAN	.00	Jan 6	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 2	.00
INSTANTANEOUS PEAK FLOW			15200
INSTANTANEOUS PEAK STAGE			6.87
ANNUAL RUNOFF (AC-FT)	33610		52140
10 PERCENT EXCEEDS	2.4		862
50 PERCENT EXCEEDS	.00		11
90 PERCENT EXCEEDS	.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.

CHEMICAL DATA: December 1997 to September 1998.

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.

REMARKS.—Chemical data collected for the National Water-Quality Assessment Program (NAWQA).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		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 AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	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)
DEC 07...	1630	1500	342	8.10	20.0	14.0	764	11.3	109	98	32	28
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	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 (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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
DEC 07...	7.0	24	33	1	6.8	80	65	42	29	.3	6.1	209
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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL DIS. (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHOS DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)
DEC 07...	193	.28	.01	2.1	.13	3.9	.6	2.6	.35	.31	16	<1
DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
DEC 07...	2	24	<1	<1	<1	<1	2	28	<1	7	3	2
DATE	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C) (00689)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1-DI- CHLORO- PRO- PENE, WAT, WH TOTAL (UG/L) (77168)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	1,1,2- TRI- CHLORO- ETHANE TOTAL (UG/L) (34511)	1,2- DIBROMO ETHANE WATER WHOLE TOTAL (UG/L) (77651)
DEC 07...	<1	<1	2	2	5	>17	<.264	<.176	<.104	<.128	<.256	<.144

11078000 SANTA ANA RIVER AT SANTA ANA, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	1,2,3- TRI- CHLORO- BENZENE WAT, WH REC (UG/L) (77613)	1,3-DI- CHLORO- PROPANE WAT, WH TOTAL (UG/L) (77173)	2BUTENE TRANS-1 4-DI- CHLORO UNFLTRD RECOVER (UG/L) (73547)	2-HEXA- NONE WATER WHOLE TOTAL (UG/L) (77103)	2,2-DI- CHLORO- PRO- PANE WAT, WH TOTAL (UG/L) (77170)	123-TRI CHLORO- PROPANE WATER WHOLE TOTAL (UG/L) (77443)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO- NITRILE TOTAL (UG/L) (34215)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (UG/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)
DEC 07...	<.536	<.272	<1.06	<.464	<2.77	<2.98	<.312	<.28	<19.6	<4.90	<.752	<.216
DATE	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	BENZENE 123-TRI- METHYL- WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 124-TRI- METHYL WATER UNFLTRD RECOVER (UG/L) (77222)	BENZENE 135-TRI- METHYL WATER UNFLTRD REC (UG/L) (77226)	BENZENE N-BUTYL N-PROPY WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC BUTYL- WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT- BUTYL- WATER UNFLTRD REC (UG/L) (77353)	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)
DEC 07...	<.2	<.496	<.224	<.176	<.744	<.168	<.192	<.192	<.384	<.128	<.144	<.192
DATE	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER WHOLE TOTAL (UG/L) (77041)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE WATER TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)
DEC 07...	<.4	<.416	<.32	<.352	<.112	<.728	<.48	E.056	<.152	<.368	<.856	<.2
DATE	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL METHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L) (39702)
DEC 07...	<.384	<.392	<.528	<.176	<1.45	<.68	<.216	<.448	<.12	<.128	<4.59	<.568
DATE	ISO- DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	ISO- PROPYL- BENZENE WATER WHOLE REC (UG/L) (77223)	META/ PARA- XYLENE WATER UNFLTRD REC (UG/L) (85795)	METHAC- RYLATE ETHYL- WATER UNFLTRD RECOVER (UG/L) (73570)	METHAC- RYLATE METHYL WATER UNFLTRD RECOVER (UG/L) (81597)	METH- ACRYLO- NITRITE WATER UNFLTRD RECOVER (UG/L) (81593)	METHANE BROMO CHLORO- WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRY- LATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL ISO- BUTYL KETONE WAT. WH. TOTAL (UG/L) (78133)	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL- BROMIDE TOTAL (UG/L) (34413)
DEC 07...	<.96	<.128	<.256	<1.11	<1.4	<2.28	<.176	<2.45	<.304	<1.50	E.39	<.592
DATE	METHYL- CHLO- RIDE TOTAL (UG/L) (34418)	METHYL ENE CHLO- RIDE TOTAL (UG/L) (34423)	METHYL- ETHYL- KETONE WATER WHOLE TOTAL (UG/L) (81595)	O- CHLORO- TOLUENE NAPHTH- ALENE TOTAL (UG/L) (34696)	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	O- XYLENE WATER WHOLE TOTAL (UG/L) (77135)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L) (77356)	PREH- NITENE WATER UNFLTRD RECOVER (UG/L) (49999)	PROPENE 3- CHLORO- WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)
DEC 07...	<1.02	<1.53	<6.6	<1	<.168	<.256	<.44	<.92	<.784	<.168	<.152	<.4

11078000 SANTA ANA RIVER AT SANTA ANA, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)	TOLUENE TOTAL (UG/L) (34010)	TRANS- 1,2-DI- CHLORO- ETHENE TOTAL (UG/L) (34546)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)		2,4-DB WATER, FLTRD, GF 0.7U DIS- SOLVED (UG/L) (39732)		2,4-DB WATER, FLTRD, GF 0.7U DIS- SOLVED (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U (UG/L) (39742)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U (UG/L) (49308)
DEC 07...	<.224	E.11	<.128	<.536	<.152	<.368	<.448	<.15	<.24	<.035	<.003	<.014		
	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALPHA BHC DIS- SOLVED (UG/L) (34253)		ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)		BEN- FLUR- ALIN WAT FLD GF, REC (UG/L) (82673)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)
DEC 07...	<.002	<.035	<.002	<.55	<.1	<.021	<.002	.0099	<.002	<.014	<.035	<.035		
	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD GF, REC (UG/L) (82674)	CHLOR- AMBEN, WATER, FLTRD GF 0.7U REC (UG/L) (49307)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)		CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)		CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	
DEC 07...	<.002	E.0300	<.003	<.42	<.48	.0210	<.23	<.004	<.017	.0453	<.002			
	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLO- BENIL, WATER, FLTRD, GF 0.7U REC (UG/L) (49303)	DICHLO- PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)		DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)		DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)		DNOC WAT,FLT GF 0.7U REC (UG/L) (49299)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
DEC 07...	.262	<.035	<1.2	<.032	<.001	<.035	<.017	E4.3	E.14	<.002	<.004			
	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)	FONOPOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)		MALA- THION, DIS- SOLVED (UG/L) (39532)		MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)		MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)
DEC 07...	<.003	<.013	<.035	<.003	<.004	<.002	.0602	<.17	<.14	<.026	<.017			
	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)		NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)		NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)		ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P, P' DDE DISSOLV (UG/L) (34653)
DEC 07...	<.001	<.006	.0100	<.004	<.004	.0199	<.015	<.024	<.31	<.018	<.006			

11078000 SANTA ANA RIVER AT SANTA ANA, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
DEC 07...	.0646	<.004	<.004	<.005	<.002	<.05	.0374	<.003	<.004	<.013	<.007
DATE	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SILVEX, DIS- SOLVED (UG/L) (39762)	SI- MAZINE, WATER, FLTRD, GF, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
DEC 07...	<.035	<.035	<.021	1.64	<.010	<.007	<.013	<.002	<.001	<.25	<.002

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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. 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)
DEC 06...	1245	1780	12.0	4790	23000	27	36	42
DEC 07...	1630	1500	14.0	1560	6320	--	--	--
JAN 29...	1200	229	--	186	115	--	--	--
FEB 03...	1300	2100	12.5	2500	14200	18	27	35
08...	1120	4140	12.0	1600	17900	22	26	31
17...	1205	1520	13.0	652	2680	--	--	--
26...	1300	6300	14.5	998	17000	--	--	--
MAR 25...	1230	2420	12.0	1170	7640	--	--	--
APR 20...	1125	e100	20.5	14	3.8	--	--	--
29...	1410	e105	27.0	19	5.4	--	--	--
MAY 26...	1200	112	18.0	38	11	--	--	--
JUL 01...	1420	23	29.0	24	1.5	--	--	--
DATE	SED. SUSP. FALL DIAM. % FINER THAN .016 MM (70340)	SED. SUSP. FALL DIAM. % FINER THAN .031 MM (70341)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SED. SUSP. SIEVE DIAM. % FINER THAN .125 MM (70332)	SED. SUSP. SIEVE DIAM. % FINER THAN .250 MM (70333)	SED. SUSP. SIEVE DIAM. % FINER THAN .500 MM (70334)	SED. SUSP. SIEVE DIAM. % FINER THAN 1.00 MM (70335)	SED. SUSP. SIEVE DIAM. % FINER THAN 2.00 MM (70336)
DEC 06...	59	76	85	92	96	100	--	--
DEC 07...	--	--	69	--	--	--	--	--
JAN 29...	--	--	90	96	98	99	100	--
FEB 03...	46	60	72	85	96	100	--	--
08...	40	50	61	76	88	99	100	--
17...	--	--	75	--	--	--	--	--
26...	--	--	59	--	--	--	--	--
MAR 25...	--	--	50	--	--	--	--	--
APR 20...	--	--	95	--	--	--	--	--
29...	--	--	98	--	--	--	--	--
MAY 26...	--	--	46	60	80	90	98	100
JUL 01...	--	--	72	91	100	--	--	--

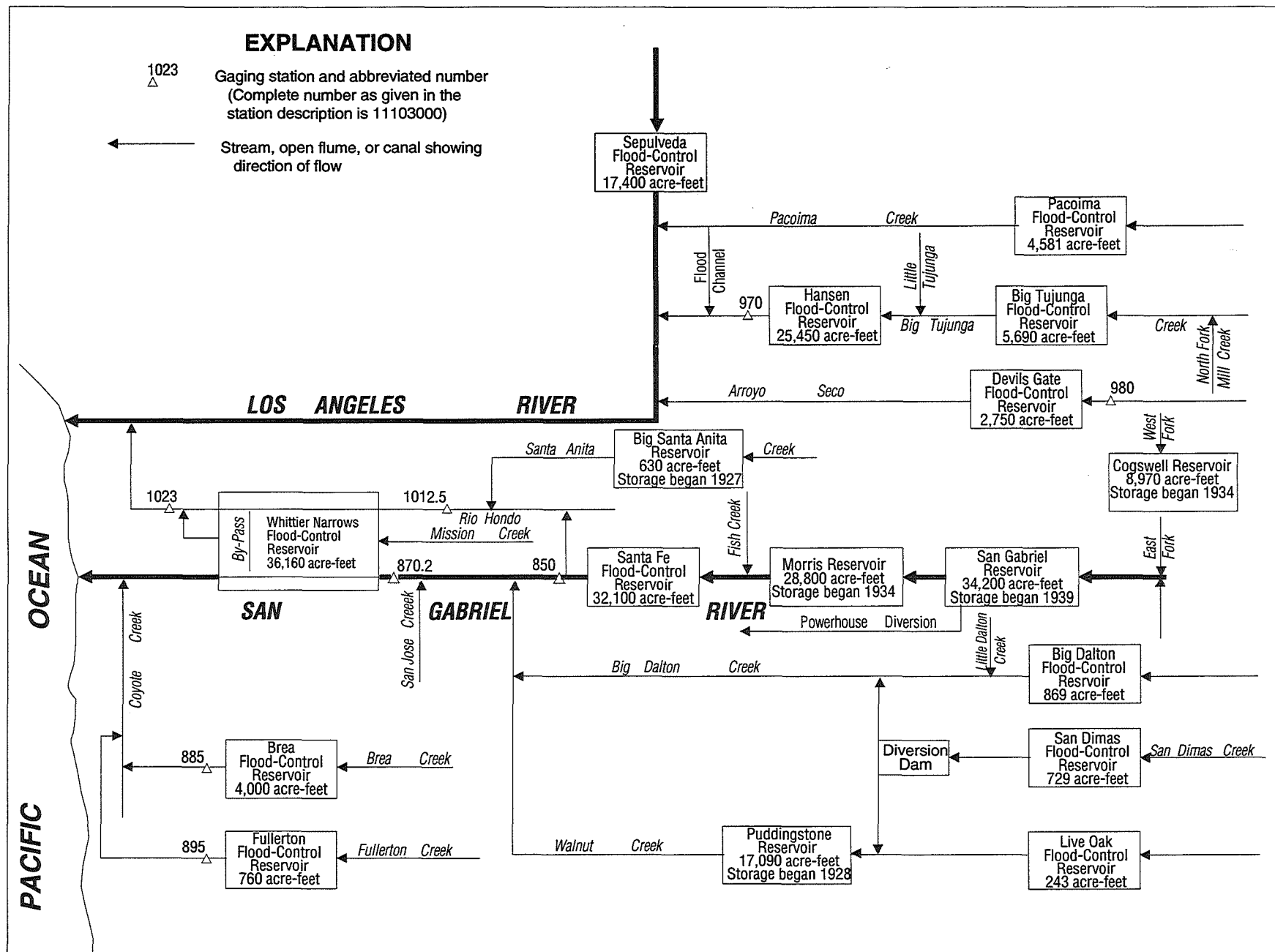


Figure 18. Diversions and storage in San Gabriel and Los Angeles River Basins.

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. Auxiliary gage 500 ft downstream with crest-stage gage and concrete control. Datum of gage is 400.00 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.—Records fair except for discharges above 500 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; 17,010 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.03	20	.04	309	50	275	3.6	.71	94	.00
2	.00	.00	.03	22	.04	449	61	266	.00	405	96	.00
3	.00	.00	.02	25	8.3	468	55	2.8	58	90	39	.00
4	.00	.00	.02	25	11	315	5.2	14	256	3.8	.00	.00
5	.00	.00	.01	27	.68	172	1.1	217	241	2.1	.00	.00
6	.00	.00	1.9	26	5.0	257	.46	1650	225	1.7	.00	.00
7	.00	.00	2.5	26	13	384	.00	1540	103	.54	.00	.00
8	.00	.00	1.3	29	21	380	.00	463	.00	119	.00	.00
9	.00	.00	22	33	39	350	.00	336	.00	211	.00	.00
10	.00	.00	73	40	45	300	.00	557	.11	367	.00	.00
11	.00	.00	30	37	41	297	75	300	40	250	.00	.00
12	.00	.00	32	27	35	293	397	1290	66	32	.00	.00
13	.00	.00	32	.44	20	264	247	1690	65	13	.00	.00
14	.37	.00	32	.06	9.4	96	199	1330	53	196	.00	.00
15	129	.00	32	12	23	29	273	1100	22	360	.00	.00
16	115	.00	32	24	11	25	281	884	.00	303	.00	.00
17	51	.00	32	32	12	11	209	851	87	207	.00	.00
18	6.7	.00	25	32	5.2	2.6	177	671	327	174	.00	.00
19	.04	.00	29	32	2.9	192	181	466	327	22	.00	.00
20	.04	.00	30	32	7.4	279	180	362	316	.54	.00	.00
21	.04	.00	32	32	2.3	339	177	495	179	1.9	.00	.00
22	.03	.00	32	22	18	354	214	269	1.3	1.5	.00	.00
23	.03	.00	32	17	45	238	258	382	.68	1.1	.00	.00
24	.03	.00	34	17	5300	104	222	594	81	.90	.00	.00
25	.02	.00	34	17	1860	64	62	646	256	.78	.00	.00
26	.00	.53	34	17	1550	67	14	237	257	.65	.00	.00
27	.00	3.4	35	17	1610	123	40	179	255	.50	.00	.00
28	.00	2.5	35	17	1070	373	34	567	226	.37	.00	.00
29	.00	.65	110	26	---	433	112	562	85	.24	.00	.00
30	.00	.04	42	26	---	212	198	549	1.7	29	.00	.00
31	.00	---	29	2.1	---	33	---	388	---	90	.00	---
TOTAL	302.30	7.12	855.81	711.60	11765.26	7212.6	3722.76	19132.8	3532.39	2885.33	229.00	0.00
MEAN	9.75	.24	27.6	23.0	420	233	124	617	118	93.1	7.39	.000
MAX	129	3.4	110	40	5300	468	397	1690	327	405	96	.00
MIN	.00	.00	.01	.06	.04	2.6	.00	2.8	.00	.24	.00	.00
AC-FT	600	14	1700	1410	23340	14310	7380	37950	7010	5720	454	.00

11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.83	17.4	30.6	134	237	210	62.0	67.7	27.5	10.2	5.91	9.92
MAX	74.6	577	514	2151	3259	2465	616	617	414	170	121	206
(WY)	1993	1966	1947	1969	1969	1978	1978	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1943 - 1998			
ANNUAL TOTAL	2817.56				50356.97							
ANNUAL MEAN	7.72				138				67.1			
HIGHEST ANNUAL MEAN									540			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	235				5300				26000			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					6200				30900			
INSTANTANEOUS PEAK STAGE					17.39				22.20			
ANNUAL RUNOFF (AC-FT)	5590				99880				48600			
10 PERCENT EXCEEDS	18				356				81			
50 PERCENT EXCEEDS	.00				17				.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 17,010 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	115	52	37	47	462	859	296	153	51	39	50
2	64	121	41	40	204	318	122	249	61	232	35	533
3	105	78	38	442	2290	382	147	96	154	220	35	98
4	113	36	75	513	115	394	230	127	259	47	36	87
5	113	36	75	124	53	207	228	702	241	42	36	86
6	111	30	2450	98	2160	565	73	4330	229	51	34	83
7	108	33	306	58	3970	353	65	2730	172	46	34	87
8	113	36	82	44	2090	339	64	841	83	49	34	86
9	110	33	47	2830	342	325	72	244	41	43	36	82
10	105	249	83	1430	344	238	63	591	40	39	36	87
11	108	51	182	58	205	222	277	607	46	83	36	92
12	116	39	157	53	126	218	312	2970	45	56	34	97
13	129	274	133	60	132	553	311	3440	51	114	32	80
14	120	48	121	49	3090	516	158	2060	49	198	37	95
15	115	47	110	47	263	63	235	1650	258	260	35	92
16	99	38	120	44	470	58	256	1160	88	188	35	88
17	100	39	61	41	1250	57	209	1010	45	40	34	84
18	106	37	615	36	84	58	178	873	192	42	35	89
19	111	40	122	163	489	62	146	718	162	35	33	86
20	113	35	63	75	432	199	159	389	184	128	37	77
21	108	38	92	151	141	284	151	219	195	119	37	78
22	98	37	46	81	3570	321	145	531	176	42	39	79
23	98	41	59	56	6300	254	206	903	113	40	32	81
24	113	37	53	50	11700	282	160	903	54	31	35	80
25	113	39	42	48	3770	2880	95	766	126	37	38	79
26	115	984	42	57	2860	178	58	395	194	32	34	81
27	116	114	64	50	2960	207	67	81	195	42	33	80
28	106	40	38	47	2160	1090	64	633	180	38	32	85
29	104	44	44	520	---	441	66	542	123	40	33	84
30	110	406	47	53	---	323	236	529	56	38	32	83
31	97	---	41	49	---	905	---	435	---	33	36	---
TOTAL	3277	3195	5501	7404	51617	12754	5412	31020	3965	2456	1084	2969
MEAN	106	107	177	239	1843	411	180	1001	132	79.2	35.0	99.0
MAX	129	984	2450	2830	11700	2880	859	4330	259	260	39	533
MIN	40	30	38	36	47	57	58	81	40	31	32	50
AC-FT	6500	6340	10910	14690	102400	25300	10730	61530	7860	4870	2150	5890

11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.1	147	159	388	602	410	118	118	69.3	58.5	55.8	75.7
MAX	208	782	426	4150	4497	3796	591	1001	254	230	208	205
(WY)	1979	1966	1993	1993	1980	1978	1978	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1956 - 1998			
ANNUAL TOTAL	49965				130654							
ANNUAL MEAN	137				358							
HIGHEST ANNUAL MEAN									189			
LOWEST ANNUAL MEAN									810			
HIGHEST DAILY MEAN	2630				11700				24800			
LOWEST DAILY MEAN	17				30				.00			
ANNUAL SEVEN-DAY MINIMUM	36				34				.00			
INSTANTANEOUS PEAK FLOW					31200				46600			
INSTANTANEOUS PEAK STAGE					10.90				10.90			
ANNUAL RUNOFF (AC-FT)	99110				259200				136800			
10 PERCENT EXCEEDS	251				661				214			
50 PERCENT EXCEEDS	83				97				68			
90 PERCENT EXCEEDS	41				36				.40			

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. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	1.5	9.8	2.6	2.3	e12	90	18	5.9	4.5	3.1	2.8
2	2.9	1.4	3.9	2.3	2.2	e10	58	19	5.6	4.3	1.0	34
3	3.0	1.1	1.5	6.6	218	e8.5	57	19	5.4	4.2	2.0	13
4	2.4	1.2	1.3	e25	36	e7.9	58	56	7.1	6.4	3.1	16
5	2.2	1.2	1.4	e8.0	6.2	e7.6	44	75	9.8	6.6	5.7	9.4
6	2.0	1.0	e349	e3.0	123	e135	47	65	12	6.0	6.2	2.6
7	2.0	1.0	e174	2.7	215	e17	43	34	8.3	5.8	6.3	2.5
8	2.2	1.4	e30	2.5	431	e16	44	28	11	5.4	6.0	2.1
9	2.1	1.5	8.4	180	62	e14	40	28	6.0	5.3	6.1	3.4
10	2.2	34	7.3	e250	22	e13	29	28	6.8	4.7	6.0	1.8
11	5.9	27	6.5	e6.8	14	e12	45	25	12	4.5	5.3	2.1
12	2.3	4.6	7.0	e5.3	12	e11	19	112	12	4.2	2.0	2.6
13	2.4	69	6.2	e6.0	11	11	13	196	12	3.9	1.9	3.1
14	2.5	33	6.0	e5.3	300	31	12	46	10	3.9	1.4	3.2
15	2.5	5.9	4.7	4.7	60	15	11	30	10	4.2	3.1	3.1
16	2.4	4.8	3.8	4.7	20	12	9.8	29	11	4.2	1.9	2.9
17	2.4	4.6	3.6	2.7	90	10	13	24	8.7	2.3	2.1	2.9
18	1.3	2.7	e120	2.5	19	9.0	14	24	9.3	2.4	2.8	2.7
19	1.2	1.8	e32	e22	39	8.0	11	23	8.2	3.5	3.4	2.9
20	.93	2.1	4.5	e9.0	82	8.1	9.1	19	8.7	3.9	3.1	3.0
21	1.9	2.2	7.6	e5.0	17	7.8	7.9	12	7.7	3.1	2.9	2.7
22	1.7	3.6	3.4	4.4	471	7.4	6.5	9.2	6.5	2.6	2.9	2.3
23	1.6	2.6	2.1	3.8	431	9.4	5.5	9.7	6.4	3.6	3.8	2.3
24	1.6	2.5	2.1	2.7	437	6.5	4.8	10	6.1	4.2	3.8	2.3
25	1.5	2.6	1.9	1.8	61	215	5.3	10	4.2	3.0	3.7	2.5
26	1.5	e72	2.2	2.1	80	52	8.1	7.9	4.6	2.2	3.6	3.2
27	1.6	e19	2.7	1.6	76	67	6.6	6.5	6.2	2.9	3.5	4.2
28	1.7	10	2.6	1.6	65	81	8.3	6.1	5.3	2.7	2.7	4.4
29	1.5	8.1	2.2	e110	---	37	15	6.3	4.3	2.8	2.5	4.0
30	1.5	50	2.3	e20	---	48	17	7.4	3.9	1.4	3.3	4.4
31	1.3	---	2.5	3.1	---	95	---	7.0	---	2.9	2.1	---
TOTAL	65.23	373.4	812.5	707.8	3402.7	994.2	751.9	990.1	235.0	121.6	107.3	148.4
MEAN	2.10	12.4	26.2	22.8	122	32.1	25.1	31.9	7.83	3.92	3.46	4.95
MAX	5.9	72	349	250	471	215	90	196	12	6.6	6.3	34
MIN	.93	1.0	1.3	1.6	2.2	6.5	4.8	6.1	3.9	1.4	1.0	1.8
AC-FT	129	741	1610	1400	6750	1970	1490	1960	466	241	213	294

e Estimated.

11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.05	3.23	4.86	10.4	14.8	10.2	3.34	1.38	.75	.53	.61	.87
MAX	15.3	31.6	26.6	95.8	165	79.9	50.3	31.9	7.83	3.92	4.68	7.02
(WY)	1984	1984	1989	1993	1980	1978	1983	1998	1998	1998	1983	1986
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998	
ANNUAL TOTAL	2961.62		8710.13			
ANNUAL MEAN	8.11		23.9		4.28	
HIGHEST ANNUAL MEAN					23.9	
LOWEST ANNUAL MEAN					.001	
HIGHEST DAILY MEAN	349	Jan 26	471	Feb 22	1700	Feb 18 1980
LOWEST DAILY MEAN	.33	Jun 12	.93	Oct 20	.00	Mar 24 1942
ANNUAL SEVEN-DAY MINIMUM	.39	Jun 20	1.2	Nov 2	.00	Apr 29 1942
INSTANTANEOUS PEAK FLOW			1390	Feb 7	a	Feb 18 1980
INSTANTANEOUS PEAK STAGE			6.03	Feb 7	a	Feb 18 1980
ANNUAL RUNOFF (AC-FT)	5870		17280		3100	
10 PERCENT EXCEEDS	7.5		57		3.6	
50 PERCENT EXCEEDS	1.3		5.9		.21	
90 PERCENT EXCEEDS	.46		1.9		.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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.47	1.2	.43	.57	1.0	23	.59	.40	.48	.51	.48
2	.44	.43	.48	.43	.44	1.0	1.3	.63	.48	.52	.50	.64
3	.43	.43	.41	.99	82	.51	.83	.57	.47	.53	.50	.58
4	.42	.44	.41	4.2	12	.43	1.5	22	.47	.52	.48	.58
5	.38	.43	.43	1.5	.90	1.1	1.2	16	.46	.49	.47	.58
6	.42	.55	125	.65	36	21	.74	7.5	.47	.57	.48	.56
7	.40	.60	25	.52	58	.79	2.3	.70	.42	.48	.53	.57
8	.36	.49	5.5	.43	131	.52	3.6	.56	.48	.42	.53	.54
9	.42	.38	1.1	38	14	.51	3.4	.59	.50	.46	.47	.51
10	.42	9.8	.49	39	1.2	.45	3.4	.56	.49	.48	.50	.52
11	.58	1.7	.34	1.5	.88	.48	7.5	.53	1.2	.44	.51	.55
12	.32	.44	.35	.83	.63	.56	.98	31	.72	.43	.49	.54
13	.35	23	.46	1.2	.60	.97	.46	88	.54	.45	.48	.49
14	.33	1.2	.43	.81	118	19	.43	3.6	.51	.41	.49	.54
15	.35	.49	.47	1.1	9.1	.71	.43	.70	.54	.43	.59	.57
16	.35	.42	.47	.91	1.3	.50	.43	.60	.61	.54	.50	.48
17	.38	.38	.43	.61	25	.47	.41	.56	.50	.65	.56	.45
18	.39	.36	31	.58	1.3	.49	.43	.54	.49	.53	.63	.46
19	.41	.38	4.7	3.9	7.4	.48	.43	.54	.53	.44	.52	.45
20	.42	.44	.88	.74	24	.43	.45	.53	.50	.51	.52	.41
21	.40	.43	.91	.51	1.6	.43	.51	.51	.45	.49	.54	.43
22	.37	.37	.56	.43	141	.43	.50	.56	.48	.47	.52	.43
23	.43	.38	.43	.37	125	.48	.48	.54	.44	.59	.49	.39
24	.39	.42	.41	.42	104	.43	.50	.47	.44	.61	.53	.38
25	.39	.41	.36	.36	1.6	94	.48	.61	.46	.57	.53	.42
26	.35	20	.36	.36	.94	5.2	.43	1.1	.50	.52	.49	.41
27	.33	6.2	.36	.36	.63	.80	.49	.39	.51	.62	.48	.38
28	.42	.45	.39	.38	.58	23	3.3	.40	.44	.63	.52	.39
29	.50	.46	.39	24	---	.97	.66	.41	.50	.53	.51	.40
30	.51	16	.40	1.3	---	.55	.56	.41	.51	.47	.47	.39
31	.49	---	.40	.65	---	17	---	.39	---	.52	.49	---
TOTAL	12.54	87.95	204.52	127.47	899.67	194.69	61.13	182.09	15.51	15.80	15.83	14.52
MEAN	.40	2.93	6.60	4.11	32.1	6.28	2.04	5.87	.52	.51	.51	.48
MAX	.58	23	125	39	141	94	23	88	1.2	.65	.63	.64
MIN	.32	.36	.34	.36	.44	.43	.41	.39	.40	.41	.47	.38
AC-FT	25	174	406	253	1780	386	121	361	31	31	31	29

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
LOWEST ANNUAL MEAN	.000
HIGHEST DAILY MEAN	79
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	298
INSTANTANEOUS PEAK STAGE	3.80
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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.55	1.20	2.06	4.31	5.15	3.39	.95	.51	.35	.31	.36	.45
MAX	5.31	5.76	9.96	28.0	32.1	18.6	6.28	5.87	1.66	1.01	1.72	2.53
(WY)	1984	1986	1993	1993	1998	1983	1958	1998	1995	1991	1977	1986
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1955 - 1998

ANNUAL TOTAL	890.55	1831.72	
ANNUAL MEAN	2.44	5.02	1.62
HIGHEST ANNUAL MEAN			5.16
LOWEST ANNUAL MEAN			.028
HIGHEST DAILY MEAN	125	Dec 6	141
LOWEST DAILY MEAN	.32	Oct 12	.32
ANNUAL SEVEN-DAY MINIMUM	.35	Oct 12	.35
INSTANTANEOUS PEAK FLOW			360
INSTANTANEOUS PEAK STAGE			8.13
ANNUAL RUNOFF (AC-FT)	1770	3630	1170
10 PERCENT EXCEEDS	3.4	6.7	1.0
50 PERCENT EXCEEDS	.47	.50	.30
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 and concrete-lined flood control channel. Datum of gage is 943.32 ft above sea level (U.S. Army Corps of Engineers benchmark). See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.—Records fair except for discharges below 100 ft³/s, which are poor. Flow regulated since July 1931 by Big Tujunga Flood-Control Reservoir, capacity, 5,690 acre-ft, and since September 1940 by Hansen Flood-Control Reservoir, capacity, 25,450 acre-ft. Several small diversions for domestic use and irrigation. Since about 1948, Los Angeles County Department of Public Works has diverted water 0.3 mi upstream from gage to spreading grounds, as shown in footnote below table. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,200 ft³/s, Feb. 10, 1978, Mar. 2, 1983; maximum gage height, 7.64 ft, Mar. 2, 1983; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 54,000 ft³/s, estimated, Mar. 2, 1938.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	5.1	.00	.00	851	50	194	190	.00	32	17
2	.00	.00	.00	.00	.00	517	11	184	165	25	30	17
3	23	.00	.00	.00	194	325	.24	177	181	53	28	24
4	.00	.00	.00	.00	96	297	1.7	231	160	42	57	22
5	.00	.00	.00	.00	153	239	20	734	148	34	62	20
6	.00	.00	185	.00	55	198	55	988	136	49	58	21
7	.00	.00	76	.00	88	150	55	710	126	133	33	20
8	.00	.00	40	.00	161	109	69	255	118	105	28	12
9	.05	.00	.00	.01	439	100	84	153	112	68	28	.00
10	.00	.00	.00	16	175	80	78	167	229	39	28	.00
11	.00	.00	.00	10	107	60	87	353	161	36	27	.00
12	.00	.00	.00	3.1	80	50	142	507	146	33	27	.00
13	.00	.00	.00	.00	1.9	35	125	990	135	37	26	.00
14	.00	.00	.00	.00	24	27	95	1060	131	95	25	.00
15	.00	.00	.00	.00	140	32	100	862	156	85	25	.00
16	.00	.00	.00	.00	109	33	91	735	127	81	26	.00
17	.00	.85	.00	.00	69	14	78	697	.00	47	26	.00
18	.00	.00	.00	.00	89	.00	9.4	660	.00	40	52	.00
19	.00	.20	.00	.00	153	.00	.23	555	.00	38	60	.00
20	.00	.00	.00	.00	155	.00	96	509	.00	38	55	.00
21	.00	.00	.00	.00	71	.00	174	398	.00	48	34	.00
22	.00	.00	.00	.00	164	.00	511	284	.00	51	25	.00
23	.00	.00	.00	.00	2310	.00	278	290	.00	51	23	1.1
24	.00	.00	.00	.00	4760	.00	245	291	11	41	20	.00
25	.00	.00	.00	.00	1710	41	323	283	.00	33	38	.00
26	.00	34	.00	.21	761	31	224	358	.00	28	39	.00
27	.00	23	.00	.00	671	.00	204	281	.00	29	32	.00
28	.00	12	.00	.00	603	.00	177	253	.00	74	25	.00
29	.00	8.7	.00	.00	---	.00	164	237	.00	82	19	.00
30	.00	26	.00	.00	---	.00	187	221	.00	73	20	.00
31	.00	---	.00	.00	---	5.4	---	218	---	36	18	---
TOTAL	23.05	104.75	306.10	29.32	13338.90	3194.40	3734.57	13835	2432.00	1624.00	1026	154.10
MEAN	.74	3.49	9.87	.95	476	103	124	446	81.1	52.4	33.1	5.14
MAX	23	34	185	16	4760	851	511	1060	229	133	62	24
MIN	.00	.00	.00	.00	.00	.00	.23	153	.00	.00	18	.00
AC-FT	46	208	607	58	26460	6340	7410	27440	4820	3220	2040	306
a	244	937	1730	690	37980	8860	7830	34190	5230	3420	2270	602

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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.58	7.82	4.00	41.2	99.0	83.9	28.6	25.2	7.31	2.56	2.11	3.27
MAX	32.2	153	65.3	742	1218	1387	252	446	81.1	52.4	33.1	41.4
(WY)	1984	1984	1984	1993	1993	1983	1983	1998	1998	1998	1998	1983
MIN	.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 1997 CALENDAR YEAR					FOR 1998 WATER YEAR				WATER YEARS 1948 - 1998		
ANNUAL TOTAL	3414.60					39802.19						
ANNUAL MEAN	9.36					109				25.2		
HIGHEST ANNUAL MEAN										224		
LOWEST ANNUAL MEAN										.000		
HIGHEST DAILY MEAN	185					4760				11400		
LOWEST DAILY MEAN	.00					.00				.00		
ANNUAL SEVEN-DAY MINIMUM	.00					.00				.00		
INSTANTANEOUS PEAK FLOW						8600				15200		
INSTANTANEOUS PEAK STAGE						5.84				7.64		
ANNUAL RUNOFF (AC-FT)	6770					78950				18280		
10 PERCENT EXCEEDS	25					248				20		
50 PERCENT EXCEEDS	.00					20				.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 above 1 ft³/s and fair below. No regulation or diversion upstream from station. See schematic diagram of San Gabriel and Los Angeles River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,620 ft³/s, Mar. 2, 1938, gage height, 9.42 ft, present datum, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft³/s, or maximum, from rating curve extended above 1,170 ft³/s on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 3	1130	248	3.13	Feb. 23	1420	4,380	7.34
Feb. 7	2230	924	4.41	May 5	1345	484	3.57
Feb. 14	1645	189	2.95	May 12	1730	384	3.39

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.16	3.0	2.1	3.9	65	69	22	34	14	6.5	3.3
2	.23	.20	2.4	2.1	4.0	65	62	22	32	13	7.0	3.5
3	.22	.29	2.2	3.0	96	55	60	26	32	13	6.7	3.7
4	.19	.39	2.0	3.8	42	49	60	28	31	13	6.5	4.7
5	.20	.44	2.9	3.8	19	46	59	203	29	12	6.5	5.5
6	.19	.50	51	3.2	70	57	55	124	29	12	6.2	4.9
7	.15	.57	11	2.9	155	39	51	67	28	11	6.1	4.2
8	.13	.59	8.4	2.7	217	34	48	52	28	11	6.1	4.0
9	.13	.51	4.6	7.1	79	30	46	45	27	11	6.0	4.7
10	.12	2.0	3.5	32	44	28	44	39	26	11	6.3	5.1
11	.16	.94	3.0	11	31	26	52	36	26	10	6.4	4.8
12	.24	.64	2.9	7.0	24	24	50	140	27	9.9	5.7	4.5
13	.20	.81	2.7	6.1	20	24	45	232	24	9.8	5.4	4.2
14	.18	.94	2.5	5.1	66	28	43	179	23	9.5	5.0	3.8
15	.27	1.1	2.4	4.7	50	23	40	134	22	9.1	4.9	3.7
16	.25	1.2	2.2	4.6	32	22	37	118	23	8.5	4.7	3.5
17	.25	1.2	2.2	4.3	39	21	35	101	22	8.0	4.7	3.2
18	.24	1.1	3.0	4.2	29	19	33	91	21	7.8	4.9	3.1
19	.35	1.1	4.5	6.1	28	18	32	82	20	8.1	4.7	3.0
20	.50	1.1	3.4	4.6	34	18	31	76	19	7.9	4.6	3.5
21	.59	1.0	3.2	4.3	26	17	29	69	19	7.8	4.5	4.3
22	.56	.96	2.5	4.0	119	16	29	66	18	8.0	4.2	4.6
23	.55	.94	2.4	3.9	1530	15	28	63	17	8.1	3.9	4.6
24	.52	.97	2.4	3.7	609	14	28	58	17	8.1	3.9	4.4
25	.36	.99	2.3	3.3	271	62	27	56	17	7.7	4.0	4.2
26	.30	11	2.2	3.1	138	39	25	54	17	7.1	4.0	4.2
27	.37	6.8	2.2	3.0	101	32	24	48	16	6.6	3.9	4.8
28	.31	3.2	2.2	2.9	75	60	23	44	15	6.4	3.7	4.5
29	.34	2.2	2.2	7.4	---	42	22	41	15	6.4	3.4	4.0
30	.32	2.5	2.1	4.8	---	36	22	39	14	6.6	3.3	4.0
31	.27	---	2.0	4.1	---	50	---	36	---	6.5	3.2	---
TOTAL	8.84	46.34	145.5	164.9	3951.9	1074	1209	2391	688	288.9	156.9	124.5
MEAN	.29	1.54	4.69	5.32	141	34.6	40.3	77.1	22.9	9.32	5.06	4.15
MAX	.59	11	51	32	1530	65	69	232	34	14	7.0	5.5
MIN	.12	.16	2.0	2.1	3.9	14	22	22	14	6.4	3.2	3.0
AC-FT	18	92	289	327	7840	2130	2400	4740	1360	573	311	247

11098000 ARROYO SECO NEAR PASADENA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.15	3.89	8.88	18.8	34.0	28.7	14.3	7.34	3.57	1.73	1.04	1.07
MAX	8.54	97.4	132	251	344	235	91.5	77.1	22.9	10.7	7.70	8.26
(WY)	1984	1966	1922	1969	1914	1938	1941	1998	1998	1969	1983	1976
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1911 - 1998	
ANNUAL TOTAL	1605.10		10249.78			
ANNUAL MEAN	4.40		28.1		10.3	
HIGHEST ANNUAL MEAN					57.8	1969
LOWEST ANNUAL MEAN					.75	1951
HIGHEST DAILY MEAN	87	Jan 26	1530	Feb 23	3690	Feb 20 1914
LOWEST DAILY MEAN	.12	Oct 10	.12	Oct 10	.00	Aug 18 1920
ANNUAL SEVEN-DAY MINIMUM	.15	Oct 5	.15	Oct 5	.00	Aug 18 1920
INSTANTANEOUS PEAK FLOW			4380	Feb 23	8620	Mar 2 1938
INSTANTANEOUS PEAK STAGE			7.34	Feb 23	9.42	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	3180		20330		7450	
10 PERCENT EXCEEDS	11		59		17	
50 PERCENT EXCEEDS	1.3		7.0		1.9	
90 PERCENT EXCEEDS	.25		.56		.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 17,010 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.2	4.4	1.3	.99	81	166	5.6	6.1	2.4	18	3.0
2	1.7	3.5	1.4	1.3	6.2	71	17	30	43	1.9	92	1.6
3	1.1	2.0	1.2	28	1140	50	46	22	330	2.0	62	1.5
4	.96	5.2	1.4	187	4.5	49	142	17	368	1.6	1.9	2.4
5	1.2	3.6	98	2.9	1.1	149	74	584	432	1.9	2.0	2.5
6	1.3	2.1	1200	1.7	1270	263	56	1670	433	1.5	2.9	1.8
7	1.2	1.9	94	.95	1970	27	9.3	121	386	1.5	1.9	2.0
8	.99	1.3	4.5	1.1	1080	21	5.6	36	17	82	1.3	2.4
9	1.2	1.1	1.4	1070	124	22	6.1	24	3.6	231	1.3	1.6
10	1.3	573	.73	309	2.1	23	133	22	2.3	7.9	1.8	1.3
11	1.1	3.3	1.3	2.5	1.6	12	683	21	43	3.4	1.8	1.1
12	.91	2.4	.78	1.5	1.3	13	48	1210	262	1.2	1.5	1.0
13	2.8	134	.65	9.2	2.3	409	32	1450	121	1.4	1.7	1.3
14	1.3	1.7	.85	1.0	1370	188	12	293	118	99	1.5	1.5
15	3.1	.98	2.2	5.6	12	38	2.0	127	86	373	1.5	1.3
16	1.9	2.4	1.6	2.0	130	26	1.4	89	8.4	364	1.5	1.2
17	1.2	3.5	1.9	1.1	498	15	1.6	89	3.8	358	1.6	1.2
18	.93	1.1	490	1.3	1.8	9.7	1.6	201	1.8	433	1.5	1.0
19	.91	.94	2.2	65	359	53	1.4	616	1.8	160	1.8	1.0
20	2.2	4.5	.60	1.3	22	135	1.8	837	1.6	5.6	1.4	1.4
21	3.8	3.9	12	1.3	2.8	77	1.6	369	2.4	1.4	1.3	1.4
22	1.3	5.0	1.9	1.5	1210	10	2.6	27	1.7	1.6	1.3	1.3
23	2.9	4.9	.95	1.3	4590	6.6	2.7	32	1.8	1.3	1.4	1.2
24	1.1	1.9	1.6	1.5	2650	3.0	9.8	30	1.8	1.3	1.7	1.8
25	1.0	1.5	.56	1.5	1240	1890	9.7	29	1.7	1.2	1.5	1.9
26	.63	384	.63	1.5	529	28	9.6	25	2.2	1.1	1.0	1.3
27	.99	4.2	.52	2.7	141	26	9.8	26	2.1	1.5	1.1	1.4
28	1.2	.76	.82	2.4	111	415	7.2	23	2.0	.90	1.2	1.0
29	3.5	.62	1.0	442	---	42	4.1	9.1	2.7	.89	1.7	1.2
30	7.2	211	2.1	1.3	---	24	4.7	10	2.7	.95	1.2	1.1
31	4.3	---	1.9	4.5	---	730	---	11	---	.90	2.8	---
TOTAL	57.12	1367.50	1933.09	2155.25	18470.69	4906.3	1501.6	8055.7	2689.5	2145.34	217.1	45.7
MEAN	1.84	45.6	62.4	69.5	660	158	50.1	260	89.7	69.2	7.00	1.52
MAX	7.2	573	1200	1070	4590	1890	683	1670	433	433	92	3.0
MIN	.63	.62	.52	.95	.99	3.0	1.4	5.6	1.6	.89	1.0	1.0
AC-FT	113	2710	3830	4270	36640	9730	2980	15980	5330	4260	431	91

11101250 RIO HONDO ABOVE WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.9	39.2	46.6	96.1	155	102	39.6	28.2	26.3	17.8	9.62	11.6
MAX	253	284	178	834	860	796	236	260	166	187	112	109
(WY)	1984	1966	1978	1993	1969	1983	1983	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1956 - 1998

ANNUAL TOTAL	14013.34		43544.89									
ANNUAL MEAN	38.4		119						49.0			
HIGHEST ANNUAL MEAN									187			1983
LOWEST ANNUAL MEAN									6.01			1961
HIGHEST DAILY MEAN	1200	Dec 6		4590	Feb 23			7700		Jan 25		1969
LOWEST DAILY MEAN	.27	Apr 16		.52	Dec 27			.00		Mar 3		1956
ANNUAL SEVEN-DAY MINIMUM	.39	Apr 14		.87	Dec 23			.00		Apr 5		1956
INSTANTANEOUS PEAK FLOW				12500	Feb 7			18200		Feb 16		1980
INSTANTANEOUS PEAK STAGE				6.38	Feb 7			7.35		Feb 16		1980
ANNUAL RUNOFF (AC-FT)	27800			86370				35500				
10 PERCENT EXCEEDS	100			361				96				
50 PERCENT EXCEEDS	1.6			2.4				1.9				
90 PERCENT EXCEEDS	.76			1.1				.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 500 ft³/s, which are poor. Flow regulated by Whittier Narrows Flood-Control Reservoir, capacity, 36,160 acre-ft. There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Discharge records for current year provided by Los Angeles County Department of Public Works for the following dates: Oct. 1 to Nov. 9, Nov. 12–22, 24, 25, 28, 29, Dec. 1–5, Dec. 18 to Jan. 2, Jan. 5–8, Jan. 11 to Feb. 2, Feb. 10–13, 18, Mar. 16–18, Apr. 7–9, 13, 14, Apr. 29 to May 4, May 9–11, 19, 20, July 7, 8, 17–20, 24–31, Aug. 4 to Sept. 1, Sept. 4–7, and Sept. 22–30.

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	66	19	27	33	83	415	.00	159	37	40	.00
2	.00	67	18	27	66	69	182	.00	246	60	159	86
3	.00	63	15	334	1970	78	212	.00	604	164	112	175
4	.00	32	13	507	569	176	309	.00	702	68	11	46
5	.00	38	131	71	63	189	196	451	707	61	6.8	47
6	.00	32	2180	21	1510	367	101	3210	716	45	7.5	46
7	.00	34	564	20	4060	68	50	312	680	7.1	6.6	49
8	.00	37	160	22	3100	161	40	54	230	7.1	6.0	35
9	.00	35	86	1290	207	176	46	.00	192	370	5.4	53
10	.00	429	100	2440	31	173	101	.00	212	67	5.8	103
11	.00	109	183	166	48	168	455	.00	293	76	5.9	102
12	.00	52	172	28	40	154	64	1190	413	65	5.8	103
13	.00	175	165	36	38	407	30	1200	263	43	5.5	90
14	.00	52	152	24	1620	460	71	275	259	76	5.3	111
15	.00	62	151	29	765	54	156	171	202	264	5.0	108
16	.00	50	151	26	92	22	162	131	39	179	3.5	105
17	.00	54	100	21	463	41	165	142	32	6.1	3.6	104
18	.00	44	615	20	52	38	152	72	152	6.5	4.3	113
19	.00	47	246	108	130	63	159	.00	147	6.9	3.9	114
20	9.8	44	23	53	545	185	181	.00	158	96	3.8	110
21	1.0	43	28	136	e50	161	204	637	156	143	3.6	107
22	1.0	47	21	89	3290	142	237	1070	158	129	3.5	49
23	.71	43	50	62	6000	160	266	124	141	93	3.4	6.7
24	58	13	54	57	8120	229	82	103	91	30	2.3	5.7
25	71	39	48	52	2330	3140	85	108	151	26	1.4	5.5
26	69	665	37	56	1450	121	90	102	224	23	.00	5.4
27	73	149	38	53	1370	67	100	118	230	34	.00	5.2
28	72	56	39	60	900	455	55	127	210	28	.00	4.9
29	66	46	39	704	---	79	.00	122	177	27	.00	4.7
30	81	387	41	44	---	124	.00	137	68	27	.00	4.6
31	66	---	53	47	---	780	---	152	---	26	.00	---
TOTAL	594.51	3010	5692	6630	38912	8590	4366.00	10008.00	8012	2290.7	420.90	1898.70
MEAN	19.2	100	184	214	1390	277	146	323	267	73.9	13.6	63.3
MAX	81	665	2180	2440	8120	3140	455	3210	716	370	159	175
MIN	.00	13	13	20	31	22	.00	.00	32	6.1	.00	.00
AC-FT	1180	5970	11290	13150	77180	17040	8660	19850	15890	4540	835	3770

e Estimated.

11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	104	141	164	359	541	357	120	117	107	73.6	55.5	75.4
MAX	302	362	522	2378	3459	2265	371	323	355	205	244	413
(WY)	1984	1992	1992	1993	1969	1983	1983	1998	1992	1993	1991	1991
MIN	.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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1967 - 1998		
ANNUAL TOTAL	41299.63			90424.81					
ANNUAL MEAN	113			248			183		
HIGHEST ANNUAL MEAN							638		
LOWEST ANNUAL MEAN							40.9		
HIGHEST DAILY MEAN	4180			8120			21200		
LOWEST DAILY MEAN	.00			.00			.00		
ANNUAL SEVEN-DAY MINIMUM	.00			.00			.00		
INSTANTANEOUS PEAK FLOW				33900			38800		
INSTANTANEOUS PEAK STAGE				13.00			13.82		
ANNUAL RUNOFF (AC-FT)	81920			179400			132200		
10 PERCENT EXCEEDS	171			461			257		
50 PERCENT EXCEEDS	64			66			81		
90 PERCENT EXCEEDS	.73			.43			3.6		

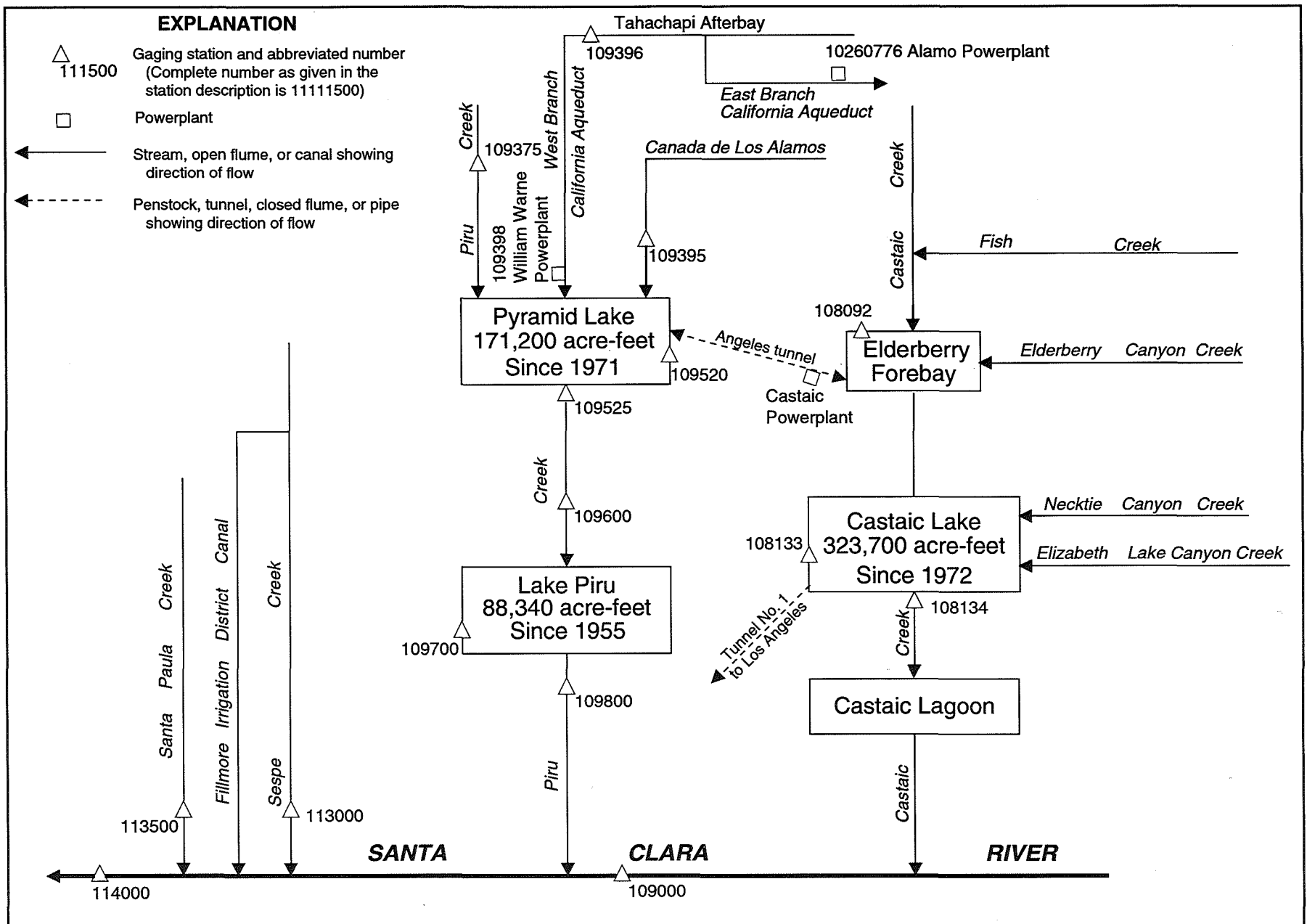


Figure 19. Diversions and storage in Santa Clara River Basin.

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA

LOCATION.—Lat 34°10'46", long 119°02'20", in Guadalupe Grant, Ventura County, Hydrologic Unit 18070103, on downstream side of county road bridge, 1.0 mi northeast of Camarillo State Hospital, and 1.4 mi downstream from Conejo Creek.

DRAINAGE AREA.—248 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—Water years 1969-83. October 1996 to September 1998.

GAGE.—Water-stage recorder. Datum of gage is 58.42 ft above sea level (levels by Ventura County Flood Control District).

REMARKS.—No regulation above station. Pumping for irrigation in valley 1.0 mi above station. Sustained flow from city of Thousand Oaks reclamation plant.

COOPERATION.—Records were furnished by Ventura County Flood Control District and reviewed by U. S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,900 ft³/s, Mar. 1, 1983, gage height, 10.08 ft; maximum gage height, 10.54 ft, Feb. 16, 1980, from rating curve extended above 4,600 ft³/s on basis of slope-conveyance study of maximum flow; no flow at times in some years.

EXTREMES FOR 1997 WATER YEAR (not previously published).—Peak discharges greater than base discharge of 1,100 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 30	0630	1,920	3.28	Dec. 22	1400	3,120	3.89
Nov. 21	1730	2,010	3.33	Jan. 15	1115	1,140	2.77
Dec. 9	1945	4,080	4.30	Jan. 26	1800	4,210	4.35

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,100 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	0600	8,220	6.21	Feb. 14	1550	6,990	6.12
Dec. 18	1630	2,720	4.01	Feb. 23	1835	19,500	9.01
Jan. 10	0010	2,030	3.62	Mar. 25	0920	3,220	4.23
Feb. 3	0830	7,850	6.39	Mar. 31	2145	1,450	3.11
Feb. 6	1210	21,600	9.38	May 5	1330	1,970	3.49

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

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

DAILY MEAN VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	54	23	54	52	26	25	14	19	12	9.3	17
2	20	44	24	165	50	28	24	12	15	13	9.2	17
3	16	40	22	228	49	29	23	14	16	15	7.3	15
4	15	34	23	48	41	28	25	17	17	15	8.1	6.2
5	13	30	25	44	42	27	26	13	16	13	11	7.1
6	19	25	32	40	40	30	28	14	15	17	11	7.7
7	17	25	22	40	40	28	26	11	15	12	10	12
8	16	21	27	40	42	24	24	12	21	12	16	13
9	16	21	952	43	43	27	26	12	19	13	13	12
10	15	26	714	39	44	24	25	13	19	15	13	13
11	15	24	1310	37	43	21	26	17	19	15	19	9.5
12	13	19	161	120	32	21	22	15	15	13	13	11
13	20	21	60	246	34	23	21	16	12	14	12	11
14	15	23	49	54	30	24	22	20	11	12	12	14
15	15	25	35	380	28	22	18	19	15	10	11	18
16	15	29	33	94	28	23	17	16	17	11	12	14
17	15	30	32	57	34	24	15	19	19	8.1	15	13
18	19	28	31	45	35	22	18	23	11	7.6	15	13
19	18	29	33	39	31	20	20	20	12	11	14	14
20	18	32	34	154	31	19	24	25	14	17	14	13
21	17	665	35	137	32	18	19	26	18	16	18	16
22	13	171	564	125	31	17	16	24	19	18	13	16
23	9.1	23	80	495	29	20	16	20	19	23	15	13
24	17	16	42	81	28	22	21	17	19	18	18	8.2
25	15	15	35	341	28	30	24	18	17	16	19	10
26	13	17	32	858	27	23	19	19	15	16	15	16
27	17	19	249	317	29	22	12	20	13	26	13	11
28	17	19	95	83	30	28	15	18	15	21	14	18
29	19	21	50	60	---	28	15	16	15	17	14	35
30	499	21	39	54	---	34	15	14	15	9.8	13	12
31	72	---	38	52	---	30	---	14	---	9.1	17	---
TOTAL	1039.1	1567	4901	4570	1003	762	627	528	482	445.6	413.9	405.7
MEAN	33.5	52.2	158	147	35.8	24.6	20.9	17.0	16.1	14.4	13.4	13.5
MAX	499	665	1310	858	52	34	28	26	21	26	19	35
MIN	9.1	15	22	37	27	17	12	11	11	7.6	7.3	6.2
AC-FT	2060	3110	9720	9060	1990	1510	1240	1050	956	884	821	805

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1997, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.5	27.0	38.8	106	129	113	21.6	14.0	10.8	9.67	9.45	12.4
MAX	33.5	119	158	462	628	677	72.4	33.6	26.6	24.5	23.6	36.4
(WY)	1997	1971	1997	1969	1980	1983	1983	1980	1983	1983	1983	1983
MIN	1.83	2.61	2.84	3.94	5.61	6.17	3.45	1.83	1.20	.47	.090	1.07
(WY)	1971	1969	1969	1970	1971	1972	1970	1970	1971	1971	1970	1970

SUMMARY STATISTICS

FOR 1997 WATER YEAR

WATER YEARS 1969 - 1997

ANNUAL TOTAL	16744.3	
ANNUAL MEAN	45.9	
HIGHEST ANNUAL MEAN		41.5
LOWEST ANNUAL MEAN		121
HIGHEST DAILY MEAN	1310	Dec 11
LOWEST DAILY MEAN	6.2	Sep 4
ANNUAL SEVEN-DAY MINIMUM	9.1	Jul 30
INSTANTANEOUS PEAK FLOW	4210	Jan 26
INSTANTANEOUS PEAK STAGE	4.35	Jan 26
ANNUAL RUNOFF (AC-FT)	33210	
10 PERCENT EXCEEDS	51	
50 PERCENT EXCEEDS	19	
90 PERCENT EXCEEDS	12	
		2.5

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	55	29	45	112	224	37	36	31	19	21
2	15	18	22	29	1070	100	43	46	37	31	24	23
3	15	15	21	29	3750	100	36	89	35	33	21	30
4	15	16	20	70	531	84	95	52	31	32	24	22
5	20	19	1210	48	153	102	79	589	36	31	21	23
6	18	18	3730	34	4470	184	35	75	37	32	25	23
7	18	18	269	30	3320	76	32	48	38	29	20	23
8	18	18	116	32	2370	85	30	43	36	22	18	21
9	18	21	61	399	850	86	46	42	33	22	21	21
10	18	29	40	568	281	77	55	42	34	24	20	22
11	16	55	39	58	173	76	195	45	35	22	21	19
12	20	20	37	43	130	101	131	167	29	24	19	22
13	19	45	33	122	117	64	58	326	31	23	23	21
14	14	36	33	39	2320	104	51	49	30	21	21	23
15	17	38	34	40	487	60	44	39	34	22	21	25
16	15	50	30	56	225	63	46	42	34	23	26	21
17	17	22	29	36	746	61	40	36	34	20	22	22
18	15	19	692	34	152	51	42	37	36	21	20	23
19	18	21	122	75	430	74	44	37	30	21	25	20
20	21	20	49	38	520	78	46	36	32	23	23	22
21	17	19	43	35	193	78	40	33	34	18	19	20
22	20	19	40	33	2070	73	39	39	35	19	22	21
23	17	20	39	31	5150	72	38	33	33	22	23	19
24	17	22	38	30	1480	75	43	40	33	20	19	18
25	17	24	37	31	477	1410	46	35	32	20	21	18
26	17	186	33	30	279	252	47	32	34	21	24	20
27	15	70	33	30	183	76	41	33	36	21	21	19
28	14	22	34	28	139	194	40	37	36	18	20	20
29	16	19	30	223	---	39	45	37	31	18	21	19
30	14	219	30	49	---	34	42	35	29	18	18	23
31	13	---	29	55	---	202	---	33	---	19	19	---
TOTAL	518	1132	7028	2384	32111	4243	1793	2264	1011	721	661	644
MEAN	16.7	37.7	227	76.9	1147	137	59.8	73.0	33.7	23.3	21.3	21.5
MAX	21	219	3730	568	5150	1410	224	589	38	33	26	30
MIN	13	14	20	28	45	34	30	32	29	18	18	18
AC-FT	1030	2250	13940	4730	63690	8420	3560	4490	2010	1430	1310	1280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.8	27.6	49.8	104	189	114	23.9	17.5	12.1	10.5	10.1	13.0
MAX	33.5	119	227	462	1147	677	72.4	73.0	33.7	24.5	23.6	36.4
(WY)	1997	1971	1998	1969	1998	1983	1983	1998	1998	1983	1983	1983
MIN	1.83	2.61	2.84	3.94	5.61	6.17	3.45	1.83	1.20	.47	.090	1.07
(WY)	1971	1969	1969	1970	1971	1972	1970	1970	1971	1971	1970	1970

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1969 - 1998

ANNUAL TOTAL	17915.2	54510	
ANNUAL MEAN	49.1	149	47.9
HIGHEST ANNUAL MEAN			149
LOWEST ANNUAL MEAN			8.46
HIGHEST DAILY MEAN	3730	Dec 6	5150
LOWEST DAILY MEAN	6.2	Sep 4	13
ANNUAL SEVEN-DAY MINIMUM	9.1	Jul 30	15
INSTANTANEOUS PEAK FLOW			21600
INSTANTANEOUS PEAK STAGE			9.38
ANNUAL RUNOFF (AC-FT)	35530	108100	34670
10 PERCENT EXCEEDS	49	189	42
50 PERCENT EXCEEDS	19	33	12
90 PERCENT EXCEEDS	12	18	2.5

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1969–78, October 1996 to current year.

WATER TEMPERATURES: Water years, 1971–78, October 1996 to current year.

SEDIMENT RECORDS: Water years 1969–78, October 1996 to current year.

PERIOD OF DAILY RECORD.—

SEDIMENT RECORDS: Water years 1969–78, October 1996 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SEDIMENT CONCENTRATIONS: Maximum daily mean, 62,900 mg/L Jan. 25, 1969; minimum daily mean, no flow for many days.

SEDIMENT DISCHARGE: Maximum daily, 1,700,000 tons (1,540,000 metric tons) Jan. 25, 1969; minimum daily, 0 tons on many days during most years.

EXTREMES FOR 1997 WATER YEAR.—

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,370 mg/L, Jan. 26; minimum daily mean, 11 mg/L, July 18.

SEDIMENT DISCHARGE: Maximum daily, 12,500 tons, Jan. 26; minimum daily, 0.24 tons, July 18.

EXTREMES FOR CURRENT YEAR.—

SEDIMENT CONCENTRATIONS: Maximum daily mean, 10,600 mg/L, Feb. 23; minimum daily mean, 10 mg/L, Apr. 29, 30.

SEDIMENT DISCHARGE: Maximum daily, 217,000 tons, Feb. 23; minimum daily, 1.0 ton, Sept. 21.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY INSTANTANEOUS VALUES
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	16.0	18.5	---	16.5	16.0	---	---	24.5	29.0	---
2	23.5	---	11.0	---	---	15.0	14.0	25.5	30.0	---	---	27.5
3	---	---	15.0	---	---	17.0	---	---	---	---	29.5	---
4	---	---	11.0	---	19.0	19.5	17.0	24.0	25.0	25.5	---	30.0
5	---	---	14.0	16.0	13.0	12.0	21.5	---	28.0	---	28.5	---
6	---	16.0	18.0	13.5	18.0	20.5	21.0	21.0	---	24.5	---	---
7	---	---	15.0	13.5	16.0	19.0	16.5	---	22.0	---	27.5	---
8	---	---	17.0	14.0	14.0	17.0	24.0	22.0	---	26.0	---	28.0
9	---	---	14.5	14.5	14.0	18.0	18.0	---	28.0	29.0	27.0	---
10	---	---	---	15.0	13.0	16.5	23.5	28.0	---	23.5	---	26.0
11	---	---	---	12.5	19.5	21.5	---	---	23.0	---	24.0	---
12	---	---	---	---	17.0	21.0	17.0	25.0	---	23.0	22.0	27.0
13	---	---	16.0	---	17.5	23.0	---	---	27.0	---	27.0	---
14	---	---	15.0	---	17.0	20.0	18.0	21.0	---	25.0	---	28.0
15	---	---	---	---	16.0	18.5	---	---	27.0	---	28.0	---
16	---	---	10.5	---	17.5	19.5	18.5	25.0	---	24.0	---	25.0
17	---	---	14.0	15.0	---	23.0	---	---	25.5	---	---	---
18	---	---	10.5	12.0	19.5	24.0	18.5	---	---	29.0	---	27.0
19	---	---	11.0	14.0	13.0	17.0	---	22.5	25.0	---	---	---
20	---	---	12.0	---	20.0	25.5	25.0	---	---	26.0	---	---
21	---	---	13.5	---	18.0	20.0	---	21.5	23.0	---	29.0	---
22	---	---	---	---	17.0	---	22.0	---	---	22.0	---	27.0
23	20.0	---	---	---	16.0	---	---	26.0	23.0	---	30.0	---
24	---	---	15.0	18.0	11.0	---	18.0	---	---	25.0	---	24.0
25	---	---	---	---	18.0	---	---	28.0	27.5	---	28.5	---
26	---	---	15.0	---	13.5	---	22.5	---	---	27.0	---	27.0
27	---	---	15.0	---	17.0	---	---	29.0	23.0	---	29.0	---
28	---	---	---	---	19.5	21.0	22.0	---	---	22.5	---	26.0
29	---	---	15.0	---	---	22.0	---	31.5	26.5	---	28.5	---
30	---	---	---	---	---	19.5	19.5	---	---	27.5	---	---
31	---	---	17.0	---	---	20.0	---	30.0	---	---	26.0	---

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	19.0	17.0	15.0	14.0	20.0	15.0	21.0	---	---	25.0	---
2	24.0	22.0	15.5	14.0	11.0	21.0	19.0	19.0	---	---	---	29.0
3	---	22.0	16.0	14.5	10.0	---	21.0	22.0	---	---	---	---
4	---	23.0	15.0	11.0	13.0	---	---	22.0	---	---	23.0	---
5	---	22.0	11.0	---	14.0	18.0	19.0	17.0	---	---	---	25.0
6	24.0	21.0	11.0	---	13.0	17.0	21.0	19.0	---	---	---	---
7	22.0	19.0	14.0	12.0	13.0	18.0	19.0	21.0	---	---	30.0	24.0
8	24.0	19.0	14.5	14.0	14.0	19.0	---	---	26.5	---	---	---
9	---	20.0	15.0	11.0	17.0	20.0	---	22.0	---	---	---	25.0
10	23.0	19.0	14.0	11.0	16.0	19.0	22.0	---	---	---	---	---
11	---	18.0	13.0	15.0	17.0	17.0	17.0	23.0	---	---	---	27.0
12	24.0	18.0	12.5	14.0	15.0	18.0	19.0	19.0	---	---	---	---
13	---	16.0	13.0	15.5	17.0	17.0	18.0	21.0	---	---	---	27.0
14	21.0	18.0	13.5	15.0	12.0	18.0	21.0	---	---	---	---	---
15	---	19.0	14.0	14.0	14.0	21.0	22.0	23.0	27.0	---	---	26.0
16	22.0	18.0	14.5	15.5	11.0	19.0	24.0	---	---	---	29.0	---
17	---	19.0	14.0	15.0	15.0	18.0	23.0	24.0	25.0	---	---	27.0
18	23.0	18.0	13.0	16.0	17.0	20.0	22.0	---	---	---	28.0	---
19	---	19.0	13.0	15.0	14.0	19.0	25.0	23.0	28.0	---	---	25.0
20	24.0	19.0	14.0	14.0	16.0	---	22.0	---	---	---	29.0	---
21	---	18.0	13.0	14.5	14.0	---	25.0	22.0	26.0	---	---	24.5
22	21.5	15.0	12.0	14.0	16.0	---	21.0	---	---	---	27.0	---
23	---	16.0	10.0	15.0	13.0	---	19.0	24.0	24.0	---	---	---
24	22.0	18.0	12.0	13.5	12.0	17.0	23.0	---	---	---	29.0	20.0
25	---	18.0	11.0	12.0	17.0	15.0	20.0	25.0	26.0	---	---	---
26	20.0	15.0	12.0	13.0	17.0	20.0	21.0	---	---	---	28.0	---
27	---	15.0	13.0	14.0	16.0	19.0	24.0	24.0	27.0	---	---	22.0
28	19.0	15.0	12.0	15.0	17.0	17.0	19.0	---	---	---	27.0	---
29	---	14.0	13.0	12.0	---	20.0	24.0	25.0	29.0	---	---	16.0
30	20.0	13.0	15.0	13.0	---	19.0	22.0	---	---	28.5	---	---
31	---	---	13.0	12.0	---	16.0	---	26.0	---	---	31.0	---

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
(NOT PREVIOUSLY PUBLISHED)

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	21	36	2.0	54	230	33	23	34	2.2
2	20	36	1.9	44	190	23	24	46	3.0
3	16	36	1.6	40	157	17	22	83	5.0
4	15	36	1.5	34	129	12	23	92	5.8
5	13	36	1.3	30	107	8.6	25	85	5.7
6	19	35	1.8	25	90	6.1	32	70	6.1
7	17	35	1.6	25	84	5.7	22	39	2.4
8	16	35	1.5	21	81	4.6	27	41	2.9
9	16	35	1.5	21	77	4.5	952	1340	8440
10	15	35	1.4	26	74	5.2	714	1850	4810
11	15	35	1.4	24	71	4.6	1310	2280	9970
12	13	35	1.3	19	68	3.4	161	677	339
13	20	34	1.9	21	65	3.7	60	145	24
14	15	34	1.3	23	66	4.0	49	65	8.7
15	15	34	1.4	25	66	4.5	35	53	4.9
16	15	34	1.4	29	67	5.2	33	43	3.9
17	15	34	1.4	30	68	5.5	32	67	5.7
18	19	34	1.8	28	68	5.2	31	47	4.0
19	18	34	1.6	29	69	5.3	33	75	6.7
20	18	33	1.7	32	70	5.9	34	120	11
21	17	33	1.5	665	2330	6420	35	313	30
22	13	33	1.2	171	1140	700	564	3160	7120
23	9.1	33	.83	23	219	14	80	502	143
24	17	33	1.5	16	44	1.9	42	125	14
25	15	34	1.3	15	30	1.2	35	103	9.7
26	13	34	1.1	17	31	1.4	32	127	11
27	17	34	1.6	19	32	1.6	249	608	557
28	17	35	1.6	19	32	1.7	95	141	46
29	19	72	4.1	21	33	1.9	50	39	5.3
30	499	3220	7350	21	33	1.9	39	32	3.5
31	72	287	57	---	---	---	38	33	3.4
TOTAL	1039.1	---	7453.03	1567	---	7312.6	4901	---	31603.9
JANUARY			FEBRUARY			MARCH			
1	54	88	24	52	102	14	26	54	3.7
2	165	366	224	50	91	12	28	49	3.6
3	228	1150	926	49	89	12	29	35	2.7
4	48	135	18	41	70	7.8	28	46	3.5
5	44	54	6.4	42	61	7.0	27	34	2.5
6	40	43	4.7	40	50	5.4	30	33	2.7
7	40	40	4.4	40	49	5.3	28	41	3.1
8	40	33	3.7	42	34	3.8	24	51	3.3
9	43	31	3.7	43	48	5.6	27	45	3.3
10	39	29	3.1	44	46	5.6	24	57	3.7
11	37	22	2.2	43	40	4.5	21	62	3.6
12	120	734	417	32	66	5.8	21	75	4.3
13	246	1710	1590	34	87	7.9	23	66	4.2
14	54	150	23	30	96	7.8	24	62	4.0
15	380	706	1120	28	74	5.6	22	65	4.0
16	94	188	55	28	41	3.1	23	76	4.8
17	57	53	8.2	34	41	4.2	24	55	3.5
18	45	39	4.7	35	53	5.0	22	43	2.5
19	39	36	3.9	31	38	3.1	20	39	2.1
20	154	816	610	31	62	5.2	19	51	2.6
21	137	759	446	32	74	6.3	18	58	2.8
22	125	385	172	31	56	4.7	17	61	2.8
23	495	1820	3120	29	43	3.4	20	64	3.3
24	81	187	46	28	51	3.9	22	67	4.0
25	341	1190	2630	28	47	3.5	30	70	5.6
26	858	3370	12500	27	56	4.1	23	73	4.6
27	317	2310	2720	29	42	3.2	22	76	4.6
28	83	317	75	30	39	3.1	28	76	5.7
29	60	177	29	---	---	---	28	63	4.7
30	54	128	19	---	---	---	34	68	6.2
31	52	89	12	---	---	---	30	30	2.4
TOTAL	4570	---	26821.0	1003	---	162.9	762	---	114.4

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
(NOT PREVIOUSLY PUBLISHED)

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	25	35	2.3	14	52	1.9	19	76	3.8
2	24	47	3.0	12	53	1.8	15	71	2.7
3	23	38	2.4	14	55	2.1	16	84	3.5
4	25	45	3.0	17	57	2.6	17	99	4.6
5	26	60	4.2	13	67	2.2	16	68	3.0
6	28	69	5.1	14	80	3.0	15	63	2.5
7	26	54	3.8	11	69	2.1	15	63	2.6
8	24	29	1.9	12	59	1.9	21	53	3.1
9	26	31	2.3	12	61	2.0	19	46	2.3
10	25	21	1.4	13	64	2.3	19	60	3.0
11	26	23	1.6	17	60	2.8	19	78	4.0
12	22	25	1.5	15	56	2.3	15	59	2.4
13	21	27	1.5	16	67	2.9	12	43	1.4
14	22	28	1.7	20	80	4.4	11	56	1.8
15	18	25	1.2	19	78	4.1	15	81	3.4
16	17	22	.97	16	74	3.2	17	91	4.2
17	15	18	.73	19	70	3.5	19	89	4.6
18	18	18	.87	23	66	4.2	11	58	1.9
19	20	40	2.1	20	63	3.5	12	38	1.2
20	24	83	5.3	25	71	4.8	14	42	1.6
21	19	55	3.0	26	78	5.4	18	51	2.4
22	16	31	1.3	24	62	4.1	19	50	2.6
23	16	36	1.6	20	47	2.4	19	48	2.4
24	21	44	2.6	17	46	2.0	19	48	2.4
25	24	58	3.7	18	49	2.4	17	49	2.1
26	19	70	3.5	19	53	2.7	15	49	2.0
27	12	54	1.8	20	57	3.1	13	49	1.7
28	15	40	1.6	18	62	3.1	15	52	2.1
29	15	43	1.7	16	68	2.9	15	54	2.2
30	15	50	2.0	14	74	2.9	15	44	1.9
31	---	---	---	14	81	3.0	---	---	---
TOTAL	627	---	69.67	528	---	91.6	482	---	79.4
JULY			AUGUST			SEPTEMBER			
1	12	35	1.2	9.3	19	.47	17	20	.90
2	13	35	1.2	9.2	17	.44	17	27	1.2
3	15	36	1.5	7.3	16	.32	15	28	1.2
4	15	38	1.6	8.1	24	.52	6.2	29	.48
5	13	47	1.6	11	31	.91	7.1	29	.56
6	17	55	2.5	11	34	1.0	7.7	29	.61
7	12	43	1.4	10	41	1.1	12	30	.93
8	12	37	1.1	16	39	1.6	13	30	1.0
9	13	65	2.4	13	36	1.3	12	35	1.1
10	15	44	1.6	13	42	1.5	13	41	1.5
11	15	38	1.5	19	50	2.5	9.5	43	1.1
12	13	34	1.2	13	53	1.9	11	45	1.3
13	14	26	1.0	12	50	1.6	11	36	1.1
14	12	21	.65	12	35	1.1	14	28	1.1
15	10	24	.67	11	24	.72	18	29	1.4
16	11	26	.78	12	26	.81	14	32	1.2
17	8.1	17	.39	15	30	1.2	13	36	1.3
18	7.6	11	.24	15	36	1.5	13	40	1.4
19	11	15	.41	14	43	1.6	14	41	1.5
20	17	23	1.0	14	51	1.9	13	41	1.4
21	16	33	1.4	18	62	3.0	16	81	4.0
22	18	46	2.3	13	87	3.1	16	82	4.1
23	23	51	3.2	15	122	4.9	13	22	.75
24	18	55	2.6	18	148	7.2	8.2	25	.54
25	16	53	2.3	19	168	8.3	10	28	.78
26	16	48	2.1	15	141	5.6	16	31	1.3
27	26	33	2.2	13	108	3.7	11	31	.92
28	21	22	1.3	14	71	2.7	18	64	3.2
29	17	17	.80	14	45	1.8	35	106	12
30	9.8	15	.38	13	28	.93	12	70	2.4
31	9.1	17	.41	17	17	.77	---	---	---
TOTAL	445.6	---	42.93	413.9	---	65.99	405.7	---	52.27
YEAR	16744.3		73869.69						

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	14	77	2.9	14	118	4.4	55	414	88
2	15	90	3.7	18	102	4.8	22	52	3.2
3	15	92	3.8	15	129	5.2	21	40	2.3
4	15	92	3.8	16	249	11	20	127	6.9
5	20	104	5.6	19	318	16	1210	2200	26800
6	18	105	5.1	18	201	9.8	3730	10500	142000
7	18	54	2.6	18	196	9.5	269	999	955
8	18	127	5.9	18	196	9.5	116	181	59
9	18	165	8.1	21	173	9.9	61	86	15
10	18	177	8.4	29	239	22	40	76	8.3
11	16	158	6.7	55	347	69	39	34	3.6
12	20	136	7.2	20	119	6.6	37	25	2.5
13	19	136	7.0	45	244	41	33	20	1.8
14	14	143	5.3	36	255	27	33	19	1.7
15	17	173	8.0	38	209	28	34	23	2.1
16	15	211	8.5	50	160	25	30	36	3.0
17	17	230	11	22	99	5.8	29	55	4.4
18	15	244	9.9	19	100	5.1	692	1060	4000
19	18	236	12	21	100	5.7	122	397	186
20	21	222	12	20	112	6.1	49	62	8.2
21	17	204	9.6	19	104	5.4	43	28	3.3
22	20	185	10	19	64	3.3	40	21	2.2
23	17	168	7.8	20	70	3.8	39	20	2.2
24	17	153	7.0	22	72	4.2	38	23	2.4
25	17	155	7.2	24	67	4.3	37	23	2.3
26	17	157	7.4	186	3080	2900	33	22	1.9
27	15	126	5.4	70	1250	330	33	22	1.9
28	14	97	3.6	22	126	7.9	34	22	2.0
29	16	87	3.7	19	55	2.9	30	24	2.0
30	14	85	3.2	219	1730	1820	30	26	2.1
31	13	102	3.6	---	---	---	29	22	1.7
TOTAL	518	---	206.0	1132	---	5403.2	7028	---	174175.0
JANUARY			FEBRUARY			MARCH			
1	29	26	2.0	45	117	16	112	315	95
2	29	35	2.8	1070	3140	14400	100	277	75
3	29	55	4.4	3750	7980	110000	100	230	63
4	70	296	98	531	1740	3160	84	192	44
5	48	397	54	153	462	199	102	276	91
6	34	139	13	4470	6880	174000	184	1140	743
7	30	49	4.0	3320	5260	92300	76	337	70
8	32	23	2.0	2370	6230	46400	85	248	57
9	399	2620	6970	850	2330	7100	86	181	42
10	568	2880	6680	281	813	634	77	199	41
11	58	176	30	173	423	202	76	108	22
12	43	105	12	130	245	86	101	89	25
13	122	653	285	117	262	83	64	123	21
14	39	98	10	2320	5860	67000	104	168	72
15	40	63	7.5	487	2460	3780	60	49	7.9
16	56	121	21	225	1130	699	63	56	9.7
17	36	25	2.5	746	3220	9720	61	65	11
18	34	18	1.6	152	641	271	51	64	8.9
19	75	191	52	430	1530	5910	74	65	13
20	38	43	4.5	520	3160	6190	78	65	14
21	35	21	2.0	193	5210	2650	78	65	14
22	33	20	1.8	2070	7610	61600	73	65	13
23	31	20	1.7	5150	10600	217000	72	65	13
24	30	25	2.0	1480	7850	36200	75	585	124
25	31	25	2.1	477	2420	3270	1410	5660	25800
26	30	19	1.5	279	1210	920	252	1230	1080
27	30	17	1.4	183	879	438	76	392	86
28	28	15	1.1	139	390	149	194	541	426
29	223	1070	974	---	---	---	39	251	26
30	49	419	58	---	---	---	34	242	22
31	55	179	29	---	---	---	202	780	1300
TOTAL	2384	---	15330.9	32111	---	864377	4243	---	30429.5

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	224	789	774	37	50	5.0	36	51	5.0
2	43	168	20	46	75	9.5	37	52	5.2
3	36	57	5.5	89	225	79	35	54	5.0
4	95	177	80	52	81	11	31	55	4.6
5	79	169	48	589	3010	8910	36	57	5.4
6	35	54	5.1	75	635	171	37	58	5.7
7	32	34	2.9	48	188	24	38	59	6.1
8	30	32	2.6	43	253	29	36	60	5.9
9	46	34	4.2	42	363	41	33	51	4.5
10	55	35	5.1	42	392	44	34	42	3.9
11	195	358	575	45	392	48	35	35	3.3
12	131	255	171	167	668	467	29	29	2.2
13	58	43	6.7	326	530	644	31	24	2.0
14	51	35	4.8	49	119	16	30	19	1.5
15	44	37	4.4	39	66	7.0	34	16	1.5
16	46	26	3.3	42	41	4.8	34	16	1.5
17	40	23	2.4	36	28	2.8	34	16	1.5
18	42	24	2.7	37	29	2.8	36	16	1.5
19	44	22	2.7	37	31	3.1	30	15	1.2
20	46	21	2.6	36	25	2.4	32	18	1.5
21	40	26	2.8	33	21	1.9	34	22	2.1
22	39	58	6.2	39	22	2.3	35	42	3.9
23	38	56	5.7	33	24	2.2	33	72	6.4
24	43	20	2.3	40	26	2.8	33	65	5.9
25	46	20	2.5	35	30	2.8	32	56	4.8
26	47	47	6.0	32	42	3.6	34	61	5.5
27	41	36	4.0	33	60	5.4	36	68	6.7
28	40	32	3.5	37	63	6.3	36	74	7.1
29	45	10	1.3	37	62	6.2	31	78	6.6
30	42	10	1.1	35	56	5.4	29	77	6.0
31	---	---	---	33	51	4.5	---	---	---
TOTAL	1793	---	1758.4	2264	---	10564.8	1011	---	124.0
JULY			AUGUST			SEPTEMBER			
1	31	75	6.3	19	43	2.2	21	33	1.9
2	31	73	6.2	24	46	3.0	23	21	1.3
3	33	71	6.3	21	49	2.8	30	21	1.7
4	32	70	6.1	24	51	3.3	22	24	1.5
5	31	68	5.6	21	47	2.6	23	28	1.7
6	32	66	5.7	25	43	2.9	23	42	2.6
7	29	65	5.0	20	40	2.1	23	59	3.7
8	22	63	3.7	18	39	1.9	21	45	2.5
9	22	61	3.7	21	38	2.2	21	33	1.8
10	24	60	3.8	20	38	2.1	22	34	2.0
11	22	58	3.5	21	38	2.1	19	37	1.9
12	24	57	3.7	19	37	2.0	22	39	2.3
13	23	55	3.4	23	37	2.3	21	39	2.2
14	21	54	3.1	21	37	2.1	23	35	2.1
15	22	53	3.1	21	36	2.1	25	30	2.0
16	23	51	3.1	26	36	2.6	21	37	2.0
17	20	50	2.6	22	34	2.0	22	47	2.8
18	21	49	2.8	20	32	1.8	23	41	2.6
19	21	48	2.8	25	30	2.0	20	32	1.7
20	23	46	2.8	23	28	1.7	22	24	1.4
21	18	45	2.1	19	34	1.7	20	19	1.0
22	19	44	2.3	22	43	2.5	21	30	1.7
23	22	43	2.5	23	40	2.5	19	55	2.7
24	20	42	2.3	19	36	1.8	18	87	4.4
25	20	41	2.3	21	30	1.7	18	66	3.2
26	21	40	2.3	24	26	1.6	20	44	2.4
27	21	39	2.2	21	32	1.8	19	30	1.6
28	18	38	1.8	20	43	2.4	20	49	2.5
29	18	37	1.8	21	45	2.6	19	90	4.6
30	18	36	1.7	18	47	2.3	23	94	6.0
31	19	39	1.9	19	47	2.3	---	---	---
TOTAL	721	---	106.5	661	---	69.0	644	---	71.8
YEAR	54510		1102616.1						

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. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with 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, 30,161 acre-ft, Apr. 24, elevation, 1,535.25ft; minimum 16,078 acre-ft, Dec. 31, elevation, 1,501.07 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24448	20640	18784	17434	18303	22799	25647	28380	23763	28244	23138	26504
2	24886	18649	24741	20358	23083	22623	23037	24505	23936	29728	21193	27000
3	26527	20104	24741	20309	24173	23356	23262	20893	20857	26215	23544	28483
4	22914	20239	21368	19046	21035	23608	23563	23249	21869	22005	24636	21980
5	17829	22229	23304	23445	23523	22409	22872	25941	24213	19789	27312	21548
6	21872	23122	25664	24052	19188	22627	23953	28015	22387	22038	23600	22021
7	20926	24649	23155	21802	20540	23257	23696	26247	19035	25075	26243	20817
8	22715	21666	23113	23117	20216	21503	24401	27538	21384	23987	23343	20175
9	23442	18012	23412	25986	23828	23053	24745	26433	21765	24330	20317	20732
10	22085	20410	24972	24470	21638	22188	22413	22944	20857	27677	21445	21934
11	16637	23037	26176	21339	20628	21839	22375	26270	21205	28610	21790	20413
12	17585	24043	24470	20974	21708	21981	23007	26234	21417	20488	24191	21026
13	22816	23253	24889	18146	22471	22821	23936	24767	22842	21161	26409	19478
14	23936	24710	21502	19230	22009	25318	24618	23623	22192	22880	27037	21552
15	24627	24991	21514	22084	20457	23854	23627	24623	24235	22694	23480	23032
16	23352	23168	21161	21055	19719	23606	24357	24492	22518	25571	18824	21445
17	23003	25682	21774	18101	20580	24090	23892	23893	23841	28539	20990	21634
18	20036	22059	22846	18779	20397	24828	23130	26690	26085	24461	19978	24009
19	18605	22753	21728	18962	22631	24422	21683	27294	29671	19134	21376	22639
20	23850	22837	24400	20888	24710	23772	22030	29262	26659	19852	21708	19635
21	20040	21712	23905	19011	22686	22075	25251	28859	20373	20508	25664	20155
22	23421	19797	22539	17295	20259	21976	23241	29623	24894	23983	25602	21984
23	22350	19447	22246	19532	28469	25602	26615	27032	24156	28020	22732	21889
24	28840	21773	23553	19015	26627	24689	30161	24330	29647	27252	25691	23992
25	27377	21242	23160	17215	24313	21806	26275	22833	29205	28718	24413	24614
26	24304	20305	21650	20037	23467	22497	21733	22097	29011	24322	23351	22969
27	23668	19069	21206	20100	22774	23966	24099	23287	25793	24535	22417	20946
28	18423	18902	21222	19471	22125	22674	25048	25353	21222	24330	23194	20777
29	19700	19339	20982	17650	---	24330	28755	26768	22868	25638	26004	22871
30	20756	19961	18479	18381	---	25629	28324	23910	26122	25145	22254	21478
31	22104	---	16078	18773	---	26613	---	20013	---	22990	24544	---
MAX	28840	25682	26176	25986	28469	26613	30161	29623	29671	29728	27312	28483
MIN	16637	18012	16078	17215	18303	21503	21683	20013	19035	19134	18824	19478
a	1517.30	1512.00	1501.57	1508.92	1517.35	1527.67	1531.38	1512.13	1526.58	1519.41	1523.02	1515.78
b	-3280	-2143	-3883	2695	3352	4488	1711	-8311	6109	-2977	1554	-3066

CAL YR 1997 b -2838

WTR YR 1998 b -3906

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11108133 CASTAIC LAKE NEAR CASTAIC, CA

LOCATION.—Lat 34°31'22", long 118°36'43", in NW 1/4 NE 1/4 sec.13, T.5 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, in intake tower in Castaic Lake and 2.3 mi north of Castaic.

DRAINAGE AREA.—137 mi², excludes 18.1 mi² noncontributing area in Elizabeth Canyon Creek Basin.

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

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

REMARKS.—Lake is formed by earthfill dam. Storage began April 1972. Dead storage below outlet tower to downstream distribution system, 1,799 acre-ft, elevation, 1,213 ft. Capacity below spillway level, 323,699 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, 322,962 acre-ft, Mar. 25, 1998, elevation, 1,514.67 ft; minimum, 142,325 acre-ft, Jan. 7, 1995, elevation, 1,415.48 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.—Maximum contents, 322,962 acre-ft, Mar 25, elevation, 1,514.67 ft; minimum, 234,566 acre-ft, Oct.20, elevation, 1,471.40 ft.

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

1,450	196,414	1,490	270,629
1,460	213,807	1,500	291,186
1,470	231,964	1,510	310,451
1,480	250,894	1,520	334,985

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239139	238198	253802	286671	286067	318250	322247	320023	320490	316372	312614	308057
2	240837	237071	253413	286047	285652	315693	321357	319579	321313	315491	311521	306756
3	240270	235761	254191	285631	288150	315029	321357	319358	320868	314611	310429	308274
4	239704	236884	256357	285009	289655	317587	321134	320912	320423	315491	311521	307233
5	238950	239252	261312	284325	289216	319092	320690	321357	321090	314831	310211	306691
6	238198	242163	261312	283683	292195	318671	320245	321580	320756	317034	311739	306258
7	237447	240837	260917	286171	293882	318228	321802	322137	320001	316372	310647	305588
8	239723	239704	263690	285548	296974	319247	321134	321691	319557	317454	311521	304832
9	241461	238386	267138	284926	296337	318449	320445	321246	319114	316791	310347	306237
10	239911	237259	268942	284304	297399	319779	321557	321246	319779	315909	309557	306107
11	238386	236135	268160	283477	298251	319335	320668	320801	319557	315249	310865	308057
12	237071	236959	270390	282650	297399	318671	319779	320801	319779	314589	312395	306540
13	235499	240270	269987	284926	296974	318449	321112	320334	319557	313930	311521	306107
14	237184	243207	269384	286379	296762	318449	320223	321557	319092	313053	310429	306107
15	239252	242257	268641	285341	296762	318228	321335	322672	318648	315029	309318	305502
16	240799	241272	271072	284304	297612	318892	320445	322226	318870	317012	308231	306756
17	239101	240516	274061	283270	301542	319779	320556	322226	318471	316130	307146	308274
18	237597	243625	275950	282238	302615	319557	319446	321535	319136	315249	308014	307298
19	236060	242846	277376	281414	302400	319335	318250	320868	318693	314369	308557	306973
20	234566	245876	276825	281414	302185	319114	318250	319979	318029	313491	310516	306107
21	238687	248657	276133	283352	302185	318892	317366	321535	317653	314149	309862	305675
22	241897	247888	279216	285631	302615	318671	319003	321758	316990	313272	308992	305675
23	243796	247120	281681	285631	309470	318449	318117	320868	320801	312177	308122	306432
24	242276	246277	281270	285424	315161	320912	317454	320868	321023	313930	307471	305459
25	241140	250894	280858	285216	319358	322962	316791	319979	320579	313053	308774	305091
26	239817	252889	284594	284801	319801	322471	317233	321313	319912	311985	307905	304660
27	238311	252481	284387	284387	319801	321850	316703	320645	319247	310647	309579	304272
28	240950	251513	283973	285652	318914	320912	318250	321357	318582	311739	308709	305783
29	239911	252675	283352	287942	---	320467	318250	322025	317918	310647	308057	305372
30	240459	252443	284801	287316	---	320023	319358	321357	317255	311958	307190	305783
31	239327	---	287087	286691	---	319801	---	320912	---	313710	306323	---
MAX	243796	252889	287087	287942	319801	322962	322247	322672	321313	317454	312614	308274
MIN	234566	235761	253413	281414	285652	315029	316703	319358	316990	310647	306323	304272
a	1473.94	1480.80	1498.04	1497.85	1512.85	1513.25	1513.05	1513.75	1512.10	1510.49	1507.10	1506.85
b	2612	13116	34644	-396	32223	887	-443	1554	-3657	-3545	-7387	-540

CAL YR 1997 b -1272

WTR YR 1998 b 69068

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, 3080 ft³/s, Feb. 23, 1998; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 7,670 ft³/s, Mar. 2, 1983, at station 11108135; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	15	1000	135	.00	.8	22	10	8
2	.00	.00	.00	5	75	522	200	.00	.8	22	10	8
3	.00	.00	.00	5	1700	250	200	.00	.8	22	10	8
4	.00	.00	.00	5	340	250	200	.00	.8	22	10	8
5	.00	.00	.00	5	200	250	200	.00	.8	22	10	8
6	.00	.00	.00	5	100	250	200	.00	.8	22	10	8
7	.00	.00	.00	20	400	250	200	112	.8	22	10	8
8	.00	.00	.00	20	100	250	304	200	.8	22	10	8
9	.00	.00	.00	20	100	250	300	200	.8	22	10	8
10	.00	.00	.00	70	100	200	200	200	.8	22	10	8
11	.00	.00	105	70	100	150	100	200	.8	22	10	8
12	.00	.00	10	70	100	150	63	200	.8	22	10	8
13	.00	.00	10	70	32	150	.00	200	.8	22	10	8
14	.00	.00	5	70	.00	100	.00	200	.8	22	5	8
15	.00	.00	5	15	.00	.00	.00	200	.8	22	5	8
16	.00	.00	5	10	.00	.00	.00	200	.8	22	5	8
17	.00	.00	5	10	.00	.00	.00	200	.8	22	5	8
18	.00	.00	5	10	.00	.00	.00	200	.8	22	5	8
19	.00	.00	5	8	.00	.00	.00	200	.8	22	5	8
20	.00	.00	2	5	.00	.00	.00	200	.8	22	5	8
21	.00	.00	.00	5	.00	.00	.00	200	.8	22	5	8
22	.00	.00	.00	5	.00	.00	.00	200	.8	22	5	8
23	.00	.00	.00	5	3080	.00	.00	200	.8	23	5	8
24	.00	.00	.00	5	1680	.00	.00	200	.8	23	5	8
25	.00	.00	.00	5	865	200	.00	200	.8	23	5	7
26	.00	.00	.00	10	210	200	.00	100	.8	23	5	7
27	.00	.00	.00	10	335	400	.00	.00	.8	23	5	7
28	.00	.00	.00	10	325	200	.00	.00	.8	23	5	7
29	.00	.00	.00	10	---	200	.00	.00	.7	23	5	7
30	.00	.00	.00	25	---	100	.00	.00	.7	23	5	7
31	.00	---	.00	15	---	97	---	.00	---	23	5	---
TOTAL	0.00	0.00	157.00	598.00	9857.00	5419.00	2302.00	3812.00	23.8	691	220	234
MEAN	.0000	.0000	5.06	19.3	352	175	76.7	123	.79	22.3	7.10	7.80
MAX	.00	.00	105	70	3080	1000	304	200	.80	23	10	8.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.70	22	5.0	7.0
AC-FT	.00	.00	311	1190	19550	10750	4570	7560	47	1370	436	464

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.0000	.0000	1.27	4.82	87.2	79.2	43.2	33.5	7.21	14.1	9.25	1.95
MAX	.0000	.0000	5.06	19.3	352	175	81.4	123	28.0	34.2	29.9	7.80
(WY)	1995	1995	1998	1998	1998	1998	1996	1998	1995	1995	1995	1998
MIN	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	.0000
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1996	1996	1996	1995

SUMMARY STATISTICS

FOR 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1995 - 1998

ANNUAL TOTAL	5002.00	23313.80		
ANNUAL MEAN	13.7	63.9	23.1	
HIGHEST ANNUAL MEAN			63.9	1998
LOWEST ANNUAL MEAN			7.60	1996
HIGHEST DAILY MEAN	300	Mar 22	3080	Feb 23 1998
LOWEST DAILY MEAN	.00	Jan 1	.00	Oct 1 1994
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1 1994
ANNUAL RUNOFF (AC-FT)	9920		46240	
10 PERCENT EXCEEDS	5.0	200	39	
50 PERCENT EXCEEDS	.00	5.0	.00	
90 PERCENT EXCEEDS	.00	.00	.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, not determined, Feb. 23, 1998; maximum gage height, 16.45 ft, Feb. 23, 1998; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.6	9.7	13	31	e356	262	172	134	54	24	20
2	2.6	3.5	8.7	13	645	e346	257	182	132	52	23	19
3	2.8	3.5	7.8	14	3000	e341	315	221	131	52	22	20
4	2.8	3.6	7.2	14	569	e307	300	228	125	51	21	24
5	2.7	3.6	149	14	305	e276	288	415	121	49	20	28
6	2.8	3.6	991	13	715	e240	256	470	118	47	20	23
7	3.0	3.8	205	13	1200	e217	244	325	115	47	20	21
8	3.2	3.9	95	13	1730	206	226	295	113	45	20	20
9	3.2	3.9	56	73	568	194	217	254	110	44	19	20
10	3.1	5.2	39	176	441	184	216	232	108	43	19	19
11	3.2	5.0	31	79	377	179	261	217	106	42	19	19
12	3.4	4.5	26	46	335	177	282	254	108	40	19	19
13	3.4	4.6	24	36	296	176	243	326	110	39	21	18
14	3.2	4.8	22	31	479	203	227	362	98	37	20	18
15	3.0	4.5	22	29	557	188	215	317	94	36	20	17
16	2.9	4.7	20	44	355	182	200	289	93	35	21	17
17	2.9	4.6	18	41	343	186	188	257	89	34	20	18
18	2.9	4.4	29	31	298	180	181	238	84	33	19	18
19	3.0	4.4	24	32	293	171	181	221	81	32	19	18
20	3.2	4.5	20	32	289	161	186	213	79	33	19	18
21	3.4	4.5	18	27	252	154	196	207	76	32	18	19
22	3.4	4.4	17	24	706	149	208	196	74	32	17	19
23	3.3	4.4	15	23	e11700	164	205	187	72	32	17	19
24	3.5	4.4	15	22	2020	166	198	180	71	31	16	19
25	3.6	4.5	14	21	e777	578	185	176	68	29	16	19
26	3.6	30	13	20	e566	438	174	172	66	28	16	20
27	3.6	8.4	13	20	e464	305	170	163	63	27	16	20
28	3.7	6.7	13	19	e418	311	170	156	60	26	16	21
29	3.6	5.9	14	33	---	270	171	152	57	25	15	21
30	3.6	35	14	40	---	230	170	145	56	25	15	21
31	3.6	---	13	31	---	238	---	140	---	25	25	---
TOTAL	98.7	192.4	1963.4	1037	29729	7473	6592	7362	2812	1157	592	592
MEAN	3.18	6.41	63.3	33.5	1062	241	220	237	93.7	37.3	19.1	19.7
MAX	3.7	35	991	176	11700	578	315	470	134	54	25	28
MIN	2.5	3.5	7.2	13	31	149	170	140	56	25	15	17
AC-FT	196	382	3890	2060	58970	14820	13080	14600	5580	2290	1170	1170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.18	6.55	20.6	94.0	274	191	102	55.2	23.2	10.5	6.25	6.30
MAX	14.9	17.1	63.3	501	1062	674	235	237	93.7	37.3	19.1	19.7
(WY)	1994	1994	1998	1995	1998	1978	1978	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1977 - 1998	
ANNUAL TOTAL	6661.8		59600.5			
ANNUAL MEAN	18.3		163		64.9	
HIGHEST ANNUAL MEAN					163	
LOWEST ANNUAL MEAN					2.45	
HIGHEST DAILY MEAN	991	Dec 6	11700	Feb 23	11700	Feb 23 1998
LOWEST DAILY MEAN	1.4	Jul 18	2.5	Oct 1	.00	Sep 6 1977
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 15	2.7	Oct 1	.00	Sep 6 1977
INSTANTANEOUS PEAK FLOW			unknown	Feb 23	unknown	Feb 23 1998
INSTANTANEOUS PEAK STAGE			16.45	Feb 23	16.45	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	13210		118200		47030	
10 PERCENT EXCEEDS	31		306		166	
50 PERCENT EXCEEDS	5.2		33		10	
90 PERCENT EXCEEDS	1.9		3.7		.79	

e Estimated.

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, 3,640 ft³/s, Dec. 6, 1997, gage height, 5.73 ft; minimum daily, 0.30 ft³/s, May 10, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.0	3.4	3.6	2.6	e6.7	e8.3	e6.8	3.4	2.6	2.3	2.2
2	2.7	3.0	3.2	3.4	16	e5.5	e9.5	e7.4	3.8	2.8	2.3	2.5
3	2.7	2.9	3.2	3.4	e379	e3.9	e8.3	e7.6	3.5	3.0	2.1	2.9
4	2.5	3.1	3.2	3.4	e14	e4.3	e5.6	e5.6	3.5	3.0	2.2	4.0
5	2.5	3.1	140	3.4	e3.3	e4.9	e5.0	5.7	3.5	3.1	2.1	3.4
6	2.6	3.1	1060	3.1	e116	e6.1	e5.8	5.7	3.6	3.0	2.1	2.8
7	2.7	3.3	4.6	2.9	e29	e4.7	e5.3	5.9	3.4	3.0	2.2	2.6
8	2.8	3.4	3.9	2.7	e74	e3.7	e5.2	5.8	3.4	3.0	2.2	2.5
9	2.8	3.3	3.5	3.4	e10	e4.5	e5.8	5.8	3.3	2.8	2.1	2.5
10	2.8	4.2	3.4	4.8	e7.4	e3.7	e5.8	5.5	3.4	2.8	2.1	2.6
11	2.9	4.1	3.3	2.5	e5.8	e4.2	e6.4	5.5	3.4	2.8	2.1	2.6
12	2.8	3.9	3.2	2.5	e5.3	e4.1	e9.4	5.1	3.6	2.8	2.0	2.5
13	2.7	4.1	3.2	2.5	e4.7	e3.7	e8.5	5.3	3.5	2.8	2.0	2.4
14	2.6	3.9	3.2	2.5	e4.3	e3.4	e8.0	5.3	3.0	2.8	2.1	2.4
15	2.4	3.8	3.4	2.7	e4.5	e2.4	e6.9	5.2	2.9	2.8	2.1	2.2
16	2.4	3.8	3.4	3.0	e4.7	e4.3	e5.9	5.2	3.3	2.8	2.2	2.2
17	2.5	3.8	3.4	2.5	e4.6	e5.5	e5.9	5.2	3.5	2.8	2.3	2.2
18	2.6	3.8	4.6	2.5	e4.5	e5.3	e5.7	5.2	2.9	2.8	2.4	2.3
19	2.6	3.6	4.1	2.6	e5.0	e4.4	e5.4	4.9	2.7	2.7	2.3	2.3
20	2.7	3.6	3.6	2.5	e6.2	e4.1	e5.3	4.9	2.6	2.6	2.3	2.5
21	2.9	3.5	3.6	2.5	e7.0	e4.0	e5.6	4.6	2.8	2.5	2.2	2.8
22	2.8	3.4	3.6	2.5	e29	e4.3	e4.7	4.6	2.8	2.5	2.0	2.6
23	2.8	3.4	3.6	2.5	e473	e4.4	e4.6	4.3	2.8	2.5	2.0	2.6
24	3.0	3.3	3.6	2.5	e18	e6.7	e4.6	4.3	2.8	2.3	2.0	2.5
25	3.0	3.2	3.6	2.5	e13	e9.1	e5.6	4.3	3.0	2.3	2.0	2.4
26	3.0	4.7	3.4	2.5	e11	e5.3	e6.1	4.3	2.9	2.2	2.0	2.7
27	3.0	3.6	3.4	2.5	e9.7	e5.4	e6.5	4.2	2.9	2.0	2.0	2.8
28	3.1	3.3	3.4	2.5	e7.9	e7.5	e7.1	4.1	2.8	2.1	1.9	2.9
29	3.2	3.2	3.4	3.1	---	e4.2	e6.8	4.0	2.7	2.1	2.2	2.9
30	3.2	3.6	3.5	2.7	---	4.6	e4.7	3.8	2.7	2.2	2.2	2.8
31	3.1	---	3.6	2.7	---	e4.6	---	3.7	---	2.4	2.2	---
TOTAL	85.7	106.0	1302.5	88.4	1269.5	149.5	188.3	159.8	94.4	81.9	66.2	78.6
MEAN	2.76	3.53	42.0	2.85	45.3	4.82	6.28	5.15	3.15	2.64	2.14	2.62
MAX	3.2	4.7	1060	4.8	473	9.1	9.5	7.6	3.8	3.1	2.4	4.0
MIN	2.3	2.9	3.2	2.5	2.6	2.4	4.6	3.7	2.6	2.0	1.9	2.2
AC-FT	170	210	2580	175	2520	297	373	317	187	162	131	156

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.16	2.58	6.22	5.21	15.1	7.96	3.08	2.49	2.03	1.73	1.69	1.86
MAX	3.34	3.53	42.0	22.0	64.3	40.5	6.28	5.15	3.15	2.64	2.45	2.73
(WY)	1997	1998	1998	1995	1978	1978	1998	1998	1998	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1977 - 1998

ANNUAL TOTAL	2292.3	3670.8	
ANNUAL MEAN	6.28	10.1	4.28
HIGHEST ANNUAL MEAN			10.1
LOWEST ANNUAL MEAN			1.54
HIGHEST DAILY MEAN	1060	Dec 6	1220
LOWEST DAILY MEAN	1.8	Jun 3	.30
ANNUAL SEVEN-DAY MINIMUM	2.0	Jun 1	.36
INSTANTANEOUS PEAK FLOW			3640
INSTANTANEOUS PEAK STAGE			5.73
ANNUAL RUNOFF (AC-FT)	4550	7280	3100
10 PERCENT EXCEEDS	3.8	6.3	3.8
50 PERCENT EXCEEDS	3.0	3.3	2.4
90 PERCENT EXCEEDS	2.3	2.3	1.4

e Estimated.

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	660	1160	687	412	.00	894	1290	1110	1020	1340	1400
2	1410	660	1160	663	381	.00	912	1250	1170	1030	1320	1440
3	1370	660	1150	611	378	.00	1000	1350	1130	1060	1350	1370
4	1510	987	1110	660	352	.00	896	1440	1060	950	1410	1480
5	1310	1920	1140	650	385	.00	855	1460	990	854	1390	1370
6	1220	1910	1100	635	385	.00	841	1360	922	921	1420	1240
7	1330	1860	1290	633	385	.00	1020	1390	935	1060	1410	1250
8	868	1950	1190	646	660	.00	1000	487	935	975	2270	1300
9	388	2220	1120	646	268	.00	1050	660	935	934	2270	1420
10	386	1050	965	605	275	.00	976	522	990	1110	1400	1440
11	386	1110	936	622	.00	.00	1000	660	935	839	1440	1220
12	715	1130	939	575	.00	.00	1140	660	935	852	1420	1150
13	1110	1130	1100	524	.00	.00	1020	746	907	956	1330	1270
14	1140	1080	1380	660	28	.00	1160	648	935	1270	1090	1000
15	1440	1020	1220	660	.00	.00	1130	577	1020	1260	2330	904
16	1430	989	1190	1190	26	.00	1130	619	1040	1260	2720	855
17	1320	1050	1250	1070	.00	.00	1030	674	976	1290	1620	1040
18	853	1070	1250	1320	28	.00	881	646	962	1350	1450	1000
19	825	1080	938	924	82	.00	990	605	936	1620	1700	950
20	853	1080	1040	782	14	1.5	978	649	920	1310	1580	756
21	1420	1080	1350	730	.00	521	949	645	799	1450	1600	1030
22	1410	996	1100	431	.00	660	1000	701	826	1210	1510	1160
23	1380	966	1070	330	.00	339	859	567	838	1610	1300	1210
24	1980	1080	1090	330	.00	480	718	655	785	1540	1390	1110
25	2520	1080	1070	357	.00	469	772	558	1140	1480	1400	1060
26	3220	1080	1090	385	.00	533	846	808	1310	1630	1550	934
27	1550	1100	1090	371	.00	686	893	784	1130	1350	1520	826
28	925	1130	956	386	.00	728	906	908	1180	1410	1510	1140
29	707	1100	664	382	---	901	1050	949	1250	1410	1480	1310
30	718	1330	665	381	---	579	1210	1020	1240	1410	1110	1170
31	690	---	665	381	---	893	---	1330	---	1390	1250	---
TOTAL	37754	35558	33438	19227	4059.00	6790.50	29106	26618	30241	37811	47880	34805
MEAN	1218	1185	1079	620	145	219	970	859	1008	1220	1545	1160
MAX	3220	2220	1380	1320	660	901	1210	1460	1310	1630	2720	1480
MIN	386	660	664	330	.00	.00	718	487	785	839	1090	756
AC-FT	74890	70530	66320	38140	8050	13470	57730	52800	59980	75000	94970	69040
a	35370	22590	18080	17500	160	13270	57050	52650	54650	54260	67320	48460
b	39370	45570	47560	19110	7450	0	0	0	3710	20980	26980	18800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	713	721	657	532	431	745	1697	1490	1304	1456	1549	1485
MAX	1218	1185	1079	620	814	1071	2345	2063	1474	1594	1613	1761
(WY)	1998	1998	1998	1998	1996	1997	1997	1997	1996	1996	1996	1996
MIN	104	349	399	378	145	219	970	859	1008	1220	1489	1160
(WY)	1996	1996	1996	1996	1998	1998	1998	1998	1998	1998	1997	1998

SUMMARY STATISTICS FOR 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1996 - 1998

ANNUAL TOTAL	484943.10	343287.50	
ANNUAL MEAN	1329	941	1067
HIGHEST ANNUAL MEAN			1199
LOWEST ANNUAL MEAN			941
HIGHEST DAILY MEAN	3480	May 25	3220
LOWEST DAILY MEAN	.00	Feb 27	.00
ANNUAL SEVEN-DAY MINIMUM	124	Feb 24	.00
ANNUAL RUNOFF (AC-FT)	961900	680900	773000
ANNUAL DIVERSION (AC-FT) a	453200	440000	419900
ANNUAL DIVERSION (AC-FT) b	350100	229900	268300
10 PERCENT EXCEEDS	2270	1440	1940
50 PERCENT EXCEEDS	1240	990	1050
90 PERCENT EXCEEDS	471	28	185

a Diversion, in acre-feet, to Alamo Powerplant, provided by California Department of Water Resources.

b Diversion, in acre-feet, to William Warne Powerplant, provided by California Department of Water Resources.

11109520 PYRAMID LAKE NEAR GORMAN, CA

LOCATION.—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, 169,868 acre-ft, Feb.7, elevation, 2,577.97 ft; minimum, 151,307 acre-ft, June 24, elevation, 2,563.05 ft.

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

2,545	130,601	2,565	153,364
2,550	136,154	2,570	159,778
2,555	141,850	2,575	166,057
2,560	147,680	2,580	172,497

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161370	164535	166146	166834	168113	168023	164434	155646	164295	157642	159518	156452
2	159766	166184	162321	164535	165904	167460	166260	160001	162998	156355	162208	159295
3	159060	166057	161483	165346	165118	168306	166604	164169	166426	161146	160847	154139
4	163023	163526	162408	166668	166898	167345	167166	160598	165650	164333	159085	160735
5	167882	159258	161059	162822	165143	166681	168511	159456	162283	167102	157384	162308
6	164763	155817	163023	162810	169051	167000	168241	158763	164321	162120	159617	162045
7	166847	156208	164953	162421	169868	166643	166923	160598	167844	159716	158122	164750
8	162998	161034	163287	161620	166057	166898	166732	160026	165879	159518	159666	166031
9	160188	166745	160822	159679	162371	165561	166681	161420	165726	159419	162622	164283
10	162446	166388	158541	162170	161983	164814	167524	165080	165447	157421	162521	163539
11	168703	165308	159233	165485	161933	165625	168280	162258	165511	156281	160735	162747
12	167818	163879	159852	166592	161783	165714	168267	163199	164472	165435	156440	162596
13	163866	161745	161108	166808	161608	165295	165663	165841	164119	165549	156147	164182
14	160436	157790	164270	164308	163690	162948	165752	166745	164220	164245	155903	162559
15	167482	159493	166286	162195	166643	164890	165422	165130	162383	162873	160660	161508
16	157028	162672	165320	164056	166961	164270	164978	166057	163942	157888	165993	161608
17	158603	161720	162973	167716	163312	163640	165156	166732	162283	154636	164157	160349
18	163099	163375	161295	167140	163212	163438	166197	164738	159035	160623	164434	158603
19	165866	164472	162684	167664	161745	164119	168305	164814	155927	165815	162609	160548
20	162634	162033	161858	166553	160386	165333	166936	163312	159072	165841	160648	163640
21	162108	161670	162433	166974	163325	167498	164169	161720	165561	164169	157605	163740
22	155951	165726	161895	166783	168241	168036	163766	160560	161071	161208	158973	162559
23	155232	166044	161246	165371	166197	164738	161895	163703	157495	158097	162471	161633
24	151655	164902	161758	166579	166273	163124	157691	166019	151307	156514	159716	160237
25	156245	162170	164119	168472	167524	165841	162058	167946	152906	155878	159456	160188
26	162772	162120	163199	166451	167972	165511	166019	166808	154612	160872	161283	162484
27	163917	165244	165333	167204	168305	164220	163980	166095	157581	162170	160536	164498
28	165879	167230	165320	166464	168780	165841	161445	162772	162822	160735	160772	163149
29	165371	166719	166260	166885	---	164510	157396	160473	162358	160560	157863	161645
30	162860	166235	167345	167012	---	163602	156245	163451	159270	159048	162358	160760
31	162095	---	167421	167485	---	163514	---	167997	---	158998	160847	---
MAX	168703	167230	167421	168472	169868	168306	168511	167997	167844	167102	165993	166031
MIN	151655	155817	158541	159679	160386	162948	156245	155646	151307	154636	155903	154139
a	2571.86	2575.14	2576.07	2576.12	2577.13	2572.99	2567.13	2576.52	2569.59	2569.37	2570.86	2570.79
b	-790	4140	1186	64	1295	-5266	-7269	11752	-8727	-272	1849	-87

CAL YR 1997 b 715

CAL YR 1998 b -2125

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, 6,000 ft³/s, Feb. 23 1998; minimum daily, 4.0 ft³/s, Nov. 1–5, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	5.0	10	5.0	10	200	25	25	25	25	26	25
2	8.0	5.0	10	5.0	850	200	25	25	25	25	26	25
3	8.0	5.0	10	5.0	2200	200	25	25	25	25	26	26
4	8.0	5.0	10	5.0	500	200	25	25	25	25	26	26
5	7.0	5.0	10	5.0	500	200	25	25	25	25	26	27
6	7.0	5.0	525	5.0	750	200	25	25	25	25	26	27
7	6.0	5.0	503	5.0	2560	200	100	25	25	25	26	27
8	6.0	5.0	200	5.0	2770	200	100	25	25	25	26	28
9	5.0	5.0	200	5.0	1450	200	100	25	25	25	26	28
10	5.0	5.0	100	10	1100	200	100	25	25	25	26	29
11	5.0	5.0	25	10	25	200	101	25	25	25	26	30
12	5.0	5.0	25	22	25	200	100	25	25	25	26	30
13	5.0	5.0	25	10	25	116	100	25	25	25	26	30
14	5.0	5.0	25	10	25	100	29	25	25	25	26	30
15	5.0	5.0	20	10	25	100	25	25	25	25	26	30
16	5.0	5.0	20	10	25	100	25	25	25	25	25	30
17	5.0	5.0	10	10	25	5.0	25	25	25	25	25	30
18	5.0	5.0	10	10	25	5.0	25	25	25	25	25	30
19	5.0	5.0	10	10	25	5.0	25	25	25	25	25	30
20	5.0	5.0	10	10	25	5.0	25	25	25	25	25	30
21	5.0	5.0	10	10	25	5.0	25	25	25	25	25	30
22	5.0	5.0	10	10	25	5.0	25	25	25	25	25	30
23	5.0	5.0	10	10	6000	5.0	25	25	24	25	25	30
24	5.0	5.0	10	10	2210	5.0	25	25	24	25	25	30
25	5.0	4.0	10	10	25	200	25	25	24	25	25	30
26	5.0	4.0	10	10	202	400	25	25	24	26	25	30
27	5.0	4.0	10	10	200	350	25	25	24	26	25	30
28	5.0	4.0	10	10	200	275	25	25	24	26	25	30
29	5.0	4.0	10	10	---	200	25	25	24	26	25	35
30	5.0	4.0	10	10	---	200	25	25	24	26	25	39
31	5.0	---	10	10	---	100	---	22	---	26	25	---
TOTAL	174.0	144.0	1868	277.0	21827	4581.0	1280	772	742	781	790	882
MEAN	5.61	4.80	60.3	8.94	780	148	42.7	24.9	24.7	25.2	25.5	29.4
MAX	9.0	5.0	525	22	6000	400	101	25	25	26	26	39
MIN	5.0	4.0	10	5.0	10	5.0	25	22	24	25	25	25
AC-FT	345	286	3710	549	43290	9090	2540	1530	1470	1550	1570	1750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.0	23.6	28.2	101	195	87.1	39.5	31.0	24.3	23.5	21.7	21.1
MAX	45.5	83.8	64.0	422	780	242	132	97.3	41.0	32.9	25.8	29.4
(WY)	1993	1993	1996	1995	1998	1992	1993	1991	1993	1993	1993	1998
MIN	5.00	4.80	5.03	5.00	5.00	5.10	5.57	10.6	12.5	13.6	12.9	13.0
(WY)	1997	1998	1995	1991	1991	1995	1992	1990	1990	1989	1989	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1989 - 1998
ANNUAL TOTAL	11332.0	34118.0	
ANNUAL MEAN	31.0	93.5	50.3
HIGHEST ANNUAL MEAN			119
LOWEST ANNUAL MEAN			10.8
HIGHEST DAILY MEAN	525	Dec 6	6000
LOWEST DAILY MEAN	4.0	Nov 25	4.0
ANNUAL SEVEN-DAY MINIMUM	4.1	Nov 24	4.1
ANNUAL RUNOFF (AC-FT)	22480	67670	36420
10 PERCENT EXCEEDS	50	150	70
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 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, 38,000 ft³/s, Feb. 23, 1998, gage height, 13.38 ft, from floodmark, from rating curve extended above 20,000 ft³/s on basis of slope-area measurement at gage height 11.36 ft; maximum gage height, 18.6 ft, Feb. 25, 1969, site and datum then in use; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 35,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	3.3	21	12	e16	e1000	e300	e80	92	54	41	46
2	5.9	3.0	11	12	e40	e800	e270	e83	90	54	42	51
3	5.3	2.9	8.2	12	e10000	e650	e260	e145	90	54	40	52
4	4.8	2.9	6.7	17	e2000	e550	e270	e140	88	54	38	48
5	4.3	2.8	179	18	e350	e460	e260	e138	85	53	38	48
6	4.3	2.9	680	12	e1000	e400	e240	e135	83	52	39	48
7	4.3	2.9	527	11	e4000	e330	e230	e132	81	51	39	47
8	4.0	2.9	195	e10	e2500	e300	e220	e130	80	51	39	49
9	3.5	2.9	124	e70	e1300	e270	e200	120	78	51	38	50
10	3.2	4.7	107	e500	e650	e230	e190	116	77	50	38	50
11	3.0	6.2	52	e180	e360	e220	e220	112	77	49	39	50
12	2.8	4.4	46	e60	e200	e210	e250	155	75	49	39	51
13	2.7	4.9	43	e20	e100	e198	e200	178	74	48	39	52
14	2.7	4.9	41	e18	e800	e200	e200	146	72	48	38	53
15	2.7	4.3	39	e17	e400	e190	e190	132	71	46	39	54
16	2.7	4.2	37	e16	e190	e180	e180	127	71	43	40	54
17	2.6	3.8	25	e15	e300	e170	e170	122	70	43	41	e55
18	2.6	3.5	27	e14	e250	e160	e165	118	67	44	42	e57
19	2.5	3.4	24	e13	e200	e160	e160	115	66	46	32	e58
20	2.7	3.4	18	e12	e170	e150	e150	113	66	46	28	e59
21	2.9	3.3	17	e11	e150	e130	e140	110	64	46	39	e60
22	3.1	3.0	15	e11	e2500	e120	e135	108	63	46	41	e62
23	3.0	2.9	14	e10	e15000	e120	e130	107	62	46	42	e63
24	3.1	3.2	14	e10	e6500	e110	e120	106	62	46	42	e64
25	3.3	3.4	14	e9.0	e4000	e400	e110	107	61	45	43	e65
26	3.2	24	13	e8.0	e2700	e200	e105	105	60	43	43	e67
27	3.4	16	12	e7.0	e1900	e120	e99	102	59	42	43	e68
28	3.5	9.0	12	e6.0	e1500	e380	e93	100	59	42	43	e69
29	3.3	6.8	11	e20	---	e300	e88	98	57	42	44	e70
30	3.4	30	11	e20	---	e230	e84	96	56	41	46	e72
31	3.0	---	11	e18	---	e250	---	94	---	40	46	---
TOTAL	107.7	175.8	2354.9	1169.0	59076	9188	5429	3670	2156	1465	1241	1692
MEAN	3.47	5.86	76.0	37.7	2110	296	181	118	71.9	47.3	40.0	56.4
MAX	5.9	30	680	500	15000	1000	300	178	92	54	46	72
MIN	2.5	2.8	6.7	6.0	16	110	84	80	56	40	28	46
AC-FT	214	349	4670	2320	117200	18220	10770	7280	4280	2910	2460	3360

e Estimated.

11109600 PIRU CREEK ABOVE LAKE PIRU, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1971, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.14	54.7	52.8	106	229	100	102	33.7	12.6	4.22	2.00	1.86
MAX	11.9	503	291	992	1657	569	741	165	53.4	22.4	11.3	9.63
(WY)	1970	1966	1966	1969	1969	1969	1958	1967	1969	1969	1969	1969
MIN	.000	.34	2.91	9.24	7.50	7.26	3.96	1.34	.12	.000	.000	.000
(WY)	1956	1965	1957	1965	1965	1961	1961	1961	1961	1960	1957	1956

SUMMARY STATISTICS

WATER YEARS 1956 - 1971

ANNUAL MEAN	57.2
HIGHEST ANNUAL MEAN	294 1969
LOWEST ANNUAL MEAN	5.66 1961
HIGHEST DAILY MEAN	15600 Feb 25 1969
LOWEST DAILY MEAN	.00 Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1955
INSTANTANEOUS PEAK FLOW	31200 Feb 25 1969
INSTANTANEOUS PEAK STAGE	18.6 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	41470
10 PERCENT EXCEEDS	84
50 PERCENT EXCEEDS	8.2
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.6	18.2	39.3	120	281	197	85.2	52.2	30.9	21.0	17.1	15.5
MAX	51.8	92.4	180	1154	2110	1126	289	204	93.7	47.3	40.0	56.4
(WY)	1993	1993	1984	1995	1998	1983	1983	1983	1978	1998	1998	1998
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1972 - 1998

ANNUAL TOTAL	13394.8	87724.4	
ANNUAL MEAN	36.7	240	73.1
HIGHEST ANNUAL MEAN			240 1998
LOWEST ANNUAL MEAN			9.52 1990
HIGHEST DAILY MEAN	680 Dec 6	15000 Feb 23	15000 Feb 23 1998
LOWEST DAILY MEAN	2.5 Oct 19	2.5 Oct 19	.07 Jun 9 1972
ANNUAL SEVEN-DAY MINIMUM	2.6 Oct 13	2.6 Oct 13	.09 Sep 3 1972
INSTANTANEOUS PEAK FLOW		38000 Feb 23	38000 Feb 23 1998
INSTANTANEOUS PEAK STAGE		13.38 Feb 23	18.60 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	26570	174000	52940
10 PERCENT EXCEEDS	81	270	123
50 PERCENT EXCEEDS	23	52	20
90 PERCENT EXCEEDS	3.4	3.4	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, 93,900 acre-ft, Feb. 25; maximum elevation, 1,055.40 ft, Feb. 25; minimum contents 35,000 acre-ft, Nov. 24, 25; minimum elevation 1,001.43 ft, Nov. 25.

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 1997 TO SEPTEMBER 1998
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47100	35700	35500	42700	e48400	89100	88700	88200	88100	87700	87700	87700
2	46800	35400	35500	42800	e48600	88800	88600	88200	88100	87700	87700	87700
3	46400	35200	35500	42800	48800	88800	88600	88300	88100	87700	87600	87800
4	46100	35200	35500	42800	57600	88700	88600	88300	88100	87800	87600	87800
5	45700	35100	36600	42900	e62100	88800	88600	88700	88000	87800	87500	87800
6	45300	35100	39500	42900	e66600	88700	88600	88600	88000	87800	87500	87800
7	45000	35100	41200	42900	e71100	88600	88600	88400	87900	87800	87500	87800
8	44600	35100	41600	e43100	75600	e88600	88700	88400	87900	87900	87500	87800
9	44300	35100	41800	e43300	82200	e88600	88700	88400	87900	88000	87500	87800
10	43900	35100	42000	e43600	85600	e88600	88700	88300	87900	88000	87500	87800
11	43500	35100	42100	e43800	88000	e88600	88900	88300	87800	88100	87500	87800
12	43200	35100	42100	e44000	88600	e88600	88800	88600	87800	88100	87500	87800
13	42700	35200	42200	e44200	88500	e88600	88700	88600	87800	88200	87600	87800
14	42400	35100	42300	e44400	88000	e88600	88700	88500	87700	88200	87600	87800
15	42100	35100	42300	e44700	88600	e88600	88600	88400	87700	88300	87600	87600
16	41600	35100	42400	e44900	88500	e88600	88600	88400	87600	88300	87600	87200
17	41300	35100	42400	e45100	88600	e88600	88500	88400	87600	88300	87600	86800
18	41000	35100	42600	e45300	88700	e88600	88500	88400	87500	88300	87600	86400
19	40600	35100	42600	e45500	88600	e88600	88400	88300	87500	88300	87600	86000
20	40200	35100	42600	e45700	88800	e88700	88400	88300	87500	88300	87600	85700
21	39900	35100	42600	e46000	88800	e88700	88400	88300	87500	88300	87600	85300
22	39500	35100	42600	e46200	89300	e88700	88500	88300	87500	88300	87600	85000
23	39100	35100	42600	e46400	89400	e88700	88500	88300	87500	88300	87600	84600
24	38800	35000	42600	e46600	92000	e88700	88500	88300	87500	88300	87600	84200
25	38400	35000	42700	e46800	93900	e88700	88300	88200	87600	88300	87600	83900
26	38000	35200	42700	e47100	89200	e88700	88300	88200	87600	88300	87700	83500
27	37600	35200	42700	e47300	89200	e88700	88200	88200	87600	88300	87700	83100
28	37200	35200	42700	e47500	89200	e88700	88200	88200	87700	88200	87700	82700
29	36800	35200	42700	e47700	---	e88700	88200	88200	87700	88000	87700	82300
30	36400	35400	42700	e47900	---	e88700	88200	88200	87700	87900	87700	81900
31	36100	---	42700	e48200	---	e88700	---	88200	---	87800	87700	---
MAX	47100	35700	42700	48200	93900	89100	88900	88700	88100	88300	87700	87800
MIN	36100	35000	35500	42700	48400	88600	88200	88200	87500	87700	87500	81900
a	1002.83	1001.94	1010.87	e1017.12	1055.65	1055.36	1054.86	1054.86	1054.49	1054.53	1054.46	1049.69
b	-11500	-700	+7300	+5500	+41000	-500	-500	0	-500	+100	-100	-5800

CAL YR 1997 b -9400

WTR YR 1998 b +34300

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA

LOCATION.—Lat 34°27'37", long 118°45'04", in Temescal Grant, Ventura County, Hydrologic Unit 18070102, on right bank 750 ft downstream from Santa Felicia Dam, 1 mi upstream from Lime Canyon, 4 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.—425 mi².

PERIOD OF RECORD.—October 1955 to September 1968, October 1973 to current year.

CHEMICAL DATA.: Water years 1969, 1974–80.

WATER TEMPERATURE.: Water year 1969.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	182	179	9.8	5.5	6.9	.02	103	98	107	44	68	15
2	179	166	9.6	5.5	7.1	64	103	98	109	44	43	17
3	185	124	9.5	5.5	7.3	102	101	98	108	44	44	17
4	185	46	9.5	5.6	7.2	100	101	97	107	44	45	22
5	185	9.9	6.7	5.7	51	114	102	91	109	44	43	24
6	187	9.8	5.3	5.7	98	129	103	98	109	44	37	27
7	188	9.6	5.0	5.7	100	175	103	96	109	36	23	27
8	188	9.5	5.0	5.7	102	186	102	96	111	13	17	23
9	188	9.5	5.0	5.7	103	192	101	98	110	5.5	17	24
10	188	9.5	5.0	5.7	140	195	101	98	109	5.6	17	24
11	188	9.6	5.0	5.7	302	197	101	98	109	5.7	17	24
12	185	9.8	5.2	5.7	302	196	101	99	105	5.9	17	23
13	188	9.8	5.2	5.9	302	198	101	99	107	6.0	17	19
14	188	9.6	5.2	6.0	305	199	101	100	107	5.7	16	16
15	186	9.5	5.2	6.0	306	197	101	101	99	2.4	16	126
16	185	9.5	5.2	6.0	306	200	101	101	107	.00	17	224
17	185	9.5	5.2	6.0	306	200	101	101	107	.00	17	218
18	185	9.5	5.4	6.0	306	201	101	103	86	.00	17	217
19	185	9.5	5.4	6.0	225	204	99	103	74	.00	17	215
20	185	8.9	5.2	6.0	107	171	99	103	74	.00	16	213
21	182	9.1	5.2	6.0	107	96	99	105	74	.00	11	212
22	173	9.1	5.2	6.0	108	98	83	103	74	.00	9.5	194
23	191	9.1	5.2	3.9	214	98	60	103	74	.00	9.5	207
24	191	9.1	5.2	6.1	67	99	85	105	52	.00	9.5	206
25	191	9.1	5.2	6.6	.22	100	99	105	43	.00	10	220
26	191	11	5.2	6.6	.14	99	99	105	43	.00	13	227
27	189	10	5.2	6.6	.09	101	98	106	44	.00	15	227
28	190	9.8	5.2	6.6	.05	101	110	105	44	21	16	227
29	191	9.8	5.3	6.8	---	101	99	105	44	95	16	223
30	191	9.9	5.5	6.9	---	103	98	107	44	98	16	222
31	191	---	5.5	6.9	---	103	---	107	---	98	15	---
TOTAL	5786	764.0	180.5	184.6	3886.00	4319.02	2956	3132	2599	661.80	661.5	3680
MEAN	187	25.5	5.82	5.95	139	139	98.5	101	86.6	21.3	21.3	123
MAX	191	179	9.8	6.9	306	204	110	107	111	98	68	227
MIN	173	8.9	5.0	3.9	.05	.02	60	91	43	.00	9.5	15
AC-FT	11480	1520	358	366	7710	8570	5860	6210	5160	1310	1310	7300
a	11480	1520	358	366	61550	15340	13320	7380	5160	1310	1310	7300

a Combined discharge, in acre-feet, of Piru Creek below Santa Felicia Dam and spill from Santa Felicia Dam.

11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1968, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.0	13.9	33.1	10.4	14.2	25.3	49.7	46.0	56.8	94.4	88.0	44.3
MAX	29.8	97.7	235	34.6	35.7	115	136	194	245	465	396	248
(WY)	1961	1967	1959	1966	1966	1963	1964	1966	1962	1958	1958	1967
MIN	.000	.86	.003	.15	.018	.006	5.59	6.76	6.76	6.82	6.93	5.94
(WY)	1956	1956	1956	1968	1957	1957	1957	1964	1964	1959	1959	1968

SUMMARY STATISTICS

WATER YEARS 1956 - 1968

ANNUAL MEAN	40.8
HIGHEST ANNUAL MEAN	102
LOWEST ANNUAL MEAN	10.0
HIGHEST DAILY MEAN	526
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	544
INSTANTANEOUS PEAK STAGE	3.66
ANNUAL RUNOFF (AC-FT)	29540
10 PERCENT EXCEEDS	101
50 PERCENT EXCEEDS	8.6
90 PERCENT EXCEEDS	1.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	109	49.3	17.8	14.1	24.3	31.2	26.6	45.7	51.3	71.3	85.7	108
MAX	446	323	89.5	86.6	139	139	109	224	241	271	322	294
(WY)	1993	1993	1995	1994	1998	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1974 - 1998

ANNUAL TOTAL	19472.8	28810.42	
ANNUAL MEAN	53.4	78.9	53.1
HIGHEST ANNUAL MEAN			138
LOWEST ANNUAL MEAN			7.03
HIGHEST DAILY MEAN	202	Aug 4	306
LOWEST DAILY MEAN	4.1	Jun 4	.00
ANNUAL SEVEN-DAY MINIMUM	4.3	Jun 3	.00
INSTANTANEOUS PEAK FLOW			389
INSTANTANEOUS PEAK STAGE			3.40
ANNUAL RUNOFF (AC-FT)	38620	57150	38440
ANNUAL RUNOFF (AC-FT) a	38620	126400	
10 PERCENT EXCEEDS	187	191	194
50 PERCENT EXCEEDS	6.8	74	7.1
90 PERCENT EXCEEDS	4.8	5.2	3.7

a Combined discharge, in acre-feet, of Piru Creek below Santa Felicia Dam and spill from Santa Felicia Dam.

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, October 1993 to current year; combined records of creek and canal, October 1927 to September 1939 monthly only, October 1939 to September 1985, October 1990 to January 1993. Prior to 1935, published as "at Sespe."

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 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)
Dec. 6	0445	18,300	13.12	Feb. 23	unknown	unknown	19.7
Jan. 10	unknown	unknown	unknown	Mar. 25	1515	2,030	8.51
Feb. 3	1000	62,500	16.31	May 5	1415	2,820	9.66
Feb. 7	2000	35,500	14.60				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.60	33	e65	205	e1500	832	193	242	130	65	38
2	.48	.55	e15	e64	11600	e1300	748	202	239	128	65	40
3	.49	.51	e9.5	e63	21700	e1100	717	330	240	127	63	43
4	.53	.51	e7.0	e62	3920	e980	761	308	243	124	62	41
5	.53	.55	e200	e61	1900	894	718	1620	241	122	59	43
6	.53	.57	e3600	e60	7930	1050	683	805	237	118	57	44
7	.52	.61	e200	e55	9720	867	619	569	240	114	56	42
8	.50	.65	e140	e50	7570	773	573	461	242	112	54	41
9	.48	.70	e90	e250	2920	714	539	392	240	109	49	40
10	.47	8.4	e65	e2500	1670	676	512	352	229	106	46	39
11	.51	15	e50	e400	1240	649	625	323	228	107	47	39
12	.68	8.2	e40	e150	e800	616	677	532	223	108	46	39
13	.60	3.0	e32	199	e600	608	543	813	240	105	46	39
14	.57	3.3	e28	173	e2000	633	513	637	219	101	46	38
15	.56	5.5	e23	156	e1500	558	499	532	210	98	47	35
16	.52	11	e20	151	e950	533	448	488	205	94	50	36
17	.51	8.7	e18	154	e1200	512	417	436	204	93	53	35
18	.55	8.3	e60	143	e1150	489	392	399	193	85	54	34
19	.62	7.9	e180	155	e1100	471	372	370	185	74	54	33
20	.66	8.0	e140	155	e1000	459	355	347	182	73	54	31
21	.76	7.8	e130	142	e750	385	336	330	181	72	52	33
22	.80	7.7	e120	137	e4000	357	321	314	177	71	51	36
23	.67	7.3	e110	134	e20000	348	301	301	175	70	46	37
24	.75	6.8	e95	133	e7000	e300	288	290	172	68	41	37
25	.66	7.9	e89	131	e3000	e1000	271	282	166	67	40	37
26	.60	37	e82	131	e2400	e500	255	280	162	62	39	35
27	.60	27	e80	130	e1900	e300	240	270	153	57	39	36
28	.62	14	e75	130	e1600	e900	227	261	145	56	38	37
29	.62	11	e71	240	---	692	215	257	141	55	37	37
30	.60	69	e70	245	---	616	203	251	135	55	37	37
31	.62	---	e68	204	---	728	---	246	---	58	36	---
TOTAL	18.07	288.05	5940.5	6823	121325	21508	14200	13191	6089	2819	1529	1132
MEAN	.58	9.60	192	220	4333	694	473	426	203	90.9	49.3	37.7
MAX	.80	69	3600	2500	21700	1500	832	1620	243	130	65	44
MIN	.46	.51	7.0	50	205	300	203	193	135	55	36	31
AC-FT	36	571	11780	13530	240600	42660	28170	26160	12080	5590	3030	2250

e Estimated.

11113000 SESPE CREEK NEAR FILLMORE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.11	41.1	101	248	506	367	168	55.3	20.0	8.05	4.17	4.01
MAX	55.4	1285	698	3378	4333	2301	1632	426	203	90.9	49.3	45.6
(WY)	1984	1966	1966	1969	1998	1978	1958	1998	1998	1998	1998	1939
MIN	.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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1911 - 1998		
ANNUAL TOTAL	27206.60			194862.62					
ANNUAL MEAN	74.5			534			125		
HIGHEST ANNUAL MEAN							641		
LOWEST ANNUAL MEAN							1.78		
HIGHEST DAILY MEAN	3600			Dec 6			29100		
LOWEST DAILY MEAN	.43			Sep 16			.00		
ANNUAL SEVEN-DAY MINIMUM	.45			Sep 10			.00		
INSTANTANEOUS PEAK FLOW							73000		
INSTANTANEOUS PEAK STAGE							24.95		
ANNUAL RUNOFF (AC-FT)	53960			386500			90700		
10 PERCENT EXCEEDS	163			846			181		
50 PERCENT EXCEEDS	7.9			127			10		
90 PERCENT EXCEEDS	.51			.69			.20		

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	175	e11	114	e1700	e2000	e1000	e340	e170	e37	e19
2	.00	.00	.30	e10	6700	e1300	e1500	1430	e340	e165	e35	e19
3	.00	.00	3.0	e10	2720	e1000	e1600	2100	e335	e160	e33	e19
4	.00	.00	4.7	e10	460	e900	e1800	2410	e333	e155	e32	e19
5	.00	.00	1300	e9.8	e4000	e850	e1700	3790	e330	e150	e30	e19
6	.00	.00	9750	e9.6	e35000	1250	e1700	4900	e325	e145	e29	e18
7	.00	.00	771	9.2	e6500	678	e1600	e2000	e323	e140	e28	e18
8	.00	.00	127	10	e2600	589	e1500	e1500	e320	e135	e28	e18
9	.00	.00	43	320	e1500	598	e1400	e1100	e315	e130	e27	e18
10	.00	.00	e39	762	e880	612	e1300	e900	e310	e130	e26	e18
11	.00	.00	e9.5	249	e560	613	e2000	e800	e305	e130	e25	e18
12	.00	.00	e5.0	66	e480	618	e1900	e1000	e300	e130	e25	e18
13	.00	.00	e3.2	47	e280	624	e1900	e1400	e302	e120	e24	e18
14	.00	.00	e2.2	37	e5000	629	e1900	e1200	e280	e100	e23	e18
15	.00	.00	e1.7	e28	e1500	574	e1800	e900	e270	e95	e22	e18
16	.00	.00	e1.3	e22	e500	579	e1800	e800	e270	e90	e22	e17
17	.00	.00	e1.0	e18	e6000	571	e1800	e700	e260	e88	e21	e17
18	.00	.00	139	e16	e5000	547	e1800	e640	e250	e79	e20	e17
19	.00	.00	80	e45	e3800	552	e1700	e580	e240	e71	e20	e17
20	.00	.00	e54	e21	e2800	531	e1700	e540	e240	e68	e20	e17
21	.00	.00	e40	e15	e2000	516	e1600	e490	e240	e65	e20	e17
22	.00	.00	e33	e10	e12000	512	e1600	e470	e230	e62	e20	e17
23	.00	.00	e27	e8.0	e60000	500	e1500	e450	e230	e60	e20	e17
24	.00	.00	e23	e6.5	e20000	603	e1500	e430	e220	e57	e20	e17
25	.00	.00	e20	e5.5	e9000	3500	e1400	e410	e210	e54	e19	e17
26	.00	6.8	e18	e4.8	e5000	e2000	e1400	e390	e200	e51	e19	e16
27	.00	15	e17	e4.2	e3000	e1500	e1300	e380	e190	e48	e19	e15
28	.00	.60	e15	e3.9	e2100	e3000	e1300	e370	e185	e46	e19	e14
29	.00	.00	e14	613	---	e2100	e1200	e365	e180	e44	e19	e13
30	.00	220	e13	328	---	e1700	e1100	e360	e175	e41	e19	e12
31	.00	---	e12	115	---	e1800	---	e350	---	e39	e19	---
TOTAL	0.00	242.40	12741.90	2824.5	199494	33046	48300	34155	8048	3018	740	515
MEAN	.000	8.08	411	91.1	7125	1066	1610	1102	268	97.4	23.9	17.2
MAX	.00	220	9750	762	60000	3500	2000	4900	340	170	37	19
MIN	.00	.00	.30	3.9	114	500	1100	350	175	39	19	12
AC-FT	.00	481	25270	5600	395700	65550	95800	67750	15960	5990	1470	1020

e Estimated.

SANTA CLARA RIVER BASIN

11114000 SANTA CLARA RIVER AT MONTALVO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.08	53.0	106	325	910	548	208	46.8	11.0	4.23	.68	1.43
MAX	72.0	1603	917	5477	7314	5985	2668	1102	268	97.4	23.9	31.7
(WY)	1997	1966	1966	1969	1969	1983	1958	1998	1998	1998	1998	1983
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1928 - 1998	
ANNUAL TOTAL	30478.58		343124.80			
ANNUAL MEAN	83.5		940		181	
HIGHEST ANNUAL MEAN					1229	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	9750	Dec 6	60000	Feb 23	92300	Feb 25 1969
LOWEST DAILY MEAN	.00	May 21	.00	Oct 1	.00	Oct 1 1927
ANNUAL SEVEN-DAY MINIMUM	.00	May 25	.00	Oct 1	.00	Oct 1 1927
INSTANTANEOUS PEAK FLOW			84000	Feb 23	165000	Jan 25 1969
INSTANTANEOUS PEAK STAGE			16.80	Feb 23	17.41	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	60450		680600		130900	
10 PERCENT EXCEEDS	105		1800		100	
50 PERCENT EXCEEDS	.00		71		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11118500 VENTURA RIVER NEAR VENTURA, CA

LOCATION.—Lat 34°21'05", long 119°18'23", in southeast corner of Santa Ana Grant, Ventura County, Hydrologic Unit 18070101, on right bank 420 ft downstream from bridge on Casitas Pass Road at Foster Memorial Park, 0.2 mi downstream from Coyote Creek, and 5 mi north of Ventura.

DRAINAGE AREA.—188 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, and many days during 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	e.03	.18	e5.7	e20	e1500	647	e270	254	89	e40	27
2	.84	e.03	.16	e5.4	e500	e1200	565	e266	244	89	e38	27
3	.62	e.02	.35	e5.2	e15000	e910	561	305	226	89	e37	27
4	.49	e.01	.66	e5.0	e2000	e800	563	297	214	87	e36	26
5	.42	e.00	116	e4.7	e300	e690	545	904	206	86	e35	27
6	.39	.00	1730	e4.4	e1500	e600	520	687	200	84	33	28
7	.34	.00	77	e4.2	e7000	e500	486	512	198	83	34	28
8	.30	.00	35	e4.0	e2600	e450	457	463	195	78	31	28
9	.27	.00	23	e70	e1000	e400	440	417	187	71	29	28
10	.23	.03	16	e1000	e550	e350	427	384	180	e70	28	29
11	.20	.01	12	e200	e320	e310	520	358	177	e68	29	29
12	.19	.00	10	e30	e190	e280	514	520	176	e67	31	28
13	.16	.01	11	e40	e100	e260	456	703	172	e66	29	27
14	.16	.00	12	e38	e1500	e240	430	604	161	e64	27	28
15	e.15	.04	11	e35	e650	e210	419	538	154	e63	28	27
16	e.15	.01	9.8	e32	e300	e190	400	492	151	e62	31	28
17	e.14	.00	8.7	e30	e400	e180	356	457	150	e60	35	27
18	e.13	.00	27	e28	e330	e170	353	430	143	e59	36	26
19	e.13	.00	16	e27	e280	e160	357	404	135	e57	37	28
20	e.12	.00	9.5	e25	e240	e140	338	381	124	e56	36	29
21	e.11	.00	8.7	e23	e200	e130	321	365	121	e55	35	30
22	e.10	.00	8.7	e21	8540	e120	301	345	121	e53	33	31
23	e.10	.00	7.7	e19	20600	e110	296	325	119	e52	32	32
24	e.09	.00	e7.4	e18	e7000	e100	296	312	120	e51	31	31
25	e.08	.00	e7.2	e17	e4000	e800	292	301	120	e49	31	32
26	e.08	.21	e7.0	e16	e2800	e400	290	289	95	e48	31	34
27	e.07	.02	e6.7	e15	e2100	e200	e286	274	96	e47	31	33
28	e.06	.00	e6.4	e14	e1700	742	e282	260	100	e45	30	31
29	e.06	.00	e6.2	e30	---	628	e278	259	97	e44	29	32
30	e.05	.44	e6.0	e27	---	555	e274	262	94	e42	28	33
31	e.04	---	e5.7	e23	---	671	---	263	---	e41	28	---
TOTAL	6.99	0.86	2203.05	1816.6	81720	13996	12270	12647	4730	1975	999	871
MEAN	.23	.029	71.1	58.6	2919	451	409	408	158	63.7	32.2	29.0
MAX	.84	.44	1730	1000	20600	1500	647	904	254	89	40	34
MIN	.04	.00	.16	4.0	20	100	274	259	94	41	27	26
AC-FT	14	1.7	4370	3600	162100	27760	24340	25090	9380	3920	1980	1730

e Estimated.

VENTURA RIVER BASIN

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 1941
LOWEST ANNUAL MEAN	.000 1951
HIGHEST DAILY MEAN	17900 Mar 2 1938
LOWEST DAILY MEAN	.00 Oct 1 1929
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1929
INSTANTANEOUS PEAK FLOW	39200 Mar 2 1938
INSTANTANEOUS PEAK STAGE	19.20 Mar 2 1938
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 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.45	14.3	25.9	148	339	212	77.2	36.6	16.1	8.18	4.18	3.45
MAX	40.9	278	234	1880	2919	1797	758	408	158	63.7	32.2	29.0
(WY)	1984	1966	1966	1969	1998	1983	1983	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1960 - 1998

ANNUAL TOTAL	9685.09	133235.50	
ANNUAL MEAN	26.5	365	72.5
HIGHEST ANNUAL MEAN			383 1995
LOWEST ANNUAL MEAN			.29 1961
HIGHEST DAILY MEAN	1730 Dec 6	20600 Feb 23	22000 Feb 9 1978
LOWEST DAILY MEAN	.00 Nov 5	.00 Nov 5	.00 Sep 12 1960
ANNUAL SEVEN-DAY MINIMUM	.00 Nov 17	.00 Nov 17	.00 Dec 15 1960
INSTANTANEOUS PEAK FLOW		38800 Feb 23	63600 Feb 10 1978
INSTANTANEOUS PEAK STAGE		17.33 Feb 23	29.30 Feb 25 1969
INSTANTANEOUS LOW FLOW			.04 Sep 30 1996
ANNUAL RUNOFF (AC-FT)	19210	264300	52490
10 PERCENT EXCEEDS	57	552	57
50 PERCENT EXCEEDS	4.4	45	3.2
90 PERCENT EXCEEDS	.10	.10	.00

11118501 VENTURA RIVER NEAR VENTURA, CA—Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	e.03	.18	e5.7	e20	e1500	647	e271	255	92	e41	27
2	.84	e.03	.16	e5.4	e500	e1200	566	e268	245	93	e39	27
3	.62	e.02	.35	e5.2	e15000	e910	562	307	227	92	e39	27
4	.49	e.01	.66	e5.0	e2000	e800	563	299	215	90	e38	26
5	.42	e.00	116	e4.7	e300	e690	545	905	207	88	e36	27
6	.39	.00	1730	e4.4	e1500	e600	520	687	201	87	34	28
7	.34	.00	77	e4.2	e7000	e500	486	512	200	86	35	28
8	.30	.00	35	e4.0	e2600	e451	458	464	198	81	32	28
9	.27	.00	23	e70	e1000	e402	442	417	190	74	31	28
10	.23	.03	16	e1000	e550	e350	428	384	183	e72	30	29
11	.20	.01	12	e200	e320	e311	520	358	180	e71	31	29
12	.19	.00	10	e30	e190	e280	514	520	179	e70	32	28
13	.16	.01	11	e40	e100	e260	456	703	175	e68	30	27
14	.16	.00	12	e38	e1500	e240	431	604	164	e66	28	28
15	e.15	.04	11	e35	e650	e211	421	538	157	e65	29	27
16	e.15	.01	9.8	e32	e300	e192	401	493	154	e64	32	28
17	e.14	.00	8.7	e30	e400	e182	357	458	153	e62	36	27
18	e.13	.00	27	e28	e330	e173	354	431	146	e61	37	26
19	e.13	.00	16	e27	e280	e164	358	405	138	e59	37	28
20	e.12	.00	9.5	e25	e240	e145	339	382	127	e58	36	29
21	e.11	.00	8.7	e23	e200	e135	323	366	124	e57	35	30
22	e.10	.00	8.7	e22	8540	e125	303	345	124	e54	33	31
23	e.10	.00	7.7	e21	20600	e113	297	326	122	e53	32	32
24	e.09	.00	e7.4	e21	e7000	e103	297	313	123	e52	31	31
25	e.08	.00	e7.2	e20	e4000	e800	293	301	123	e50	31	32
26	e.08	.21	e7.0	e19	e2800	e400	292	289	98	e49	31	34
27	e.07	.02	e6.7	e18	e2100	e200	e287	274	99	e48	31	33
28	e.06	.00	e6.4	e17	e1700	742	e283	261	102	e46	30	31
29	e.06	.00	e6.2	e33	---	628	e279	260	99	e46	29	32
30	e.05	.44	e6.0	e28	---	555	e275	262	96	e44	28	33
31	e.04	---	e5.7	e24	---	671	---	263	---	e43	28	---
TOTAL	6.99	0.86	2203.05	1839.6	81720	14033	12297	12666	4804	2041	1022	871
MEAN	.23	.029	71.1	59.3	2919	453	410	409	160	65.8	33.0	29.0
MAX	.84	.44	1730	1000	20600	1500	647	905	255	93	41	34
MIN	.04	.00	.16	4.0	20	103	275	260	96	43	28	26
AC-FT	14	1.7	4370	3650	162100	27830	24390	25120	9530	4050	2030	1730

e Estimated.

VENTURA RIVER BASIN

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 1941
LOWEST ANNUAL MEAN	2.31 1951
HIGHEST DAILY MEAN	17900 Mar 2 1938
LOWEST DAILY MEAN	.00 Apr 27 1934
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1934
INSTANTANEOUS PEAK FLOW	63600 Feb 10 1978
INSTANTANEOUS PEAK STAGE	29.30 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	52800
10 PERCENT EXCEEDS	84
50 PERCENT EXCEEDS	11
90 PERCENT EXCEEDS	2.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.40	19.9	31.0	154	345	219	85.2	45.5	24.9	16.7	11.9	10.3
MAX	50.3	282	240	1883	2919	1804	766	409	160	65.8	33.0	29.0
(WY)	1984	1966	1966	1969	1998	1983	1983	1998	1998	1998	1998	1998
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1960 - 1998

ANNUAL TOTAL	9926.29	133504.50	
ANNUAL MEAN	27.2	366	79.4
HIGHEST ANNUAL MEAN			384 1995
LOWEST ANNUAL MEAN			2.22 1961
HIGHEST DAILY MEAN	1730 Dec 6	20600 Feb 23	22000 Feb 9 1978
LOWEST DAILY MEAN	.00 Nov 5	.00 Nov 5	.00 Nov 28 1977
ANNUAL SEVEN-DAY MINIMUM	.00 Nov 17	.00 Nov 17	.00 Sep 7 1994
ANNUAL RUNOFF (AC-FT)	19690	264800	57560
10 PERCENT EXCEEDS	57	552	63
50 PERCENT EXCEEDS	6.1	46	12
90 PERCENT EXCEEDS	.10	.10	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 1997 TO SEPTEMBER 1998

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)
FEB					
03...	1440	e8700	--	8720	205000
05...	1200	e488	13.0	166	219
21...	1345	e2100	--	1620	9160

e Estimated.

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA

LOCATION.—Lat 34°24'05", long 119°29'08", in El Rincon Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank 100 ft upstream from bridge on State Highway 192, 165 ft downstream from Gobernador Creek, and 1.8 mi northeast of Carpinteria.

DRAINAGE AREA.—13.1 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. 6	0915	643	5.82	Feb. 14	1400	370	5.21
Jan. 10	0245	171	4.61	Feb. 17	0430	498	5.48
Feb. 3	1100	3,050	8.30	Feb. 23	1215	5,930	10.77
Feb. 7	1915	3,060	8.31	Mar. 25	0215	422	5.36

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.02	.00	7.7	68	43	9.9	5.9	4.6	3.1	2.6
2	.00	.00	.00	.00	558	63	38	11	6.1	4.7	3.1	2.6
3	.00	.00	.00	.00	982	58	38	11	6.2	5.3	2.7	3.2
4	.00	.00	.00	.67	152	55	36	11	6.1	5.8	2.9	3.7
5	.00	.00	41	.53	72	55	34	49	6.0	5.6	3.0	4.9
6	.00	.00	197	.00	153	53	32	22	6.0	5.5	3.4	4.5
7	.00	.00	20	.00	609	49	29	18	6.4	5.5	3.5	4.3
8	.00	.00	7.4	.00	390	48	27	15	6.7	5.0	3.4	4.3
9	.00	.00	4.4	16	184	46	26	13	6.7	4.3	3.0	4.4
10	.00	.00	3.4	68	138	45	24	10	7.4	3.9	2.9	4.8
11	.00	.00	2.5	19	151	44	29	9.8	7.7	3.9	3.0	4.9
12	.00	.00	2.3	13	141	41	25	20	7.5	4.1	2.9	4.8
13	.00	.00	1.9	13	130	40	24	35	7.4	4.4	2.9	4.0
14	.00	.00	1.4	7.8	206	37	23	21	7.2	4.3	2.9	4.2
15	.00	.00	.86	6.3	117	39	21	16	7.6	4.3	3.1	4.6
16	.00	.00	.14	5.3	107	42	21	15	8.0	4.2	3.4	3.4
17	.00	.00	.00	3.4	208	41	18	14	8.2	4.0	3.6	4.9
18	.00	.00	3.1	3.3	123	37	18	13	8.2	4.2	3.7	4.8
19	.00	.00	.93	8.3	129	35	19	12	8.0	4.3	3.7	4.3
20	.00	.00	.11	4.7	124	33	16	11	7.4	4.2	3.4	1.4
21	.00	.00	.00	3.6	113	32	16	9.9	5.8	4.3	3.0	1.5
22	.00	.00	.00	3.0	487	31	15	9.7	4.6	4.3	2.8	1.5
23	.00	.00	.03	2.8	1690	29	13	8.9	4.3	4.3	2.9	1.7
24	.00	.00	.00	2.5	297	44	12	8.6	4.3	4.5	3.0	1.8
25	.00	.00	.00	1.9	143	164	13	8.4	4.3	4.4	3.2	1.8
26	.00	.21	.00	1.6	107	56	12	8.0	4.2	3.7	3.2	1.9
27	.00	.00	.00	1.3	88	40	11	7.8	4.7	3.4	3.2	2.1
28	.00	.00	.00	1.1	76	41	11	7.2	4.9	3.3	2.9	2.2
29	.00	.00	.00	12	---	34	10	6.4	4.7	3.3	2.6	2.2
30	.00	1.1	.00	10	---	31	10	6.3	4.6	3.6	2.4	2.2
31	.00	---	.00	6.5	---	46	---	6.0	---	3.5	2.4	---
TOTAL	0.00	1.31	286.49	215.60	7682.7	1477	664	423.9	187.1	134.7	95.2	99.5
MEAN	.000	.044	9.24	6.95	274	47.6	22.1	13.7	6.24	4.35	3.07	3.32
MAX	.00	1.1	197	68	1690	164	43	49	8.2	5.8	3.7	4.9
MIN	.00	.00	.00	.00	7.7	29	10	6.0	4.2	3.3	2.4	1.4
AC-FT	.00	2.6	568	428	15240	2930	1320	841	371	267	189	197

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.10	.81	2.61	13.6	18.4	9.99	4.35	1.13	.47	.24	.12	.12
MAX	3.59	16.7	38.9	242	274	83.8	67.8	13.7	6.24	4.35	3.07	3.32
(WY)	1984	1966	1967	1995	1998	1995	1958	1998	1998	1998	1998	1998
MIN	.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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1941 - 1998			
ANNUAL TOTAL	1483.68				11267.50							
ANNUAL MEAN	4.06				30.9				4.08			
HIGHEST ANNUAL MEAN									33.5			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	351				1690				4000			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					5930				8880			
INSTANTANEOUS PEAK STAGE					10.77				14.10			
ANNUAL RUNOFF (AC-FT)	2940				22350				2950			
10 PERCENT EXCEEDS	5.1				54				3.6			
50 PERCENT EXCEEDS	.00				4.4				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11119745 MISSION CREEK AT ROCKY NOOK PARK, AT SANTA BARBARA, CA

LOCATION.—Lat 34°26'26", long 119°42'39", in Santa Barbara County, Hydrologic Unit 18060013, on right bank 50 ft southeast of entrance to Rocky Nook Park, and 75 ft upstream from bridge on Los Olivos Street in Santa Barbara.

DRAINAGE AREA.—6.60 mi².

PERIOD OF RECORD.—Water years 1984-86. October 1997 to September 1998.

WATER TEMPERATURE: Water years 1984-86 (storm season only).

SEDIMENT DATA: Water years 1984-86 (storm season only).

GAGE.—Water-stage recorder, "v" notch in concrete approach to culvert and crest-stage gage. Elevation of gage is 335 ft above sea level, from topographic map.

REMARKS.—Records poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,010 ft³/s, Feb. 3, 1998, gage height, 9.52 ft, from rating curve extended above 838 ft³/s; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	e.00	e.00	.55	15	e4.0	e21	e2.0	e3.0	e2.4	e1.8	e1.0
2	e.00	e.00	e.00	.57	410	e3.3	14	e15	e3.1	e2.4	e1.7	e1.0
3	e.00	e.00	e.00	.72	524	e2.8	e11	e9.0	e3.3	e2.7	e1.6	e1.0
4	e.00	.00	e20	2.6	169	e2.5	e9.4	e7.0	e3.2	e3.0	e1.7	e1.0
5	e.00	e.00	e40	.94	e200	e5.0	e8.0	e25	e3.1	e2.9	e1.8	e.98
6	e.00	e.00	170	.72	360	e8.0	e7.7	e19	e3.3	e2.8	e1.9	e.94
7	e.00	e.00	e24	.70	e440	e7.0	e7.5	e14	e3.5	e2.8	e2.0	e.92
8	e.00	e.00	11	.71	e500	e6.4	e7.3	e10	e3.5	e2.5	e1.8	e.90
9	e.00	e.00	5.6	44	e200	e5.6	e7.1	e7.2	e3.7	e2.3	e1.7	e.88
10	e.00	e.00	3.2	54	e90	e5.0	e7.0	e6.0	e3.8	e2.2	e1.5	e.86
11	e.00	e.00	1.4	9.7	e40	e4.5	e15	e5.6	e4.0	e2.0	e1.5	e.84
12	e.00	e.00	1.2	4.6	e17	e4.0	e10	e10	e3.9	e2.1	e1.5	e.82
13	e.00	e.00	1.0	3.4	e8.0	e5.0	e7.0	e22	e3.8	e2.2	e1.5	e.80
14	e.00	e.00	.99	2.1	e60	e4.4	e6.4	18	e3.8	e2.2	e1.6	e.80
15	e.00	e.00	.95	2.1	e20	e3.9	e5.7	e11	e3.9	e2.1	e1.6	e.78
16	e.00	e.00	.89	1.9	e18	e3.4	e5.2	e8.0	e4.0	e2.1	e1.8	e.76
17	e.00	e.00	.81	1.7	e40	e2.8	e4.6	e7.0	e4.1	e2.1	e1.9	e.74
18	e.00	e.00	3.7	4.5	e12	e2.3	e4.2	e6.6	e4.0	e2.2	e2.1	e.72
19	e.00	e.00	1.1	7.0	e35	e1.9	e3.8	e6.2	3.6	e2.2	e1.8	e.70
20	e.00	e.00	.88	2.5	e23	e1.5	e3.4	e5.8	e3.2	e2.2	e1.6	e.70
21	e.00	e.00	.75	2.0	e17	e1.4	e3.1	e5.4	e3.0	e2.2	e1.4	e.68
22	e.00	e.00	.67	1.9	e80	e1.2	e2.8	e5.0	e2.5	e2.3	e1.5	e.68
23	e.00	e.00	.66	1.8	e450	e1.1	e2.5	e4.7	e2.2	e2.3	e1.5	e.66
24	e.00	e.00	.66	1.6	e80	e9.0	e2.3	e4.5	e2.2	e2.3	e1.6	e.66
25	e.00	e.00	.63	1.5	e25	e50	e2.1	e4.3	e2.1	e2.2	e1.6	e.66
26	e.00	e.00	.60	1.3	e16	e21	e1.9	e4.1	e2.1	e2.0	e1.5	e.64
27	e.00	e.00	.59	1.3	e10	e10	e1.7	e3.9	e2.3	e1.9	e1.4	e.62
28	e.00	e.00	.59	1.3	e6.0	e9.0	e1.6	e3.7	e2.5	e1.8	e1.3	e.62
29	e.00	e.00	.58	14	---	e8.0	e1.4	e3.5	e2.4	e2.0	e1.2	e.62
30	e.00	e.00	.57	2.4	---	e7.0	e1.3	e3.4	e2.4	e2.1	e1.1	e.60
31	e.00	---	.55	5.5	---	e23	---	e3.1	---	e1.9	e1.1	---
TOTAL	0.00	0.00	293.57	179.61	3865.0	224.0	186.0	260.0	95.5	70.4	49.6	23.58
MEAN	.000	.000	9.47	5.79	138	7.23	6.20	8.39	3.18	2.27	1.60	.79
MAX	.00	.00	170	54	524	50	21	25	4.1	3.0	2.1	1.0
MIN	.00	.00	.00	.55	6.0	1.1	1.3	2.0	2.1	1.8	1.1	.60
AC-FT	.00	.00	582	356	7670	444	369	516	189	140	98	47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1998, BY WATER YEAR (WY)

	MEAN	.012	.54	4.47	1.93	38.4	4.51	1.97	2.23	1.01	.59	.41	.21
MAX	.020	1.52	9.47	5.79	138	9.55	6.20	8.39	3.18	2.27	1.60	.79	
(WY)	1986	1984	1998	1998	1998	1986	1998	1998	1998	1998	1998	1998	1998
MIN	.000	.000	.39	.20	.67	.29	.28	.039	.029	.010	.007	.008	
(WY)	1998	1998	1986	1986	1984	1985	1984	1985	1984	1984	1984	1984	1984

SUMMARY STATISTICS

FOR 1998 WATER YEAR

WATER YEARS 1984 - 1998

ANNUAL TOTAL	5247.26												
ANNUAL MEAN	14.4									5.66			
HIGHEST ANNUAL MEAN										14.4			1998
LOWEST ANNUAL MEAN										.48			1985
HIGHEST DAILY MEAN	524	Feb	3							524	Feb	3	1998
LOWEST DAILY MEAN	.00	Oct	1							.00	Aug	15	1984
ANNUAL SEVEN-DAY MINIMUM	.00	Oct	1							.00	Aug	15	1984
INSTANTANEOUS PEAK FLOW	1010	Feb	3							1010	Feb	3	1998
INSTANTANEOUS PEAK STAGE	9.52	Feb	3							9.52	Feb	3	1998
ANNUAL RUNOFF (AC-FT)	10410									4100			
10 PERCENT EXCEEDS	16									4.3			
50 PERCENT EXCEEDS	2.1									.28			
90 PERCENT EXCEEDS	.00									.01			

e Estimated.

1119750 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, low-flow concrete control and crest-stage gage. Concrete-lined channel. Elevation of gage is 105 ft above sea level, from topographic map.

REMARKS.—Records good, except for estimated daily discharges, which are 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, 3,090 ft³/s, Feb. 23, 1998, gage height, 5.67 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. 18	unknown	783	3.85	Feb. 23	1200	3,090	5.67
Feb. 3	unknown	1,720	4.78	Mar. 24	2330	251	2.90
Feb. 7	1815	2,940	5.59				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.20	e.00	e200	5.7	21	e3.0	e4.4	e.00	e.00	e.00
2	.00	.00	.00	e.00	e700	5.2	14	25	e4.1	e.00	e.00	e.00
3	.00	.00	.00	1.3	e450	e4.0	16	17	e3.9	e.00	e.00	e.00
4	.00	.00	.00	8.0	e250	e3.5	12	9.9	e3.7	e.00	e.00	e.00
5	.00	.00	71	.38	e150	7.8	11	34	e3.5	e.00	e.00	e.00
6	.00	.00	84	e.00	e250	13	10	26	e3.4	e.00	e.00	e.00
7	.00	.00	13	e.00	e400	9.9	9.8	16	e3.2	e.00	e.00	e.00
8	.00	.00	6.4	e.00	e600	8.7	9.8	13	e3.0	e.00	e.00	e.00
9	.00	.00	2.8	16	e300	7.7	9.1	11	e2.8	e.00	e.00	e.00
10	.00	1.4	1.4	69	e120	7.1	8.8	10	e2.6	e.00	e.00	e.00
11	.00	.00	.82	62	e60	6.5	27	10	e2.5	e.00	e.00	e.00
12	.00	.00	.45	45	e30	5.6	12	22	e2.4	e.00	e.00	e.00
13	.00	.13	.27	e30	11	7.2	9.3	29	e2.2	e.00	e.00	e.00
14	.00	.00	.14	e21	88	5.4	8.8	12	e2.1	e.00	e.00	e.00
15	.00	4.5	e.00	e16	25	e5.0	8.5	9.4	e2.0	e.00	e.00	e.00
16	.00	.00	e.00	e12	23	e4.7	e8.0	8.8	e1.8	e.00	e.00	e.00
17	.00	.00	e.00	e10	53	e3.8	e7.0	8.4	e1.7	e.00	e.00	e.00
18	.00	.00	10	e20	17	e3.1	e6.2	7.8	e1.6	e.00	e.00	e.00
19	.00	.00	.55	e30	41	e2.6	e5.8	7.7	e1.4	e.00	e.00	e.00
20	.00	.00	e.00	e18	28	e2.3	e5.0	7.3	e1.3	e.00	e.00	e.00
21	.00	.00	e.00	e15	20	e2.1	e4.6	e7.0	e1.2	e.00	e.00	e.00
22	.00	.00	e.00	e13	150	e1.8	e4.3	e6.8	e1.1	e.00	e.00	e.00
23	.00	.00	e.00	e12	718	e1.7	e3.8	e6.4	e1.0	e.00	e.00	e.00
24	.00	.00	e.00	e11	139	35	e3.5	e6.2	e.95	e.00	e.00	e.00
25	.00	.00	e.00	e9.5	48	75	e3.1	e5.8	e.90	e.00	e.00	e.00
26	.00	8.2	e.00	e8.2	22	21	e2.8	e5.6	e.40	e.00	e.00	e.00
27	.00	.07	e.00	e14	14	14	e2.5	e5.4	e.00	e.00	e.00	e.00
28	.00	.00	e.00	e25	8.7	14	e2.3	e5.2	e.00	e.00	e.00	e.00
29	.00	.00	e.00	e50	---	11	e2.0	e4.8	e.00	e.00	e.00	e.00
30	.00	11	e.00	e35	---	9.8	e1.8	e4.6	e.00	e.00	e.00	e.00
31	.00	---	e.00	e25	---	37	---	e4.5	---	e.00	e.00	---
TOTAL	0.00	25.30	191.03	576.38	4915.7	341.2	249.8	349.6	59.15	0.00	0.00	0.00
MEAN	.000	.84	6.16	18.6	176	11.0	8.33	11.3	1.97	.000	.000	.000
MAX	.00	11	84	69	718	75	27	34	4.4	.00	.00	.00
MIN	.00	.00	.00	.00	8.7	1.7	1.8	3.0	.00	.00	.00	.00
AC-FT	.00	50	379	1140	9750	677	495	693	117	.00	.00	.00

e Estimated.

11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.16	1.11	2.69	9.24	16.3	9.35	2.22	1.14	.19	.022	.039	.14
MAX	2.01	14.0	13.9	79.9	176	62.3	17.2	11.3	1.97	.49	1.08	1.37
(WY)	1984	1973	1972	1995	1998	1978	1983	1998	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1971 - 1998

ANNUAL TOTAL	748.28	6708.16	
ANNUAL MEAN	2.05	18.4	3.49
HIGHEST ANNUAL MEAN			18.4
LOWEST ANNUAL MEAN			.12
HIGHEST DAILY MEAN	85	Jan 26	718
LOWEST DAILY MEAN	.00	Mar 5	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 12	.00
INSTANTANEOUS PEAK FLOW			3090
INSTANTANEOUS PEAK STAGE			5.67
ANNUAL RUNOFF (AC-FT)	1480	13310	2520
10 PERCENT EXCEEDS	4.0	25	4.0
50 PERCENT EXCEEDS	.00	.55	.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 fair. No regulation upstream from station. Some pumping for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,600 ft³/s, Mar. 10, 1995, gage height, 10.16 ft, from rating curve extended above 3,000 ft³/s on basis of slope-area measurement of peak flow; 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)
Dec. 6	0215	190	2.57	Feb. 23	0900	1,050	4.79
Jan. 9	2200	80	2.09	Mar. 24	2330	107	2.31
Feb. 3	0400	1,010	4.71	Mar. 31	1500	87	2.22
Feb. 7	1800	1,460	5.54	Apr. 11	1615	91	2.23
Feb. 14	1315	170	2.49	May 2	1945	167	2.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.29	.17	10	16	22	12	6.3	8.3	5.8	1.2
2	.00	.00	.00	.18	226	15	17	45	7.5	8.1	6.0	1.0
3	.00	.00	.00	3.9	322	14	17	28	6.2	8.7	5.4	1.3
4	.00	.00	.00	1.7	35	14	14	17	7.0	9.6	5.1	1.8
5	.00	.00	34	.16	19	14	8.1	41	8.0	10	4.9	2.4
6	.00	.00	38	.00	147	14	5.4	33	8.4	9.2	4.7	1.8
7	.00	.00	5.2	.09	271	12	4.5	19	8.7	9.0	4.7	1.4
8	.00	.00	1.5	.14	127	12	4.0	14	8.4	7.8	4.8	1.6
9	.00	.00	1.0	24	37	11	5.2	14	8.6	7.7	3.8	1.4
10	.00	2.7	1.2	16	22	10	2.1	14	7.0	7.6	3.2	1.2
11	.00	.26	1.3	2.3	20	10	25	12	6.8	7.4	3.0	.92
12	.00	.00	1.1	.75	19	11	33	18	7.4	7.7	2.7	1.0
13	.00	1.6	1.1	.02	18	12	27	25	7.5	8.0	2.6	1.1
14	.00	.00	.89	.00	73	12	25	14	8.1	8.5	2.8	1.3
15	.00	2.0	.71	.00	19	11	23	12	8.2	8.2	2.1	1.2
16	.00	.23	.53	.00	16	12	21	10	8.6	6.9	1.5	1.3
17	.00	.00	.47	.00	27	11	20	10	8.3	6.5	1.5	1.4
18	.00	.00	4.6	3.7	8.7	11	19	9.2	8.4	6.6	1.4	1.2
19	.00	.00	.98	12	15	11	19	8.6	7.4	7.0	1.5	.58
20	.00	.00	.58	2.8	8.7	11	18	8.5	8.2	6.9	1.3	2.0
21	.00	.00	.33	1.4	10	11	17	8.9	8.4	6.5	1.3	1.8
22	.00	.00	.26	1.1	82	11	17	9.1	8.7	6.9	.96	1.2
23	.00	.00	.35	1.1	324	14	16	8.8	8.9	7.1	1.2	1.4
24	.00	.00	3.2	1.1	37	29	15	9.2	8.5	7.3	1.3	1.7
25	.00	.00	4.8	1.0	25	32	15	8.1	8.7	7.3	1.5	.94
26	.00	.38	e4.2	.96	20	14	15	5.9	9.4	7.0	1.6	1.4
27	.00	.29	3.9	.94	18	10	14	5.5	9.7	6.3	1.5	1.5
28	.00	.00	3.5	.89	16	14	14	6.6	9.1	6.1	1.1	1.2
29	.00	.00	.86	18	---	15	13	7.3	8.3	5.7	1.3	1.2
30	.00	2.2	.33	1.9	---	15	12	6.2	8.2	5.8	.98	1.4
31	.00	---	.23	11	---	30	---	6.2	---	5.8	.77	---
TOTAL	0.00	9.66	115.41	107.30	1972.4	439	477.3	446.1	242.9	231.5	82.31	40.84
MEAN	.000	.32	3.72	3.46	70.4	14.2	15.9	14.4	8.10	7.47	2.66	1.36
MAX	.00	2.7	38	24	324	32	33	45	9.7	10	6.0	2.4
MIN	.00	.00	.00	.00	8.7	10	2.1	5.5	6.2	5.7	.77	.58
AC-FT	.00	19	229	213	3910	871	947	885	482	459	163	81

e Estimated.

11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.11	.26	1.41	5.92	9.41	7.58	1.53	.79	.38	.30	.12	.086
MAX	2.05	2.35	8.18	61.2	70.4	32.9	15.9	14.4	8.10	7.47	2.66	1.36
(WY)	1984	1983	1984	1995	1998	1978	1998	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	427.07		4164.72			
ANNUAL MEAN	1.17		11.4		2.29	
HIGHEST ANNUAL MEAN					11.4	
LOWEST ANNUAL MEAN					.039	
HIGHEST DAILY MEAN	55	Jan 26	324	Feb 23	629	Jan 10 1995
LOWEST DAILY MEAN	.00	Apr 22	.00	Oct 1	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 22	.00	Oct 1	.00	Oct 1 1970
INSTANTANEOUS PEAK FLOW			1460		4600	
INSTANTANEOUS PEAK STAGE			5.54		10.16	
ANNUAL RUNOFF (AC-FT)	847		8260		1660	
10 PERCENT EXCEEDS	1.4		19		2.0	
50 PERCENT EXCEEDS	.00		5.8		.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: Water year 1982.

SUSPENDED-SEDIMENT DISCHARGE: Water year 1982.

WATER TEMPERATURE: Water year 1982.

REVISED RECORDS.—WSP 1635: 1943–45(M), 1947(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and broad-crested weir. Datum of gage is 8.59 ft, 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 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)
Jan. 10	0015	361	3.25	Feb. 23	0930	2,200	5.60
Jan. 18	2145	282	3.04	Mar. 24	2230	889	4.20
Feb. 3	0400	3,290	6.70	Mar. 31	1430	794	4.10
Feb. 7	1815	3,450	6.83	Apr. 11	1545	369	3.25
Feb. 14	1245	972	3.89	May 2	1800	589	3.73
Feb. 19	1800	768	3.60				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.38	.25	72	227	52	7.2	4.8	4.0	e2.9	e.78
2	.00	.00	.16	1.4	629	220	31	110	4.8	4.0	e2.9	e.70
3	.00	.00	.14	9.6	979	213	52	35	4.8	e3.9	e2.8	e.74
4	.00	.00	.08	11	100	209	27	30	4.8	e3.8	e2.8	e.85
5	.00	.00	7.7	3.4	50	222	23	82	4.8	e3.7	e2.7	e.72
6	.00	.00	34	2.6	522	212	18	42	4.8	e3.7	e2.7	e.90
7	.00	.00	20	2.1	652	201	16	25	4.8	e3.7	e2.7	e1.1
8	.00	.00	7.6	.39	310	190	15	23	4.8	e3.6	e2.6	e1.4
9	.00	.00	2.1	139	125	175	14	23	4.8	e3.6	e2.6	e1.2
10	.00	7.8	1.2	92	73	155	13	23	4.5	e3.6	e2.5	e1.1
11	.00	.45	.69	17	58	140	94	21	4.4	e3.6	e2.5	e1.0
12	.00	.11	.49	17	48	130	29	51	4.4	e3.5	e2.4	e.90
13	.00	2.7	.45	17	41	120	19	62	4.4	e3.5	e2.3	e.82
14	.00	.32	.42	15	373	110	15	29	4.4	e3.5	e2.0	e.80
15	.00	6.2	2.9	18	87	95	13	23	4.4	e3.5	e2.3	e.84
16	.00	.25	.80	13	111	88	12	19	4.4	e3.4	e1.9	e.90
17	.00	.06	.30	13	170	76	11	18	4.4	e3.4	e1.5	e1.0
18	.00	.06	35	38	60	66	11	16	4.4	e3.3	e1.3	e1.1
19	.00	.10	1.9	33	168	60	11	15	4.4	e3.3	e1.2	e1.1
20	.00	.14	.70	15	95	55	10	14	4.4	e3.3	e1.2	e.70
21	.00	.15	.48	13	90	45	9.7	13	4.4	e3.3	e1.2	e.60
22	.00	.15	2.1	13	395	50	9.4	12	4.4	e3.3	e1.1	e.50
23	.01	.12	.59	13	870	100	9.5	11	4.1	e3.2	e.98	e.90
24	.00	.14	.51	12	252	273	8.9	10	4.5	e3.2	e.88	e1.2
25	.00	.16	.45	12	317	318	8.2	9.3	4.4	e3.1	e.88	e.90
26	.00	17	.40	12	293	185	7.7	7.7	4.4	e3.1	e1.0	e1.2
27	.00	1.0	.29	12	265	165	7.5	6.4	4.4	e3.1	e1.2	e1.0
28	.00	.23	.29	12	241	190	7.2	6.1	4.4	e3.0	e1.3	e.90
29	.00	.13	.29	69	---	178	6.9	5.1	4.4	e3.0	e1.0	e1.1
30	.00	33	.29	19	---	177	6.6	4.8	4.0	e2.9	e.98	e1.2
31	.00	---	.28	39	---	249	---	4.8	---	e2.9	e.82	---
TOTAL	0.01	70.27	122.98	683.74	7446	4894	567.6	758.4	135.1	106.0	57.14	28.15
MEAN	.000	2.34	3.97	22.1	266	158	18.9	24.5	4.50	3.42	1.84	.94
MAX	.01	33	35	139	979	318	94	110	4.8	4.0	2.9	1.4
MIN	.00	.00	.08	.25	41	45	6.6	4.8	4.0	2.9	.82	.50
AC-FT	.02	139	244	1360	14770	9710	1130	1500	268	210	113	56

e Estimated.

ATASCADERO CREEK BASIN

11120000 ATASCADERO CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.35	3.31	5.52	18.0	23.4	16.9	4.09	.99	.24	.11	.091	.26
MAX	8.08	49.8	41.5	230	266	158	63.5	24.5	4.50	3.42	1.84	4.68
(WY)	1984	1966	1967	1969	1998	1998	1958	1998	1998	1998	1998	1976
MIN	.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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1942 - 1998

ANNUAL TOTAL	972.62	14869.39	
ANNUAL MEAN	2.66	40.7	6.02
HIGHEST ANNUAL MEAN			40.7
LOWEST ANNUAL MEAN			.018
HIGHEST DAILY MEAN	117	Jan 26	979
LOWEST DAILY MEAN	.00	May 25	.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 30	.00
INSTANTANEOUS PEAK FLOW			3450
INSTANTANEOUS PEAK STAGE			6.83
ANNUAL RUNOFF (AC-FT)	1930	29490	4360
10 PERCENT EXCEEDS	3.2	127	3.4
50 PERCENT EXCEEDS	.06	4.1	.03
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 except estimated daily discharges, which are poor. No regulation upstream from station. Many small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,000 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)
Jan. 9	unknown	unknown	unknown	Feb. 23	1000	1310	6.87
Feb. 3	unknown	1,540	7.71	Mar. 24	2145	418	4.93
Feb. 6	0845	964	6.36	May 2	1852	305	4.55
Feb. 14	1415	538	5.42				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.05	e20	e.25	e40	226	e55	4.4	5.0	4.1	2.3	e.88
2	.07	.04	e1.0	e1.0	e150	202	e45	47	4.8	3.9	2.5	e.80
3	.06	.05	e.10	e6.0	e1000	191	e35	24	4.6	4.3	2.5	e.88
4	.07	.04	e.07	e7.0	e50	183	e25	14	4.2	4.4	2.1	e.96
5	.06	e.03	e.70	e3.0	22	146	e35	46	4.1	4.2	1.9	e1.0
6	.07	e.04	e5.0	e1.5	182	97	e27	44	4.4	4.4	1.8	e1.2
7	.06	e.06	e25	e.90	313	88	19	21	4.3	4.3	1.9	e1.3
8	.06	e.08	e15	e5.0	558	85	17	17	4.2	4.2	1.7	e1.4
9	.05	e.06	e2.3	e100	418	82	16	13	4.2	4.2	1.8	e1.3
10	.05	e.07	e.70	e70	291	79	14	11	4.5	4.1	1.7	e1.1
11	.05	e.08	e.54	e35	199	77	34	9.3	4.7	3.8	1.6	e.98
12	.04	e.10	e.42	e17	176	75	25	16	4.4	4.0	1.5	e.86
13	.06	e1.5	e.36	e15	164	73	18	34	4.0	4.0	1.3	e.90
14	.06	e.20	e1.0	e13	317	71	16	17	4.1	3.7	1.3	e.96
15	.05	e2.0	e1.5	e14	259	70	14	13	4.1	3.7	1.2	e1.0
16	.05	e.20	e.40	e13	233	69	13	11	4.1	3.6	1.4	e1.1
17	.05	e.06	e.30	e12	306	69	11	9.5	4.1	3.5	1.4	e1.1
18	.05	e.07	e2.5	e15	234	68	10	8.1	4.1	3.3	1.4	e1.0
19	.06	e.08	e20	e30	268	67	9.3	7.2	4.4	3.4	e1.3	e.92
20	.05	e.09	e1.5	e20	261	67	8.7	6.7	4.3	3.5	e1.1	e.85
21	.06	e.11	e.40	e13	154	66	7.9	6.3	4.4	3.3	e1.1	e.78
22	.06	e.13	e1.3	e12	205	65	7.5	6.0	4.2	3.4	e1.0	e.82
23	.07	e.12	e1.0	e11	841	64	7.2	5.9	3.8	3.4	e.98	e.95
24	.06	e.16	e.50	e11	552	108	6.7	5.9	4.1	3.5	e.96	e.70
25	.05	e1.0	e.45	e11	454	151	6.2	5.6	4.1	3.3	e.90	e.75
26	.06	e12	e.36	e11	385	103	5.7	5.1	4.1	3.1	e1.0	e.80
27	.07	e5.0	e.33	e10	341	89	5.4	4.8	4.1	2.9	e1.1	e.90
28	.06	e1.5	e.29	e10	259	92	5.0	4.7	4.3	2.5	e1.3	e.68
29	.06	e.10	e.28	e20	---	85	4.7	5.2	4.1	2.3	e1.1	e.75
30	.06	e3.5	e.27	e46	---	85	4.4	4.8	4.1	2.5	e1.0	e.80
31	.06	---	e.26	e19	---	e70	---	4.8	---	2.3	e.95	---
TOTAL	1.79	28.52	103.83	552.65	8632	3063	507.7	432.3	127.9	111.1	45.09	28.42
MEAN	.058	.95	3.35	17.8	308	98.8	16.9	13.9	4.26	3.58	1.45	.95
MAX	.07	12	25	100	1000	226	55	47	5.0	4.4	2.5	1.4
MIN	.04	.03	.07	.25	22	64	4.4	4.4	3.8	2.3	.90	.68
AC-FT	3.6	57	206	1100	17120	6080	1010	857	254	220	89	56

e Estimated.

SAN JOSE CREEK BASIN

11120500 SAN JOSE CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.26	1.11	2.45	5.79	12.6	7.26	2.91	.95	.36	.21	.15	.15
MAX	6.40	21.2	23.5	35.6	308	98.8	29.0	13.9	4.26	3.58	1.45	1.40
(WY)	1984	1966	1967	1952	1998	1998	1958	1998	1998	1998	1998	1954
MIN	.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 1997 CALENDAR YEAR			FOR 1998 WATER YEAR			WATER YEARS 1941 - 1998		
ANNUAL TOTAL	511.92			13634.30					
ANNUAL MEAN	1.40			37.4			2.67		
HIGHEST ANNUAL MEAN							37.4		
LOWEST ANNUAL MEAN							.042		
HIGHEST DAILY MEAN	72			1000			1000		
LOWEST DAILY MEAN	.03			.03			.00		
ANNUAL SEVEN-DAY MINIMUM	.04			.04			.00		
INSTANTANEOUS PEAK FLOW				1540			2000		
INSTANTANEOUS PEAK STAGE				7.71			12.74		
ANNUAL RUNOFF (AC-FT)	1020			27040			1940		
10 PERCENT EXCEEDS	1.8			90			2.3		
50 PERCENT EXCEEDS	.17			4.1			.25		
90 PERCENT EXCEEDS	.06			.07			.00		

11120510 SAN JOSE CREEK AT GOLETA, CA

LOCATION.—Lat 34°25'49", long 119°49'16", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank south of Hollister Avenue on Kellogg Avenue and 0.5 mi southeast of Goleta.

DRAINAGE AREA.—9.42 mi².

PERIOD OF RECORD.—October 1970 to September 1992, October 1997 to September 1998, November 1955 to September 1970 in files of Santa Barbara County Flood Control and Water Conservation District and Water Agency.

REVISED RECORDS.—WDR CA-75-1: 1973(M).

GAGE.—Water-stage recorder and concrete channel. Elevation of gage is 10 ft above sea level, from topographic map.

REMARKS.—Records fair. No regulation upstream from station. Diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,470 ft³/s, Feb. 7, 1998, gage height, 5.68 ft; no flow for many days in each year.

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. 6	0300	643	3.24	Feb. 19	1800	341	2.61
Feb. 3	1045	1,800	4.91	Feb. 23	0915	1,490	4.52
Feb. 7	1800	2,470	5.68	May 2	1600	386	2.72
Feb. 14	1245	477	2.92				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.55	.58	.65	16	104	16	1.2	2.4	5.8	1.1	.23
2	e.00	.49	.31	.68	458	97	3.6	68	2.5	5.5	1.4	.25
3	e.00	.45	.29	14	593	89	7.6	15	2.7	6.3	1.3	.97
4	e.00	.51	.24	2.0	115	83	3.5	3.1	2.4	5.8	1.0	.14
5	e.00	.51	104	1.5	61	74	3.2	51	2.6	5.5	.89	.14
6	e.00	.52	132	1.0	415	66	1.4	37	3.1	5.7	1.2	.10
7	e.00	.51	9.6	.87	447	58	1.2	9.4	3.7	5.4	.89	.08
8	e.00	.46	4.5	.79	205	50	1.8	5.5	4.0	5.0	1.1	.05
9	e.00	.39	3.1	51	113	43	2.6	2.9	4.1	4.8	1.2	.06
10	e.00	1.1	2.4	35	89	39	2.8	1.6	4.7	4.1	.96	.04
11	e.00	.45	2.0	4.0	65	36	28	1.1	5.7	3.8	.85	.04
12	e.00	.34	1.8	3.9	48	33	3.8	5.5	6.1	4.2	.76	.07
13	e.00	.77	1.6	3.9	38	31	1.3	28	5.8	4.3	.78	.05
14	e.00	.37	1.5	1.8	167	25	1.1	6.8	6.2	4.0	.80	.05
15	e.00	.96	1.5	2.1	98	18	2.2	3.0	7.0	3.8	1.4	.06
16	e.00	.38	1.3	3.4	90	14	3.4	1.8	7.3	3.4	1.5	.05
17	e.00	.31	1.3	1.8	114	12	2.7	1.7	7.9	3.2	1.4	.01
18	e.05	.25	2.9	8.2	89	11	2.5	3.6	8.2	3.0	.84	.01
19	e.10	.31	2.0	13	111	11	2.3	3.9	8.9	3.8	.62	.03
20	e.15	.39	1.5	3.6	102	10	2.0	3.5	7.8	3.5	.47	.03
21	e.20	.35	1.2	2.4	95	10	1.8	3.1	7.9	3.7	.42	.04
22	e.26	.23	.99	1.2	203	9.6	1.7	2.6	7.7	3.9	.38	.04
23	e.30	.20	.97	.92	549	9.3	1.8	2.2	7.1	3.7	.40	.02
24	e.35	.18	.84	.68	144	40	1.9	2.3	7.3	3.3	.40	.03
25	e.40	.15	.84	.58	117	113	1.3	2.1	7.1	2.7	.36	.02
26	e.45	1.3	.80	.50	114	68	1.2	2.0	7.1	2.9	.38	.02
27	e.45	.46	.84	.49	112	30	1.2	1.9	6.8	1.6	.28	e.01
28	e.47	.30	.78	.35	109	17	1.2	2.3	7.1	1.2	.26	e.00
29	.49	.24	.76	32	---	11	1.1	2.7	6.6	1.5	.22	e.00
30	.63	5.3	.72	2.0	---	8.2	.95	2.1	6.1	1.5	.18	e.00
31	.61	---	.70	2.3	---	8.9	---	2.4	---	1.2	.13	---
TOTAL	4.91	18.73	283.86	196.61	4877	1229.0	107.15	279.3	173.9	118.1	23.87	2.64
MEAN	.16	.62	9.16	6.34	174	39.6	3.57	9.01	5.80	3.81	.77	.088
MAX	.63	5.3	132	51	593	113	28	68	8.9	6.3	1.5	.97
MIN	.00	.15	.24	.35	16	8.2	.95	1.1	2.4	1.2	.13	.00
AC-FT	9.7	37	563	390	9670	2440	213	554	345	234	47	5.2

e Estimated.

11120510 SAN JOSE CREEK AT GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.40	1.23	3.08	5.48	17.5	10.6	2.40	1.07	.48	.26	.13	.18
MAX	7.11	7.65	16.5	40.5	174	52.7	16.1	9.01	5.80	3.81	1.85	1.67
(WY)	1984	1973	1984	1983	1998	1978	1983	1998	1998	1998	1983	1983
MIN	.000	.000	.000	.005	.083	.000	.000	.000	.000	.000	.000	.000
(WY)	1981	1981	1990	1976	1972	1990	1972	1972	1972	1971	1972	1971

SUMMARY STATISTICS

FOR 1998 WATER YEAR

WATER YEARS 1971 - 1998

ANNUAL TOTAL	7315.07		
ANNUAL MEAN	20.0		
HIGHEST ANNUAL MEAN			3.49
LOWEST ANNUAL MEAN			20.0
HIGHEST DAILY MEAN	593	Feb 3	1998
LOWEST DAILY MEAN	.00	Oct 1	1990
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1	
INSTANTANEOUS PEAK FLOW	2470	Feb 7	
INSTANTANEOUS PEAK STAGE	5.68	Feb 7	
ANNUAL RUNOFF (AC-FT)	14510		
10 PERCENT EXCEEDS	59		
50 PERCENT EXCEEDS	1.9		
90 PERCENT EXCEEDS	.05		

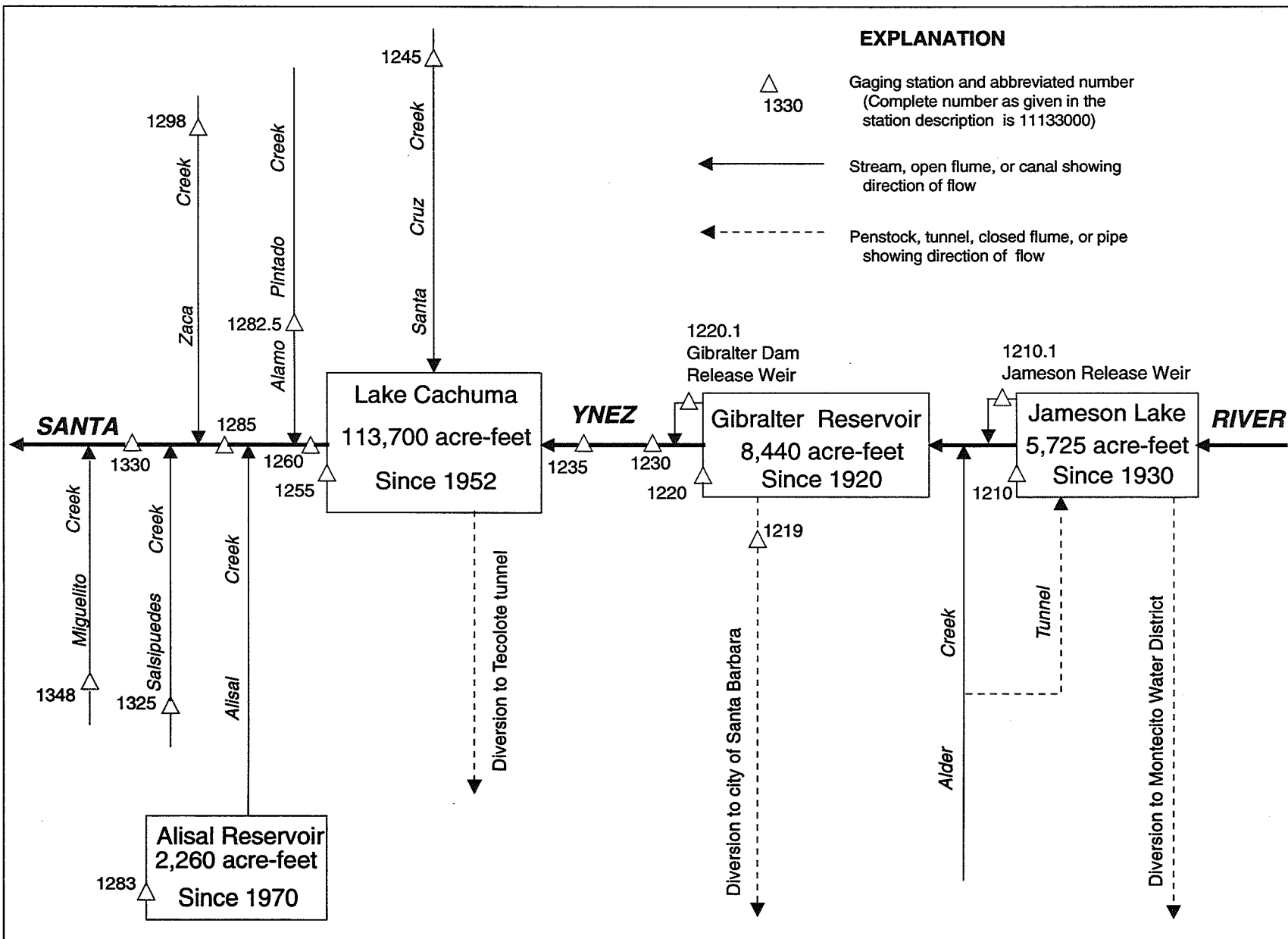


Figure 20. Diversions and storage in Santa Ynez River Basin.

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.—67 years (water years 1932–98), spill and release, 10.19 ft³/s, 7,380 acre-ft/yr.

MONTHLY NET INFLOW, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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	2,211.20	3,810	—	—	—	—	—	—	—
Oct. 31	2,209.10	3,600	-210	190	0	22	2	1	1
Nov. 30	2,208.45	3,530	-70	119	0	4	53	8	45
Dec. 31	2,219.60	4,720	+1190	65	0	6	1,261	6	1,255
CAL YR 1997	—	—	+360	1,973	994	384	3,711	177	3,534
Jan. 31	2,222.80	5,090	+370	61	0	0	431	64	367
Feb. 28	2,224.24	5,270	+180	56	19,440	0	19,676	415	19,261
Mar. 31	2,224.17	5,260	-10	61	4,970	15	5,036	66	4,970
Apr. 30	2,224.10	5,250	-10	60	4,800	41	4,891	46	4,845
May 31	2,224.08	5,240	-10	62	3,690	18	3,760	77	3,593
June 30	2,224.93	5,360	+120	75	19,740	22	19,957	4	19,953
July 31	2,224.82	5,340	-20	122	35,800	62	35,964	0	35,964
Aug. 31	2,224.40	5,290	-50	141	24,260	71	24,422	0	24,422
Sept. 30	2,223.62	5,190	-100	136	412	14	462	4	458
WTR YR 1998	—	—	+1,380	1,148	113,100	275	115,903	691	115,212

^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 1997 TO SEPTEMBER 1998

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	1,390.25	6,070	—	—	—	—	—	—	—
Oct. 31	1,387.19	5,450	-620	503	0	118	1	0	1
Nov. 30	1,385.21	5,050	-400	458	0	38	96	91	5
Dec. 31	1,399.74	8,420	+3370	445	5,380	34	9,229	233	8,996
CAL YR 1997	—	—	-30	4,420	32,530	648	37,568	510	37,058
Jan. 31	1,399.55	8,370	-50	435	6,310	30	6,725	160	6,565
Feb. 28	1,400.19	8,540	+170	281	171,600	27	172,078	864	171,214
Mar. 31	1,399.61	8,380	-160	1,290	52,210	68	53,408	110	53,298
Apr. 30	1,399.44	8,340	-40	1,310	25,300	92	26,662	108	26,554
May 31	1,399.47	8,350	+10	1,350	27,110	97	28,567	159	28,408
June 30	1,399.56	8,370	+20	1,310	7,490	142	8,962	1	8,961
July 31	1,399.68	8,400	+30	1,350	2,400	214	3,994	0	3,994
Aug. 31	1,399.65	8,400	0	1,350	824	236	2,410	0	2,410
Sept. 30	1,399.73	8,420	+20	1,310	802	130	2,262	13	2,249
WTR YR 1998	—	—	+2,350	11,400	299,400	1,195	314,345	1,738	312,607

^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 11,392 acre-ft during current year from Gibraltar Reservoir; Montecito Water District diverted 1,148 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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	12	201	1850	692	178	179	65	23	9.9
2	.00	.00	.00	11	7020	1700	634	302	192	66	25	9.4
3	.00	.00	.00	14	10400	1470	649	676	208	65	25	11
4	.00	.00	.00	43	3030	1210	657	350	191	65	24	8.1
5	.00	.00	3.2	22	1300	1190	650	719	179	63	22	7.8
6	.00	.00	1340	35	3550	1300	640	867	180	61	20	8.8
7	.00	.00	494	19	6530	1010	596	593	177	57	17	6.8
8	.00	.00	210	22	6090	932	556	476	170	38	16	4.2
9	.00	.00	108	218	2830	904	543	424	154	38	16	2.8
10	.00	.00	73	640	1760	820	434	314	155	43	15	5.8
11	.00	.00	53	241	1440	808	562	350	151	44	14	9.5
12	.00	.00	52	218	1550	789	651	468	147	45	13	12
13	.00	.00	36	144	1240	795	410	966	144	43	12	12
14	.00	.00	31	82	1570	802	506	868	134	41	13	12
15	.00	.00	37	117	1440	734	404	689	124	39	13	13
16	.00	.00	12	110	1160	625	371	572	97	36	12	13
17	.00	.00	8.5	74	2090	655	378	548	84	32	7.2	13
18	.00	.00	76	112	1430	543	356	478	93	29	6.0	13
19	.00	.00	24	132	1280	486	339	423	97	21	8.0	12
20	.00	.00	18	39	1310	502	303	350	95	16	9.8	13
21	.00	.00	19	73	1080	488	329	352	95	25	11	15
22	.00	.00	19	76	2930	467	236	347	93	29	11	16
23	.00	.00	17	51	10500	440	261	330	90	31	11	18
24	.00	.00	11	47	6020	370	288	310	89	32	9.7	18
25	.00	.00	8.7	54	3060	1950	264	294	86	33	8.9	20
26	.00	.00	8.6	56	2100	840	245	250	83	32	8.0	21
27	.00	.00	9.1	55	1620	543	209	255	78	31	8.1	24
28	.00	.00	8.8	65	1990	547	213	251	74	31	8.4	25
29	.00	.00	9.9	278	---	527	199	246	71	28	9.2	25
30	.00	.00	13	67	---	457	180	239	68	17	9.3	25
31	.00	---	13	55	---	567	---	184	---	15	9.8	---
TOTAL	0.00	0.00	2712.80	3182	86521	26321	12755	13669	3778	1211	415.4	404.1
MEAN	.000	.000	87.5	103	3090	849	425	441	126	39.1	13.4	13.5
MAX	.00	.00	1340	640	10500	1950	692	966	208	66	25	25
MIN	.00	.00	.00	11	201	370	180	178	68	15	6.0	2.8
AC-FT	.00	.00	5380	6310	171600	52210	25300	27110	7490	2400	824	802

11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1998, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.69	6.27	26.8	131	264	247	106	31.5	8.48	3.54	1.52	.58
MAX	32.6	336	607	2077	3090	1712	1168	441	126	43.6	24.1	13.5
(WY)	1984	1966	1967	1969	1998	1983	1958	1998	1998	1983	1995	1998
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1934 - 1998	
ANNUAL TOTAL	16399.12		150969.30			
ANNUAL MEAN	44.9		414		67.9	
HIGHEST ANNUAL MEAN					437	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	1610	Jan 26	10500	Feb 23	26600	Jan 25 1969
LOWEST DAILY MEAN	.00	May 12	.00	Oct 1	.00	Dec 16 1933
ANNUAL SEVEN-DAY MINIMUM	.00	May 12	.00	Oct 1	.00	Dec 16 1933
INSTANTANEOUS PEAK FLOW			16300	Feb 23	54200	Jan 25 1969
INSTANTANEOUS PEAK STAGE			17.77	Feb 23	25.80	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	32530		299400		49190	
10 PERCENT EXCEEDS	100		984		82	
50 PERCENT EXCEEDS	.00		54		.09	
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 poor. Flow regulated by Jameson Lake and Gibraltar Reservoir (stations 11121000 and 11122000). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station. Satellite telemeter at station. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 67,500 ft³/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft³/s on basis of peak flow for station below Gibraltar Dam plus tributary inflow; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	12	123	2660	1080	204	251	144	23	7.5
2	.00	.00	e.00	12	9800	2500	877	342	270	143	26	7.3
3	.00	.00	e.00	13	17000	2350	864	780	271	143	27	10
4	.00	.00	e.00	16	4340	2170	883	420	294	143	26	12
5	.00	.00	e200	33	2080	2060	848	688	245	140	25	14
6	.00	.00	e1400	22	4340	2120	838	1040	247	139	24	12
7	.00	.00	e600	26	6940	1960	786	747	247	130	23	11
8	.00	.00	300	19	7880	1880	737	599	246	106	23	9.8
9	.00	.00	136	171	3670	1830	742	524	229	62	22	10
10	.00	.00	95	734	2530	1750	634	443	217	76	21	8.9
11	.00	.00	67	379	1900	1610	724	372	218	86	18	7.6
12	.00	.00	52	226	1510	1530	846	562	216	90	17	6.5
13	.00	.00	53	151	1240	1460	639	1080	210	88	17	7.4
14	.00	.00	37	126	1490	1430	618	1000	206	84	15	9.4
15	.00	e.00	39	88	1720	1350	626	840	197	84	14	9.7
16	.00	e.00	31	133	1190	1230	491	709	184	84	14	9.5
17	.00	.00	20	94	2250	1140	519	651	161	76	13	9.4
18	.00	.00	32	76	1780	1170	488	619	157	62	13	9.5
19	.00	.00	55	208	1510	950	462	513	168	58	9.7	8.5
20	.00	.00	29	57	1590	958	424	473	171	48	9.4	6.2
21	.00	.00	24	63	1240	944	388	435	172	42	11	2.9
22	.00	.00	22	78	2480	924	353	448	171	48	12	2.2
23	.00	.00	21	71	e18000	887	275	440	171	49	11	2.4
24	.00	.00	19	51	e9000	943	353	421	170	51	11	4.5
25	.00	.00	15	50	e4000	2580	318	404	168	50	11	5.0
26	.00	e.00	13	52	3430	1990	293	362	165	48	10	2.5
27	.00	.00	12	53	3110	1500	259	339	161	44	9.6	5.3
28	.00	.00	11	51	2860	1290	235	344	155	41	9.3	4.9
29	.00	.00	11	313	---	1140	230	350	150	38	8.2	6.7
30	.00	.00	11	166	---	951	219	339	147	36	7.4	4.6
31	.00	---	11	79	---	932	---	303	---	25	7.8	---
TOTAL	0.00	0.00	3316.00	3623	119003	48189	17049	16791	6035	2458	488.4	227.2
MEAN	.000	.000	107	117	4250	1554	568	542	201	79.3	15.8	7.57
MAX	.00	.00	1400	734	18000	2660	1080	1080	294	144	27	14
MIN	.00	.00	.00	12	123	887	219	204	147	25	7.4	2.2
AC-FT	.00	.00	6580	7190	236000	95580	33820	33300	11970	4880	969	451

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1998, BY WATER YEAR (WY)

	MEAN	7.92	38.6	195	378	314	131	43.6	12.5	3.89	1.10	.42
MAX	18.8	315	608	2755	4250	2525	1480	542	201	79.3	15.8	7.57
(WY)	1984	1966	1967	1969	1998	1995	1958	1998	1998	1998	1998	1998
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1947 - 1998

ANNUAL TOTAL	19767.83	217179.60	
ANNUAL MEAN	54.2	595	92.3
HIGHEST ANNUAL MEAN			595
LOWEST ANNUAL MEAN			.013
HIGHEST DAILY MEAN	1920	Jan 26	18000
LOWEST DAILY MEAN	.00	May 18	.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 1	.00
INSTANTANEOUS PEAK FLOW			55900
INSTANTANEOUS PEAK STAGE			17.54
ANNUAL RUNOFF (AC-FT)	39210	430800	66870
10 PERCENT EXCEEDS	122	1510	99
50 PERCENT EXCEEDS	.00	79	.06
90 PERCENT EXCEEDS	.00	.00	.00

e Estimated.

WATER-QUALITY RECORDS

CHEMICAL DATA: Water years 1973–89, 1991 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
JAN 14...	1150	133	922	7.9	10.5	--	--	--	--	--
APR 20...	1215	442	1190	8.4	14.5	580	130	63	51	16
JUN 10...	1215	215	1180	8.3	17.5	--	--	--	--	--
JUL 22...	1550	47	1250	8.0	28.0	--	--	--	--	--
AUG 10...	1635	21	1200	8.1	28.0	--	--	--	--	--

[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 fair except 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, from rating curve extended above 5,000 ft³/s on basis of slope-area measurement at gage height 12.10 ft, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	0245	2,320	11.52	Feb. 14	1515	880	9.68
Jan. 10	0200	302	8.36	Feb. 23	1100	4,360	13.03
Feb. 3	1200	3,640	12.56	Apr. 1	unknown	unknown	unknown
Feb. 7	1915	2,980	12.08	May 3	0445	476	8.81

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	5.7	7.6	51	e380	e620	e100	e88	e39	e20	e9.3
2	.00	.00	4.0	7.6	1480	e360	e600	e150	e86	e38	e20	e9.2
3	.00	.00	3.4	9.2	2240	e340	e470	e130	e84	e37	e19	e9.1
4	.00	.00	2.9	14	768	e320	e580	e150	e82	e36	e18	e9.0
5	.00	.00	260	19	751	e300	e400	e240	e81	e35	e17	e15
6	.00	.00	744	13	987	e350	e310	e190	e80	e34	e17	e11
7	.00	.00	e100	11	1150	e300	e270	e160	e79	e33	e16	e10
8	.00	.00	e70	10	854	e280	e250	147	e78	e32	e16	e9.3
9	.00	.00	e50	24	e650	e260	e240	131	78	e31	e15	e8.8
10	.00	.00	e40	174	e500	e250	e230	119	74	e30	e15	e8.5
11	.00	.00	e30	62	e400	e240	e450	113	72	e29	e15	e8.2
12	.00	.00	e25	40	e350	e230	e350	166	68	e28	e14	e8.0
13	.00	.00	e20	38	e300	e220	e300	286	66	e28	e14	e7.9
14	.00	.00	e18	30	525	e240	e250	214	62	e28	e13	e7.8
15	.00	.00	e15	32	374	e230	e220	188	e62	e27	e13	e7.8
16	.00	.00	e14	39	306	e220	e200	173	62	e27	e13	e7.9
17	.00	.00	e13	31	444	e210	e180	160	60	e26	e13	e7.9
18	.00	.00	e12	28	314	e200	e170	152	57	25	e13	e7.9
19	.00	.00	e12	49	315	e200	e160	137	55	25	13	e8.0
20	.00	.00	e20	33	289	e190	e150	e130	54	25	13	e8.0
21	.00	.00	e13	28	268	e180	e145	e125	52	24	13	e8.0
22	.00	.00	e11	27	636	e180	e140	e120	51	e25	12	e8.0
23	.00	.00	10	25	1940	e180	e130	e115	50	26	11	e8.0
24	.00	.00	9.6	24	870	e180	e125	e110	48	25	11	e8.0
25	.00	.00	9.4	23	e600	e200	e120	e105	47	24	11	e8.0
26	.00	3.6	9.2	22	e500	e350	e115	e102	46	22	11	e8.1
27	.00	12	8.9	22	e450	e270	e110	e99	44	22	10	e8.3
28	.00	3.4	8.7	21	e400	e430	e110	e96	43	21	10	e8.4
29	.00	2.2	8.4	50	---	e320	e105	e94	41	21	e9.9	e8.5
30	.00	6.7	8.1	35	---	e320	e100	e92	40	21	e9.7	e8.5
31	.00	---	7.6	35	---	e350	---	e90	---	21	e9.5	---
TOTAL	0.00	27.90	1562.9	983.4	18712	8280	7600	4384	1890	865	425.1	260.4
MEAN	.000	.93	50.4	31.7	668	267	253	141	63.0	27.9	13.7	8.68
MAX	.00	12	744	174	2240	430	620	286	88	39	20	15
MIN	.00	.00	2.9	7.6	51	180	100	90	40	21	9.5	7.8
AC-FT	.00	55	3100	1950	37120	16420	15070	8700	3750	1720	843	517

e Estimated.

11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.55	3.05	12.2	38.5	74.7	62.3	37.4	15.4	6.35	2.34	.98	.57
MAX	12.4	50.4	205	510	743	355	378	141	63.0	27.9	13.7	8.68
(WY)	1984	1966	1967	1969	1969	1995	1958	1998	1998	1998	1998	1998
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998	
ANNUAL TOTAL	7461.24		44990.70			
ANNUAL MEAN	20.4		123		20.9	
HIGHEST ANNUAL MEAN					134	
LOWEST ANNUAL MEAN					.066	
HIGHEST DAILY MEAN	744	Dec 6	2240	Feb 3	5000	Feb 24 1969
LOWEST DAILY MEAN	.00	Jul 30	.00	Oct 1	.00	Jul 6 1953
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 30	.00	Oct 1	.00	Jul 6 1953
INSTANTANEOUS PEAK FLOW			4360	Feb 23	7050	Feb 24 1969
INSTANTANEOUS PEAK STAGE			13.03	Feb 23	14.45	Feb 24 1969
ANNUAL RUNOFF (AC-FT)	14800		89240		15130	
10 PERCENT EXCEEDS	54		328		35	
50 PERCENT EXCEEDS	2.3		28		1.2	
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 1997 TO SEPTEMBER 1998

[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.

RESERVOIR-CONTENTS RECORDS

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, 200,974 acre-ft, Feb. 24, elevation, 753.41 ft; minimum, 117,849 acre-ft, Nov. 22–24, elevation, 721.92 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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 0800 HOURS

SDAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124545	119294	118439	131835	142112	184394	191051	192703	192428	192887	192550	188957
2	124298	119206	118461	131929	145640	184424	190684	192703	192550	192856	192458	188836
3	124096	119075	118439	131929	177883	185023	190745	192764	192550	192795	192428	188685
4	123871	118921	118483	131999	192367	185859	190960	192612	192581	192734	192367	188624
5	123669	118811	118680	132164	180446	186457	190409	192734	192703	192673	192306	188594
6	123490	118680	125248	132235	177739	187444	190531	192153	192703	192642	192244	188534
7	123243	118614	128262	132282	191174	188231	190562	192275	192673	192642	192183	188473
8	123063	118395	129251	132352	197870	188957	190562	192183	192703	192642	192061	188382
9	122883	118285	129832	132399	188957	189804	190562	192673	192703	192673	191969	188261
10	122704	118176	130135	133693	184394	190348	190593	192581	192703	192673	191877	188171
11	122456	118176	130344	134974	185052	190501	190868	192336	192703	192673	191786	188080
12	122234	118132	130623	135545	184484	190562	191204	192367	192703	192703	191663	187959
13	122057	118176	130646	136044	184902	190440	191571	193397	192703	192764	191571	187808
14	121835	118110	130762	136378	185082	190379	191969	192214	192856	192856	191449	187686
15	121679	118066	130855	136715	184573	190501	192030	192183	192703	192917	191327	187566
16	121502	118088	130995	137197	184633	190501	191908	192397	192764	193009	191204	187414
17	121324	118044	131111	137534	184962	190501	192061	192428	192703	193009	191051	187264
18	121147	117979	131181	137798	184514	190501	192306	192428	192734	193009	190868	187115
19	120992	117935	131436	138232	184514	190440	192550	192275	192764	193009	190715	186965
20	120836	117870	131529	138641	184693	190440	192611	192236	192826	193009	190593	186786
21	120659	117870	131576	138859	181147	190592	192642	192336	192887	192979	190470	186636
22	120503	117849	131600	139103	179511	190684	192734	192336	192917	192948	190318	186487
23	120370	117849	131670	139322	180358	190715	192673	192673	192917	192917	190167	186397
24	120259	117849	131647	139493	200974	190715	192734	192673	192917	192887	190046	186278
25	120149	117870	131764	139663	187717	191480	192703	192734	192887	192887	189925	186158
26	120018	118197	131764	139834	184723	190807	192673	192428	192887	192856	189804	186038
27	119864	118263	131764	140029	184573	190715	192642	192458	192887	192856	189653	185919
28	119733	118263	131764	140175	184394	190898	192703	192367	192887	192826	189502	185769
29	119645	118285	131764	140663	---	190654	192673	192428	192887	192764	189380	185650
30	119513	118417	131811	141397	---	190776	192642	192611	192917	192703	189229	185500
31	119382	---	131835	141791	---	190807	---	192642	---	192612	189078	---
MAX	124545	119294	131835	141791	200974	191480	192734	193397	192917	193009	192550	188957
MIN	119382	117849	118439	131835	142112	184394	190409	192153	192428	192612	189078	185500
a	722.62	722.18	728.11	732.26	748.00	750.13	750.73	750.73	750.82	750.72	749.56	748.37
b	-5389	-965	+13418	+9956	+42603	+6413	+1835	0	+275	-305	-3534	-3578
c	2667	1589	1168	1045	1691	1182	1382	1612	2413	3238	3472	3014

CAL YR 1997 b +8548

WTR YR 1998 b +60729

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

c Diversion, in acre-feet, to Tecolote Tunnel.

11125500 LAKE CACHUMA NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

REMARKS.—Samples collected by Santa Barbara County and reviewed by the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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 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)	SODIUM PERCENT (00932)
OCT 08...	1100	886	8.2	--	410	77	52	44	19
APR 21...	1000	860	8.2	14.0	420	98	42	33	14

DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CAC03) (90410)	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)
OCT 08...	1	2.7	163	310	14	.4	15	--	615	
APR 21...	.7	2.0	198	260	8.0	.4	15	588	581	

DATE		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)
OCT 08...	.84	<.01	<.05	<.01	<.01	330	22	15	
APR 21...	.80	<.01	.17	.06	.02	255	<10	<4	

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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	2.2	---	---	---	---	---	---	---	62	e6.5	e6.4
2	50	2.0	---	---	---	---	---	---	e200	62	e6.5	e6.4
3	56	1.7	---	---	---	---	---	---	e210	61	e6.5	e6.4
4	48	1.8	---	---	---	---	---	---	e210	62	e6.5	e6.4
5	39	1.7	---	---	---	---	---	---	e200	63	e6.5	e7.0
6	39	1.7	---	---	---	---	---	---	e190	73	e6.4	e7.0
7	46	1.8	---	---	---	---	---	---	e180	53	e6.4	e7.0
8	45	1.9	---	---	---	---	---	---	e170	30	e6.4	e7.0
9	50	e1.7	---	---	---	---	---	---	e160	12	e6.4	e7.0
10	78	e1.7	---	---	---	---	---	---	e150	18	e6.4	e7.0
11	82	e1.7	---	---	---	---	---	---	e150	9.6	e6.4	e7.0
12	72	e1.7	---	---	---	---	---	---	e150	7.3	e6.4	e7.0
13	52	e1.7	---	---	---	---	---	---	e150	5.7	e6.4	e7.0
14	51	e1.7	---	---	---	---	---	---	e150	12	e6.4	e7.0
15	36	e1.7	---	---	---	---	---	---	e150	12	e6.4	e7.0
16	22	e1.7	---	---	---	---	---	---	e145	11	e6.4	e7.2
17	22	e1.7	---	---	---	---	---	---	e145	12	e6.4	e7.2
18	24	e1.7	---	---	---	---	---	---	143	e10	e6.4	e7.4
19	26	e1.6	---	---	---	---	---	---	147	e10	e6.4	e7.4
20	27	e1.6	---	---	---	---	---	---	140	e10	e6.4	e7.6
21	24	e1.6	---	---	---	---	---	---	133	e10	e6.4	e7.6
22	21	e1.6	---	---	---	---	---	---	129	e9.0	e6.4	e7.8
23	19	e1.6	---	---	---	---	---	---	126	e8.0	e6.4	e7.8
24	15	e1.6	---	---	---	---	---	---	132	e7.0	e6.4	e8.0
25	16	e1.5	---	---	---	---	---	---	108	e7.0	e6.4	e8.0
26	16	e1.5	---	---	---	---	---	---	88	e7.0	e6.4	e8.0
27	16	e1.5	---	---	---	---	---	---	90	e7.0	e6.4	e8.0
28	18	e1.5	---	---	---	---	---	---	76	e7.0	e6.4	e8.0
29	15	e1.5	---	---	---	---	---	---	62	e7.0	e6.4	e8.0
30	5.1	e1.5	---	---	---	---	---	---	62	e7.0	e6.4	e8.0
31	2.9	---	---	---	---	---	---	---	---	e7.0	e6.4	---
TOTAL	1093.0	50.4	---	---	---	---	---	---	---	678.6	198.9	218.6
MEAN	35.3	1.68	---	---	---	---	---	---	---	21.9	6.42	7.29
MAX	82	2.2	---	---	---	---	---	---	---	73	6.5	8.0
MIN	2.9	1.5	---	---	---	---	---	---	---	5.7	6.4	6.4
AC-FT	2170	100	---	---	---	---	---	---	---	1350	395	434

e Estimated.

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

WATER-QUALITY RECORDS

CHEMICAL DATA: October 1991 to current year.

SPECIFIC CONDUCTANCE: July 1994 to November 1994, October 1995 to current year.

WATER TEMPERATURE: July 1994 to current year.

INSTRUMENTATION.—Water-quality monitor since July 1994.

REMARKS.—Water-quality samples collected below spillway. Discharge provided by U.S. Bureau of Reclamation. Interruption in record was due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,010 microsiemens, Nov. 10, 1994; minimum recorded, 194 microsiemens, Dec. 6, 1997.

WATER TEMPERATURE: Maximum recorded, 25.0°C, May 14, 16, 1996; minimum recorded, 9.0°C, Nov. 15, 1994, Jan. 6, 1998.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 952 microsiemens, Oct. 6, 1997; minimum recorded, 194 microsiemens, Dec. 6, 1997.

WATER TEMPERATURE: Maximum recorded, 23.0°C, July 6, 1998; minimum recorded, 9.0°C, Jan. 6, 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-	SPE-	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,	SODIUM	
		CHARGE,	CIFIC	WATER		NESS		SIUM,			DIS-
		INST.	CON-	FIELD		TOTAL		DIS-			SOLVED
		CUBIC	DUCT-	(STAND-		AS		SOLVED			SOLVED
		FEET	ANCE	(STAND-	ATURE	(MG/L		(MG/L	(MG/L		
		PER		ARD	WATER	AS					
		SECOND	(US/CM)	UNITS)	(DEG C)	(CACO3)	AS CA)	AS MG)	AS NA)	SODIUM	
		(00061)	(00095)	(00400)	(00010)	(00900)	(00915)	(00925)	(00930)	PERCENT	
OCT											
06...	1400	34	943	8.3	17.0	430	91	48	41	17	
NOV											
04...	1320	1.7	915	8.1	17.0	--	--	--	--	--	
DEC											
04...	1135	1.5	922	7.8	14.5	--	--	--	--	--	
APR											
21...	1315	725	789	8.6	17.5	360	83	37	30	15	
JUN											
11...	1150	147	850	8.4	15.5	--	--	--	--	--	
AUG											
10...	1400	6.4	875	8.0	21.5	--	--	--	--	--	

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	928	914	922	910	924	909	---	---	---	---	528	522
2	935	916	927	913	921	913	---	---	---	---	528	522
3	942	927	920	910	925	913	---	---	---	---	527	524
4	946	933	922	911	924	914	---	---	---	---	531	524
5	949	937	925	912	918	686	---	---	---	---	527	523
6	952	938	931	915	804	194	---	---	---	---	528	520
7	950	937	926	912	560	549	---	---	---	---	535	521
8	946	934	915	904	622	555	---	---	---	---	521	518
9	946	932	919	907	718	614	---	---	---	---	531	520
10	943	932	913	906	832	696	---	---	---	---	538	528
11	938	929	950	912	852	819	---	---	---	---	546	537
12	942	927	951	930	850	825	---	---	---	---	554	543
13	936	925	950	931	861	840	---	---	434	420	559	550
14	935	924	951	931	864	850	---	---	449	432	566	557
15	941	924	935	921	865	845	---	---	453	445	583	558
16	937	922	933	918	860	840	---	---	467	453	590	583
17	935	923	939	922	846	830	---	---	472	464	600	586
18	930	919	929	920	856	827	---	---	480	472	608	600
19	931	921	937	924	837	823	---	---	490	480	629	608
20	934	922	938	926	837	810	---	---	498	488	647	629
21	927	918	931	925	852	824	---	---	507	497	657	643
22	929	917	934	924	849	833	---	---	511	505	670	657
23	925	916	936	922	842	816	---	---	514	502	672	662
24	924	915	938	926	837	821	---	---	505	498	708	672
25	926	912	939	927	835	823	---	---	507	499	709	699
26	925	911	930	909	839	812	---	---	515	504	705	696
27	921	909	936	915	836	821	---	---	519	511	701	695
28	915	906	932	916	838	823	---	---	523	517	709	697
29	917	908	926	919	829	821	---	---	---	---	709	701
30	919	906	931	911	830	814	---	---	---	---	709	701
31	922	906	---	---	---	---	---	---	---	---	713	704
MONTH	952	906	951	904	---	---	---	---	---	---	713	518
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	726	705	---	---	---	---	842	822	---	---	---	---
2	731	725	---	---	---	---	845	825	---	---	---	---
3	735	723	---	---	---	---	841	827	---	---	---	---
4	734	726	---	---	---	---	847	828	---	---	---	---
5	---	---	---	---	---	---	854	836	---	---	---	---
6	743	733	---	---	---	---	848	834	---	---	---	---
7	751	740	---	---	---	---	---	---	---	---	---	---
8	752	744	---	---	---	---	---	---	---	---	---	---
9	756	748	---	---	---	---	---	---	---	---	---	---
10	758	748	---	---	---	---	---	---	---	---	---	---
11	761	751	---	---	857	845	---	---	---	---	---	---
12	765	751	---	---	858	839	---	---	---	---	---	---
13	765	755	---	---	856	841	---	---	---	---	---	---
14	769	758	---	---	864	848	---	---	---	---	---	---
15	771	759	---	---	857	849	---	---	---	---	---	---
16	775	763	---	---	860	848	---	---	---	---	---	---
17	777	768	---	---	860	848	---	---	---	---	857	846
18	788	770	---	---	864	849	---	---	---	---	859	843
19	788	776	---	---	862	850	---	---	---	---	860	845
20	790	778	---	---	860	840	---	---	---	---	860	845
21	797	779	---	---	856	838	---	---	---	---	857	844
22	---	---	---	---	856	830	---	---	---	---	859	844
23	---	---	---	---	849	830	---	---	---	---	861	847
24	---	---	---	---	851	830	---	---	---	---	863	843
25	---	---	---	---	853	832	---	---	---	---	863	843
26	---	---	---	---	852	835	---	---	---	---	869	859
27	---	---	---	---	850	835	---	---	---	---	868	855
28	---	---	---	---	850	832	---	---	---	---	863	849
29	---	---	---	---	848	832	---	---	---	---	864	849
30	---	---	---	---	844	828	---	---	---	---	877	854
31	---	---	---	---	---	---	---	---	---	---	---	---

11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.0	15.5	18.0	15.5	15.0	13.0	14.5	12.0	---	---	13.5	13.5
2	18.5	15.5	18.0	16.0	15.5	13.0	13.5	12.5	---	---	14.0	13.5
3	18.0	16.5	17.5	16.0	14.5	13.0	13.5	12.0	---	---	13.5	13.5
4	18.0	16.0	17.5	16.0	15.0	13.0	13.0	11.5	---	---	14.0	13.5
5	18.0	15.5	17.0	15.5	14.0	13.5	13.0	10.0	---	---	14.0	14.0
6	17.5	16.0	17.0	15.5	14.0	13.0	12.0	9.0	---	---	14.5	14.0
7	17.5	15.5	17.5	16.0	14.0	13.0	12.0	9.5	---	---	14.0	13.5
8	17.0	15.0	16.5	15.5	14.5	13.5	14.0	11.0	---	---	14.0	14.0
9	17.5	15.0	17.0	14.0	14.0	12.5	13.0	11.5	---	---	14.0	14.0
10	17.0	16.0	16.0	15.5	13.5	11.5	12.5	11.5	---	---	14.5	14.0
11	17.0	15.5	16.0	15.0	13.5	11.0	13.0	11.5	---	---	15.0	14.5
12	16.5	15.0	16.5	15.0	13.5	11.0	14.0	12.5	---	---	15.0	14.5
13	16.5	15.0	16.0	15.0	12.5	11.5	14.0	12.5	13.5	13.5	15.0	15.0
14	17.0	15.0	16.0	14.0	12.5	11.5	---	---	13.5	13.5	15.5	14.5
15	17.0	15.0	15.0	13.5	14.0	12.0	---	---	13.5	13.5	15.5	15.0
16	18.0	15.5	15.5	13.0	13.5	12.0	---	---	13.5	13.5	15.0	15.0
17	17.5	15.5	15.5	13.5	13.5	12.5	---	---	13.5	13.5	15.5	15.0
18	17.0	15.0	16.5	13.5	13.5	12.5	---	---	13.5	13.5	15.5	15.0
19	17.5	16.0	16.0	15.0	13.5	12.0	---	---	13.5	13.5	16.0	15.0
20	17.5	15.5	16.5	15.0	13.0	11.5	---	---	13.5	13.5	16.0	15.5
21	16.5	15.0	16.0	14.0	13.5	12.0	---	---	13.5	13.0	16.5	15.5
22	16.5	15.5	17.5	14.5	13.0	11.0	---	---	13.5	13.5	16.5	16.0
23	17.5	16.0	16.0	14.5	12.0	10.5	---	---	13.5	13.5	17.0	16.0
24	17.0	16.0	16.0	15.0	12.0	10.5	---	---	13.5	13.5	17.0	16.5
25	16.5	14.5	16.0	15.0	11.5	10.0	---	---	13.5	13.0	17.0	17.0
26	16.0	14.0	16.0	15.0	11.5	9.5	---	---	13.5	13.5	17.0	16.0
27	16.0	14.0	16.0	14.0	11.5	9.5	---	---	13.5	13.5	16.5	15.5
28	16.0	14.0	16.0	13.5	12.5	10.0	---	---	14.0	13.5	16.5	16.0
29	16.0	14.0	15.5	13.5	12.5	10.5	---	---	---	---	16.5	16.0
30	16.5	14.5	15.0	13.5	13.5	11.5	---	---	---	---	16.5	16.0
31	17.0	15.0	---	---	13.5	12.0	---	---	---	---	16.0	16.0
MONTH	18.5	14.0	18.0	13.0	15.5	9.5	---	---	---	---	17.0	13.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.0	16.0	19.5	19.0	17.5	17.0	21.5	18.0	---	---	---	---
2	16.0	16.0	19.5	19.5	17.5	16.5	20.0	16.5	---	---	---	---
3	16.0	15.5	19.5	19.5	17.0	16.5	20.0	15.0	---	---	---	---
4	16.5	16.0	20.0	19.5	17.5	16.5	21.0	18.5	---	---	---	---
5	---	---	19.5	19.5	17.0	16.5	22.0	19.5	---	---	---	---
6	16.5	16.0	19.5	19.0	17.0	16.5	23.0	19.5	---	---	---	---
7	16.5	15.5	19.0	18.5	17.5	16.0	---	---	---	---	---	---
8	16.5	16.0	19.0	17.5	16.5	16.0	---	---	---	---	---	---
9	16.5	16.0	18.5	17.5	17.0	16.0	---	---	---	---	---	---
10	16.5	16.0	18.0	17.5	22.0	16.0	---	---	---	---	---	---
11	16.5	16.0	18.0	17.5	21.5	19.0	---	---	---	---	---	---
12	16.5	16.0	18.0	17.5	21.0	19.5	---	---	---	---	---	---
13	16.5	16.0	18.0	17.5	20.5	18.0	---	---	---	---	---	---
14	16.5	16.0	18.0	17.5	20.5	17.5	---	---	---	---	---	---
15	16.5	16.0	18.5	17.0	18.5	16.0	---	---	---	---	---	---
16	16.5	16.0	17.5	17.0	19.0	16.5	---	---	---	---	---	---
17	16.5	16.5	17.5	17.0	20.5	17.5	---	---	---	---	20.5	19.5
18	17.0	16.0	18.0	17.0	21.5	19.0	---	---	---	---	20.5	19.5
19	17.0	16.5	18.5	17.5	22.0	19.5	---	---	---	---	20.0	18.0
20	17.5	17.0	18.0	17.5	22.0	20.0	---	---	---	---	19.5	19.0
21	18.0	17.0	18.0	17.0	21.5	19.5	---	---	---	---	19.5	18.5
22	18.0	17.5	18.0	16.5	21.5	18.5	---	---	---	---	19.5	18.5
23	18.5	18.0	17.5	16.5	21.0	18.0	---	---	---	---	19.5	18.0
24	18.5	18.0	17.5	17.0	21.5	18.0	---	---	---	---	19.0	18.0
25	18.0	17.5	17.5	17.0	22.0	19.0	---	---	---	---	19.0	18.0
26	18.0	17.5	17.5	16.5	22.0	19.5	---	---	---	---	19.0	18.0
27	18.5	18.0	18.0	16.5	22.0	19.5	---	---	---	---	19.0	18.0
28	18.5	18.0	17.5	16.5	22.0	19.0	---	---	---	---	19.0	18.0
29	18.5	18.5	17.5	17.0	21.5	19.0	---	---	---	---	19.0	17.5
30	19.0	18.5	18.0	16.5	22.0	19.0	---	---	---	---	19.0	18.5
31	---	---	17.5	17.0	---	---	---	---	---	---	---	---
MONTH	---	---	20.0	16.5	22.0	16.0	---	---	---	---	---	---

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA

LOCATION.—Lat 34°37'06", long 120°07'11", in NW 1/4 NW 1/4 sec.11, T.6 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at downstream side of bridge on Alamo Pintado Road, 1.5 mi northeast of Solvang.

DRAINAGE AREA.—29.4 mi².

PERIOD OF RECORD.—October 1970 to September 1985, October 1989 to September 1992, October 1994 to current year. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

CHEMICAL DATA: Water year 1997.

REVISED RECORDS.—WDR CA-98-1: 1997.

GAGE.—Water-stage recorder and crest-stage gage. 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, 3,680 ft³/s, Feb. 3, 1998, gage height, 11.69 ft, from rating curve extended above 1,050 ft³/s; 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)
Feb. 3	1045	3,680	11.69	Mar. 24	unknown	unknown	unknown
Feb. 7	unknown	unknown	unknown	Apr. 1	0300	144	3.56
Feb. 14	1245	302	4.43	Apr. 4	1930	208	3.96
Feb. 23	1000	814	6.33				

REVISIONS.—Revised daily discharges, in cubic feet per second, for period in September 1997 are given below. These figures supercede those published in the report for 1997.

Sept. 7 e 0.39	Sept. 13 e 0.50	Sept. 19 e 0.50	Sept. 25 e 0.36
8 e 0.38	14 e 0.57	20 e 0.47	26 e 0.37
9 e 0.38	15 e 0.53	21 e 0.47	27 e 0.40
10 e 0.49	16 e 0.48	22 e 0.43	28 e 0.37
11 e 0.49	17 e 0.49	23 e 0.38	29 e 0.36
12 e 0.51	18 e 0.54	24 e 0.35	30 e 0.41

	TOTAL	MEAN	MAX	MIN	AC-FT
September 1997	14.23	0.47	0.94	0.35	28
Water Year 1997	670.41	1.84	49	0	1,330

e Estimated.

11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.40	e.30	2.1	e.60	5.0	89	65	e22	e4.5	e3.4	e3.3	3.7
2	e.40	e.30	.77	e.60	370	75	48	e15	e4.3	e3.4	e3.3	4.1
3	e.40	e.30	.85	e.60	1150	e65	55	e10	e4.2	e3.4	e3.4	4.5
4	e.40	e.30	1.1	e2.5	318	e60	81	e9.0	e4.1	e3.4	e3.4	4.0
5	e.40	.40	10	e2.0	e150	e55	27	17	e4.0	e3.4	e3.4	3.8
6	e.40	.38	36	e1.5	252	e50	28	11	e4.0	e3.3	e3.4	3.7
7	e.40	.32	e3.0	e1.4	e350	e45	e20	6.4	e3.9	e3.3	e3.3	3.4
8	e.40	.36	e1.6	e1.3	e300	e40	e20	6.0	e3.9	e3.3	e3.3	3.0
9	e.40	.40	e1.2	e5.0	e250	e35	e18	5.8	e3.9	e3.3	e3.3	3.0
10	.53	.87	e1.0	8.3	179	e35	e20	5.8	e3.8	e3.3	e3.3	3.0
11	.44	.59	e.90	2.4	160	e55	e40	5.8	e3.8	e3.2	e3.2	3.0
12	.42	.37	e.80	3.2	143	e50	e30	10	e3.8	e3.2	e3.2	2.9
13	.46	.41	e.70	8.1	131	e45	e25	15	e3.7	e3.2	e3.2	2.9
14	.43	.44	e.60	3.0	214	e40	e20	5.8	e3.7	e3.2	e3.2	3.1
15	.39	1.4	e.60	8.0	199	e35	e18	5.6	e3.7	e3.2	e3.2	3.2
16	.41	.88	e.60	7.7	149	e35	e17	5.7	e3.7	e3.1	e3.2	3.5
17	.37	.70	e.60	9.9	162	e30	e16	5.6	e3.7	e3.1	e3.2	3.6
18	.41	.72	e10	15	124	e30	e15	5.6	e3.6	e3.1	3.3	3.6
19	.44	.83	e4.0	30	126	e30	e14	5.6	e3.6	e3.1	3.0	3.6
20	.54	1.4	e2.0	1.9	115	e30	e13	5.6	e3.6	e3.1	3.1	3.8
21	.28	e.80	e1.5	1.7	117	e40	e12	5.6	e3.6	e3.1	3.2	3.8
22	.28	e.60	e1.2	12	113	e50	e11	5.3	e3.6	e3.1	3.3	4.0
23	.28	e.50	e1.1	8.4	420	e60	e10	5.3	e3.5	e3.1	3.4	4.0
24	.30	e.50	e1.1	8.1	e210	e80	e10	5.3	e3.5	e3.1	3.0	4.0
25	.28	e.50	e1.0	1.4	140	e60	e9.5	5.3	e3.5	e3.1	3.0	4.1
26	1.3	1.9	e.90	1.4	108	33	e9.0	5.3	e3.5	e3.2	3.2	4.0
27	e.40	1.1	e.80	1.4	95	e25	e9.0	5.3	e3.5	e3.2	3.5	4.0
28	e.35	.95	e.80	1.4	82	e25	e9.0	5.3	e3.4	e3.2	3.7	3.4
29	e.30	.95	e.70	47	---	e25	e9.0	5.1	e3.4	e3.2	4.3	2.6
30	e.30	4.8	e.70	37	---	e20	e9.0	5.0	e3.4	e3.2	4.5	2.6
31	e.30	---	e.65	13	---	e30	---	5.0	---	e3.3	4.5	---
TOTAL	12.81	24.27	88.87	245.80	6132.0	1377	687.5	236.1	112.4	99.8	104.8	105.9
MEAN	.41	.81	2.87	7.93	219	44.4	22.9	7.62	3.75	3.22	3.38	3.53
MAX	1.3	4.8	36	47	1150	89	81	22	4.5	3.4	4.5	4.5
MIN	.28	.30	.60	.60	5.0	20	9.0	5.0	3.4	3.1	3.0	2.6
AC-FT	25	48	176	488	12160	2730	1360	468	223	198	208	210

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

MEAN	.23	.40	.50	4.17	14.4	8.27	1.94	.72	.57	.30	.37	.29
MAX	2.04	5.73	2.87	56.8	219	44.8	22.9	7.62	4.83	3.22	3.38	3.53
(WY)	1996	1996	1998	1995	1998	1995	1998	1998	1995	1998	1998	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1971 - 1998	
ANNUAL TOTAL	687.30		9227.25			
ANNUAL MEAN	1.88		25.3		2.61	
HIGHEST ANNUAL MEAN					25.3	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	49	Jan 11	1150	Feb 3	1150	Feb 3 1998
LOWEST DAILY MEAN	.03	Jun 4	.28	Oct 21	.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	.16	Jul 21	.30	Oct 29	.00	Oct 1 1970
INSTANTANEOUS PEAK FLOW			3680	Feb 3	3680	Feb 3 1998
INSTANTANEOUS PEAK STAGE			11.69	Feb 3	11.69	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	1360		18300		1890	
10 PERCENT EXCEEDS	3.1		57		1.8	
50 PERCENT EXCEEDS	.88		3.5		.00	
90 PERCENT EXCEEDS	.30		.44		.00	

e Estimated.

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 month end elevations and contents published.

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

REMARKS.—Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft between bottom of outlet gate at elevation 555.70 ft, and crest of spillway at elevation 599.88 ft. Dead storage, 110 acre-ft. Inflow must total 150 acre-ft during any one month between November and June in order to store flows for that water year. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 2,770 acre-ft, March 4, 1978, elevation, 604.31 ft; minimum, 748 acre-ft, Nov. 8–10, 1972, elevation, 577.15 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 2,580 acre-ft, Feb. 7, elevation, 602.18 ft; minimum contents, 1,840 acre-ft, several days in November, minimum elevation, 593.70 ft, Nov. 8, 9.

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 1997 TO SEPTEMBER 1998

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	1850	1870	2330	2450	2400	2400	2380	2390	2380	e2370	2320
2	1920	1850	1870	2330	2530	2400	2400	2400	2390	2380	e2370	2320
3	1910	1850	1870	2330	2500	2400	2400	2390	2390	2380	e2370	2320
4	1910	1840	1880	2340	2430	2390	2400	2390	2390	2380	e2370	2320
5	1910	1840	2070	2350	2410	2390	2400	2400	2390	2380	e2370	2320
6	1910	1840	2210	2350	2460	2390	2390	2400	2390	2380	2360	2320
7	1900	1840	2230	2350	2580	2390	2390	2400	e2390	2380	2360	2320
8	1900	1840	2250	2360	2470	2390	2390	2390	2390	2380	2360	2320
9	1900	1840	2250	2460	2430	2390	2390	2390	2380	2380	2360	2320
10	1900	1840	2260	2410	2420	2390	2390	2390	2380	2380	2360	2310
11	1890	1840	2260	2390	2410	2390	2410	2390	2380	2380	2360	2310
12	1890	1840	2270	2390	2410	2380	2400	2400	2380	2380	2350	2310
13	1890	1840	2270	2390	2420	2390	2390	2420	2380	2380	2350	2310
14	1890	1840	2270	2390	2430	2380	2390	2410	2380	e2380	2350	2310
15	1880	1850	2270	2390	2410	2380	2390	2400	2380	e2380	2350	2310
16	1880	1850	2280	2390	2430	2380	2390	2400	2380	e2380	2350	2300
17	1880	1850	2280	2390	2420	2380	2390	2400	2380	e2380	2340	2300
18	1880	1850	2290	2400	2410	2380	2390	2400	2380	e2380	2340	2300
19	1870	1850	2300	2390	2440	2380	2390	2400	2380	e2380	2340	2300
20	1870	1850	2300	2390	2420	2380	2390	2400	2380	e2370	2340	2300
21	1870	1850	2310	2390	2410	2380	2380	2400	2380	e2370	2340	2300
22	1870	1850	2310	2390	2420	2380	2380	2400	2380	e2370	2340	2300
23	1870	1850	2310	2390	2490	2380	2380	2400	e2380	e2370	2330	2300
24	1860	1850	2310	2390	2440	2410	2380	2400	2380	e2370	2330	2300
25	1860	1850	2320	2380	2420	2400	2380	2400	2380	e2370	2330	2300
26	1860	1860	2320	2380	2410	2390	2380	2390	2380	e2370	2330	2300
27	1860	1860	2320	2380	2410	2390	2380	2390	e2380	e2370	2330	2290
28	1860	1860	2320	2380	2400	2390	2380	2400	2380	e2370	2330	2290
29	1850	1860	2320	2400	---	2390	2380	2390	2380	e2370	2330	2290
30	1850	1870	2320	2390	---	2390	2380	2390	2380	e2370	2330	2290
31	1850	---	2330	2400	---	2410	---	2390	---	e2370	2330	---
MAX	1920	1870	2330	2460	2580	2410	2410	2420	2390	2380	2370	2320
MIN	1850	1840	1870	2330	2400	2380	2380	2380	2380	2370	2330	2290
a	593.87	594.14	599.39	600.19	600.26	600.32	600.02	600.10	599.99	e599.86	599.40	599.90
b	-70	+20	+460	+70	0	+10	-30	+10	-10	-10	-40	-40

CAL YR 1997 b -50

WTR YR 1998 b +370

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 poor. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952, by Lake Cachuma (stations 11121000, 11122000, and 11125500). Additional water may be added by releases from Alisal Reservoir (11128300). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water for irrigation pumped from wells along banks of river in valley upstream. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD (water years 1928–36, 1946–98).—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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	4.0	8.3	14	88	e2660	e1680	e481	e520	e131	e22	e9.3
2	33	3.3	7.4	14	4610	e2590	e1810	e584	e479	e114	e23	e5.7
3	29	2.9	6.7	13	23700	e2400	e1680	e1160	e436	e103	e24	e5.9
4	30	3.0	6.3	16	e20100	e2210	e1680	e1050	e387	e102	e24	e9.2
5	29	3.0	130	15	e19200	e2020	e1760	e1040	e357	e120	e19	e16
6	26	2.9	1370	15	e5550	e1830	e1500	e1980	e353	e125	e18	e20
7	24	2.8	106	14	e4840	e1540	e1490	e1350	e348	e124	e20	e22
8	23	2.9	62	13	e19000	e1240	e1420	e1230	e319	e108	e19	e22
9	23	2.9	41	139	e13000	e1100	e1370	e781	e301	e87	e16	e22
10	26	3.4	30	389	e3650	e1150	e1300	e928	e294	e67	e17	e23
11	32	4.1	26	93	e1860	e1160	e1250	e812	e286	e64	e16	e22
12	34	4.1	23	57	e1820	e1130	e1730	e887	e279	e56	e13	e19
13	31	4.2	21	51	e1250	e1220	e1400	e1820	e257	e49	e11	e16
14	27	4.3	19	41	e1130	e1220	e1100	e1630	e235	e47	e10	e16
15	24	5.2	19	52	e1960	e1040	e1400	e1520	e213	e42	e7.8	e16
16	18	5.3	18	101	e1720	e988	e1260	e1280	e191	e39	e7.6	e17
17	13	5.0	17	53	e3000	e917	e1070	e995	e176	e34	e9.5	e19
18	12	4.8	21	47	e2380	e856	e948	e1010	e161	e32	e9.5	e18
19	12	4.9	20	95	e2130	e865	e946	e1080	e145	e29	e11	e18
20	13	5.0	18	59	e2340	e780	e980	e894	e143	e32	e11	e17
21	13	5.0	17	48	e4040	e709	e928	e801	e135	e30	e9.8	e18
22	12	5.0	16	41	e3940	e680	e914	e766	e144	e29	e10	e20
23	9.4	4.8	16	36	e11700	e611	e873	e619	e142	e26	e9.9	e22
24	8.1	4.8	15	32	e28900	e653	e774	e681	e150	e29	e11	e18
25	6.9	4.8	15	30	e14000	e1840	e772	e651	e150	e28	e11	e18
26	6.1	9.0	15	29	e7070	e2340	e751	e770	e145	e24	e13	e18
27	5.7	8.4	15	27	e2730	e1490	e729	e595	e144	e24	e13	e19
28	5.7	6.7	15	27	e2740	e1450	e634	e622	e142	e21	e12	e22
29	5.2	6.4	14	127	---	e1380	e621	e638	e134	e21	e11	e21
30	4.9	11	14	71	---	e1130	e622	e481	e128	e21	e8.9	e23
31	4.2	---	14	62	---	e1080	---	e505	---	e20	e10	---
TOTAL	573.2	143.9	2135.7	1821	208448	42279	35392	29641	7294	1778	428.0	532.1
MEAN	18.5	4.80	68.9	58.7	7445	1364	1180	956	243	57.4	13.8	17.7
MAX	34	11	1370	389	28900	2660	1810	1980	520	131	24	23
MIN	4.2	2.8	6.3	13	88	611	621	481	128	20	7.6	5.7
AC-FT	1140	285	4240	3610	413500	83860	70200	58790	14470	3530	849	1060

e Estimated.

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1950, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.92	7.04	32.8	62.0	176	52.4	48.1	11.7	8.56	4.00	2.41	2.51
MAX	6.69	34.9	257	211	1240	164	375	59.3	36.8	17.0	6.36	5.69
(WY)	1939	1947	1932	1935	1932	1935	1935	1935	1938	1938	1938	1938
MIN	.25	2.40	4.20	4.87	5.90	4.95	3.51	2.36	1.27	.21	.000	.000
(WY)	1950	1930	1930	1948	1948	1950	1931	1948	1948	1949	1948	1948

SUMMARY STATISTICS

WATER YEARS 1929 - 1950

ANNUAL TOTAL	
ANNUAL MEAN	32.9
HIGHEST ANNUAL MEAN	152
LOWEST ANNUAL MEAN	3.31
HIGHEST DAILY MEAN	12300
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
INSTANTANEOUS PEAK FLOW	18700
ANNUAL RUNOFF (AC-FT)	23800
10 PERCENT EXCEEDS	35
50 PERCENT EXCEEDS	5.3
90 PERCENT EXCEEDS	1.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.09	4.30	20.5	249	502	420	164	59.1	15.4	6.95	7.04	6.63
MAX	88.7	96.2	263	3572	7445	4029	1258	956	243	57.4	58.9	38.3
(WY)	1992	1966	1984	1995	1998	1983	1983	1998	1998	1998	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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1952 - 1998

ANNUAL TOTAL	8920.08	330465.9	
ANNUAL MEAN	24.4	905	120
HIGHEST ANNUAL MEAN			905
LOWEST ANNUAL MEAN			.86
HIGHEST DAILY MEAN	1370	Dec 6	28900
LOWEST DAILY MEAN	.00	Apr 20	2.8
ANNUAL SEVEN-DAY MINIMUM	.00	May 17	2.9
INSTANTANEOUS PEAK FLOW			unknown
INSTANTANEOUS PEAK STAGE			unknown
ANNUAL RUNOFF (AC-FT)	17690		655500
10 PERCENT EXCEEDS	60		1740
50 PERCENT EXCEEDS	12		47
90 PERCENT EXCEEDS	.00		6.7

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[illegible]

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	24.5	19.5	22.5	16.5	17.5	14.0	---	---	---	---	---	---
2	25.0	20.0	22.5	16.5	17.5	14.0	---	---	---	---	---	---
3	24.0	18.5	21.5	16.0	---	---	---	---	---	---	---	---
4	24.5	18.0	21.0	16.0	---	---	---	---	---	---	---	---
5	24.5	19.0	21.0	16.0	---	---	---	---	---	---	---	---
6	23.0	18.5	21.0	16.0	---	---	---	---	---	---	---	---
7	21.5	17.5	20.0	17.0	---	---	---	---	---	---	---	---
8	21.5	16.5	20.0	15.0	---	---	---	---	---	---	---	---
9	22.5	16.5	19.0	14.5	---	---	---	---	---	---	---	---
10	21.5	18.5	18.5	17.0	---	---	---	---	---	---	---	---
11	20.5	16.0	20.0	16.0	---	---	---	---	---	---	---	---
12	21.0	15.5	20.0	16.5	---	---	---	---	---	---	---	---
13	21.0	15.0	19.0	16.5	---	---	---	---	---	---	---	---
14	22.0	15.5	19.0	15.0	---	---	---	---	---	---	---	---
15	22.5	16.0	17.5	14.5	---	---	---	---	---	---	---	---
16	22.5	16.5	19.0	15.0	---	---	---	---	---	---	---	---
17	22.5	16.0	18.5	14.5	---	---	---	---	---	---	---	---
18	22.5	17.5	18.5	13.5	---	---	---	---	---	---	18.5	16.5
19	22.5	18.0	18.5	16.0	---	---	---	---	---	---	18.5	16.5
20	21.0	18.0	18.5	15.0	---	---	---	---	---	---	19.0	16.5
21	21.5	16.0	18.0	13.5	---	---	---	---	---	---	18.5	16.5
22	22.0	17.5	19.0	15.5	---	---	---	---	---	---	19.0	16.5
23	21.5	18.5	19.0	15.0	---	---	---	---	---	---	19.5	16.5
24	21.5	17.5	18.5	16.0	---	---	---	---	---	---	19.0	16.5
25	21.0	15.0	18.5	15.5	---	---	---	---	---	---	18.0	16.0
26	20.0	14.5	17.5	16.0	---	---	---	---	---	---	17.0	15.5
27	20.0	14.0	18.5	15.5	---	---	---	---	---	---	18.0	14.5
28	20.0	14.5	18.5	15.0	---	---	---	---	---	---	16.5	14.5
29	20.0	14.5	17.5	14.5	---	---	---	---	---	---	17.0	13.5
30	21.0	15.5	17.0	14.5	---	---	---	---	---	---	18.0	13.5
31	21.0	16.0	---	---	---	---	---	---	---	---	15.5	14.0
MONTH	25.0	14.0	22.5	13.5	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	15.5	13.5	19.5	16.5	22.5	14.5	---	---	---	---	---	---
2	17.0	14.0	18.0	17.0	21.0	13.0	---	---	---	---	---	---
3	15.5	14.0	19.0	17.5	18.0	13.0	---	---	---	---	---	---
4	17.0	13.5	18.0	17.5	21.0	12.5	---	---	---	---	---	---
5	17.3	14.5	18.5	17.0	19.5	12.0	---	---	---	---	---	---
6	17.0	14.5	19.5	17.5	14.5	12.5	---	---	---	---	---	---
7	17.0	14.0	20.0	17.5	19.5	11.5	---	---	---	---	---	---
8	18.0	13.5	17.5	15.0	16.0	12.0	---	---	---	---	---	---
9	18.0	14.0	19.0	15.0	19.5	13.0	---	---	---	---	---	---
10	18.5	15.0	19.0	15.0	19.5	12.5	---	---	---	---	---	---
11	17.0	14.5	17.0	15.5	17.0	12.5	---	---	---	---	---	---
12	17.0	15.0	15.5	14.5	19.5	11.0	---	---	---	---	---	---
13	17.0	15.5	17.0	13.5	21.5	11.5	---	---	---	---	---	---
14	17.5	16.5	19.0	14.5	22.0	11.5	---	---	---	---	---	---
15	17.0	15.0	19.0	14.0	23.0	13.5	---	---	---	---	---	---
16	17.0	16.5	16.5	14.5	15.5	13.0	---	---	---	---	---	---
17	17.0	16.5	18.5	13.0	23.5	11.0	---	---	---	---	---	---
18	17.0	16.5	20.0	13.5	23.0	11.0	---	---	---	---	---	---
19	17.0	16.5	21.5	14.0	---	---	---	---	---	---	---	---
20	17.0	16.5	21.5	14.0	---	---	---	---	---	---	---	---
21	17.5	17.0	22.5	13.5	---	---	---	---	---	---	---	---
22	18.5	17.0	22.0	13.5	---	---	---	---	---	---	---	---
23	18.0	17.0	19.0	13.0	---	---	---	---	---	---	---	---
24	17.5	17.0	18.0	15.0	---	---	---	---	---	---	---	---
25	17.5	17.0	18.0	15.0	---	---	---	---	---	---	---	---
26	18.0	17.0	21.5	13.5	---	---	---	---	---	---	---	---
27	18.0	17.0	23.5	12.5	---	---	---	---	---	---	---	---
28	18.5	17.0	17.5	13.5	---	---	---	---	---	---	---	---
29	22.5	17.0	22.0	13.5	---	---	---	---	---	---	---	---
30	23.0	17.5	17.5	13.0	---	---	---	---	---	---	---	---
31	---	--	18.5	13.5	---	---	---	---	---	---	---	---
MONTH	23.0	13.5	23.5	12.5	---	---	---	---	---	---	---	---

11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.—Lat 34°38'55", long 120°11'00", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 2 ft upstream from bridge on Frontage Road, 0.9 mi upstream from Dry Creek, 2.4 mi north of Buellton, and 4.0 mi upstream from mouth.

DRAINAGE AREA.—32.8 mi².

PERIOD OF RECORD.—September 1963 to September 1981, October 1989 to September 1992, October 1994 to current year.

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, 12.59 ft, Feb. 3, 1998 no flow most of each year.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 3	0615	1,070	12.59	Feb. 23	1240	588	7.52
Feb. 6	0640	487	6.83	Mar. 24	2015	106	4.11
Feb. 14	1045	230	4.93	Mar. 31	1455	86	3.91

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	2.0	e17	e12	e3.0	e3.3	.71	e.22	.06
2	.00	.00	.00	.00	380	e14	e8.0	e3.0	e3.2	.68	e.22	.06
3	.00	.00	.00	.00	598	e12	e10	e6.0	e3.1	.73	e.21	.06
4	.00	.00	.00	e.50	167	e10	e7.0	e9.0	e3.1	.67	e.21	.14
5	.00	.00	3.4	e.00	76	e9.0	e6.0	e7.0	e3.0	.77	e.20	.16
6	.00	.00	6.3	e.00	192	e8.0	e5.0	e6.0	e2.9	.66	.18	.12
7	.00	.00	.23	e.00	216	e7.0	e4.5	e5.0	e2.9	.53	.16	.08
8	.00	.00	.14	.00	171	e7.0	e4.0	e4.0	2.8	.47	.14	.08
9	.00	.00	.00	e1.0	106	e7.0	e3.5	e3.6	2.8	.47	.12	.08
10	.00	.00	.00	e.60	69	e7.0	e6.0	e3.5	3.3	.50	.12	.08
11	.00	.00	.00	e.55	50	e7.0	e15	e3.5	4.2	.51	.14	.08
12	.00	.00	.00	e.50	36	e8.0	e10	e4.0	4.5	.54	.16	.08
13	.00	.00	.00	e.50	27	e10	e8.0	e20	3.6	.46	.12	.08
14	.00	.00	.00	.43	117	e8.0	e7.0	e10	2.8	.42	.12	.08
15	.00	.00	.00	2.2	77	e7.0	e6.0	12	2.5	.36	.14	.10
16	.00	.00	.00	5.1	56	e6.5	e5.6	9.4	2.3	.37	.12	.10
17	.00	.00	.00	.92	84	e6.0	e5.3	8.8	2.5	.35	.12	.08
18	.00	.00	e1.0	.76	47	e6.0	e5.0	8.8	1.3	e.34	.10	.08
19	.00	.00	.00	2.1	59	e6.0	e4.7	6.7	1.2	e.33	.06	.06
20	.00	.00	.00	.87	47	e7.0	e4.5	5.0	1.9	e.32	.06	.08
21	.00	.00	.00	.68	38	e8.0	e4.3	4.3	2.4	e.31	.08	.08
22	.00	.00	.00	e.60	107	e9.0	e4.2	3.8	1.8	e.30	.08	.08
23	.00	.00	.00	e.55	316	e16	e4.0	3.2	2.2	e.29	.10	.10
24	.00	.00	.00	e.50	159	27	e3.8	e3.2	3.2	e.28	.10	.10
25	.00	.00	.00	e.45	77	26	e3.7	e3.1	2.6	e.27	.10	e.10
26	.00	.00	.00	e.43	46	e10	e3.6	e3.2	1.9	e.26	.10	e.10
27	.00	.00	.00	e.42	31	e13	e3.5	e3.2	1.4	e.25	.10	e.10
28	.00	.00	.00	e.40	21	e15	e3.4	e3.2	1.1	e.24	.08	e.10
29	.00	.00	.00	6.1	---	e11	e3.2	e4.0	.97	e.24	.08	e.10
30	.00	.00	.00	1.2	---	e20	e3.1	e3.6	.86	e.23	.08	e.10
31	.00	---	.00	.93	---	35	---	e3.4	---	e.23	.08	---
TOTAL	0.00	0.00	11.07	28.29	3372.0	359.5	173.9	176.5	75.63	13.09	3.90	2.70
MEAN	.000	.000	.36	.91	120	11.6	5.80	5.69	2.52	.42	.13	.090
MAX	.00	.00	6.3	6.1	598	35	15	20	4.5	.77	.22	.16
MIN	.00	.00	.00	.00	2.0	6.0	3.1	3.0	.86	.23	.06	.06
AC-FT	.00	.00	22	56	6690	713	345	350	150	26	7.7	5.4

e Estimated.

11129800 ZACA CREEK NEAR BUELLTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.002	.055	.50	3.40	10.7	4.90	1.39	.56	.20	.032	.008	.006
MAX	.036	1.22	7.64	32.1	120	40.1	9.75	5.69	2.52	.42	.13	.090
(WY)	1996	1997	1997	1969	1998	1995	1995	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1964 - 1998			
ANNUAL TOTAL	573.19				4216.58							
ANNUAL MEAN	1.57				11.6				1.76			
HIGHEST ANNUAL MEAN									11.6			
LOWEST ANNUAL MEAN									.000			
HIGHEST DAILY MEAN	35 Jan 24				598 Feb 3				598 Feb 3 1998			
LOWEST DAILY MEAN	.00 Apr 20				.00 Oct 1				.00 Oct 1 1963			
ANNUAL SEVEN-DAY MINIMUM	.00 Apr 20				.00 Oct 1				.00 Oct 1 1963			
INSTANTANEOUS PEAK FLOW					1070 Feb 3				1390 Feb 24 1969			
INSTANTANEOUS PEAK STAGE					12.59 Feb 3				12.59 Feb 3 1998			
ANNUAL RUNOFF (AC-FT)	1140				8360				1280			
10 PERCENT EXCEEDS	3.3				14				1.1			
50 PERCENT EXCEEDS	.00				.47				.00			
90 PERCENT EXCEEDS	.00				.00				.00			

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA

LOCATION.—Lat 34°35'19", long 120°24'27", in W 1/2 sec.24, T.6 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank at bridge on Jalama Road, 0.4 mi downstream from El Jaro Creek, and 4.4 mi southeast of Lompoc.

DRAINAGE AREA.—47.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1941 to current year.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder and concrete low-water control. Elevation of gage is 220 ft above sea level, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair. No regulation upstream from station. Small diversions for irrigation upstream from station. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,400 ft³/s, Mar. 15, 1952, gage height, 20.80 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 5	1400	398	3.10	Feb. 19	1755	1,150	4.69
Dec. 18	1145	551	3.50	Feb. 23	0825	2,560	7.38
Jan. 9	1930	835	4.07	Mar. 24	1945	342	2.82
Jan. 29	0530	475	3.31	Mar. 31	1415	909	4.20
Feb. 3	0600	7,470	15.07	Apr. 3	1345	818	4.04
Feb. 6	0655	4,640	10.91	Apr. 11	1415	1,120	4.63
Feb. 14	1130	1,800	5.97	May 13	0300	727	3.86

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	.34	3.1	e2.6	242	e120	170	23	e16	8.6	6.6	4.6
2	.26	.29	1.8	e2.6	1410	e100	103	99	e16	8.7	6.2	4.2
3	.26	.29	1.5	e2.5	1570	e90	190	47	e16	9.3	5.8	3.7
4	.22	.31	1.2	12	338	e80	134	42	e16	9.7	5.3	5.7
5	.22	.37	160	7.9	196	e70	97	57	e15	9.7	4.9	7.3
6	.22	.46	83	3.9	962	e60	84	38	e15	9.2	5.0	5.2
7	.22	.56	10	3.4	1040	e55	73	32	e15	8.6	5.1	4.3
8	.24	.59	10	3.4	550	e50	61	29	e15	8.8	4.9	3.8
9	.28	.67	6.8	226	319	e45	54	29	e15	9.0	5.0	e3.7
10	.38	1.1	4.0	122	248	e45	55	29	e14	9.4	4.8	e3.4
11	.46	1.9	3.2	24	249	e75	240	28	e14	9.8	4.4	3.1
12	.40	1.5	2.8	14	218	e70	90	55	e13	9.7	4.3	2.6
13	.30	1.6	2.6	20	216	e60	67	144	e13	9.6	4.4	2.8
14	.26	1.8	2.6	9.8	599	e55	60	e35	e13	9.9	4.9	3.2
15	.22	2.8	2.9	15	283	e50	56	e30	e13	9.5	5.1	3.1
16	.20	2.3	2.6	41	433	e45	50	e28	e12	8.9	5.3	3.1
17	.17	1.1	2.4	13	643	e43	43	e26	e12	8.6	5.4	3.1
18	.23	.83	104	21	249	e42	39	e24	e12	8.6	5.4	3.0
19	.29	1.0	14	43	382	e40	37	e22	12	8.7	5.6	2.8
20	.38	1.2	9.3	15	264	e40	35	e20	12	8.6	6.0	3.0
21	.47	.89	7.2	12	294	e40	32	e19	12	7.7	6.1	3.3
22	.59	.67	5.7	10	483	e45	31	e19	11	7.9	5.9	3.2
23	.64	.71	4.7	9.4	1010	e60	35	e18	11	8.5	6.0	3.1
24	.64	.76	4.4	8.7	325	96	30	e18	11	9.3	5.8	3.1
25	.51	.81	4.2	8.2	e250	144	e28	e17	e10	8.9	6.6	3.2
26	.42	5.6	e3.8	7.8	e200	60	e26	e17	e10	8.2	6.6	3.4
27	.40	4.0	e3.5	7.5	e170	50	e25	e17	e10	7.8	6.4	3.5
28	.43	1.7	e3.3	7.4	e140	84	e24	e16	e9.0	7.3	5.8	3.4
29	.46	1.3	e3.0	115	---	61	e23	e16	e9.0	6.9	5.4	3.5
30	.47	7.7	e2.8	20	---	48	e23	e16	e8.8	7.0	5.0	3.5
31	.41	---	e2.7	39	---	205	---	e16	---	6.9	4.9	---
TOTAL	10.90	45.15	473.1	847.1	13283	2128	2015	1026	380.8	269.3	168.9	108.9
MEAN	.35	1.50	15.3	27.3	474	68.6	67.2	33.1	12.7	8.69	5.45	3.63
MAX	.64	7.7	160	226	1570	205	240	144	16	9.9	6.6	7.3
MIN	.17	.29	1.2	2.5	140	40	23	16	8.8	6.9	4.3	2.6
AC-FT	22	90	938	1680	26350	4220	4000	2040	755	534	335	216

e Estimated.

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.77	2.16	7.64	24.9	45.2	38.4	15.3	4.68	2.38	1.40	.94	.79
MAX	4.26	48.6	102	281	474	545	158	33.1	12.7	8.69	5.77	4.51
(WY)	1942	1966	1956	1995	1998	1995	1941	1998	1998	1998	1941	1941
MIN	.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 1997 CALENDAR YEAR

FOR 1998 WATER YEAR

WATER YEARS 1941 - 1998

ANNUAL TOTAL	2848.34	20756.15	
ANNUAL MEAN	7.80	56.9	11.6
HIGHEST ANNUAL MEAN			80.6
LOWEST ANNUAL MEAN			.17
HIGHEST DAILY MEAN	256	Jan 25	1570
LOWEST DAILY MEAN	.15	Aug 29	.17
ANNUAL SEVEN-DAY MINIMUM	.22	Aug 23	.23
INSTANTANEOUS PEAK FLOW			7470
INSTANTANEOUS PEAK STAGE			15.07
ANNUAL RUNOFF (AC-FT)	5650	41170	8400
10 PERCENT EXCEEDS	11	136	12
50 PERCENT EXCEEDS	1.7	9.3	1.4
90 PERCENT EXCEEDS	.29	.59	.10

11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1978 to current year.

CHEMICAL DATA: Water years 1978 to current year.

pH: Water years 1982–83.

WATER TEMPERATURE: Water years 1982–98.

PERIOD OF DAILY RECORD.—

pH: Water years 1982–83.

WATER TEMPERATURE: Water years 1982–98.

INSTRUMENTATION.—Water-quality monitor, water years 1982–83.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
OCT 08...	1335	.24	1640	8.2	18.5	590	130	63	116	30
NOV 05...	1150	.31	1560	8.1	16.0	--	--	--	--	--
DEC 04...	1415	1.1	1380	8.2	14.0	--	--	--	--	--
JAN 06...	1125	3.6	1270	8.1	6.5	--	--	--	--	--
APR 21...	1148	34	1280	8.4	--	530	140	46	82	25
JUN 03...	1335	16	1220	8.1	21.0	--	--	--	--	--
JUL 07...	1245	8.6	1220	8.5	22.5	--	--	--	--	--
AUG 07...	1625	5.0	1180	8.2	--	--	--	--	--	--
SEP 09...	1525	3.7	1040	8.3	22.0	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[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.—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 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	3.3	30	30	137	e2800	1860	507	573	178	29	14
2	22	3.3	23	27	9850	e2700	1920	686	e510	156	29	10
3	23	2.6	18	27	19400	e2500	1880	1210	e480	145	30	9.7
4	20	2.2	16	37	17200	e2300	1820	1100	e440	139	29	15
5	19	2.4	259	39	12900	e2100	1860	1100	e420	163	24	23
6	19	3.1	e2200	32	6370	e1900	1590	2010	e430	170	23	25
7	18	3.0	575	e30	e5000	e1600	1580	1390	e440	169	25	26
8	15	2.7	218	e29	19800	e1300	1480	1260	e420	147	24	26
9	14	2.8	145	e200	12400	1150	1430	814	e410	119	21	26
10	15	3.6	102	e600	3970	1200	1360	960	e400	91	22	26
11	14	3.9	81	e160	2160	1240	1500	844	e390	87	20	25
12	15	4.6	69	e110	2070	1210	1830	946	e380	76	17	22
13	19	4.6	61	e90	1490	1290	1470	1970	e350	67	15	19
14	20	4.6	56	e90	e3200	1280	1170	1670	e320	64	15	19
15	19	5.5	53	e100	3120	1100	1460	1560	e290	57	13	19
16	17	5.9	49	e150	2210	1040	1320	1320	e260	53	13	20
17	16	5.5	45	e95	3730	996	1120	1030	e240	47	15	22
18	14	5.4	161	e110	2680	904	992	1040	e220	44	15	21
19	12	6.1	83	e150	2570	911	988	1110	198	40	17	21
20	12	6.7	52	e100	2650	827	1020	919	195	43	17	20
21	10	6.7	46	e95	4370	757	964	824	184	41	16	21
22	10	7.2	42	e90	4530	734	949	789	196	39	16	23
23	10	7.9	39	e90	13000	687	912	640	194	36	16	25
24	9.4	11	38	e82	29400	776	808	701	205	39	17	21
25	8.3	16	36	e78	14300	2010	804	670	205	38	18	21
26	7.3	25	34	e72	4320	2410	781	789	197	33	20	21
27	6.6	23	34	e70	2930	1550	757	614	196	33	19	23
28	6.0	18	34	e140	e2900	1550	661	640	193	29	18	25
29	5.3	15	32	e180	---	1450	647	659	182	28	16	25
30	4.6	28	32	197	---	1200	648	499	175	29	14	27
31	4.0	---	30	144	---	1320	---	522	---	27	15	---
TOTAL	424.5	239.6	4693	3444	208657	44792	37581	30793	9293	2427	598	640.7
MEAN	13.7	7.99	151	111	7452	1445	1253	993	310	78.3	19.3	21.4
MAX	23	28	2200	600	29400	2800	1920	2010	573	178	30	27
MIN	4.0	2.2	16	27	137	687	647	499	175	27	13	9.7
AC-FT	842	475	9310	6830	413900	88840	74540	61080	18430	4810	1190	1270

e Estimated.

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.62	6.40	31.7	249	540	447	192	73.0	19.5	5.37	3.29	3.27
MAX	29.9	112	291	3303	7452	3590	1253	993	310	78.3	26.8	29.4
(WY)	1992	1966	1984	1969	1998	1983	1998	1998	1998	1998	1997	1992
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1952 - 1998	
ANNUAL TOTAL	18358.64		343582.8			
ANNUAL MEAN	50.3		941		129	
HIGHEST ANNUAL MEAN					941	
LOWEST ANNUAL MEAN					.000	
HIGHEST DAILY MEAN	2200	Dec 6	29400	Feb 24	38000	Jan 25 1969
LOWEST DAILY MEAN	.00	Jun 19	2.2	Nov 4	.00	Sep 18 1953
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 30	2.7	Nov 3	.00	Oct 23 1953
INSTANTANEOUS PEAK FLOW			39300	Feb 24	80000	Jan 25 1969
INSTANTANEOUS PEAK STAGE			14.36	Feb 24	24.20	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	36410		681500		93300	
10 PERCENT EXCEEDS	80		1940		119	
50 PERCENT EXCEEDS	15		90		1.7	
90 PERCENT EXCEEDS	.00		11		.00	

11133000 SANTA YNEZ RIVER AT NARROWS NEAR LOMPOC, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1978–88, October 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-	SPE-	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,	SODIUM		
		CHARGE,	CIFIC	WATER		NESS		SIUM,				
		INST.	CON-	WHOLE				DIS-			DIS-	DIS-
		CUBIC	DUCT-	FIELD		TOTAL		DIS-			SOLVED	SOLVED
		FEET	ANCE	(STAND-	ATURE	(MG/L		(MG/L	(MG/L			
		PER		ARD	WATER	AS		AS CA)	AS NA)	PERCENT		
		SECOND	(US/CM)	UNITS)	(DEG C)	CACO3)		AS MG)	AS NA)			
		(00061)	(00095)	(00400)	(00010)	(00900)	(00915)	(00925)	(00930)	(00932)		
OCT												
08...	1050	15	1300	8.4	16.0	580	120	69	71	21		
NOV												
05...	1425	2.3	1460	8.5	22.0	--	--	--	--	--		
JAN												
07...	1320	30	1370	8.0	15.0	--	--	--	--	--		
APR												
22...	1615	776	936	8.5	20.0	410	89	46	41	18		
JUL												
06...	1400	170	1040	8.3	26.0	--	--	--	--	--		
AUG												
07...	1420	25	1380	8.2	29.5	--	--	--	--	--		

[illegible][illegible]

11134800 MIGUELITO CREEK AT LOMPOC, CA

LOCATION.—Lat 34°37'54", long 120°27'50", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank 120 ft upstream from drop structure to debris basin and 1,900 ft south of Lompoc Union High School.

DRAINAGE AREA.—11.6 mi².

PERIOD OF RECORD.—October 1970 to May 6, 1986, October 1987 to current year.

CHEMICAL DATA: Water years 1980–86, 1988–97.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 97.94 ft, Santa Barbara County Flood Control District datum. Prior to May 6, 1986, on right bank at site 350 ft downstream at different datum.

REMARKS.—Records poor. No regulation or diversion upstream from station; some pumping from wells along stream for irrigation. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,660 ft³/s, Feb. 3, 1998, gage height, 4.61 ft, from theoretical rating curve above 50 ft³/s; no flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 5.83 ft, site in use prior to 1986, from floodmark, discharge, 680 ft³/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 140 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	1330	381	1.79	Feb. 3	0530	2,660	4.61
Dec. 5	1215	619	2.18	Feb. 23	0815	479	1.96
Jan. 9	1430	199	1.40	Apr. 11	1500	146	1.26
Jan. 29	0330	146	1.26				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.13	e.30	e.30	e3.0	18	20	3.3	e2.8	e2.7	e2.2	e1.6
2	.57	.13	e.25	e.30	154	16	11	4.4	e2.8	e2.7	e2.1	e1.6
3	.43	.13	e.25	e.30	401	14	20	3.9	e2.8	e2.7	e2.1	e1.6
4	.43	.13	e.30	e.40	51	13	12	3.8	e2.8	e2.7	e2.1	e1.6
5	.34	.13	e10	e.30	26	12	8.7	8.7	e2.8	e2.7	e2.1	e1.6
6	.33	.13	e6.0	e.30	e250	12	7.8	3.9	e2.8	e2.7	e2.1	e1.6
7	.42	.13	e2.0	.92	e200	11	7.3	3.5	e2.8	e2.7	e2.0	e1.5
8	.33	.13	e1.0	.24	e150	9.7	6.7	3.3	e2.8	e2.7	e2.0	e1.5
9	.22	.13	e.80	24	e100	8.9	6.0	3.3	e2.8	e2.7	e2.0	e1.5
10	.13	.29	e.60	11	e70	8.0	6.0	3.3	e2.8	e2.7	e2.0	e1.4
11	.13	.16	e.50	e3.0	e50	7.6	27	3.1	e2.8	e2.7	e2.0	e1.4
12	.13	.13	e.40	e2.0	e45	6.9	9.8	3.7	e2.8	e2.7	e2.0	e1.4
13	.13	.33	e.40	e2.5	e40	8.4	7.3	4.6	e2.8	e2.7	e2.0	e1.4
14	.13	.22	e.40	e2.0	e35	6.9	6.8	2.8	e2.8	e2.7	e2.0	e1.4
15	.13	e5.0	e.50	e2.5	e35	6.9	6.0	2.8	e2.8	e2.7	e2.0	e1.4
16	.13	e1.4	e.60	e2.5	e60	6.9	6.0	2.8	e2.8	e2.7	e2.0	e1.3
17	.13	e.20	e.50	e2.5	e30	6.3	5.6	2.8	e2.8	e2.7	e2.0	e1.3
18	.13	e.20	e2.5	e4.0	21	6.0	5.2	e2.8	e2.8	e2.6	e1.9	e1.3
19	.13	e.20	e1.5	e3.5	40	6.0	5.2	e2.8	e2.8	e2.6	e1.9	e1.3
20	.13	e.30	e1.0	e3.0	22	6.0	5.2	e2.8	e2.8	e2.6	e1.9	e1.2
21	.13	e.20	e.90	e2.5	26	5.9	5.0	e2.8	e2.7	e2.6	e1.9	e1.2
22	.13	e.20	e.80	e2.0	56	5.2	4.5	e2.8	e2.7	e2.6	e1.9	e1.2
23	.13	e.20	e.70	e1.5	116	5.2	4.5	e2.8	e2.7	e2.6	e1.8	e1.2
24	.13	e.30	e.60	e1.4	44	14	4.4	e2.8	e2.7	e2.5	e1.8	e1.2
25	.13	e.50	e.50	e1.2	29	14	3.9	e2.8	e2.7	e2.4	e1.8	e1.1
26	.13	e1.0	e.45	e1.2	24	6.0	3.9	e2.8	e2.7	e2.4	e1.8	e1.1
27	.13	e.70	e.45	e1.5	21	5.5	3.9	e2.8	e2.7	e2.4	e1.7	e1.1
28	.13	e.40	e.40	e2.5	19	12	3.5	e2.8	e2.7	e2.4	e1.7	e1.1
29	.13	e.30	e.35	e13	---	7.5	3.3	e2.8	e2.7	e2.2	e1.7	e1.1
30	.13	e.40	e.35	e4.0	---	5.8	3.3	e2.8	e2.7	e2.2	e1.7	e1.0
31	.13	---	e.30	e2.5	---	23	---	e2.8	---	e2.2	e1.7	---
TOTAL	6.63	13.80	35.60	98.86	2118.0	294.6	229.8	103.2	83.0	80.2	59.9	40.2
MEAN	.21	.46	1.15	3.19	75.6	9.50	7.66	3.33	2.77	2.59	1.93	1.34
MAX	.70	5.0	10	24	401	23	27	8.7	2.8	2.7	2.2	1.6
MIN	.13	.13	.25	.24	3.0	5.2	3.3	2.8	2.7	2.2	1.7	1.0
AC-FT	13	27	71	196	4200	584	456	205	165	159	119	80

e Estimated.

11134800 MIGUELITO CREEK AT LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.25	.53	1.71	3.89	7.86	9.00	2.10	1.11	.73	.53	.40	.35
MAX	1.39	2.77	8.69	37.9	75.6	106	14.2	6.04	3.79	2.64	2.33	2.05
(WY)	1984	1996	1993	1995	1998	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 1997 CALENDAR YEAR FOR 1998 WATER YEAR WATER YEARS 1971 - 1998

ANNUAL TOTAL	337.49	3163.79	
ANNUAL MEAN	.92	8.67	2.36
HIGHEST ANNUAL MEAN			13.8
LOWEST ANNUAL MEAN			.15
HIGHEST DAILY MEAN	28	Jan 25	401
LOWEST DAILY MEAN	.13	Mar 7	.13
ANNUAL SEVEN-DAY MINIMUM	.13	Oct 10	.13
INSTANTANEOUS PEAK FLOW			2660
INSTANTANEOUS PEAK STAGE			4.61
ANNUAL RUNOFF (AC-FT)	669	6280	1710
10 PERCENT EXCEEDS	1.6	14	2.8
50 PERCENT EXCEEDS	.37	2.6	.36
90 PERCENT EXCEEDS	.16	.20	.02

11135800 SAN ANTONIO CREEK AT LOS ALAMOS, CA

LOCATION.—Lat 34°44'36", long 120°16'12", in Los Alamos Grant, Santa Barbara County, Hydrologic Unit 18060009, on left bank 100 ft upstream from bridge on northbound lane of U.S. Highway 101 at Los Alamos.

DRAINAGE AREA.—34.9 mi².

PERIOD OF RECORD.—Water years 1971–92, October 1997 to September 1998.

GAGE.—Water-stage recorder. Elevation of gage is 580 ft above sea level, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Pumping for irrigation of about 1,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,230 ft³/s, Mar. 1, 1983, gage height, 11.6 ft, from floodmarks, from rating curve extended above 150 ft³/s on basis of computation of peak flow through culvertst; maximum gage height, 14.53 ft, Feb. 3, 1998 (backwater from debris dam); no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 30 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 30	0800	52	2.08	Feb. 23	1430	1,060	5.93
Dec. 5	1815	102	2.47	Feb. 27	0915	86	2.09
Jan. 15	1800	41	1.98	Mar. 25	0745	58	1.90
Feb. 3	unknown	3,100	unknown	Mar. 31	1630	123	2.34
Feb. 7	1815	1,950	8.39	Apr. 3	1600	158	2.55
Feb. 14	1230	416	3.84	Apr. 11	1645	102	2.20

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.27	.00	8.7	52	72	1.1	e.61	.38	.18	.00
2	e.00	.00	.06	.00	e450	39	25	1.8	e.60	.41	.15	.00
3	e.00	.00	.13	.00	e1000	29	52	1.2	e.58	.34	.11	.00
4	e.00	.00	.02	.03	241	21	37	1.1	e.57	.29	.10	.00
5	e.00	.00	21	.04	111	16	20	2.5	e.56	.35	e.09	.00
6	e.00	.00	2.5	.03	268	12	13	1.1	e.55	.31	.08	.00
7	e.00	.00	.62	.03	564	10	7.3	1.0	e.53	.27	.06	.00
8	e.00	.00	1.1	.05	251	8.4	5.2	1.1	e.52	.28	.06	.00
9	e.00	.00	.06	.97	132	6.9	4.3	1.0	e.50	.27	.05	.01
10	.00	.00	.00	.35	92	5.9	3.5	.85	e.49	.23	.04	.01
11	.00	.00	.00	.00	71	5.5	25	.87	e.48	.21	.04	.01
12	.00	.00	.00	.00	53	5.1	7.7	1.4	.47	e.19	.03	.01
13	.00	.00	.00	.01	33	4.7	3.7	2.0	.45	e.17	.03	.01
14	.00	.00	.00	.00	169	3.7	3.0	.84	.42	e.15	.02	.01
15	.00	.00	.00	5.9	123	3.4	2.3	e.83	.42	.14	.02	.01
16	.00	.00	.00	.30	81	3.3	1.8	e.81	.48	.13	.01	.01
17	.00	.01	.00	.04	119	3.1	1.4	e.80	.51	.12	.01	.00
18	.00	.00	2.0	.20	74	2.9	1.5	e.79	.46	.15	.00	.00
19	.00	.01	.67	.25	107	2.7	1.2	e.77	.48	.18	.00	.00
20	.00	.00	.08	.03	71	2.5	1.1	e.76	.47	.19	.00	.00
21	.00	.00	.04	.01	56	2.3	1.2	e.75	.43	.16	.00	.00
22	.00	.01	.02	.01	259	2.4	1.2	e.74	.41	.16	.00	.00
23	.00	.02	.01	.01	454	2.0	1.1	e.72	.43	.23	.00	e.00
24	.00	.01	.00	.02	248	8.9	1.1	e.71	.44	.23	.00	e.00
25	.00	.01	.00	.01	136	29	1.2	e.70	.47	.19	.00	e.00
26	.00	1.2	.00	.01	103	4.1	1.1	e.68	.42	.18	.00	e.00
27	.00	.18	.00	.02	83	2.1	1.0	e.67	.41	.17	.00	e.00
28	.00	.04	.00	.02	67	28	1.1	e.66	.38	.16	.00	e.00
29	.00	.03	.00	8.4	---	3.5	1.1	e.65	.37	.15	.00	e.00
30	.00	5.0	.00	.07	---	5.1	.99	e.63	.38	.17	.00	e.00
31	.00	---	.00	.01	---	42	---	e.62	---	.22	.00	---
TOTAL	0.00	6.52	28.58	16.82	5424.7	366.5	299.09	30.15	14.29	6.78	1.08	0.08
MEAN	.000	.22	.92	.54	194	11.8	9.97	.97	.48	.22	.035	.003
MAX	.00	5.0	21	8.4	1000	52	72	2.5	.61	.41	.18	.01
MIN	.00	.00	.00	.00	8.7	2.0	.99	.62	.37	.12	.00	.00
AC-FT	.00	13	57	33	10760	727	593	60	28	13	2.1	.2

e Estimated.

SAN ANTONIO CREEK BASIN

11135800 SAN ANTONIO CREEK AT LOS ALAMOS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.049	.17	1.66	15.7	11.0	.81	.087	.039	.013	.002	.008
MAX	.000	.55	.92	33.2	194	144	9.97	.97	.48	.22	.035	.18
(WY)	1971	1974	1998	1983	1998	1983	1998	1998	1998	1998	1998	1990
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1971	1971	1973	1976	1977	1972	1971	1971	1971	1971	1971	1971

SUMMARY STATISTICS

FOR 1998 WATER YEAR

WATER YEARS 1971 - 1998

ANNUAL TOTAL	6194.59											
ANNUAL MEAN	17.0									2.38		
HIGHEST ANNUAL MEAN										18.9		1983
LOWEST ANNUAL MEAN										.001		1977
HIGHEST DAILY MEAN	1000					Feb	3			1430	Mar	1 1983
LOWEST DAILY MEAN					.00	Oct	1			.00	Oct	1 1970
ANNUAL SEVEN-DAY MINIMUM					.00	Oct	1			.00	Oct	1 1970
INSTANTANEOUS PEAK FLOW	3100					Feb	3			3230	Mar	1 1983
INSTANTANEOUS PEAK STAGE					14.53	Feb	3			14.53	Feb	3 1998
ANNUAL RUNOFF (AC-FT)	12290									1730		
10 PERCENT EXCEEDS					26					.26		
50 PERCENT EXCEEDS					.19					.00		
90 PERCENT EXCEEDS					.00					.00		

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.—Lat 34°46'56", long 120°31'47", in Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060009, on Vandenberg Military Reservation, on downstream side of San Antonio Road Bridge, 0.7 mi east of junction of San Antonio Road and Lompoc-Casmalia Road, and 3.8 mi south of Casmalia.

DRAINAGE AREA.—135 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 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. 5	1745	124	3.10	Feb. 23	unknown	unknown	unknown
Jan. 10	0415	102	2.95	Mar. 25	0900	157	3.34
Jan. 15	2030	137	3.19	Mar. 28	1445	119	3.07
Feb. 3	1000	3,260	11.91	Apr. 1	1345	255	3.88
Feb. 7	2115	1,510	8.25	Apr. 11	1815	246	3.84
Feb. 14	unknown	unknown	unknown				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.43	1.6	.53	27	e65	192	2.5	1.9	1.4	1.2	1.1
2	.44	.40	.73	.54	888	e50	65	3.3	1.9	1.5	1.2	1.1
3	.44	.40	.67	.57	1710	e38	97	5.1	1.9	1.6	1.2	1.1
4	.44	.40	.70	2.0	364	e27	41	3.7	1.9	1.7	1.2	1.2
5	.43	.51	33	1.3	180	e20	20	12	1.9	1.5	1.2	1.3
6	.43	.60	45	.61	391	e15	13	6.8	1.9	1.4	1.2	1.2
7	.44	.59	1.9	.63	555	e11	11	3.6	1.9	1.4	1.2	1.1
8	.44	.60	4.0	.69	354	e11	7.9	3.4	1.9	1.4	1.3	1.1
9	.44	.60	1.4	14	162	e10	5.4	3.3	1.9	1.5	1.2	1.1
10	.47	.78	.51	44	e130	e10	4.0	2.8	1.9	1.7	1.2	1.1
11	.46	.94	.47	6.0	e88	e9.6	47	2.8	1.9	1.5	1.2	e1.1
12	.44	.69	.45	1.7	e70	e9.3	18	7.3	1.8	1.5	1.2	e1.1
13	.44	.94	.46	4.2	e54	e9.0	7.5	11	1.6	1.4	1.2	e1.1
14	.44	.91	.47	1.6	e190	e8.7	5.6	4.1	1.6	1.3	1.2	e1.1
15	.43	1.4	.51	31	e170	e8.4	4.2	2.9	1.6	1.4	1.2	e1.0
16	.42	.91	.47	37	e130	e8.2	3.5	2.7	1.6	1.7	1.2	e1.0
17	.42	.62	.47	5.5	e170	e8.0	3.0	2.6	2.1	1.5	1.1	e1.0
18	.43	.73	13	2.1	e130	e7.8	2.8	2.5	2.3	1.4	1.1	e1.0
19	.43	.78	4.7	25	e150	7.6	2.7	2.3	2.1	1.3	1.1	e1.0
20	.44	.66	.70	5.3	e98	9.2	2.5	2.3	1.6	1.2	1.1	e1.0
21	.42	.55	.58	1.7	e78	7.4	2.4	2.2	1.6	1.2	1.1	e.98
22	.42	.55	.55	1.1	e300	7.1	2.2	2.2	1.5	1.2	1.1	e.98
23	.44	.57	.51	.86	e500	6.9	2.3	2.2	1.5	1.2	1.1	e.98
24	.44	.58	.47	.78	e280	22	2.3	2.2	1.8	1.4	1.1	e.97
25	.43	.61	.47	.69	e170	71	2.2	2.2	1.6	1.4	1.1	e.97
26	.40	1.2	.47	.66	e130	23	2.2	2.0	1.4	1.3	1.1	e.97
27	.42	.96	.46	.62	e95	14	2.3	2.0	1.4	1.2	1.1	e.97
28	.44	.62	.47	.57	e80	66	2.5	2.3	1.4	1.2	1.1	e.96
29	.44	.60	.51	28	---	32	2.5	2.2	1.5	1.2	1.1	e.96
30	.44	2.7	.56	11	---	18	2.6	2.0	1.5	1.2	1.1	e.96
31	.44	---	.56	3.8	---	77	---	2.0	---	1.2	1.1	---
TOTAL	13.49	22.83	116.82	234.05	7644	687.2	576.6	110.5	52.4	43.0	35.8	31.50
MEAN	.44	.76	3.77	7.55	273	22.2	19.2	3.56	1.75	1.39	1.15	1.05
MAX	.47	2.7	45	44	1710	77	192	12	2.3	1.7	1.3	1.3
MIN	.40	.40	.45	.53	27	6.9	2.2	2.0	1.4	1.2	1.1	.96
AC-FT	27	45	232	464	15160	1360	1140	219	104	85	71	62

e Estimated.

SAN ANTONIO CREEK BASIN

11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.79	1.58	2.92	12.1	29.9	20.6	7.41	1.44	.93	.68	.69	.73
MAX	2.36	6.73	10.6	104	273	234	149	3.85	2.07	1.59	1.84	2.23
(WY)	1964	1973	1956	1995	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1956 - 1998			
ANNUAL TOTAL	980.37				9568.19							
ANNUAL MEAN	2.69				26.2				6.52			
HIGHEST ANNUAL MEAN									39.7			
LOWEST ANNUAL MEAN									.47			
HIGHEST DAILY MEAN	86				1710				2040			
LOWEST DAILY MEAN	.22				.40				.10			
ANNUAL SEVEN-DAY MINIMUM	.27				.42				.13			
INSTANTANEOUS PEAK FLOW					3260				4680			
INSTANTANEOUS PEAK STAGE					11.91				14.32			
ANNUAL RUNOFF (AC-FT)	1940				18980				4720			
10 PERCENT EXCEEDS	3.1				46				4.8			
50 PERCENT EXCEEDS	.57				1.4				1.0			
90 PERCENT EXCEEDS	.36				.46				.37			

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[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, 26,200 ft³/s, Feb. 23, 1998, gage height, 14.76 ft, from rating curve extended above 4,900 ft³/s on basis of slope-area measurement at gage height 14.76 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft³/s, or maximum:

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 6	1130	5,920	10.24	Feb. 23	2230	26,200	14.76
Feb. 3	1815	12,900	12.53	Mar. 24	2015	777	8.41
Feb. 8	unknown	unknown	unknown	May 5	2030	847	8.41
Feb. 14	unknown	unknown	unknown				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.04	.00	.63	e5.0	e65	568	468	77	66	36	20	17
2	e.04	.00	.59	e4.5	e700	507	400	87	66	34	18	17
3	e.04	.00	.27	e4.0	e4000	458	600	90	66	32	17	17
4	e.04	.00	.26	e3.6	e2000	415	473	86	66	31	17	26
5	e.04	.00	16	e3.2	e200	387	465	255	66	30	16	37
6	e.03	.00	1060	e2.8	e500	420	454	250	66	29	15	26
7	e.03	.00	e500	e2.5	e1000	344	423	91	66	29	15	21
8	e.03	.00	e250	2.3	e600	295	393	105	67	28	13	19
9	e.03	.00	e140	14	e370	253	322	89	67	28	12	18
10	.17	.62	e90	17	e230	226	299	80	67	29	17	15
11	.21	.64	e80	e90	e150	207	317	75	64	30	12	15
12	.19	.22	e72	e72	e100	197	321	105	62	30	12	14
13	.16	.49	e50	e55	e250	192	262	183	62	31	12	14
14	.04	.32	e40	e45	e500	198	231	159	60	27	13	14
15	.00	.65	e34	e35	e350	165	207	146	58	24	19	13
16	.00	.47	e28	e58	e390	156	191	103	57	24	27	13
17	.00	.31	e22	e90	e420	143	171	69	59	24	30	13
18	.00	.28	e18	e60	e360	125	150	69	58	23	30	13
19	.00	.67	e15	e75	e310	115	133	73	58	24	38	12
20	.00	.50	e20	e90	e280	122	114	70	57	23	33	13
21	.06	.48	e18	e70	e700	130	102	71	61	23	30	13
22	.16	.42	e16	e55	e1700	134	97	70	69	23	31	14
23	.14	.46	e14	e42	e3500	137	93	69	86	25	25	15
24	.19	.48	e13	e35	e10000	251	92	67	83	25	25	15
25	.12	.51	e11	e30	2340	571	96	67	89	24	26	17
26	.08	9.5	e10	e28	1450	463	88	67	89	23	24	17
27	.11	1.5	e9.0	e24	765	337	89	66	84	22	20	16
28	.12	4.6	e8.0	e23	653	520	84	67	77	22	20	18
29	.04	2.2	e7.0	e45	---	553	83	67	48	20	21	17
30	.00	3.5	e6.4	e100	---	434	81	65	37	20	19	14
31	.00	---	e5.6	e60	---	494	---	66	---	18	19	---
TOTAL	2.11	28.82	2554.75	1240.9	33883	9517	7299	3004	1981	811	646	503
MEAN	.068	.96	82.4	40.0	1210	307	243	96.9	66.0	26.2	20.8	16.8
MAX	.21	9.5	1060	100	10000	571	600	255	89	36	38	37
MIN	.00	.00	.26	2.3	65	115	81	65	37	18	12	12
AC-FT	4.2	57	5070	2460	67210	18880	14480	5960	3930	1610	1280	998

e Estimated.

11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.57	2.50	15.9	41.9	124	109	27.9	8.56	4.58	2.04	1.28	1.80
MAX	8.40	23.6	275	467	1210	974	243	96.9	66.0	26.2	20.8	22.7
(WY)	1984	1966	1967	1969	1998	1995	1998	1998	1998	1998	1998	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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1960 - 1998			
ANNUAL TOTAL	8940.53				61470.58							
ANNUAL MEAN	24.5				168				27.8			
HIGHEST ANNUAL MEAN									168			
LOWEST ANNUAL MEAN									.002			
HIGHEST DAILY MEAN	1060				10000				10000			
LOWEST DAILY MEAN	.00				.00				.00			
ANNUAL SEVEN-DAY MINIMUM	.00				.00				.00			
INSTANTANEOUS PEAK FLOW					26200				26200			
INSTANTANEOUS PEAK STAGE					14.76				14.76			
ANNUAL RUNOFF (AC-FT)	17730				121900				20150			
10 PERCENT EXCEEDS	50				396				22			
50 PERCENT EXCEEDS	1.9				32				.50			
90 PERCENT EXCEEDS	.08				.17				.00			

WATER-QUALITY RECORDS

CHEMICAL DATA: Water year 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE,	SPE-	SPE-	PH	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,
		INST.	CIFIC	CIFIC	WATER	WATER					
		CUBIC	CON-	CON-	WHOLE	WHOLE					
		FEET	DUCT-	DUCT-	FIELD	LAB					
PER	ANCE	ANCE	(STAND-	(STAND-	ATURE	NESS	TOTAL	DIS-	SIUM,		
SECOND	ANCE	ANCE	ARD	ARD	WATER	AS	AS	SOLVED	DIS-	DIS-	
(00061)	(US/CM)	(US/CM)	UNITS)	UNITS)	(DEG C)	CAC03)	CA	(MG/L	AS	AS	
OCT											
10...	1520	.03	--	1150	--	8.1	22.5	--	--	--	--
DEC											
05...	1550	14	803	--	8.1	--	14.0	--	--	--	--
JAN											
08...	1500	5.04	2630	--	8.0	--	16.0	--	--	--	--
APR											
29...	1120	112	1610	--	8.3	--	23.5	670	140	75	117
JUN											
11...	1150	67	1760	--	8.2	--	17.5	--	--	--	--
JUL											
16...	1045	24	2190	--	8.2	--	25.0	--	--	--	--
AUG											
10...	1525	11	2170	--	8.2	--	31.0	--	--	--	--

[illegible][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. WDR CA-98-1: 1997.

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 except for estimated daily discharges, which are poor. 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 were not determined but were known to have occurred on Dec. 6, Jan. 10, Feb. 3, Feb. 7, Feb. 14, and Feb. 23. The peak of May 13 at 1315 was 529 ft³/s, gage height 3.56 ft.

REVISIONS.—Revised daily discharges, in cubic feet per second, for period in September 1997 are given below. These figures supercede those published in the report for 1997.

Sept. 5	0.68	Sept. 12	0.46	Sept. 19	0.46	Sept. 26	0.40
6	0.68	13	0.50	20	0.44	27	0.39
7	0.60	14	0.48	21	0.42	28	0.36
8	0.58	15	0.45	22	0.44	29	0.33
9	0.58	16	0.41	23	0.43	30	0.37
10	0.59	17	0.43	24	0.35		
11	0.49	18	0.45	25	0.38		
TOTAL		MEAN		MAX		MIN	
September 1997	15.70	0.52		1.2		0.33	
Water Year 1997	11,535.10	31.6		690		.33	
						AC-FT	
						31	
						22,880	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.39	.22	e2.0	e18	e600	e950	e800	259	e207	87	38	13
2	.42	.25	e1.8	e19	e4000	e900	e700	271	194	84	36	13
3	.44	.26	e1.5	e20	e5400	e850	e900	365	189	83	36	13
4	.43	.26	e1.4	e25	e2500	e800	e800	320	182	81	34	16
5	.43	.27	e5.0	e40	e1900	e750	e700	372	174	79	31	19
6	.39	.27	e200	e35	e2700	e800	e650	454	168	77	30	26
7	.40	.32	e140	e33	e2300	e800	e600	370	168	73	29	31
8	.40	.33	e120	e30	e1900	e700	e580	341	163	70	27	e29
9	.40	.36	e100	e28	e1500	e620	e580	e305	157	66	27	e28
10	.40	.38	e80	e400	e1100	e550	e600	e280	155	66	26	28
11	.40	.51	e70	e200	e900	e500	e700	265	151	64	25	25
12	.40	.51	e60	e150	e750	e470	e750	313	149	62	23	22
13	.40	.51	e55	e120	e750	e450	e700	500	146	e60	22	21
14	.36	.51	e50	e90	e1200	e430	e600	465	141	e57	21	19
15	.31	.65	e45	e75	e900	e440	e500	423	136	e54	21	19
16	.29	.64	e40	e90	e800	e400	e450	400	133	e51	21	18
17	.29	.64	e35	e90	e1100	e380	e430	363	132	50	21	18
18	.32	.64	e33	e80	e900	e360	e410	333	128	49	e20	18
19	.37	.72	e33	e70	e800	e345	e390	309	126	48	e19	17
20	.40	.74	e50	e120	e700	e340	e370	291	126	48	19	16
21	.40	.80	e35	e70	e800	e340	e350	280	e123	47	20	16
22	.36	.80	e30	e65	e1500	e350	e340	264	e120	46	21	17
23	.33	.80	e28	e60	e4500	e380	e320	256	118	46	20	17
24	.34	.80	e25	e58	e2500	e450	e310	248	115	e46	18	18
25	.31	e1.0	e23	e55	e1500	e600	e300	244	113	e46	18	18
26	.30	e2.0	e22	e54	e1300	e550	e290	243	109	45	18	18
27	.31	e10	e21	e52	e1100	e580	e280	235	104	43	17	19
28	.33	e7.0	e20	e70	e1000	e600	e275	231	99	40	17	19
29	.33	e5.0	e20	e110	---	e670	e270	236	94	38	16	e19
30	.27	e3.0	e19	e100	---	e620	e270	224	90	38	15	e19
31	.22	---	e19	e85	---	e700	---	e214	---	38	14	---
TOTAL	11.14	40.19	1384.7	2512	46900	17675	15215	9674	4210	1782	720	589
MEAN	.36	1.34	44.7	81.0	1675	570	507	312	140	57.5	23.2	19.6
MAX	.44	10	200	400	5400	950	900	500	207	87	38	31
MIN	.22	.22	1.4	18	600	340	270	214	90	38	14	13
AC-FT	22	80	2750	4980	93030	35060	30180	19190	8350	3530	1430	1170

e Estimated.

11138500 SISQUOC RIVER NEAR SISQUOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.43	6.52	27.6	83.8	181	153	97.3	35.2	13.2	5.34	2.71	2.67
MAX	46.0	80.5	555	1457	1731	871	975	312	140	57.5	23.2	19.6
(WY)	1968	1966	1967	1969	1969	1983	1958	1998	1998	1998	1998	1998
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1944 - 1998	
ANNUAL TOTAL	10682.77		100713.03		50.1	
ANNUAL MEAN	29.3		276		361	
HIGHEST ANNUAL MEAN					1.07	
LOWEST ANNUAL MEAN					14800	
HIGHEST DAILY MEAN	513	Jan 26	5400	Feb 3	14800	Jan 25 1969
LOWEST DAILY MEAN	.22	Oct 31	.22	Oct 31	.00	Nov 11 1967
ANNUAL SEVEN-DAY MINIMUM	.25	Oct 30	.25	Oct 30	.00	Nov 11 1967
INSTANTANEOUS PEAK FLOW			unknown	Feb 3	23200	Dec 6 1966
INSTANTANEOUS PEAK STAGE			unknown	Feb 3	15.75	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	21190		199800		36300	
10 PERCENT EXCEEDS	82		750		87	
50 PERCENT EXCEEDS	2.5		65		2.5	
90 PERCENT EXCEEDS	.40		.40		.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 1997 TO SEPTEMBER 1998

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 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)
		OCT 10...	1215	.42	1150	8.1	17.5	--	--	--
NOV 03...	1200	.26	1180	8.0	21.5	--	--	--	--	--
DEC 03...	1150	1.4	1180	8.5	14.5	--	--	--	--	--
JAN 07...	1200	32	1080	8.4	10.5	--	--	--	--	--
APR 30...	1210	266	1220	8.5	15.5	620	120	79	50	15
JUN 10...	1325	156	1120	8.5	17.0	--	--	--	--	--
JUL 17...	1405	50	1180	8.5	26.0	--	--	--	--	--
AUG 07...	1750	27	1190	8.4	26.0	--	--	--	--	--

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

[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. 6	unknown	3,060	7.10	Mar. 25	1145	1,940	6.73
Feb. 3	1345	29,500	10.61	Apr. 3	1630	1,910	6.72
Feb. 14	2030	3,300	7.17	May 5	2130	875	6.38
Feb. 23	1845	21,800	9.91	May 13	1030	856	6.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	e.00	e17	125	e1600	1580	e300	e240	60	e12	e3.2
2	.00	.00	e.00	e20	6500	e1450	1490	e300	e230	60	e11	e3.1
3	.00	.00	e.00	e30	13900	1030	1600	464	e220	55	e10	e3.2
4	.00	.00	e.00	e40	5500	933	1680	297	e210	57	e10	e3.4
5	.00	.00	e10	e100	e2500	712	1600	504	e200	54	e9.0	e6.0
6	.00	.00	e230	e90	e3500	974	1410	632	e190	e48	e8.0	e8.0
7	.00	.00	e140	e80	e3300	685	1310	453	e180	e47	e8.0	e8.0
8	.00	.00	e110	e75	e3100	e600	1170	e350	e180	e46	e7.0	e8.0
9	.00	.00	e90	e80	e2700	e560	1070	e300	e170	e45	e7.0	e7.5
10	.00	.00	e80	e330	e2300	e520	1020	e300	e160	e44	e6.5	e7.0
11	.00	.00	e70	e150	e2100	e500	1070	e350	149	e43	e6.0	e6.5
12	.00	.00	e60	e120	1630	e480	1120	376	146	e42	e6.0	e6.0
13	.00	.00	e50	97	1280	e460	955	742	141	e41	e5.7	e6.0
14	.00	.00	e40	78	1990	e450	797	e650	130	e40	e5.4	e5.5
15	.00	.00	e37	93	2280	e440	e700	e600	121	e39	e5.2	e5.0
16	.00	.00	e34	175	1590	e440	e600	e550	119	e39	e5.0	e4.8
17	.00	.00	e31	154	1820	e430	e550	e510	116	e38	e5.0	e4.6
18	.00	.00	e29	121	1650	e420	e500	e480	98	e35	e4.9	e4.4
19	.00	.00	e26	156	1510	e410	e500	e460	106	e32	e4.8	e4.0
20	.00	.00	e40	162	1430	e400	e450	e440	108	e30	e4.7	e3.5
21	.00	.00	e35	125	1430	e400	e430	e420	103	e28	e4.6	e3.0
22	.00	.00	e30	97	2780	e400	e410	e400	98	e26	e4.5	e2.5
23	.00	.00	e28	75	9830	e400	e390	e380	96	e24	e4.4	e2.3
24	.00	.00	e26	60	8120	e400	e370	e360	91	e22	e4.3	e2.0
25	.00	.00	e24	50	e3500	1480	e350	e340	85	e20	e4.2	e1.8
26	.00	.00	e22	42	2420	1150	e340	e320	82	e19	e4.1	e1.6
27	.00	e4.0	e20	35	e2000	751	e330	e300	76	e17	e4.0	e1.5
28	.00	e3.0	e19	27	e1900	1110	e320	e280	70	e16	e3.9	e1.4
29	.00	e2.0	e18	79	---	1150	e310	e260	66	e15	e3.7	e1.2
30	.00	e1.0	e17	138	---	918	e300	e250	61	e14	e3.5	e1.0
31	.00	---	e17	110	---	1130	---	e240	---	e13	e3.4	---
TOTAL	0.00	10.00	1333.00	3006	92685	22783	24722	12608	4042	1109	185.8	126.0
MEAN	.000	.33	43.0	97.0	3310	735	824	407	135	35.8	5.99	4.20
MAX	.00	4.0	230	330	13900	1600	1680	742	240	60	12	8.0
MIN	.00	.00	.00	17	125	400	300	240	61	13	3.4	1.0
AC-FT	.00	20	2640	5960	183800	45190	49040	25010	8020	2200	369	250

e Estimated.

11140000 SISQUOC RIVER NEAR GAREY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.12	2.61	18.7	103	235	190	91.2	21.7	4.37	.80	.15	.17
MAX	3.88	39.0	506	1531	3310	1833	1072	407	135	35.8	5.99	4.20
(WY)	1968	1966	1967	1969	1998	1983	1958	1998	1998	1998	1998	1998
MIN	.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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1942 - 1998	
ANNUAL TOTAL	22120.88		162609.80		54.6	
ANNUAL MEAN	60.6		446		446	
HIGHEST ANNUAL MEAN					.000	
LOWEST ANNUAL MEAN					1998	
HIGHEST DAILY MEAN	1510	Jan 27	13900	Feb 3	13900	Feb 3 1998
LOWEST DAILY MEAN	.00	Apr 3	.00	Oct 1	.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 3	.00	Oct 1	.00	Oct 1 1941
INSTANTANEOUS PEAK FLOW			29500	Feb 3	33600	Mar 1 1983
INSTANTANEOUS PEAK STAGE			10.61	Feb 3	13.50	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	43880		322500		39570	
10 PERCENT EXCEEDS	143		1290		51	
50 PERCENT EXCEEDS	.00		57		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

11140600 BRADLEY DITCH NEAR DONOVAN ROAD, AT SANTA MARIA, CA

LOCATION.—Lat 34°58'00", long 120°25'00", in NE 1/4 NE 1/4 sec.11, T.10 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on left bank 250 ft upstream from bridge on Donovan Road and 0.2 mi east of U.S. Highway 101 in Santa Maria.

DRAINAGE AREA.—5.47 mi².

PERIOD OF RECORD.—October 1970 to September 1978, October 1979 to September 1992, October 1997 to September 1998.

GAGE.—Water-stage recorder on concrete-lined channel. Elevation of gage is 225 ft above sea level, from topographic map. Prior to September 1978, at site 50 ft downstream at same datum.

REMARKS.—Records poor. Extensive channel modification in 1979 water year widened the concrete-lined channel. No regulation upstream from station. Many diversions upstream from station for irrigation during growing season, and some waste water.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 848 ft³/s, Feb. 3, 1998, gage height, 5.69 ft, from rating curve extended above 296 ft³/s on basis of slope-conveyance studies of discharge; maximum gage height, 5.85 ft, Mar 4, 1978; no flow for several days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharge 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)
Nov. 26	1350	153	2.88	Feb. 19	1800	308	3.67
Nov. 30	1255	247	3.39	Feb. 23	0745	290	3.59
Dec. 5	1145	179	3.03	Mar. 25	0630	136	2.77
Jan. 15	1515	119	2.66	Mar. 28	0415	103	2.54
Feb. 3	0530	848	5.69	Apr. 1	1045	199	3.14
Feb. 7	1615	632	4.96	May 5	1115	247	3.39
Feb. 14	1100	344	3.83				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.14	e1.2	.67	.75	21	.01	83	1.0	e1.2	1.1	.51	e.17
2	e.15	e1.2	.07	.58	165	.02	9.1	1.3	e1.2	.73	.60	e.16
3	e.15	e.65	.00	.82	319	.16	31	1.7	e1.2	.86	.07	e.15
4	e.15	e1.2	.01	4.9	23	.16	6.3	1.6	e1.2	.68	.07	e.70
5	e.15	e1.5	45	.09	2.5	1.3	1.5	39	e1.2	.80	.08	e1.5
6	e.16	e1.7	10	.48	91	2.4	.08	1.0	e1.2	.21	.18	e.25
7	e.17	e2.1	3.4	.77	206	.91	.08	.05	e1.2	.10	.62	e.20
8	e.17	e2.2	3.8	.25	85	.54	.00	.01	e1.0	.21	.82	e.15
9	e.22	e4.0	.20	6.3	12	.25	.01	.03	1.6	.41	1.1	e.10
10	e.49	e7.9	.00	9.3	1.0	.90	.24	.11	2.2	.32	1.8	e.10
11	e.53	e3.4	.15	.13	.04	1.6	.76	.17	1.3	.37	3.1	.28
12	e.53	e.87	.08	4.6	.09	2.4	1.1	.95	1.6	.41	.87	1.1
13	e.49	e2.9	.01	1.9	.00	1.7	.15	1.6	1.0	.35	e.70	.63
14	e.37	e1.6	.57	.01	95	1.3	.02	e.12	.95	.58	e.60	.17
15	e.53	e2.9	.02	30	12	1.6	.02	e.15	.72	.89	e.45	.85
16	e.62	e.16	.08	2.8	29	1.2	.02	e.20	.99	1.3	e.40	.11
17	e.58	e.61	.09	.04	48	.46	.06	e.35	1.3	1.4	e.35	.05
18	e.69	.32	3.5	1.0	3.7	1.0	.39	e.70	1.0	2.2	e.30	.14
19	e1.1	19	.03	3.7	52	.73	.71	e.90	1.2	1.7	e.30	.10
20	e.31	.20	.03	.24	13	1.2	.32	e1.0	1.6	2.5	e.25	.62
21	e.26	.38	.00	.08	10	.72	.47	e1.1	1.0	1.4	e.25	.30
22	e.38	.20	.03	.02	69	.36	1.1	e1.2	.81	.24	e.25	1.1
23	e.29	.40	.23	.00	90	.04	1.4	e1.2	1.4	.40	e.25	.10
24	e.62	.47	1.1	.02	14	31	1.5	e1.2	.86	.46	e.20	.34
25	e.41	.09	.62	.04	1.7	38	1.5	e1.2	.62	.48	e.20	.09
26	e.38	32	.99	.07	.09	.16	1.3	e1.2	.54	.35	e.20	.79
27	e.34	1.9	1.5	.20	.06	.01	1.1	e1.2	.41	.29	e.20	.04
28	e.71	.07	1.3	.40	.03	34	1.0	e1.2	.48	.20	e.20	.05
29	e.60	.01	1.3	6.0	---	1.9	1.1	e1.2	.56	.26	e.18	.02
30	e.55	55	1.0	.45	---	.27	1.0	e1.2	.94	.33	e.18	.82
31	e.50	---	1.3	.25	---	34	---	e1.2	---	.44	e.18	---
TOTAL	12.74	146.13	77.08	76.19	1363.21	160.30	146.33	65.04	32.48	21.97	15.46	11.18
MEAN	.41	4.87	2.49	2.46	48.7	5.17	4.88	2.10	1.08	.71	.50	.37
MAX	1.1	55	45	30	319	38	83	39	2.2	2.5	3.1	1.5
MIN	.14	.01	.00	.00	.00	.01	.00	.01	.41	.10	.07	.02
AC-FT	25	290	153	151	2700	318	290	129	64	44	31	22

e Estimated.

11140600 BRADLEY DITCH NEAR DONOVAN ROAD, AT SANTA MARIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	.99	1.38	1.95	5.69	3.47	1.20	.79	.79	.94	1.02	.88
MAX	4.17	4.87	3.66	10.3	48.7	11.5	4.88	2.10	2.22	1.97	1.72	2.64
(WY)	1982	1998	1975	1983	1998	1991	1998	1998	1987	1983	1987	1976
MIN	.036	.25	.26	.081	.13	.32	.15	.14	.16	.17	.14	.11
(WY)	1971	1976	1976	1971	1974	1971	1977	1971	1977	1978	1978	1978

SUMMARY STATISTICS

FOR 1998 WATER YEAR

WATER YEARS 1971 - 1998a

ANNUAL TOTAL	2128.11											
ANNUAL MEAN	5.83											
HIGHEST ANNUAL MEAN									1.64			
LOWEST ANNUAL MEAN									5.83			1998
HIGHEST DAILY MEAN	319	Feb	3						319	Feb	3	1998
LOWEST DAILY MEAN	.00	Dec	3						.00	Oct	1	1970
ANNUAL SEVEN-DAY MINIMUM	.06	Jan	21						.00	Dec	3	1970
INSTANTANEOUS PEAK FLOW	848	Feb	3						848	Feb	3	1998
INSTANTANEOUS PEAK STAGE	5.69	Feb	3						5.85	Mar	4	1978
ANNUAL RUNOFF (AC-FT)	4220								1190			
10 PERCENT EXCEEDS	6.1								2.1			
50 PERCENT EXCEEDS	.62								.59			
90 PERCENT EXCEEDS	.06								.04			

a Does not include water years 1979 and 1993-97 (See Period of Record).

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)
Nov. 30	1145	48	3.01	Feb. 23	0800	660	5.08
Dec. 5	1145	103	3.26	Mar. 6	0400	28	2.25
Jan. 10	0445	39	2.95	Mar. 24	1715	177	3.29
Jan. 15	1745	79	3.16	Apr. 1	1100	193	3.38
Feb. 3	unknown	unknown	unknown	Apr. 11	1515	145	3.10
Feb. 6	unknown	unknown	unknown	May 5	1130	139	3.06
Feb. 14	1145	902	5.65	May 12	1445	96	2.80
Feb. 19	1815	344	4.07				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.24	3.1	.40	44	7.7	89	1.1	e.74	.36	.34	e.14
2	.02	.22	.82	.42	e250	6.7	13	2.3	e.72	.21	.10	e.15
3	.02	.06	.40	.49	e300	6.0	40	1.9	e.70	.37	.30	e.18
4	.02	.06	.17	2.8	e50	5.5	17	2.2	e.67	.31	.29	e.25
5	.00	.13	22	.92	e20	8.6	6.0	32	e.63	.27	.21	e.35
6	.00	.06	5.9	.58	e150	12	4.5	3.2	e.60	.32	e.15	e.32
7	.05	.11	3.3	.47	e200	5.1	3.6	2.6	e.55	.45	e.11	e.31
8	.06	.03	5.1	.46	e100	4.5	3.0	2.9	e.52	.32	e.12	e.31
9	.04	.01	1.5	7.1	e40	4.2	3.0	1.9	e.50	.39	e.12	e.30
10	.02	.22	.57	16	e20	3.9	2.9	1.9	e.49	.30	e.11	e.29
11	.00	.41	.51	2.8	e15	3.8	40	1.9	e.48	.37	e.10	e.28
12	.00	.10	.37	2.1	e10	3.9	8.4	17	e.45	.26	e.10	e.28
13	.00	1.4	.34	3.6	7.9	4.9	4.9	5.8	e.43	.24	e.11	e.28
14	.04	2.1	1.0	.79	188	4.2	3.4	1.3	e.42	.24	e.11	e.27
15	.06	3.0	.93	18	52	3.9	e2.5	e1.3	e.40	e.22	e.11	e.28
16	.11	.60	.51	5.6	67	3.8	e2.3	e1.2	e.38	.21	e.11	e.27
17	.10	.12	.41	1.5	91	3.5	e2.2	e1.2	e.35	.21	e.12	e.27
18	.15	.09	3.7	7.7	19	3.3	e2.1	e1.1	e.32	.71	e.12	e.27
19	.10	2.7	1.2	10	74	3.2	e2.0	e1.0	e.32	.40	e.12	e.26
20	.11	.48	.54	1.9	29	3.1	e1.9	e1.0	e.31	.31	e.12	e.26
21	.11	.14	.46	.70	43	2.9	e1.8	e1.0	e.30	.32	e.12	e.27
22	.12	.12	.38	.49	120	2.8	e1.7	e.95	e.29	.87	e.12	e.26
23	.19	.12	.43	.46	172	2.8	e1.7	e.90	e.27	.39	e.12	e.25
24	.15	.12	.34	.41	33	34	e1.6	e.87	e.29	.37	e.12	e.25
25	.25	.14	.68	.40	18	33	e1.5	e.85	e.28	.31	e.12	e.25
26	.18	5.8	.64	.36	14	6.0	e1.4	e.82	e.30	.28	e.12	e.24
27	.08	2.1	.66	.36	12	5.6	e1.3	e.80	e.29	.27	e.13	e.24
28	.09	.29	.38	.37	9.1	57	e1.3	e.79	e.29	.36	e.13	e.23
29	.22	.18	.38	7.5	---	8.9	e1.2	e.78	e.31	.43	e.13	e.23
30	.04	17	.41	1.6	---	4.9	e1.2	e.77	e.30	.17	e.13	e.23
31	.13	---	.40	2.4	---	39	---	e.77	---	.24	e.13	---
TOTAL	2.46	38.15	57.53	98.68	2148.0	298.7	266.4	94.10	12.90	10.48	4.34	7.77
MEAN	.079	1.27	1.86	3.18	76.7	9.64	8.88	3.04	.43	.34	.14	.26
MAX	.25	17	22	18	300	57	89	32	.74	.87	.34	.35
MIN	.00	.01	.17	.36	7.9	2.8	1.2	.77	.27	.17	.10	.14
AC-FT	4.9	76	114	196	4260	592	528	187	26	21	8.6	15

e Estimated.

11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.072	.27	.82	3.75	10.1	14.0	1.20	.44	.17	.10	.091	.086
MAX	.29	1.27	2.68	27.5	76.7	120	8.88	3.04	.43	.34	.23	.26
(WY)	1984	1998	1992	1995	1998	1995	1998	1998	1998	1998	1983	1998
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 1997 CALENDAR YEAR				FOR 1998 WATER YEAR				WATER YEARS 1983 - 1998			
ANNUAL TOTAL	329.52				3039.51							
ANNUAL MEAN	.90				8.33				2.56			
HIGHEST ANNUAL MEAN									13.8			
LOWEST ANNUAL MEAN									.090			
HIGHEST DAILY MEAN	37 Jan 2				300 Feb 3				1460 Mar 10 1995			
LOWEST DAILY MEAN	.00 May 25				.00 Oct 1				.00 Oct 1 1982			
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 31				.02 Oct 1				.00 Oct 1 1982			
INSTANTANEOUS PEAK FLOW					unknown Feb 3 a				1830 Mar 1 1983			
INSTANTANEOUS PEAK STAGE					unknown Feb 3 a				11.07 Mar 10 1995			
ANNUAL RUNOFF (AC-FT)	654				6030				1850			
10 PERCENT EXCEEDS	1.3				15				1.3			
50 PERCENT EXCEEDS	.09				.46				.07			
90 PERCENT EXCEEDS	.00				.11				.00			

a Discharge and gage-height are unknown but probably occurred on Feb. 3.

11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—

CHEMICAL DATA: Water years 1983–92, October 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	DIS-CHARGE,	SPE-	PH	TEMPER-	HARD-	CALCIUM	MAGNE-	SODIUM,	SODIUM
		INST.	CIFIC	WATER						
		CUBIC	CON-	WHOLE						
		FEET	DUCT-	FIELD						
		PER	ANCE	(STAND-	ATURE	(MG/L	SOLVED	SOLVED	SOLVED	
		SECOND	(US/CM)	ARD	WATER	AS	(MG/L	(MG/L	(MG/L	SODIUM
		(00061)	(00095)	UNITS	(DEG C)	CACO3)	AS CA)	AS MG)	AS NA)	PERCENT
		(00061)	(00095)	(00400)	(00010)	(00900)	(00915)	(00925)	(00930)	(00932)
NOV										
03...	1525	.02	1980	7.9	18.5	--	--	--	--	--
DEC										
02...	1050	.85	1260	7.7	11.0	--	--	--	--	--
JAN										
13...	1140	3.3	926	7.7	13.0	--	--	--	--	--
APR										
30...	1510	1.3	1720	8.3	28.5	360	78	40	214	56
JUN										
09...	1615	.48	1880	8.8	29.0	--	--	--	--	--
JUL										
15...	0940	.48	2320	8.3	21.0	--	--	--	--	--
AUG										
06...	0855	.09	2640	8.0	19.0	--	--	--	--	--

[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 others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at miscellaneous sites are given in separate tables.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 1998

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum Gage height (ft)	Discharge (ft ³ /s)
BRISTOL LAKE BASIN							
10253000	Gourd Creek near Ludlow, CA	Lat 34°40'35", long 116°01'20", in SW 1/4 sec.23, T.7 N., R.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, 1976–98		12.76	44
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, 1977–98		2.99	36.7
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, 1997–98		15.33	e65
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, 1978–98		—	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	1996–98		—	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.		1996–98		—	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.		1997–98		—	0

a Operated as a continuous-record station.

e Estimated.

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (ft)	Annual maximum Discharge (ft ³ /s)
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	1997-98	08-31-98	2.60	119
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	1997-98	02-23-98	23.48	244
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	1997-98	02-23-98	6.65	145
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	02-03-98	unknown	unknown
				1981-98	02-23-98	10.57	723
11133700	Purissima Creek near Lompoc, CA	Lat 34° 41'34", long 120°25'51", in Purissima 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	02-03-98	2.51	104
				1976-98	02-23-98	1.55	14.6
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	02-03-98	3.05	505
				1973-78	02-23-98	4.06	965
				1980-98			

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. The data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to miscellaneous sites.

SANTA YNEZ RIVER BASIN

11121900 GIBRALTER DAM DIVERSION WEIR AT GIBRALTER DAM, CA

LOCATION.—Lat 34°31'37", long 119°41'10", NE 1/4 NW 1/4 sec.11, T. 5N., R. 27W., Santa Barbara County, Hydrologic Unit 18060010.

DRAINAGE AREA.—216 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

REMARKS.—Samples collected by Santa Barbara County and reviewed by the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TIME	PH			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)													
		SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE WATER (DEG C) (00010)																		
OCT 08...	0930	1130	8.1	20.0	540	110	64	59	19													
APR 21...	1100	1300	8.20	12.0	660	150	70	53	15													
DATE		ANC			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)													
		SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)						SULFATE DIS- SOLVED (MG/L AS SO4) (00945)												
OCT 08...	1	2.5	173	440	16	.5	15	--	809													
APR 21...	.9	2.1	235	490	9.2	.4	16	976	927													
DATE		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)		
		SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)																				
OCT 08...	1.10	<.01	<.05	<.01	.01	662	31	8														
APR 21...	1.33	<.01	.06	.04	.01	457	<10	10														

SANTA YNEZ RIVER BASIN

11127500 ZANJA DE COTA CREEK NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°35'10", long 120°05'42", in Canada de Los Pinos Grant (on boundary), on right bank 75 ft downstream from Mitchell Ranch Rd., 0.2 mi upstream from mouth, and 20 mi southwest of Santa Ynez, Santa Barbara County.

DRAINAGE AREA.—13.4 mi².

RECORDS AVAILABLE.—

CHEMICAL DATA: May 1998 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
MAY 01...	1100	.27	1240	7.5	15.5	590	92	89	62	18
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)	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)
MAY 01...	1	7.1	540	443	190	58	.3	47	870	
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)
MAY 01...	810	1.18	<.01	.08	.03	.95	187	12	330	

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 Rd. and 30 ft upstream from where the creek crosses Refugio Rd.

DRAINAGE AREA.—6.32 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to current year .

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	
		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)
APR											
20...	1600	8.9	906	8.4	19.5	450	120	36	36	15	
22...	1500	7.2	988	8.4	20.0	480	120	42	42	16	

SANTA MARIA 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 Rd., 0.1 mi east on Santos Rd. on downstream side of bridge over Santa Rosa Creek and 5.1 mi west of Buellton.

DRAINAGE AREA.—15.2 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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 22...	1220	.80	1440	8.2	22.0	450	89	56	140	39
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)	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)
APR 22...	3		7.3	153	125	430	100	.8	52	1030
DATE	TIME	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 22...	997		1.40	.02	7.7	.04	4.0	871	<10	8

SANTA YNEZ RIVER BASIN

11135100 SANTA LUCIA CANYON NEAR LOMPOC, CA

LOCATION.—Lat 34°42'16", long 120°30'07", Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060010, 1.1 mi north of intersection of Highway 1 and Santa Lucia Canyon Road, at crossing of Pine Canyon Road and stream, 5.8 mi northeast of Surf.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: Apr. 8, 1997, to Sept. 30, 1997 (discontinued).

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

(NOT PREVIOUSLY PUBLISHED)

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 AD- SORP- TION RATIO PERCENT (00932)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
		APR 08...	1115	1.1	1870	8.4	10.0	360	100	27	31

DATE	BICAR- BONATE 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)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	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...	397	326	200	21	.2	23	595	.81	25.3	13

SANTA MARIA 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 and 1 mi west of Lompoc.

DRAINAGE AREA.—4.18 mi².

PERIOD OF RECORD.—

CHEMICAL DATA: April 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
OCT 08...	1740	e.01	1880	8.1	16.0	850	150	120	85	18
APR 21...	1425	2.1	1560	8.3	--	650	110	90	93	24

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)	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)
OCT 08...	1	4.1	--	¹ 412	420	170	.5	35	1320
APR 21...	2	3.2	449	368	310	130	.4	36	1070

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)
OCT 08...	1230	1.80	<.00	<.05	<.01	E.09	149	11	52
APR 21...	1000	1.46	.07	.48	.05	.11	205	<10	70

e Estimated.

¹ Lab value.

SANTA YNEZ RIVER BASIN

343246119463401 SANTA YNEZ RIVER AT LOS PRIETOS BOYS CAMP, NEAR SANTA YNEZ, CA

LOCATION.—Lat 34°32'46", long 119°46'34, San Marcos Pass, Santa Barbara County, Hydrologic Unit 18060010, about 6 mi upstream from Lake Cachuma and 11 mi east south-east of Santa Ynez at river crossing.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
OCT 06...	1150	.200	1290	8.0	25	630	150	62	54
DATE	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)
OCT 06...	16	.9	2.5	228	460	22	.4	21	954
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)
OCT 06...	907	1.30	<.01	<.05	<.01	<.01	478	13	11

SANTA MARIA RIVER BASIN

343519120092201 SOLVANG SEWAGE TREATMENT PLANT AT SOLVANG, CA

LOCATION.—Lat 34°35'19", long 120°09'22", Santa Barbara County, Hydrologic Unit 18060010, along Santa Ynez River, about 3/4 mi west, downstream from Alisal Rd. bridge, 0.5 mi southwest of Solvang, on San Carlos De Jonata Grant.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)		
OCT 08...	1540	1660	7.3	24.0	380	55	59	180	49		
DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)	
OCT 08...	4	14	108	330	190	.2	18	1060	1030		
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)	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)		
OCT 08...	1.44	.36	22	4.6	4.2	387	47	4			

SANTA YNEZ RIVER BASIN

343637120120601 BUELLTON SEWAGE TREATMENT PLANT AT BUELLTON, CA

LOCATION.—Lat 34°36'37", long 120°12'06", Santa Barbara County, Hydrologic Unit 18060010, along Santa Ynez River, 100 ft west of Industrial Way, 0.5 mi west of Avenue of the Flags bridge, downstream from old station, Santa Ynez River at Buellton (11129500), on San Carlos De Jonata Grant.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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) AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) AS NA) (00930)	SODIUM PERCENT (00932)	
OCT 07...	1030	1140	7.4	20.0	200	42	24	140	57	
DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)
OCT 07...	4	23	147	140	140	.2	21	714	715	
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)	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)	
OCT 07...	.97	.01	18	<.01	4.9	468	17	<1		

SANTA MARIA RIVER BASIN

343943120284701 LOMPOC SEWAGE TREATMENT PLANT AT LOMPOC, CA

LOCATION.—Lat 34°39'43", long 120°28'47", Santa Barbara County, Hydrologic Unit 18060010, along Santa Ynez River about 0.3 mi west of 13th St. and 300 ft north of Central Ave., about 0.5 mi downstream from 13th St. Bridge, and downstream from station 11134500, and 0.75 mi northwest of Lompoc on Lompoc Grant.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)	
OCT 08...	1540	1660	7.3	24.0	380	55	59	180	49	
DATE	TIME	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)
OCT 08...	4	14	108	330	190	.2	18	1060	1030	
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)	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)	
OCT 08...	1.44	.36	22	4.6	4.2	387	47	4		

SANTA YNEZ RIVER BASIN

344033120331001 BIG DITCH AT RENWICK ROAD NEAR LOMPOC, CA

LOCATION.—Lat 34°40'33", long 120°33'10", Santa Barbara County, Hydrologic Unit 18060010, along Santa Ynez River, taken from field drainage pipe discharging to ditch about, 150 ft east of Renwick Rd. and 15 ft north of dirt road (Union Sugar Ave.), about 400 ft southeast of Santa Ynez River, at Renwick Rd. station, and 4 mi northwest of Lompoc.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: November 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
NOV 26...	1030	.86	1340	8.2	15.0	440	86	55	100	33
APR 22...	0955	3.5	3860	7.7	16.0	1600	310	210	320	30

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)	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)
NOV 26...	2	8.1	126	104	340	140	.2	8.7	887
APR 22...	3	8.2	498	408	1000	430	.5	28	3020

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)
NOV 26...	853	1.21	.23	10	4.03	.42	264	<10	180
APR 22...	2830	4.10	.38	54	1.9	.40	838	<30	320

ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

SANTA MARIA RIVER BASIN

344047120331201 SANTA YNEZ RIVER AT RENWICK ROAD, NEAR LOMPOC, CA

LOCATION.—Lat 34°40'47", long 120°33'12", Santa Barbara County, Hydrologic Unit 18060010, along Santa Ynez River taken from pool at Renwick Rd. Bridge, downstream from "V" St. gage 11134500, and 4.25 mi northwest of Lompoc on Jesus Maria Grant.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—

CHEMICAL DATA: October 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

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)
OCT 08...	1720	.00	1800	8.1	16.5	450	87	57	190
DATE	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	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)
OCT 08...	47	4	12	164	400	220	.3	18	1190
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)
OCT 08...	1150	1.62	.02	13	<.01	2.6	485	15	54

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 1997 TO SEPTEMBER 1998

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)	SODIUM AD- SORP- TION RATIO (00931)
MAY 06...	1410	37	1420	8.0	25.0	610	140	63	89	24	2
SEP 09...	1055	19.8	2330	8.0	19.0	1100	240	120	160	24	2
DATE	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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	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)
MAY 06...	7.4	224	184	410	97	.4	18	1110	1020	1.52	.08
SEP 09...	6.1	349	286	740	190	.4	31	--	1810	2.46	.28
DATE	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)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	ALA- CHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	AME- TRYNE TOTAL (UG/L) (82184)	ATRA- ZINE WATER UNFLTRD REC (UG/L) (39630)
MAY 06...	18	.98	.51	206	<10	65	6	<.1	<.2	<.1	<.1
SEP 09...	35	.15	.38	301	<30	92	<5	<.1	<.2	<.1	<.1
DATE	DEETHYL ATRA- ZINE, WATER, WHOLE TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE TOTAL (UG/L) (75980)	BROM- ACIL WATER WHLREC (UG/L) (30234)	BUTA- CHLOR WATER WHLREC (UG/L) (30235)	BUTYL- ATE WATER WHLREC (UG/L) (30236)	CARBOX- IN WATER WHOLE RECOV- ERABLE (UG/L) (30245)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	CHLOR- PYRIFOS TOTAL RECOVER (UG/L) (38932)	CYAN- AZINE TOTAL (UG/L) (81757)	CYCLO- ATE WATER WHOLE RECOV- ERABLE (UG/L) (30254)	P, P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)
MAY 06...	<.2	<.2	E.1	<.1	<.1	<.1	9	.04	<.2	<.1	110
SEP 09...	<.20	<.20	<.2	<.1	<.1	<.2	14	.10	<.2	<.1	140

SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	P, P'-DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	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 WHOLE TOT.REC (UG/L) (82614)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)
MAY											
06...	E47	<.01	.03	7.9	<.1	<.01	<.3	10	<.01	<.01	<.2
SEP											
09...	160	<.01	E.009	4.0	<.1	<.01	<.2	11	<.01	<.01	<.2
DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	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)	PHORATE TOTAL (UG/L) (39023)
MAY											
06...	<.2	<.2	<.2	<.01	<2.5	<.01	<.2	<.1	<.2	<.01	<.01
SEP											
09...	<.2	<.2	<.3	<.01	<3.0	<.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)
MAY											
06...	<.2	<.1	<.1	<.1	<.1	<.1	<.2	120	<.1	<.01	<.1
SEP											
09...	<.2	.1	<.1	<.1	<.1	.1	<.2	170	<.1	<.01	<.1

	Page		Page
A		C	
ABELOUR DITCH NEAR BISHOP	123	Bottom material, definition of	13
ACCESS TO USGS WATER DATA	11	BRADLEY DITCH NEAR DONOVAN ROAD, AT SANTA MARIA	402
Accuracy of the Records	8	BREA CREEK BELOW BREA DAM, NEAR FULLERTON	294
Acid neutralizing capacity	12	BUCKHORN CREEK AT EAST 120TH AVENUE, NEAR ROGERS LAKE	101
Acre-foot, definition of	12	Buckhorn Creek near Valyermo	407
Adenosine triphosphate, definition of	12	BUELLTON SEWAGE TREATMENT PLANT AT BUELLTON	417
AGNEW LAKE NEAR JUNE LAKE	131		
ALAMO PINTADO CREEK NEAR SOLVANG 368			
Alamo River (at the United States–Mexico International Boundary)	43	CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK	237
ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA	45	CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL	307
ALAMO RIVER NEAR NILAND	47	CAMPO CREEK NEAR CAMPO	143
Algae, definition of	12	CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE	320
Algal growth potential, definition of	12	CARBON CREEK BELOW CARBON CANYON DAM	278
ALISAL RESERVOIR NEAR SOLVANG	370	CARPINTERIA CREEK NEAR CARPINTERIA	338
Alkalinity, definition of	12	CARUTHERS CREEK NEAR IVANPAH	39
ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD STATIONS	409	CASTAIC CREEK RELEASE FLOW BELOW CASTAIC LAKE, NEAR CASTAIC	318
ANDREAS CREEK NEAR PALM SPRINGS	72	CASTAIC LAKE NEAR CASTAIC	317
Annual 7-day minimum, definition of	13	Cell volume determination	13
Annual mean, explanation of	7	Cells per volume	13
Annual runoff, explanation of	7	Chemical oxygen demand, definition of	13
Annual total, explanation of	7	CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS	65
Aquifer, definition of	12	CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO	255
Arrangement of Records	8	Chlorophyll, definition of	13
ARROYO SECO NEAR PASADENA	300	CHRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE	205
ARROYO TRABUCO AT SAN JUAN CAPISTRANO	209	CITY CREEK NEAR HIGHLAND	221
Artesian, definition of	12	CITY CREEK WATER CO.'S CANAL NEAR HIGHLAND	223
Artificial substrate, definition of	18	Classification of Records	8
Ash mass, definition of	12	Color unit, definition of	13
ATASCADERO CREEK NEAR GOLETA	345	Contents, definition of	13
B		Continuing-record station	8, 13
Bacteria, definition of	12	Control structure, definition of	13
BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET	247	Control, definition of	13
Bed material, definition of	12	COOPERATION	1
Bed load	12	Cooperation paragraph	6
Bed load discharge, definition of	17	COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA	141
Bed load, definition of	17	Crest-stage partial-record stations	407
Benthic organisms (invertebrates)	12	Cross-Sectional Data	10
BIG BEAR LAKE NEAR BIG BEAR LAKE	212	Cubic foot per second, definition of	13
BIG DITCH AT RENWICK ROAD NEAR LOMPOC	419	Cubic foot per second-day, definition of	13
BIG ROCK CREEK NEAR VALYERMO	97	CUCAMONGA CREEK NEAR MIRA LOMA	264
BIG TUJUNGA CREEK BELOW HANSEN DAM	298	CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA	393
Biochemical oxygen demand, definition of	12		
Biomass, definition of	12		
BIRCH CREEK BELOW DIVERSION DAM, NEAR BISHOP	110		
BIRCH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2, NEAR BISHOP	120		
BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP	24	D	
Bishop Creek Basin, diversions and storage in	108	Daily mean values, data table of	6
BISHOP CREEK BELOW INTAKE NO. 3 DIVERSION DAM, NEAR BISHOP	119	Data Collection and Computation	4
BISHOP CREEK BELOW INTAKE NO. 4 DIVERSION DAM, NEAR BISHOP	121	Data Presentation	5, 11
BISHOP CREEK BELOW INTAKE NO. 5 DIVERSION DAM, NEAR BISHOP	122	DE LUZ CREEK NEAR DE LUZ	184
Bishop Creek Powerplant No. 6	124	DEEP CREEK NEAR HESPERIA	83
Blank Samples	10	DEEP CREEK NEAR PALM DESERT	77
Blue-green algae, definition of	16	DEFINITION OF TERMS	12
BORREGO PALM CREEK NEAR BORREGO SPRINGS	50	DEVIL CANYON CREEK NEAR SAN BERNARDINO	239
		Diatoms, definition of	17
		Discharge, definition of	13
		Dissolved Trace-Element Concentrations	37
		Dissolved, definition of	13
		Dissolved-solids concentration, definition of	14

	Page		Page
Diversions and storage in Bishop Creek Basin	108	Highest daily mean, explanation of	7
Diversions and storage in Mojave River Basin	82	HOT CREEK AT FLUME, NEAR MAMMOTH	106
Diversions and storage in Salton Sea Basin	41	Hydrologic Bench-Mark Network	2
Diversions and storage in San Gabriel and Los Angeles River Basins	289	Hydrologic Bench-Mark Network, definition of	14
Diversions and storage in Santa Ana River Basin	211	Hydrologic unit, definition of	14
Diversions and storage in Santa Clara River Basin	306		
Diversions and storage in Santa Margarita River Basin	164	I	
Diversions and storage in Santa Ynez River Basin	351	Identifying Estimated Daily Discharge	8
Diversity index, definition of	14	Imperial County, location of discharge and water-quality stations	25
Downstream Order System	3	Instantaneous discharge, definition of	13
Drainage area paragraph	5	Instantaneous low flow, explanation of	7
Drainage area, definition of	14	Instantaneous peak flow, explanation of	7
Drainage basin, definition of	14	Instantaneous peak stage, explanation of	7
Dry mass, definition of	13	INTAKE NO. 2 RESERVOIR NEAR BISHOP	117
		INTRODUCTION	1
E		Inyo County, location of discharge stations	26
EAST FORK OF WEST FORK MOJAVE RIVER			
ABOVE SILVERWOOD LAKE, NEAR HESPERIA	86	J	
EAST TWIN CREEK NEAR ARROWHEAD SPRINGS	225	JAMUL CREEK NEAR JAMUL	145
ELDERBERRY FOREBAY NEAR CASTAIC	316		
ELLERY LAKE NEAR LEE VINING	138	K	
Enterococcus bacteria	12	Kern County, location of discharge and water-quality stations	27
Equipment blank	10		
EXPLANATION OF THE RECORDS	3	L	
Extractable organic halides	14	Laboratory Measurements	10
Extremes for current year paragraph	6	LAKE CACHUMA NEAR SANTA YNEZ	361
Extremes for period of record paragraph	6	LAKE PIRU NEAR PIRU	326
Extremes outside period of record paragraph	6	LAKE SABRINA NEAR BISHOP	115
		Lakes and reservoirs:	
F		AGNEW LAKE NEAR JUNE LAKE	131
FALLBROOK CREEK NEAR FALLBROOK	186	ALISAL RESERVOIR NEAR SOLVANG	370
FALLS CREEK DIVERSION NEAR WHITE WATER	60	BIG BEAR LAKE NEAR BIG BEAR LAKE	212
FALLS CREEK NEAR WHITE WATER	58	CACHUMA, LAKE, NEAR SANTA YNEZ	361
Fecal-coliform bacteria, definition of	12	CASTAIC LAKE NEAR CASTAIC	317
Fecal-streptococcal bacteria, definition of	12	ELDERBERRY FOREBAY NEAR CASTAIC	316
Field blank	10	ELLERY LAKE NEAR LEE VINING	138
Filter blank	10	GEM LAKE NEAR JUNE LAKE	130
FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY	43	INTAKE NO. 2 RESERVOIR NEAR BISHOP	117
FONTANA WATER CO.'S INFILTRATION LINE DIVERSION ...	234	LUNDY LAKE NEAR LEE VINING	126
FULLERTON CREEK BELOW FULLERTON DAM,		PIRU, LAKE, NEAR PIRU	326
NEAR BREA	296	PYRAMID LAKE NEAR GORMAN	322
		SABRINA, LAKE, NEAR BISHOP	115
G		SADDLEBAG LAKE NEAR LEE VINING	134
Gage datum, definition of	14	SALTON SEA NEAR WESTMORLAND	42
Gage height, definition of	14	SAN VICENTE RESERVOIR NEAR LAKESIDE	149
Gage paragraph	6	SILVERWOOD LAKE NEAR HESPERIA	87
Gaging station, definition of	14	SOUTH LAKE NEAR BISHOP	112
GEM LAKE NEAR JUNE LAKE	130	TIOGA LAKE NEAR LEE VINING	136
GIBRALTER DAM DIVERSION WEIR		VAIL LAKE NEAR TEMECULA	167
AT GIBRALTER DAM	409	WAUGH LAKE NEAR JUNE LAKE	129
GLACIER CREEK BELOW TIOGA LAKE,		Lamb Canyon Creek at Victory Ranch, near San Jacinto	408
NEAR LEE VINING	137	LAS FLORES CREEK NEAR OCEANSIDE	202
Gourd Creek near Ludlow	407	Latitude-Longitude System	3
Green algae, definition of	17	LEE VINING CREEK BELOW RHINEDOLLAR DAM,	
GREEN CANYON CREEK AT MAIN STREET,		NEAR LEE VINING	139
NEAR GUADALUPE	421	LEE VINING CREEK BELOW SADDLEBAG LAKE,	
GREEN CREEK CONDUIT OUTLET NEAR BISHOP	111	NEAR LEE VINING	135
		Light-attenuation coefficient, definition of	14
H		Line "D" Storm Drain at Santa Fe Street, near San Jacinto	408
Hardness, definition of	14	Line "E" Storm Drain below State Street, near San Jacinto	408
High tide	14	Location paragraph	5
Highest annual mean, explanation of	7	LOMPOC SEWAGE TREATMENT PLANT AT LOMPOC	418
		LONE PINE CREEK NEAR KEENBROOK	235

	Page		Page
Los Angeles and San Gabriel River Basins, diversions and storage in	289	N	
Los Angeles County, location of discharge and water-quality stations	28	Nanograms per liter, definition of	15
LOS COCHES CREEK NEAR LAKESIDE	150	National Atmospheric Deposition Program	2, 15
LOS PENASQUITOS CREEK NEAR POWAY	156	National Geodetic Vertical Datum of 1929, definition of	15
Low tide	14	National Stream Quality Accounting Network	15
Lowest annual mean, explanation of	7	National Stream-Quality Accounting Network	2
Lowest daily mean, explanation of	7	National Trends Network	2, 15
LUNDY LAKE NEAR LEE VINING	126	National Trends Network, change in procedures	37
Lundy Powerplant Tailrace	127	National Water Data Exchange	8
LYTLE CREEK AT COLTON	241	National Water Information System (NWIS)	11, 16
LYTLE CREEK NEAR FONTANA	232	National Water-Quality Assessment (NAWQA) Program	15
		National Water-Quality Assessment Program	3
M		Natural substrate, definition of	18
Macrophytes, definition of	14	Nekton, definition of	16
MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA	343	New River (at the United States–Mexico International Boundary)	43
MCGEE CREEK DIVERSION NEAR BISHOP	109	NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO	48
Mean concentration, definition of	17	NEW RIVER NEAR WESTMORLAND	49
Mean discharge, definition of	13	North Base Tributary at RR crossing near Edwards	407
Mean high tide	15	NORTH PORTAL TEHACHAPI TUNNEL NEAR GORMAN	321
Mean low tide	15		
Mean water level	15	O	
Membrane filter	15	Onsite Measurements and Sample Collection	9
Metamorphic stage, definition of	15	Orange County, location of discharge and water-quality stations	30
Methylene blue active substance, definition of	15	ORCUTT CREEK NEAR ORCUTT	404
MEXICO AT INTERNATIONAL BOUNDARY, FLOW FROM	43	Organic mass, definition of	13
Micrograms per gram, definition of	15	Organism count/area, definition of	16
Micrograms per liter, definition of	15	Organism count/volume, definition of	16
Microsiemens per centimeter	15	Organism, definition of	16
MIDDLE FORK BISHOP CREEK BELOW INTAKE NO. 2 RESERVOIR, NEAR BISHOP	118	Other Records Available	8
MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP	116		
MIGUELITO CREEK AT LOMPOC	385	P	
MILL CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING	127	PALM CANYON CREEK NEAR PALM SPRINGS	70
MILL CREEK NEAR MENTONE	217	PALM CANYON WASH NEAR CATHEDRAL CITY	74
MILL CREEK POWER CANALS NOS. 2 AND 3 NEAR YUCAIPA	216	Parameter, definition of	16
Milligrams per liter, definition of	15	Partial-record station	8
Miscellaneous sampling site	8	Partial-record station, definition of	16
MISSION CREEK AT RICKY NOOK PARK, AT SANTA BARBARA	340	Partial-record stations, crest-stage	407
MISSION CREEK AT ROCKY NOOK PARK, AT SANTA BARBARA	340	PARTIAL-RECORD STATIONS, WATER-QUALITY, ANALYSES OF SAMPLES COLLECTED AT	409
MISSION CREEK NEAR DESERT HOT SPRINGS	63	Particle size, definition of	16
MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA	340	Particle-size classification, definition of	16
MOJAVE CREEK AT FORBES AVENUE, AT EDWARDS AIR FORCE BASE	103	PECHANGA CREEK NEAR TEMECULA	168
Mojave Creek near Edwards	407	Percent composition or percent of total, definition of	16
MOJAVE RIVER AT AFTON	95	Period of record paragraph	5
MOJAVE RIVER AT BARSTOW	94	Periphyton, definition of	16
MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE	92	PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS	251
Mojave River Basin, diversions and storage in	82	Pesticides, definition of	16
Mono County, location of discharge stations	29	pH, definition of	16
Monthly mean data, statistics of	6	Phytoplankton, definition of	16
Most probable number	15	Picocurie, definition of	16
Multiple-plate samplers	15	Pine Creek near Palmdale	407
MURRIETA CREEK AT TEMECULA	175	PIRU CREEK ABOVE LAKE PIRU	324
MURRIETA CREEK AT TENAJA ROAD, NEAR MURRIETA	170	PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE	319
		PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN	323
		PIRU CREEK BELOW SANTA FELICIA DAM	327
		Piru Creek below Santa Felicia Dam and spill from Santa Felicia Dam, combined discharge	327
		Plankton, definition of	16
		PLUNGE CREEK AND DIVERSIONS NEAR EAST HIGHLANDS	220

	Page		Page
SISQUOC RIVER NEAR SISQUOC	396	Total discharge	19
SLED TRACK CANAL AT LANCASTER BOULEVARD, NEAR ROGERS LAKE	99	Total load, definition of	19
SLOANS CANYON CREEK NEAR LOMPOC	414	Total organism count, definition of	16
SNOW CREEK DIVERSION NEAR WHITE WATER	57	Total, definition of	19
SNOW CREEK NEAR WHITE WATER	54	Total, recoverable, definition of	19
Sodium-adsorption-ratio, definition of	18	Total-sediment discharge, definition of	18
Solute, definition of	18	Total-sediment load, definition of	18
SOLVANG SEWAGE TREATMENT PLANT AT SOLVANG	416	Trip blank	10
SOUTH DRAINAGE BISSELL/ROSAMOND HILLS NEAR EDWARDS AIR FORCE BASE	102	Tritium Network	19
South Drainage Bissell/Rosamond Hills near Edwards Air Force Base	407	Turbidity, definition of	19
SOUTH FORK BISHOP CREEK BELOW SOUTH FORK DIVERSION DAM, NEAR BISHOP	114	U	
SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP	113	Upper Conway Ditch	127
SOUTH LAKE NEAR BISHOP	112	V	
SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR MENTONE	215	VAIL LAKE NEAR TEMECULA	167
SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CREEK CONDUIT	234	VENTURA CITY DIVERSION NEAR VENTURA	335
Southern California Edison's Canal below Powerplant No. 2, near Mentone	213	Ventura County, location of discharge and water-quality stations	35
SPECIAL NETWORKS AND PROGRAMS	2	VENTURA RIVER NEAR VENTURA	333
Specific conductance, definition of	18	Volatile Organic Compounds	19
Spencer Canyon Creek near Fairmont	407	W	
Spike Samples	11	WARM CREEK NEAR SAN BERNARDINO	230
Split sample	11	WARM SPRINGS CREEK NEAR MURRIETA	172
Splitter blank	10	Water Quality-Control Data	10
Stage-discharge relation, definition of	18	Water Temperature	9
Station manuscript, explanation of	5	Water year, definition of	20
Station-Identification Numbers	3	WATER-QUALITY PARTIAL-RECORD STATIONS, ANALYSES OF SAMPLES COLLECTED AT	409
Streamflow, definition of	18	WAUGH LAKE NEAR JUNE LAKE	129
Substrate, definition of	18	WDR, definition of	20
Summary statistics, explanation of	7	Weighted average, definition of	20
Surface area, definition of	18	WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO	262
Surficial bed material, definition of	18	WEST FORK MOJAVE RIVER ABOVE MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA	90
Suspended sediment, definition of	17	WEST FORK MOJAVE RIVER ABOVE SILVERWOOD LAKE, NEAR HESPERIA	85
Suspended total residue	18	WEST FORK MOJAVE RIVER BELOW SILVERWOOD LAKE, NEAR HESPERIA	88
Suspended, definition of	18	Wet mass, definition of	13
Suspended, recoverable, definition of	18	WHITewater RIVER AT INDIO	79
Suspended, total, definition of	18	WHITewater RIVER AT RANCHO MIRAGE	75
Suspended-sediment concentration, definition of	17	WHITewater RIVER AT WHITE WATER	52
Suspended-sediment discharge, definition of	17	WHITewater RIVER AT WHITE WATER CUTOFF, AT WHITE WATER	53
Suspended-sediment load, definition of	18	WHITewater RIVER AT WINDY POINT, NEAR WHITE WATER	61
SWEETWATER RIVER NEAR DESCANSO	147	WHITewater RIVER NEAR MECCA	81
Synoptic Studies	19	WSP, definition of	20
System for numbering miscellaneous sites (latitude and longitude)	4	Z	
T		ZACA CREEK NEAR BUELLTON	376
TAHQUITZ CREEK NEAR PALM SPRINGS	68	ZANJA DE COTA CREEK NEAR SANTA YNEZ	410
Taxonomy, definition of	19	Zooplankton, definition of	17
TEMECULA CREEK NEAR AGUANGA	165		
TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA	253		
Thermograph, definition of	19		
Time-weighted average, definition of	19		
TIOGA LAKE NEAR LEE VINING	136		
Tons per acre-foot, definition of	19		
Tons per day, definition of	19		
Total coliform bacteria, definition of	12		

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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